Elephants in the Boardroom?

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ELEPHANTS IN THE BOARDROOM?

SUSTAINABLE VALUES-BASED STRATEGIC DECISION-MAKING IN A DUTCH HOUSING ASSOCIATION

SANDRA HOOMANS

Elephants in the boardroom? Sustainable values-based strategic decision-making in a Dutch housing association

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SUMMARY

PROBLEM DEFINITION

Organisations are confronted with major environmental challenges. Climate change, decline in biocapacity, deforestation and biodiversity loss show the dependencies of organisations in their license to operate on ecosystems. Many organisations recognise the importance of social and environmental values in addition to profit values and account for sustainability in their strategies, activities and decisions (Elkington, 2013; Epstein, Buhovac & Yuthas, 2010). The concept of sustainability reflects a multidisciplinary framework integrating people, planet and profit values that are needed in contemporary organizations to maintain a license to operate in a complex and continuous changing organizational context (Elkington, 1999; Epstein & Buhovac, 2014). Most organisational strategies and decisions however are based on economic values and overlook social and ecological values (Bieker & Waxenberger, 2001; Figge, Hahn, Schaltegger, & Wagner, 2002; Laufer, 2003; Sekerka & Stimel, 2012; Senge, Smith, Kruschwitz, Laur, & Schley, 2008).

Housing is of considerable importance for environmental, social and economic sustainability (Bhatti, 2001; Dong & Ng, 2015; Priemus, 2005; Priemus and Ten Heuvelhof, 2005; Tosics, 2004; Winston, 2009). Decisions about design, location, equipment, surrounding infrastructure and maintenance have significant negative effects on the quality of the local and global environment (Huby, 1998; Power, 2008; Winston, 2010; Winston & Pareja Eastaway, 2008). Sustainable development is generally acknowledged within the Dutch housing sector. However, analysis of the pace of renovations in non-profit housing stock shows that there is very limited progress towards national and international targets for sustainability (Filippidou, 2018).

This research aims to get a better understanding of the essential role of frames and values in what decision makers individually and collectively see as strategic event, in how they analyse, think, and make sense of an uncertain, complex, unstructured concept, sustainability. More specifically, this research aims to gain insight in the meanings adhered to sustainability by strategic decision-makers and the frames and values of actors, individually or collectively, that may influence strategic decision-making in a housing association, through describing the process of strategic decision-making and exploring factors influencing this

process with respect to sustainability. The theoretical relevance of this study is to zoom in on the connection between sustainability paradigms, sensemaking and strategic decision-making. The empirical aim of this research is to describe the practice and the ways a Dutch housing association, Welbions, integrates sustainability in strategic decision-making. The relevance of this research for strategic practitioners is that it provides insight in factors influencing, positively or negatively, integration of sustainability in strategic decision-making.

RESEARCH DESIGN AND METHODS

The central research question in this study is:

> Which meaning is given to sustainability within a Dutch housing association and does making sense of the concept of sustainability lead to sustainable strategic choices?

This research is based on an ontological position in which reality and knowledge are considered to be subjectively interpreted and constructed in human interactions (Creswell, 2012; Denzin & Lincoln, 2005; Silverman, 2007). Research from a social constructivist-interpretive philosophy can be characterized as in-depth investigations. Developing an understanding of frames and values of actors that guide their construction of meaning requires analysis of words, which implies that this research is qualitative in nature.

The general method used to analyse and interpret the data is Grounded Theory. Grounded Theory Methods (abbrv. GTM) is an analytical approach to qualitative data and is making use of the constant comparative method based on an inductive research approach.

The chosen research strategy is a longitudinal case study. Data was collected in three periods between 2009 and 2018. To make results more trustworthy and verify outcomes that are qualitative in nature, multiple data sources and data collection methods are used. This is common in studies in a naturalistic setting (Klein, 2003; Punch, 2005), it helps to overcome weaknesses associated with using only qualitative data (Tashakkori & Teddlie, 2010) and disadvantages of studying one case in depth.

Three data collection methods are applied: (1) examining relevant documents, (2) (participant-) observation of group debates, and (3) asking individual decision-makers (interviews).

Data is analysed using sustainability as sensitising concept. Reviewing literature in each dimension of sustainability provided sensitising codes. These codes are used to categorise statements from interviews, observations and documents. A deeper level of analysis is obtained by applying theoretical frasme types and values per frame type. Collected data on decision criteria and factors are labelled via detection of values in the beliefs and preferences with respect to the selective stage of strategic decision-making. The values that are discovered were subsequently linked to the frame types, which enabled an overview of dominant perspectives used in strategic choice.

FINDINGS

The main finding after the initial literature review on biodiversity and organizational strategies was that most organizations do not take biodiversity or ecosystems into account in their strategies. When broadening the perspective and replacing the term biodiversity with sustainability, the theoretical assumption is that strategic decisions are dominantly based on economic values.

Individual decision-makers associated sustainability often with cost, return on investment and the financial position of Welbions. In the first period they often spoke of ways to transform the organisation into a more sustainable one and the necessary conditions for changing the organisational behaviour. But financial conditions allow for this change. The financial situation is seen as a barrier to investments in sustainability. However, housing associations do have a social responsibility to act towards more sustainable organisations, the mission statement is to provide in affordable housing. And scarcity in resources and rising energy costs will result in higher housing costs. In every period, individual respondents mentioned the necessity to integrate sustainability into the process of decision-making in particular. Least often interviewees associated sustainability with the quality of ecosystems or biodiversity decline.

Initially in teams a broad perspective on sustainability dominated interactions. Central to working towards more sustainability are housing costs, quality houses and quality of living environment, although the quality of the living environment was seen as a motive for raising the financial value of the real estate. Financial

conditions for investments in sustainability measures are (societal) return on investments and profitability.

The pattern in teams debating sustainability was that the financial position, costs, budget and level of investments determine boundaries of sustainability projects. Another pattern was that Welbions needed an integrated frame in order to make strategic decisions based on sustainability. Sustainability also meant a necessary change of behaviour and culture of the organisation. Innovative technologies are seen as more sustainable techniques (smart equipment) but also as cause of rising maintenance cost. A plan to realise 48 zero-energy-use houses was not chosen because it was too expensive and tenants were not expected to profit from the investments, according to the management team in 2017.

In every period strategic choices were dominantly based on financial criteria. The goals stated in the vision document on sustainable development (2010) were not used in making strategic choices. These goals reflected a broad view on sustainability. Since the vision document and the goals was developed in the first stage of data collection, it may well have supported other employees in that period to accept a more broad view on sustainability. The vision of sustainable development was designed using a tool (the Ecosystem Services Review) which pointed to the dependency of building processes on the availability of ecosystem services such as water, air and natural resources. But the relevance of e.g. materials for core processes of the housing association was not a decision criterion in 2017.

From the listed factors influencing strategic decision-making, the economic, technical and personal frames appeared to be used mostly. The organizational and ethical frame were used only once, and the aesthetic frame was not used at all. Noteworthy is that ecological developments were not mentioned.

Frames derived from the decision criteria showed a dominating economic frame. Strikingly, the societal return on investments (SROI) criterion was mentioned in every period and layer. However, when taking a closer look into some decisions that were made, no sign of actual use of this criterion was found. An example is that in 2017 the target of achieving an average of energy label B for property in 2020 was assessed merely against the Internal Rate of Return.

One of the factors that successfully result in pro sustainable strategic decision-making is the need for shared meanings and beliefs and for a change in culture of Welbions. The culture can be characterised by employees being too kind towards each other. Short term successes as well as practical thinkers seem to be preferred above debating long term issues. Another factor that contributes to more sustainable strategic decision making is changing the current business model. This model is thought to prevent a healthy financial base from where to invest in sustainability measures. Integrating sustainability in the structure and processes of Welbions, innovative and flexible human capital and implementation of sustainability measured in order to consciously creating learning effects, and clarity about the main goal of the housing association are seen as important in changing towards a more sustainable organisation.

The meaning constructed of sustainability, by individual and groups of decision-makers, changed from a broad perspective in the first period to a narrower meaning of sustainability: measures to reduce energy and gas use and CO2-emissions. This may be explained by the (intern-)national agreements and energy deals to which the housing associations sector must comply. In retrospect one could argue that the government may have prevented housing associations to become more sustainable in a broad sense, forcing them to comply with new laws and covenants in which the focus was only on energy measures.

CONCLUSIONS

The sustainability concept is an ambiguous concept, it is defined in many different ways. Dutch housing associations take values as affordability, financial continuity, quantity and location of houses, quality of houses and housing environment (Priemus, 2003; Nieboer, 2011; Koffijberg, 2005) into account when making strategic choices.

Welbions associates sustainability mainly with the financial position, costs and affordability, and interprets the concept as investment measures in energy savings, reducing the usage of gas and CO2-emissions which are aimed at in covenants. The conclusion in this case is that sustainability is not integrated in strategic decision-making. Making sense of sustainability does not result in sustainability-based actions, or choice. The values that are used in sensemaking differ from the values used in choosing an alternative. Apparently, something

happens after the construction of a meaning of sustainability that prevents sustainability values from having influence on the process of weighing and choosing one alternative over others. Theoretically this may be explained by the impact of group rules, or mechanisms, that develop or are developed and used to make decisions (Kaplan, 2008). Use of power, culture and the desire to conform to the group mean may prevent multiple frames to be used in the process of strategic decision-making.

This indicates that sustainable values have not gained a position in strategic decision-making, compared to traditional values such as cost-efficiency and affordability.

Frames enable decision-makers to make fast judgments of decision situations. The question then becomes if it is possible to organise strategic decision-making in a more conscious, reasoned way, making ‘slower’ decisions (Kahneman, 2011) and taking a long-term view into account. Deliberately eliciting multiple frames and values, however, although providing the organisation with a way to cope with a complex, dynamic environment, may lead to conflicts. If different frames and values are elicited in strategic decision-making, in what way are they synthesised or converged into a choice? Internalisation of multiple, sustainable, frames-based strategic decision-making requires an open mind and willingness to change the decision-making routine. This routine is based on frames, which implies that ecological change is filtered, and some events, although strategic in nature, may remain unnoticed. Attention to events is limited or ‘bounded’. The ecological crisis however asks for reframing.

SAMENVATTING

PROBLEEMFEDINITIE

Organisaties worden geconfronteerd met een ecologische crisis. Problemen als klimaatverandering, verminderde water- en luchtkwaliteit en biodiversiteitsverlies maken duidelijk dat organisaties afhankelijk zijn in hun voortbestaan van het ecologische systeem. Veel organisaties erkennen het belang van sociale en ecologische waarden naast economische waarden en houden rekening met duurzaamheid in hun strategieën, activiteiten en besluiten (Bonn & Fisher, 2011; Elkington, 2013; Epstein Buhovac & Yuthas, 2010). Het concept duurzaamheid verbindt economische ontwikkeling aan ecologische problemen en maatschappelijke rechtvaardigheid en vraagt om integratie van maatschappelijke, ecologische en economische waarden in strategische besluitvorming (Elkington, 1999; Epstein & Buhovac, 2014). De meeste strategische beslissingen zijn echter alleen gebaseerd op economische waarden (Bieker & Waxenberger, 2001; Figge, Hahn, Schaltegger, & Wagner, 2002; Laufer, 2003; Sekerka & Stimel, 2012; Senge , Smith, Kruschwitz, Laur, & Schley, 2008).

Huisvesting is van groot belang voor de ecologische, sociale en economische duurzaamheid (Bhatti, 2001; Dong & Ng, 2015; Priemus, 2005; Priemus en tien Heuvelhof, 2005; Tosics, 2004; Winston, 2009). Beslissingen over ontwerp, locatie, uitrusting, omliggende infrastructuur en onderhoud kunnen significant negatieve effecten hebben op de kwaliteit van het lokale en mondiale milieu (Huby, 1998; Power, 2008; Winston, 2010; Winston & Pareja Eastaway, 2008). Duurzaamheid wordt binnen de Nederlandse huisvestingssector algemeen erkend als relevant onderwerp. Echter, uit een analyse van het tempo van de renovatie van huizen in de sociale huursector blijkt, dat zeer beperkte vooruitgang is geboekt in de richting van nationale en internationale doelstellingen voor duurzaamheid (Filippidou, 2018).

Dit onderzoek heeft tot doel inzicht te krijgen in het strategische besluitvormingsproces van een Nederlandse woningbouwcorporatie, Welbions, in het licht van een “nieuw” concept, duurzaamheid. In het bijzonder beoogt dit onderzoek inzicht te verwerven in de essentiële rol van frames en waarden in het individuele en collectieve proces van betekenisconstructie en in strategische besluiten en in de factoren die dit proces beïnvloeden. De theoretische relevantie

van deze studie is om het verband tussen duurzaamheid als wetenschappelijk paradigma, sensemaking theorie en theorie over strategische besluitvorming aan te geven. Het empirische doel van dit onderzoek richt zich op het beschrijven van het strategische besluitvormingsproces van Welbions, en de mate waarin duurzaamheid daarin geïntegreerd wordt. De relevantie van dit onderzoek voor beleidsmakers, managers, directieleden en medewerkers van organisaties is, dat het inzicht geeft in factoren en mechanismen die, positief of negatief, de integratie van duurzaamheid in strategische besluitvorming beïnvloeden.

ONDERZOEKSONTWERP EN -METHODEN

De centrale onderzoeksvraag in deze studie is:

> Welke betekenis wordt gegeven aan duurzaamheid in een Nederlandse woningbouwvereniging en leidt betekenisconstructie van het concept duurzaamheid tot duurzame strategische keuzes?

Dit onderzoek is gebaseerd op een ontologische positie waarin de werkelijkheid en kennis worden beschouwd als het resultaat van subjectieve interpretaties, geconstrueerd in menselijke interacties (Creswell, 2012; Denzin & Lincoln, 2005; Silverman, 2007). Onderzoek vanuit een sociaal-interpretatieve filosofie kan gekarakteriseerd worden als diepteonderzoeken. Het ontwikkelen van een begrip van frames en waarden van actoren die ten grondslag liggen aan het proces van betekenisverlening en besluitvorming vereist analyse van woorden en tekst. Dit impliceert dat dit onderzoek kwalitatief van aard is.

De algemene methode die wordt gebruikt om de gegevens te analyseren en te interpreteren is Gefundeerde Theorie benadering. De Gefundeerde Theorie Methode (in het Engels afgekort GTM) is een analytische benadering van kwalitatieve gegevens die gebruik maakt van de constante vergelijkende methode en van een inductieve onderzoeksbenadering.

De gekozen onderzoekstrategie is een longitudinale casestudy, de casus in kwestie is het strategische besluitvormingsproces van Welbions. Data werd verzameld in drie periodes tussen 2009 en 2018. Om resultaten geloofwaardiger te maken en uitkomsten te verifiëren die kwalitatief van aard zijn, worden meerdere gegevensbronnen en methodes van gegevensverzameling gebruikt. Dit is gebruikelijk in studies in een natuurlijke omgeving (Klein 2003; Punch, 2005). Het komt tegemoet aan het nadeel van gebruik van alleen kwalitatieve

gegevens (Tashakkori & Teddlie, 2010) en van het bestuderen van één enkele casus.

De drie gebruikte methoden voor het verzamelen van gegevens zijn: (1) het onderzoeken van relevante documenten, (2) (deelnemer-) observaties van groepsdebatten, en (3) het stellen van vragen aan individuele beslissers (interviews). Waarden kunnen expliciet worden gevonden in beslissingscriteria, impliciet afgeleid van oordelen en selectief gedrag (van dat wat *is*, en van de overtuigingen en voorkeuren van wat *zou* moeten (Williams, in Rokeach, 1979: p. 16)).

Gegevens worden geanalyseerd met duurzaamheid als sensitising concept. Met behulp van het bestuderen van literatuur die in elke dimensie van duurzaamheid een rol speelt, zijn open sensitising codes gevonden. Deze codes zijn gebruikt om data te groeperen. Een dieper niveau van analyse is verkregen door gebruik te maken van theoretische frametypen en waarden per frame type. Uit data over (expliciete) beslissingscriteria en (impliciete) voorkeuren en overtuigingen ten aanzien van factoren die van invloed zijn op het besluitvormingsproces, zijn waarden geïdentificeerd. Deze waarden zijn vervolgens gekoppeld aan de frametypen, waardoor een overzicht kon worden gegeven van de dominante frames in het proces van strategische besluitvorming.

RESULTATEN

De belangrijkste bevinding na de eerste ronde van literatuuronderzoek over duurzaamheid en strategisch management was dat de meeste organisaties geen rekening houden met biodiversiteit of de kwaliteit van ecosystemen in hun strategieën. De theoretische veronderstelling is dat strategische beslissingen vooral gebaseerd zijn op economische waarden.

De individuele beslissers van Welbions verbonden duurzaamheid veelal met kosten, rendement en de financiële positie van Welbions. In de eerste periode spraken zij vaak over hoe de organisatie te veranderen in een duurzamere, en over voorwaarden benodigd om te veranderen. Maar het zijn dan vooral de financiële voorwaarden die kunnen zorgen voor deze verandering. De financiële situatie wordt gezien als een belemmering voor investeringen in duurzaamheid. Desondanks hebben woningbouwcorporaties een maatschappelijke verantwoordelijkheid om te verduurzamen, hun missie is immers zorgdragen voor betaalbare huisvesting. Grondstoffenschaarste en stijgende energiekosten

worden verwacht te resulteren in hogere huisvestingskosten. In elke periode noemen de respondenten de noodzaak om duurzaamheid te integreren in het besluitvormingsproces. Een enkele keer noemden geïnterviewden elementen als kwaliteit van ecosystemen of de achteruitgang van de biodiversiteit.

In team debatten was aanvankelijk een breed perspectief op duurzaamheid te horen. Centraal in het streven naar meer duurzaamheid zijn niet alleen huisvestingskosten, ook de kwaliteit van het bezit en de kwaliteit van de leefomgeving worden geassocieerd met duurzaamheid (hoewel de kwaliteit van de leefomgeving werd gezien als een motief voor het verhogen van de financiële waarde van het onroerend goed). De financiële voorwaarden voor investeringen in duurzaamheidsmaatregelen zijn (maatschappelijk) rendement op beleggingen en winstgevendheid.

Het patroon in teamdebatten over duurzaamheid was dat de financiële positie, kosten, budget en investeringsniveau de grenzen bepalen van duurzaamheidsprojecten. Een ander patroon was dat Welbions een geïntegreerd kader nodig heeft om strategische beslissingen te nemen op basis van duurzaamheid. Duurzaamheid betekent ook een noodzakelijke verandering van gedrag en cultuur van de organisatie. Innovatieve technologieën worden per definitie gezien als duurzamere technieken (bijvoorbeeld slimme apparatuur), maar ook als een oorzaak van de stijgende kosten van onderhoud. In 2017 stemde het managementteam echter niet in met een beslisvoorstel om 48 nul-energiegebruik huizen te realiseren omdat het te veel geld kostte en huurders niet werden verwacht mee te kunnen profiteren van de investeringen (lagere lasten).

In elke periode werden de strategische keuzes zoals weergegeven in documenten voornamelijk genomen op basis van financiële criteria. De doelstellingen van het visiedocument ‘Duurzame Ontwikkeling Welbions’ (2010) werden niet gebruikt bij het maken van strategische keuzes. Maar het visiedocument weerspiegelt een brede kijk op duurzaamheid en de activiteiten van de projectgroep duurzaamheid in diezelfde periode kunnen medewerkers hebben gestimuleerd een bredere visie op duurzaamheid te accepteren (zoals bijvoorbeeld bleek uit de enquête in 2011). Hoewel de visie op duurzame ontwikkeling tot stand kwam met behulp van de Ecosystem Services Review (een tool waarmee de risico’s en impact van verlies aan grondstoffen en kwaliteit van ecosystemen voor de primaire processen van de woningbouwcorporatie in

kaart werden gebracht), was bijvoorbeeld grondstoffenschaarste geen beslissingscriterium in 2017.

In de door respondenten genoemde factoren werden vooral waarden gevonden die het economische, technisch en persoonlijke frametype representeren. Het organisatorische en ethische frametype werden enkel gebruikt en het esthetische frametype helemaal niet. Opmerkelijk is dat ecologische ontwikkelingen niet werden vermeld door respondenten bij de identificatie van gebeurtenissen die van invloed zijn op strategische besluitvorming.

Het dominante frametype dat werd afgeleid uit de beslissingscriteria, is het economische frame. Opvallend is wel dat maatschappelijk rendement als criterium voor beslissingen in elke periode als criterium genoemd wordt. Echter, bij het analyseren van enkele besluiten, was er geen teken van daadwerkelijk gebruik van dit criterium. Een voorbeeld is dat in 2017 zelfs het doel van het bereiken van een gemiddelde van energielabel B voor onroerend goed in 2020 wordt beoordeeld tegen interne rentabiliteit (IRR).

Een van de factoren die volgens respondenten en documenten leiden tot duurzame strategische besluitvorming is een totstandkoming van gedeelde betekenissen en overtuigingen; ook is het noodzakelijk dat de cultuur van Welbions verandert en dat strategische beslissingen gebaseerd worden op duurzaamheidswaarden. Men vindt dat werknemers te vriendelijk zijn naar elkaar en korte termijn successen en praktische denkers lijken de voorkeur te krijgen boven diegene die willen debatteren over lange termijn kwesties – zoals duurzaamheid. Een andere factor die bijdraagt aan duurzame strategische besluitvorming is het veranderen van het huidige bedrijfsmodel van de woningbouwcorporaties. Het huidige model voorkomt een gezonde financiële basis van waaruit investeringsbeslissingen in duurzaamheidsmaatregelen genomen kunnen worden. Integratie van duurzaamheid in de structuur en processen van Welbions, innovatief en flexibel ‘menselijk kapitaal’, implementatie van duurzaamheidsmaatregelen met het oog op het bewust creëren van leereffecten, en helderheid over het hoofddoel van de woningbouwcorporatie worden als belangrijk gezien in het veranderen naar een duurzamere organisatie.

De betekenis die is geconstrueerd van duurzaamheid, door individuele en groepen beslissers, is veranderd van een breed perspectief in de eerste periode

(2009-2012) tot een engere betekenis van duurzaamheid in de latere perioden, namelijk duurzaamheid in de zin van het verminderen van energiegebruik, gebruik van schone energie, terugdringen van gebruik van gas, en het verminderen van CO2-emissies. Dit kan worden verklaard door internationale en nationale overeenkomsten en energie deals waaraan de woningbouwcorporatiesector moet voldoen. Achteraf zou men kunnen betogen dat de regering daarmee verhinderd dat woningbouwcorporaties werken aan duurzaamheid in brede zin en hen dwingt te voldoen aan nieuwe wetten en convenanten waarin de focus alleen ligt op energiemaatregelen.

CONCLUSIES

Het concept duurzaamheid is een term die op veel verschillende manieren wordt gedefinieerd. Nederlandse woningcorporaties houden rekening met waarden als betaalbaarheid, financiële continuïteit, kwantiteit en locatie van huizen, kwaliteit van huizen en woonomgeving (Priemus, 2003; Nieboer, 2011; Koffijberg, 2005), bij het maken van strategische keuzes.

Welbions associeert duurzaamheid vooral met de financiële positie, kosten en betaalbaarheid, en interpreteert vooral in latere jaren duurzaamheid als te nemen investeringsmaatregelen in energiebesparing, het verminderen van het gebruik van gas en terugdringen van CO2-emissies, zoals in convenanten is opgenomen. De conclusie in de case study is ook, dat duurzaamheid niet geïntegreerd is in de strategische besluitvorming. Het construeren van een betekenis aan duurzaamheid door individuen en groepen leidt niet tot strategische besluiten die op duurzaamheid zijn gebaseerd. De waarden die in betekenigsgeving worden gebruikt, verschillen van de waarden die bij de keuze zelf worden gebruikt. Blijkbaar gebeurt er iets na de betekenisconstructie van duurzaamheid die verhindert dat duurzaamheidswaarden invloed hebben op het proces van het wegen van alternatieven en de uiteindelijke keuze voor één alternatief. Theoretisch kan dit worden verklaard door de impact van groepsregels, of -mechanismen die zich ontwikkelen of worden ontwikkeld, die invloed hebben op het nemen van besluiten (Kaplan, 2008). Gebruik van macht en de wens om te conformeren aan de groep kan voorkomen dat meerdere frametypen worden gebruikt in het proces van strategische besluitvorming.

Duurzame waarden wegen (nog) niet op tegen de traditionele waarden als kostenefficiëntie en betaalbaarheid die gebruikt worden in het proces van strategische besluitvorming.

Frames stellen beslissers in staat snel beslissingen te nemen. De vraag is dan, of het mogelijk is om strategische besluitvorming te ‘organiseren’ op een meer bewuste manier (Kahneman, 2011) waarbij oog is voor de lange-termijn. Het bewust gebruik maken vaan meerdere frametypen in het strategische proces van besluitvorming, van meervoudige waardesystemen zoals voorgesteld in het herziene conceptual model, kan echter leiden tot conflicten. Als meerdere frames aan de oppervlakte komen in strategische besluitvorming, dan is de vraag hoe ze convergeren in de keuze voor één alternatief. De internalisering van meerdere, op duurzaamheid gebaseerde frametypen in het proces van strategische besluitvorming vereist een open geest en de bereidheid om de besluitvormingsroutine te veranderen. De huidige routine is gebaseerd op het economisch frame, wat impliceert dat de ecologische verandering wordt gefilterd, en daardoor blijven sommige gebeurtenissen, hoewel strategisch van aard, onopgemerkt blijven (‘bounded attention’). De ecologische crisis bijvoorbeeld echter, vraagt om reframing.

1 INTRODUCTION

1.1 CHALLENGE

The “elephant” in the title of this thesis refers to an uncomfortable truth complicating the dynamics in strategic decision-making in organisations. Elephants are often big enough for everybody to see, but no one seems to be willing to address them. Marking the planet’s diminishing biocapacity and the continuing biodiversity decline as elephants, one wonders if these issues are taken into account in organisational strategic decision-making.

The concept of sustainable development captures the interdependencies between economic development, ecological problems and inequalities between rich and poor, developed and developing nations. Sustainability asks for balancing social, environmental and economic values in strategic decision-making (Elkington, 1999). Many organisations recognise the importance of social and environmental values in addition to profit values and account for sustainability in their strategies, activities and decisions (Bonn & Fisher, 2011; Elkington, 2013; Epstein & Buhovac, 2014). In spite of this recognition, the ecological crisis has not been mitigated, the quality of ecosystems continues to decline and biodiversity loss is not halted (Arrow et al., 1995; Global Environment Outlook 5, 2012; Milennium Ecosystems Assessment, 2005; Rees, 2003; WWF, 2016)[1]. Integration of ecological values in decision-making processes is urgent (Jacobs et al., 2016) but most tools that have been developed are geared towards a single-value approach (WBCSD, 2009) and monetise ecosystem values (Menzel, 2013).

Organisations have grown accustomed to the limitless availability of natural resources or assume that they somehow are replaceable by technological innovations, but technology, together with the scale and growing intensity of human activity, causes environmental damage (Farla, Markard, Raven, & Coenen, 2012; Gardner & Stern, 2002; Krutilla, 1967; Odum & Barrett, 2005). Most organisational strategies and decisions are based on economic values and overlook social and ecological values (Bieker & Waxenberger, 2001; Elkington,

[1] See also https://www.unenvironment.org/explore-topics/ecosystems/what-we-do/accounting-ecosystems, date of retr. 2018/11/07

1999; Figge, Hahn, Schaltegger, & Wagner, 2002; Laufer, 2003; Sekerka & Stimel, 2012; Senge, Smith, Kruschwitz, Laur, & Schley, 2008).

The use of the word 'values' in the economic domain usually refers to gaining monetary value and is based on a utilitarian willingness-to-pay. Making decisions imply valuations, which refers to the mental process of estimating the worth of something (Costanza et al., 2017). This represents one side of the concept, i.e. values of objects (Van der Linden, 2012). The other side of the concept values is that they are proscriptive beliefs upon which a person acts by preference and which have cognitive, affective and behavioural components. Values, to be found in the minds of actors, are the ideas and beliefs that influence and direct our preferred choices (Rokeach, 1973). Choices made by members of an organization reflect the values that are strived for (Simon, 1976). Actors may vary in the ranking of the values they hold and to the strength in which particular values are hold compared to others. It is interesting to investigate if sustainability leads to a change in this ranking of values, and hence if sustainability is reflected in the strategic choices made by an organisation.

This issue is studied in a Dutch housing association. In the next section an explanation is given of why a housing association is a good case for studying sustainability and strategic decision-making. Section 1.3 points to the role of values and frames in the process of strategic decision-making, and the consequence of sustainability for these drivers of choice. The objectives of this study are described in section 1.4, followed by the research questions and chosen methods in section 1.5. In the last section of this chapter an outline is given of this thesis.

1.2 Sustainability and Dutch housing associations

Over the past several decades, humans have changed ecosystems more rapidly and extensively than in any comparable period in human history. The rising demands on resources are diminishing the earth's biocapacity. Threats to biodiversity are often grouped under five headings: 1) habitat loss, fragmentation or change, especially due to agriculture; 2) overexploitation of species, especially due to fishing and hunting; 3) pollution; 4) the spread of invasive species or genes and 5) climate change. These pressures are either constant or increasing in intensity (GBO3, 2010). Human actions play the central role in environmental problems but that role is not confined to the actions of individuals. Most of the destructive activities are caused by organizations (Gardner & Stern, 2002).

Although every organisation's licence to operate and all economic activity depends on the biocapacity of the earth, and in spite of ratified international conventions and treaties, ecosystems are being degraded and the planet's capacity to provide us with ecosystem services is diminishing, which conflicts with economic development (Costanza et al., 2017).

The building sector in general depends and impacts heavily on the quality of the local and global physical environment. Construction of houses consumes a considerable amount of valuable environmental resources, such as wood, minerals, energy and water (Chang, Wilkinson, Brunsdon, & Seville, 2011; Haase, 2009; Holden, 2004; Huovila & Koskela, 1998; Kim & Yu, 2018). Buildings consume a third of the global energy use (fossil-fuel-based) and contribute significantly to CO2 emissions (WBCSD, 2016[2]). Housing is of considerable importance for environmental, social and economic sustainability (Bhatti, 2001; Dong & Ng, 2015; Priemus, 2005; Priemus and Ten Heuvelhof, 2005; Tosics, 2004; Winston, 2009). Decisions about design, location, equipment, surrounding infrastructure and maintenance have significant negative effects on the quality of the local and global environment (Huby, 1998; Power, 2008; Winston, 2010; Winston & Pareja Eastaway, 2008).

In the Netherlands, about 2.2 million out of 7.2 million houses (CBS, 2017) are owned by housing associations that perform a public task, providing lower income groups with affordable housing. Housing associations are private organisations, which means that within institutional arrangements, they decide upon allocation of resources and strategies with respect to the quality of the housing stock and their impact on the environment.

Sustainability offers a concept to build strategies and decisions for housing which integrates ecological, social and economic values. In recent decades, housing associations have begun to recognise that they have an important role in creating a sustainable built environment. Existing buildings account for 38% of the total energy consumption in Europe, and 36% of the CO2 emissions (Filippidou, Nieboer, & Visscher, 2017). The Dutch housing associations contribute significantly to the emission of greenhouse gases (GHG), since approximately one out of three houses in the Netherlands is owned by them. The long-term goals of the 2015 UNFCC Paris climate deals, signed by 195 UNFCC members, require contributions from each individual nation towards preventing an increase

[2] http://www.wbcsd.org/Projects/Energy-Efficiency-in-Buildings, date of retr. 2017/01/10

in the global average temperature, and towards converting to the use of renewable energy sources. The EU's goals regarding energy renovation are to reduce GHG emissions by 20% in 2020, and by 40% in 2030 (European Commission, 2011, 2014). These international goals were incorporated into the Dutch national Energy agenda (2016) in which the aims were to achieve an 80–95% reduction in CO2 emissions by 2050. In the 'Woonagenda 2017–2021' and the Aedes 'Routeplanner', the target for Dutch housing associations is set at an average energy label of B in 2021 and CO2-neutral dwellings in 2050.

The Aedes covenants of 2008 and 2012, and the Green Deals of 2017 show that the relevance of sustainable development is generally acknowledged within the Dutch housing sector. However, analysis of the pace of renovations in non-profit housing stock shows that there is very limited progress towards national and international targets (Filippidou, 2018). The focus in decision-making lies mainly on affordability of housing for their target group, optimising business efficiency and securing financial continuity (Nieboer & Gruis, 2016). Sustainability is but one of the aspects and relatively new compared to these traditional values and targets. This research aims to explore how housing association professionals make sense of sustainability and how this converges in their decision-making process.

1.3 Sustainable strategic choices

Although sustainability is defined in many different ways, it is intended to explicitly connect the ecological system to the social and economic system. In this thesis its three-dimensional value system is used to study strategic decision-making. The growing attention in society to sustainability is seen as a trigger for strategic decision-making. This research adopts a systemic view (see e.g. Boulding, 1966; Czarniawska, 2005; Stacey, 1995; Von Bertalanffy, 1950) of the dependencies and impact of housing associations on the quality of ecosystems.

By acknowledging strategic decisions as being at the heart of organisational behaviour, which are multi-disciplinary, integrative and long-term in nature (Eisenhardt & Zbaracki, 1999; Gavetti & Rivkin, 2007; Mintzberg, Raisinghani, & Théorêt, 1976; Nutt, 2010), a systems perspective implies a need to connect sustainability and integrate sustainable values into strategic decision-making. The stages preceding choice are characterised by sensemaking. Sensemaking, defined as ongoing processes aimed at construction of meaning, is triggered by disruptive events that cause doubt and uncertainty and start when a connection

is made between the value systems of the actor and the event. The aim of incorporating ecological, economic and social values into decisions is to reach balanced, sustainable decisions and, subsequently, sustainable organisational behaviour (Elkington, 1999; Kolkman, 2005; Schaltegger, Beckmann, & Hansen, 2013).

DECISION THEORY

Debates in decision research lead to the gradual replacement of models of rational choice with the development of procedures and criteria to de-bias decision-making (Kahneman, Lovallo, & Sibony, 2011; Lipshitz, Klein, Orasanu, & Salas, 2001; Schwenk, 1995; Hodgkinson & Starbuck, 2008). There is a development from decision-making as a deliberate and analytical process based on information processing to decision-making as empirical-based prescription in naturalistic decision-making (abbrv. NDM, see Klein, 2008). Naturalistic decision-making focuses on the shaping features of the contexts in which decisions are made, and emerging patterns of thinking and interaction preceding choice (Courtney, 2001; Mintzberg, Ahlstrand & Lampel, 2005). This development to empirical-based research in naturalistic decision-making ratifies a study which focuses on empirical objectives.

Strategic decision-making in particular is characterised by novelty, complexity and open-endedness (Mintzberg et al., 1976). The many perspectives with respect to strategic decision-making lie on the spectrum of positivism, post-modernism and social constructivism and are summarised in Mintzberg's ten schools ((Mintzberg, Lampel, & Ahlstrand, 2009). This research combines perspectives and defines strategic decision-making as an ongoing process of (inter)actions and influencing, dynamic factors that begin with the deliberate search for or identification of an event or decision situation that is little understood, is non-routine and ends with a specific commitment to action[3]. The word strategic refers to long-term, integrative and multidisciplinary. Strategies are

[3] According to Mintzberg, strategic decision-making consists of three stages: (1) the identification of the decision to be made, (2) the development of alternatives and (3) a selection phase. Each phase is supported by seven central routines and six dynamic factors that support explanation of the relationship among the central and supporting routines ((Griffith, Northcraft, & Fuller, 2008; Mintzberg, 1976).

aimed at raising resilience, it concerns behaviour that is intended and affects the organisation's licence to operate.

A large part of the literature focusses on routinely made decisions by individual decision-makers. However, these routines seem far less significant than the stages in which the decision situation or event is diagnosed, or where alternatives are designed, and how managers socially construct their organisational worlds and their environments (Balogun, Pye, & Hodgkinson, 2008; Lipshitz et al., 2001; Mintzberg et al., 1976). Focusing on emerging patterns in interactions and the way interactions are synthesised in choice (Mintzberg, Ahlstrand, & Lampel, 2005) means studying strategic decision-making from a social cognition perspective. Cognitive scientists distinguish between two extreme modes of thinking: intuitive and reflective (Courtney, 2001; Kahneman et al., 2011). The first mode includes innate and learned skills and makes it possible to generate representations of reality through associations in a fast, effortless, routine way. This mode of thinking leads to intuitive, unconsciously made decisions, with a short-term focus. The second mode, referred to by Kahneman (2011) as slow thinking, requires conscious attention for events that result in deliberate decisions with a long-term focus. In the strategic cognition perspective, both individual and collective mental processes are taken into account. Strategic decision-making in this view starts when an event is noticed, or signalled, and connected to frames that are used to socially construct meanings of these environmental events, as described in sensemaking theory (Weick, 1995, 2005).

SENSEMAKING THEORY

Weick (1995, 2011) argues that the focus of organisations should be set on the process of transforming ongoing interdependent actions into a sensible order. According to Weick, sensemaking is aimed at rationalising what people are doing; it is about the ongoing retrospective development of plausible images (Weick, 1995, Weick et al, 2005). Organisations are sensemaking systems that aim to create and identify events, and make the environment more predictable. Individuals and teams cope with surprises, violated expectancies or uncertainties and doubt through the process of sensemaking (Cziarniawska, 2005; Klein, 2008). Sensemaking is activated by the question 'same or different' (Weick, Sutcliffe, & Obstfeld, 2005). The process of sensemaking is social in nature and therefore may be constrained due to executing influence over other people (Gioia & Chittipeddi, 1991; Weick, 1979, 2015).

Required for sensemaking is a connection between an event and the frame of an actor (Weick, 1995). A frame includes the actors' assumptions, interests, values and beliefs (Kolkman, 2005). The meaning of available information to a specific actor is the result of an interpretation and valuation process that occurs within this 'frame of perception'. Weick et al. (2009) state that ecological change is made meaningful when people enact their environment. After enactment, the number of possible meanings is reduced in the selection stage. In the last stage, the constructed meaning is retained in order to save what has been learned. The process of sensemaking is conceptualised in Figure 1.

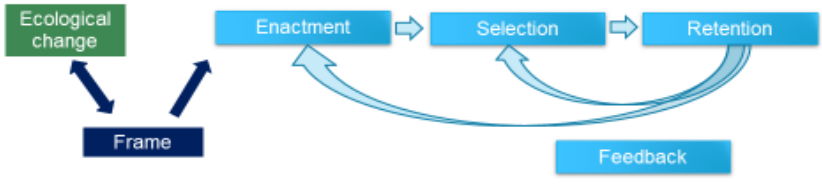

Figure 1 Process of sensemaking, based on Weick (1995, Weick et al. (2009)

Following Weick, people can be expected to pay attention to and enact ecological change when it has three properties: (1) complexity, (2) information load and (3) turbulence (Weick, 1995: p. 86, Weick et al., 2009). An increase in complexity increases perceived uncertainty but also greater search for and reliance on habits and routines (Weick, 1988). Using routine can lead to a greater discrepancy between what occurs and the way people respond to ecological change. Signs of that are considered unbelievable – but do happen anyway – and may be ignored or not enacted. Especially when events or information are perceived as distant (in time and/or place) the idea of threat may be pushed to the periphery, in which case sensemaking does not even start (Weick, 1995). The availability of information on environmental decline for instance does not lead to changes in existing meanings nor to better decision-making (Balogun, Pye, & Hodgkinson, 2008). Weick (1995) suspects that turbulence throws people back on whatever heuristics for noticing they know best and those which are rewarded and practised most often in their firms. As turbulence increases, so too does the use of intuition and heuristics.

Sensemaking theory serves to gain more understanding of the complexity of how organisations socially construct plausible images of ecological change. The greater the variety of beliefs in the organisation, the more fully should any

situation be seen, the higher the number of solutions that should be identified and the more likely it should be that someone knows a great deal about what is happening (Weick, 1995).

However, using the concept of sensemaking alone to analyse the impact of sustainability on organisational behaviour as a 'new' or additional factor leads to several research challenges. The first challenge is that sensemaking theory does not offer support in analysing the way disruptive events lead to *reframing*, where other scholars state that any substantive change results in alteration of existing values and meanings (see e.g. Conner, 1998; Gioia & Chittipeddi, 1991; Scharmer, 2009; Van Marrewijk & Werre, 2003). This raises the question of whether collective meaning construction of sustainability results in sensible sustainable organisational behaviour without reframing (Cramer, Jonker, & van der Heijden, 2004). Sensemaking is set apart from decision-making (Weick, 1995, 2011; Weick et al., 2005), which provides a challenge to connecting strategic decision-making with the process of meaning construction. Making sense of events that have occurred, by using past experiences, may not provide a coping strategy for the future. The question is what happens with a diversity of (decision) alternatives, supposedly generated and designed by individual decision-makers in a collective process of meaning construction, in the stage of synthesis and strategic choice. In this research, a more specific challenge is that little is known about the ongoing, cyclical process of sensemaking preceding strategic choice within Dutch housing associations, especially in relation to sustainability.

The concepts of frames and framing are necessary for analysing sensemaking. Analysing of the meaning constructed of sustainability by strategic decision-makers, individually or collectively, implies looking into the way they connect to (disruptive) events. This connection is determined by the frames of decision-makers. Frames, defined as filtering devices that consist of the values and beliefs of actors, structure the context in which the organisation operates, and so contextual factors influence sensemaking indirectly through the frames of actors in the organisation. Within the frame, information is judged and synthesised into a problem solution, or choice (Kolkman, 2005). In this way, frames connect sensemaking to strategic decision-making.

The central question is if sustainability, representing an integrated concept balancing people, planet and profit values, is integrated in strategic decision-making of organisation. Although sustainability aims to balance ecological

developments with social and economic developments, within the Dutch housing associations sustainability seems foremost to be interpreted as raising the energy performance of buildings, and housing associations seem to focus on traditional activities (Nieboer & Gruis, 2014). Embracing the central role of strategic decision-making in responding to environmental changes and in guiding the organisation towards enhanced resilience leads to the question of whether sustainability as a disruptive event, is enacted, and what frames and values are used by decision-makers when they connect to their environment. This study discusses the connection between sensemaking and strategic choice in the context of a 'new' event, sustainability. In theory, no answer is found to the question of how possible conflicts between traditional values and new values[4] are solved and whether the values representing sustainability are integrated in strategic choices made by housing associations.

1.4 Empirical and theoretical study objectives

This study focuses on the process of sensemaking by individuals and teams in real-time decision environments. Placing this study in a combined approach using naturalistic decision-making, strategic cognition and transdisciplinary research, a method is designed to enable studying the role of frames – and values - in sensemaking and decision-making in practice. Sustainability is considered as an event that triggers these processes since it makes decision-makers doubt their prior understandings. This thesis discusses the meaning given to sustainability and the impact on strategic choices. Accepting the relevance of frames for sensemaking makes one wonder if the frames and values that guide meanings constructed of sustainability by strategic decision-makers are also used in in strategic choices.

Although the emphasis is on contributing to empirical aims, contribution to theory emerged during the research. Using grounded methods, this research did not start with the formulation of hypotheses based on a specific theoretical lens. The theoretical relevance of this study is that it focuses on the relevance of frames for the process of strategic decision-making, frames connect sensemaking to decision-making. This research suggests that this connection could be made more distinct.

[4] Sustainability as an integrative concept aims to balance values from three dimensions (Elkington, 1999) in decision-making.

The empirical aim of this research is to describe the way in which sustainability is integrated into the strategic decision-making of a Dutch housing association and to explore which factors influence this process. Describing events identified by decision-makers as strategic in nature shows which frames guide situational awareness. The meanings constructed of sustainability indicate the frames and values of individuals and teams of decision-makers. Identifying factors that influence the integration of sustainability in strategic decision-making enables establishment of a connection between sensemaking and strategic decision-making. The relevance of this research for strategic practitioners is that it provides insight into factors influencing, positively or negatively, integration of sustainability in strategic decision-making, by focusing on the stages preceding strategic choice. These stages are usually not given much attention in practice. In the western world, strategic choices are made with the focus on solving problems and not on analysis of decision situations (Weick, 1995). In practice, strategic decisions are often made based on one alternative. Focussing attention on 'hard' decision criteria alone can lead to neglect of the essential role of an ongoing process of sensemaking, frames and values and their impact on decisions, and in the end the impact of these decisions on our environment. The frames and values of individual strategic decision-makers may remain invisible in conversations and social constructions of meaning of sustainability due to mechanisms that influence group processes. However, diversity of frames in strategic decision-making augments the chance of using a more sustainable, more balanced strategy and hence the organisation's licence to operate.

1.5 Research questions and methodology

1.5.1 Research questions

This research firstly aims to improve understanding of strategic decision-making and the way sustainability affects this process. Through studying the concept of sustainability and acknowledging the relevance of values and frames for sensemaking and decision-making a framework is developed which supports decision-makers in seeing and making sense of environmental events from an integrated perspective, developing decision alternatives using the concept of sustainability as an integrative frame and reaching a synthesis when choosing one alternative acknowledging a diversity of values.

By studying and describing decision-making and exploring integrating mechanisms and factors that contribute to more sustainability-based strategic choices, this research contributes to a better understanding of the foundations of strategic choice and the results may be used to improve sustainable organisational behaviour. Studying the processes of sensemaking and strategic choice answers why e.g. a major crisis such as biodiversity decline is initially disregarded in the minds of decision-makers. Searching for values and influential factors in strategic decision-making and reviewing aspects of an organisation that operates in and impacts on the quality of local areas may generate useful results for other organisations, be it in the Netherlands or abroad, that are involved in the governance of the development of local environmental quality.

The main assumption in this thesis is that if the values that are used to make sense of sustainability belong to an economic frame, this frame will also be used when making choices. Consequently, the chance that organisational behaviour transforms into sustainable organisational behaviour will be nil.

The sensemaking paradigm enables a focus on the frames and values that are used when making sense of events, and supports an explanation of why that environmental data are overlooked or ignored. The stages differentiated in meaning constructions may be of help in finding an answer to the question of why strategic decisions are not based on integrated values and provide room for exploring how to change the old ways of making decisions.

This research is centred on finding an answer for the following question:

> Which meaning is given to sustainability within a Dutch housing association and does making sense of the concept of sustainability lead to sustainable strategic choices?

To answer the central question, several component research questions will be addressed in this thesis:

1. What is the (theoretical) meaning of sustainability, particularly in the Dutch housing association sector?
2. What is the role of frames and values in strategic decision-making from a decision theory perspective?
3. Which meaning of sustainability is constructed by individual decision-makers and teams of decision-makers and which meaning of sustainability is reflected in strategic choices?

4. Which frames and values can be identified when actors (individual decision-makers, teams of decision-makers) make sense of the concept of sustainability and which frames and values can be identified in strategic choice?
5. Which factors influence the embedding / integration of sustainability in strategic decision-making?

1.5.2 METHODOLOGY

The central question will be answered through a longitudinal, in-depth investigation of strategic decision-making within a single Dutch housing association (Welbions).

RESEARCH PHILOSOPHY

Climate change, biodiversity decline and the deterioration of ecosystem quality could be framed as an observable reality, as components of our planetary system, which are present with or without being noticed or interpreted by humans. But it is in the way humans see, interpret and analyse reality that lies behind the constructionist approach of this study. The ontological position is that reality and knowledge are considered to be subjectively interpreted and constructed in human interactions (Creswell, 2003, 2012; Denzin & Lincoln, 2008; Silverman, 2013). In the social-constructivist approach to knowledge development, events come into human life when people observe their existence. To conceptualise these events and create an image of them, people talk to trusted, knowledgeable others and construct a meaning.

Research from a social constructivist-interpretive philosophy can be characterised as in-depth investigations. Decisions at the strategic level are made in local interactions by informal and formal groups of decision-makers. A reliable study of strategic decision-making from collecting and analysing organisational documents is difficult (Mintzberg et al. 1976). Developing an understanding of the reality in which organisations function, the interaction processes through which members of the organisation individually and collectively make sense of this reality, and the choices they make that guide their actions requires analysis of written and spoken words. The frames and values of actors – individuals or groups – guiding their construction of reality can be elicited by analysing text and talk, which also implies that this research is qualitative in

nature. In accordance with Schön & Rein (1996), frames are constructed from the words and texts used in the processes of meaning construction and making choices with respect to sustainability.

This study is approached from a combined critical realist and social constructionist stance. Critical realists accept that objects can exist independently of the human mind (objectivist stance); when noticed, humans are tricked by what they see[5] and what they see is merely a partial image of reality[6]. This means that some things or events may remain unnoticed. As stated above, executing a study from a social constructivist view means accepting that reality only comes into human existence when it is seen, analysed, interpreted and given meaning, when reality is socially constructed (Silverman, 2013). Understanding how strategic decision-makers construct and create knowledge about the natural world requires studying the way they frame reality. Elicitation of the perceptions and observations of sustainability and environmental issues, especially by groups of decision-makers involved in strategic decision-making, and the sense they make of factors influencing the process of strategic choice requires the researcher to enter that social world (social interactionism[7]). Studying strategic decision-making is possible through investigation of deciding in a naturalistic setting.

While conventional analysis of decision-making seems to be more static (e.g. probabilistic research, artificial intelligent information processing), dynamic studies of strategic decision-making are more holistic in nature. These dynamic studies emphasise the significant role of time and context – factors and social influence processes – in ongoing, cyclical processes of sensemaking that precede choice. The latter refers to the influential role of group mechanisms in strategic decision-making in practice, and compliance with 'soft' criteria, which are often more important than the quality, or integrated nature of the decision proposal. 'It is only in following the shifting dynamics of the aligning of interpretation and influencing processes over time and in context that it is

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[5] See e.g. the Muller-Lyer experiment, in (Kahneman, 2011: pp. 26-28).
[6] Reality can only be understood if we understand the social structures that condition our knowledge of reality (Bhaskar, 1989 in Saunders, 2012: p. 136).
[7] Studying mind processes and social construction of meanings in organisations is believed to be value-laden and not value-free. A researcher needs to interact socially to be able to collect data. This means that the researcher's values possibly influence other actors' assumptions and may be influenced by others (Silverman, 2007: p.16). In compiling a list of uninterpreted data there is always transformation, an intervention between researcher and raw data (Bateson, 1972).

possible to observe and monitor skilful practice, and its impacts and outcomes.' (Balogun, Pye, & Hodgkinson, 2008: p. 244).

This research is longitudinal in character. To make results more trustworthy and verify outcomes that are qualitative in nature, this study will use multiple data sources and data collection methods, which is common in studies in a naturalistic setting (Klein et al., 2003; Punch, 2005). It helps to overcome weaknesses associated with using only qualitative data (Tashakkori & Teddlie, 2010). Using multiple methods also contributes to overcoming the disadvantages of studying one case in depth.

The general method used in this research to analyse and interpret the data is Grounded Theory[8]. The aim of using grounded theory is to generate a theory from the empirical data. This method is suitable if there are no available predefined hypotheses (Punch, 2005). As stated earlier, the connection between sustainability research and strategic choice is growing. But the answer to the question of how a synthesis is reached when a diversity of frames and values come to surface in strategic decision-making, or when other values interfere with existing values, remains unclear. Therefore a substantive theory is developed inductively from the data.

KEYWORDS

The key concepts used in this thesis are sustainability, individual and collective sensemaking, strategic decision-making and strategic choice, frames and values.

Studying decision-making from a social psychological view – more specifically, social cognition – means studying decision-making as a function of the interaction between the decision-maker(s) and the environment. Actors filter events through their frames. These frames are internalised value systems in the minds of actors and are used to deal with new information or events. This interactionist perspective contributes to a gap in present decision-making studies which usually focus on one level, the level of the individual, the group, the organisational or the industrial level, when studying patterns in strategic

[8] Grounded Theory Methods (GTM) is an analytical approach to qualitative data and makes use of the constant comparative method, which involves four stages: (1) extracting concepts from incidents in analysing a single case, or 'comparing incidents applicable to each category'; (2) categorising concepts and their properties and noting relationships among concepts, thereby reducing the number of concepts; (3) choosing relevant relationships and delimiting the theory; (4) communication of research findings and sharing these with others (Babbie, 2001: p. 361; Punch, 2005).

cognition. Moreover, most group-level analyses are restricted to executive management teams, whereas in strategic decision-making, others besides the members of the management team are also involved. In order to explain the cognitive structure and thinking processes in the team, however, an understanding of how individual, diverse cognitive structures synthesise in a collective mind process (Mitroff & Linstone, 1993), the influence of contextual factors and social influence processes (Chattopadhyay, Glick, Miller, & Huber, 1999) and the role of organisational goals is needed. In strategic management, the cognitive perspective (reflected in the term strategic cognition) is viewed as a legitimate area for theory building and empirical research (Narayanan, Zane, & Kemmerer, 2011). Rooted in the Carnegie School, strategic cognition focuses on linkages between cognitive structure, strategic diagnosis and decision-making. Cognitive structures include (executive management's) beliefs about environment (Daft & Weick, 1984; Maitlis, 2005; Porac, Thomas, & Baden-Fuller, 1989). These cognitive structures enable sensemaking and interpretation processes during diagnosis and choice.

Analysis of strategic cognition at the organisational level depends on the size and life cycle stage of the organisation (e.g. small start-ups), the size of the management team (Haleblian & Finkelstein, 1993) and power distribution within the organisation (e.g. the CEO has centralised power). Housing associations are large enough in size to focus on group-level analysis of cognitive structures underlying sensemaking and choice.

Strategic decision-making is influenced by dynamic factors (external factors and internal mechanisms) and based on values. The influence of contextual factors (external or internal) in meaning constructions of disruptive events or information is filtered through the frames used by individual decision-makers or groups of decision-makers. In-depth insight into the factors, frames and values underlying strategic decision processes is gained through studying the interpretations of sustainability by individual strategic decision-makers and teams of them.

The main idea is to explicate the ways a Dutch housing association makes sense of sustainability and to describe the specific setting in which this is done. The way strategic decisions with respect to sustainability emerge requires an understanding of the sense that individuals and groups make of sustainability, the context in which they function and their existing understandings, frames and expectations. Therefore, the case and unit of analysis studied is strategic decision-making (abbreviated: SDM).

Strategic decision-making is analysed using sensemaking theory. Firstly, data is collected about which events are seen or perceived by strategic decision-makers (dealing with input to SDM). Secondly, contextual factors influencing strategic decision-making , and decision criteria that are actually used in making strategic choices, are derived from data (dealing with throughput in the SDM process). Thirdly, values are retrieved from sensemaking by individuals and teams of decision-makers to indicate which frames are used in the process of strategic choice with respect to sustainability (dealing with output of SDM). Attention is paid to reframing, in enumerating factors that contribute to pro-sustainable, strategic decision-making. Sensemaking theory, frames, reframing and decision theory (design of decision alternatives, weighing and the outcome of the entire process, choice) are used to shed more light on the way sustainability is integrated into the existing practice of SDM within an organisation.

The analytical model will be presented in chapter 4. Although individuals are expected to be influenced by collective sensemaking and vice versa, this influence (to what degree and via which mechanisms) is not studied.

1.6 Outline

In this section a brief outline of the chapters in this thesis and where to find the answers to the research questions is given.

The first research question is:

> What is the (theoretical) meaning of sustainability, particularly in the Dutch housing association sector?

This sub-question will be answered in Chapter 2. Chapter 2 provides an overview of debated themes in human-environment relationships as well as the present most accepted definition of sustainability. International and national policies with respect to sustainability will be described briefly in the context of Dutch housing associations. Acknowledging the relevance of decision-making for organisational behaviour, this chapter will describe the implications of the sustainability paradigm for strategic decision-making in Dutch housing associations. The aim is to understand the foundation of the concept of sustainability, its debate and meaning, and to get an idea of how the concept is transferred into the Dutch housing association sector, based on a review of general literature and policy documents at the sector level.

The next sub-question, research question 2, is:

> What is the role of frames and values in strategic decision-making from a decision theory perspective?

This question will be answered in Chapter 3. Starting from decision theory, sensemaking theory will be put forward and its characteristics described in depth as the most essential stage in strategic decision-making. Attention will be paid to the gaps in sensemaking theory, which are, in short, foremost its lack of empirical proof and its lack of elaboration on its essential component, frames. The essential role of frames and their content and values will be described specifically in the last sections of the chapter. An overview will be given of frame types that were induced after a first data collection period. The chapter ends with a conceptual model that is built after literature studies and a first data collection period (2009–2013). In this model, a number of theories were helpful in organising the patterns that emerged from the data. These theories were strategic management, policy studies, sustainability research, economic studies and social psychology.

In Chapter 4, the analytical model is presented which summarizes the methods of data collection and analyses that are used. The case and unit of analysis to be studied is strategic decision-making.

The way decision-making is shaped requires an understanding of the sense made by individuals and groups in regard to sustainability, the context in which they function and their existing understandings and expectations (Pye, 1995; Weick, 2009; Carreon, 2012; Newell & Simon, 1972). Gaining in-depth insights in the factors, frames and values underlying strategic decision processes is executed through studying the interpretations of sustainability by decision-makers. Descriptions of reality depend on the structure of the human mind (Mitroff & Linstone, 1993); cognitive structures enable sensemaking and interpretation processes during diagnosis and choice[9]. Identification of the assumptions used in solving complex, non-routine problems by groups can be executed through the study of dialectical processes (Bartunek, 1984). Figure 2

[9] March and Simon (1967) divided memory content into (a) values or goals (criteria that serve to determine which action is preferred); (b) relations between actions and their outcomes (beliefs, perceptions and expectations as to the consequences of the considered actions) and (c) alternatives (possible courses of action).

shows the chosen methods to collect and analyse data on sensemaking and strategic choice with respect to sustainability.

What	How	Analysis
Meaning of sustainability (individuals, teams, organisation) and dominant perspective used in meaning construction and choice	Interviews Participant observation Documents reflecting strategic choices Literature review	Categorisation of meanings using codes per dimension of sustainability (the sensitising concept)
Factors and mechanisms influencing meaning construction and choice	Literature review (social psychology, decision theory) Interviews Field notes from (participant) observation Documents	Surfacing and categorisation of data with use of three relationships (Hoogerwerf,1989): values-norms (thinking about desired results of sustainable strategy); cause-effect (identification of factors causing sustainability to be a strategic event); motives and means (analysis of assumptions and beliefs with respect to sustainability and current SDM and used decision criteria)
Frame types used in meaning construction and choice	Categorisation frame types based on literature Labelling data from interviews, observations and documents Identification of values in factors and decision criteria Connecting values to frame types	Listing frame types, values and decision criteria based on literature Using this list to limit values and connect these to empirically collected factors and decision criteria

Figure 2 Research methods.

Strategic decisions are made by individuals and by a collective of individuals, usually the top management team (Amason, 1996; Gioia, 1991; Senge, 1996). Strategic cognition studies are usually centred on studying the upper echelons or top management team within an organisation. This research is designed to investigate three levels of decision-making in the organisation: (1) individual level: perceptions, values and norms regarding SDM (descriptive) and exploring factors that contribute or prevent sustainable strategic decisions; (2) group level: mechanisms, values and norms that influence the interactions within a group with respect to sustainability and the process of meaning construction; (3) organisational level: attention to sustainability in choices made. Data is collected in three time periods, at one organisation, between 2009 and 2018.

The organization that is studied is a Dutch housing association. Collected data is analysed using grounded theory. Grounded theory indicates that an iterative process of empirical data collection (in three time episodes) and literature study is used to find concepts. Data is reduced, displayed and verified (Punch, 2005; Saunders, 2012). These concepts indicate patterns in individual and collective sensemaking and illuminate factors, frames and values influencing and underlying SDM in the context of sustainability as event. Sustainability is used as a sensitising concept. Its three dimensions are given codes via enlisting keywords from a number of theories that address each dimension: organisational/strategic management, economic theories, social psychology and ecology.

Research question number 3:

> Which meaning of sustainability is constructed by individual decision-makers and teams of decision-makers and which meaning of sustainability is reflected in strategic choices?

This question will be answered in Chapter 5 (individual sensemaking) and 6 (collective sensemaking and strategic choice). The answer as to which meaning is constructed by individual decision-makers is found by interviewing key decision-makers in three periods: 2009, 2012–2013 and 2017. The collective meaning constructed of sustainability is found by (participant) observation during the three periods (2009–2010, 2010–2012 and 2017). The way sustainability is reflected in strategic choice is investigated by collecting and analysing documents in the three time stages.

The following research question, number 4 is:

> Which frames and values can be identified when actors (individual decision-makers, teams of decision-makers) make sense of the concept of sustainability and which frames and values can be identified in strategic choice?

This question will be answered in Chapter 7. The answer to the question is found firstly by identifying values in the strategic issues and factors, as well as decision criteria that are collected from individuals, teams and documents reflecting strategic choices, and secondly by connecting the identified values to the frame types that were described in Chapter 3.

Finally, research question 5:

> Which factors influence the embedding / integration of sustainability in strategic decision-making?

This question aims to find factors that enable sustainability to be the frame used in making strategic decisions. The answer to the question is mainly based on the factors that were mentioned by individual decision-makers. This question will be answered in Chapter 7. By combining theoretical and empirical insights I will answer the question of whether constructing a meaning for sustainability results in sustainable strategic decisions and which factors contribute to sustainable values to substantiate/underpin strategic decision-making.

Chapter 8 then concludes this research and presents reflections and issues for further debate.

The research process is visualised in Figure 3. The green boxes on the left side of this figure show the preliminary research and inputs used for making choices about the research area, research questions and research design (the first three blue boxes in the middle of the figure). The strategic event studied is sustainability (first red box, right side of the figure). Sustainability was used as sensitizing concept, which provided an analytical framework. The context in which strategic decision-making is studied is the Dutch housing association Welbions (second red box on the right side). The red boxes then enabled answering the first research question.

The boxes Data collection 1 and Data analysis 1 refer to the first stage of this research in the years 2009 to 2011. The results from this first stage (box Results part 1) gave rise to reviewing literature in the field of decision theory, strategic management, sensemaking and sustainability. Data collection 2 and Data analysis 2 refer to the second stage of the research, 2011-2013. The results from this stage (box Results part 2) lead to further literature studies on frames and values. The results from these literature review answered the second research question and the results from the three stages (Results part 1, 2 and 3) answered research questions 3,4 and 5.

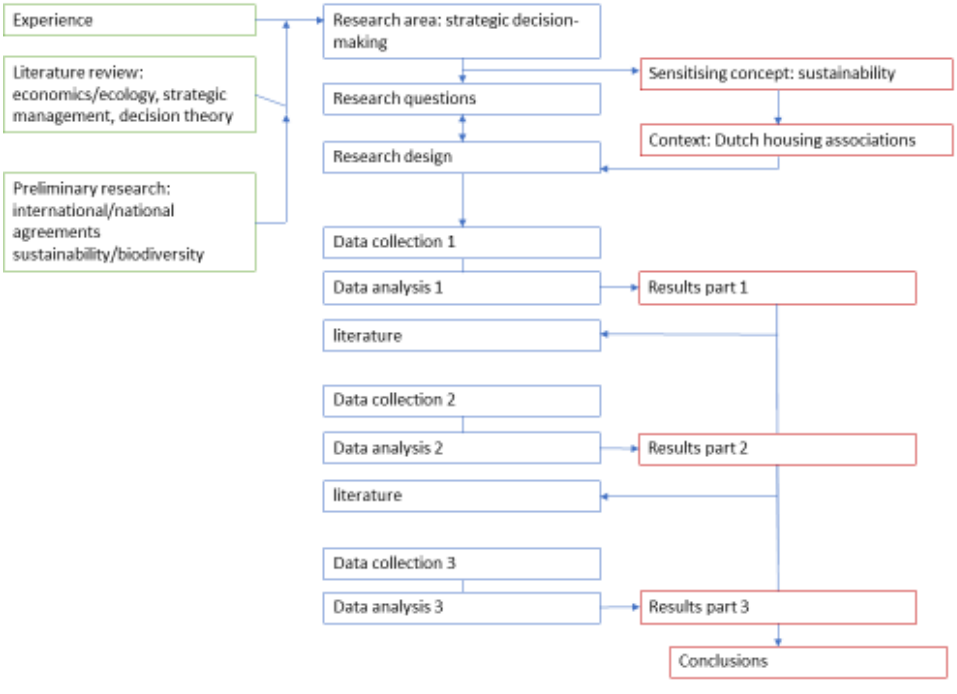

Figure 3 Research process.

Table 1.1 shows the outline of this thesis.

Table 1.1 Outline of this thesis

Chapter	Aim	Research question
2	Examine the background and meaning of the concept of sustainability and the meaning that is attached to this concept in the Dutch housing associations sector (see pp. 43–59)	What is the (theoretical) meaning of sustainability, particularly in the Dutch housing association sector?
3	Clarify the essential role of frames and values in sensemaking and SDM (see pp. 59–91)	From a decision theory perspective, what is the role of frames and values in sensemaking, which precedes choice?
3, 7	Describe and explore factors/mechanisms that lead to synthesis in group decision-making processes (taking a social psychology/social cognition perspective, assuming that sustainability means surfacing of different frames, and that diversity of frames leads to conflict, see pp 59-91, 265-317)	Which factors and mechanisms influence the embedding of sustainability in strategic decision-making (which factors enable reframing)?
4	Design methods for data collection and analysis of meanings constructed by individual decision-makers, teams of decision-makers and strategic choice with respect to sustainability (see pp 91–117)	Which methods in the interpretive-constructionist stance of data collection and data analysis are suitable for investigating strategic decision-making in an organisation and deliver a study that addresses methodological rigour and a useful practical result?
5, 6, 7	Describe the meaning of sustainability, identify values used in making sense of sustainability, and frames of strategic decision-makers to raise our understanding of the frames used in SDM, with respect to sustainability, in a Dutch housing association (Welbions) (see pp 117-317)	Which meaning of sustainability is constructed by individual and teams of decision-makers, and as reflected in strategic choices? Which frames and values can be identified when decision-makers make sense of sustainability and in strategic choices?

2 SUSTAINABILITY

2.1 INTRODUCTION

This chapter deals with the following research question what is the (theoretical) meaning of sustainability, particularly in the Dutch housing association sector? The relationship between human development and environmental development has been debated for centuries. The reason behind ongoing debates on sustainability lies perhaps foremost in (organizations of) humans not behaving in a sustainable manner. Since the report of the Brundtland commission (WCED, 1987), this debate is captured in the concept of sustainable development in which human and environmental developments are explicitly related. A definition in itself, however, does not lead to an easily applicable way of transforming organizational behaviour into sustainable organizational behaviour.

Moving forward to a sustainable society requires a connection between the concept of sustainability and organizational decision-making (Gibson, 2006; Janeiro & Patel, 2015; Van Kerkhoff, 2016). Sustainability as the fundamental concept to be used in determining organisational behaviour necessitates the balancing of social, environmental and economic values in strategic decision-making (Elkington, 1999; Hahn, Pinkse, Preuss, & Figge, 2014). Therefore, in order to study how sustainability is or can be incorporated in decision-making in organisations, the meanings that are attached to sustainability will be investigated.

Section 2.2 establishes some main themes in the debate on sustainable development and relates the concept to organisational decisions. The meaning of sustainability and the implications of local interpretations of events or ecological change are described in Section 2.3. Starting from the idea that sustainable development (SD) implies a change in the way strategic choices are made, Section 2.4 clarifies the relevance of housing for sustainable development and the impact of sustainability on the decisions made by housing associations.

2.2 DEBATING SUSTAINABLE DEVELOPMENT

For ages there have been debates on the relationship between humans and the environment and a social responsibility for environmental problems (Gardner & Stern, 2002; Jonker, Diepstraten, & Kieboom, 2011). The Industrial Age meant a shift from an organic view of this relationship towards a mechanistic view. In this view, humans dominate nature, and resources are available without limit (Krutilla, 1967; Merchant, 1979). Together with this shift, economic principles were embraced which still underlie our contemporary economic system, such as the idea that the economic system is independent of environmental constraints (Beder, 2011; Holden, Linnerud, & Banister, 2017) .

Although the basic laws of nature have not changed, environmental problems have grown rapidly in the last 60 years. Concerns about the environment were taken more seriously by a group of economists after the Second World War (Beder, 2011; Mathis, 2008. The relation between human beings and the environment has changed due to the growing human population and its power to modify the environment (Odum, 1969). Technological progress does not fully compensate for diminishing quality of ecosystems and up to the present day is still unable to substitute for goods and services provided by nature (Krutilla, 1967). Use of technology in many cases has proven to negatively impact on the environment, causing environmental damage (Gardner & Stern, 2002). In 1972 the famous report by the 'Club of Rome' focused on five critical themes in the sustainability of society: population growth, industrialisation, food production, pollution and overexploitation, and diminishing stock of natural resources. The stock of natural capital is considered irreplaceable and should not decrease in order to enable future generations' well-being (Jabareen, 2008). This is normally referred to as 'strong sustainability'; keeping the stock of natural capital constant instead of consuming it is highlighted by ecological economists and referred to as a criterion of sustainability.

Technological optimism and faith in the ability of markets to overcome scarcity in resources were still dominating economic thinking in the 1980s (Beder, 2006). Perhaps that was the reason behind the publication in 1987 by the World Commission on Environment and Development (WCED) of its report 'Our Common Future', in which the concept of sustainable development, the so-called Brundtland definition, captures the interdependencies between economic

development, ecological problems and inequalities between rich and poor, developed and developing nations. During the UN Earth Summit in Rio de Janeiro in 1992 agreements were reached on a number of international frameworks which put the focus on sustainability[10]. The Rio conference explicitly mentioned the key role of organisations in achieving greater balance between environmental degradation and economic growth[11]. In 2000, eight millennium development goals (MDGs) expressed growing concern for unbalanced societal development. Goals, however, were not reached and new agreements were necessary, such as the Paris agreement on combating climate change in 2015 and the establishment of seventeen sustainable development goals (SDGs) in 2015.

From consecutive ratified international treaties and frameworks, it becomes evident that there is a lack of implementation of sustainability goals and targets. Governmental organisations do not seem to be able to create a sustainable institutional context, enabling a transformation of society into a more sustainable one. Reasons for corporate social responsibility (CSR) activities are instrumental, legitimistic and economic in nature (Mathis, 2008). In 2010 a lack of implementation of the three objectives of the Convention on Biological Diversity showed lack of significant progress in reducing the loss of biodiversity (GBO3, 2010). In 2015, it was concluded that the MDGs were not achieved, hence 17 SDGs were formulated (GBO4, 2014). The lack of implementation is believed to be caused by limited efforts of *organisations* to behave in a more sustainable way and to make progress towards integration of sustainability into business strategies (GBO3, 2010; GBO4, 2014). These reports call for fundamental changes in the way nature is treated at every level of organisational decision-making (Millennium Ecosystem Assessment, 2005).

[10] Agreements were reached on Agenda 21, the Convention on Biological Diversity, the Framework Convention on Climate Change, the Rio Declaration, and non-binding Forest principles.
[11] Agenda 21 supports a shift towards sustainability and greater environmental responsibility through proactive environmental stewardship and self-regulation by business.

The main reason for the ongoing discussion of sustainability is its complexity and its nature, being a dynamic, relative concept that has developed over time under the influence of societal, philosophical, political, cultural and organisational debates (Elkington, 1999; Carréon, 2012; Faber, Jorna, & Engelen, 2005). The sustainability concept is defined in many different ways (see e.g. McElroy, 2008; Carreon, 2012[12]; Ferdig, 2007; Jabareen, 2008; Huovila & Koskela, 1998; Dyllick & Hockerts, 2002). The Brundtland definition of sustainable development continues to be the most commonly agreed upon: 'Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED 1987).

The maturing scientific debate on sustainability is evolving from debating its definition and themes to a more holistic approach (Ferdig, 2007), balancing on a line between sustainability research as a normative science and science as contributor to complex decision-making and practice, for which sustainability implies using a combination of different *values* of a different nature in organisational decisions (Jacobs et al., 2016; Van Kerkhoff, 2016). In the next section the meaning of sustainable development and its implications for organisations will be described.

2.3 THE MEANING OF SUSTAINABLE DEVELOPMENT

The concept of sustainability is defined from many different views but the meaning of sustainability for organisational decision-making is still debated (Angus-Leppan, Benn, & Young, 2010) (Janeiro & Patel, 2014). Sustainability seems over-defined, in the sense that many attempts have been made to create an abstract definition. It is under-defined, since it has often been used in a general way without being based on information or a connection to a particular context (Ferdig, 2007).

Definitions of sustainability and/or sustainable development that emerge tend to reflect conflicting worldviews. Merchant (1979) made a distinction between the organic and the mechanic worldview and three values that underlie these views

[12] Carreon (2012) listed eleven meanings of sustainability.

on the relation between humans and the environment: (1) egocentric values, (2) homocentric values and (3) ecocentric values[13]. In the organic worldview, non-human life forms have as much importance and worth as human life. In the mechanic worldview that emerged in the industrial age, during which machines and technology improved human welfare, humans dominate over nature, including other life forms. This view has been criticised for being too static (Pettigrew, 1992), linear (Henderson & Mitchell, 1997), fragmented (Schendel, 1994) and simple. In a more complex world in which behaviours of individuals, organisations and markets are constantly changing (Farjoun, 2002).

Another distinction is between the expansionist and ecological view (Jepson Jr., 2001). The expansionist worldview is derived from Western empiricist roots and is the dominant social paradigm. In this industrial age view, the economic system is based on the goal of maximum utility and human system growth is virtually unlimited due to the unique capacity of humans to use, adapt and innovate (Jepson Jr., 2001). This view stands in contrast to the *ecological* paradigm which holds the belief that there are limits to the ability of the natural environment to support life forms (Beder, 2006; Costanza & Mageau, 1999; Galli, Lin, Wackernagel, Gressot, & Global, 2015; Gardner & Stern, 2002; Holden et al., 2017; Rees, 2003).

McElroy (2008) states that the Brundtland definition in itself does not even clarify the term sustainability and many people use the term sustainability in many different ways. So, what is the meaning of sustainability? Jabareen (2008: p. 188) identifies seven interrelated concepts of sustainable development, each representing a distinct meaning: ‘sustainable development tolerates diverse interpretations and practices that range between “light ecology”, which allows intensive interventions, and “deep ecology”, which allows minor interventions in nature’.

[13] The egocentric ethic values and judges behaviour from the view of human self-interest; the homocentric ethic values and judges policies, events or changes from the view of welfare for humans in general. In this ethic, humans dominate over other species. The ecocentric values prefer behaviour that benefits ecosystems, even if this means that humans have to sacrifice. In this ethic, environmental quality has an intrinsic value (Gardner & Stern, 2002:48). The first two ethics can be related to industrial economic assumptions that underlie most present decisions.

Although sustainable development is an ambiguous concept for which no single definition and approach exists (Carréon, 2012), two theories that have become agreed upon synthesise different views. The first is the capital theory approach (CTA), the term capital referring to the carrying capacity of the stock of resources (Costanza et al., 1997). The second is the triple bottom line approach (Elkington, 1999), in which creating people, planet and profit values is central to sustainable organisations. Elkington (1999), Gardner and Stern (2002) argue that there is evidence that a shift in values towards an ecocentric ethic, in which there is a preference for behaviour that values environmental quality, is already taking place.

Theories about nature have been seen as implicating the way individuals or social groups behave or ought to behave. In industrialised society the organic view was not lost but in spite of support for the interconnected, interdependent and flexible relations with nature the mechanical worldview dominated most organisations (Senge, Smith, Kruschwitz, Laur, & Schley, 2008). A shift in the economic mindset is needed, starting with accepting that the economic system is bound by the ability of the ecosystem to provide services and products on which the human-made economy depends (Holden et al., 2017; Senge et al., 2008). Because many terms used in interpreting sustainability are grounded in ecology, box 2.1 briefly describes the ecological perspective on the meaning of sustainability.

AN ECOLOGICAL PERSPECTIVE ON THE MEANING OF SUSTAINABILITY

The concept of sustainability is grounded in ecology, referring to an ecosystem's potential for stability while absorbing changes (Jabareen, 2008). The relevance of an understanding of ecology and basic ecological concepts, such as carrying capacity, nutrient cycles, biodiversity and ecosystem services, lies in an understanding of the basic principles required for redesigning the economic system. Principles of ecological sustainability can serve as guidelines in corporate sustainable strategies and for strategic decision-making (Beder, 2006; Dale et al, 2000; Decker, 2016; Holden et al., 2017; Stacey, 1995).

Ecology is concerned largely with studying the system levels beyond that of the organism, patterns in interrelationships and interactions between groups of organisms, between these groups and their physical or abiotic environment (energy and matter) and the functional processes that take place during such interactions (Odum, 1969; Odum & Barrett, 2005). Central to healthy ecosystem functioning are diversity of species and resilience[14]. Systems are open in nature, which means that they receive input (air, food, water) and give off output (Boulding, 1966). The system adjusts to and achieves a stable state through control mechanisms (cybernetics) which require positive and negative feedback (Odum, 1969; Stacey, 1995). Positive feedback is necessary for growth and survival of organisms, while negative feedback provides barriers to growth. The human population, however, does not seem to be capable of self-limitation but is controlled by outside factors. The reason why humans are not able to limit themselves in the utilisation of vital resources (air, water, food) lies in too much positive feedback, or focus on only positive feedback (Odum, 1969).

Box 2.1 An ecological perspective on the meaning of sustainability.

A central theme in the present sustainability debate is the role and responsibility of organisations and their corporate behaviour and decisions (MA, 2005, Royakkers, 2006, Jonker et al., 2011).

Contemporary organisations function in an economic system which is fundamentally based on assumptions as stable preferences, coordination of the market by a system of prices and allocation of resources, rational choice at the

[14] Diversity of species destabilises or stabilises the ecosystem; biodiversity is a fundamental component of long-term ecosystem survival, indicating the healthiness of the system (Parr & Simons, 2007; Wallace & Wallace, 2008) and enhancing the resilience of the ecosystem (Folke, Carpenter et al, 2002; Costanza & Mageau, 1999).

core of decision models and economic agents driven by maximising utility. In industrialised society, management of organisations is focused on efficiency of processes, profit maximisation and labour standardisation (March & Simon, 1967). The question of how resources are used is dependent on administrative decisions made by organisations and not directly on the operation of the market (Coase, 1960). These decisions, however, are primarily based on economic principles, neglecting values related to the generative powers of nature (Kramer & Porter, 2011; Lindenberg & Steg, 2007; Merchant, 1979).

Global access and the growing intensity of resource consumption raises the risk of passing tipping points after which exponential decline in biocapacity will cause entire populations to be wiped out (Meadows et al., 1972; Miller, 1990, in Gardner & Stern, 2002; Rockström, Steffen, Noone, Persson, & Stuart Chapin III, 2009; WWF, 2016). In industrial society, organisations have grown accustomed to the limitless availability of natural resources or assume that they are somehow replaceable by technological innovations (Odum & Barrett, 2005). However, technological progress only temporarily and partially compensates for the depletion of natural resources (Farla, Markard, Raven, & Coenen, 2012). Technology, together with the scale and intensity of (growing) human activity, causes environmental damage, and resources are no longer unlimited available (Gardner & Stern, 2002: p. 206).

Goals of maximising utility, or production, which means trying to obtain the highest possible yield out of ecosystems by extracting and harvesting resources against the lowest possible price (efficiency criterion) conflict with the basic structure of vital ecosystems (Odum, 1969; Ophuls, 1977, in Gardner & Stern, 2002). In current decision-making, the total value of ecosystem services is often ignored or underestimated (Millennium Ecosystem Assessment, 2005). Not all ecosystem services find their way to the marketplace (GBO3, 2010), although they are of essential importance to every organisation. A solution to this issue as suggested by the World Business Council for Sustainable Development (WBCSD) is to develop valuation techniques and tools that quantify the economic value of ecosystem services (Sukhdev & Kumar, 2008). Although these tools support decision-makers in identifying value and assessing the consequences of alternative management options, in this way decisions are still based on economic assumptions of rationality and stable preferences (Menzel, 2013) and

take the market, although agreed to be an imperfectly created economic construct, as the starting point for valuation (Barney & Ouchi, 1986).

The time element has become a massive contributing factor to ecosystem deterioration. There is a tendency to foreshorten the time horizon applied to investment decisions (Elkington, 1999; Laverty, 1996; Liljeblom & Vaihekoski, 2009; Solomon, 2013). Most politicians, business people and media still focus on the economic system alone, focusing their attention on parts and neglecting the whole, and focusing on short-term profits (Senge, 2008: pp. 24–27). Long-term consequences are often not taken into account in organisational strategies and decisions. One example of a bottleneck for the sustainable use of natural resources by businesses is the time lag in the return on investments (Krutilla, 1967). From an ecological perspective it is surprising that decisions made in organisations are still primarily based on economic values and tend to overlook social, ethical and ecological values (Elkington, 1999; Gibson, 2006; Menzel, 2013; Senge, 2008).

SUSTAINABILITY IN THE CONTEXT OF ORGANISATIONS

Defining the sustainability concept did not result in showing organisations how to transfer their decision-making and practice into becoming more sustainable (Carréon, 2012; McElroy, 2008) (Lang, Wiek, & von Wehrden, 2017). However, there seems to be agreement on certain characteristics. Sustainability implies viewing problems in human-environment relationships from multiple perspectives and incorporating ecological, economic and social aspects and values in decisions to reach balanced and sustainable decisions and subsequently sustainable organisational behaviour (Bonn & Fisher, 2011; Elkington, 1999; Gardner & Stern, 2002; Kolkman, 2005; Schaltegger, Beckmann, & Hansen, 2013; Van Kerkhoff, 2016). In 1997 Elkington introduced a three-dimensional translation of the concept of sustainable development for organisations. Organisations are responsible for outcome effects of their operations on the social environment (people), the ecological environment (planet) and economic performance (profit). Environmental and economic problems are in nature social, political and ethical issues. The realisation of the triple bottom line (people, planet and profit) requires changes in the principles and values that underlie governance of organisations (Elkington, 1999).

In applying sustainability, issues emerge and the chance arises that elements are excluded which are relevant to understanding the complexity and interrelated

issues in the relationship between humans and nature. ‘If we are to generate a collective understanding of the significance … we must each consider what sustainability means to us in our particular circumstances’ (Ferdig, 2007, p. 2).

The context in which new meaning is created is always local and therefore influenced by local conditions. According to Homan, (2005) a change in (organisational) behaviour is only possible if events, issues or situations that confront local communities within the organisation are assimilated in the local structure of sensemaking. March and Olsen (1976) observe that most of what we believe we know about elements within organisational choice situations, as well as the events themselves, reflect an interpretation of events by organisational actors and observers. Weick defines organisations as sensemaking systems (Weick, 1995). Under conditions of uncertainty, the social context and processes of social influence are crucial for sensemaking (Pfeffer, Salancik, & Leblebici, 1976).

Sensemaking in organisations is about frames of mind (Weick, 1995). Frames are used to interpret reality (Rein & Schön, 1996), limiting rationality in decision-making. The idea that the meaning of sustainability is created in a local context implies that different meanings may emerge and depend on the frames that are used in organisations by local communities and individual actors. In the cultural school of strategy formation, strategy is referred to as a process of social interactions, and as the collective mind which provides a frame, or ideology. The shared beliefs which make an organisation unique, reflected in traditions and routine, and which emerge through interaction processes, enable interpretations of reality, which influence decision-making (Mintzberg, Lampel, & Ahlstrand, 2009).

This research translates the concept of sustainability in the organisational context into strategic decision-making. Strategic choices are connected to the objectives of the organisation (Keeney, 1992) and to developments in the organisational environment (Mintzberg & Waters, 1985). The behaviour of members of an organisation collectively is aimed at achievement of the organisational goals (Aarts, 2006; Simon, 1976). Lindenberg and Steg (2007) introduced goal-framing theory, which states that goals ‘frame’ the way people process information and

act upon it[15]. Strategic choices take long-term future consequences into account (Eisenhardt & Zbaracki, 1992), which is also intended with the concept of sustainability. Strategic decision-making not only refers to deliberately made plans by the top management team of the organisation but also to patterns that emerge from local (inter)actions by the members of the organisation, which reflect the collective values and beliefs (Mintzberg, 1985; Pettigrew, 1992). Thinking about future consequences is inextricably linked to uncertainty, which means that it is impossible to base choices on factual knowledge (McElroy, 2008[16]). Therefore, strategic choices are based on values (Simon, 1976); they express how to achieve the mission, vision and goals of the organisation (Elkington, 1999). In other words, the vision, goals and strategy of the organisation serve as interpretative frameworks determining the perception of a situation (Aarts, 2006; Gioia & Chittipeddi, 1991; Hart, 1996; Lindenberg & Steg, 2007). Developing a vision requires value knowledge, which consists of normative beliefs about the world (McElroy, 2008).

Derived from the triple bottom line and based on a normative view of sustainability, the sustainability concept requires three value categories to be used in strategic decision-making: people, planet and profit values (Elkington, 1999). People have different values, interests and perspectives which result in frame controversies (Rein & Schön, 1996) and therefore different understandings of sustainability. But diversity in views and perspectives is needed in change processes to behave more sustainably (Hahn, Preuss, Pinkse, & Figge, 2014).

[15] Three goal frames are distinguished: the normative, hedonic and gain goal frame. Normative goal frames imply behaviour based on values and norms, gain goal frames aim to make profit and hedonic goal frames prioritise behaviour in one's own interest or pleasure (Lindenberg & Steg, 2007).

[16] Descriptive claims, or factual knowledge about organisational behaviour, or performance, made in the absence of claims regarding normative performance, value knowledge, suffer from a lack of context and tell us little about the true sustainable performance of an organisation (McElroy, 2008).

2.4 Sustainability in the Dutch housing association sector

Housing is of considerable importance for sustainable development (Holden, 2004; Priemus, 2005; Priemus & Heuvelhof, 2005; Tosics, 2004; Winston, 2010). It is an essential component of the quality of life and important for human well-being (Winston & Pareja Eastaway, 2008). Social and affordable housing is a challenge that has existed for centuries. Inequality between rich and poor, the growing number of slum dwellers (70 million per year (UN Habitat, 2015)), urbanisation[17] and refugees from politically instable countries increasingly lead to attention for housing and settlement strategies in international agreements. The UN Sustainable Development Goals (SDG) of 2015 are explicitly aimed at ensuring access for all to adequate, safe and affordable housing and basic services and to upgrade slums by 2030 (SDG target 11: make cities and human settlements inclusive, safe, resilient and sustainable).

The characteristics of houses in general (Priemus, 1983 in Koffijberg, 2005, pp. 65–66) make housing highly relevant to the sustainable development of communities. Houses have a long-term life cycle which makes them heterogenic in character, and decisions about where to construct houses have an impact on system quality. Technology plays an essential role in housing, which requires innovative, long-term investment decisions. Houses fulfil people's basic need for shelter and the cost of housing is a relatively large part of household budgets. The non-material values of houses, such as protection against climatic changes, the value of self-expression and their external effects, are not accounted for in their economic value. Housing is local in nature, which in addition requires complex infrastructure to coordinate energy, water, roads and cooperation with the various stakeholders. The housing sector is a complex and segmented one, in which many different stakeholders have an interest (markets such as those for land, capital, services, building materials, labour, energy and water).

[17] According to the UN-HABITAT Global Activity Report 2015, the world has rapidly urbanised over the last century. In 2008, for the first time in history, the urban population outnumbered the rural population, and by 2050 it is expected that two thirds of the world's population will be living in urban areas.

From a systemic point of view, the function of housing cannot be viewed apart from its environment. The quantity, type and location of land (brown versus green field) used to construct housing determines its impact on environmental resources such as wildlife, landscape and amenity value. Construction of houses consumes a considerable amount of environmental resources – materials, water and energy (Chang, Wilkinson, Brunsdon, & Seville, 2011; Haase, 2009; Holden, 2004; Huovila & Koskela, 1998; Kim & Yu, 2018). In the EU, buildings account for 38% of total energy consumption and produce 36% of CO2 emissions (Filippidou, Nieboer, & Visscher, 2017). The construction, design, management, maintenance, use and demolition of housing can have significant negative effects on the environment (Tosics, 2004; Winston, 2010; Winston & Pareja-Eastaway, 2007; Holden, 2004; Huovila & Koskela, 1998). Despite the many negative impacts, housing can also enhance human well-being and the environment (Bhatti, 2001), as is shown for example in the construction of energy-producing houses. So far, however, houses still require extraction of natural resources for which technology is not able to provide substitutes.

In the Netherlands the housing association sector accounts for approximately one third of all houses and thus contributes significantly to the use of environmental resources and impact on the quality of ecosystems and human well-being (van den Dobbelsteen & Alberts, 2001). Developments in the sector, however, show that housing associations at present are narrowing down their scope to their traditional role as provider of social houses and financial performance in terms of efficiency (Nieboer & Gruis, 2014), influenced by institutional context. This seems to contradict international regulations and ambitions related to sustainable development, assembled in the Sustainable Development Goals (SDGS[18]), the Paris Climate Deal and EU policies. Sector targets for sustainable development are recorded in several covenants (the Aedes Covenant (2008), the Covenant Energy Savings Rental Sector (2012), the 2013 SER Energy Agreement and the Aedes housing calendar 2017) in which targets with respect to reduction of greenhouse gas emissions and more sustainable and efficient energy consumption have been recorded. Early adopters of sustainability within the housing association sector already focused on energy reduction measures (Egmond, Jonkers & Kok, 2006), driven by a forecast of rising energy costs (Smid & Nieboer, 2008). The concept of

[18] SDG 11 aims at safe, resilient, inclusive and sustainable cities (https://www.un.org/sustainabledevelopment/cities/. Retr. 11/8/2018)

sustainable development seems generally accepted within the public housing sector but the content of laws and covenants shows a translation of the concept of sustainability to sustainable energy supplies and use. The former BBSH and now Housing Law ('Woningwet') state that housing associations may design sustainable measures if they contribute to sustainable energy consumption (Chapter IIIa, Woningwet 2015). In 2018 the debate about the development of the successor to the 2013 Energy Agreement, the Climate Agreement, is fixated on ways to build new houses based on sustainable energy sources and strategies to eliminate gas usage in existing buildings. Currently, only one housing association (Woonbedrijf, source Aedes 27-1-2017) is found that explicitly aims to transform its business into a circular one in which attention is paid to materials usage. We can conclude that the Dutch social housing sector primarily focuses on financial results and uses a narrow definition of sustainability by focusing on energy measures. Other valuable resources, such as materials, water and ecosystem service values such as recreational values that support the quality of the local environment, seem to be out of scope of housing strategies and investment decisions.

Sustainability of the built environment is of increasing concern in academic and policy discussions (Prochorskaite, Couch, Malys, & Maliene, 2016; Winston, 2007) but progress in sustainable management and reduction of environmental impact in the social housing sector has been slow (Bhatti, 2001; Blaauw & Klunder, 1999; Brown & Bhatti, 2003; Sunnika & Boon, 2003; Van Bueren, 2009). Sustainable housing is a poorly defined concept, both in science and in practice (Holden, Linnerud, & Banister, 2017; Priemus, 2005; Robinson & Edwards, 2009). Winston and Pareja Montserrat (2008) call for more attention to be paid to the importance of (aspects of) housing for sustainable development and the measurement of progress. Most of the major international statements on sustainable development, however, fail to include good indicators of sustainable housing. A narrow definition of sustainability is adopted, in which environmental measures have concentrated on new construction and in which energy seems to be the conceptualisation of the much broader concept of sustainability (Egmond, Jonkers, & Kok, 2005; Nieboer & Gruis, 2016; Priemus, 2005). However, if housing is to function within environmental constraints (Holden et al., 2017), and is about increasing the quality of life and the resilience of communities, it requires a holistic view (Prochorskaite et al., 2016) and tight coupling of environmental, social and economic sustainability in investment decisions (Mulliner, Smallbone, & Maliene, 2013).

2.5 Conclusions

This chapter dealt with answering the question of what is the (theoretical) meaning of sustainability, particularly in the Dutch housing association sector?

Sustainability is defined in many different ways, which results in the concept being ambiguous. In general, the accepted definition is the Brundtland definition which stems from 1987. In this definition, ecological problems are explicitly connected to human and economic development. Although universally accepted, the Brundtland definition needs interpretation in the local context of organisations. Elkington bridged this gap by providing a three-dimensional base, integrating environmental, social and economic values that are required for development of sustainable organisational strategies and decisions. However, these three dimensions still need further interpretation, which is an activity in the local context of organisations.

One of the sectors contributing significantly to and impacting on the environment is the housing sector. Dutch housing associations take values such as affordability, financial continuity, quantity and location of houses, quality of houses and housing environment (Koffijberg, 2005; Nieboer, 2011; Priemus, 2003) into account when making strategic choices. Developments in recent years have shown that housing associations, under the influence of institutional contextual changes, narrowed down their activities to those primarily aimed at social housing and financial performance. Agreements that bind housing associations to contribute to sustainability are aimed at reducing energy consumption and CO2 emissions. Although housing requires use of natural resources and has an impact on the quality of the environment, economic and social aspects both globally and locally seem to be prioritised, and sustainability is merely interpreted as energy use and the reduction of CO2 emissions.

3 SENSEMAKING IN PROCESSES OF STRATEGIC CHOICE

3.1 INTRODUCTION

In the previous chapter sustainability appeared to be a rather ambiguous concept, causing uncertainty for organisations regarding how to translate and integrate it into their strategic decisions. This chapter deals with the question: What is the role of frames and values in strategic decision-making, from a decision theory perspective? More specifically, in this chapter a connection will be described between making sense of complex, dynamic decision situations and strategic decision-making.

Strategic decision-making is a fundamental issue in the field of strategic management (Fréry, 2006), although not often explicitly elaborated upon in works of strategy scholars. In recent decades, many definitions and thoughts have been developed about what strategy is, but there is no agreement on a single definition. However, certain characteristics seem to be present in every school of thought (Mintzberg, Lampel, & Ahlstrand, 2009). Strategy is about content as process; strategies are not fully deliberate; strategies exist at every level in the organisation; the content of strategies is complex, and strategies are about the way the organisation deals with issues or events in the organisational context that could affect – either positively (chances) or negatively (risks) – the organisation's licence to operate and hence its achievement of goals. The aim of strategies is the development of stability and resilience[19], or the power of an organisation to adapt to changes in the organisational environment (Nemeth, Wears, Woods, Hollnagel, & Cook, 2008; Stacey, 1995). Strategic decisions require taking into account long-term consequences of organisational behaviour,

[19] Resilience can also be defined as the ability to demonstrate both strength and flexibility in the face of disorder (Conner, 1998), a definition which is often used to describe the ability of ecosystems to restore themselves after deterioration and biodiversity loss (Costanza & Mageau, 1999; Walker, Holling, Carpenter, & Kinzig, 2004). Diversity of species enhances the ability of systems to absorb changes within thresholds (Folke, Carpenter et al, 2010).

which is also required in thinking about sustainable development (Holden, Linnerud, & Banister, 2017; Loorbach, 2010).

Strategic choices are the result of a process that is viewed as nested (March, 1994), cyclical (Courtney, 2001; Hambrick and Frederickson, 2005) and multistaged (Eisenhardt & Zbaracki, 1992; Langley, Mintzberg, Pitcher, Posada, & Saint-Macary, 1995). Mintzberg, Ahlstrand & Lampel (2005) argue that making strategic decisions requires consciously seeing, analysing and thinking over those problems or events in the organisational environment that could possibly affect the organisation's licence to operate. Environmental changes that are multidisciplinary, complex, unstructured and unbounded (Kolkman, 2005; Mc Elroy, 2008; Carreon, 2012)[20] cause doubt and uncertainty with respect to the routine ways of coping with events. According to Weick (2011), ambiguity and uncertainty trigger a process of sensemaking which precedes decision-making. Sensemaking starts when a connection is made between a cue and an actor's frame (Weick, 1995).

In a dynamic and complex environment, effective decision-making requires multidisciplinary thinking (Elkington, 1999; Gardner & Stern, 2002; Senge, 2008) and the eliciting of multiple frames since this provides a much greater understanding of the decision situation and leads to more productive information collection, better alternatives and more effective strategic decision-making (Courtney, 2001; Keeney, 1994; Boonstra & de Caluwé, 2007; Hall, Guo, & Davis, 2003; Mitroff & Linstone, 1993). But complexity[21] in sensemaking processes creates uncertainty (Funtowicz & Ravetz, 1994) and conflicts over the values and norms of a multiplicity of stakeholders (Homan, 2005; Kolkman, 2005), leaving room for the question of which perspective finally determines choice.

Section 3.2 defines and connects strategic decision-making to sensemaking and describes some issues in decision theory that have been and are debated. The

[20] Problems confronting organisations are unstructured because there is no single, accepted way of structuring them (Kolkman, 2005). They are unbounded since there seems to be an infinite number of conceivable solutions (Mitroff & Linstone, 1993).
[21] Complexity refers to the large number of interactions and connections that exist within systems (Homan, 2005). These systems in which post-industrial organisations are engaged, function at the micro, meso, macro and global level (Scharmer, 2009); they are cyclical and open in nature (Boulding, 1966; Stacey, 1995; von Bertalanffy, 1969).

relevance of sensemaking for strategic decision-making is clarified. In Section 3.3 the connector between sensemaking and decision-making, frames and its content, values, is highlighted. Section 3.4 conceptualises the process of strategic decisions with sustainability as the event that triggers it.

3.2 SENSEMAKING PRECEDING STRATEGIC CHOICE

In order to define strategic decision-making and connect it to sensemaking, first some attention is given to theories in the strategy field and to decision theory; second, a closer look will be taken at sensemaking as the stage(s) preceding choice.

3.2.1 STRATEGIC DECISION-MAKING

Strategy in its core is an integrative process but due to the many views and ideas that emerged in the preceding decades, the strategy field can be labelled as a 'fuzzy discipline' (Mintzberg et al., 2009:371; Fréry, 2006). A central issue in the strategy field is whether strategies result from deliberate resource allocations or if strategy is a pattern that emerges from the day-to-day activities of the members of the organisation (Fréry, 2006; Koffijberg, 2005; Mintzberg & Waters, 1985; Mintzberg, et al., 2009). In the book *Safari Strategy* (2009), Mintzberg et al. distinguish ten schools of thought or perspectives on strategy process, roughly divided into models prescribing how organisations should plan for activities that lead to goal achievement (in the plan, position and design schools of strategy formation), and models that describe how a pattern of activities emerges within organisations (entrepreneurial, cognitive, learning, political, cultural and environmental school).

In general, there is agreement that the aim of strategies is the development of stability and resilience, which means the power of an organisation to adapt to changes in the organisational environment (R. Stacey, 1995), matching the internal organisational environment with external environmental factors in the content of strategy (Boon et al. in Paauwe, 2013: p. 71; Itami in Mintzberg et al., 2009: p. 214)[22]. The organisational context is complex and local in nature and

[22] Based on this fundamental aim, Mintzberg categorises the ten perspectives on strategy with respect to adaptation alongside two axes. The first axis is the degree to which one thinks to control the external environment (from controllable to unpredictable), the second axis the degree to which strategy is based on rational (planned, analytical) or natural (emerging) internal processes.

people in organisations continually interact with others, constrained by external forces, structures, institutionalised instruments of power, technologies and allocations of resources (Stacey, 1991, 1995; Mowles, Stacey, & Griffin, 2008).

According to Farjoun (2002), models of choice are a core issue in the strategy field. In the traditional view, strategic decision-making is thought to be a responsibility of top management. This legitimises the control of top managers over the direction of organisational activities and the planning function (Miles & Snow, 1978). Strategy in this view is seen as a designed plan to structure organisational activities aimed at goal achievement. However, in organisational practice almost the opposite is true. Strategy does not necessarily have to be the result of a plan. It may emerge as a pattern from multiplayer interactions and decisions (Homan, 2005; Mintzberg et al., 2005; Mintzberg & Waters, 1985; Weick, 1995), which is central to strategic management and supports the definition of strategy as the way decisions develop into patterns (Mintzberg, 2003: p.189).

DECISION THEORY

Choice, or decision, is defined as the outcome of an ongoing decision-making process, leading to activities and in that way guiding behaviour. Decisions, made consciously or unconsciously, with good or bad consequences, are the fundamental tool we use when confronted with events (Hammond, Keeney, & Raiffa, 2006). Decisions are 'descriptive of a (preferred) future state of affairs', which means that they have both ethical and factual content[23] (Simon, 1976: p.46).

Structural elements in definitions of a decision are that (1) it is related to goals[24], (2) it is a choice among a number of potential lines of action, (3) it has known or unknown outcomes and therefore the issues of probability and uncertainty are related to it, (4) it is constrained by a number of contextual factors[25], either

[23] 'Factual' referring to a positivist epistemology, factual statements can be assessed as true or false (Simon, 1976, pp. 45–46).
[24] Lindenberg & Steg (2007) identify three general goal frames that steer decision-making and behaviour: the normative goal frame, the gain goal frame and the hedonic goal frame.
[25] In this study internal factors will be referred to as mechanisms operating in groups and organisations, affecting strategic decision-making (see e.g. (Erden, von Krogh, & Nonaka, 2008; Greer, Caruso, & Jehn, 2011; Peterson & Behfar, 2003). Group mechanisms develop to make decisions without the involvement of an official authority (Kaplan, 2008).

internal or external to the organisation, that may vary the degree of certainty, and (5) it is a process which is based on *values*.

With respect to the element of goals, Simon argues that each decision involves the selection of a goal and a behaviour relevant to it. The correctness of decisions can only be determined given the objective at which they are aimed and only has meaning in terms of subjective human values (Simon, 1976). 'In so far as decisions lead toward the selection of final goals, they will be called "value judgments"; so far as they involve the implementation of such goals they will be called "factual judgments"' (Simon, 1976). The final decision depends on the relative weight that is given to the different objectives and on the judgment of the realisation of the *values* of each objective. The question of what purpose is served by a particular decision is a question about the intentions of a chosen behaviour, and the social values affected by this behaviour.

Current debates in decision science centre on the gradual replacement of a number of classical characteristics of decision-making (Lipshitz, Klein, Orasanu, & Salas, 2001; Hodgkinson & Starbuck, 2008):

(1) from normative models of rational choice in classical decision-making (CDM) to bounded rationality and loosely coupled effective decision-making in Behavioural Decision Theory (BDT)

(2) from predicting which alternative is chosen given decision-makers' (presumed to be stable) preferences to developing procedures to de-bias decision-making (central to prospect theory, Kahneman et al.)

(3) from decision-making as a deliberate and analytical process based on information to decision-making as matching

(4) from formal, prescriptive models of decision-making to empirical-based descriptions of decision-making in a naturalistic setting, which focuses on the shaping features of the contexts in which decision are made

(5) from describing the cognitive processes and directly representing the actually observed behaviour (in naturalistic decision-making, NDM) to modelling constraints, opportunities and criteria in organisational decision-making (ODM).

Decision theory is founded in a 'theory of *attention'*, the capacity people have to attend to and do as individuals, when organised (Cohen, March & Olsen, 1972; Simon, 1976). This capacity is agreed to be bounded in rationality; the capacity of the human mind for making rational decisions is bounded due to limited skills, abilities and knowledge (Simon, 1976). Rational theories are based in economic theory and assume that every decision-maker has access to all relevant information, knows all the alternatives for action, knows the consequences of every alternative action (based on probability/expected utility calculations), has stable and consistent preferences that enable prioritisation of alternatives, and uses decision rules to choose one single action (March, 1997). Intuition and rationality are both relevant to decision-making (Calabretta, Gemser, & Wijnberg, 2017). The rationalist model often only allows ex-post or ad-hoc explanations of behaviour (Vatn, 2005).

The foundation of individual decisions is found in the human mind, which is activated through environmental stimuli, events or problems. When confronted with a stimulus or problem, individuals use internal strategies, intuition and routine methods, based on experience, when deciding. Experience of reality and descriptions of reality are dependent on the structure of the human mind (Mitroff & Linstone, 1993). Individuals cope with complex information, most often through the use of heuristics, which enables them to make routine, fast decisions (Kahneman, 2011)[26]. Decision-makers conceptualise problems in different ways and do this from different perspectives or ideologies (Denzau & North, 1994; Mohammed & Ringseis, 2001; Van Marrewijk & Werre, 2002). Due to individual differences in experience and characteristics, each person has a different view of a particular problem (Aronson, 1995; Simon, 1976). Cognitive psychologists analyse mental processes with the aim of understanding, explaining and predicting human behaviour; cognitive science is an interdisciplinary study of mind and intelligence (Boden, 2009; Carréon, 2012) based largely on the work of

[26] Cognitive scientists distinguish between two extreme modes of thinking: intuitive and reflective (Courtney, 2001; Kahneman, Lovallo, & Sibony, 2011). These two main modes of thinking are labelled System One and System Two (Kahneman, 2011). System One includes innate and learned skills and produces representations of reality through associations and feelings in a fast, routine way, generating patterns of ideas. This mode of thinking leads to intuitive, unconsciously made decisions, with a short-term focus. System Two, also called slow thinking, requires conscious attention to events that result in deliberate decisions with a long-term focus. People are not able to concentrate on several System Two tasks at the same time, which causes blindness in perception. And since people have limited capacities for attention, only a fraction of our thinking processes can be labelled System 2 thinking.

Newell and Simon. In this perspective, the mind serves as a command centre and it stores experiences and programs responses to environmental stimuli (March and Simon, 1967).

Decisions in organisations are made by every individual member and by a collective of individuals, to be found at every level in the organisation (Balogun, Pye, & Hodgkinson, 2008; Child, 1972; Homan, 2005; Senge, 1996). Individual human beings are social in nature (Aronson, 1995) and therefore are influenced by others. According to Weick (1995), when confronted with an ambiguous, confusing event, individuals use language to share perceptions and create meaning through discussion and interaction. Denzau and North (1994) state that shared mental models guide choices[27]. Groups may have a formal or informal character; they vary in the way they construct meanings of situations or events (Thomas and Thomas, 1928, in Weick, 1995: p. 66). These differences flow from different goals, a different time focus (short- versus long-term focus), different group values, or group cultures and different task structures (Eccles & Serafeim, 2011).

A primary function of organising is to enforce conformity of the individual to norms laid down by the group (Aronson, 1995; Kassin, Fein, & Markus, 2014; Royakkers & Pieters, 2006). Individuals tend to follow these group rules, or group norms, for reasons such as mutual respect and concern for one another or out of a sense of obligation to the group due to social pressure. The aim to converge towards a group mean, or consensus, motivates leaders – those group members who have a strong position to influence the construction of social reality (Maitlis, 2005; Maitlis & Lawrence, 2007; Mohammed & Ringseis, 2001; Simon, 1976) – to persuade or even force group members to change their meanings and adjust to the group construction. The use of authority may prevent surfacing of divergent perspectives which are considered necessary for effective decision-making (Hall et al., 2003; Mitroff & Linstone, 1993). But even without involvement of an official authority in a group or community, people informally develop and mutually enforce rules used to make decisions (Gardner and Stern, 2002: p. 28).

[27] The development of shared understandings is a group process (Bettenhausen, 1991). By sharing mental models, members may form complementary or congruent explanations of environmental cues and implicitly coordinate their responses (Orasanu, 1990 in Hodgkinson, Starbuck, & ed., 2008: p. 222).

Decision scholars for decades have analysed and studied decision-making from an *information processing* perspective (Balogun, Pye, Hodgkinson in Hodgkinson & Starbuck, 2008; Simon, 1977), focusing on the ways individuals, groups and organisations make decisions when confronted with events or problems. The topics debated among decision theorists reflect a tension between a computational and an interpretive approach in studies that analyse decision-making (Hodgkinson & Starbuck, 2008: p. 15). Feldman and March (1981) already discovered that organisations even ignore information they have. Earlier, Cohen, March, and Olson (1972) conjectured about why organisations ignore already present information in their garbage can model of decision-making. When they ask for more information it is to support existing meanings (Mitroff and Linstone, 1993). Simply providing people with information has weak effects on a limited set of behaviours (Gardner and Stern, 2002). Information in itself does not lead to better decisions (Mintzberg et al., 2009: pp. 163–164), information is more used afterwards to discuss, explain or defend decisions made (cognitive dissonance theory, Festinger, 1957; Mintzberg, 2003). The question is not so much how information is processed and to what degree individuals or groups do this in a rational manner (they are bounded by rationality), but strategic decision-making is more concerned with:

(1) *conscious* searching for strategic decision situations in the environment, identifying those events that influence organisational strategies and enhancing development of decision alternatives

(2) how to change the collective mind and redirect perceptions (Brown, Colville, & Pye, 2015; Weick, 2011), accepting that rationality is bounded and information is interpreted through interactions (and thus influenced by different factors).

Simon (1977) identifies three *stages* in decision-making: intelligence, design and choice. Intelligence means searching the environment for problems. Design involves listing alternatives, or development of alternative ways of solving problems. Choice consists of analysing and comparing alternatives and choosing one for implementation. The process of decision-making comprises two major segments: (1) the development of a system of intermediate values and an appraisal of their relative weights, and (2) a comparison of possible lines of action in terms of this value system (Simon, 1976).

Mintzberg, Raisinghani & Théorêt (1976) label the decision process stages as identification, development and selection, each consisting of a number of routines. The identification phase consists of two 'routines', i.e. recognition or identification of a decision situation and diagnosis, in which management tries to locate cause-effect relationships. In the development phase the two sub-phases are the search routine phase, aimed at convergence and finding ready-made solutions, and design, an iterative, complex process characterised by divergent thinking. The outcome of strategic thinking is an integrated perspective, or vision, whereby 'such strategies often cannot be developed on schedule, preferably they appear freely at any time and any place in the organization typically through messy processes of informal learning carried out by people at different organization levels' (Mintzberg & Waters, 1985). In the phase of choice, a multistage iterative process, the three sub-phases are (1) screening, a superficial routine aimed at reducing the number of ready-made alternatives to a few feasible ones; (2) evaluation-choice, in which feasible alternatives are judged and bargained and one course of action is selected; and (3) authorisation, in which the chosen course of action is ratified in case an individual decision-maker is not in the position to make the decision himself (a binary process in which a decision proposal is accepted or rejected).

In strategic decision-making processes two aspects are of major importance, the *diagnosis* of decision situations and the *design* of solutions (Mintzberg, 2003: p. 60). The diagnosis phase of decision-making is important in directing the collective thinking and strategy of the organisation. In diagnosing complex and dynamic problems, situations or events, decision-makers filter information and try to make sense of it. Diagnosis means analysing a situation and breaking down a goal or set of intentions into steps needed to carry out the vision (Mintzberg, 1994). In the stage of design[28], or thinking, identification of values and objectives (Hammond, Keeney, Raiffa, et al., 2006; Keeney, 1996)[29] and analysis of information, especially information/data that broadens consideration of issues, is required (Mintzberg et al., 1976). Strategic thinking means seeing ahead; it is

[28] The design of solutions can be viewed as a process of sense giving and sense making (Gioia & Chittipeddi, 1991; Kloosterboer, 2005, 2011; Rouleau, 2005; Weick & Quinn, 1999).

[29] Fréry (2006) defines strategic decisions as judgements by executives. Whether an issue can be considered strategic depends on whether they consist of designing or modifying a value system, preventing or ensuring imitation and redefining a perimeter. 'Decisions that have no impact on any of these dimensions or just one dimension are not strategic'.

based on an understanding of the past (and information) and on creative intuition. Strategic thinkers construct the future by challenging conventional wisdom and seeing things differently, which requires creativity and placing creative ideas into context[30]. Developments and desired consequences of decisions are imagined and tried to make sense of (Mintzberg et al. 2005).

In Figure 1 a combination of Simon's three phases and Mintzberg's routines is depicted.

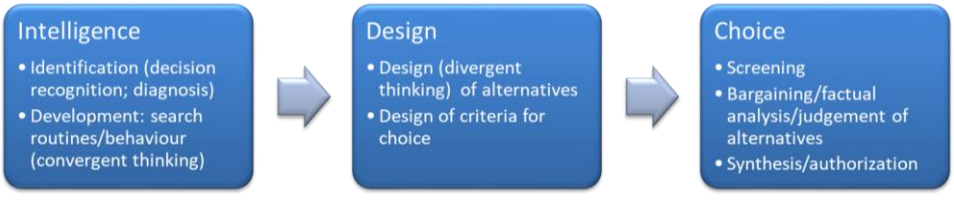

Figure 1 Stages in decision-making, based on a combination of Simon's three decision process phases and Mintzberg's seven central routines (Simon, 1977; Mintzberg et al., 1976).

Diagnosis of decision situations and the design of alternative choices are scarcely studied in strategic decision-making (Mintzberg, 2003: p. 60). In Western culture in particular, the diagnosis phase of decision-making, in which a problem or event is analysed, given a diversity of possible views from which to analyse the decision situation, has until recently not been given much attention (Mintzberg et al., 1976; Mintzberg et al. 2005; Weick, 1995).

According to many scholars, strategic decisions are made by the top team of the organisation (Amason, 1996; Chattopadhyay et al., 1999; Finkelstein & Hambrick, 1990; Fréry, 2006). Amason (1996) states that top management teams make strategic decisions, and that decision quality, consensus (understanding and commitment of team members) and affective acceptance[31] are necessary for enduringly high organisational performance[32]. But the ongoing,

[30] Attention for supportive tools to construct an idea of the future are e.g. scenario planning tools and serious games which are supportive of reaching consensus in constructing a collective vision and decision-making process (Hodgkinson & Starbuck, 2008).
[31] Team members positively commit (affective acceptance) to decision-making when they are allowed to participate in an open manner (Amason & Schweiger, 2006; Scharmer, 2009).
[32] The origins of the idea that only the top executive is able to make strategic decisions is to be found in Selznick (1957) and Andrews (1987, in Mintzberg et al., 2009: p. 35).

complex process of adaptation to environmental change and dealing with uncertainties is reflected in the many decisions made at different levels in the organisation. This complexity can be studied by searching for patterns in the major decisions that the organisation needs to make to maintain an effective alignment with its environment (Miles & Snow, 1978). In this strategic choice approach, the starting point of strategy is not the discovery of a particular event or fact, but *seeing*, comprehending and managing *strategic* events, in or outside the organisation (Mintzberg et al., 2005, 2009). Strategic events are those events that may pose risks or opportunities for goal achievement and affect the organisation's licence to operate.

In this study, strategic decision-making is considered central to organisational behaviour, aligned with the ideas of the Carnegie school. Strategic choices reflect a balance between external and internal events, are either deliberately made or emerge in local interactions (Gavetti, Levinthal, & Ocasio, 2007). Strategic decisions are made under uncertainty, involve several decision-makers, and do not have programmed or routine solutions (Hodgkinson & Starbuck, 2008: p. 251).

Starting with Simon's statement that decision theory is about a theory of attention (1976), Tsverksy & Kahneman's prospect theory (Tversky & Kahneman, 1992) and Mintzberg's work on the routines that make up strategy and choice (Mintzberg et al. 1976), a growing number of management scholars are studying the stages preceding choice, accepting the idea that the most consequential developments in the decision-making process occur before a final choice is made (see e.g. Bazerman & Sezer, 2016; Benson III & Beach, 1996; Hickson et al., 1986; Langley et al., 1995; Siebert & Keeney, 2015; Srivastava & Tang, 2015). In Weick's sensemaking theory the idea is also that the most decisive stages in the decision process are the ones that precede choice. Nowadays it seems that most scholars accept that understanding decision-making processes requires an understanding of processes of sensemaking since these processes can shape and limit these deciding processes (Pye, 1995, in Hodgkinson & Starbuck, 2008). Sensemaking implies focusing on determining the meaning and significance of an event before decisions can be made.

3.2.2 SENSEMAKING

According to Weick (1995), an actor interprets new events[33] after a cognitive construction of the content of that event which then becomes sensible[34]. The aim of the process of sensemaking is the development of plausible images or constructs of reality (Weick, Sutcliffe, & Obstfeld, 2005). It is a process to make sure that the existing and stable frames of the actor still fit with the new reality and to rationalise what the actor is or has been doing. Weick et al. (2005) state that making sense of something is a quest for meaning. The process of construction of meaning is social in nature, meaning is influenced by other people and therefore is a socially constructed phenomenon (Gioia & Chittipeddi, 1991; Weick, 1979). Shared understandings are required for organised activities (Weick, 2011). Figure 2 expresses the cycle of sensemaking based on Weick et al. (2005) and Jennings and Greenwood (2003). Sensemaking can be treated as mutual exchanges between actors and their environments (ecological change is enacted) that are made meaningful (sensemaking is selective when sensing the environment) and preserved (retention).

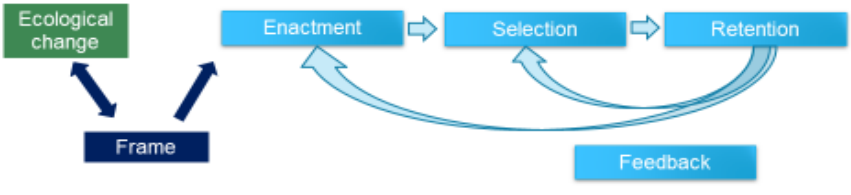

Figure 2 Sensemaking. Based on Weick, 1995, 2009; Weick, Sutcliffe and Obstfeld, 2005; Jennings and Greenwood, 2003. Enactment means noticing and bracketing (Weick, 1988). It is triggered by ecological change, discrepancies and equivocality which interrupts daily routine. The result of enactment is a number of possible meanings. Selection is the reduction in the number of possible meanings through dialogue; retention refers to saving that which has been learned.

[33] An event or situation may be labelled as problematic, which refers to the undesirability of a situation which triggers problem-solving that closely resembles sensemaking (Kolkman, 2005). The term problem usually refers to some kind of gap, or difference between the way things *are* and the way one wants them to be (Hoogerwerf, 1989). Other options to label an event are the perceived existence of an issue, a conflict, a paradox, a dilemma, an opportunity, a crisis or a decision.

[34] The term cognitive refers to mind processes. Mind processes comprise cognitive, affective and behavioural components.

In 1995 Weick enlisted seven characteristics that set apart sensemaking from other explanatory processes such as understanding, interpretation and attribution. In a more recent work by Weick, Sutcliffe and Obstfeld (2005), these features have been adjusted and restated in order to make sensemaking among other things more future-oriented and more infused with emotion. These characteristics are: (1) sensemaking starts with chaos; in a flow of activities and events either cues are extracted for closer attention *or they remain unnoticed*; (2) sensemaking starts with noticing and bracketing, that is, inventing a new meaning or interpretation for something that has already occurred during the organising process, guided by mental models; (3) sensemaking is about labelling and categorising events to enable people to find common ground; (4) sensemaking is retrospective[35], meaning (5) to make sense is to connect *the abstract with the concrete*, which requires imagery and presumptions (knowing that in this process which is aimed at guiding action, bias can evolve which entails that ineffective organisational activities may be caused by false presumptions); (6) sensemaking is an interactive process: it is a matter of thinking that is acted out through dialogue as well as applying knowledge; (7) sensemaking is a social process by which invisible knowledge becomes more visible through dialogue and interactive exchange of views and perspectives (Weick, et al., 2005).

Weick distinguishes between ambiguity and uncertainty as triggers for sensemaking to start. Martin (1992, in Weick, 1995) argues that ambiguity is perceived when there is lack of clarity, high complexity or a paradox that makes multiple explanations plausible. People are confused due to too many interpretations. To remove confusion, a different kind of information is needed, namely, the information that is constructed in face-to-face interaction. When confronted with ambiguity or uncertainty, managers use language to share perceptions and gradually create meaning through discussion and joint interpretation (Huber & Draft, 1987, in Weick, 1995).

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[35] The creation of meaning is an *attentional* process in regard to what has already occurred. Only when a response occurs can a plausible stimulus be defined; according to Weick, the stimulus-response sequence can be misleading in analysis. The choice of the stimulus affects the choice of what the action 'means'. And both choices are influenced by the *situational context***.** We are conscious of what we have already done. The elapsed experience makes many different kinds of sense. These meanings need to be *synthesised*. The problem is confusion, not ignorance. So the problem the sensemaker faces is equivocality. People need values, priorities and clarity about preferences to help them be clear about which activities/projects matter (Weick, 1995).

Uncertainty refers to a situation in which people lack understanding of how components of the environment are changing, of the impact of environmental changes on the organisation (effect uncertainty) or of response options open to them (response uncertainty, Milliken, 1987). Uncertainty is reduced, according to sensemaking theory, through new information and is transformed into risk, whereby a decision can be made to accept it or not (Weick, 1995).

According to Weick (1995), three properties of perceived environmental uncertainty are information load[36], turbulence[37] and complexity. These properties increase the probability that people, regardless of where they sit in organisations or who they are, start processing what is happening.

An increase in complexity can increase perceived uncertainty: a greater number of diverse elements interact in a greater variety of ways, which refers to interdependencies. Complexity affects what people notice and ignore and with greater complexity comes greater search for and reliance on habits and routines (Weick, 1988)[38]. Using routine can lead to ignoring or not noticing warnings of that which is unbelievable. As Weick (2011) puts it, people use concepts to single out events (believing is seeing), and people conceptualise events that are perceived different (seeing is believing). Action, which precedes cognition, tends to confirm preconceptions (Weick et al., 2005). Events or information that are perceived as distant (in time and/or place) although threatening may be pushed to the periphery, in which case sensemaking does not even start (Weick, 1995). Meanings may be constrained by the *preferences* and *goals* of an actor – be it an individual, a group or an organisation (Gioia & Chittipeddi, 1991; North, 2010).

[36] Information load is an occasion for sensemaking because it forces cues out of an ongoing flow (Weick, 1995).

[37] Turbulence is defined as a combination of instability (frequency of change) and randomness (frequency and direction of change). Weick (1995) suspects that turbulence throws people back on whatever heuristics for noticing they know best and that are rewarded and practised most often in their firms. As turbulence goes up, so too does the use of intuition and heuristics, e.g. in decision-making.

[38] This argument seems to somewhat contradict Weick's later claims in which he states that sensemaking begins with the question whether it is possible to take things for granted or not. When it has become impossible to continue with automatic information processing, and heightened arousal is perceived, sensemaking starts. People try to construct some link between the present situation and 'relevant' prior situations to make sense of the arousal.

This seems to contradict a later description of sensemaking by Weick (2011): 'Sensemaking puts *conscious* feeling and thought into words.' Mintzberg et al. (1976) state that the processes preceding choice are based on routines, and according to Gioia and Mehra (1996, in Rouleau, 2005), sensemaking and sensegiving result from *unconscious* processes that are related to actors' practical experience. The question is whether strategic sensemaking is based on routines aimed at creating stability or on conscious reasoning processes through which noticed events are connected to a frame of reference (Kahneman, 2011; Weick, 1995; Maitlis & Sonenshein, 2010). Either way, implicit knowledge seems to be as important to sensemaking as conscious knowledge (Rouleau, 2005). The main assumption in sensemaking is that meaning is socially constructed when there is a connection between a frame of reference, based on past experiences and socialisation, and a cue in the environment. Sensemaking starts when a *frame* is connected to a perceived, observed event (Weick, 1995).

In Figure 3 the cognitive process of filtering, naming, selecting and making sense of events is depicted. A distinction is made between individual and collective processes, in order to clarify that individuals not necessarily start interactions when they are triggered by ecological change. Interaction occurs when an individual actor is not able to find meaning for the noticed event, which is the case when this event causes ambiguity or uncertainty, or when involved in interactions started by others. The aspect of interaction, or storytelling (Bateson, 1972; Weick, 1995), is set apart to indicate the socially constructed meaning[39].

[39] Van Hulst and Yanow (2016) mention that framing (the process in which a certain event gets framed) contains the aspects of (1) sensemaking, (2) selecting, naming and categorising, and (3) storytelling. They use a different definition of frame than what is meant by frame as perspective, which is used to make sense of events (Goffman, 1974). I disagree with van Hulst and Yanow when they set apart sensemaking from selecting and storytelling. In accordance with Weick and others in the field of sensemaking theory, sensemaking as a process contains the three aspects that Van Hulst and Yanow mention. Individual actors may become involved in collective sensemaking as a response to others' interactions. Aronson (1995) makes a distinction in three responses to social influence: compliance, identification and internalisation of values and beliefs.

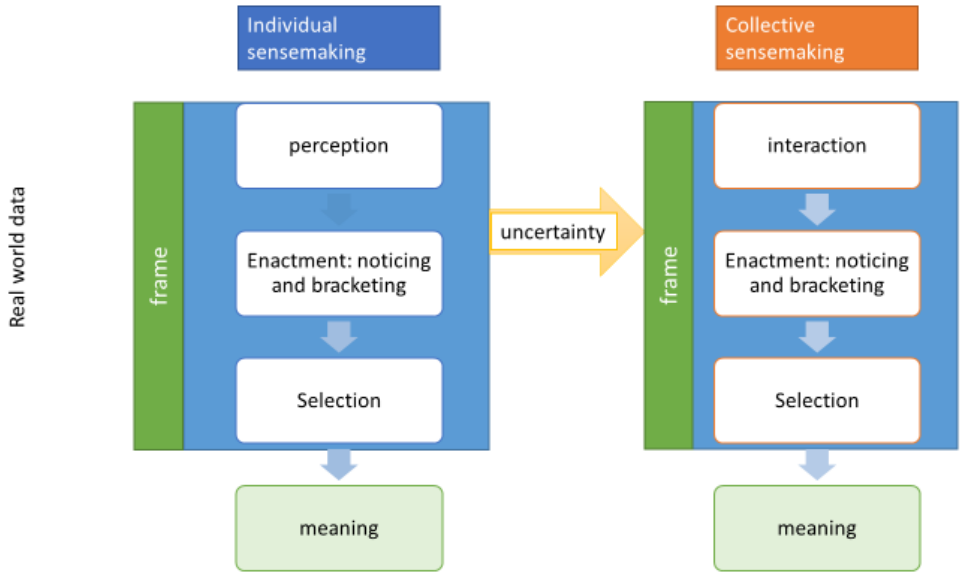

Figure 3 Individual and collective sensemaking, figure inspired by Courtney (2001), Kolkman (2005), Weick (1995) and Van Hulst and Yanow (2016). Mind process of filtering events, resulting in a connection between the cue (ecological change, or real world data) and the frame. In other words, sense is made from a cue using frames (Weick, 1995). The left column represents the individual actor's cognitive process. A cue is perceived ('sensed'), after which an actor consciously constructs a plausible image of reality using his existing cognitive structure (conceptions). The right column depicts the collective sensemaking process, which starts when an individual encounters a situation that causes ambiguity and or uncertainty, and enters into dialogue with (trustworthy) others. Under conditions of uncertainty, processes of social influence are crucial for meaning constructions.

In this research, sensemaking is operationalised by:

- A feeling of urgency, arousal, dissatisfaction or discomfort that implies sustained attention to an event, which is considered strategic in nature
- Meanings that are constructed via interactions
- Values and beliefs that motivate an actor to (intend to) do something with extracted cues
- Frame type

Events are those situations or issues that disrupt daily routines and ongoing activities. They are strategic in nature when events affect one's 'well-being'. When the event is 'seen' it leads to a search for meaning (Weick, 1995).

In sum, sensemaking theory offers new lines of thought for observing decisional processes in organisations, communication patterns in groups and their ways of dealing with continually changing business environments, emphasising the relevance of social interaction for strategic decision-making. Sensemaking then is relevant for strategic decision-making where seeing, analysis, thinking and synthesis are considered essential stages in the ongoing process of choice. Sensemaking focuses on dialogues and interactions in organisations through which meanings are constructed and from which the act of making a strategic choice emerges.

Sensemaking as process in which plausible images of perceived cues emerge fills a gap in decision theory in general, where the focus of many studies seems to be on leadership and top team functioning. The intention of sensemaking is to illuminate the importance of seeking and giving meaning to matters that are causing doubt. The difference between sensemaking and choice is that sensemaking does not require commitment to a specific action, whereas Mintzberg et al. (1976: p. 246) define a decision as 'a specific commitment to action (usually a commitment to resources), a decision process as a set of actions and dynamic factors that begins with the identification of a stimulus and ends with commitment to action'. 'Strategic' decisions are those decisions that are 'important' in terms of 'actions taken, resources committed, or precedents set' (Mintzberg et al., 1976)

However, some remarks about sensemaking can be made that could offer new lines of inquiry. Sensemaking takes an interpretive perspective on information processing and seems to accept that events may remain unnoticed[40]. According to Simon (1976), the key to organising decision-making is indeed managing scarce attention in an information-rich organisational environment. This raises the question when disruptive or strategic events to systems will be perceived and if sensemaking contributes to the resilience of an organisation. Sensemaking only starts for something that has already occurred, whereas decision-making is about a future state of affairs (Brown et al., 2015); sensemaking, although stated

[40] Data on environmental decline has been available to decision-makers for decades but does not seem to belong to the set of signals commonly received or searched for by decision-makers (Arrow et al., 1995). Failing to notice issues of strategic importance is referred to as 'bounded awareness' by Bazerman & Nezer (2016). See also Simons & Chabris (1999).

to be a predecisional activity, focuses on action, not choice (Weick, 1988; 2005) and does not connect specifically to strategic decisions. But decisions are preceded by interactions and activities, and choice may be seen as an act in itself. Separating the process of sensemaking from decision-making seems more or less artificial.

Sensemaking seems to ignore the role of feedback and the time element, which are crucial from a systemic, strategic and ecological point of view[41]. In sensemaking theory, individual processes of sensemaking may remain invisible but nevertheless produce meanings. Sensemaking offers no practical concepts for studying mechanisms of social influence in convergence, or synthesis of constructed meanings at different levels in the organization[42] into one shared meaning, through which strategies emerge[43] and consequently, a balanced pattern in organisational sense- (and decision-) making[44]. Sensemaking does not elaborate on the notion of frames, and its content, values (Egels-Zandén & Rosén, 2015) and the effect of the use of frames for sensemaking, strategic decision-making and organisational behaviour, the essential role of frames and values have hardly been empirically studied in sensemaking and strategic decision-making.

Understanding decisions requires understanding of underlying values, perceptions and meanings given by organisational decision-makers to events (Mittroff & Linstone, 1993; Schein, 1984). The substance of sensemaking, the interpretations of and meanings found for cues depend on an understanding of an actor's frames (Weick, 1995) and the values to be found inside frames (Hall et al., 2003). Frames tend to be past moments of socialisation; cues present moments of experience (Weick, 1995). These frames reside in people's minds.

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[41] Although Weick (1995) sees a system perspective as most suitable when talking about sensemaking in organisations, greater openness to input from the environment means more diverse information to deal with – information load being one of the triggers for increased uncertainty and hence sensemaking.

[42] According to Wiley (1998, in Weick, 1995), three levels of sensemaking above the individual level of analysis are, in ascending order, the intersubjective (interaction and level of social reality), generic subjective (the level of social structure, where organisations are included) and the extra subjective level.

[43] Mintzberg and McHugh (1985) state that ongoing retrospective sensemaking creates emergent strategies that differ from intended, deliberate strategies, suggesting that learning can substitute for rational decision-making (North, 2010).

[44] An empirical basis for sensemaking may partly be provided by Naturalistic Decision-Making (Klein, Moon, & Hoffman, 2006).

People use these frames to filter, simplify and interpret what they perceive. Frames may consist of an ideology or belief system which acts to structure that simplification (Trice and Beyer, 1993, in Weick, 1995).

In this research, strategic decisions were defined as consciously made choices to which no standard solution applies, which affect the organisation's licence to operate and require a long-term view, and as specific commitment to action (Mintzberg et al., 1976). Strategic choice is the outcome of a process of strategic sensemaking and selecting one decision alternative over others (Simon, 1976), which is influenced by dynamic factors (external factors and internal mechanisms) and based on values. The influence of contextual factors (external or internal) in meaning constructions of disruptive events or information is filtered through the frames used by individual decision-makers or groups of them. How frames influence the management of attention, or 'seeing', or the synthesis of diverse perspectives that emerge from local interactions, as intended in hybrid forms of strategic decision-making (Mintzberg et al., 2009: pp. 371–375), is an issue that so far has not been central to any studies but could possibly bridge the gap between sensemaking theory and decision theory.

In the next section, frames and their content values, as essential elements in sensemaking and decision-making, will be described in more detail.

3.3 The role of frames and values in strategic decision-making

Research indicates the importance and relevance of values in the collective process of decision-making (Courtney, 2001; Hall et al., 2003; Keeney, 1996; Simon, 1976; Smith, 2008). The frame and values of the *organisation* are reflected in its objectives, strategy and culture. Within a dynamic organisational environment and increasing cultural diversity within the workforce, acknowledgment of the influential role of a diversity of perceptions and views in organisational decision-making is becoming more important (Balogun, Pye & Hodgkinson, 2008; Paauwe, 2013: p. 106; Van Knippenberg & Schippers, 2007).

Due to different experiences and personal backgrounds, individual strategic decision-makers have a unique frame (Courtney, 2001; Hall et al. 2003; Mitroff &

Linstone, 1993; Van Marrewijk & Werre, 2002). This means that in a group debate a diversity of individual frames may come to the surface. A diversity of frames, when surfaced, is believed to lead to more effective decision-making but may also lead to conflict and use of authority to solve conflicts (Amason, 1996; Ashkanasy, Wilderom, & Peterson, 2004; Kaplan, 2008; Lê & Jarzabkowski, 2015; Mitroff & Linstone, 1993; Mohammed & Ringseis, 2001; Rein & Schön, 1996).

3.3.1 Defining frame

The concepts of frame and framing, often used interchangeably, have been and are discussed in a variety of scientific disciplines, including public policy, psychology, sociology and communication studies (Van Hulst & Yanow, 2016; Vliegenthart & Van Zoonen, 2011). There seems to be a lack of consistency in how different authors define these concepts. Vliegenthart et al. (2011) state that many authors fail to distinguish the content of frames from the contextual features of framing.

From a social movement perspective, framing theory typically is concerned with how people's opinions, values and attitudes are affected by and impact on opposing ways of presenting, or framing, an issue or event. It is about the process through which a meaning is constructed and a social or political issue is defined and interpreted, choosing one interpretation over others (Balogun, Pye, & Hodgkinson, 2008; Benford & Snow, 2000; Nelson, Oxley, & Clawson, 1997). Benford and Snow focus on strategic framing processes as deliberate, utilitarian and goal-directed processes; the deployment and development of frames is used to achieve certain purposes (Benford & Snow, 2000). The way of presenting or framing a decision situation influences strategic decisions (Dufwenberg, Gächter, & Henning-Schmidt, 2006). Based on the definition of framing by Van Hulst and Yanow (2016), in this research, framing is defined as the interactive, intersubjective processes through which frames are deliberately constructed in organisations.

Cognitive psychologists (Bateson, 1972; Kahneman & Tsversky, 1983; Tversky & Kahneman, 1981) conceptualise frames as memory structures resulting from experience. Sociologists (Goffman, 1974, (Benford & Snow, 2000; Snow, Rochford, Worden, & Benford, 1986) apply the concept when studying collective action and the way humans make sense of events. Weick (1995) posits that

frames are central to sensemaking and defines frames as past moments of socialisation. When actors 'build' their frame, they are influenced by others[45]. Frames develop through interactional processes of communication in an *unconscious* way (Goffman, 1974). Davidson (1984) states that frames are a socially constructed concept and are conceptual schemes, to be found at different levels in an organisation. These schemes, or frameworks, may provide a starting point from which to guide current and future action which enables one to make a normative leap from a situation as it is to a situation that ought to be (Bartunek, 1984; Rein, 2000; Rein & Schön, 1977, 1996). This may refer to Goffman's notion of strategic interaction, which refers to a more deliberate, planned aspect of frames used in organisations. This connection between frames and guidance towards future action and strategies is interesting from the point of view of strategic decision-making. Guidance could refer to deliberately constructed frames to be used by the members of the organisations when making sense of reality, and points to the influence of leaders in reframing the minds of the organisational members. 'The creation of new understandings is not free of power issues and self-interested behaviour' (Vlaar, van den Bosch and Volberda, 2006: p. 1629). Abolafia (2010, p. 363) shows how policymakers' sensemaking is influenced by an 'operating model' that serves as 'a dominant perceptual filter that shapes and biases sensemaking'. This operating model refers to a collective frame, guiding meaning constructions and interactions. It is useful in sensemaking because it limits complexity and variety, while its institutionalization means it has internal legitimacy (Abolafia, 2010).

In general, frames provide an actor with a view to the world (Lakoff, 2004) and a way to cope with and respond to a continuous stream of environmental issues, events, ideas and information in a mostly *unconscious*, automatic way (Goffman, 1974). Frames, according to Goffman's theory, guide the ways that actors

[45] A distinction can be made between this process that starts when humans are born, from the process of 'framing' as used in communication studies, policy science and the social movement discipline. In these disciplines framing refers to a process through which an event gets framed, which is a deliberate, conscious, planned process.

perceive their social realities and reflect an actor's organising principles, which structure those perceptions[46].

In this study, frames are seen as the outcome of an internalisation process and are found in an actor's mind. The concept frame can be used as a synonym for and defined as *an actor's internalised, invisible value system,* worldview, perspective or paradigm (Gardner & Stern, 2002) *that serves to filter cues*[47] in the real world. Frames reside in people's minds and represent underlying structures of belief, perception and appreciation (Kolkman, 2005: p. 47; Rein & Schön, 1996) Frames contain the values that unconsciously and consciously guide individuals and groups in making sense, from which a pattern of decisions emerges.

3.3.2 Defining values

The content of frames, based on a social-psychological view (Bateson, 1972; Benford & Snow, 2000; Goffman, 1974; Kahneman & Tsversky, 1983), are the beliefs, principles, values and meanings found after making sense of experiences. Values are fundamental in understanding human activity and are considered one of the most basic drivers of human behaviour (Rokeach, 1973, 1979; Wright and Goodwin, 2008). Values influence the behaviour of people and their willingness to take actions (Gardner & Stern, 2002).

Few scholars seem to study the role of frames, values, beliefs and underlying assumptions for decision-making (Gardner & Stern, 2002; Hall et al. 2003; Keeney, 1996; Kolkman, 2005; Lindenberg & Steg, 2007; Mitroff & Linstone, 1993). In the design school of strategy formation, Selznick already points to the relevance of managerial values for strategy formation but so far little attention has been given to this factor (Mintzberg et al., 2009: p. 36). Fréry (2006) states that the uniqueness of a strategy resides in value creation, which relates to debates on managerial ethics and values *(*Mintzberg et al., 2009) as a fundamental issue supporting strategic decisions.

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[46] Goffman initially focused on the definition of the situation, using Bateson's notion of frame analysis, and based on symbolic interactionist ideas. Goffman uses the word frame to refer to basic principles that people use to negotiate the meaning of their interactions. A characteristic feature of this interactionist definition of frame is that it is not consciously created (Van Hulst and Yanow, 2016; Vliegenthart & Van Zoonen, 2015).
[47] Filtering is needed in a world where information is overabundantly available to people.

There is lack of agreement and consensus among scholars with respect to the definition and meaning of the term values. This disagreement is related to the differences between the concept of values used by (business) ethicists, philosophers and, more recently, scholars in the field of sustainable business practices and values as the outcome of a creation process as used in economic theories[48].

Values act as social constructs, consciously and unconsciously mobilising and guiding the way decisions are made (Gini, 2004). Values motivate and commit people to act and respond (Aronson, 1995). Values are particularly relevant to strategic decision-making since they are central to studying and assessing general patterns of organisational behaviour (Marcus, MacDonald, & Sulsky, 2015).

Values from an ethical stance are defined as people's moral compass, giving them a deep sense of the right thing to do (George, 2003) (Alas, Ennulo, & Türnpuu, 2006). The term value in this sense refers to standards, rules, criteria, norms, goals or ideals that serve as the basis for such an evaluative judgement (Kahneman & Tsversky, 1983; Keeney, 1996). Values are the beliefs used (often implicit) as criteria in making preference judgements (Sánchez-Fernández & Ángeles Iniesta-Bonillo, 2007; Flint et al., 1997; Beder, 2006). 'Values' are the important personal beliefs that people hold with respect to themselves and the goals they strive for (Rokeach, 1973). Barron and Hulleman (2015) label values as predictive and connect them to seeing a reason or purpose for motivation and engaging in an activity. McClelland (1985, in Kluijtmans, 2014: p. 239) differentiates three main categories of needs that motivate people to make decisions and act: (1) the need to perform; (2) the need for social contact; (3) the need for power. These motivations, or needs, are influenced by situational factors which can change over time.

According to Williams (in Rokeach, 1979), values have cognitive, affective and directional aspects. Values are simultaneously components of psychological processes, of social interaction and of cultural patterning. They are present both

[48] E.g. among marketing scholars and practitioners great interest can be noted in the phenomenon of value creation (Sánchez-Fernández & Iniesta-Bonillo, 2007). Perceived value is considered by some to be a key factor in strategic management (Mizik and Jaconson, 2003); creating value for customers is what provides an organisation with its licence to exist.

implicitly, as inferred from selective behaviour, and explicitly, as observed in processes of evaluation.

From a system perspective, values can only be understood in relation to wider contextual influences (Alas et al. 2006). The beliefs of individuals are socially constructed (Chattopadhyay, Glick, Miller, & Huber, 1999). Humans are social animals and live in a state of tension between values associated with individuality and values associated with conformity (Aronson, 1995). Individual judgements about important issues can be swayed under group pressure, as has already been shown by the Asch experiments (Asch, 1951).

According to Rokeach, values are defined as the ideas and beliefs that influence and direct our preferred choices and actions (Rokeach, 1973). A value *prescribes* judgements and choices; it is an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence (Rokeach, 1973)[49]. Although the number of values a person possesses is relatively small (Rokeach, 1973), a universal list of individual values may be composed (see e.g. Schwartz, 1992, Stern et al., 1995, in Gardner & Stern, 2002: p. 64). These universal values can be hierarchically ordered into relatively enduring value systems (Rokeach, 1973; Bateson, 1972). Actors may vary in the ranking of the values they hold and in the strength in which particular values are held compared to others.

Stern et al. (1995) compiled a list of specific individual values from the work of Schwartz (1992). Related to the values distinguished by Merchant[50], Schwartz concluded that the homocentric and ecocentric ethics seem to be combined in many people's minds. This underlies the statement that humans usually use one or two frames (Van Marrewijk & Werre, 2002).

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[49] Rokeach (1973: p. 5) defined three types of beliefs: (1) descriptive or existential beliefs, (2) evaluative beliefs which induce a good or bad judgement of an object and (3) prescriptive or proscriptive beliefs which are referred to as a value.

[50] Merchant (1992) analysed values that underlie human views on the environment. Controversies around human-environment relations centre around three different values or ethics: 1) egocentric ethics, 2) homocentric ethics and 3) ecocentric ethics and values. The egocentric ethic values and judges behaviour from the view of human self-interest. This ethic could be linked to the utilitarian assumption of Bentham in which humans strive for maximisation of benefits. The second value is the homocentric ethic, which values and judges policies, events or changes that lead to welfare for humans in general. In this ethic humans dominate over other species.

3.3.3 Frame types

In this research the assumption is that values, as the content of frames, lie at the heart of decision-making (Gini, 2004; Simon, 1976; Mitroff and Linstone, 1993). Values are organised in value systems, which are referred to as frame types, or world views (Gardner & Stern, 2002: p. 56). Rokeach (1973: p. 7) defines value systems as an enduring organisation of beliefs concerning preferable modes of conduct. Values in this sense are prescriptive beliefs; they enable judgement of decision alternatives as desirable or undesirable. Values then serve as constraints to the actual synthesis of alternatives. Or values are the beliefs used (often implicitly) as criteria in making preference judgements (Beder, 2006; Flint, Woodruff, & Gardial, 1997; Sánchez-Fernández & Ángeles Iniesta-Bonillo, 2007).

Each frame type incorporates sets of underlying assumptions and values; each actor sees a problem differently and thus generates a distinct perspective on it. The weight or preference given to values differs, dependent on the actor's frame (Mitroff & Linstone, 1993). The generation of a perspective depends on the cognitive processes in the mind of the actor (Kolkman, 2005; Hall et al., 2003).

Few researchers focus on identification of objectives as value premises and development of multiple frames and values for collective decision-making (Beder, 2006; Courtney, 2001; Fritszche & Oz, 2007; Hall et al., 2003; Keeney, 1992; Mitroff & Linstone, 1993). Multiple frames provide a much greater understanding of the decision situation, lead to more productive information collection and possibly to better alternatives and more effective solutions (Courtney, 2001; Keeney, 1992). Boonstra and de Caluwé (2007) state that in dynamic environments multiple value systems, when brought together, are used for renewal of organisational strategies. Making effective strategic decisions suggests revealing a diversity of frames and integrating multiple values, thereby creating a better fit between decisions and the organisational context.

Categorising value systems, or frames, is helpful to get a more in-depth understanding of the process of sensemaking and enables the identification of the assumptions and values on which decisions are based. Mitroff and Linstone (1993) distinguish three frame types: the technical frame (T), the organisational

frame (O) and the personal and individual frame (P). These frame types are used to identify the way a decision situation is approached by decision-makers, whether individually or in teams. In 2001, Courtney added a fourth and fifth frame type to the ones categorised by Mitroff and Linstone by adding an aesthetic (A) and an ethical (Et) perspective, to be developed in the stages preceding choice. Hall et al. (2003) use Spranger's six values types to connect frames to values: '…values generate perspectives that fundamentally restrict the way the individuals "see" the world, interpret information, and make decisions.' (Hall et al, 2003: p. 3). They added a sixth frame, the economic frame (En), to the five frames already identified. A combination of these identified frame types by Mitroff and Linstone, Courtney's new decision paradigm and Hall et al.'s connection to Spranger's values is presented in Table 3.1.

Table 3.1 Frame types, based on categorisation by Mitroff & Linstone (1993), Courtney (2001) and Hall et al. (2003)

FRAME TYPE	Technical	Organisational	Personal	Ethical	Aesthetic	Economic
WORLD VIEW	Mechanistic	Collective, system (each organisation is composed of various suborganisations); interpretive	Individual, power (intuition & experience)	Philosophical, moral	Beauty of things	Practical
PLANNING HORIZON	Far	Intermediate	Short	All	Intermediate	Short
VALUES	Theoretical: Discovery of truth and knowledge in a rational and scientific way	Social: interaction, justice, fairness	Political: Power, influence, prestige	Religious (ideals): Make the world a better place	Aesthetic: harmony	Economic: usability, pragmatism
DECISION CRITERIA	Best fit with data	Societal gain	Individual gain	Highest level of understanding	Highest level of harmony and design	Highest cost/benefit ratio

Distinguishing frame types enhances understanding of the complexity of decision situations and diversity of values underlying sense and decision-making. Differences in frames lead to differences in observations, interpretations and

meaning construction of situations. Different preferences and goals of actors (be it individuals, groups or organisations) (Gioia & Chittipeddi, 1991; North, 2010) may complicate sensemaking. In organisations, frames can be found at three different levels in the organisation: (1) the level of the individual decision-maker, (2) the group level and (3) the organisational level. At the individual level, goals and objectives are created according to a person's value system. At the group and organisational level, decision-makers use the vision and goals of the organisation to guide their decision-making (Cherrington, 1994).

An individual's characteristics and/or coping strategies for dealing with uncertainty influence whether individual frames and values are revealed in group processes. Emotions, desires and needs may prevent people from entering into dialogue on different interpretations of reality. In the case where diverging frames and values are revealed, the group sensemaking process, aimed at making a strategic choice, can be characterised as a process of bargaining (Kaplan, 2008), or exchange of ideas, images, and information. Group mechanisms may prevent different frames from being elicited and prevent decision-making based on multiple frames and values.

People informally develop and mutually enforce rules used to make decisions without involvement of an official authority (Gardner and Stern, 2002: p. 28). Individuals tend to follow these group rules, or group norms, for reasons such as mutual respect and concern for one another, out of a sense of obligation to the group, or due to social pressure (Aronson, 1995). Leadership and power are the main themes in reframing, in making sense of disruptive events (Pfeffer, 1981; Kahane, 2010; Weick, 2011). Group conformity and group pressure may prevent reasoned thinking and prevent searching for and making sense of problems or complex issues that do not fit with existing value systems. Conflicts may rise when no agreement or synthesis is reached in meaning construction, which may threaten the functioning of the group. This could cause the use of *power* by the one who is responsible for group functioning. The sequence in which members of groups are asked about their views is a third reason why diverging frames may not come to the surface (Aronson, 1995; Homan, 2005). Consequences of misfit may be dissatisfaction and a low level of commitment in implementing decisions.

At the organisational level, decision-makers use the vision and goals of the organisation to guide their decision-making (Mintzberg & Westley, 2001). Organisational frames, defined as the shared values, goals and beliefs of the

organisation, are reflected in the organisation's vision, strategy, goals and culture.

Section 3.4 will elaborate on connecting sensemaking to strategic decision-making through frames and values.

3.4 SENSEMAKING IN STRATEGIC DECISION-MAKING

Accepting sensemaking as part of decision-making means accepting the assumption that the start of decision-making requires a connection between an event and the frame of an actor (Hutton, Klein, & Wiggins, 2008). This puts frames and their content – values – in the midst of decision-making (Hall and Davis, 2007; Keeney, 1994). Understanding strategic decision-making as an emerging pattern of interactions means paying attention to the cognitions of actors, individuals or groups that are either formally or informally involved in decision-making (Hodgkinson & Starbuck, 2008; Langley et al., 1995; Senge, 1996; Weick, 1995).

Strategic decisions involve multiple practitioners (Amason, 2006; Jarzabkowski, 2004)[51]. Until quite recently actors and their actions, emotions and motivations were given little attention in mainstream strategy research (Jarzabkowski & Spee, 2009). Strategic cognition studies are usually focused on one level of analysis, such as the individual, group, organisation or industry level. Most group level analyses are restricted to cognitions of top management teams (TMTs) (Egels-Zandén & Rosén, 2014; Narayanan, Zane, & Kemmerer, 2011).

Few researchers focus on identification of objectives and values (Keeney, 1992, 1994), and development of multiple frames and values for collective decision-making (Beder, 2006; Courtney, 2001; Fritszche & Oz, 2007; Hall et al., 2003, 2007; Mitroff & Linstone, 1993).

[51] The field of strategic cognition focuses on cognitive representations of the environment and organisation. Cognition, or the mind of an actor, is an intervening factor between events and strategic decisions (Narayanan et al., 2011). The mind is not separable from its material base, or in other words the unit of survival is always the organism and its environment (Bateson, 1972).

Making effective strategic decisions implies surfacing of a diversity of frames and integrating multiple values, thereby creating a better fit between decisions and the organisational context. Eliciting multiple views, or frames provide a greater understanding of the decision situation, lead to more productive information collection and possibly to better (design of) alternatives and more effective solutions (Courtney, 2001; Keeney, 1994). In dynamic environments, multiple value systems may be used for renewal of organisational strategies (Boonstra & de Caluwé, 2007).

Strategic decision-making can be depicted as a process consisting of a number of phases that are not sequentially related: seeing, analysis, thinking and choice (Mintzberg et al., 2005). The first three phases are captured by strategic sensemaking that can be positioned at the individual and group level. The term strategic refers to consciously searching the environment for events that may disrupt ongoing flows or affect the resilience of the organisation. In sensemaking theory, the process of meaning construction is triggered when an event causes increased arousal. The first response is initially an emotional one, which is based on a fast association of the event with past experiences. An individual starts interacting when he or she perceives a disruptive event but cannot find a meaning that matches his/her frame, when an event leads to feelings of discomfort or remaining dissatisfaction, or when others involve an individual in interactions about events. In that case a collective process of sensemaking precedes strategic choice.

Factors cause decision processes to cycle back and forth to other stages, influencing the strategic decision process (Mintzberg et al. 1976). These (non-quantitative) factors influence the perceptions and sensemaking of individual decision-makers and groups as well as the synthesis and choice stage in which one preferred strategic alternative is chosen (the organisational level or, as Weick calls it, the intra-group level (1995)). External and internal factors (see Appendix 3.1 for an overview) influencing the processes of sensemaking and strategic choice are filtered through the frames of decision-makers (individually and collectively).

This conceptual model depicted in Figure 4 shows the process of strategic decision-making, in which sustainability is taken as the disruptive event.

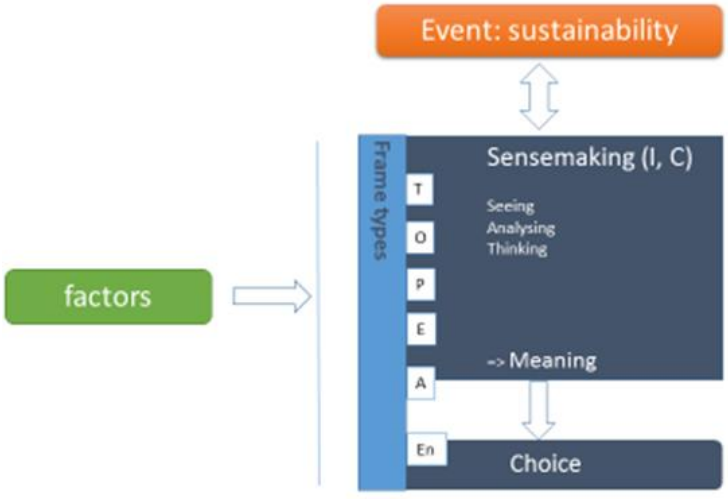

Figure 4 Conceptual model of strategic decision-making. Sensemaking may start consciously or unconsciously. Disruptive events may trigger individual actors (referred to with the 'I' in brackets) to search for meanings, and match their frames to the deviant occurrence. If doubt and uncertainty continues, individuals talk to trustworthy others, and a collective process of sensemaking starts (referred to with 'C' in brackets).

For sustainability to become an integrative part of strategic decision-making, the concept itself first needs to be seen as disruptive, and enacted, in order to trigger a process of sensemaking which precedes surfacing of diverse frames in analysis and thinking, in order to result in synthesis and choice. This means that a connection must be made between sustainability and the frames of actors (individually or collectively) within the organisation. Without this connection, disruptive events, such as ecological crises, will not be seen. In the case of sustainability this may lead to a failure to using a multiple, sustainable value system, as the concept of sustainability suggests, in making strategic decisions.

Three relevant elements can be derived from the above for studying sensemaking and strategic decision-making with respect to sustainability: (1) identified cause-effect relationships and perceptions and values of actors (key individual decision-makers and groups of decision-makers) in an organisation with respect to sustainability; (2) identified values in organisational goals and strategic choices made and the role of sustainability in them; (3) contextual factors influencing synthesis and choice, especially with respect to sustainability.

3.5 SUMMARY

The central question in this chapter is a theoretical one: *What is the role and relevance of frames and values in strategic decision-making, from a decision theory perspective*? This question is answered by deriving knowledge from different theoretical disciplines, including strategic management, decision theory and social psychology.

In decision theory, the intelligence phase in which events or situations are identified which need to be decided upon and in which a diagnosis of cause and effect takes place, have hardly been studied (Mintzberg, 2003: pp. 35, 60). Sensemaking theory is useful for strategic decision-making since it places the main focus on predecisional activities. Sensemaking connects to strategic cognition studies by incorporating the mind in organisational theory. Ecological change is enacted when a connection is made with the frame of the actor, individual or collective.

A diversity of frames elicited in the process of sensemaking enables more effective decision-making. However, surfacing frames from multiple actors not only enhances decision quality but also serves as a constraint in the stage of synthesis of developed decision alternatives. In groups, conformists are preferred over non-conformists (Aronson, 1995), who may prevent individuals from sharing their views with the group. Group rules, or mechanisms, are developed and used to make decisions (Kaplan 2008). Leaders – group members with a strong influencing position in meaning construction (Mills, 2003: p. 153) – may persuade or even force group members to adjust their individual frame to the group frame (Pfeffer, 1981; Weick, 1995), or prevent the surfacing of divergent views which results in less effective decision-making.

Organizational frames, or goals, may be used to synthesise and overcome possible conflicts caused by surfacing diverse values and serve as criteria in choosing one course of action out of feasible alternatives (Keeney, 1992, 2015; Simon, 1976).

Strategic decision-making, including sensemaking, can be depicted as a process consisting of a number of phases that are not sequentially related. This process can be characterised by novelty, complexity and open-endedness (Mintzberg et al., 1976), the latter referring to strategic decision-making as a circular process. It is a process at the individual and group level and, following the terms used by

Mintzberg et al. (2005), consists of seeing, analysis, thinking, synthesis and choice.

The conceptual model presented in Figure 5 shows the connection between an event, in this research sustainability, frames and values (expressed by frame types), sensemaking and choice, which fills a gap in both decision theory and sensemaking.

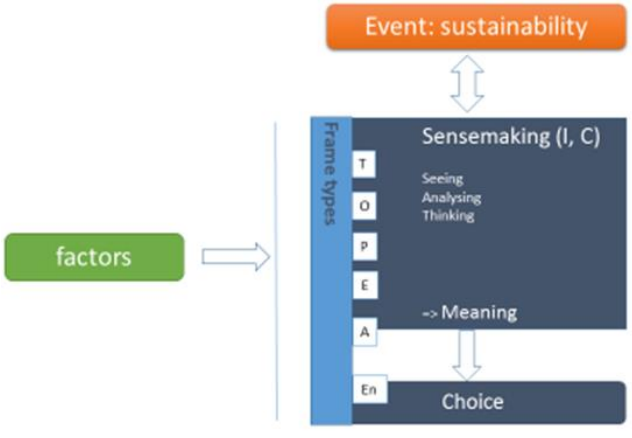

Figure 5 Conceptual model. Sustainability as trigger for a process of sensemaking, resulting in the act of choice. Sensemaking and choice are stages in the process of decision-making, influenced by factors.

Aligned with the Carnegie School (Cyert, March, Simon), this research puts the key focus on (strategic) decision-making. Understanding the process through which decision-makers, either as individuals or teams, enact their environment and make sense of it enhances understanding of organisational behaviour. This requires understanding the underlying values, beliefs, perceptions and meanings created by decision-makers to events or triggers that disrupt organisational behaviour and pose risks to achieving the organisational objectives.

The next chapter deals with the research methodology and research design.

4 METHODS

4.1 INTRODUCTION

This chapter presents an analytical model guiding the study of strategic decision-making in a Dutch housing association (Welbions). The empirical intention is to gain insight into the frames, values and factors that influence strategic decision-making in organisations, in the case where sustainability is the disruptive event, through *describing* the process of sensemaking and strategic decision-making in the context of sustainability and *exploring* factors influencing this process.

Climate change, biodiversity decline and ecosystem quality deterioration can be framed as an observable reality, which represents a positivist view of acceptable knowledge. Changes in our planetary system are present regardless of whether or not they are noticed by humans. Disruptive events only come into human life when people observe their existence. How the real world is interpreted depends on an actor's perspective, or frame[52]. This frame colours observations, interpretations, analyses and explanations, and develops through experience and learning. Studying sensemaking, beliefs and preferences of strategic decision-makers best fits with an interpretive-constructivist approach (Bryman & Bell, 2011; Ketchen, Boyd, & Bergh, 2008; Rouleau, 2005). The way humans see, analyse, think, talk and communicate with others to search for meaning is where the *social* constructionist approach of this research lies. In order to conceptualise and create an image of ambiguous and doubted events people talk to trusted, knowledgeable others and construct a meaning. This research is based on an ontological position in which reality and knowledge are considered to be subjectively interpreted and constructed in human interactions (Creswell, Hanson, Plano Clark, & Morales, 2007; Denzin & Lincoln, 2005; Saunders, Lewis & Thornhill, 2012; Silverman, 2013). This is not only characteristic of a relativist

[52] Frames and values that reside in the minds of actors can only be unfolded and described by using words. Identification of the assumptions used in solving complex, non-routine problems can be executed using the study of dialectical processes (Bartunek, 1984).

view of knowledge development[53], which currently dominates strategy research, but also embraces the idea that the mind does not exist in any independent sense but rather exists via communication (Craig-Lees, 2001). Research from a social constructivist-interpretive philosophy can be characterised as in-depth investigations which are particularly useful in cases of conceptualising new developments and important features of complex social behaviour (Punch, 2005).

Studying the frames and meaning constructions of actors requires collection and analysis of words, text and talk[54], which implies that this research is *qualitative* in nature. The main assumption of the qualitative paradigm is that in order to understand a social problem, a holistic picture must be formed with words, both of context and of perceptions of informants presenting an inside view, conducted in a natural setting (Creswell et al. 2007; Denzin & Lincoln, 2005; Punch, 2005; Silverman, 2007). Noticing patterns in interaction processes and identifying underlying perspectives of individuals and teams in a context requires an in-depth view, time, a process of empathetic understanding and an open mind – not predefining concepts but labelling preconceptions.

Indeed, qualitative research is considered an appropriate method in studying organisational sensemaking processes (Craig-Lees, 2001; Hutton, Klein, & Wiggins, 2008; Van Der Heijden, Driessen, & Cramer, 2010). Aligned with this qualitative nature, studying meanings, preferences, choices and not directly observable frames in the context of organisations, especially with respect to sustainability, is believed to be value-laden and not value-free. Collecting and analysing data about how sustainability and environmental issues are made sense of in the local context of organisational decision-making can only be acquired when the researcher enters that social world (social interactionism).

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[53] The realist paradigm dominates strategy research; constructivism is often ignored but of importance to strategy research (Mir & Watson, 2000). Constructivism can be characterised by ontological realism and epistemological relativism. Epistemological relativism helps to identify the constructed nature of the field, where the researcher is an active participant rather than a reactor or information processor (Jarzabkowski & Spee, 2009; Mir & Watson, 2000).

[54] According to Schön & Rein (1994: p. 34), 'we must become aware of our frames, which is to say that we must construct them, either from the texts of debates and speeches or from the decisions, laws, regulations, and routines that make up policy practice'.

This chapter provides an overview of the methods used in this study. Section 4.2 presents the research design. In section 4.3 the chosen methods of data collection and analysis are described. Section 4.4 ends with a reflection on the quality of this research.

4.2 A QUALITATIVE RESEARCH DESIGN

The case and unit of analysis is the process of strategic decision-making on sustainability in the context of one particular Dutch housing association. The way key decision-makers make sense of sustainability will be studied in this one case, in-depth and longitudinal. The specific setting in which strategic decision-making with respect to sustainability is studied is the Dutch housing association Welbions.

Welbions is located in Hengelo in the region of Twente, Netherlands. Welbions owns 14,365 houses, divided into energy labels varying from A++ to G. Approximately 90% of these houses are rented to people with an income lower than €36,798 (reference date 2018). In 2008 the Aedes Covenant made sustainability an issue for all Dutch housing associations. Welbions chose sustainability as one of the five strategic themes in its business plan for 2009–2011. Initially the goals for the strategic theme of sustainability were to develop a vision of sustainability in a broad sense and balance ecological, social and economic aspects. The second stage, encompassing the period 2011–2013, can be characterised as the stage in which the sustainability vision is translated into choices and operational activities and in which sustainability is integrated into the strategy of Welbions. In the business plan for 2012–2017 however, sustainability was given less attention, but in the business plan for 2018-2020 sustainability, translated as measures to reduce CO2 emissions and energy use, is said to be a so-called ‘green line’ in all operational activities. This ‘green line’ indicates that sustainability should become integrated into every aspect of the organisation.

The objective of this research is to deepen our understanding of the underlying assumptions, frames and values of individual decision-makers and teams of decision-makers used in making sense of sustainability and in making strategic choices. Factors influencing strategic decision-making with respect to sustainability will be described and explored. The key issue is how sustainability is taken into account in strategic decision-making. Together with the main question, which meaning is given to sustainability within a Dutch housing

association and does making sense of the concept of sustainability lead to sustainable strategic choices, the chosen research strategy is a case study.

A case study especially fits with gaining a thorough understanding of processes in a realistic, naturalistic context (Punch, 2005; Saunders et al., 2012; Simons, 2005; Thomas, 2011). The general objective of case studies is to develop as full an understanding as possible of complex processes. It explores an event or phenomenon in a real-life, bounded context, in which several levels can be distinguished but together form a more complete picture of events (Punch, 2005; Yin & Campbell, 2018). Case studies concentrate on experiential knowledge of the case and close attention to the context of the case, and study both what is common and what is particular about the case (Denzin and Lincoln, 2005). According to Poole & van de Ven (in Nutt, 2010, p. 576), 'the measure of generalisability of a process theory is not its ability to apply uniformly across cases, but its sensitivity to the pattern that shapes the decision'.

Whether or not the case is typical for studying strategic decision-making in the context of sustainability is not the critical issue, but the propositions on which this study is based and the identified patterns in strategic decision-making may support similar studies, since strategic decision-making and sustainability are widely applicable. Sustainability is an abstract ambiguous concept which needs to be made sense of in the local contextual settings of organisations. Every organisation has its own patterns of interaction and value systems, and employees each have different values and norms (Veenswijk, van Marrewijk, & Boersma, 2010) and notions of temporality (Dilee & Söderland, 2011), influencing the process of strategic decision-making. This may complicate the generalisation of findings from one setting to the other or to compare several cases of strategic decision-making. However, identified patterns in the way individuals and groups construct a meaning of sustainability and in the way sustainability is integrated in strategic decision-making offers insights applicable to other studies of the process of strategic decision-making.

The approach in this research is indicative and idiographic, a single case is studied in depth. In this inductive investigation themes and categories are developed from the data, into patterns and higher level concepts (referred to as proposition generalisation, or pattern theories (Creswell, 2009). Strategic decision-making is a complex and dynamic *process* that is ongoing. Therefore, the chosen time horizon is longitudinal.

Research instruments

Strategic decision-making in general is researched by observation, studying organisational records and by interviews or questionnaires (Mintzberg, Raisinghani, & Theoret, 1976), since the process deals with different levels of analysing an organisation, the individual, the organisation, groups and the industry itself (Ketchen et al., 2008; Langley & Abdallah, 2011). The difficulty in studying strategic decision-making and the frames and values underlying this process is that they seldom leave reliable traces in the files of the organisation (Langley, Mintzberg, Pitcher, Posada, & Saint-Macary, 1995; Mintzberg et al., 1976). The question of who is making strategic decisions then leads to the units of observation. As stated in Chapter 3, strategic decisions are made by informal and formal strategic decision-makers, individually and collectively. The formal group being the management team of the organisation, informal key decision-makers are those employees who are not part of the management team but prepare decisions and define the content and context of the interactions in the management team, while talking to others about it.

Asking individual strategic decision-makers to reflect on the group processes in which they are making sense of sustainability and about their perceived factors/risks/opportunities in decision situations that are triggered by (disruptive) events, in this case, sustainability, enabled the researcher to identify individual frames and values. Interviews provided a third angle and enabled verification of results from reviewing documents and group observations. This method also provides insight into possible discrepancies in the group values and individual values, but also explores which factors could possibly contribute to sustainable values based strategic decision-making.

Patterns in interaction, the values and frames and factors influencing strategic decision-making are traced by means of asking individual decision-makers and groups of decision-makers what meaning they attach to the concept of sustainability and which strategic events are of concern for the organisation, and via (participant-) observation of groups discussing strategic events and sustainability. Values can be explicitly found in the decision criteria, implicitly inferred from judgements and selective behaviour (of what *is*, and the beliefs and preferences of what should be (Williams, in Rokeach, 1979: p. 16)). Observation of groups and asking individuals about the culture gives an idea of the shared values used in group decision-making. The organisational frame is reflected in

the business goals, often found in paper artefacts such as business plans, decision proposals and frequent performance reports.

The convergence of the fields of sustainability and strategic management has not been studied in depth by many researchers (Egels-Zandén & Rosén, 2014). The reason for this could be that it is rather time-consuming to get a thorough, clear view of strategic decision-making. Another issue is that the researcher needs to be present on many occasions, which is best provided for when the researcher fulfils a (specific) task in the organisation. This is often the case in single case studies (Saunders et al., 2012).

Working as a strategic consultant at Welbions enabled the researcher to observe internal decision processes and participate in activities related to sustainability. Reports and notes of attended group meetings were gathered during two full years. The role of the researcher can therefore be described as participant-as-observer.

When a researcher interacts in a natural setting in order to collect data, the researcher's values possibly influence other actors' assumptions and may be influenced by others (Silverman, 2007, p. 16). In compiling a list of uninterpreted data there is always transformation, an intervention between researcher and raw data (Bateson, 1972).

It is quite impossible to not being influenced by others in the values that underlie decisions. Humans are social in nature, frames are developed through experience and socialisation (Aronson, 1995). However, measures were taken and used methods described as thorough as possible in order to give other researchers the opportunity to achieve the same results.

The quality of the research is improved by informing, validating, and sharing information with others then those interviewed or observed in group meetings (workshop Aedes and workshop with members of other housing associations) and by means of a survey (2011), presentation of findings in lunch meetings, and a focus group (2012) at Welbions.

The risk of subjective interpretation of findings from interviews was mitigated by asking every respondent in every period to check and validate the interview reports. Statements from respondents were transferred into excel without interpretation from researcher. Continuously collecting and analysing data from documents in which strategic choices are described, is a way to justify the

discrepancy between what people say and what people do, leaving the researcher the freedom to take the things people say for true. I did not study the causes of that discrepancy. Skills that I could make well use of in this study are my sensitivity and ability to gain trust due to my professional expertise. Respondents felt that I understood their language and respected their culture, and taking a position as equal minimizes status differences between interviewer and respondent (Punch, 2005). By using interviews with experts before designing interview questions in the 2nd and 3rd period, the interview moved from unstructured (in the first period) to semi-structured in the last periods.

Field notes from (participant) observation are cross-checked with reports from the same meetings. Unstructured observational data collection was centred on general questions, to keep focus on broader views. Field notes were written as many as possible. In the case of the participant-observation of the project team Sustainable Development, I functioned as a chair person which enabled me to step back in the meetings and listen carefully while others debated sustainability. An assessment of the functioning of the project team is used to cross-check findings. The field notes and statements were transferred without interpretation into excel and coded. In the third period the observation of the management team meeting (in 2017) was audio-recorded.

By using the same keywords/sensitizing concepts to analyse data in every period, codes and categories emerged along the way, made it possible to distinguish patterns in data acquired from the three sources.

Summarized, this research uses a constructivist, qualitative and longitudinal case study design to deepen our understanding of three main topics: (1) the meaning constructed of sustainability by individuals and the collective, (2) factors influencing strategic decision-making, (3) individual and collective frames and values underlying strategic decision-making with respect to sustainability.

4.3 Data collection methods and data analysis

Data collection methods

During the eight years in which data was collected, three data collection methods were applied: (1) examining relevant documents, (2) (participant-) observation of group debates, and (3) asking individual decision-makers (interviews). Data was

collected in three time periods, which can be characterized by three main process stages in the development of strategies, vision development, strategy design and strategy implementation.

This study of strategic decision-making starts with getting insights in the strategic decision situations and reading and gathering *literature and documents* about sustainability and strategic decision-making. From the collected data a list is extracted of factors that influence strategic decision-making as well as a number of categories or main concepts related to the sensitising concept sustainability. The Welbions case was prepared by collecting and studying relevant sectoral and organisational documents such as UN, EU and Dutch policy documents about sustainability and biodiversity, sectoral and organisational documents such as general sector policies on sustainability, financial policy, financial forecasts and reports, the business plan and public housing report of Welbions. Welbions allowed the researcher unlimited access to materials until approximately 2013. After this period the researcher was more distanced from the organisation, which complicated access to data from participant observation and organisational documents. However, access to documents, observation and recording of a management team meeting in 2017 was allowed, and interviews with key decision-makers was easily arranged due to the accompanying letter of support of the CEO of Welbions.

A suitable method for collecting and finding patterns in qualitatively natured data, in the meanings that people construct, is *observation* (Saunders et al., 2012; Silverman, 2007). Where interviews using questions are more regulatory and could eliminate other patterns than the interviewer expected to find, observation fits with the idea of finding open concepts as intended in Grounded Theory Methods. Therefore, the method of (participant) observation is used, with the aim of finding a pattern in sensemaking and decisions made with respect to sustainability. The collected data can be depicted both as descriptive observations and brief narrative accounts of attended meetings and discussions.

The selection of groups for observation was carried out using the distinction made by Cohen and Bailey (1997). They distinguished four levels of teams within an organisation: work teams, parallel teams, project teams and management teams. Aligned with this idea, groups that have been selected to study represent these four levels: (1) the management team, since strategic decisions are made within this top-level team of managers; (2) the work team ‘Strategy & Organization’, which was assigned the task of developing a vision of

sustainability – and had to make sense of the concept of sustainability; (3) the project team 'Sustainable Development Welbions', that was assigned the task of formulating sustainable goals aligned with the vision document; (4) the parallel team, or working group 'Awareness', parallel operating to the project team 'Sustainable Development Welbions', assigned with the task of raising awareness among the employees of the organisation about the urgency to act more sustainably and (5) the project team 'Hengelose Es Noord' (abbrv. 'HEN') that applied the concept of sustainability within its development process with respect to the specific city area. Appendix 4.1 lists meetings that were attended by the researcher as participant-observator in 2009, 2010 and 2011. In 2017, researcher observed and recorded a management team meeting.

The data collection methods used during this research are visualised in Figure 1.

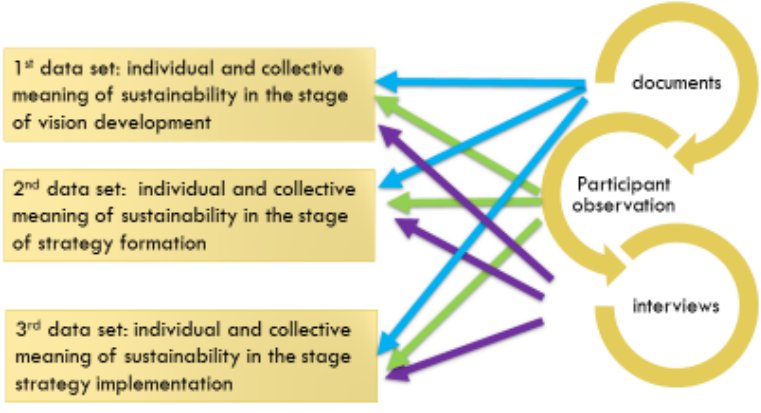

Figure 1 Data collection methods, case Welbions 2009-2018.

This study will use multiple data sources and data collection methods to make results more trustworthy and verify outcomes that are qualitative in nature, which is common practice in studies in a naturalistic setting (Silverman, 2013). This helps to overcome weaknesses associated with using only qualitative data (Tashakkori & Teddlie, 2010). Using multiple methods also contributes to overcoming the disadvantages of studying one case in depth. Triangulation[55] is a way to find an outcome based on results from different angles, which, according to the researcher, is of importance in research based on socially constructed

[55] Triangulation originally is meant to refer to the use of multiple techniques within a given method to collect and interpret data (Denzin, 2012). Campbell and Fiske (1959) developed this idea of using more than one method with the aim of strengthening the validity of the study and to ensure that the variance reflected that of the trait and not of the method.

meanings and interpretations and in studying a single case (Saunders et al., 2012). Uninterpreted data from informants that is subjectively interpreted by the researcher is triangulated with different sources to make data more trustworthy.

Another measure to mitigate too much subjectivity is the decision to follow an inductive process. I did not use predefined concepts nor hypotheses. The sensitising concept sustainability is used to mark findings in all stages of data collection. After the first stage of data collection that was guided by the general question in interviews and in participant observation, 'what is the meaning of sustainability?', literature is reviewed continuously which enabled formation of a number of sensitising concepts. These concepts are connected to sustainability and categorised into the three dimensions of sustainability: people, planet and profit. Concepts per dimension were located by reviewing theories in each dimension: economy for concepts in the profit dimension, organisational behaviour, strategic management and social psychology for concepts in the people dimension and ecology for concepts in the planet dimension. Saturation of literature search in this study is complicated due to the multidisciplinary nature of sustainability and the use of theoretical underpinnings from sustainability science and ecology, strategic management, decision theory, social and cognitive psychology. When more than one article or book was found where the sustainability concept was defined in numerous ways (see e.g. Carreon, 2012), as was also the case for sensemaking (see e.g. Weick, 2012), I merely focused on the commonly agreed definitions. The main goal in this study was not to find a definition but to search for the meaning given to the concept by individuals and groups, and as reflected in strategic choice documents.

The research can be divided into three data collection stages, together encompassing a period from 2009 to 2017, which shows the longitudinal character of the research design. Each data collection stage started with collecting empirical data and subsequently literature search. After the second stage of data collection I decided to zoom in on concepts that seemed to connect and combine main elements of decision theory to and with sensemaking and sustainability, i.e. frames and values.

DATA COLLECTION 1ST STAGE

During August 2009 – February 2010, the meaning of sustainability and its relevance for the housing association's licence to operate was discussed in 34

open, unstructured interviews with Welbions' directors, management, policy consultants and urban area developers. Those employees were selected who were expected to be involved in transforming Welbions into a more sustainable organisation. Among these 34 interviewees were three non-employees – a customer, an external expert and a policy advisor from the municipality of Hengelo. The central question in these interviews was: 'What does sustainability mean in your opinion; which expectations do you have with respect to a strategy based on sustainability for Welbions and what should Welbions do when aiming to behave in a sustainable way?'. See Appendix 4.2 for a list of the people who were interviewed in 2009.

From its start, the focus of this study was on the relevance of sustainability for the organisation, i.e. Welbions. Although in the explorative interviews some external individuals were asked about their opinion regarding sustainability, the search for a meaning by the organisation and the impact of sustainability for the strategy of the organisation was emphasised.

In 2011 a survey was held (qualitative information) to find out what employees considered the meaning of sustainability to be after two years of working with the strategic theme. See Appendix 4.3 for a list of the survey questions.

In addition to the explorative individual interviews, the meaning of sustainability was discussed in open, unstructured group sessions in which the researcher participated and observed: three meetings with managers and directors in September 2009, January 2010 and February 2010, nine meetings of the Strategy & Organisation team in the period September 2009 – February 2010, one meeting with the board of directors in December 2009 and seven meetings in the Welbions sustainable development working group in the period September 2009 – March 2010.

To identify main themes of sustainability for Welbions and empower the manager strategy of Welbions to formulate a sustainable vision for the organisation, an Ecosystem Services Review (ESR) was executed (action research) in three sessions in the period October – December 2009. The researcher supported the manager strategy in her task to identify sustainability themes for Welbions in providing a tool to identify themes. The ESR tool was selected after evaluating environmental assessment tools. The 'Ecosystem Services Review' (ESR) is based on the principles of the Ecosystem Approach of the Convention on Biological Diversity (CBD). It is a tool for strategy development as well as a tool to raise awareness for businesses that their performance is influenced by its

interaction with ecosystem services (provisional, regulating, supporting and cultural). The ESR methodology consists of five steps: 1) Select the scope; 2) Identify priority ecosystem services and systematically evaluate the degree of the company's dependence and impact on ecosystem services; 3) Analyse trends in priority services and research and evaluate conditions and trends in the priority ecosystem services, as well as the drivers of these trends; 4) Identify business risks and opportunities that might arise due to the trends in priority ecosystem services; 5) Develop strategies for managing the risks and opportunities[56]. The ESR scan was executed in three sessions with the Welbions Strategy Manager. The main processes and supply chain of Welbions were described together with the risks and opportunities that arise from the dependency of the organisation on ecosystem services and impact on ecosystems by its operations. The results are translated into the Welbions sustainable development vision document.

This vision document was debated and decided upon in the board of directors in December 2010 and debated in two management team meetings in early 2010.

The following documents were analysed, which described the strategic choices that were made: Welbions Business Plan 2009-2011, Vision of Sustainable Development (2010), Welbions Financial Policy (2009), Report Real Estate Management (2009) and Investment Criteria (2009).

Results of this data collection stage can be characterised by descriptions of the concepts that individuals and groups used in constructing a meaning of sustainability and how sustainability was expressed in strategic choices.

DATA COLLECTION 2ND STAGE

In the period 2010 – 2011 the researcher observed and participated in 28 meetings of the project team 'Sustainable Development Welbions', five management team meetings, 16 meetings of the working group 'Awareness', four meetings of the maintenance policy working group and meetings in which the urban area development of Hengelose Es Noord was discussed. The aim was to find patterns in interactions of collective sensemaking and strategic choices regarding sustainability. In this period the researcher was a member of team strategy. At the end of this period the researcher left the organisation.

[56] http://www.wri.org.ecosystem-services-review.

The final choices made by the sustainable development project team concerned choices with respect to the organisational goals. These choices are reflected in a number of documents (in Dutch): Welbions Business Plan 2012–2017, Strategic Letter 2012, Decision Document Veldwijk Noord, Management Report for Quarter 2, 2011.

In 2012–2013 individual interviews were held with 15 key decision-makers (see Appendix 4.4 for a list of the informants) to identify factors influencing strategic decision-making and possible discrepancies between the collective pattern and frame and the individual frames and values. In the last part of the interviews, factors were explored that could lead to sustainable values based strategic decision-making. The selection of the interviewees in 2012–2013 was based on the experience of the researcher during the time in which she worked as a strategic consultant. The list of interviewees was discussed with the manager of the team Strategy & Organization and the Director for confirmation. Advantages of interviewing these informants after leaving the company were that the researcher was already known to interviewees and trusted, which enabled an open-minded approach. The researcher was also able to cross-check the subjective picture formed during and after the stage of participative observation and interpretations of documents (triangulation). To prepare the interviews with key decision-makers at Welbions, a workshop in early 2012 and unstructured interviews with five expert informants were held. From the workshop with people active in housing associations and in the building sector and from conversations with these expert informants, operating outside the organisation, a number of key issues and themes in the Dutch housing association sector were identified related to housing associations' sustainability and licence to operate. These focal points were then used in the interviews with 15 key decision-makers (the list of interviewees and interview questions is presented in Appendix 4.4). In 2013 a focus group interview was held after these 15 interviews. The group consisted of the director and a number of employees working at different layers in the organisation; the meeting aimed to verify the results and possibly add new insights and additional information.

To distinguish processes in the construction of meaning and weighing of alternatives in making choices, the first category of questions involved the stage of *seeing*: which events are seen as essential for the organisation to act upon and integrate in their strategy – what causes attention for sustainability (Questions 1 and 2) and who are Welbions' stakeholders (Question 3). The second stage in sensemaking is the *analysis* of Welbions' current way of making

strategic decisions (Questions 3a, 3b, 3c, 3d and 4). The question about possible controversies in the decision-making process was posed to answer the question of whether diverse frames are coming to the surface in the decision-making process, from the theoretical claim that diversity leads to more effective decisions. The aim is to find decision criteria that are used (3a), what the beliefs and norms of the decision-makers are with respect to decision-making regarding sustainability (3b), what values underlie decision-making, which patterns can be identified in the process and which factors contribute to pro-sustainable decision-making (3d) and what are the shared values and norms of Welbions (Question 8). The third process is the process of *thinking*; the questions categorised in this process (Questions 5, 6, 7, 9 and 10) ask about the perceptions of decision-makers with respect to the goals that Welbions should aim for (goals reflect norms and enable discovery of a possible ranking in values that are used) and factors that could contribute to pro-sustainable strategy (the explorative part of this research).

DATA COLLECTION 3RD STAGE

The third and last stage of data collection was conducted in 2017, in which nine key decision-makers were interviewed (see Appendix 4.5 for a list of the informants). The same interview questions were used as in 2012–2013 in order to describe the terms and concepts used by these decision-makers in making sense of sustainability. They were also specifically asked about the progress made in executing the sustainable strategy of Welbions and in developments and changes that they perceived during the years from 2009. It was possible to ask this because seven out of nine interviewees were the same people who were interviewed before. Selection of interviewees was made by consulting the director who was the sponsor of the sustainability task force. In addition to these individual interviews, one meeting of the management team was observed. In this meeting the multi-year budgets (abbr. MYB) were discussed, in which sustainability was expected to be integrated. The notes from all meetings of the management team in 2017 in which sustainability was discussed were also obtained. The documents that were collected in which strategic choices were written with respect to sustainability were: the Audit Report (2017), the memo ‘Leading principles Sustainability’ (2017), and the decision proposal ‘Collective Energy system Hengelose Es’ (2017).

Data collected in this period enabled descriptions of concepts and terms used by individuals and the management team in making sense of sustainability and

reflected in the strategic choices. The answers given by individual key decision-makers (non-members and members of the management team) were again categorised in three stages, 1) the stage of seeing (which events were labelled as strategic in nature), 2) the stage of analysis (perceptions with respect to the current method of strategic decision-making at Welbions) and 3) the stage of thinking (which beliefs, preferences and values are reflected in the factors that influence strategic decision-making).

Data analysis techniques

The general method used in this research to analyse and interpret the data is Grounded Theory [57]. The aim of a grounded theory is to generate a theory from the empirical data. This method is suitable if there are no predefined hypotheses available (Punch, 2005: p. 154). As stated earlier, the connection between sustainability research and strategic choice is growing. But the answer to the question of how a synthesis is reached when a diversity of frames and values comes to the surface in strategic decision-making, especially with respect to a disruptive event, sustainability, remains unclear. Therefore, a substantive theory is developed inductively from the data.

Grounded Theory (GT) is largely based on the work of Glaser and Strauss and originally positioned in the positivist paradigm. Glaser stated that in Grounded Theory no predefined categories or codes are used. Recently, GT was further developed and moved towards post-positivism (Strauss & Corbin, 2008), and Charmaz (2006) positioned it in the constructivist-interpretive approach. Identification and conceptualisation of complex patterns in strategic decision-making according to a qualitative approach requires the researcher to have an open mind. Characteristic of GT is a continuous comparison of empirical data with theoretical concepts, the central aim is conceptualisation and development of propositions from the case. The first phase of the study is focused on exploring the research area (Punch, 2005). Emerging concepts from this first phase are

[57] Grounded Theory Methods (GTM) is an analytical approach to qualitative data and makes use of the constant comparative method, which involves four stages: (1) extracting concepts from incidents in analysing a single case, or 'comparing incidents applicable to each category'; (2) categorising concepts and their properties and relationships among concepts, thereby reducing the number of concepts; (3) choosing relevant relationships and delimiting theory; (4) communication of research findings and sharing these with others (Babbie, 2001: p.361; Punch, 2005).

labelled as sensitising concepts which opposes Glaser's original idea that no predefined codes should be used. The reason for this is that it is often not clear what came first, theoretical concepts or empirical data[58]. From a constructivist view it is considered impossible *not* to use any categories and concepts derived from theory. Raw data somehow are transformed into uninterpreted data, which means that the researcher intervenes in collecting data (Bateson, 1972). In this study, strategic decision-making emerged as a central study topic after collecting empirical data in 2009. Techniques from grounded theory combined with sensitising concepts are used in this study to inductively develop and build a conceptual framework (Charmaz in Denzin and Lincoln, 2000, p. 515).

The analytical model is presented in Figure 2. The event triggering the process of strategic decision-making in this case is sustainability. Sensemaking enables an understanding of the ways in which people select moments out of continuous flows and extract cues from those moments (Weick, 1995). Individuals make sense of an event when their ongoing activities are interrupted. Collective sensemaking starts when individuals are uncertain and start interacting with others. Information load, complexity, turbulence, expertise, perceptions and beliefs ('Factors' in Figure 8) influences sensemaking and reliance on and search for routines (Weick, 1995). Sustained attention is given to an event and search for meaning starts when that event is seen as something that matters and is undesirable. The white box in Figure 8 shows elements that are analysed in this study. Perceived strategic issues refer to those events, or issues, that are believed to be causing a gap between the desire, or goal, and the way things are. Contextual factors connect to information load, turbulence and complexity, which affects what is noticed. Respondents are asked about their perceptions of the decision criteria used in strategic choices to analyse the shared values that guide those choices. The last analytical element that is analysed intends to explore which factors, according to respondents, support integration of sustainability in strategic decision-making.

[58] Balancing in the debate between Strauss and Glaser on interactionist coding paradigm (where the axial coding stage results in an understanding of the central phenomenon in the data in terms of the context, or conditions that trigger it (Punch, 2005: p. 210) versus 'true' grounded theory, in which no theoretical codes are forced upon the data.

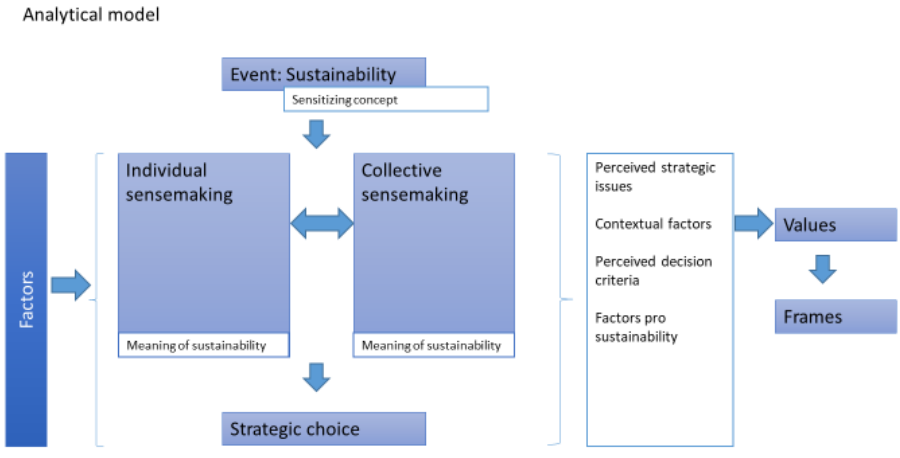

Figure 2 Analytical model. The event being studied is sustainability, which also provides sensitising codes for analysis of data collected from individual decision-makers, groups op decision-makers and documents in which strategic choices are written. The relationship between individual and collective sensemaking is not investigated. Frames are derived from the identified values in sensemaking, i.e. the perceived strategic issues, factors, decision criteria used and factors that are expected to enable sustainable strategic decision-making.

The acquired qualitative data can be analysed from different perspectives (Punch, 2005: p.194). In this research the chosen analysis perspective and sensitising concept is sustainability. According to Ostrom (2009), a combination of scientific disciplines is needed to understand and describe complex socio-ecological systems. Sustainability is acknowledged to be a multi- or even a transdisciplinary concept. (Lang et al., 2012; Gardner& Stern, 2002) and Elkington (1999) categorised these different disciplines into three dimensions. Bringing together theories from different theoretical disciplines in each dimension of the sustainability concept (Ostrom, 2009) provides a multidisciplinary analytical method for studying organisations that aim to develop a sustainable strategy and make decisions based on sustainability. The scientific disciplines of policy science, social and environmental psychology, management science (business economics, decision theory and strategic management) and ecology are used to form a multidisciplinary analytical framework, which is presented in Table 4.1. This framework provides key words and codes that enable the researcher to categorise empirical data in the three dimensions of sustainability.

Sensitising codes are provided for every dimension of sustainability and used in every stage of this study to code data, that is data collected from (explorative) interviews, documents and data collected from participant observation.

For each sensitising dimension, key words were listed, based on a first review of literature. For the profit dimension, macro and micro economics were briefly reviewed. For the people dimension, social psychology, organisation management studies and strategic management were reviewed. For the planet dimension ecology is used to find these key words. Each key word is given a sensitising code (e.g. perceptions are coded B for a focus on elements of behaviour).

Table 4.1 Open sensitising codes based on the sensitising concept sustainable development.

Dimension and keywords from literature	Sensitising codes
Profit (business economics, financial management)	
cost minimisation / return on investments	F (focus on financial position, return on investments, affordability)
information based & rational decisions	CF (focus on financial requirements and conditions, use of financial information for sustainable strategy/strategic decision-making)
monitoring performance	R (oriented on measuring performance and results)
production quality and cycle: input, throughput, output	V (focus on technical quality and primary processes: renting, maintenance, building real estate)
People (organisational science, environmental psychology, strategic management)	
perceptions / interests / beliefs & values / motivation	B (behavioural process – attention, interests, beliefs – drivers of behaviour, individual/collective)
awareness / learning and education / knowledge / commitment	CB (behavioural conditions and requirements for integrating sustainability into organisation)

social influence (power, information, responsibilities, allocation of decision-making authority)	M (internal processes/mechanisms/factors influencing sustainable strategic decision-making)
strategy / goals / pattern of activities / bounded rationality	S (ways of integrating sustainability into organisation)
Planet (natural resource management, ecological principles, ecosystem valuation)	
dependency and impact (outcome): risks and opportunities related to operating licence (use and non-use value (existence value) of ecosystems)	G (focus on goals/existence value of the organisation, supply chain position)
ecological quality/biodiversity decline drivers of biodiversity decline: 1) habitat loss, fragmentation or change, especially due to agriculture; 2) overexploitation of species, especially due to fishing and hunting; 3) pollution; 4) the spread of invasive species or genes and 5) climate change (GBO3, 2010)	EB (concern for diminishing ecological quality and/or biodiversity decline) EN: climate change: focus on reduction of CO2 emissions and energy consumption; orientation on measures to reduce energy use

From this table and based on the first round of data collection, the focus in this study is on organisational behaviour and factors influencing strategic decision-making. This means that customer behaviour is left out of data collection and analyses.

In the second stage of the data analysis, the same codes were used as mentioned in Table 4.1, but the results from the analysis were also used to identify frame types. Grounded in the data from the first stage and after studying sensemaking and decision theory, the interviews in 2012–2013 were analysed not only using the codes per dimension of sustainability. The researcher decided to try to find deeper-lying patterns and assumptions in making sense of a new event, in this study the concept of sustainability. In theory, Courtney (2001), Mitroff & Linstone (1993), Hall et al. (2003), Rokeach, 1979, Keeney (1992), and Weick (1995) pointed to the relevance of underlying assumptions, frames and values in sensemaking and in decision-making. As described in Chapter 3, the concept *frame* is used in this research as a synonym for *perspective*, which

enables connecting decision theory to strategic management and sensemaking. The six frame types identified by Courtney, Hall et al. were used as codes to find patterns in the way individual decision-makers make sense of sustainability and in their perceptions with respect to strategic decision-making.

Quotes of interviewees were categorised using the codes from Table 4.1 and subsequently using the frame types. This process of naming and categorising pieces of phenomena (also referred to by Punch as labelling) is repeated in the analysis of interviews in 2017 and the observation of the management team meetings. Systematically comparing pieces of data to theory in the field of decision-making and strategic management enabled the emergence of the main concept of values and frames, by constantly asking the main question 'What does this piece of data indicate, what is it an example of?'. The quotes collected from the interviews enabled more specific labelling because they showed different categories of quotes; quotes that answer the question of which strategic events are noticed and what the causes for attention to sustainability are, quotes that reflect the goals the decision-makers strive for when it comes to sustainability, quotes that are normative in nature ('Welbions should') and reflect the beliefs, and quotes that reflect assumptions with respect to sustainability and values of the individual decision-makers. In this way open, or provisional, codes are derived, grounded in the data. The idea to label the quotes under these categories is partly derived from policy science in which causal, normative and final relationships are distinguished to express different aspects in the policy formation process (Hoogerwerf, 1989). These three types of relationships are used in this research to connect and display results from interviews in the period 2012–2013. Relationships and patterns will be identified in the data and synthesised into a representation: narratives, reports and visualisation of main issues through mind maps. Mapping techniques (Mindjet app) have been used to display aspects of and relations between a number of key concepts.

A separate list is made of the answers given to the question of what the shared values of Welbions are. Quotes that encompass some sort of idea, or desire with respect to what Welbions should do to become more sustainable, were coded separately. These quotes also show how the decision-makers analyse the problems they face when aiming to transform into a more sustainable organisation.

Since decision-making was often mentioned as a central issue in which sustainability should be integrated, studying decision theory alongside data

analysis provided the identification of a pattern, a main concept that seemed to surface in all quotes: the values of decision-makers as guidance in the events that are attended to, the goals that should be strived for, the beliefs and assumptions and motives guiding the attitude towards sustainability.

Subsequently, deepening the researcher's understanding of the stages preceding decision-making and focusing on the concept of values enabled the 'discovery' of frames as the central concept in sensemaking and decision-making processes. Frame types were then derived from the data: factors/strategic events, decision criteria and factors enabling sustainable strategic decision-making. An overview of the axial codes, the values and frame types, is presented in Table 4.2.

Table 4.2 Axial codes, based on frame types. The frame types are based on the six frame types identified by Courtney, Mitroff & Linstone and Hall, Guo & Davis. The values, decision criteria, planning horizon and worldview (used synonymously with frame type) are based on Hall et al., 2003. See also Table 3.1 in Chapter 3, page 70.

CODE	T	O	P	ET	AE	EN
FRAME TYPE	Technical	Organisational	Personal	Ethical	Aesthetic	Economic
WORLD VIEW	Mechanistic	Collective, system (each organisation is composed of various suborganisa-tions); interpretive	Individual, power (intuition & experience)	Philosophical, moral	Beauty of things	Practical
PLANNING HORIZON	Far	Intermediate	Short	Long	Mediate	Short
VALUES	Theoretical: discovery of truth and knowledge in a rational and scientific way	Social: interaction, justice, fairness	Political: power, influence, prestige	Religious (ideals): make the world a better place	Aesthetic: harmony	Economic: usability, pragmatism
DECISION CRITERIA	Best fit with data	Societal gain	Individual gain	Highest level of understanding	Highest level of harmony and design	Highest cost/benefit ratio

The analysis of the interviews in 2012–2013 was initially summarised in a number of cognitive maps. Before analysis of data in the third stage of the

research in 2012–2013 and in 2017, the open codes as suggested in Table 4.1 were placed in the context of relevant literature using connecting concepts. These theoretical codes as they are referred to by Glaser (Glaser, 1978), or axial codes (Strauss and Corbin, 1998; Punch, 2005: p. 209) imply that some theory is used to make comparisons between data and the provisional concepts that resulted from the open coding stage. The axial codes in this research are derived from social psychology and organisation studies (sensemaking): frames and values.

These axial codes were used to analyse data and to specify categorisation of statements and topics than only the three dimensions of sustainability.

4.4 Ethical responsibilities

Ethical issues in (qualitative) research in general can be categorised in a number of aspects. These aspects are that participation has to be voluntary, that social research should never harm the subjects of study and that the interests and well-being of participants should be protected (Babbie, 2001).

Conducting research in a naturalistic setting especially asks for careful consideration of issues such as “using” people as allies or informants in order to gain access to their understandings, taking sides in a factionalised situation. In the first stage of the research (2009-2010) I was seen as a colleague more than a researcher. I was confided in with the thoughts and perceptions of participants and given broad access to all sorts of documents. Trust in this period was very important for investigating underlying assumptions and values in operating processes. Of course, at all times every participant knew that the results of the interview would be used as data. The ethical dilemma often encountered in field settings is the fear that after revelations, the social processes being studied will be affected. But respondents were often cooperative and motivated to participate because of their belief that they will benefit from doing so. Voluntary participation is hard to demonstrate. The fact is that no participant refused to answer questions and readily agreed to schedule an interview.

Another ethical aspect of research is that participation in social research should not harm the participants. Answers provided by participants in some cases comprised a complaint against the ones in charge, against the governance of the entire sector or against the attitude of housing association employees in general. This could endanger the participant’s position. I agreed to prevent identification of

the participant since I see it as my responsibility as a researcher to acquire data anonymously, to protect participants from possible negative consequences as a result of sharing their thoughts and ideas.

Sometimes social research may force participants to reflect on less desirable (or in this case, unsustainable) behaviour. Babbie (2001, p. 471): 'In retrospect, a certain past behaviour may appear unjust or immoral...personal concern [about his or her own morality] may last long after the research has been completed and reported.' This kind of research can only be justified if the research is essential. Considering the fact that this research contributes to relating ecological concerns such as biodiversity decline to organisational behaviour, one could certainly argue that asking participants to reflect on past behaviour, even when it turns out that the values that are strived for are immoral or unjust (or 'simply' unsustainable), is justified. By constantly asking the participants for approval to collect and analyse data, communicate and discuss findings (which fits with grounded theory), I found support in asking reflective questions on the process of strategic decision-making. Having an open mind as a researcher and showing transparency in choices that I made enabled me to pursue the research for so many years in one organisation.

CONFIDENTIALITY

Giving respondents the opportunity to verify the written interview report and add information when they thought it necessary allowed the researcher to protect respondent confidentiality. Since respondents knew the researcher, this might affect the objectiveness of the answers. Adding a research question on perceptions of respondents on conflicting opinions about sustainability gave respondents the opportunity to make statements in the third person, and to keep away from socially desirable answers. This was a risk because research was given the task in team Strategy and Organisation to support the development of a vision document on sustainability, and to chair the project team Sustainable Development. The experienced level of trustworthiness of the researcher became apparent when in some cases respondents confided in me regarding arguments that were not discussed in the openness of management team meetings.

ANALYSIS AND REPORTING

Applying Grounded Theory Methods in analysis of meaning construction of sustainability and sustainability in strategic decisions means that there are no

limits up front with respect to data collection and analysis, apart from using sustainability as a sensitising concept. Initially I started this research motivated by seeing that strategic decisions made at distance, did not seem to take certain relevant aspects into account such as long-term consequences and balancing economic and ecological development[59]. Implementation of a strategy seemed to be constrained by decisions. After the first round of data collection, strategic decision-making emerged as a theme that was considered essential by the participants. Possibly I could have gained some time in this research if I had made this choice earlier. On the other hand, I believe that grounded theory methods, especially in the case of strategic decision-making, although time-consuming, are a good way to make progress in getting an understanding of which factors and mechanisms influence a process.

Another issue is that the influence of the collective on the individual decision-maker became evident. But the data was not rich enough to investigate which concepts could be identified in this relationship. The acquired qualitative data was enormous. Limits in the analysis of the data stemmed purely from an inability of the researcher to deal with this. Choices needed to be made. The analysis of strategic choice, as the outcome of a cyclical process of meaning construction and design of decision alternatives, is restricted because not all strategic choice documents were analysed (nor collected). The reason once again is that there are limits to what one researcher in this situation can handle.

However, having said this, the rigour of this study lies in its longitudinal character, its multimethod and multi-layered design and in applying grounded theory methods, leaving space for important themes to emerge in strategic decision-making. Analysis of that data is based on solid, rich datasets that have been confirmed in parts by the participants in this study.

The quality of this study is based on an interpretivist-constructionist epistemology. The two generally used criteria and principles for conducting

[59] The strategic decision about tarring a road in a game reserve was made by the wildlife authority who was not present in the reserve. The decision was aimed at combatting an enduring problem in wildlife conservation, i.e. poaching. By giving local communities the opportunity to work on the road, the wildlife authority thought to contribute to their economic development. But the project was short-term, and only one community was interested in working the tar road.

scientific research are reliability[60] and validity[61]. These principles guide responsible measurement of real events or situations and operationalisation of concepts into observable characteristics.

Reliability is restricted in interpretivist, constructionist research. Reliability is influenced by the researcher's subjectivity (vision, experiences, biases), the specific circumstances of measurements (time, physical circumstances, cultural backgrounds), and the respondents' subjectivity and agreed scientific 'rules' (which develop over time, which affect agreed ways of doing research). When the researcher is observing situations, the interpretation of gathered data is coloured by the frame of the researcher.

The aim of research is to generate at least intersubjective knowledge (Swanborn, 1987). Transparency and trustworthiness as criteria seem more appropriate in judging the quality of underlying research (Bowen, 2006; Bryman & Bell, 2011; Charmaz, 2008, 2015; Denzin, 2009). In the last chapter of this thesis I will reflect on these criteria to indicate the quality of the study.

4.5 SUMMARY

The concepts of sustainability and strategic decision-making are multidisciplinary in nature. This complicated the search for an appropriate method of data collection and analysis. In the first decades of development of the discipline of strategic management, and in decision theory, use of quantitative methods was quite common. However, when focusing on what decision-makers observe as strategic events, or factors influencing the strategy of the organisation, what sense they make of sustainability, and if sustainability is integrated in strategic decision-making, the collected data is qualitative in nature. Research from a social-constructivist and interpretive stance means collecting and analysing qualitative materials. Within the strategy field, recent years have shown a

[60] Reliability means that the method of data collection and the procedures followed in analysing the gathered data produce the same result if repeated or gathered and analysed by another researcher (Babbie, 2001; Saunders et al., 2012).
[61] Validity refers to whether empirical measurements reflect the 'real meaning' of a concept. Field (2009) distinguishes criterion validity, which answers the question of whether an instrument is measuring what it claims to measure. The purpose is to assess the degree to which individual items represent the construct being measured and cover the full range of the construct.

development towards the use of qualitative methods (Ketchen et al., 2008). The development of strategic decision-making moves towards studying the process in a natural setting. Regarding strategy as a pattern in a stream of decisions, a longitudinal design gives more opportunities in getting in-depth understanding and in developing a grounded, substantive theory.

5 INDIVIDUAL SENSEMAKING OF SUSTAINABILITY

5.1 INTRODUCTION

In this chapter, the first part of the results of strategic decision-making with respect to sustainability in the Welbions case are presented. The third component question of this research is: *Which meaning of sustainability is constructed by individual decision-makers and teams of decision-makers and which meaning of sustainability is reflected in strategic choices?* This chapter deals with the first part of this research question, that is, which meaning of sustainability is constructed by individual decision-makers of Welbions. The answer to this question is categorised using the conceptual model. In this model (see figure 4 in chapter 3, page 60) three elements have been marked as essential in strategic decision-making. The first element is enactment, seeing, or: attention. The question asked is what events do individual decision-makers notice as being of strategic importance. The second element is analysis; the question asked is how individuals perceive the current strategic decision-making process from the view of sustainability. The third element is termed 'values', which represents the underlying beliefs and preferences of actors with respect to sustainability. Questions were asked about the preferred goals and results of sustainability, and which factors could possibly enable pro-sustainable strategic decisions. This research was executed in three periods between 2009 and 2018. Since this study is inductive in nature, only a general question was asked in the first period (2009–2010) in order to identify the meaning of those decision-makers that were involved in the first stage of sustainability at Welbions. In the next two periods the other research questions led the interviews that were held among key decision-makers. Since all data was collected at one organisation, the Dutch housing association Welbions, this introduction will briefly describe the context in which this study was situated (the Dutch housing associations sector) and illustrate the research approach with some examples.

Sustainability became a strategic event for Dutch housing associations in 2008 when, responding to pressure from the government, Aedes, on behalf of the entire sector, signed a Covenant in which reduction of CO2 emissions and measures to reduce energy and gas use were aimed for.

In the same year Welbions – a merger between two housing associations in Hengelo, a municipality in the region of Twente – chose sustainability as one of the five strategic choices in its business plan for 2009 – 2011. The goals for the strategic theme sustainability were to develop a vision of sustainability in a broad sense, in which physical, social and ecological aspects would be taken into account, to develop an implementation plan and to raise the awareness of all employees first, followed by a communication plan to raise awareness among customers. The initial plan stated that energy-saving measures were to be implemented in existing and newly built stock. To achieve this, a budget of €100 per house was made available, of which 50% was seen as an investment by Welbions. Tenants were expected to pay partly for energy reduction measures via higher rent since they were expected to be compensated by lower energy costs. The aim was to reduce CO2 emissions by 25% in 2019.

From 2011 – the economic crisis affected the value of real estate and the Dutch government imposed a levy of €1.7 billion on the housing association sector – Welbions was forced to focus on its financial healthiness. Measures such as a 10% reduction in operational expenses resulted in employees leaving the organisation. The sustainability vision document was evaluated and, although the main themes were still seen as up-to-date and mentioned in the 2012–2017 business plan, the project team did not function effectively. Sustainability was pushed to the periphery. Five years later, however, sustainability was once again a central topic in management team meetings, as will be clear from the findings of interviews with decision-makers and observation of a management team meeting. This change also was largely influenced by agreements and covenants with the government.

The general aim of this study is to get insights into the way individuals and teams made sense of sustainability in three different time stages between 2009 and 2018 and to provide insights into the decision criteria used in and factors influencing the process of strategic choice with respect to sustainability. In this chapter, the meaning attached to sustainability by individual decision-makers is analysed and described in three different time periods. The first time period runs from August 2009 to March 2010. This is the period in which Welbions accepted sustainability as a strategic theme for the first time and in which 34 exploratory interviews were held. In the second time period, from the end of 2012 to March

2013, 15 interviews were held with key decision-makers. In the third time period, from June to October 2017, nine interviews were held with key decision-makers.

In Section 5.2 the results of analysing data from the first period are presented, in Section 5.3 the findings are described from interviews executed in 2012–2013 and in Section 5.4 the findings from interviews in 2017. This chapter ends with a summary of the results of individual sensemaking of sustainability in these three different periods.

Statements made by interviewees are coded using the sensitising codes for each dimension of sustainability (see Chapter 4, Table 4.1, or Appendix 5.1). The findings are described per dimension of sustainability. The remarks made by interviewees are coded and a brief description of these remarks is given for each code. The findings are then summarised in three ways. First, counting the number of interviewees making statements per code and expressing this number in a percentage of the total number of interviewees indicates the preferred perspective in making sense of sustainability. The resulting graphs can be found in the appendices of Chapter 5. Second, to give an idea of the dimension that is used most dominantly in making sense of sustainability a circle diagram is presented at the end of each section. This diagram is based on the number of statements that interviewees made per code, expressed in a percentage of the total number of statements that all interviewees made. A word of warning, however – quantitative counting methods only *indicate* which perspective is used most often when interviewees make sense of sustainability; they do not reflect which meanings mattered most. It might well be the case that the one statement made by a highly influential interviewee is weighing more in the process of sensemaking, is getting more attention from others for whatever reason. Therefore, a third method is used to summarise the findings. At the end of each section a table summarises the most remarkable findings for each dimension in a qualitative way.

Some examples are given to shed some light on the procedures used in the quantitative analysis.

Example 1. One interviewee in 2012–2013 stated that [in reflecting on elements in the decision-making process with respect to a collective energy system], ‘**There is a link with CO2 emissions**. A system that benefits individuals and

reduces CO2 emissions will always beat an inert collective system….**Conditional [for any system] is that it is flexible and organic**. However, the question is: What is a sustainable concept?'

The first part of the statement is coded EN, reflecting an orientation towards climate change and energy. The second part is coded EB, showing a focus on ecosystems and biodiversity.

In this example, the answers given by one interviewee are divided into two statements, both made within the planet dimension. These two statements add up to the total number of statements within the planet dimension. The number of interviewees in code EN is added one, and the number of interviewees making statements from an EB perspective is also added one. When counting the total number of interviewees within the planet dimension, to which codes EN and EB belong, it is still one interviewee making two statements. The number of interviewees per dimension therefore is not regarded as useful.

Example 2. Another interviewee stated that, 'The reform of the WWS impacts on sustainability measures (energy measures)…**if the WWS is reformed** and the WOZ value becomes the base so there is no option to raise the rent **when investing in energy**, then it will become unattractive for housing associations to **invest** in sustainability.'

This statement is coded EN, energy, since the meaning of sustainability is associated with investments in energy. The interviewee clearly associates sustainability with investments, so code F, reflecting a financial focus, is also attached. Moreover, part of this statement is coded CF, since it refers to rules/law (WWS system) that influence financial options for housing associations. In this case, the entire statement made by this one interviewee is given three codes; these codes are distributed among two dimensions (the planet and profit dimension) of sustainability.

In Figure 1, a timeline visualises the three research phases. In the top bar, the end of Stage 1 is marked with a yellow flag, Stage 2 with a green flag and Stage 3 with a blue flag. The bars of individual sensemaking are green, those of collective sensemaking are coloured red and those of strategic choice blue. This timeline will be presented in every section and subsection of chapters 5 and 6, to point out to the reader the stage to which the findings belong.

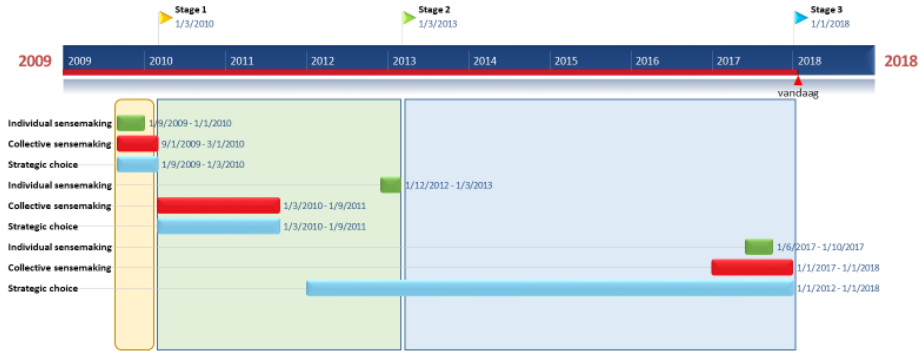

Figure 1 Timeline representing different stages in which individual, collective sensemaking and strategic choices were researched at Welbions. The first time stage is marked yellow, the second green and the third blue.

5.2 THE EMERGENCE OF A VISION OF SUSTAINABLE DEVELOPMENT, 2009–2011

5.2.1 EXPLORATORY INTERVIEWS, 2009

In the first stage of researching individual sensemaking, the period between August 2009 and January 2010, the meaning attached to sustainability by those employees that were expected to be involved in working towards a sustainable Welbions are described. In the timeline in Figure 2 below, this first stage is marked with a yellow oval.

Figure 2 Research first stage: Individual sensemaking of sustainability, 2009

In the year that sustainability was chosen as one of the five strategic choices, or themes in the Welbions 2009–2011 business plan, thirty-four exploratory unstructured interviews were held. The aim of these interviews was to find out what meaning was given to sustainability. Employees from all levels in the

organisation were asked about their associations and opinions with respect to sustainability. See Appendix 4.2 for a list of the people that were interviewed.

The findings are described per dimension of sustainability, and the analysis of the collected data was executed using the codes that were applied per dimension (see Table 4.1 in Chapter 4, or Appendix 5.1).

PROFIT DIMENSION

Of 34 interviewees, 23 used an economic view when talking about sustainability. Nine out of 34 interviewees focused on financial aspects and associated the strategic theme of sustainability with investments in real estate and the cost of housing, while three of them connected sustainability to investments in the energetic quality of the houses. These investments were seen as extra costs but as adding comfort to the houses owned by the association. Contrary to investing in replacements should investments in sustainability be treated as investments in expansions, aimed at improving housing comfort and therefore 'compensated by a higher rent'. In reference to the price of using sustainable materials, one interviewee said that 'everything that nature delivers comes with a price'. Three interviewees stated that cost should be clear, costs and benefits should be weighed before investments in sustainable measures could be made. The controller focused on the cost of raising the energy label of one house and the impact of such a measure.

Ten interviewees connected sustainability to measuring results and reporting on sustainability. Sustainability should be measured in a broad sense and integrated into management reports. One person stated that reporting on CO2 reduction of the complete asset is possible through energy labels. Other tools mentioned were DPL and GPR, and the policymaker of the city of Hengelo added that measuring sustainability in a broad sense supports the transformation of urban areas, which is a common responsibility of the municipality and the housing association. A management system should be developed to be able to measure societal return on investments. Developing measurable goals was mentioned by three interviewees and considered conditional for building a sustainable strategy. Insights into the origin of materials and measuring the impact of activities is considered a step towards a more sustainable Welbions.

Six interviewees referred to the quality of houses and to asset management when talking about the consequences of sustainability for Welbions. As one

interviewee stated: ‘if the quality of the [energetic performance of a] house is beneath a certain basic level, it might well be the case that the phenomenon of “climate refugees” emerges, resulting in loss of customers’. Another person, however, said that ‘pilots (on sustainability) cannot be executed at the expense of the quality of the real estate’. When talking about sustainability, two interviewees pointed to the necessity of integrating sustainability in the way urban areas are designed and developed.

Eleven interviewees mentioned financial conditions that should be met before investments in sustainability can be executed. Four of them mentioned the availability of budgets as conditional for implementing sustainability measures; four others mentioned return on investments and payback period as criteria for investment decisions. One interviewee mentioned subsidies as conditional for investments in energetic measures.

PEOPLE DIMENSION

In total, 29 out of 34 interviewees mentioned topics that could be labelled with one of the codes from the people dimension of sustainability.

Six interviewees said that in order to transform into a more sustainable organisation a change of behaviour is required. Two people stated that the perspective, the view of sustainability matters and that there is a difference between what is in a person’s own interest and what is of mutual interest. According to one of the directors, the essence of sustainability is to act in a conscious way, at all levels of the organisation. Another interviewee stated that at the operational level it is about energy-saving measures and different behaviour with respect to energy usage. Sustainability is said to be a change process and needs to be integrated into every aspect and behaviour. The HRM manager added that people need to have the capabilities to reflect and think in a more conceptual way. Another employee associated sustainability with fundamental needs and referred to Maslow’s pyramid of needs.

Twelve interviewees made connections between sustainability and conditions that need to be met before behavioural change occurs. Eight interviewees enumerated awareness, a sense of urgency and attention as a first step to change behaviour. Four interviewees mentioned that commitment and support are required. One of the directors associated sustainability with enabling experience in order to get more insights, and he claimed people need to have an open mind for change. One person claimed that people are encouraged to

transform ‘if it pays off in due time’. Other conditions for change that were mentioned are support by the board of directors, capacities and skills, knowledge, information, time (‘a necessary change of the organisational culture takes time’) and money. Stimulating factors for transformation of organisational behaviour into sustainable behaviour were compliance and exemplary behaviour by the executives.

Twenty-one interviewees enumerated ways to transform the organisation when asked about their opinions with respect to sustainability[62]. Ten people associated sustainability with a strategy of executing pilot projects and developing plans for urban areas as ways to transform Welbions into a sustainable organisation. The only client that was interviewed surfaced the idea of doing a pilot on water use. All other interviewees referred to energy-saving measures, insulation of houses and working towards sustainable energy use. Interviewees pointed to the relevance of communication with tenants. When doing pilots, it is considered (legally) essential to encourage and get support from tenants. Ways to acquire that support mentioned by interviewees were consulting an objective party (‘Woonbond’) to convince tenants that although investments in energy quality made by the housing association lead to a rise in rent, these measures also reduce energy costs – and in total lead to a lower monthly housing cost – and to inform tenants about measures to reduce energy usage.

Communication within the organisation should be focused on the different organisational layers, i.e. board of directors, management and employees. Organisational activities in which sustainability should be integrated or to which it is at least related, are: investments (in measures to raise the energy quality of the houses), purchasing policy, rental policy, the decision-making process, waste management, fleet (electric bikes included) and housing cost management.

Ten interviewees enumerated mechanisms in the present organisation that influence a transition of organisational behaviour. The mechanism mentioned most often is the way decisions are made. Choices should be assessed against sustainability criteria; there is a need for an assessment framework to make integrated judgments. This frame is required because ‘little is thought about the why of sustainability, so we need to develop a frame and make choices. Only then can we decide which measures to take. If you have an umbrella you can go

[62] One could deduce that these employees accepted sustainability as something that demands changes in the normal routine.

outside, be a pioneer; that is good for your reputation'. However, one person acknowledged that in the 'Wilderinkshoek' urban area development programme, 'sustainability was one but certainly not the decisive factor when choices were made'. Reputation and image were mentioned as implicit criteria guiding strategic decisions.

PLANET DIMENSION

Sixteen interviewees referred to environmental aspects when talking about sustainability. Eleven of them associated sustainability with energy measures and climate change. Topics mentioned were investments in energy, energy use and energy reduction. It is remarkable that all statements with reference to energy were connected to finances. Four respondents explicitly connected sustainability to investments in a higher energetic quality of houses. According to one interviewee, the WWS ('Woning Waardering Stelsel', a valuation system on which the rent of houses is based) system could enhance investments in energetic quality if a higher energy label for a house results in a higher number of WWS points. An improvement in the energy label is then compensated by a higher rent. The representative of the municipality of Hengelo and the external advisor mentioned the relevance of 'Warmtenet' in Hengelo for reducing energy use (lower energy cost). The external advisor, however, warned that this system advocated by the government 'does not provide freedom of choice for Welbions' clients, so nothing changes with Warmtenet'. Three people referred to higher goals of reducing energy, i.e. reduction in greenhouse gas emissions and halting climate change.

Five interviewees stated that control of housing cost (affordability) is the main goal of implementing sustainability measures, since this is housing associations' licence to operate. According to one of the directors, sustainability offers an opportunity to realise more comfort in houses and focus on the long term, instead of running a business under short-term pressure as usual. One interviewee stated that Welbions should take environmental impact into account, which may result in competitive advantages in the short term and long term. Two employees associated sustainability not only with energy but also with use of sustainable materials, although these remarks were made strictly from a financial point of view (price of materials) and were therefore categorised under the profit dimension.

Four respondents associated sustainability with integrating people, planet and profit. Sustainability in a broad view is of interest because fossil fuels are extracted from politically unstable countries; because of the environmental impact, labour market developments and competitive advantage in the short and long term. Acting in a conscious, sustainable way is part of social responsibility, according to one interviewee.

Not one interviewee mentioned or associated sustainability with biodiversity. But within the people dimension, code S for strategy, ten statements are categorised that relate sustainability to environmental quality.

SUMMARY OF EXPLORATORY INTERVIEWS 2009

Expressing the number of statements per dimension as a percentage of the total number of statements made by the interviewees results in a distribution over the three dimensions of sustainability. From Figure 3 it can be seen that the people dimension is used most often, the planet dimension least. However, as previously stated, a quantitative representation of qualitative findings merely indicates which dimension is used most often. It does not say that the associations used most often are determinant of the collective meaning of sensemaking nor of the meaning of sustainability used in the strategic choices that were made.

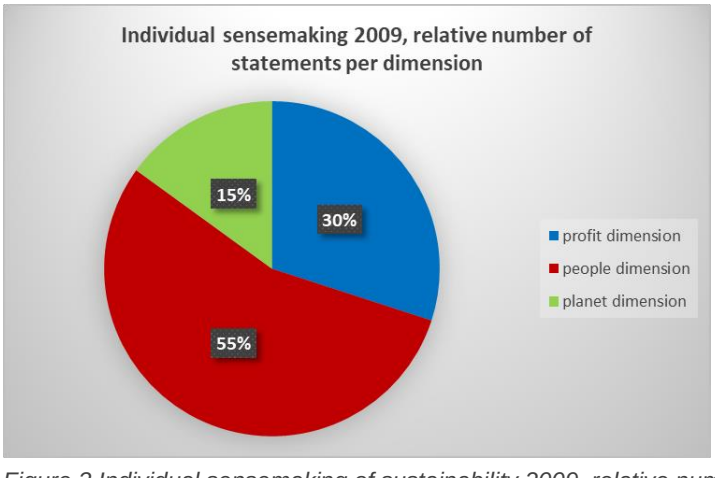

Figure 3 Individual sensemaking of sustainability 2009, relative number of statements per dimension.

Appendix 5.2 displays the findings from exploratory interviews in 2009 in a quantitative manner; the relative number of interviewees making statements categorised under the sensitizing codes is shown here. Relatively, interviewees talk most often about how to transform the organisation into a more sustainable one; 62% of the quotes are coded with an S for strategy. The second most often mentioned are conditions or requirements necessary for changing the collective behaviour; 35% of the interviewees made statements in this code. The third code, used by 32% of the interviewees, is code CF for financial conditions that need to be met before change is possible. Least often used is code EB; 12% of the interviewees associated sustainability with the quality of ecosystems or biodiversity decline.

The findings in qualitative terms from the 34 exploratory interviews are summarised in Table 5.1.

Table 5.1 Summary of individual sensemaking of sustainability, Welbions, 2009.

Summary of 34 exploratory interviews held in 2009. Findings from answering the question about the meaning of sustainability for Welbions	
Profit	- Sustainability is associated with extra costs and investments in real estate; conditional are the availability of budgets and measuring the effects of investments; sustainability should be measured in a broad sense and integrated in management reports - Investment decisions in sustainability should be assessed against (social and financial) return on investments and the payback period
People	- Awareness, a sense of urgency and attention, experiencing, open mind are seen as success factors in a behavioural transition; conditional are commitment, compliance and exemplary behaviour by the executives - Human nature in general, time, money, knowledge and information are seen as barriers in the sustainability transition - A strategy of executing pilots and urban area development plans based on sustainability are ways to make progress towards a sustainable Welbions - Decisions should be assessed against sustainability criteria; an integrated frame is needed to make integrated decisions

Planet	- Sustainability is mainly associated with reduction in energy use (measured by the energy label) of property and CO2 reduction - From the point of view that housing associations' licence to operate is to provide social groups with affordable housing, and from their social responsibility, control of housing cost is central to a sustainable strategy

Only one interviewee connected sustainable development to (the price of) building materials. Two interviewees mentioned the importance of the perspective, the view of sustainability and that there are differences in interests among people. One interviewee associated sustainability firstly with fundamental needs and referred to Maslow's pyramid of needs. The coordinator of an urban area development programme acknowledged that sustainability, although briefly discussed in the project team, was not the decisive factor in choices made with respect to the urban area development. Eleven interviewees associated sustainability with energy measures while at the same time reflecting on the financial consequences of these measures.

Only the external advisor mentioned that in the debate regarding a collective heating system ('Warmtenet', made compulsory for the housing association by the municipality through integrating it into the local building rules) the effects for customers with respect to freedom of choice were ignored. Clients in the new system would still have to pay a monthly fixed amount for infrastructure (which needed to be organised and was not ready yet) and a variable amount for energy use. The only beneficiary in the matter would be the owner of the newly built infrastructure. Moreover, it was considered doubtable which energy sources were used; rest heat from a non-sustainable factory would still be labelled as non-green energy, as well as the use of biomass.

5.2.2 Survey 2011

In the summer of 2011 a survey was carried out among all employees (at the time 167.7 FTE) of Welbions; see Appendix 4.3 for the questions in this survey. The answers to the questions 'What does sustainability mean?', 'Do you think Welbions must work towards a more sustainable organisation, if so, why?' and 'What do you do at work about sustainability?' were analysed and coded. In 2011, the sustainable development project team and the awareness working

group had been operating for more than a year. The survey was carried out with the aim to check whether the activities of these two teams contributed to more knowledge and awareness of sustainability, as intended, and was recorded in the plans of both teams (the findings from participant observation of these teams are described in Chapter 6, Section 6.3.1).

The response to the questionnaire was more than 20% of the total number of staff; 34 employees filled in the survey. On the question about the meaning of sustainability, fifteen respondents were reflecting on behaviour and conditions for behavioural change, as expressed in the following quote: 'Sustainability means thinking about what we do; we need to be aware of our impact on the environment'. Eleven respondents associated sustainability with materials, efficient use of our planet, taking care of nature and our impact on the environment. On the question about whether they thought climate change a reality, three respondents answered they thought climate change is rubbish but most respondents thought that humans influence climate change. Two respondents stated that sustainability is just a hype which will pass. More than half of the respondents said they were concerned about biodiversity decline (18 out of 34). Only two respondents stated that nothing can be gained from doing something about sustainability, and only one respondent answered 'I don't know' to the question about whether people think that working on sustainability is necessary. Twenty-one out of 34 respondents answered this question from a planet perspective, stating that working on sustainability is necessary because resources are not available without limit, and that we must prevent the destruction of our living environment. Eleven respondents associated sustainability with a healthy living environment.

The meaning of sustainability was dominantly created from a planet perspective, as shown in Figure 4 below. The profit dimension was used less often in making sense of sustainability.

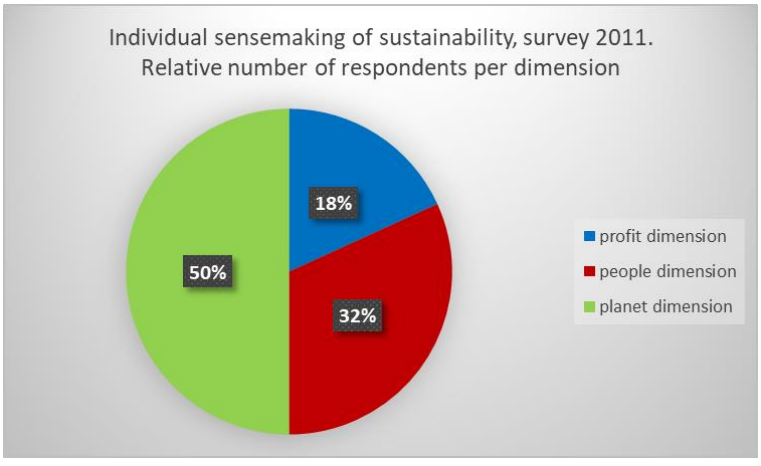

Figure 4 Relative number of respondents making statements within one dimension, survey 2011.

In Appendix 5.2 the relative number of respondents per code from the survey in 2011 is presented. It is quite remarkable that most statements by respondents were placed in the 'EB' code (ecosystems, biodiversity, resources) of the planet dimension since in the interviews held in 2009, code EB was used least of all codes in making sense of sustainability. It is also surprising that not one respondent associated sustainability with strategy (code S), with ways to implement sustainability at Welbions. Perhaps it was easier to provide answers that fit in the planet dimension because in 2011 much attention was given to knowledge development and raising awareness of planetary aspects of sustainability, by both the working group and the project team. Another explanation might be that at that time Welbions was involved in a number of urban area developments, such as e.g. the Hengelose Es, in which an ecological workshop was held, and the Woolder Es and Kasbah, where tenants specifically asked for greening of the area, drawing attention to the quality of the living environment from a broader perspective on sustainability than only from looking at energy measures.

5.3 THE FORMATION OF A SUSTAINABLE STRATEGY 2010–2013

In the second stage, the period from 2010 to 2013, the meaning given to sustainability by individuals was studied by executing interviews with key decision-makers (see Appendix 4.4 for a list of interviewees and an overview of the questions).

The results are presented in three subsections: (1) strategic events, (2) perceptions with respect to decision-making and (3) values. These subsections are in accordance with the three categories of questions that were asked. The first group of questions were aimed at identifying which strategic events were noticed by the key decision-makers. The objective of the second group of questions was to surface the perceptions of decision-makers with respect to the current way of strategic decision-making and the criteria used in strategic choices. The third group of questions was focused on finding the underlying assumptions and values that key decision-makers prioritise and exploring supporting factors for transforming an organisation into a more sustainable organisation.

In this section the total number of interviewees making statements in one dimension is not counted nor visualised. Since the number of interviewees is only 15 (although representing the key decision-makers), this does not seem very useful. The researcher considered a more detailed overview more relevant. In Figure 5 below, individual sensemaking of sustainability gathered from interviews with key decision-makers between December 2012 and March 2013 is marked with a green bar and the second stage with a green oval.

Figure 5 Research stage 2, individual sensemaking in the stage of strategy formation; interviews 2012–2013

5.3.1 STRATEGIC EVENTS, 2012-2013

The findings in this section were collected by asking 15 individual key decision-makers about which events or developments they consider as influencing the strategy of Welbions (interview question 1) and which events, risks or factors raised attention to sustainability (interview question 2). Since the researcher was familiar with the interviewees and they were informed of the focus of this study (sustainability and strategic decision-making), the second question was often not needed. The results therefore show which events are seen as strategic, in the light of sustainability being a strategic theme. The observed strategic events by the fifteen decision-makers of Welbions are also visualised in a mindmap (see Appendix 5.4).

PROFIT DIMENSION

Eleven interviewees made remarks reflecting a financial focus on sustainability. Seven of them pointed to the consequences of the levy imposed by the Dutch Secretary for Building Environment of approx. €1.7 billion for all housing associations. The interviewees saw this as strategic because, as one person stated ‘it reduces options for investments in renovation, innovation and new buildings’ and, as another interviewee stated, ‘it reduces the power to invest in sustainability’. Cuts in budgets lead to diminished opportunities for investing in sustainability. ‘Money is a barrier to sustainability’ according to the real estate development manager. ‘Sustainability requires investments and a business case’, according to the strategic advisor on real estate[63]. However, for years investments (and reinvestments) are unprofitable (the so-called ‘unprofitable ’). This model not only negatively influences pro-sustainable investments – as one interviewee noted, ‘our priority lies not with the planet but with preventing financial loss’ – but in general leads to mining the function of the sector. On the other hand, as one interviewee claims, ‘the economic crisis has a positive influence on the planet’.

[63] Financial rules for the valuation of real estate are based on the principles and rules of the CFV – the value of real estate is based on company value. This means, among other things, that there is no room for putting a value on remaining materials after the economic life cycle of a building. On the contrary, if a house is demolished, the housing association calculates a certain cost for getting rid of the materials. There is also a major difference between the market value of the real estate and the company value. Together with the rules for maximisation of raises in yearly rents, this means lower investment opportunities for sustainability and innovative techniques.

Eight interviewees marked governmental policies (national, regional and municipal) as a cause of narrowed investment opportunities and restricted financial possibilities to implement sustainability. Subsidies, although stimulating investments in sustainability, have a short-term scope. As one interviewee stated, 'the institutional context does not stimulate taking responsibility for sustainability and following environmental guidelines'. Although the province of Overijssel stimulates through subsidies, 'they do not condition activities' according to one of the directors. The business model of the housing association sector is characterised as an 'old boys school' system. 'Yearly income is restricted due to maximized raise of rent, there is an urgency to control housing cost but there is not enough financial space for housing associations'. Valuation principles established by the Central Fund for Housing (abbr. CFV) restrict the financial value that is allowed to be present on the balance sheet. Another financial factor influencing a sustainability transition is the fear that the market does not take up the challenge and that investing in sustainability is not profitable. The worsened economic situation means there is a smaller budget for sustainability, according to the Finance manager, 'although it contributes to more financial awareness'.

Two interviewees mentioned that rules and laws do not stimulate pro-sustainable investments, e.g investments in renovations are legally bound because they are only allowed to result in a higher rent if 70 per cent of the tenants agree with the renovation. If the housing association wants to raise the rent in return for investments in the energetic quality of houses (expected to result in lower energy costs), Welbions needs to convince at least 70% of the tenants. However, the actual energy costs are estimates so the impact of applying sustainability measures to housing cost is uncertain. Moreover, instruments that are available to calculate this impact are not very precise. As an example, the Klein Driene case was mentioned. In this case, tenants of Welbions were given a guarantee that their energy cost would become less after measures were taken. However, this reduction was not realised, which led to tenants protesting against a raise in rent[64]. Another example is the WWS system, which underlies rental policy.

[64] In this project, tenants were promised that they would get a lower energy bill in exchange for higher rent. However, due to the improved quality of the houses, tenants raised their heating since they believed their house was more energy-efficient. As a consequence, their energy bill rose and thus the total housing cost did as well, which was contradictory to what was promised.

Although the connection made in the WWS system between the energy performance of the building and the number of WWS points (on which maximum rent is based) there is no connection between market (WOZ) value and rent. Measures for reducing energy are not reflected in the market (WOZ) value of the real estate; as a consequence 'there is no room for raising rent in return for the investments'.

Eight interviewees made remarks coded 'V' showing a focus on techniques and quality of the real estate. Six of them mentioned the influence of technological developments. These were seen as being of strategic importance for sustainability. 'Techniques of today are old-fashioned tomorrow', which prevents investments in sustainability and use of existing innovative techniques. It was questioned what the return of these investments are, since 'real estate has a long life cycle and during this life cycle current techniques will probably have to be replaced at one stage'. On the other hand, innovative technology was seen as an opportunity to achieve more sustainable houses (e.g. smart grids), both in large maintenance projects and in new buildings. As one interviewee mentioned, 'non-sustainable houses will result in vacancies'. One interviewee stated that 'Welbions' interests are at present aimed at the physical quality of its stock'[65]. Sustainability influences 'options to rent out existing houses; certain houses will become less wanted which will cause vacancies'.

PEOPLE DIMENSION

Nine interviewees mentioned behavioural elements as necessary for a transition towards sustainability. The behavioural factors that were seen as influencing a sustainable transition of Welbions are first the traditional character of the housing association employees. This *traditional nature* is influenced by remuneration policy and good working conditions which lead to 'spoiled employees and a low willingness to change', according the HRM manager. 'The system is aimed at

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Another example often referred to is a collective system called Warmtenet. In this system an individual household still has to pay a fixed amount for energy deliveries, and the variable part in the energy bill depends on energy usage. This system does not improve the financial situation of households but instead restricts their freedom of choice, and even the degree to which the energy supplied by Warmtenet can be framed as sustainable is debateable.

[65] The so-called NEN norms are used to assess the quality of houses; criteria that are used in this system are safety/healthiness, cultural/historical value of the building, use and operational process of using the building, technical quality (including the energetic quality of the building), maintenance issues during operation and experience/aesthetics.

pleasing employees' which prevents getting the most out of people's talents, according to one of the directors. A second behavioural factor mentioned by four respondents is *differences in intentions and lack of knowledge and information* with respect to sustainability which leads to debates about what responsible actions are. There are differences in intentions among the members of the management team with respect to sustainability, 'which prevents a collective movement and effective decisions' according to three interviewees. Four interviewees pointed to commercial interests in sustainability, which is increasingly a selling point and seen as trendy. But 'there a lot of cowboys on the market', according to one interviewee. Although Welbions is sensitive to their arguments there is always a risk in agreeing with commercial parties because they prioritise profit above social interests. These companies were thought not to use objective information, merely information that supports their commercial interest; 'in the land of the blind, one eye is king', according to the real estate development manager.

One interviewee remarked that 'The current generation of administrators lacks knowledge and capacities to estimate the impact of activities on the environment, they do not have tools to integrate sustainability in decision-making'. Another factor that was mentioned is management style. 'Managers of Welbions aim more at facilitating rather than coaching or directing' according to the HRM manager. Harmony is preferred, and the culture of Welbions is based on being kind towards each other. But, 'there is a polarisation between powerful managers versus a "natural born pleaser"'. Two interviewees mentioned the relevance of managers functioning as an example for their team members. Employees are sensitive to enthusiasm and inspiration but often there is lack of clarity and consistency. Two interviewees explicitly mentioned fear, resulting in 'defensive behaviour and avoidance of feeling responsible, making jokes about sustainability, blaming others for sticking to old habits and routines', according to the Strategy manager. 'It creates a focus on return on investments', according to the other interviewee.

The controller stated that short-term thinking prevents a transition towards sustainability. The attitude of employees and tenants towards sustainability was mentioned. An interviewee stated that the attitude of employees is characterised as 'resembling ostrich policy, sustainability is seen as cost'. 'The average consumer is not willing to pay more, the energy label is still not a selling point, the location of the house is', according to another interviewee.

Thirteen interviewees enumerated developments in the *institutional context* – changes in rules and law, in governmental policy – housing market developments and political developments as conditional factors influencing implementation of sustainability. E.g. in the BBSH, the term 'vitality' of urban areas (in Dutch: 'leefbaarheid') is not to be found. Thus 'the institutional context is influencing implementation of sustainability. The agreements are "soft", meaning they are not sanctioned when not complied with, the risk is that there will be no investments in sustainability', said the Strategy manager. According to one interviewee, 'tools that stimulate sustainability are now discussed in the new administration'. Conditional for behavioural change mentioned by four interviewees was considered opportunities to cooperate, but the question still is, 'what has the largest impact and with whom are we going to work together?'. One interviewee remarked that 'we need to motivate the market by means of requirements, e.g. we should integrate sustainability in procurements'. A 'social functioning' is necessary to make progress and cooperate effectively.

The necessity of raising awareness and a sense of urgency is mentioned by four interviewees. 'Tenants need to become more aware of their energy usage and its impact on energy cost', according to one interviewee. But, as stated by one manager, 'in the mindset of the average employee a large sense of awareness is lacking'. A culture in which there is space for creativity is conditional, according to the manager HRM.

The strategy of Welbions towards sustainability is 'fragmented' according to two decision-makers, and characterised by pilots. One interviewee stated that 'long-term investments are barred by a short-term and action-oriented attitude'. Other internal factors that are mentioned as conditional for a behavioural change are establishing a connection between the vision of sustainability and annual plans of departments within Welbions, and consistency and goal congruence in activities. But decisions are not assessed against the sustainable development vision document, and 'there is no connection between the vision and year plans'.

Ten interviewees mark the way Welbions makes *decisions* as an influencing factor. Although sustainability is a criterion for decision proposals, it is an 'empty' criterion: if a proposal does not explain or take into account a sustainable perspective, it is still decided upon. '…[D]ecisions are short-term in nature and only aimed at operations', according to one decision-maker. Another interviewee stated that 'only one alternative is debated and decisions are based on financial cost and architectonic value'. One of the decision-makers added that 'there is no

information if there are any alternatives, and so there is no understanding of the revenues of [a sustainable] action'. Two interviewees explicitly expressed their desire for integrated decisions because 'investments in sustainability have a positive impact on housing cost and affordable housing… and contribute to preventing the planet from overexploitation'.

In subsection 5.3.2 the perceptions of decision-makers with respect to the decision criteria used in the process of strategic decision-making at Welbions at the time is summarised.

PLANET DIMENSION

Five interviewees mention problems with the quality of the planet and scarcity of resources as reasons why it is necessary to do something about sustainability. '[T]he average temperature in the Netherlands is rising….this is alarming, we should prevent destruction of the planet', 'one becomes disquiet', according to two interviewees. The controller mentioned scarcity of resources, which has consequences for the price of energy and materials and consequently for housing cost. 'We do not know where building materials come from and what the impact is of our way of using them on the quality of the living environment. We do not value sustainable materials enough,' according to another interviewee. One respondent mentioned becoming aware of a connection with the ecosystem: '…one needs to be aware of the consequences of our activities on the planet and on people…'.

Seven interviewees believe that Welbions cannot stay behind and do nothing about sustainability. They referred to the mission and licence to operate of the housing association: 'our main task is to provide in affordable housing', 'the housing association is a social entrepreneur, so it is necessary to put sustainability on the agenda', according to four interviewees. 'Welbions must do something about sustainability but it only becomes clear when looking at it from the mechanism of housing cost', according to an interviewee. The strategy manager stated that thinking from the point of view of housing cost and new technologies/innovation enables the visibility of the impact of new technologies on affordability.

Two interviewees referred directly to rising energy cost as a motive for implementing sustainability, 'if energy costs rise this means higher housing cost; in due time this will cause loss of revenues from rent and an increase in outplacements, which contradicts the core task of housing associations'. A

positive effect of globalisation, mentioned by one interviewee, is ‘that we can think where to get the highest return out of energy sources’.

SUMMARY OF STRATEGIC EVENTS 2012–2013

Expressing the number of statements per dimension as a percentage of the total number of statements made by 15 key decision-makers about which events they considered as strategic in nature and influencing application of sustainability measures, results in a distribution into the three dimensions of sustainability, as presented in Figure 6.

The most dominant perspective in the stage of seeing environmental events influencing the strategy of Welbions and causing a sustainability transition is the people dimension. The least used perspective is the planet dimension, although the number of statements made with respect to quality of the living environment exceeds the number of statements focused on energy.

Appendix 5.3 shows the number of interviewees per code divided by the total number of interviewees (15 decision-makers were interviewed). This indicates that interviewees mostly talked about conditions required for behavioural change (code CB), followed by associations with investments and the financial position of Welbions (code F) and thirdly, about the necessity to integrate sustainability into the process of decision-making (code M).

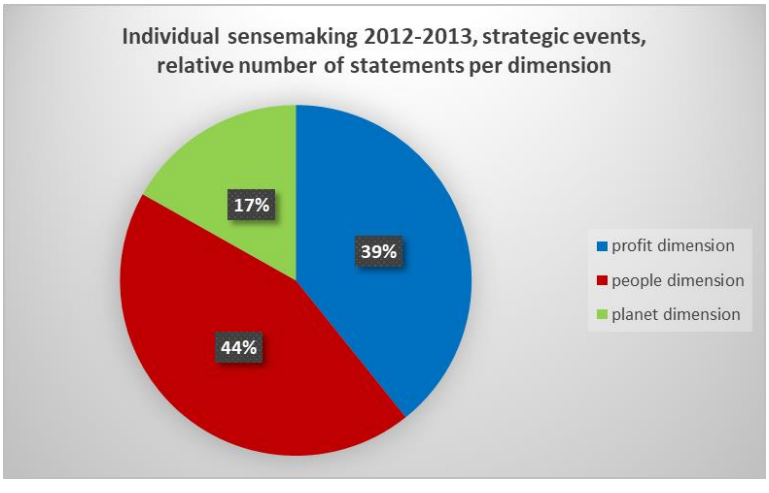

Figure 6 Strategic events and causes/external factors influencing application of sustainability measures according to 15 key decision-makers of Welbions in 2012–2013, percentage of statements per dimension of sustainability.

In qualitative terms, the findings are summarised in Table 5.2 below.

Table 5.2 Individual sensemaking of sustainability, Welbions 2012–2013. Summary of events, causes and factors that were considered strategic in nature.

Summary of answers to the question of which events are considered strategic and which events/causes/factors influence a sustainability transition of Welbions, per dimension of sustainability (15 interviews, 2012–2013)	
Profit	- Sustainable value creation is influenced by institutional rules and governmental policies; the consequences of the levy are that it reduces options for investments. The financial situation is a barrier to investments in sustainability. - More than half of the interviewees mentioned the importance of technological developments for applying sustainability.
People	- (Insufficient) knowledge and information, differences in intentions, the traditional nature of housing association employees, their capacities and those of tenants influence a sustainability transition. - Institutional developments, housing market developments and political developments influence sustainability transition. - Reputation, desire for support, financial focus influence pro-sustainability decisions.
Planet	- Housing associations have a social responsibility to act towards more sustainable organisations. - Scarcity in resources will affect the process and thus housing cost. - Rising energy costs result in higher housing costs.

It is remarkable that some interviewees explicitly refer to fear as a cause for the market not to transform into a sustainable housing market, although raising the physical quality of stock by implementing sustainability measures is thought to result in a higher value and in a higher attractiveness on the market. Fear, according to interviewees, results in defensive behaviour and ignoring the necessity for a sustainability transition and sticking to old habits and routine.

Also remarkable is that interviewees saw differences in intentions among the members of the management team, and that this prevents a collective movement and effective decision-making on sustainability (‘…administrators…do not have the tools to integrate sustainability in decision-making’). Integrated decision-making is thought to contribute to affordability while preventing overexploitation of the planet.

Only one interviewee showed an awareness of Welbions' being part of a larger ecosystem and so acknowledged a necessity to bear the consequences of activities on people and planet.

5.3.2 Perceptions regarding strategic decision-making and sustainability, 2012–2013

In this subsection the perceptions and assumptions with respect to the current method of strategic decision-making regarding sustainability are described. Questions that were asked were which aspects or elements are decisive in the current process of strategic choice at Welbions, in particular with respect to the targeted sustainability transition, and which mechanisms influence the process of strategic decision-making, e.g. what is the role of information and sustainability goals and is there a diversity of opinions with respect to sustainability among the decision-makers. The answers given to these questions were coded. From these answers a list of decision criteria is derived that reflects the criteria used in this time episode to make strategic decisions, according to the interviewees.

Profit dimension

On the question of which elements or aspects play a role in the current process of decision-making, *all* fifteen interviewees mentioned the influence of the financial position and financial elements such as investments and cost in decision-making. 'Choices are not driven by values but by costs', according to one interviewee. In total thirteen interviewees acknowledge that financial means and cost minimisation motivate decisions. Sustainability is not given priority in decisions. Economic interests are prioritised above social and ecological interests, according to five interviewees.

Motivation to raise the energy quality of houses is not so much ideological in nature but merely a matter of return on investments (ROI) and based on an analysis of costs and benefits, according to seven respondents. The problem according to interviewees, however, is that the return on investments of sustainability is not clear. Those investments need to be chosen that score highest when assessed against the ROI (which is investments in new buildings). That tenants benefit from investments in sustainability (translated into measures to reduce energy cost) was considered less important. 'Sustainability in times of financial crisis is economically not profitable', according to the Finance manager. Another interviewee stated that 'sustainability is only given some weight in the

budgets when the life cycle of houses is prolonged, not in case of demolition nor new buildings'.

This is rather contradictive to the statements of seven interviewees (including two decision-makers who also stated that ROI and CBA are the main motives for investments in measures to reduce energy costs) that the affordability of houses is a societal task of the housing association, and from this idea that sustainability is a moral obligation to the customers.

Nine interviewees enumerated the quality of real estate as a motive for making decisions on sustainability. According to one interviewee, the technical quality of the real estate is even the strongest motive in investment decisions. Two interviewees mentioned the improvement in the energetic quality of houses part of this technical quality. The aesthetic quality of houses is also of importance, according to the real estate development manager. The manager strategy refers to the value of comfortable living in short and long term.

Although it does not become clear exactly which effects were expected from investments in sustainability, three decision-makers replied that effects should be visible, in financial terms as in the experience of people. Showing results was thought to motivate people and to be appealing for management.

Eleven respondents acknowledge the influence of external financial conditions for sustainability. In the business model of housing associations, financial value can be created through renting and selling. The balance between revenues and expenditures condition every decision, e.g. the manager responsible for real estate management, although believing that 'it is absolutely necessary to do something with sustainability' states that in decision-making, nothing is done with sustainability except in the case of renovation. In renovation projects the principle guiding decisions was to achieve energy label B but investments are restricted due to an imbalance in cost and revenues. The business model was seen as a restriction to do anything about sustainability.

PEOPLE DIMENSION

Eleven interviewees make statements with respect to behavioural aspects when asking about the current decision-making process of Welbions regarding sustainability. The leadership style was considered task-oriented, resulting in a preference in decision-making for short-term actions. The negative effect of this style is that abstract concepts, such as the sustainability concept, 'abstracting people are being laughed at or said to become more specific', according to one

interviewee. Nine interviewees state that it is routine for people to think in terms of money; they have a financial mindset and are motivated by economic principles. Influencing Welbions' attitude and motivation towards sustainability are financial motives; 'a problem is only a problem when we are hit financially'. 'Sustainability is not rooted in the behaviour of the Welbions departments, it is not routine', according to one interviewee. Sustainability is not a problem today but a problem tomorrow, 'people tend to deny fossil fuels running out of stock'. It causes uncertainty but the assumption is that 'when it is economically feasible, problems will be solved'. Another interviewee stated that 'In the Netherlands we have a basic attitude to gain the most from the least possible but this attitude prevents gaining advantage from applying innovative techniques'. 'Sustainability is a matter of emotion but something needs to be gained from it', according to an interviewee.

Motives for applying sustainability are not intrinsic in nature, there is no belief in sustainable development. 'To believe in sustainability one has to appeal to emotions and cause doubt, and next one needs knowledge to be certain about what to decide'.

One interviewee stated, 'it is typical for finance people to focus on organising and structuring, on "what" needs to be done, but it is about the "how" question, how to do things differently depends on people'. Strikingly, the policy advisor for finance remarked that, although 'sustainability does not pay back easily... One makes choices that need to be reasonable and accountable, choices need to assessed... And although local government and consumers do not want to pay more for a higher energy labelled house, housing associations have a societal task to fulfil...'. One interviewee stated that if the director does not ask him to report on progress in the team towards sustainability, sustainability is not integrated into the daily tasks since these are already time-consuming.

Fourteen interviewees mentioned conditions for changing the current choices made by Welbions. Two of the interviewees stated that experience is both conditional and stimulating to change current behaviour, 'e.g. by putting a solar heater in your own home or to insulate your walls'. Competition – such as the

Wattcher game that was held[66] – motivates and provides a wakeup call, people talk about their own energy use resulting in different behaviour (this is, however, differently positioned by one respondent, who stated that too few people are playing the game). Another contributing factor is the involvement of management, at present the attitude of management is framed as 'indifferent' towards sustainability. By being an example to others, managers could create 'a snowball effect and more and more people will get involved'. In this perspective the appointment of ambassadors for sustainability is mentioned as a means to create this snowball effect.

Four interviewees mentioned the role of information and knowledge in decision-making which they considered essential. There is not only insufficient knowledge, but awareness and a sense of urgency are also lacking. 'Facts, knowledge and the ability to make it understandable for our customers are necessary to persuade "blue decision-makers"', according to one interviewee. As an example he mentioned that, in the case of Warmtenet, ten arguments needed to be listed to convince managers within Welbions 'that this system provided a suboptimal solution and that we needed information about other more sustainable alternatives'. However, the managing director stated that knowledge does not play any role of importance in decision-making (see also beliefs, page 151).

The director also stated that sustainability should become more understandable, closer to people, more tangible. Being too ambitious is considered a barrier to making pro-sustainable choices, as is the lack of a shared idea and meaning about what to do. 'There is no shared meaning about *what* Welbions needs to do when it comes to sustainability', one interviewee stated.

Six interviewees made remarks with respect to the influence of the strategy on decision-making. The strategy used so far to implement sustainability is perceived as short-term, fragmented and aimed at achieving quick wins. According to the manager responsible for Real Estate Management, sustainability is a loaded word, 'Welbions needs to contribute by taking small steps, doing little things e.g. by diminishing energy costs'. The Real Estate Development manager mentioned that 'Welbions cannot save the planet since

[66] In this game, employees of Welbions and the local government of Hengelo battle against each other for who can claim the best energy use reduction results, measured with a tool, the Wattcher.

we are only a small housing association'. These perceptions stand in contrast to those interviewees who associate sustainability with a broad perspective, including taking into account the use of materials and resources in addition to energy use. Decisions should take into account the impact of this usage on the quality of the (local) living environment. One decision-maker admitted that although there is a sense of urgency to do something about the use of materials and resources, it is still unclear how to achieve this and how to connect it to controlling housing cost and as a consequence no strategic choices were made that take this into account.

Fourteen interviewees made remarks that showed mechanisms operating in the process of strategic decision-making. Seven interviewees mentioned that pro-sustainable decisions are made when (local) rules and law prescribe this (pro-sustainable decisions meaning decisions that comply with the energy agreements, the Aedes Covenant, the performance agreements with the municipality of Hengelo). So a strong motive for Welbions to act in a more sustainable way is compliance – to comply with local rules such as the municipal government's 'bouwbesluit' (local housing law).

Ten interviewees state that image, publicity and support in the local environment (political parties and local residents of Hengelo) are a strong motivator for Welbions to act sustainably,.'Welbions is sensitive to what institutions have to say', according to one interviewee, 'reputation and support for a decision are more important than its effectivity. So Welbions cannot stay behind and do nothing about sustainability; this would present a risk for its reputation'.

Perhaps connected to this (political) sensitivity is the perception that if a decision proposal is supported by other departments within Welbions, especially the Finance department, then this works as some sort of binding 'psychological contract' which morally obliges the management team to accept the proposal.

The criteria that determine strategic decisions at Welbions and the impact of sustainability on these decisions are summarised in Table 5.3.

Table 5.3 Summary of decision criteria used according to 15 interviewees, 2012–2013.

Criteria used in making strategic decisions in the context of sustainability, according to 15 interviewees, 2012–2013	Relative number of interviewees
Financial healthy Welbions, cost benefit analysis, cost minimisation, cost efficiency of decisions aimed at affordability	100%
Need for shared views regarding sustainability, debate information vs. credibility, support of society and local politics and reputation, compliance with rules and agreements	73%
Drivers: being innovative, reputation. Barriers: lack of intrinsic motivation, too ambitious means no decisions	47%
Technical/aesthetic quality real estate, comfort of real estate determinant in decisions	33%
Lack of scheduling the topic of sustainability in management team and board meetings, not giving priority to sustainability in decisions	27%
Short-term focus (realisation of quick wins are actually just innovative techniques), investments in sustainability only in case of extension of life cycle	20%

PLANET DIMENSION

Contrary to the aforementioned financial focus are the motives stated by seven interviewees that Welbions is ‘determinant too for the conservation of our planet, and we should prevent waste’. The Strategy manager proposed to work on a lower footprint as a means to contribute to the future, not only by looking at energy but also at materials and resources used in the main processes. As one of the directors stated, ‘a barrier to integrated implementation of sustainability is looking at energy only’.

In the valuation of real-estate it is all about location, meaning the quality of the living environment and the aim to achieve vital urban areas is connected to the aim of sustainable development and is related to the aim of creating financial value. However, a blueprint for sustainable area development was missing and ‘the local government and the consumer do not want to pay more; the energy label is not a selling argument’.

Ten interviewees make remarks that can be categorised under code G for goals. They claim that Welbions is also responsible for the sustainability of the planet and has a moral obligation to act more sustainably. Two interviewees said that vital urban areas and quality of the living environment should be the result of investments in sustainability. The finance manager and HRM manager positioned sustainability as a way to avoid waste, to become more efficient in producing goods and services. What is needed is a blueprint of sustainable area development, according to the real estate developer.

The only remark that was coded EN was the statement made by the managing director about giving sustainability a narrow meaning, but ‘it is not good enough to look at energy only’.

SUMMARY OF PERCEPTIONS WITH RESPECT TO SUSTAINABILITY AND STRATEGIC DECISION-MAKING

Expressing the number of statements per dimension as a percentage of the total number of statements made by 15 key decision-makers when asked about what elements can be identified in the process of strategic decision-making at Welbions, in particular with respect to the targeted sustainability transition, and which mechanisms influence the process of strategic decision-making, results in a distribution into the three dimensions of sustainability, as presented in Figure 7.

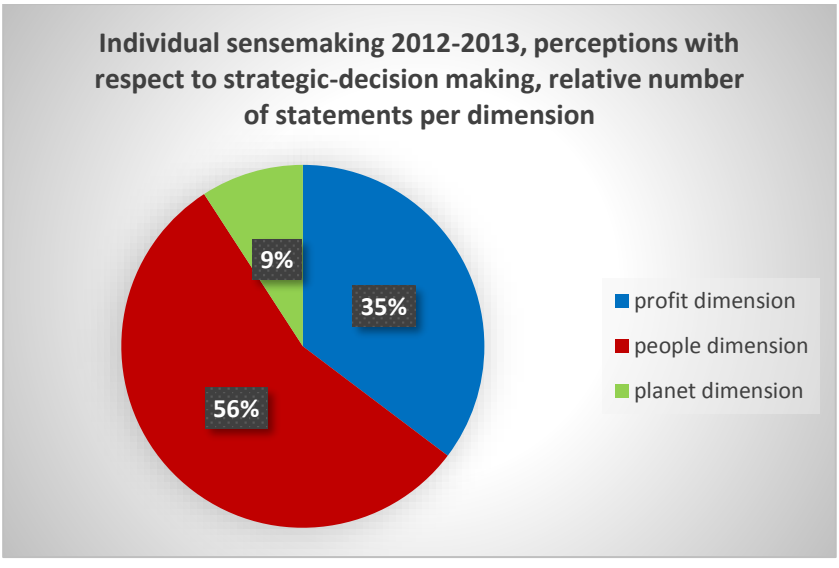

Figure 7 Relative number of statements per dimension of sustainability, categorisation of answers to questions about elements influencing current process of strategic choice in the light of sustainability, 2012-2013.

This brief overview reveals that the perceptions of decision-makers with respect to the current way of deciding in the light of sustainability are dominantly made from a people perspective.

However, when zooming in on the codes per dimension (see Appendix 5.3) all interviewees appeared to make statements that financial elements (cost-benefit analyses, affordability and the financial position of Welbions) are used most often in decision-making.

Appendix 5.3 further shows that the relative number of interviewees making statements about the current operating process of strategic decision-making in the case of sustainability are secondly most often labelled with codes CB and M, reflecting a focus on requirements for a behavioural transition and a focus on internal factors (mechanisms) influencing the process of organisational change.

In Table 5.4 the perceptions of decision-makers, with respect to their current way of deciding considering the chosen strategic theme of sustainability, are summarised in words.

Table 5.4 Individual sensemaking of sustainability, Welbions 2012–2013. Summary of motives, decision criteria and mechanisms influencing strategic decision-making with respect to sustainability.

Summary of answers to questions about motives, aspects, criteria influencing strategic decision-making at Welbions, in particular with respect to the targeted sustainability transition, and mechanisms influencing the process of strategic decision-making (15 interviews in 2012-2013).	
Profit	- The current business model sets the frame for investments in sustainability; however, the profitability of investments in sustainability measures is unknown. - Decisions are based on cost, money, not on ideology; cost minimisation and availability of financial means motivate decisions. - Sustainability in times of economic crisis is unprofitable and not given priority.
People	- The routine way of thinking is to think from a financial perspective and to focus on the short term; the attitude towards sustainability can be characterised as 'ostrich policy'/indifferent - Motivating people to act differently means experiencing, competition, inspiration (by believers); making sustainability understandable, small, shared meaning about sustainability, sense of urgency, awareness. - The strategy used to implement sustainability is perceived as short-term, fragmented and aimed at achieving quick wins, while others state that there is a sense of urgency to do something about the use of materials and resources. However, it is unclear how to connect this to housing cost.
Planet	- Welbions is also decisive in the sustainability of Earth; it is narrow-minded to only look at energy; it is also about the use of resources. - Applying innovative techniques in cooperation with others and directing towards quality of the living environment prevent waste.

All interviewees noted that decisions are driven by cost, not by values. Some interviewees stated that key decision-makers are not intrinsically motivated to act upon sustainability, decisions are not based on sustainability. Interviewees perceived a short-term focus on rising costs, especially of new buildings. In addition, decision-makers are believed to be inclined to decide with the highest level of certainty and not to give in to emotion, and sustainability seems to be

associated with emotion. Perhaps this is best expressed in the quote ‘sustainability is a matter of emotion, but something needs to be gained from it’.

Although seven interviewees stated that sustainability is a moral obligation, it is only given some weight in budgets in case of renovating existing buildings and only when the economic life cycle of the houses is prolonged.

Regarding the role of information and knowledge in decision-making, opposing statements were made. On the one hand, interviewees pointed to the relevance of facts and knowledge in making pro-sustainable decisions, as was shown in the case of Warmtenet (to counter-argue the dubious sustainability character of this collective energy system, an interviewee claimed he had to enlist 10 arguments to make this argument). On the other hand, the managing director mentioned that knowledge does not play any role of importance in decision-making.

A last remarkable quote from one of the interviewees revealed the perhaps essential role of clear goals in making pro-sustainable decisions. According to this interviewee, there was no shared meaning about *what* Welbions needed to do when it comes to sustainability.

5.3.3 Values: preferences, beliefs and factors influencing pro-sustainable decisions

In this subsection the answers of individual decision-makers to a number of questions are described. These questions were aimed at finding ‘end’ values with respect to sustainability and strategic choice (these values are a source of criteria that can be used in decision-making; see Chapter 3). The questions that were asked were what should be the goals, results and effects of sustainability and what requirements should pro-sustainable decisions meet. Interviewees were also asked what factors enable pro-sustainable strategic decisions.

The findings to these questions are described in three subsections. The first subsection describes the preferences of interviewees with respect to what the goals, results and effects of sustainability should be. The second subsection describes the beliefs of interviewees regarding requirements for making pro-sustainable decisions. The third subsection presents a list of factors which interviewees think contribute to a more sustainable Welbions. One question in the interview was specifically aimed at describing the shared values and the culture of Welbions.

Preferences: What should be the result/effect of implementing sustainability?

Profit dimension

Seven interviewees marked the main goal of sustainability as the affordability of houses and control of housing cost. The housing association should focus on housing cost and affordability of housing through implementation of sustainability measures. ‘In the long run, investments [in sustainable houses] must result in a positive effect on housing cost and so in affordable housing... it should become more mainstream thinking that this is our main task’, according to one interviewee. One interviewee (the Finance manager), mentioned affordability of basic needs in general, such as water and housing, as the main motive for making a transition; ‘basic products are always needed, raising the price of these products will have little effect’.

According to two interviewees, it is desirable from a societal perspective to raise the energetic quality of houses before they are to be sold. This investment will be profitable only through a higher selling price. ‘As a company, we need to maintain a solid financial position, so the strategy and vision on sustainability need to be calculated’.

Another goal mentioned by interviewees is the creation of sustainable buildings and reduction of greenhouse gas emissions by buildings. Three decision-makers saw sustainability as a means to keeping quality in property. They saw realisation of sustainable houses as a contribution to society. One manager stated that the housing association should contribute to tenants becoming more self-supporting, via affordable housing cost and sufficient market value of houses.

People dimension

Seven statements were made reflecting intentions with respect to integrating sustainability in the behaviour of the organisations. The motivation to do so is to get esteem from others for sustainable investments (sustainability as PR tool). Another result of implementing sustainability should be to know and understand what could be contributing to or impacting on the planet and to raise flexible, sustainable employability, according to one interviewee.

Three remarks reflect conditions for achieving sustainable behaviour. One of the statements is that efficiency is an important criterion, ‘doing the same with fewer people and focus on the core qualities of housing associations’. The same

interviewee stated that achieving this change, however, is not possible with the same people although the crisis supports a rise in the sense of urgency that it is necessary for change. In the short term, sustainability should become routine, which requires conscious implementation and clarity about the strategy, tactics and operations.

Two interviewees claimed that a sustainability strategy must be translated into what people understand and are able to deal with. ‘This results in movement’, according to an interviewee.

Integrated decisions as a goal are mentioned by one interviewee in the belief that integrated decisions contribute to affordable housing cost. A green room should be established to assess decisions on integrated criteria.

PLANET DIMENSION

Five interviewees mentioned that the goal is to contribute to society, a cleaner living environment and a prolonged expiry date of the planet by preventing a negative impact. ‘The effects should be felt in society, which is contributing to and preventing overexploitation of our planet’, according to one interviewee. The means to achieve this is to transform the property into sustainable buildings.

A goal stated by two interviewees is the reduction of CO2 emissions and energy use in houses. ‘Climate change leads to a diminishing quality of the planet, housing impacts on climate change and so the reduction in CO2 emissions of houses is a matter of housing associations’, according to one interviewee.

Three interviewees connected sustainability to the housing association’s licence to operate, more specifically to the target group of housing associations. ‘It is the mission of the housing association to organise social care, to do something [sustainable] for people that have no other options’, according to one interviewee. Another interviewee stated that the final result [of sustainability] should be that ‘our customers can afford to stay and pay for their houses’. One of the directors discussed the role of the housing association, saying ‘we must learn that others can do things better, in a more efficient or more customer-friendly way. We should not aim to do everything, ... Welbions should be the organiser, the facilitator, set the frame…’.

Beliefs: what is required for making pro-sustainable strategic decisions?

Profit dimension

Ten interviewees believed in financial elements as contributing to sustainability. The contribution of Welbions to sustainability is, according to nine interviewees, to keep housing costs under control for their customers by fulfilling the basic need for a comfortable house. One interviewee surfaced the idea to base (financial) valuation of houses on housing cost. Welbions should contribute to affordability of housing via sustainability measures, in compliance with the mission of each housing association.

The cost (and benefits) of investment must be analysed. The financial position of Welbions may prove a barrier to development of sustainable buildings since 'the cost of building a new house exceeds the market value and a sustainable house requires more funds and finance'. 'Our revenues need to be safeguarded', according to one interviewee, 'a healthy Welbions needs solid financial books'.

Four interviewees believed in the necessity of the availability of budgets. Welbions should analyse the financial risks of sustainable investments, and 'sustainability goals can only be achieved under the condition of available budgets'.

Conditional for achieving sustainability goals are extra investments and subsidies, insights into the impact and ROI. Subsidies are required for raising the ability to invest in sustainability, according to three interviewees.

Interviewees claimed that calculating the sustainable and societal rate of return on investments and the impact of housing on climate change is necessary. 'Investments need to be checked against feasibility and profitability'. The controller added that risks need to be identified and controlled.

Three interviewees believed that making progress towards sustainability is connected to applying innovative technologies. But one interviewee stated that 'technical solutions are insufficient at present'. The real estate development manager believed that technological solutions are inadequate to save the planet. One of the directors stated that housing associations are overly focused on the physical processes when it comes to sustainability, that 'physical processes and things are just a means to realise movement in how we live together'.

Two interviewees pointed to the necessity of measuring effects of new technologies on affordability. One interviewee stated that 'measuring the impact

of housing on climate change' is essential. Welbions should measure the impact and return on investments in innovative technologies.

Sustainability is only taken seriously when effects are visible. These effects do not necessarily have to be financial, but it is essential that people experience them. 'There has to be a cause-effect chain; sustainability is a matter of emotion, whether the time is ripe or not, without knowing why and what the results are. But it needs a trigger', according to one interviewee.

PEOPLE DIMENSION

Nine interviewees believed that behavioural elements are essential in realising a sustainable organisation and sustainable decision-making. One of the directors stated that 'employees need to be competent from a technical point of view and able to control processes'. The HRM Manager mentioned the relevance of appraisal by others in making decisions for sustainable investments. 'The interest is to empower people in a sustainable way; it is essential for employees to become flexible, and have a high level of employability'. The controller stated that sustainability should be integrated in the collective mind, 'but sustainability is not a goal in itself'. People need belief and passion about sustainability and, according to an interviewee, 'an individual should be persuaded to believe in the importance of taking care of the planet, because we have no other option'. However, as one interviewee stated, 'the belief that "having a job" is more important now than sustainability is, it is a matter of short term versus long term'.

One interviewee pointed to the responsibility of Welbions, saying 'our target group is not able to do something about sustainability, so we must do something'. Two interviewees mentioned intrinsic motivation as necessary for sustainable behaviour. 'Feeling responsible, flexibility and a willingness to change lead to intrinsic motivation', according to one of these interviewees.

Ten interviewees made statements about their beliefs with respect to conditional factors for behavioural change. According to eight interviewees, more *awareness* is needed among the employees as acknowledgement of the importance of sustainability.

Twelve interviewees mentioned the role of the government in implementing sustainability. The government could be more supportive of sustainable development and not by making housing associations dependent on *subsidies*.

This is, however, contradicted by three other interviewees who state that it is necessary for the government to support sustainability by allowing subsidies (see profit dimension above). For example, the rental policy is influenced by the institutional arrangements but could be more integrated in nature, taking sustainability into account.

Regarding the *management style*, seven interviewees think that a more coaching, supporting and framing kind of style is required instead of a facilitating one for transforming into a more sustainable Welbions. Managers should support and allow more flexibility and freedom, which enables sustainable behaviour. Managers are driven by success and results but they should show example behaviour themselves.

Three interviewees stated that the current system needs to be changed, that 'routine ways of behaving only provide individuals with "a shelter, a safe spot"; it is difficult to change the routine of the system'. 'Sustainability should be integrated in the DNA of people'. It is necessary to address individuals' *responsibility* and to raise their awareness. This applies to both employees and tenants. Personal beliefs are necessary for a transition.

As one interviewee stated, 'we need to acknowledge the interest of a social and ecological dimension'. One of the directors remarked that 'it is difficult to position the housing association differently… the essence is to slim down and outsource whatever is possible and to focus on our core qualities. However, the sector will suffer from administrators who shout that a change is required but achieving this with the same people is impossible... the crisis may be of support in this'.

A certain conservatism is characteristic of housing association employees. The willingness to change is low, but sustainability requires more innovative employees. *Intrinsic motivation* is required for implementing sustainability; sustainability should change something in the collective mindset. Sustainability demands an *open mind,* and if people feel responsible they will adjust and adapt their behaviour to the organisation, to customers and technologies. This will improve flexibility and create a willingness to change. This implementation of sustainability requires a higher *sense of urgency* and more awareness by employees as well as tenants.

Ten interviewees made remarks referring to more *involvement* and *inspiration*, suitable (sustainable) *competencies* and *belief* with respect to sustainability. 'Housing associations should go back to their old ways of working, which were

social in nature, which means that employees do their jobs with more devotion, courage and love'.

Another factor influencing a behavioural change mentioned by six interviewees is that sustainability should be *tangible*. It should be translated into something that people understand.

The importance of *goals* is expressed by one of the directors in the following remark: '[T]he relevance of goals is to have a target ("stip aan de horizon"). Now, the direction is not clear. E.g. in the case of the Dieselstraat where a new system was installed but we do not know if this measure is effective'. A clear goal on the horizon influences behaviour.

Although an urgency to change is felt, changes in the composition of the Welbions staff are thought to be necessary. 'It is necessary to move, but a change is not possible with the same employees', according to one interviewee. 'It is difficult to position the housing association in a different way with most of the current employees' according to an interviewee. It is essential to improve knowledge, competencies, abilities and give room to creativity, e.g. there is a need to gain knowledge about the supply chain of building materials, it is unknown where resources for (re)building come from, what the impact of their usage is on the quality of the living environment.

Interviewees believed that more *knowledge* is needed, '…not only for more knowledge about what energy measures to take (e.g. in the case of Warmtenet in which there was doubt about the sustainable nature of burning wood as source of clean energy) but more knowledge about sustainability in the broadest sense'. 'We need *knowledge* about our supply chain, what is the origin of our resources, what is the impact of using it on the quality of the living environment before and after production activities', according to another interviewee. This need, however, is contradicted by two interviewees; the Finance manager stated that there is already much information available and the Housing manager stated that knowledge is not relevant. The director opposed pointing to the absence of sustainability knowledge by claiming that 'only sceptics need information'. 'There has to be a cause-effect chain, sustainability is a matter of emotion, whether the time is ripe or not, without knowing why and what the results are. But it needs a trigger'.

Another condition that is thought to be essential is the *culture* of Welbions. 'There is a *culture* of preferring short-term activities, people with conceptualising

capabilities are laughed at; this leads to polarization'. There is a need to share meanings about what needs to be done, and the feedback mechanism should work more effectively, claim six interviewees.

Three interviewees made remarks about the strategy of Welbions towards sustainability. According to one interviewee, Welbions should prepare for a changing environment, 'the norm is "green", not "blue"'. Another interviewee stated that 'Welbions cannot save the planet'.

The strategy to transform Welbions should be an *incremental* strategy (interviewees stated that the current strategy is fragmented and aimed at short-term results); small steps should be made starting from the bottom up (mentioned by eight respondents) and by applying innovative techniques 'at natural moments in the life cycle of houses' (Housing manager). Welbions could motivate the market by setting different product terms, e.g. for energy-neutral housing, for recycling of materials, by setting different criteria for suppliers.

The concept of sustainability was believed to be complex and long-term-oriented. One interviewee stated that 'we cannot solve everything, sustainability should be tangible or else it will continue to be seen as 'granola' (in Dutch: "geiten wollen sok"). One interviewee remarked that 'we must start with small actions, bottom up', though another interviewee claimed 'it is of interest to do things on a large scale to have more impact'.

Two interviewees pointed to the opportunity for Welbions as a client to direct suppliers towards more sustainable development, e.g. via procurement criteria (as was used in the 'Sterrenbuurt' project).

Welbions should focus on the cost of housing and achieve affordable housing through implementation of sustainability measures. This requires valuation of soft indicators, scheduling sustainability for discussions in management team meetings and viewing a decision from diverse perspectives, weighing alternatives. 'Sustainability is not only about competencies but about opinions and governance; the way decisions are made enables achievement of a more sustainable organization', according to one interviewee.

Eight interviewees (among whom were the two directors) require more clarity and consistency in the direction and more control. The topic should be on the agenda

of board meetings more often, there should be more support from the top in organising for sustainability and more priority should be given to sustainable development. Sustainability should be integrated into policy and in the planning and control cycle – meaning goals need to be integrated into the annual plans of each department and should follow a plan-do-check-act cycle.

Code M. Five interviewees believed that it was necessary to make decisions based on all three dimensions of sustainability. ‘Decision-making should become integrated, and not only focused on energy measures but on all three dimensions of sustainability’. One interviewee suggested forming a ‘green room’; ‘this room could be used to enforce pro-sustainable decision proposals, on the condition that long-term goals and [decision] criteria are clear’. In weighing alternatives, diverse perspectives are needed, according to the same interviewee.

Thirteen interviewees stated that more alternatives should be discussed and more perspectives are needed, that there is not enough debate when making decisions. There is a need for checking decisions in a ‘green room….decisions should be assessed against integrated criteria, presenting alternatives in a proposal should be required’. Nine interviewees believe that decision-making should be more professional, in the sense that sustainability should be integrated into decision-making and policy and in primary processes (concerning real estate and e.g. local environment improvement projects).

Weighing should be based on soft indicators as well, e.g. ‘housing costs are not made explicit, there is no valuation of soft indicators’. However, three decision-makers saw sustainability as merely one of the criteria to be used in the assessment of the quality of the property.

Seven interviewees argue that decisions should be assessed against the sustainability vision and goals and that sustainability should be given priority in time and budgets. In decision-making, more balance in weighing short term and long term should be obtained. ‘A conscious choice for allocating financial means to unprofitable societal investments’ should be made. However, even new buildings cannot be financed at cost neutrality; the price of building a house exceeds its market value. Investing in sustainability is seen as putting extra cost on the investment budgets.

One interviewee stated that decision proposals are hardly initiated from the bottom up, which reflects a climate in which employees do not feel responsible and are not intrinsically motivated to act sustainably.

PLANET DIMENSION

Code EB. Sustainability was associated with scarcity of resources and the negative impact of climate change on the quality of the living environment, 'therefore we need to direct towards *vital urban areas*', according to one of the directors. One interviewee connected sustainability to the ideal of a self-supporting system, 'which is beneficial for individuals and for reduction of CO2 emissions'.

One interviewee stated, 'Welbions is also decisive for the sustainability of Earth'. This is, however, contradicted by the real estate development manager, who stated that Welbions cannot save the Earth.

Categorised in code EN are statements, according to five interviewees, that Welbions must take its responsibility for influencing the sustainability of the planet. 'Climate change leads to a diminishing quality of the planet, housing impacts on climate change and so the reduction in CO2 emissions of houses is a matter of housing associations'. 'We are a social entrepreneur… so Welbions has a social responsibility to build more sustainable houses', according to one interviewee. In order to do so, the energy usage of Welbions' customers should be registered, according to the energy coordinator of the real estate management department. 'Applying sustainable energy and materials in houses results in a higher value of the property', according to this interviewee.

Knowledge of the entire supply chain is necessary. Scarcity in resources is a threat to the existence of Welbions and has consequences for the prices of energy and materials, so there are opportunities for green energy and innovative techniques.

FACTORS INFLUENCING PRO-SUSTAINABLE DECISIONS AND IMPLEMENTATION OF SUSTAINABILITY

One of the questions in the interview specifically addressed the beliefs of interviewees with respect to factors contributing or enabling pro-sustainable strategies and decisions. Most interviewees mentioned conditions for changing behaviour (12 out of 15 interviewees). Two thirds of the interviewees associated certain behavioural elements with sustainable behaviour. Six interviewees believed that financial factors enable pro-sustainable behaviour. All interviewees

marked decision-making as an important factor in transforming Welbions into a more sustainable organisation.

A summary of these factors is listed in Table 5.5 below. A visualisation of the factors is presented in a mindmap, to be found in Appendix 5.4.

Table 5.5 Factors enabling pro-sustainable decisions according to 15 interviewees, 2012–2013.

Factors stimulating pro-sustainable decisions according to 15 interviewees, 2012–2013.
Knowledge and information about long-term profitability and impact of applied measures on the planet, credibility to convince others of the necessity to take care of the environment; acknowledgement of interest
Leadership: more direction and exemplary behaviour; frames, direction towards self-supporting and not directive; prioritise and allocate time for sustainability, diminish ambitions; translation of business plan into departmental plans and personal development plans of staff
Awareness and acknowledgement of interest in sustainability
Cultural change; change of meetings structure; a shared meaning about what to do
Government: stimulating a transition without dependency on subsidies
Financial awareness, insights into impact and profitability of sustainability measures, tools for measuring
Conscious choices to allocate financial means to non-profitable societal investments
Professionalisation of decision-making: taking sustainability into account in decision-making and in primary processes; more debate, more alternatives in decision-making, more perspectives required for weighing alternatives
Insights into long-term effects
Assessing decisions based on sustainability goals; establishment of a green room in which decisions are assessed in an integrated manner
Operationalisation of sustainability in criteria for investment decisions

It is perhaps remarkable that in the list of factors that are believed to contribute to more sustainable decisions and strategy by Welbions, only one external factor is mentioned, i.e. the role of the government, and this role is even discussed. Some

interviewees stated that the government should support a sustainable transition by providing subsidies while others claimed that this would make housing associations dependent on government once more.

SUMMARY OF VALUES 2012–2013

In Figure 8 below, the values expressed by individual interviewees with respect to the preferred results and their beliefs with respect to sustainability and strategic decision-making are visualised. The percentage per dimension is calculated as the number of statements per dimension divided by the total number of statements made by all interviewees when answering the questions about their preferred results and beliefs. The people dimension, though closely followed by the profit dimension, is used most often.

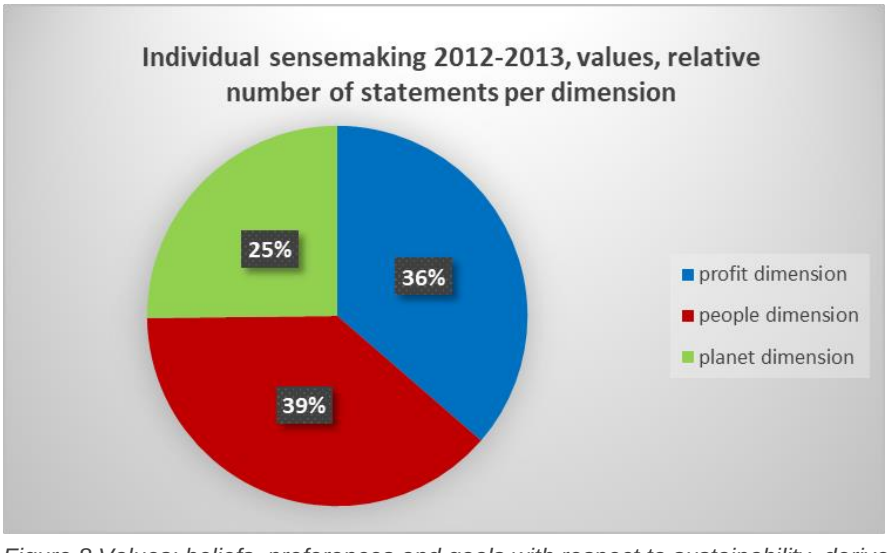

Figure 8 Values: beliefs, preferences and goals with respect to sustainability, derived from statements of interviewees answering questions about their intended goals and impact of a sustainability transition and the requirements that should be fulfilled in order to make pro-sustainable decisions.

Zooming in on the codes that were used most often (see Appendix 5.3), most interviewees showed a focus on the financial position, cost minimisation and return on investments when talking about sustainability and pro-sustainable decisions. A focus on financial values dominated. The second most often used codes were codes B and CB, reflecting a focus on behaviour and conditions for behavioural change. The third most often used is code EB, representing an

awareness of the organisation being socially responsible for the quality of the living environment. Least used were codes R, showing a focus on measurability and results, and G, associating sustainability with the housing association's licence to operate.

Some highlights of the qualitative findings in this period, in which 15 key decision-makers were interviewed, are summarised in Table 5.6 (in Appendix 5.4 a mindmap of preferred goals and beliefs, the values, is presented).

Table 5.6 Individual sensemaking of sustainability, summary of preferred goals, results and effects of sustainability, Welbions 2012–2013.

Summary of 15 interviews 2012–2013. Identification of values via preferred goals and beliefs with respect to sustainability. Highlights of answers to the questions about what the results, goals and effects of sustainability should be and the requirements for making pro-sustainable decisions.	
Profit	- The goal of sustainability is affordability and creating sufficient market value. - Continuity means control of financial accounts and managing the quality of the real estate; sustainability should be tangible or it will remain something of 'granola' (in Dutch: a 'geiten wollen sok' image). - Sustainability requires applying innovative techniques but at present housing associations are too focused on physical processes, and technological solutions are inadequate to save the planet.
People	- Belief, competencies, knowledge are required; sustainability should become routine, should be integrated in the collective mind, but the sector needs different people. - Welbions should assess decisions from an integrated perspective (install a 'green room' to enforce pro-sustainable decisions, based on integrated decision criteria).
Planet	- The housing association should play the role of orchestra conductor, not real estate developer. - Welbions should contribute to a better planet, prevent a negative impact and be willing to see things from a broader perspective.

These descriptions support the quantitative presentations. A focus on financial elements was most likely influenced by Dutch governmental policy, which was focused in these years on the financial position of the housing associations. The

sector suffered from a number of scandals and economic crises. This made it possible and legitimate for the government to impose a levy and resulted in debates about the role of housing associations in advance of a newly developed law (‘Woningwet’). This is reflected in the value expressed as ‘the role of [the housing association] should be that of the orchestra conductor, not real estate developer’. By this is meant that Welbions should not become a real estate developer, but should facilitate developments via cooperation with all organisations working in an urban area to enable the target group of the housing association to become more self-reliant.

FOCUS GROUP

In the summer of 2013 the results of the analyses of interviews with key decision-makers were presented to a focus group. In particular, this group looked into some topics that seemed to conflict with each other.

The focus group agreed with the remarks made by some interviewees that sustainability was not prioritised at Welbions. Also, they agreed that the strategy could be labelled as ‘ostrich policy’, meaning that management sticks to daily routines and thinks sustainability is of less importance. There is insufficient sense of urgency, although there is awareness that there are problems.

The group, as well as the interviewees, mentioned typical (housing association) organisational factors influencing the willingness to change: competencies, labour terms and the remuneration policy of housing associations. The culture of the organisation is an important influential factor for pro-sustainable behaviour, as is the working climate, according to the group members.

But they stated that willingness to change also depends on leadership. Interviewees mentioned exemplary behaviour on the part of management as a condition required for change. The group added that expectations need to be clear, sustainability is still not obligatory, and it is a complex concept. The director wondered how to govern in a sustainable manner, and mentioned the need for tools to direct and measure. Compliance and consistency were mentioned by the group as supporting factors towards a sustainable transition.

Group members reflected on the different goals mentioned by interviewees and debated quality of houses versus quality of the living environment. Achieving high quality of houses was mentioned more often by interviewees, but the group

stated that this had to do with societal and political developments such as individualisation of society. They thought that both goals were given equal weight in the decision process.

5.4 Individual sensemaking of sustainability, 2017

In 2017 nine decision-makers of Welbions were asked about how they define sustainability. In this section the results of these individual interviews are described. The same three subsections were used to present the findings, i.e. strategic events (which events are seen as of strategic importance for Welbions), perceptions with respect to the current method of making strategic choices regarding sustainability, and preferences, beliefs and values with respect to sustainability. In the last subsection the findings from asking interviewees about which factors contribute to more sustainable decision-making or strategy by Welbions will also be described. This time stage is marked with a blue oval and a green bar in Figure 9 below.

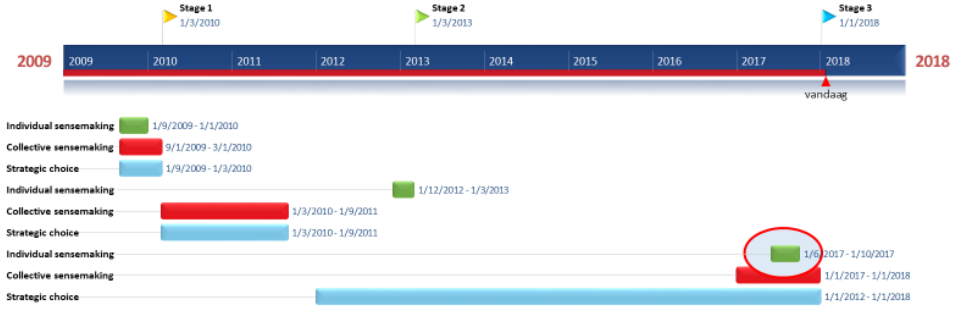

Figure 9 Third research stage: individual sensemaking, strategy implementation, 2012–2017

A list of interviewees and an overview of questions asked can be found in Appendix 4.5.

5.4.1 Strategic events, 2017

The first questions in the semi-structured interviews with nine key decision-makers were about which events influenced the strategy (Question 1) and sustainable transition (Question 2) of Welbions. Since the researcher was familiar with the interviewees and the interviewees were informed about the focus

of this study (sustainability and strategic decision-making), it was often not necessary to ask the second question.

The answers given by interviewees are described per dimension of sustainability, per code. The codes were used to categorise and label the quotes by interviewees. Then the statements made by the interviewees were counted per dimension and code, and summarised in a circle diagram in order to indicate which dimension of sustainability was used most often. The quantitative summary is further explained in qualitative terms.

PROFIT DIMENSION

Seven interviewees made statements labelled with code F, reflecting a focus on the financial position of the housing association. Five of them mentioned affordability as being of strategic importance for Welbions. ‘One looks into what it [sustainability] means for tenants in terms of cost; we choose not to invest in sustainable options because it affects the financial position of the tenant’, according to one interviewee. Another financial matter that is considered of strategic concern is that (according to the Operations manager) the housing association ‘works with a (financial) system in which scenarios are based on budgets from which you can deduce that a sustainable transition in existing buildings is financially impossible’.

The director stated that the capacity to invest should be mentioned last, that the emphasis should lie on other things: ‘Many people start with the question “Can we afford this?” and so we need to anticipate in forecasts, but finance is the last thing to resolve... it is about affordability for tenants’. One interviewee mentioned the rising price of gas as a strategic event.

Seven interviewees enumerated conditions or developments of a financial nature influencing the strategy of Welbions. A strategic event that, according to five interviewees, put pressure on the mission of the housing association to provide affordable housing is the strengthening of rules and laws. Due to stricter rules and laws, and the increasing number of them, there is less investment space for sustainability. If the levy, the so-called ‘verhuurderheffing’, did not have to be paid, Welbions ‘... would have more space to experiment, to embrace new developments and do something with it. If we could use the levy for sustainability then the financial barrier to do so would be lower’, according to the controller.

Other events of strategic importance that were mentioned were economic developments that lead to more emphasis on efficient operations (Welbions

needed to reorganise, which resulted in resignation of employees). This caused a different way of thinking, and the financial awareness grew that ‘getting one euro from rent can only be spent once’.

One interviewee marked the changes in valuation principles for property (established by the CFV and determinant for the financial value of property on the balance sheet) as influencing the business model of housing associations. However, though the property is now appreciated against market value, yearly revenues from rent are still the same. ‘The value of the property is now more sensitive to conjuncture development’, according to an interviewee.

Two interviewees noted a connection between sustainability and technological developments. ‘E.g. in the debate with respect to the collective heating system [for 344 houses in an urban area in Hengelo], the question is if this system is a future-proof alternative. I have doubts about that, we are confronted with progress in knowledge and technology…’ according to one interviewee.

No statements were made that were labelled as R for focus on results.

PEOPLE DIMENSION

Six interviewees noted behavioural aspects as being of strategic importance for sustainability. One interviewee mentioned the influence of lifestyle on the ways people deal with sustainability, saying ‘there is a difference between young people that grow up with sustainability and elderly people that are more conscious of inefficient energy use in older houses…in one urban area in Hengelo [Kasbah] inhabitants are pretty progressive; these people will ask for sustainability measures’. Another interviewee made a remark that also reflected a behavioural association: ‘there is growing attention for the transition of houses into more sustainable buildings’. The behaviour of tenants and acceptance of sustainable measures by tenants is of strategic relevance, according to three interviewees. ‘We notice that tenants are not quite ready…there is a project [in which the intention is to invest in energy measures] for which we cannot convince 70% of the tenants to step in – which is also an example of the fact that laws do not support a sustainable transition’.

One interviewee claimed that decision-making is relevant as a behavioural aspect, saying ‘the question is if we have the guts to decide and choose to be CO2 neutral and stop using gas’. Intrinsic motivation is also mentioned as essential: ‘it should not be a trick, it starts with how well we are capable of making responsible decisions’.

All nine interviewees enumerated events that can be labelled as conditional developments before a change of behaviour towards more sustainable behaviour occurs. The first category of remarks (made by eight interviewees) showed the influential role of the government – national, regional and local – in starting a transition towards sustainability. The government has more influence now due to scandals, and they aim to gain more control over housing associations. The Energy Agreement (2013[67]), the UN Climate Change Conference (2015), and the Covenant 'Energy Savings in the Rental Sector[68]' all lead to obligations towards a sustainable transition of real estate. According to one interviewee, 'the ambitions of the province of Overijssel are translated into the ambitions of the municipalities….one sees that the agenda changes; on the one hand, there is an obligation to halt and diminish energy use and on the other hand there is the obligation to step away from using gas as an energy source…but the question is if we can realize these ambitions'.

More rules and laws influence a sustainability transition, according to six interviewees. 'The legislator decides about the assignment of the housing association and the role of the housing association in society', as another interviewee stated. But if Welbions decides to change the energy system, 'e.g. by replacement of an individual heater by a collective heating system, the rental agreement in fact needs to be changed and so every individual tenant legally needs to agree with the proposed changes'.

Political developments also influence the strategy of housing associations towards sustainability. In 2017 a new cabinet was formed in the Netherlands, 'a cabinet on the more right-side of the spectrum influences Welbions' target groups', according to an interviewee.

Present society, the public, also requires a more sustainable attitude by the housing association, according to one interviewee. Three interviewees mention market developments and issues within the organisation as barriers to implementing sustainability.

Issues that were mentioned include the role of management, for example. Management needs to show exemplary behaviour, they need to show full

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[67] https://www.energieakkoordser.nl/ date of retrieval 25 July 2017.

[68] The Covenant Energy Savings in the Rental Sector obliges housing associations to realise stock with a minimum of 40% with energy label B per 2020.

commitment to sustainability and facilitate e.g. separated waste disposal. ‘For visibility it is a good thing that both managing directors have cars that need electric energy’, according to one interviewee. Other conditions that were mentioned were the culture of Welbions and people’s learning capabilities. A sense of urgency and awareness of tenants is necessary to be able to make a sustainability transition as well as cooperation with suppliers and co-makers.

Three interviewees mentioned the way Welbions acts as having influence in a sustainable transition. The developments in the organisation from 2012 meant that the focus was on matters other than sustainability issues. In this period, the strategy was characterised by a focus on efficient operations and professionalising, and the sustainable development working group did not function properly, according to one interviewee. ‘Although there were good intentions, there was no time, and at a certain moment motivation [to work on sustainability] was reduced’. There were more activities initiated from the bottom up than from the sustainability working group. It was not until 2016 that a memo was written, after which a new team was formed to focus attention on sustainability, the CEO being a team member. However, one interviewee stated that of influence on sustainability is the fact that the organisation is still searching for ways to become more professional.

Five interviewees made remarks referring to mechanisms in the management team when debating sustainability. One interviewee stated that ‘there is a diversity of opinions, e.g. whether or not a collective energy system using pellets is sustainable’. Two interviewees mentioned the relevance of putting sustainability on the agenda: ‘it is now more debated in the management team than five years ago’. One of the directors pointed to the more prominent role of the supervisory board in decision-making. Another interviewee stated that ‘in retrospect one wonders why 10 years ago certain choices were made; from this idea it is a good thing that there is more awareness now’, showing a reflection on the non-sustainable character of decisions that were made in the past.

PLANET DIMENSION

Two interviewees made statements coded with EN, reflecting a focus on energy and climate change. The first remark concerned the uncertainty with respect to the degree to which current energy systems can be framed as sustainable. The other remark was about the focus of tenants. According to the interviewee,

tenants do not implement sustainability measures by themselves but ‘require an energy-efficient house and comfort from the housing association’. ‘They only look at energy costs, are not interested in whether or not tiles can be reused’.

The last part of this quote also reflects an association of the interviewee with the sustainable nature of materials, coded with EB, reflecting a focus on the quality of the environment. Two interviewees marked changes in society as strategic for the housing association. ‘E.g. people with slight psychological problems now live in normal houses, which means a lot for the neighbourhood and tenants. Society is diverse; one sees a more inclusive society now’. A second interviewee mentioned the lower trust that society has in housing associations.

Three interviewees mentioned the objective of the housing association as being of strategic importance for sustainability. Since the housing association is social in nature, ‘the licence to operate is driven by what society wants us to do….there is pressure from society – worldwide, national government, environmental NGOs – to act more sustainably’, according to one interviewee.

SUMMARY OF STRATEGIC EVENTS, 2017

Expressing the number of statements per dimension as a percentage of the total number of statements made by nine key decision-makers, when asked about which events they considered as strategic in nature and influencing the application of sustainability measures, results in a distribution into the three dimensions of sustainability (see Figure 10).

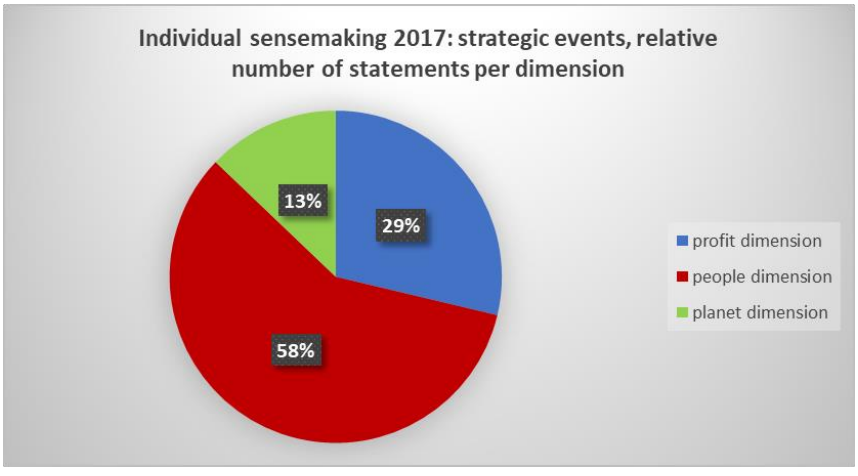


Figure 10 Strategic events with respect to sustainability observed by nine key decision-makers of Welbions, 2017. The relative number of statements made by these interviewees per dimension.

The most dominant perspective used in observing events influencing the strategy of Welbions and a sustainability transition is the people dimension. The least used perspective is the planet dimension.

All interviewees talk about conditions required for behavioural change (code CB), followed by associations with investments and the financial position of Welbions (code F, seven interviewees) and, thirdly, about the necessity to integrate sustainability into the process of decision-making in particular (code M) and expected behaviour (code B, all six interviewees). See Appendix 5.3, which depicts the relative number of interviewees per code.

Table 5.7 shows a qualitative summary of the most remarkable findings in 2017 with respect to strategic events observed.

Table 5.7 Individual sensemaking of sustainability, Welbions 2012–2013. Summary of events, causes and factors that were considered strategic in nature.

Summary of answers to the question of which events are considered strategic and which events/causes/factors influence a sustainability transition of Welbions, per dimension of sustainability (nine interviews, 2017)	
Profit	- Levy imposed by the Dutch government restricts investment capacity; changing the valuation principles (towards market-value-based assets) makes housing associations more vulnerable to fluctuations in the economic situation.

	- Economic developments resulted in more emphasis on efficient operations. - Technological developments are happening fast but sometimes the question is what the most sustainable alternative is.
People	- Different lifestyles influence implementation of sustainability measures but there is steady growth in attention to sustainability. - Institutional context (government, politics, rules and law) influence a transition; local government needs transparency in the investment capacity of housing associations; covenants and agreements focus on energy and climate change.
Planet	- The goal of the housing association is social in nature; the licence to operate is determined by what society wants; if that is acting more sustainably then there is pressure from society to build comfortable houses that do no not use too much energy.

Noteworthy remarks were those that reflected on the decisions made in the past; in retrospect it was questioned why these decisions did not have a more sustainable character. Although exemplary behaviour by management was expected, compared with 10 years ago both managing directors now drive an electric car. According to all interviewees, the reasons for acting more sustainably were due to government agreements and a society that is pushing housing associations to do so. In that way, sustainability is seen as a strategic event arising out of compliance, and not because of an intrinsic motivation to improve the quality of the living environment.

In contrast to the agreements enforcing housing associations to transform the energetic quality of their property, the influence of the levy imposed by the government and economic developments resulted in the resignation of a number of employees and a focus on efficiency. These measures were thought necessary to improve the financial position. They also left less room for investments in sustainability, the argument given being that sustainability affects tenants in terms of cost.

5.4.2 Perceptions regarding strategic decision-making and sustainability, 2017

In this subsection the perceptions of nine key decision-makers with respect to the method of strategic decision-making regarding sustainability in 2017 are

described. Questions that were asked were which aspects or elements are decisive in the current process of strategic choice at Welbions, in particular with respect to the aimed sustainability transition, and which mechanisms influence the process of strategic decision-making, e.g. what is the role of information and sustainability goals and is there a diversity of opinions with respect to sustainability among the decision-makers. The answers given to these questions were coded. From these answers a list of decision criteria is derived that reflects the criteria used in this time episode to make strategic decisions.

PROFIT DIMENSION

All interviewees made remarks that are coded with an F, showing a financial perspective on decision-making. According to two interviewees, decisions favouring sustainability have an impact on housing costs in the short and long term and thus on the financial situation of tenants. '[T]his seems contradictive but, looking closer, it is not actually', according to an interviewee. The financial situation of tenants and affordability are decisive in decision-making, claimed three interviewees. One interviewee questioned what the benefits of investments in sustainability are for Welbions: 'Welbions does not need to make profits, but we benefit from the best price/quality relation for the tenant. Although we often think to know what is best for the tenant this may differ from how he experiences it himself'.

The managing director stated that at present investment decisions are made in such a way that [due to developments in sustainable techniques] choices made today can be corrected within 10 to 15 years from now. Money earned by selling a part of the stock can be used for sustainability measures. According to an interviewee, 'In the past, decisions were made that aimed at energetic improvements of houses to energy label C because investing in label A was too expensive;. In current decisions this is different; Welbions invests in label A or B and rents are now maximised'. However, aiming at e.g. houses that use zero (fossil-fuel-based) energy (so-called 'zero-on-the-counter'), which was the aim for 48 houses (De Jeu houses), appeared to be enormously expensive, stated the real estate development manager. The cause of the failure of this experiment was that beforehand these houses were estimated to be technically suitable for achieving zero energy use, but when the project entered a subsequent stage this appeared incorrect and thus too expensive.

But another interviewee stated that ‘people are too money-driven. Everything in this world is about money and this will prove to be deadly’.

Eight interviewees made statements reflecting financial conditions influencing decision-making. One interviewee noted that the investment space (pro-sustainability) is restricted and that, ‘due to the current business model of housing associations, financial space is limited’. Another condition that restricts investments that favour sustainability is the risk profile and uncertainties in large projects, according to another interviewee. Another statement is about the IRR (internal rate of return): ‘In the boards there is debate about the IRR, all measures together may have as a consequence that the IRR [of 2.8%] is not achieved. But even then, there is no intention to cut sustainability measures’. As the CEO stated, ‘sometimes you have to accept that you invest more to achieve future profitability’.

Four interviewees made remarks showing a focus on the (technical) quality of real estate. One interviewee stated that ‘sustainability is integrated in criteria for investment decisions since real estate employees already have the assignment to look at materials they use from a sustainability perspective. Independent of renovation or maintenance, a basic quality is developed for houses which is also based on sustainability’. Among the criteria for checking the quality of houses, one criterion is indeed focused on the energetic quality of the house. This interviewee also stated that debates about sustainability are very much restricted to everything that has to do with houses. Another interviewee claimed that the future-resistance of the stock is underlying decisions. Two interviewees stated that technological developments influence decisions. These developments influence the degree to which alternatives can be called sustainable.

One remark made by an interviewee showed a focus on measurability of results, specifically that ‘there are hardly any tools to calculate’ the impact of sustainability measures.

PEOPLE DIMENSION

Five interviewees mentioned that sustainability is now (compared to five years ago) more a matter of the collective mind. This was thought necessary because, as one interviewee stated, ‘without the will of the organisation, the board, the ones who pull, the enthusiasm, nothing is achieved’. But there is a ‘gigantic reflex to control everything … when some tenants … do not care about sustainability, do not want to pay a higher rent – which can be the case when they already have

a low energy bill or because they do not intend to live in the same house for the next 15 years – what do you decide? It should be a decision aimed at serving the client's interest. If not then you are paternalistic'. The CEO observed that the willingness of people to change towards sustainability is different in the organisation. 'There is a difference in ambitions with respect to sustainability, the responsibility to act more sustainably cannot be laid low in the organisation yet'.

Eight interviewees mentioned conditions that need to be met before a change in behaviour towards more sustainable behaviour occurs. Five interviewees stated that it is necessary to have an interest and an intrinsic motivation to put the subject of sustainability on the agenda of decision-makers. 'In management team meetings there is no difference in interest', according to one interviewee, 'but it is helpful if the CEO is passionate about sustainability'. Exemplary behaviour, boosters, ambassadors are all supportive, 'you need people who constantly focus attention'. The CEO himself stated about the topic that 'I cannot permit doing nothing; it [sustainability] should be high on the agenda. Sometimes it looks like I am the only one who feels that way, which is not true, but I really need to direct it'. In the decision-making process the role of the supervisory board has become more important, according to one interviewee. The controller stated that 'the tone at the top is that we need to do something about sustainability, at the management team level and at the board level – the board of directors and the supervisory board – there is debate about sustainability'. This claim, however, contradicts the statement made by another interviewee: 'Issues such as social sustainability, as well as ecological sustainability, are issues that can be discussed within 10 years from now too; we are not confronted immediately with these issues so they are not discussed in the management team. Questions asked concern solar panels and the like; in that way we have a different mindset compared with five years ago'.

Four interviewees mentioned the necessity of having knowledge. One interviewee stated that 'information supportive of pro-sustainable decisions is not always sufficient, it is still developing….the circular economy could possibly result in Twence and Warmtenet [as sources / infrastructure for collective heating systems] becoming unnecessary'. One interviewee mentioned that the stage before decisions are brought to the management team is most crucial because this is the stage where alternatives are weighed and knowledge from the organisation is put together. But although there is more knowledge, for example in the field of resources and materials, 'nobody gives the same answer, so what is knowledge?' he wondered.

One interviewee mentioned the influence of the (legal) requirement to have the support of tenants in the decisions that are made, while another interviewee pointed to the differences in the sense of urgency among employees and tenants and stated that ‘we are not so busy with this issue [of raising awareness]’. ‘To raise this support it is a good way to celebrate successes’, according to one of the directors.

Four interviewees claimed that pro-sustainable investment decisions are made depending on arrangements with the local government. As one interviewee stated, ‘In the performance agreement with the city of Hengelo the ambitions are laid down, such as 20% sustainable production of energy in 2023 and 40% in 2030 … this is more ambitious than is agreed in the national energy covenant’. Another interviewee stated that ‘meanwhile we are truly thinking about sustainability issues and it is a topic in the new business plan. But still, the real driver of sustainability is the government; it is not from an intrinsic motivation that the topic is on the agenda. Not so much because we do not want this, but due to an inability, and because it is complex and developments are going fast.’

In total four interviewees made remarks coded with an S for strategy. With respect to the integration of sustainability in the business plan, one interviewee marked the difference between the previous plan and the current business plan in which sustainability is no longer a separate topic but integrated in every aspect, the so-called ‘green line’. The strategy pursued is still one of carrying out pilots, in cooperation with the Twentse cooperation of housing associations, ‘Woon’. As one interviewee stated: ‘our strategy is characteristic for being an early adopter, we do not necessarily have to be a pioneer and face all uncertainties that come with being the first to explore new systems, we like to be in the sub top’.

Seven interviewees shed more light on the mechanisms (code M) in the decision-making process although there is a difference in the way decisions are treated. Routine decisions, those decisions that refer to large maintenance projects and renovations that were already agreed with in the budgets, are not debated in management team meetings. When a large investment decision is developed, the process is that ‘one [informal] decision-maker informs others in the organisation before he designs the proposal. He debates the proposal with a member of the strategy team and a member of the finance team. The member of the strategy team collects information from employees working close to tenants (the so-called ‘neighbourhood coaches’ and ‘housing consultants’) to gather

knowledge at the project level. Next the decision-maker designs the proposal and discusses it with the real estate development manager. Then, the proposal is sent to the management team and, if above a certain level, to the supervisory board. It is in the debate with the real estate manager that the number of alternatives is lowered, and only a small number of alternatives are selected to be discussed in the boards.

Interviewees claimed that there is a diversity of opinions and that it is appreciated and considered relevant for effective decision-making. Three interviewees stated that there are diverse opinions among management team members, not so much about the importance of sustainability but about the speed at which Welbions should invest in a transition of the stock; 'this difference is grounded in a lack of knowledge', according to one interviewee. Another interviewee stated that there is no debate about whether or not to invest in sustainability but about the effect of pro-sustainable measures on the IRR (internal rate of return).

Three interviewees mentioned that there is no debate about the ten principles of sustainability but when it comes to making a choice, there is a difference in position; 'one is more financially motivated, the other more idealistic and another is viewing sustainability from the interest of tenants. This can be different from one project to the other'.

It is also clear that the ten sustainability principles that are agreed to and decided upon, and for which there seems to be commitment, are not used as a strict guideline when decisions need to be made. As one interviewee stated, 'in the case of deciding on [a collective] heating system of 344 houses in the urban area Hengelose Es, we called upon an escape to get away from a decision based on these principles. The ten principles were agreed to unless there would be an argument not to use them, and at the first occasion on which we needed guidance to make a sustainable decision we used the escape'. The controller stated that in the case of the decision about the energy system (collective versus individual system for 344 houses), 'there was uncertainty about the sustainability goals … uncertainty about the extra cost [of the collective system on pellets] against the individual heating system [on gas], and whether or not 70% of the tenants would support the proposal' for the collective system.

Characteristic of decision-making, according to one interviewee, is that there is diversity of opinions, which is a good thing for decision-making: 'one cannot express everything in numbers, there is room for emotions in decision-making'. However, another interviewee stated that decision-making is a rational weighing

of alternatives, but the question is how to convince tenants of the correctness of this. With respect to sustainability in decision-making, as one interviewee stated, ‘sustainability is not a separate part in decision proposals any more, it is more integrated in the assignments people get in how to do things’. However, the question remains whether decisions can be said to reflect all three dimensions of sustainability (people, planet, profit).

Zooming in on decision criteria, according to decision-makers in 2017, strategic choices are decided using the following criteria:

Table 5.8 Decision criteria mentioned by individual decision-makers in 2017

Criteria used in strategic decision-making in the context of sustainability, according to nine interviewees, 2017	Relative number of interviewees
Feasibility (for tenants/target group); financial profitability/societal return on investments; affordability ; financial continuity of the organisation; money/cost	100%
Profitability (IRR)/societal return on investments	78%
Life cycle prolongation of real estate	11%
Power	11%
Fit with real estate policy, sustainability integrated in the assignments given to employees	33%
Different perspectives/alternatives	22%
Materials used	11%
Energy label, energy-neutral, green energy 2050	33%

From table 5.8 it is clear that *all* nine decision-makers perceived that decisions are made from a financial perspective. They all mentioned one or more financial criteria as decisive in strategic choices. Two interviewees expressed why it is difficult to use other criteria, such as societal return on investments. One reason is that in the current supervisory board ‘two members are dominantly financially focused, they say “no” to everything that results in a lower percentage than the agreed IRR of 2.8%, they do not have affection for societal return on

investments'. The other interviewee mentioned that the way SROI is calculated is complex and 'methods are ambiguous and doubted quickly throughout the country... it is able to express the SROI in money but then you only touch the top of the mountain'. The managing director claimed that it is difficult to weigh different arguments since these arguments differ in size and values, and 'some things cannot be expressed in monetary values which makes weighing a complicated matter'.

A very explicit meaning is given with respect to the financial dominance in decision-making by another interviewee: '[A]lthough there is a feeling of urgency that it is five minutes to twelve, there is no action, it seems as if money and power are decisive factors. Money destroys the world, a focus on money and revenues means a loss of nature.'

PLANET DIMENSION

Three interviewees made remarks coded with EB, reflecting a broader view of sustainability. From remarks made by an interviewee regarding the debate about the decision to invest in a collective heating system for 344 houses in the urban area Hengelose Es, it becomes clear that other aspects than energy are thought of in the decision-making process. 'Pellet heaters run on wooden briquettes, so in origin we talk about trees that need to be cut down. So, we need a "production forest"; imagine this wood comes from a forest in Canada, or that we cut down trees in our own outer fields, then the question is: How is this balanced? We need to keep searching for wisdom.' Another interviewee pointed to the relevance of vitalising urban areas, and one interviewee connected sustainability in investment decisions to materials used in renovation or maintenance projects.

Five interviewees stated that in the strategic asset policy an aim to achieve energy label B in 2025 is integrated, so that 'every decision is checked against label B', and that there is no debate about this aim (compared to the past). One interviewee stated that the Paris climate agreement influences decisions constantly. Another interviewee claimed that the frame for decision-making is the leading sustainability principles[69], e.g. '…in 2018 the target is use of green energy'.

[69] In 2017 Welbions committed to 10 leading sustainability principles. These 10 principles are all focused on energy.

Three interviewees made statements that were placed in code G, showing a focus on the housing association's licence to operate. The remarks reflected that the main goal of the housing association is to provide their target groups with affordable housing. One of the directors mentioned the importance of guiding (pro-sustainable) decisions from this perspective: 'In the so-called "clover" debate, Welbions decided to focus primarily on housing as the main strategic issue and not on (re)vitalising urban areas as stated in earlier business plans, although these two are connected.'

SUMMARY PERCEPTIONS REGARDING STRATEGIC DECISION-MAKING, 2017

Expressing the number of statements per dimension as a percentage of the total number of statements made by nine key decision-makers when asked about what elements influence strategic decision-making at Welbions, in particular with respect to the targeted sustainability transition, and which mechanisms influence the process of strategic decision-making, results in a distribution over the three dimensions of sustainability (see Figure 11).

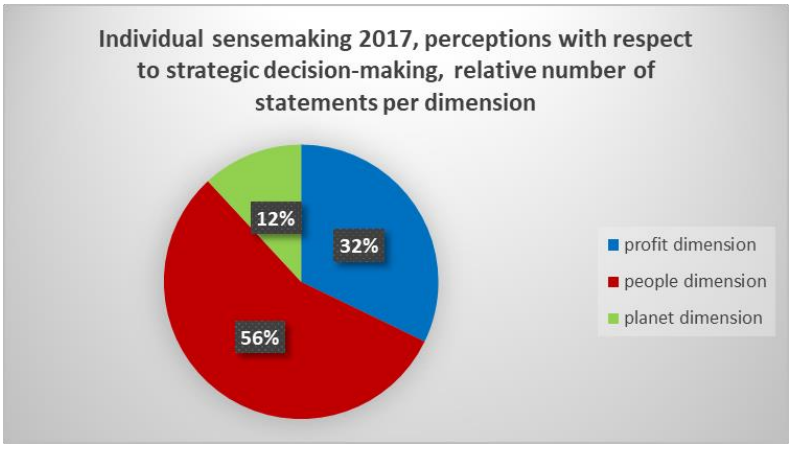


Figure 11 Perceptions with respect to strategic decision-making and sustainability, relative number of statements made by 9 interviewees in 2017.

Figure 11 indicates that decision-makers made statements with respect to the current way of deciding in the light of sustainability dominantly from a people

perspective. However, it can be deduced that *all* interviewees made the observation that strategic choices at Welbions, in particular with respect to sustainability, are dominantly based on a financial perspective (code F). The second most often used are codes CF and CB, reflecting a focus on (financial) conditions that need to be met before a behavioural change occurs (see Appendix 5.3).

In Table 5.9 the perceptions of decision-makers with respect to their current way of deciding, considering the chosen strategic theme of sustainability, are summarised qualitatively.

Table 5.9 Individual sensemaking of sustainability, Welbions 2012–2013. Summary of motives, decision criteria and mechanisms influencing strategic decision-making with respect to sustainability.

Summary of nine interviews in 2017, perceptions with respect to decision-making. Summary of answers to questions about motives, aspects, criteria influencing strategic decision-making at Welbions, in particular with respect to the targeted sustainability transition, and mechanisms influencing the process of strategic decision-making.	
Profit	- Affordability, the IRR and cost are criteria against which investments are assessed; investments are made that can be corrected over 10 to 15 years from now (transition period towards CO2-neutral houses in 2050). - There are hardly any instruments available to calculate the financial consequences of sustainability.
People	- The dilemma in decision-making is to determine what is in the best interest of the client, determining in itself is paternalistic. - Influencing decision-making are the interest and intrinsic motivation of the decision-makers to put it on the calendar for debate, exemplary behaviour, the tone at the top (but ecological matters are not discussed) and the role of the board of supervisors. - Knowledge and information are necessary although not always sufficient.
Planet	- The perspective of housing cost, as the main objective in the business plan, guides decision-making, not (re)vitalising urban areas. - About materials used for collective hearing systems: there are thoughts about the supply chain, about the origin of the resources and the impact of collecting these resources.

The stated intention with respect to sustainability seems positive. Even when sustainability investments do not meet an IRR of 2.8%, 'even then there is no intention to cut sustainability measures'. However, as will be described in Chapter 6, the choices that were made do not express this intention. The board of supervisors kept strictly to the IRR norm in debates about the proposal to invest in a sustainable collective heating system for 344 houses.

There seems to be a contradiction when interviewees make remarks about diversity of opinions and issues debated in the management team. Interviewees stated on the one hand that there are no contradictory opinions with respect to sustainability in the management team, on the other hand that there are, esp. with respect to investments and the speed at which sustainability is implemented. 'The real driver for debating sustainability is the government', according to an interviewee, which shows again that compliance is motivating sustainability transition. It is not driven by an intrinsic motivation 'because it is complex and developments are going fast'.

One interviewee explicitly stated that social and ecological sustainability are not debated. Debates in the management team are solely focused on 'solar panels and the like'. When other interviewees talk about sustainability they refer to agreements such as the national energy covenant. The ten sustainability principles that were decided upon in June 2017 all focus on energy.

Another contradiction is found when some interviewees stated that sustainability is a matter of emotion, and that there is room for emotions in decision-making while on the other hand the IRR and other financial criteria (ROI) are used quite dominantly in making decisions. As one interviewee stated, decision-making is a matter of rational weighing of alternatives. This weighing is partly made *before* a decision proposal is scheduled for decision-making in the management team.

5.4.3 Values: preferences, beliefs and factors influencing pro-sustainable decisions

In this subsection the answers of individual decision-makers to a number of questions are described. These questions were aimed at finding 'end' values with respect to sustainability and strategic choice (these values are a source of criteria used in decision-making, see Chapter 3). The questions that were asked were: what should be the goals, results and effects of sustainability and what

requirements should pro-sustainable decisions meet. Interviewees were also asked what factors enable pro-sustainable strategic decisions.

The findings on these questions are described in three subsections, the first subsection describing the answers to the question of what the goals, results and effects of sustainability should be. The second subsection categorises the answers to the question about which requirements pro-sustainable decisions should meet. The third subsection ends with a list of factors which interviewees think contribute to a more sustainable Welbions.

One question in the interview was specifically aimed at describing the shared values and the culture of Welbions.

Preferences: what should be the result/effect of implementing sustainability?

Profit dimension

Remarkably, no statements were made that were coded with an 'F' or 'CF'. Only one interviewee commented that the impact of sustainability should be calculated and shown. Integration of sustainability means it should be integrated in specific ambitions and in specific results, 'e.g. it should be clear what the energy index should be at the end of 2018', according to the controller.

The only statement categorized under 'V' (for a focus on real estate and technology) was the aim to have houses with a longer life cycle.

People dimension

Three aims were mentioned that are coded 'B'. The first aim is that sustainability should be the intention of the whole organisation, and not just saying it but truly intending to behave more sustainably. Sustainability requires entrepreneurship and guts, according to another interviewee. Another aim is to integrate sustainability into the mindset of people. Sustainability is '… more than just lowering usage of gas, more than just technique. It is a broad way of thinking; technical knowledge is needed but foremost some sort of basic sense of urgency', according to one interviewee. The healthiness of employees is necessary, according to interviewees.

Three interviewees made statements reflecting a preference for conditions for behavioural change. Elements necessary to accomplish a behavioural change mentioned by an interviewee are: a vision, an interest and desire, a plan, means and competencies. ‘In 2009 it was pioneering; although there was a vision, there was no shared interest in sustainability; it was a wish of a small group of enthusiastic employees. It was a period of resistance against sustainability. In the second stage (2012–2015) the interest [in sustainability] was acknowledged but the vision was no longer recognised or proclaimed, so this stage was confusing and actually it still is now’, according to an interviewee. According to another interviewee, the aim of sustainability is to change culture and awareness in such a way that sustainability becomes routine. Another aim that was stated was that Welbions should comply with the agreements [energy covenant] so as to impact positively on the tenant’s behalf.

Code S. The aim of sustainability is to integrate it in asset management and long-term plans, according to one interviewee. A second interviewee stated that it is essential to collect ideas from every employee in the organisation, and to connect sustainability to the various jobs within the organisation. A third interviewee enumerated that sustainability means that people work with passion towards sustainable urban areas, affordable houses and future-proof houses. ‘There is a red and green line underlying work; green refers to sustainability; we should be innovative’, according to this interviewee.

Code M. Two interviewees explicitly stated that the result of sustainability is to make more conscious choices, in which sustainability is given priority over other things.

PLANET DIMENSION

Four interviewees mentioned goals that were coded in the ‘EB’ category. One interviewee stated that the aim of sustainability is to reuse materials, and that the result of sustainability should be to increase empowerment of people. Another interviewee thought the aim of sustainability to be the use of renewable resources. Healthiness of the environment now and in the future was mentioned as an aim, as well as the objective to realise sustainable urban areas (one of the focal points in the new business plan).

Code EN. One interviewee stated that the effect of sustainability should be to lower the footprint, and achieve energy label B by 2025, ‘so the exploitation of

our stock should not deliver a loss to the ecosystem'. Another interviewee mentioned halting the use of fossil fuels as a goal.

Code G. Two interviewees connected sustainability to the mission of the housing association, i.e. providing sufficient living space for the target group. One interviewee enumerated that it is about sustainable purchase as well; 'it is not only about money but having a societal impact too'.

Beliefs: What is required for making pro-sustainable strategic decisions?

Profit dimension

Two statements were made showing a financial focus (code F). One interviewee mentioned the necessity to balance financial and societal return on investments for the financial position of Welbions: 'if we do not have a solid financial position we cannot reach our societal targets'. One interviewee explicitly stated that 'financially, we cannot afford to reach our sustainability targets'.

One interviewee mentioned that time and money are required for a sustainability transition (code CF).

Two interviewees made remarks referring to measuring results (code R). One of them stated that 'we need to take steps that can be measured'. The other interviewee mentioned that Welbions needs to make measurable progress, but 'the trouble is monitoring; if we enter a house now and renovate it then this job is done for the coming 25 years, but sustainability is a half-yearly returning phenomenon so we need to organise this…' (meaning how to keep track of new developments).

People dimension

Two interviewees referred to behavioural aspects (code B). One interviewee mentioned that Welbions needs to focus on the sustainable empowerment of employees, and on personal leadership. For future developments and the necessary speed 'the organisation needs to develop... the intention is to look at the employee of the future, to more agility, flexibility, passion for work and customer... the question is how do you keep people that are now 45–50 years old healthy until they retire at approx. 70 years old?' according to this interviewee. Another interviewee stated that sustainability 'requires people to behave responsibly and make [sustainable] choices, at all levels in the organisation'.

Code CB. Five interviewees made 16 statements that refer to necessary conditions to accomplish a behavioural change towards sustainability. Making progress towards it should be based on the right knowledge. Another interviewee believed that a fixed, structured frame prevents change; 'if it [sustainability] is about more than just energy, then Welbions is not changing, there is a structured frame decided upon by the government and laid down in covenants'. This meaning is contradicted, however, by another interviewee who stated that a steady guiding frame prevents 'met alles meewaaien' (going with the flow); 'sustainability provides a stable direction; it is something Welbions stands for.'

Four statements were made reflecting an outside influence on integrating sustainability into the organisation, i.e. pressure from laws and rules, local politics and covenants (via Aedes). As one interviewee stated, 'The housing association sector is the ultimate scapegoat of the government, we are controlled completely because the government knows if we don't succeed in the transition they will never be successful with private house owners. So they can force us to contribute but our contribution is not substantial, we do not improve the world. The big question is "who pays". Do the weak pay? If the government really wants success they should return the levy to us'.

An interviewee stated that integration of sustainability in behaviour requires awareness, a sense of urgency and affect for sustainability of people in key positions in the organisation. Remarkably the Operations manager stated that it is supportive to think in a creative way: 'I am sometimes asked if I truly am the manager of Finance... [it is important to] provide space for creative thinking without setting a financial frame... financial people feel that a one is a one'. The condition of having knowledge is put in perspective by another interviewee: 'Knowledge is not always interesting; for certain people it is, but it is about being confronted, getting shocked into attention'. 'One could debate social sustainability too, about the enormous gap between rich and poor, about the absence of a middle class, the labour market... these issues are the same as ecological sustainability, they can be debated within 10 years from now, we are not confronted with them yet', according to another interviewee. Another interviewee agreed with the relevance of listening to tenants and to people with different experiences, which Welbions tries to organise through Welbions Academy. Although, as one interviewee stated, 'it is surprising that there are tenants who still display arrogance when it comes to gaining 10 euros'. The role of the CEO in this is considered important: 'push and pull leads to progress' according to one of the directors, as well as exemplary behaviour. There should

be, according to one interviewee, a culture and structure within Welbions that fits with sustainability.

Five interviewees mentioned ways to integrate sustainability into the behaviour of the organisation (code S). The first way that was enumerated by two interviewees showed a belief in implementing quick wins. The remark referred to the formation of a working group about awareness, in which all departments are represented. The aim of this group is to implement quick wins, e.g. ‘using solar panels on roofs and copying double-sided’. Two interviewees suggested the idea of executing pilots to make some houses independent of gas and CO2-neutral; ‘one has to try something, it costs a lot of money but doing nothing is not an option’. Two interviewees mentioned the role of sustainability in the new business plan, which is now a ‘green line’ expressing a belief in the necessity to integrate it in the strategy. Another interviewee stated that integrated decision-making is necessary. Cooperation with partners is also believed to support a sustainable strategy for Welbions.

Three interviewees enumerated mechanisms (code M) influencing interactions within Welbions. One interviewee mentioned the necessity of putting more weight on sustainability in decision-making, saying ‘many decisions are a case of almost, or nearly...sustainability may, or should even, take money, effort, emotions.’ Weighing of alternatives ‘is not simply a black and white thing, one needs to have a good story to not follow the leading sustainability principles’, according to another interviewee.

A belief in the essential role of having a vision of sustainability was expressed by a manager ‘but the vision is not given much attention, is not very known apart from the goal to realise an average energy label B for our property’.

One interviewee stated that Welbions could do much more about sustainability, e.g. by debating themes and feeling responsible for it as a social organisation; ‘we don’t do that now, we [the management team] talk about it when there is a decision proposal...we don’t discuss sustainability issues if not scheduled, but it must never be a show for getting media attention and saying “we have complied with the task”’. This is subscribed to by another interviewee, who also stated that sustainability needs to be further discussed in the management team.

PLANET DIMENSION

Only one statement was made that was coded into the planet dimension, expressing a belief in a connection between sustainability and Welbions’ licence

to operate (code G). The managing director stated that ‘sustainability plays a vital role in balancing the culture of the organisation, technological and societal developments. Sustainability is not a goal in itself…We need to direct towards a healthy organisation’.

Factors influencing pro-sustainable decisions and implementation of sustainability

One of the questions in the interview specifically addressed the beliefs of interviewees with respect to factors contributing or enabling pro-sustainable strategies and decisions. Five interviewees mentioned conditions for changing behaviour; a third of the interviewees expressed financially related factors. The only statement that reflected a broader view (although categorised under code CB) was the remark that insights in the origin of materials are needed. Furthermore, not a single factor was mentioned that was coded in the planet dimension. The factors that were mentioned are listed in Table 5.10 below.

Table 5.10 Factors influencing pro-sustainable decisions and strategy, interviewees 2017.

Factors enabling pro-sustainable strategic decisions
Knowledge vs. experience, sense of urgency, key decision-makers with sustainable ambitions, creativity in thinking, government agreements, inspiration, insights in supply chain, local politics
Healthy, agile, flexible employees, who are passionate about their work, and intrinsically motivated for sustainability
Financial position: financial health of Welbions, availability of money, solid financial base
Sustainability as a green line throughout the new business plan
Prioritisation of sustainability in decision-making
Balance between profitability (IRR) and SROI
Specified, measurable ambitions and results

SUMMARY OF VALUES 2017

In Figure 12 below the values expressed by individual interviewees with respect to the preferred results and their beliefs with respect to sustainability and strategic decision-making are visualised. The percentage per dimension is calculated as the number of statements per dimension divided by the total number of statements made by all interviewees when answering the questions about their preferred results and beliefs. The people dimension is clearly used most often. It is remarkable that in this case, the profit dimension is used least.

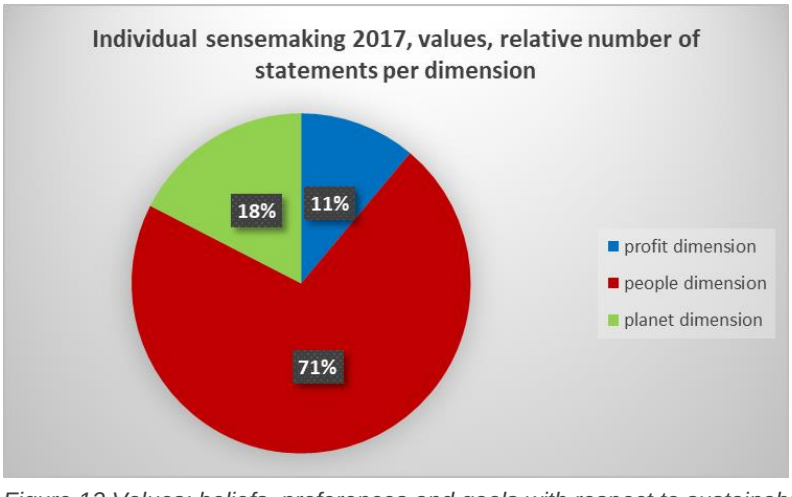


Figure 12 Values: beliefs, preferences and goals with respect to sustainability, derived from statements of interviewees answering questions about their intended goals and impact of a sustainability transition and the requirements that should be fulfilled in order to make pro-sustainable decisions.

Appendix 5.3 summarises the relative number of interviewees per code, categorising statements about preferable goals and expressing beliefs with to pro-sustainable decision-making and strategy. This figure indicates that two people dimension codes are used most often (seven out of nine interviewees): code CB, referring to conditions that are required for a behavioural transition towards sustainability, and code S, referring to ways to achieve pro-sustainable decisions and strategy of Welbions. Three codes are used in second place, one of them being code EB (four interviewees). Code EB – reflecting an association of sustainability with the quality of the living environment – is now used quite often; almost half of the interviewees made statements reflecting a broader perspective on sustainability when they talked about reuse of materials and the

quality of ecosystems. Least often mentioned are two codes from the profit dimension: codes V (focusing on the (technical) quality of houses) and code R (indicating a focus on measuring performance and showing results).

Some highlights of the qualitative findings in 2017 in which nine key decision-makers were interviewed are summarised in Table 5.11.

Table 5.11 Individual sensemaking of sustainability, summary of preferred goals, results and effects of sustainability, Welbions 2017.

Summary of nine interviews in 2017: values: preferences and beliefs. Highlights of answers to the questions of what the goals, results and effects of sustainability should be and what requirements should pro-sustainable decisions meet.	
Profit	- Time and money, measuring results and impact are conditional for success. - Sustainability has a strong connection to affordability but 'we cannot afford the sustainability assignment'.
People	- Sustainability should be part of the collective mind, elements necessary are a vision, interest, a plan, means and competencies. In 2009 it was pioneering, although there was a vision the interest of becoming more sustainable was not shared by everybody; in the second stage the interest was there but the vision was no longer familiar or recognised, so this was a stage of ambiguity and confusion. - The culture of Welbions, awareness, knowledge, a stable direction, information, debating leadership and organisational structures are all conditional factors for achieving a sustainable strategy. - Conscious, integrated decision-making based on sustainability principles.
Planet	- Sustainability is more than just diminishing the use of fossil fuels, more than just techniques. - Reusing materials, use of renewable resources, preventing a negative impact on the ecosystem from the exploitation of our property. - The aim is a healthy environment and future.

The dilemma about the role of information and knowledge in pro-sustainable decisions is again noted. On the one hand it is seen as a factor influencing pro-sustainable decisions, on the other hand knowledge is not seen as of interest at

all. As one interviewee stated, confrontation with bad habits has more influence on choices (an example is given about smoking, ‘texts on cigarette packs are not noticed but when people see x-rays of lungs infected by smoking, people are shocked’).

From examples given by one interviewee (one example is using solar panels on the roof of the office, which was an action by an employee who was previously engaged in the sustainability project team, but who left Welbions; another example given is printing double-sided, which was an action that was already initiated in 2010), it seems that not much progress was made in the years following the reorganisation, as was underlined by some interviewees. One interviewee stated that the vision document (on the sustainable development of Welbions) is no longer known now, although still accurate – ‘we are still confused’. As an interviewee stated, ‘the goals are not clear enough, but we do have some focal points, such as….working towards a sustainable city/urban area, a red and green line in everything we do – red for passion and green for sustainability, future-proof housing – investments in lower energy costs, lower maintenance costs, mingled urban areas’. However, these focal points are not specific and interviewees have different ideas about what the main aims of sustainability should be (e.g. there is still a controversy with respect to affordable housing vs. sustainable area development).

5.5 SUMMARY AND CONCLUSIONS

The research question to be answered was which sense individual decision-makers make of sustainability, what events they observed as being of strategic importance, how they perceived their current strategic decision-making process from a sustainability perspective and which factors could possibly enable pro-sustainable strategic decisions. Figure 13 shows the quantitative comparison of statements individuals made in three time periods.

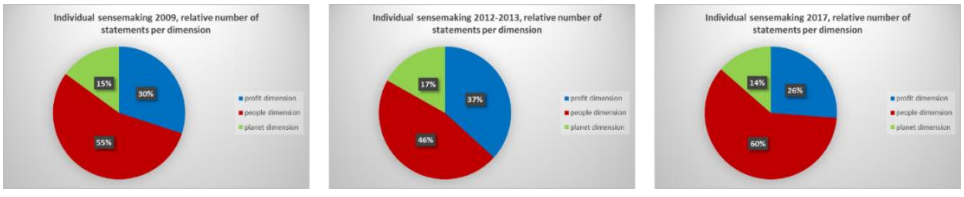


Figure 13 Quantitative comparison of individual sensemaking in three time periods, 2009–2017.

The figure shows that the people dimension was used most often in making sense of sustainability. In the second period, the profit dimension seemed to gain more emphasis in sensemaking, though this changed in the third period in which the people dimension dominated again.

MAKING SENSE OF SUSTAINABILITY

In the first period (2009–2010), only a general question was asked in order to identify the meaning of those decision-makers that were involved in the first stage of sustainability at Welbions. Sustainability was associated with extra costs and investments. A strategy of executing pilots and development of urban areas based on sustainability were seen as ways to transform the organisation. Sustainability was translated as reduction in the property's energy use and CO2 emissions, which was seen as supportive of affordable housing.

From questions asked about causes and events in the second and third period, triggering integration of sustainability in processes, an external factor such as the levy imposed by the Dutch government was perceived as influencing the financial position of housing associations, leaving less room for sustainability investments. Technological developments were thought to be influencing the implementation of sustainability; since developments are happening fast, interviewees wondered

what the most sustainable alternatives are, when and in which alternative to invest.

ROLE IN DECISION-MAKING

Decision criteria mentioned by all interviewees that determined strategic choices were cost and affordability. In 2012-2013, the need for shared views with respect to sustainability and support and reputation were mentioned by almost all interviewees as decisive in strategic choices. In 2017, interviewees thought strategic choices were made dominantly on financial values such as feasibility and profitability. a sustainability measure was too expensive (‘we cannot afford the sustainability assignment’), showing a focus on financial values to underlie strategic decisions. Asking individual decision-makers about their preferences however show other values such as Welbions should contribute to a better planet (2012–2013) and a healthy environment by reusing materials and renewable resources, ‘preventing a negative impact on the ecosystem’ (2017).

FACTORS

Success factors for sustainability that were mentioned by individual decision-makers in the second period were knowledge and information, leadership, awareness and a sense of urgency, cultural change and professionalisation of decision-making. These ‘success’ factors show a dominant focus on internal factors from the people dimension. In the last period knowledge and information was mentioned again, and motivation of all employees. But a healthy financial position was also considered a factor contributing to pro-sustainable strategic decision-making. A list of these empirical success factors will be used in Chapter 7 to analyse and compare them with factors identified in theory.

6 SUSTAINABILITY, COLLECTIVE SENSEMAKING AND STRATEGIC CHOICES

6.1 INTRODUCTION

The guiding research question in the previous chapter was which meaning of sustainability is constructed by individual decision-makers. In this chapter the question is: *Which meaning of sustainability is constructed by teams of decision-makers and which meaning of sustainability is reflected in strategic choices?* The answer to this question is found after collecting and analysing data, as was the case for individual sensemaking, in three time periods between 2009 and 2018. In these three periods, different teams operating at different levels in the organisation were participated in and observed.

As described in Chapter 5, from the start of Welbions' search for a meaning of sustainability, the subject that emerged as an important theme was strategic decision-making. It was often mentioned that to transform the organisation into a more sustainable one, sustainability should be integrated into strategic decision-making. Therefore, data collection was more focused on decision-making after the initial period and analysis aimed at understanding the way Welbions made strategic decisions.

In Section 6.2 collective sensemaking of sustainability and the extent to which strategic choices reflect sustainability dimensions in the first period (September 2009 to March 2010) are described. Section 6.3 describes the collective meaning of sustainability and strategic choices in the period from March 2010 to September 2011. In Section 6.4 the collective meaning of sustainability by the management team and strategic choices regarding sustainability made by the same team in 2017 are presented. One case is presented that encompassed a longer time period (Hengelose Es). This chapter ends with a summary.

The timeline in Figure 1 below shows the three different time stages, in which the first period is marked yellow, the period between 2010 and 2013 is marked green and 2017 is marked blue. The bars representing individual sensemaking are green, collective sensemaking red and strategic choice blue. This timeline will be presented in every section and subsection, to point out to the reader to which stage the findings belong.

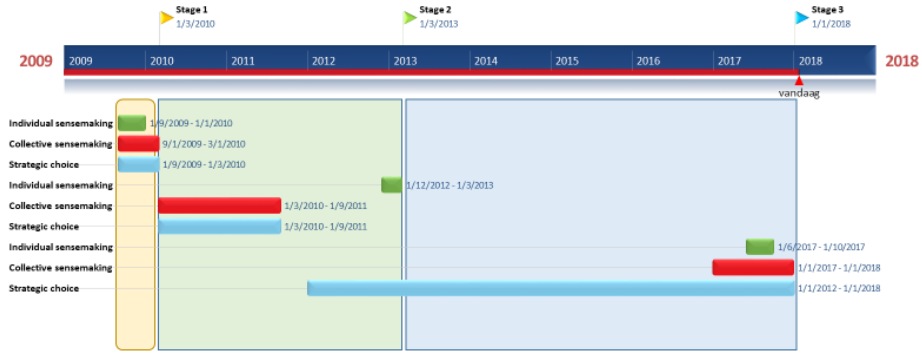


Figure 1 Timeline representing different stages in which individual, collective sensemaking and strategic choices were researched at Welbions. The first time stage is marked yellow, the second green and the third blue. In green bars: individual sensemaking; red bars: collective sensemaking; blue barsn: strategic choices.

6.2 THE EMERGENCE OF A VISION OF SUSTAINABLE DEVELOPMENT 2009–2010

From September 2009 to March 2010 data was collected and analysed to be able to indicate the sense made of sustainability by a number of teams and how sustainability is reflected in strategic decisions made by Welbions. In the timeline below, this first time episode is marked yellow. In the first subsection are the findings of analysing data from participant observation of a number of teams. In 6.2.2 the results are presented from analysing documents in which strategic choices are described.

Figure 2 First stage of researching sensemaking and strategic choice regarding sustainability, 2009–2010

6.2.1 Collective sensemaking 2009–2010

In the period between September 2009 and March 2010, the meaning attached to sustainability by three different teams was studied, (1) the management team of Welbions, (2) team Strategy & Organisation (abbrv. S&O) and (3) the working group sustainability and energy. The first time episode in which collective sensemaking was studied is indicated in the timeline in Figure 3 below with a yellow box, collective sensemaking is highlighted with a red bar.

The highlights and topics that were discussed in each team are briefly described. At the end of this subsection a summary is given of the meaning constructed of sustainability by these teams in an quantitative and qualitative way. The graph based on counting the number of statements indicates which perspective, or dimension, of sustainability was used most often in collective sensemaking.

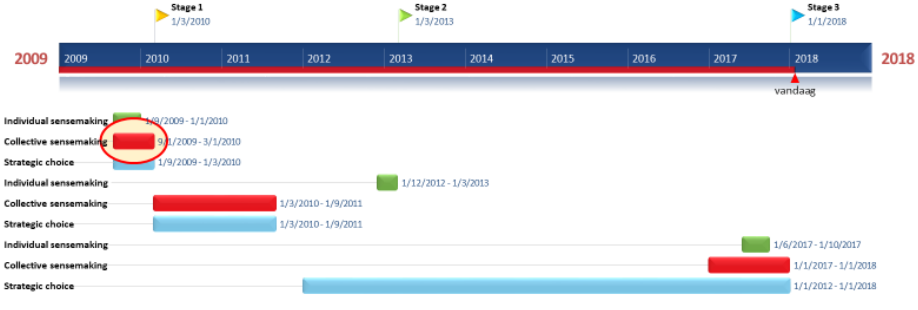


Figure 3 First stage of studying collective sensemaking of sustainability, 2009–2010

Management team

In the first stage of this research, four meetings of the management team were attended and observed. In September 2009 the researcher firstly participated in and observed a strategic management team meeting in which the meaning of the concept of sustainability was discussed in an open unstructured way. In January the vision document was debated in two separate meetings, in the strategic management team and in the management team operations. In February 2010 the vision document and documents regarding long-term activities and project team sustainability were again debated in the strategic management team.

In the first management team meeting, team members associated sustainability with multiple dimensions, balance and long term: ‘sustainability is about balance in three dimensions’, ‘sustainability encompasses everything, what do we leave the world in the long term’. But sustainability was also related to boundaries, especially financial boundaries: ‘what are we able to contribute financially’. Behavioural components mentioned as relevant for sustainability were knowledge, awareness, lifestyle, attitudes, culture and the ability to overcome resistance to change. One director stated that in in order to raise awareness information is needed. Another director mentioned that sustainability is about behaviour and attitude, and a different culture is needed. To make progress a framework and strategy for sustainability were considered necessary, together with making decisions based on the concept’s three dimensions.

One of the members of the team believed social equality to be understated in the debate on sustainability. Motives for transformation of organisational behaviour were related to the mission of the housing association: ‘In this issue housing associations play a role since their aim is to provide housing for vulnerable groups in society’. The general idea was that Welbions needed to contribute to sustainability, as clearly expressed with the statement ‘improve the world, start with your own behaviour’. There was debate about the question whether Welbions should be a pioneer or a follower of innovations. One of the participants stated that ‘the water is still running from the tap’ to express the thought that the urgency to act sustainably is not immediately felt and that most activities are still short-term in nature. But it was generally agreed in the team that Welbions should not only focus on financial revenues but on ecological and social impact and revenues as well.

In management team meetings most statements were coded in the people dimension, as visualised in Figure 4. The planet perspective was used least but there is only one statement more categorised into the profit dimension.

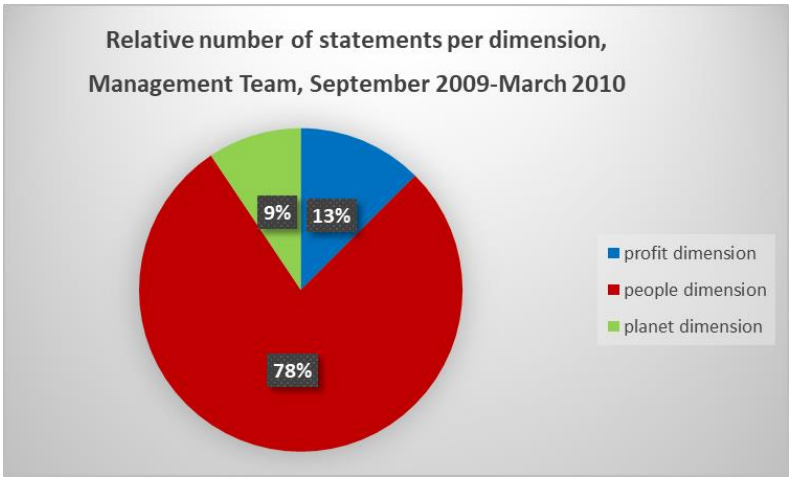


Figure 4 Collective sensemaking of sustainability, relative number of statements per dimension, Management Team 2009–2010 (four meetings).

SUSTAINABILITY AND ENERGY WORKING GROUP 2009

In 2009 and early 2010 seven meetings of a working group on sustainability and energy were participated in and attended. This was launched to start operationalising the strategic theme of sustainability as mentioned in the Welbions business plan for 2009–2011. The team consisted of four members from different departments.

PROFIT DIMENSION

Financial issues with respect to sustainability that were discussed were the available budget for sustainability measures, specifically for providing houses with an energy label and for measures to reduce energy use. In the Welbions Business Plan for 2009–2011 the following statement was made: ‘A budget of €100 per house becomes available for energy-saving measures, of which 50% is seen as an investment made by Welbions. The other 50% is to paid by tenants via a raise in rent, which is expected to be compensated by a lower energy bill’. The financial consequences of the rising cost of energy and gas for the total housing cost, the financial policy, rental policy, strategic management of real estate and financial and societal return on investments are mentioned as topics affected by sustainability.

According to the working group, sustainability should be integrated into management reports. Current criteria used to assess renovation projects are

financial and technical in nature; one of the criteria should be, according to the working group, the energy label of houses, another CO2 emissions.

PEOPLE DIMENSION

A behavioural component, part of the people dimension of sustainability, mentioned in the working group was that sustainability is believed to affect the culture, the norms and values of the organisation. Conditional factors required for and enabling a transformation that were mentioned are cooperation and networking (e.g. in the Twentse 'Vereniging Woon', and the branch organisation of housing associations in the Netherlands, Aedes), commitment of managers of Welbions for sustainability, rules and law (from 2010, the so-called 'WWS' system will take the energy label of a house into account when allocating points to a house, points on which the rent is based), communication, an integrated framework (vision, goals) and decision-making based on sustainability.

Ways to move forward with the strategic theme of sustainability suggested by the working group were a strategy of executing pilots in urban areas (such as Woolder Es, Veldwijk Noord, Klein Driene), frequent communication via intranet and scheduling sustainability in meetings to raise awareness and share knowledge among employees, restructuring processes, rethinking the Welbions investment policy (which moments will be used to invest in energy reduction measures: customer based maintenance, maintenance during mutation or maintenance in large renovation projects, or a combination) and assessment of investment decisions (based on an integrated sustainability frame and criteria). A question which was raised but remained unanswered was if Welbions should found its own energy company, as some other housing associations did.

PLANET DIMENSION

Remarks categorised in the planet dimension of sustainability were those that referred to the necessity of reporting on CO2 emissions (EN), the use of energy criteria in renovation projects, measures to reduce energy use and labelling the energetic quality of houses. A pilot in which 100 solar boilers were advocated amongst tenants, which got a response of only 10%, was labelled as a short-term activity. As a member of the Twentse 'Vereniging Woon' (abbr. 'Woon'), Welbions at the time was chairing sessions in which the development of an energy barometer (a collective effort to show progress in improvements to the energy quality of houses) for all Twentse housing associations was discussed.

Contributing to sustainability was considered pursuing a strategy of integrated urban area development, waste management, storage of rain water, and providing opportunities for tenants to experience nature in the urban area. The latter was seen as a means for improving social cohesion among inhabitants of the city area. Motives to implement sustainability were connected to the mission and licence to operate of Welbions, that is affordability, quality of the living environment and quality of the houses.

From Figure 5 below, the working group appears to give most attention to aspects of the people dimension of sustainability, followed by the profit dimension and lastly the planet dimension. The only topic mentioned in the EB code is the quality of the living environment, although it is considered an important one since the group connected this topic to Welbions' licence to operate.

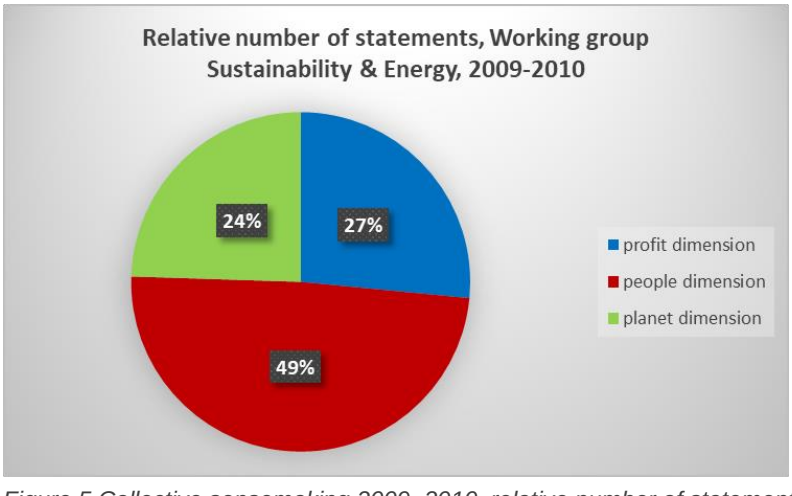


Figure 5 Collective sensemaking 2009–2010, relative number of statements per dimension, working group sustainability and energy (seven meetings).

TEAM STRATEGY AND ORGANISATION

In 2009 the researcher observed and participated in nine meetings of the Strategy & Organisation team (abbr. S&O). The statements made in these

meetings, together with the statements made while executing a SWOT analysis, were coded.

PROFIT DIMENSION

In total thirteen statements were categorised in the profit dimension.

Five statements were made showing a financial focus on sustainability. The team noticed a one-dimensional focus on economy, a negative influence of the government on the financial position of Welbions and short-term successes as threats to a healthy and more balanced Welbions. The rising cost of gas, water and electricity was also considered as having a negative impact on housing costs. However, the economic crisis was regarded as an opportunity for building a strategy for Welbions. The team thought sustainability should be integrated into the assumptions for the multi-year forecasts, in risk management and in selling policy.

Three statements were made that showed an orientation towards conditions or requirements for sustainable strategic decisions. The first, which was categorised as a threat, was a lack of clarity about the return on investments; the second referred to the availability of budgets for sustainability. The team saw the availability of a budget as a requirement for making progress towards a more sustainable organisation. Two statements were made expressing a desire to measure results and to develop key performance indicators based on key success factors, showing a sensitivity towards measuring results. Sustainability was associated with the quality of property three times; sustainability should be integrated into the assessment criteria for real estate (this indicates that so far this was not the case – at the time the quality of the property was assessed using the NEN method).

PEOPLE DIMENSION

Thirty-two statements made by the S&O team were labelled as a people perspective.

Five remarks were made reflecting a behavioural focus when making sense of sustainability: knowledge of developments in natural resources and the coping abilities of people and their resistance to change their routine were seen as threats. However, two strengths that were mentioned were the capacities of staff (e.g. a broad perspective was thought necessary to be able to integrate

sustainability in urban area development) and the open-mindedness of employees for integrating sustainability in processes and organisation.

Nine statements were made showing a focus of the team on its role in building a strategy for Welbions: ‘S&O delivers a frame for maintenance projects, sustainability should be integrated in policy assumptions’. From a reflective study by the manager strategy which was discussed in team S&O it became clear that the Welbions Business Plan for 2009–2011 lacked a long-term vision. Debating this issue, the S&O team came to the conclusion that the strategic themes did not provide guidelines and clear objectives, ‘… that the business plan and the strategic choices do not provide clear guidelines for translating the organisational goals in the fields of quality, marketing, communication and sustainability….’ and ‘…we need to have an image of developments in the environment….resulting in strategic decisions…’.

S&O believed one of its essential tasks was to be sensitive towards environmental changes, both external as internal, analyse these and acquire knowledge, combining long-term with short-term focus and taking initiatives for debates and interaction. With respect to sustainability the question emerged how to organise and position sustainability in an integrated way in the organisation, how to combine short-term results with a long-term perspective and how to operationalise the strategic theme. The team suggested the board develop a sustainability strategy interactively, but the board of directors assigned the team the task of designing a framework for sustainability first and then discussing the document with the management team. The S&O team noticed that the initial response of many employees to sustainability was to make fun of the concept. One of the directors warned not to talk about biodiversity because that would give sustainability an image of granola (in Dutch: ‘geiten wollen sok’). A joke made in a meeting with respect to the sustainability aspects of the area development project Veldwijk Noord was ‘you must be knitting your sweaters yourselves then?’ when a strategic consultant on sustainability was introduced as a participant and policy advisor on sustainability. In the SWOT analysis executed by the S&O team, however, sustainability was seen as an opportunity to develop new (sustainable) product/market combinations.

Conditions for changing the organisational behaviour towards sustainable behaviour were mentioned eleven times. Opportunities influencing a transition that were enumerated were the economic crisis, technological developments, few

rules (for sustainability) which offers opportunities for innovation, and education through stimulating nature experience. Threatening for a behavioural transition, however, were the difficulty in changing behaviour itself, the experience of team members in a dislike of housing associations to share knowledge from experimenting with energy measures. The focus of Welbions on streamlining daily operations after the merger and on routine ways of behaving were seen as a weakness.

Mechanisms influencing pro-sustainable strategic decision-making were mentioned eight times. The image, or reputation, of sustainability at the time was that sustainability was not hip or trendy and not connected to the economic system. But the organisation's reputation could be damaged if not operating in a sustainable manner. Strategic decisions based on financial criteria was seen as a weakness, preventing a transition.

PLANET DIMENSION

Seven remarks were made that were categorised in the planet dimension of sustainability. Three statements reflected a broader perspective (code EB). The sustainable exploitation of resources was seen as an opportunity, the biodiversity crisis and growing world population as threats. Three statements were coded EN; threats that were mentioned were climate change and affordable access to clean and modern energy services. Having no goals for measures aimed at reducing energy was seen as an organisational weakness. One statement was coded G, the dilemma for the housing association was considered being able to build for lower income groups while gaining revenue from sustainable houses.

In the team meetings of S&O, most statements can be placed in the people dimension, as visualised in Figure 6. It is striking that in meetings of the Strategy & Organisation team, the planet perspective is not used at all in making sense of sustainability, whereas when executing a SWOT analysis (see Appendix 6.1), seven statements reflect a planet perspective on sustainability.

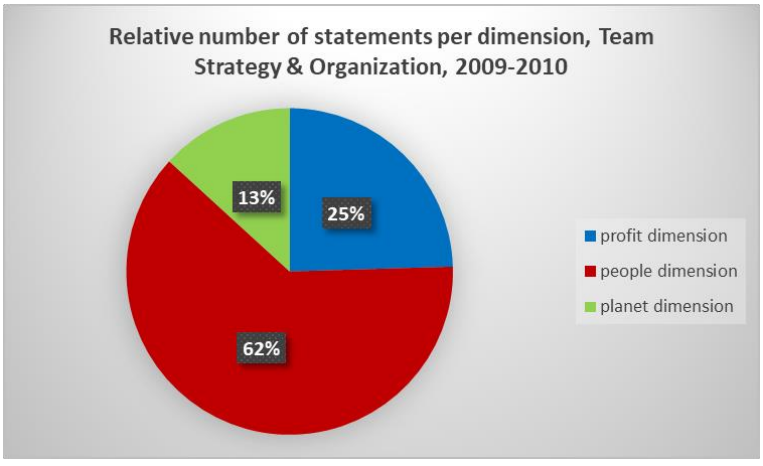


Figure 6 Collective sensemaking of sustainability, relative number of statements per dimension, S&O team 2009–2010 (nine meetings).

SUMMARY OF COLLECTIVE SENSEMAKING 2009–2010

In Figure 7A the relative number of statements per dimension, made in three different teams in the period between September 2009 and March 2010, is presented. The total results, visualised in the circle diagram, indicate that the people perspective is most often used when collectively making sense of sustainability (82 statements, 61%), subsequently followed by the profit perspective (30 statements, 22%) and the planet perspective (22 statements, 17%).

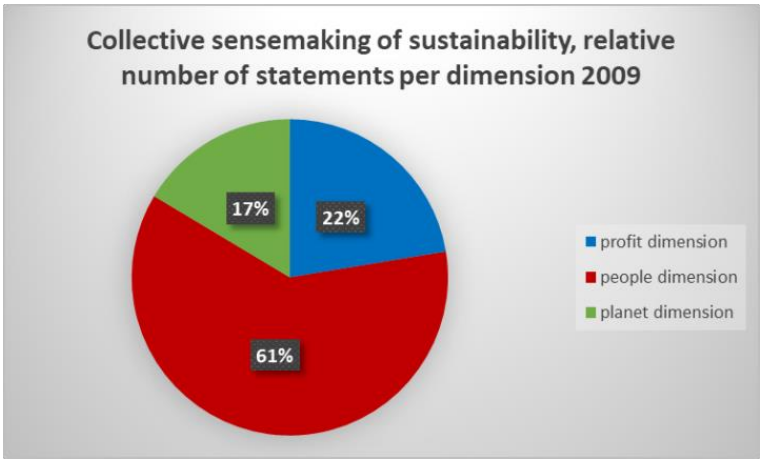


Figure 7A Relative number of statements used in collective sensemaking per dimension, 2009–2010.

Figure 7B shows the relative number of statements made in the three teams per code. Code S – how to integrate sustainability - was used most often in collectively making sense of sustainability, followed by code M which shows a focus on mechanisms and processes influenced by and impacting on a transition towards sustainability. The third most often used code is CB, indicating a focus on conditions that influence behavioural change. It seems quite logical that many statements were made about how to transform the organisation (code S) into a more sustainable one, since the organisation just started working on the issue of sustainability.

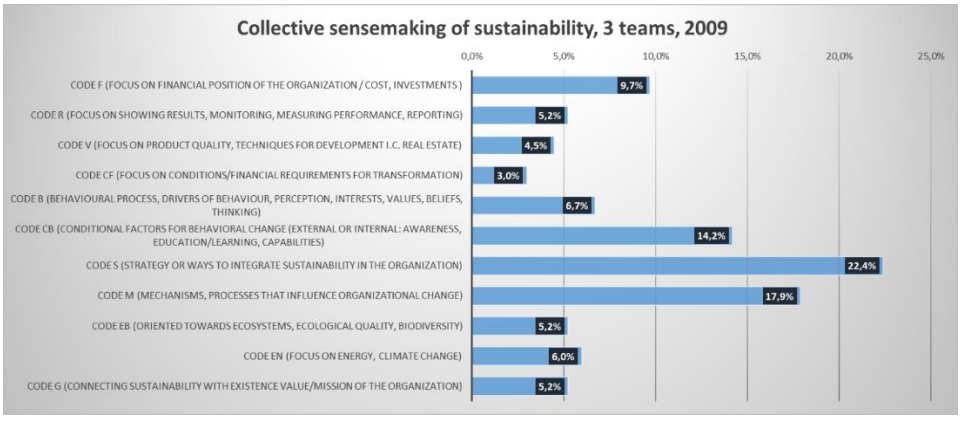


Figure 7B Collective sensemaking of sustainability, three teams of Welbions, 2009–2010

Figure 7C shows the differences per team, per code. As can be seen in this figure biggest differences are In code S. The working group Energy and sustainability clearly talks more about ways to integrate sustainability in the current strategy, which seems quite obvious since in this period, sustainability was only just on the agenda of the organisation due to sustainability being a strategic theme in its business plan. Another difference is to be noticed in code M. The management team made relatively more statements showing a focus on the decision-making process in particular. This can possibly be explained by the primary task of the management team, that is, making strategic choices.

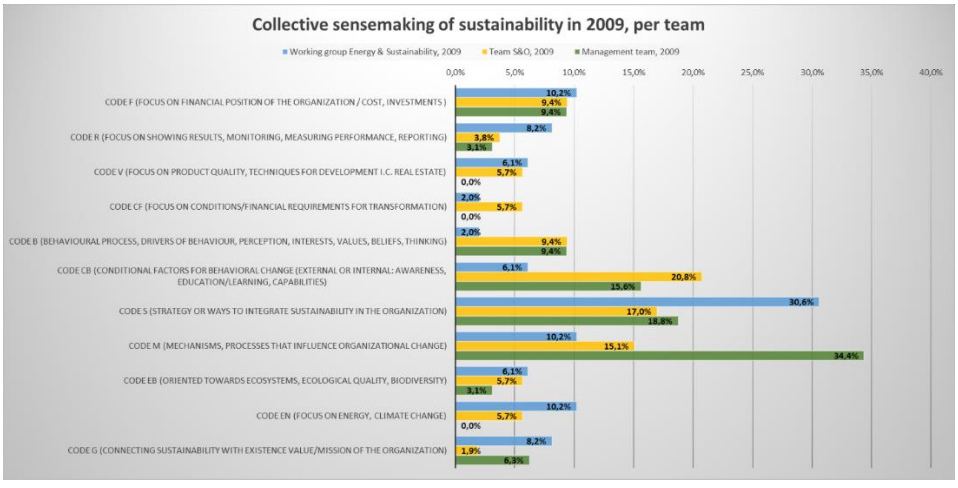


Figure 7C Collective sensemaking of sustainability, per team, 2009.

In Table 6.1 the findings per dimension are summarised in qualitative terms.

Table 6.1 Summary of findings regarding collective sensemaking of sustainability, by the management team, the sustainability and energy working group and the strategy and organisation team, period 2009–2010.

Profit	Reporting on energy labels and CO2 emissions is seen as important (development of an energy barometer in cooperation with Vereniging Woon). Central to working towards more sustainability is housing cost, quality of houses and quality of living environment. The available budget for sustainability measures, specifically for providing houses with an energy label and for measures to reduce energy use, is €100 per house; half of this budget needs to be paid back by raising rent.
People	Sustainability means that a change of behaviour, individually but also in the culture of the organisation, is necessary. Commitment is considered essential. In the formulation of ways to make progress, integrated development of urban areas to enhance the quality and achieve vital urban areas is considered important. Pilots are suggested as use of decision criteria based on three dimensions. The organisation needs an integrated frame for its decision-making process.
Planet	Resources are seen as a strategic theme, obligatory purchasing of sustainable materials seen as a way to make progress. The aim is to keep housing affordable; this is considered to be connected to the quality of the living environment, climate and clean energy use.

6.2.2 Strategic choices regarding sustainability 2009–2010

In the period from September 2009 to March 2010, a number of choices were analysed with respect to the direction of Welbions towards a more sustainable operating organisation. In Figure 8 this time episode is marked with a yellow circle.

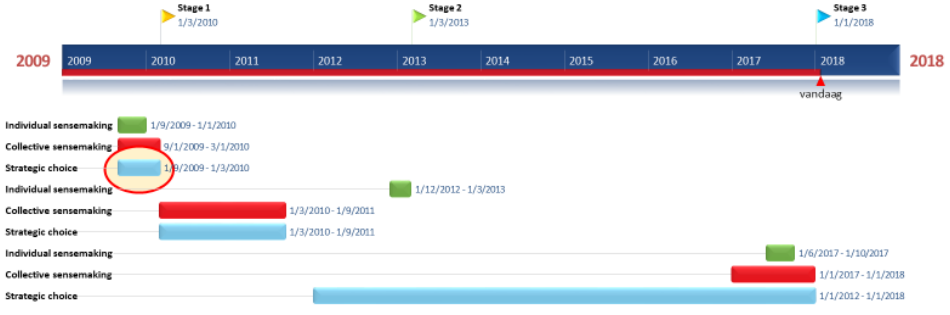


Figure 8 Research: first stage of strategic choices made in 2009–2010

The strategic choices described in four documents were analysed: (1) the Welbions Business Plan 2009–2011, (2) Financial Policy (2009), (3) Management Real Estate Report (2009) and (4) Investment Criteria (2009). These choices, or the text fragments describing the choices that were made, have been coded. The document entitled Vision of Sustainable Development is described separately and more accurately because of its relevance to Welbions' strategy towards sustainability. It is not coded since the vision aimed to balance all three dimensions of sustainability. This subsection starts with the description of the vision document, followed by a brief description of the documents that were analysed using the sensitising codes.

Vision of sustainable development

In Autumn 2009 the board of directors asked the S&O team to develop a frame of reference for sustainability since it was one of the five strategic themes in the business plan for 2009–2011. The task to develop such a frame was assigned to the S&O team. The S&O team then decided to design this frame using a tool, and to discuss the vision of sustainable development with the management team.

The Ecosystem Services Review (abbr. ESR) was selected to analyse dependencies, risks and opportunities in the environment of Welbions. After three sessions with the Strategy manager and discussions in the Strategy &

Organisation team meetings, the results were summarised in a vision document. The ESR was executed concentrating on maintenance projects since these projects make up the largest part of investment decisions (determining the scope of the ESR is the first step in the review). In the next step, data on trends and developments of priority ecosystem services were gathered (selected priority ecosystem services were wood, water, climate), as far as available. Much data only proved to be available at a higher level of aggregation (the global or national level), not on the local level. Table 6.2 shows the results of the ESR analysis and presents the identified risks and opportunities (step 4 ESR) in real estate maintenance processes.

Table 6.2 Identification of risks based on ESR, used for prioritising sustainability themes, executed by the Strategy & Organisation team, November 2009

Type	Risk	Opportunity
Operational	Scarcity of fossil fuels, water => rising cost, housing cost Greenhouse gases caused by employee traffic and transport of building materials Climate change; extreme weather conditions influence housing/quality of living environment (warmer summers, colder winters, more intensive rainfall)	Building a sustainable new office (reducing CO2 emissions, possibly energy delivering office) New houses based on sustainable energy Sustainable car park
Regulatory and Legal	New, stricter requirements for buildings and built environment Use or purchase of sustainable materials required in laws International frameworks on climate change and CO2 emission reduction Continuity of public housing sector	Use of sustainable subsidies Partnerships with stakeholders, sector and suppliers More ambition than others in project development creates demand
Reputational	Negative publicity by rising housing cost for low-income groups Public pressure to perform on a 'greener' basis	Partnership with customers: client-based product development Pilot strategy (new methods and media attention) Balanced decision-making

Market and product	Pressure on housing cost by rising prices of energy, gas, water Focus on housing cost instead of rent (revenues of housing association) Human need for more space and houses in a green area versus payable housing costs	innovative concepts Communication: customer awareness and partnership to develop sustainable houses
Financing	Rising building costs due to scarcity of natural resources or expensive innovative technologies Revenues from sustainable products Access to capital (requires venture capitalists)	Review of financial models, social return on investment Social responsibility including planet dimension Review of valuation process Development of indicators for societal revenue

Sustainability was not only associated with improving the energetic quality of the built environment but interpreted with the Brundtland definition in mind, as suggested by the management team in September 2009.

The vision was formulated as follows:

'From its social responsibility Welbions aims to balance three Ps (People, Planet, Profit) in all its activities. Our customers should be provided with high-quality housing and housing environment, now and in the future, and be able to afford it. Our well-being should not negatively impact other people's well-being. In the way we work and live we do not negatively impact ecological quality. In our production processes we use sustainable materials. Our strategy is integrated in nature and aimed at vital urban areas. We aim to develop in a sustainable way; we take into account social, economic, physical and ecological quality.' (Source: Vision document, Welbions, 2010).

Documents such as the Aedes Covenant and international and national policies with respect to sustainability were analysed and led to the description of the institutional context for the housing association. Together with the results from the explorative interviews, the meeting with the management team in September 2009, and the meetings with the sustainability and energy working group a number of topics were stated that were thought to be influencing the sustainable development of housing associations. The following four themes were chosen:

- Climate change & clean energy
- Affordable housing cost
- Awareness
- Materials (resources)

In Table 6.3 these main themes are connected to long-term goals for 2020 (step 5 of the ESR). Communication and participation is considered a basic but crucial factor in transforming Welbions and effectively achieving the long-term objectives. The goals were chosen and considered most relevant in achieving a sustainable Welbions. The vision itself needed to be decided upon by the board of directors.

Table 6.3 Strategic objectives with respect to sustainability as stated in the Welbions vision document

Theme	**Welbions' objectives for 2020**
Climate and clean energy	30% reduction in CO_2 emissions Sustainable energy: 20%
Affordable housing cost	Housing cost under control; ratio of rent to gas/water/energy rates = 6:4 Savings on energy use 2% per annum
Materials	Inputs: understanding use and origin of materials Output: reduction in waste and recycling materials
Awareness	Sustainability naturally in Welbions behaviour (genes) Raising customers' knowledge and involvement Integrative processes and decision-making at Welbions

In December 2009 the vision of sustainability was discussed in the board of directors, who unanimously agreed to commit to this vision with the remark that the long-term goals needed to be further operationalised. Although it was questioned '… what the financial consequences are', and that the vision was a rather ambitious document, a strategy of pilots was accepted under the condition that '… the pilots are positioned in a good way'. One director wondered if Welbions would be able to make progress in all of the objectives that were stated in the vision document but nevertheless the board of directors decided to commit themselves to the vision and the objectives.

Next the vision document was debated in two meetings of the strategic management team (January 2010 and February 2010) and one meeting of the management team for operations (January 2010). The strategic management team decided to pursue a strategy of executing short-term activities and form a project team to operationalise the vision. The debate about the long-term consequences of sustainability was intended to be scheduled for the management team itself as well as the task to create more awareness and a different, more balanced way of thinking. A project team was believed to be able to focus on coordinated short-term activities aligned with the themes mentioned in the vision document. Coordination of the project team was assigned to the S&O team. In the management team a debate started when the Finance manager stated that too scarce attention was paid to sustainable working in the vision document. The other members of the management team did not support this idea but all agreed that the abstract themes needed translation into more specific and measurable goals. The composition of the project team was debated, and the currently operating working group on Sustainability and Energy was thought to be too operative, so the management team decided to designate the membership of the sustainable development project team to managers, one manager per 'portfolio' (each of the three directors holds a so-called 'portfolio' and chairs a sub-management team). The management team expressed the wish to have results in the short term, meaning the first results of the project should be reported before September 2010.

The board of directors then finally decided, in February 2010, to embrace the vision document as a guiding frame for transforming Welbions.

DOCUMENTS 2009–2010

As mentioned above, the documents that were analysed were: Welbions' Business Plan for 2009–2011, Financial Policy (2009), Interim Report on Real Estate Management (2009) and Investment Criteria (2009).

PROFIT DIMENSION

In total 20 statements were placed in the profit dimension. One statement referred to the relevance of measurements for getting more insights into the appreciation of customers and society. This statement was made with respect to societal return on investments. This criterion is one of the two requirements

weighed in decisions about projects, the other being financial return on investments: ‘The goal of the organisation is to generate return on investments by means of acquiring societal capital, subsequently to be able to invest this in society again’.

Three statements were made regarding the quality of the real estate; the document ‘Interim report on real estate management (2009)’ was intended to provide an image of the future-proofing of real estate. In the business plan (2009–2011) it was stated that ‘in order to manage transparently and consistently with respect to the quality of the current stock of houses, it is essential to have insights into the quality level of the houses’. Criteria that were seen as relevant were: (housing of) the target group, sustainability, future-proof housing, safety, energy and the environment.

Most statements were coded ‘F’, expressing a financial focus in documents with respect to strategic choices. Even societal investments are expected to ‘always contribute to lower operational cost and raising market value (value creation)’. The central aim of the financial policy of Welbions, as stated in the document ‘Financial Policy’ (2009) is to guarantee financial continuity; ‘this is a prerequisite to realise the general aims of the organisation. This is realised by management on cash flows, being sufficiently solvent (at least 30%), controlling risks, consciousness at undertaking new activities and cooperation in realisation of housing tasks that exceed financial possibilities.’ With respect to sustainability, it is stated that sustainability requires a firm anchoring in strategy and organisation, that Welbions needs to anticipate the growing dominance of energy cost in the total housing cost (Real Estate Management Report, 2009).

PEOPLE DIMENSION

In total 24 statements were categorised in the people dimension. Nine statements referred to requirements for realising a sustainable organisation. Awareness of employees and customers was considered an essential part in implementing energy and environmental policies. However, the focus was laid on awareness by employees: ‘We are going to develop an appropriate vision of sustainability, in which we embrace a broad view and look into social, physical and ecological aspects. Connected to an implementation scheme we direct towards more awareness of our employees....’ (Year Plan Strategy, 2009). The business plan is expected to guide strategic choices, in management of the real estate external factors are weighed such as demographic, economic, societal,

political, technological and cultural developments. (Real Estate Management Report, 2009).

Another nine statements were coded ‘S’ for reflecting choices regarding the strategy of Welbions. These choices were already described above. The chosen guiding themes were affordable housing cost, awareness, climate and clean energy, and resources. In the Welbions Business Plan for 2009, sustainability is chosen as a strategic theme. ‘Sustainability has become an integrated part of policy implementation and development, sustainability is more than just energy-efficient use of materials’, according to the Real Estate Management Report (2009). Welbions aims at ‘sustainable building for socially powerful and vital urban areas, including offering differentiated housing in these areas’. (Valuation of real estate investments, 2009).

PLANET DIMENSION

Eight statements were made that were labelled as planet perspective. Two statements reflected a broad perspective on sustainability. As mentioned above, sustainability requires embedding into the organisation, and one of the things that are associated with this is vitality in the living environment. Criteria related to this central topic, according to the Real Estate Management Report (2009), are air quality, water quality and soil quality. In the same document, spatial developments are considered relevant for the quality and attractiveness of the city. ‘Green and water will play a prominent role in the integration of cities and land’. Four statements were made labelled with ‘EN’ for focus on energetic measures and climate change. In the Welbions Business Plan for 2009, the following statement expressed a focus on energy: ‘...we aim at an environmentally friendly and energy-efficient society. The merger cooperation [Welbions] aims to reduce CO2 emissions, to build in an energy-efficient way and to make the current stock energy-efficient....We will continue to look for energy-saving measures. Important criteria are improvement of comfort and reduction in housing cost; the tenant is expected to invest in these measures as well, but will be compensated by lower energy cost’. Two statements reflected a focus on the mission and vision of the housing association in general. In the vision document, as stated above, the vision embraced the main aim of Welbions, that is, to provide qualitative, affordable housing in the present and in the future. To achieve this, Welbions strives towards balance in social equality, ecological quality and economic growth. (Vision document, 2010).

SUMMARY OF STRATEGIC CHOICES 2009–2010

In the four themes and the (long-term) objectives that were chosen by the management team and board of directors, a balance in the three dimensions of sustainability can be distinguished. Affordable housing cost is coded into the profit dimension, the theme of awareness into the people dimension and climate & clean energy and materials into the planet dimension.

Figure 9A shows a quantitative summary of the analysis of strategic choices described in four documents. Although the people dimension in total was used most dominantly in decisions and the planet dimension was used least, Figure 9B shows that the financial perspective is dominant over other perspectives. Second most often used in strategic choices are perspectives reflecting a focus on conditions for behavioural change (code CB) and ways to integrate sustainability into processes (code S).

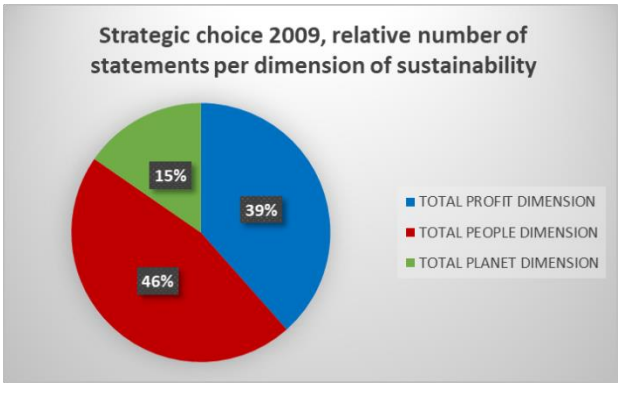


Figure 9A Strategic choice, document analysis 2009–2010, relative number of statements per dimension.

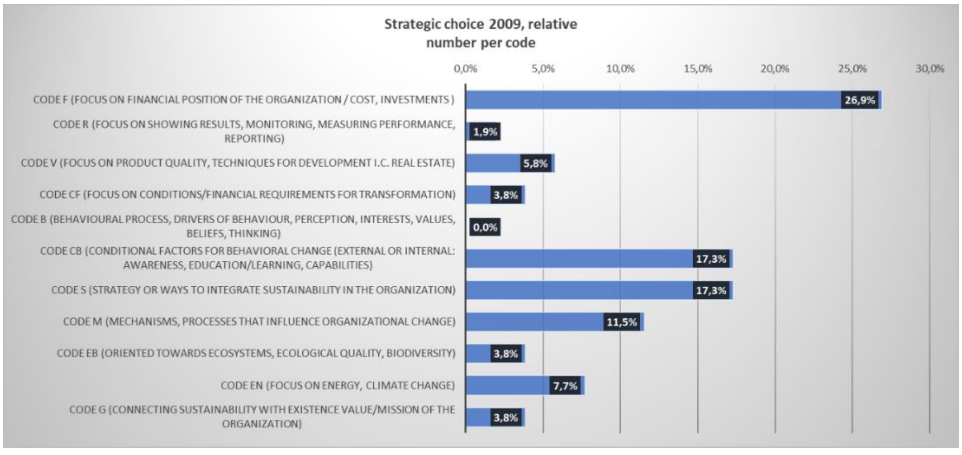


Figure 9B Strategic choice, document analysis 2009–2010, relative number of statements per code.

In Table 6.4 a qualitative summary of the analysis of strategic choice documents is presented.

Table 6.4 Summary of statements, per dimension of sustainability. Derived from strategic choice documents, Welbions, 2009.

Summary of strategic choices, 2009. Findings from analysis of the Welbions Business Plan for 2009–2011, Financial Policy (2009), Real Estate Management Report (2009) and Investment Criteria (2009).

Profit	Financial and societal return on investments are decision criteria (indirect and direct ROI, liquidity). Every investment (in energy and sustainability, in society) must be assessed against the central objective of Welbions: financial continuity and generating efficiency; investments in society must contribute to lower operational cost and a rise in market value (value creation). Control of financial risks is central.
People	Conditions for a sustainability transition mentioned were awareness and participation of tenants in collective energy purchases, cooperation with stakeholders (tenants, other housing associations, institutions in the field of living, working, care, well-being, contractors, architects). Institutional setting determines focus of housing associations (legally the BBSH, aimed, among other things, at the quality of houses, financial continuity, liveability; and political requirements for a sustainable built environment and transparent governance). In the report 'Interim Report on Real Estate Management 2009', decision criteria mentioned are: quality of houses, affordability, contribution to local

	environmental quality, financial and societal ROI, energy and sustainability, cooperation with the city of Hengelo. However, the (financial) value of real estate and income from rent are determinant, and the financial position is assessed against solvability and cash flow. Decision-making is focused on financial economic assumptions.
Planet	Sustainability is associated with social, physical and ecological aspects of housing (air, water and soil quality), and the spatial quality of the local living environment is relevant to the attractiveness of the city; 'green and blue routes will play a prominent role in the integration of city and land'. The objective is to lower energy use and reduce CO2 emissions, and this is related to affordable housing cost and improvement in the comfort of houses. In the vision document, Welbions claimed to strive towards balance, providing customers with good-quality houses and living environment at an affordable housing cost, making use of sustainable resources [however, no FSC wood is used because the manager real estate management considers tropical wood more sustainable than FSC wood].

NOTEWORTHY

Factors that are considered relevant in real estate management that were mentioned were demographic developments (ageing population, diminishing population growth, change in household composition), economic (rising welfare), societal, political and cultural developments, (housing) market developments (increasing demand for comfortable living), technological developments (home automation, web-based contact) and public administration developments (regional, local agreements).

With respect to demographic developments, it was noted that the diminishing population growth was not seen as a possible success factor for sustainable development. Globally, population growth is one of the biggest problems for deterioration of the quality of the living environment. In the local context of the housing association, however, a dilemma rises between this long-term perspective and the operational consequences of a diminishing population for the organisation.

6.3 THE FORMATION OF A SUSTAINABLE STRATEGY 2010–2013

In the second stage, the period from 2010 to 2012, the sense made of sustainability by groups is described. Subsequently a number of documents are used to analyse the basis on which strategic choices are made. This second stage is depicted in the timeline below in the colour green.

Figure 10 Research stage two: the formation of a sustainable strategy, 2010–2012. In red collective sensemaking in the period 2010–2011, in green strategic choices in the period from March 2010 to September 2011.

6.3.1 COLLECTIVE SENSEMAKING, 2010–2012

Figure 11 Research second stage: Collective sensemaking of sustainability, 2010–2011

In the period between March 2010 and September 2011, four teams were participated in and observed by the researcher with the objective of discovering the way they make sense of sustainability: (1) the Sustainable Development project team, (2) the working group on Awareness, (3) the Management team and (4) the working group on Maintenance Policy. These teams were operating

at different levels and with different tasks in the organisation. In Figure 11 the period is marked green and the collective sense made by teams in that period is highlighted with a red bar.

SUSTAINABLE DEVELOPMENT PROJECT TEAM AT WELBIONS

In March 2010 a project team was formed to translate the vision of sustainability into a sustainability strategy and implementation scheme. The project team consisted of a manager of Operations, a manager in charge of Real Estate Management, a real estate developer, a consultant in the field of finance and a Market manager.

Statements from 28 observed meetings and derived from action lists that were made of every meeting were analysed with the sensitising codes.

PROFIT DIMENSION

Initially the policy with respect to investments in sustainability – translated as measures to improve the energetic quality of the houses and reduce energy use – was that 50% of the investment needed to be paid back through an increase in the rent. In May 2010 the project team stated that the central theme was housing cost. In the second half of 2010 an externally hired interim-manager for team Strategy interfered in the project team sustainable development by pushing the team members to prioritise calculating the financial consequences of sustainability. This was discussed in the project team and it became evident that the intentions of the interim manager did not match those of the project team. The interim manager was thought to take a commercial perspective on the topic (aiming to sell consultancy to support making financial forecasts of sustainability measures) while the project team's intention was to build knowledge by doing this themselves, focusing not only on financial consequences but on societal return on investments and integrating sustainability into the planning and budgeting cycle, in decision-making and in policies. Calculating the financial consequences of energy measures was already executed with use of the software tool Vabi and the knowledge that approximately €5,000 is needed in order to improve a house with one energy label. In the maintenance policy, then, sustainability was one of the quality indicators taken into account (sustainability translated as energy label); the organisational goal for all property was a minimum of energy label B in renovation projects, and an average of label C in

2020 for all property (see below, strategic choices). The responsibility for the budget to achieve these goals was given to the manager who was responsible for Real Estate Management. For 2011 the budget for sustainability as one of the four strategic themes of the business plan was, however, the least of the strategic themes in the Business Plan.

In addition to budgeting the cost and benefits of measures, payback period and return on investments were considered as conditional criteria in investment decisions. Control of housing cost was considered the basic reason to implement sustainability. In a meeting in 2011 the project team stated that the business case for housing cost needed further attention. Factors to take into account in this business case according to the team were number of WWS points, maximum rent, financial feasibility, and payback period.

Conditions mentioned were that results should be measurable. The question, however, was which instruments or tools were most appropriate, so how to measure progress in transforming processes or real estate into sustainable processes and sustainable real estate.

PEOPLE DIMENSION

In a number of meetings the gain factor was considered as an element of behaviour influencing a transition towards sustainability. Another aspect mentioned was the willingness to invest in sustainability.

From the perspective of the people dimension of sustainability it can be said that from the start the project team discussed which organisations to cooperate with. Pioneering, the Twentse cooperation of housing associations 'Vereniging Woon', and so-called 'co-makers' (e.g. Dura Vermeer, van der Geest) were mentioned as relevant sparring partners towards a sustainable Welbions[70]. Conditional for making progress in the task of the project team were regarded commitment of the management and board of directors and the Vereniging Woon, knowledge, ability to work in a project in a professional way, budget, and financial and societal return on investments (insight into financial consequences of investments in sustainability).

[70] In the Twentse cooperation of housing associations ('Vereniging Woon') the debates were completely focused on energy-saving measures and measuring the results of projects aimed at energy use reduction.

The way Welbions aimed to integrate sustainability into its chosen behaviour was to form a sustainable development project team, which was asked to formulate goals and operational activities for each of the four themes of the vision. The formation of an implementation scheme was based on the approved vision document and memo, clarifying the role of the project team in relation to the management team. During meetings in 2010 the organisational goals were designed and debated but these goals were not set until the beginning of 2011. It was agreed that the goals for the theme of affordable housing cost were rather ambiguous, e.g the third subgoal for the theme of affordable housing cost aimed to integrate the themes of climate, clean energy and materials into all of Welbions' maintenance processes (modification maintenance, planned maintenance). How to achieve this goal remained unclear. Another element was that even once goals were set, e.g. for CO2 reduction, although aligned with the Aedes Covenant, they were again debated in the project team and stated to be too ambitious (30% CO2 reduction was lowered to 20%).

A number of policy fields were considered crucial for integration of sustainability into the organisation: maintenance policy, asset management, procurement and contract management, process management, rental policy and renovation policy, and asbestos policy. According to the project team, sustainability should also be integrated into the planning and control cycle, meaning the long-term objectives decided upon should be integrated into yearly department plans and in the long-term planning and forecasts. Every department, according to the project team, needed to feel the responsibility to do something with sustainability. In the long term, for sustainability to endure it should be in the DNA (genes) of all members of the organisation. Meanwhile, a strategy was chosen of short-term activities and pilot projects. The urban area Hengelose Es Noord was chosen as a pilot to analyse, diagnose and develop a vision based on sustainability.

Translating abstract long-term goals into success factors and performance indicators based on the four themes mentioned in the vision document (see Table 6.3 above) proved to be difficult, especially with respect to the themes of affordable housing costs and sustainable materials.

After May 2010, the intention was to discuss the long-term aspects of sustainability and the strategic issues of sustainability in the now operating 'big management team', in which *all* managers of Welbions participated. This team was the successor to the strategic management team. The aim was to discuss

sustainability every six weeks. However, sustainability was ‘debated’ two times in 2010. The first time the project team reported on their progress in the management team was in September 2010, and the second was in December of 2010. There was no debate about long-term issues connected to sustainability, such as measuring the SROI and integrating sustainability into all of Welbions’ policies, as agreed upon in early 2010.

Mechanisms influencing project team functioning, as assessed in early 2011, were, according to the project team, the formulation of clear goals, a tool to support integrated strategic decision-making (tools used to attribute energy labels of houses were not connected to tools used for financial forecasts so strategic choices were solely based on financial parameters), allocation of responsibilities for executing tasks designed in the project team, and differences in interests (sometimes hidden) of project team members. The team expressed a need for information to underpin strategic decisions. Also, the amount of available *time and capacities* needed from project team members and managers was scarce.

PLANET DIMENSION

Findings from analysis of notes and documents of the project team showed that most debated topics and measures can be said to be focused on energy measures. An often debated topic was an initiative of the municipality of Hengelo, Warmtenet. This system for collective infrastructure for heating of houses was integrated into the local building amendments in 2006, which meant that the housing association was obliged in renovation projects to connect houses to this infrastructure (which, however, was not available yet).

From Figure 12 it becomes clear that the people dimension is used most often by the project team in making sense of sustainability. The planet dimension is used least, though the gap between project and planet is not that large.

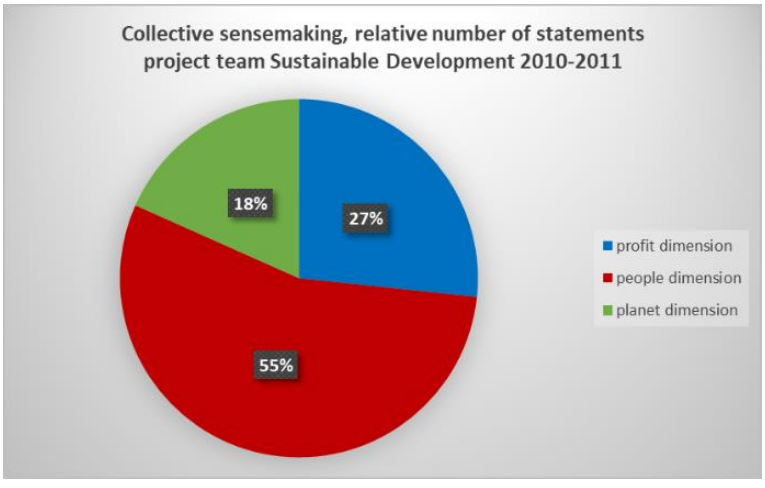


Figure 12 Collective sensemaking of sustainability, project team sustainable development 2010–2011.

Zooming in on the codes that were used most often (see Appendix 6.2) shows that the project team mostly spoke about ways to integrate sustainability in policies and processes of Welbions (code S).

Secondly, they most often spoke of conditions necessary for a behavioural change, and thirdly, of mechanisms influencing a sustainability transition, such as integrating sustainability into the decision-making process. Codes G (connecting sustainability to housing associations' licence to operate), EB (showing a focus on the quality of the living environment) and CF (financial conditions for a sustainability transition) were used least often.

Table 6.5 displays a qualitative summary of the topics debated in the project team sustainable development in the period 2010–2012.

Table 6.5 Qualitative summary collective sense made of sustainability by project team sustainable development, 2010–2012 (28 meetings)

Summary collective sensemaking 2010–2012, Project team sustainable development	
Profit	(Societal) return on investments and profitability are seen as conditional for investments in sustainability, affordability is central (tenant must pay, but payback period is doubtable considering speed of mutations, 8% per year). Financial position, cost, budget and level of investments determine boundaries of sustainability projects; interim manager does not intend to pay much attention to sustainability but to calculating financial consequences.
People	Required for success: commitment by the board of directors and management team, but this is exactly what is problematic ('I am not asked to account for my activities for this project in my meetings with the director'). Integrating sustainability into tender criteria appears troublesome, suppliers do not present an outspoken/comparable sustainability view on urban area development and price is still the main criterion. There is no connection between a vision of sustainable development and departmental plans; (multi-) year budgets are not integrated into decision criteria, but this should be the case according to the project team. Mechanisms preventing progress in project team: not surfacing of interests of team members, no open dialogue, no clarity about decision-making (sustainability is not an issue in decisions made by the management team) and sense of responsibility for sustainable development of team members differs.
Planet	Thoughts and discussion about green and blue zones in urban areas, green roofs and storage of water in times of excessive rainfall; calculating footprint of office. Welbions participated in Vereniging Woon by contributing to activities/projects aimed at energetic quality of real estate (e.g. pilot: 50 energy-neutral houses, energy barometer). Debated quite often: Warmtenet, a system for heating houses which was developed by the municipality but is not yet in operation (not ready constructed infrastructure). Welbions is legally obliged to participate via local building regulations, though it is debated to what degree the energy source to be used is sustainable and who has to pay for the infrastructure. Board of directors required advice on the matter from the project team.

WORKING GROUP ON AWARENESS

In 2010 eight meetings of a working group that was focused on raising employees' awareness of sustainability issues were held. One of the main themes of the sustainable development project team was participated in and observed by the researcher. Another eight meetings were observed in 2011. This group was aimed at finding an answer to the question of how the awareness of all employees within Welbions can be raised in such a way that they find it of interest to execute their tasks in a more environmentally friendly and energy-saving way.

The notes collected from these meetings and agendas, action lists and documents discussed in the meetings were analysed and coded.

PROFIT DIMENSION

Four statements were made that were coded in the profit dimension. Two statements showed an association of sustainability with financial conditions (being time, money and budget). One claim was that real estate management and maintenance provided the best opportunities to make progress in sustainability. One remark showed a focus on measurability of results.

PEOPLE DIMENSION

Most of the statements are categorised in the people dimension. This is not surprising since the main topic of discussion in this working group was how to raise the awareness of Welbions' employees with respect to sustainability, so the talks and debates were centred on behavioural aspects of the sustainability transition.

From the start, the team was aware that working on sustainability meant dealing with changing the behaviour of employees. Seven statements were labelled as referring to the behaviour of employees. The jokes that team members heard when employees talked about sustainability were, in their view, a sign of resistance to change. A means to deal with resistance, according to the group, was to share knowledge about the meaning and consequences of sustainability. Changing behaviour meant letting go of old routines. A slogan was created to involve all of Welbions' employees in this transition and start the awareness campaign: 'Be Green, start with yourself'. Ambassadors are needed to propagate sustainability and to signal activities within one department; one ambassador per department will be useful in spreading more 'green' behaviour and providing

feedback to those who do not know or ignore sustainability. An ambassador for sustainability needs competencies to fulfil these tasks. Competencies mentioned in the team that are required include knowledge and a willingness to acquire knowledge of sustainability, motivating others to act more sustainably by exemplary behaviour, ability to provide and receive feedback, ability to organise attention e.g. by scheduling sustainability in departmental meetings, and sensitivity towards informal talk and opinions in the department with respect to sustainability. While evaluating the first training session organised for ambassadors (see Box 1) and preparing for the kick-off of the awareness campaign on 11 November 2010 ('Sustainability Day') the team thought that it was essential for team members and ambassadors to be able to explain to other employees what is meant by sustainability and why it is necessary to change behaviour.

A requirement for actually changing behaviour is, according to the working team on awareness, experiencing or paying attention to sustainability, e.g. climate change. An activity organised for enabling employees to do so was to borrow the KNMI Climate Change exhibition for two months (at the end of 2010). This exhibition showed scenarios of climate change in a comprehensible, visual way and was exhibited in Welbions' common meeting room. Another requirement, according to the working team, was to get the attention and commitment of the managers; their role is considered essential since they are the translators of the vision document into yearly departmental plans – sustainability needs to be integrated into the yearly planning and control cycle and into operations – and their exemplary behaviour influences team behaviour. A third enabler mentioned in the working team is the integration of sustainability into the competencies of all employees. A last requirement mentioned is integrated decision-making and integrated governance.

Enumerated factors contributing to integration of sustainability into the operations of Welbions were information, inspiration, commitment and cooperation. Cooperation was considered a success factor and was therefore chosen as the main theme for a workshop for the management team in February 2011, organised by the Awareness working group.

In July 2010 the working team decided to designate ambassadors (one in every department). This strategy was based on the idea that a leading coalition is needed, not at the top but from the bottom. Ambassadors are considered informal leaders capable of setting teams in motion. Next, the team decided to organise a training course for the ambassadors. During this training course, ambassadors were given three assignments.

Decision-making based on sustainability, integrating sustainability in the planning and control cycle and governance based on sustainability were regarded essential and therefore scheduled for debate with the management team as well as cooperation.

The chosen strategy of the working team awareness to reach their objectives can be characterised as a mixture of short term activities and long term topics that needed debate in teams. In order to achieve consistency in the long term topics, the working team suggested to raise a thinktank, to be chaired by one of the directors. Another long term topic was the integrated development of urban areas, in which participation and cooperation with stakeholders was considered a success factor.

With respect to decision-making the experience was that although sustainability is one of the criteria for the decision proposal, sustainability was usually not a requirement for a decision proposal to be decided upon by the board of directors. So the working team wondered in what way decisions that integrate sustainability differ from decisions that do not pay attention to sustainability. In June 2011 a brainstorm session was held to discuss how to assess investment decisions against sustainability and which governance principles express integrated decisions. The conclusion was that the current way of deciding was not based on sustainability; integrating sustainability in strategic decision-making was considered a main topic for 2012. The brainstorm group (the working team on awareness, the strategy manager the controller) agreed that considering the outcome of assessment of the project team earlier in 2011, the consequence of this conclusion could mean that the composition of the project team needed changing.

PLANET DIMENSION

From the start of the working team in the middle of 2010, many of Welbions' employees deposited their ideas for activities to be organised in the office. These activities comprised measures such as reduction of energy usage at the office, waste management, reduction of printed documents and double-sided printing, use of green energy, using recycled materials, reuse of water, solar panels on the roof of the office, and prefab buildings.

In the training for ambassadors in November 2010, the meaning of sustainability was discussed. With respect to the office the focus was on energy (a desire to buy only green energy) and reduction of materials and water. When referring to houses and living environment, ambassadors translated sustainability into energy use and building materials, and into the social and ecological (water, animals) living environment. These activities were coded EN (energy measures) and EB (aimed at sustainable water usage, materials).

From Figure 13 it is clear that the people dimension is by far dominating the statements found in collective sensemaking of sustainability by the working group on awareness.

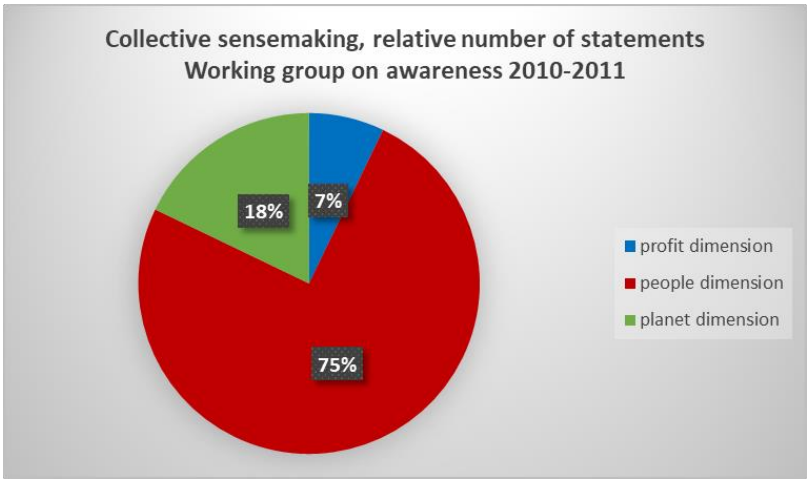


Figure 13 Collective sensemaking of sustainability, working group on awareness 2010–2011 per dimension.

Zooming in on the codes that were relatively most often used (see Appendix 6.2) shows that code S was used most often – the working group dominantly spoke of

ways to integrate sustainability in the organisational behaviour, e.g. by executing short-term activities or long-term thinking and debating and integrated decision-making. Second most often used was code B, followed by code CB, both focused on behavioural aspects. Codes F and R were not used at all.

The pattern identified in the debates in this working group is one of a focus on behavioural change. An element that was considered crucial in raising awareness was to involve colleagues. The idea behind the appointment of an ambassador for each department was to spread sustainability in each department, not just by implementing plans from the top down but to let sustainable behaviour emerge from the bottom up. The working group considered sustainability as a change of behaviour that requires letting go of old habits. The group prepared itself for resistance to change, and how to deal with the many jokes made by employees that were anti-sustainability. In 2010 a number of activities were organised to inspire colleagues and share knowledge on sustainability, such as calculating each employee's footprint, a KNMI exposition introducing knowledge on climate change, attention to sustainability on 'Sustainability Day', organic lunches, and in 2012 a Wattcher competition (participants competed over the highest reduction in home energy use).

In a workshop organised for ambassadors, a much broader perspective on sustainability was noticed. On the question of what the local environment of houses will look like three years from now, first of all the ambassadors took a longer-term perspective and stretched the view to 30 years. The answers given were e.g. that houses were, or should be 'life-cycle proof' and could supply energy, should be able to reuse water and the building materials should be reusable, building methods are prefab. The environment of the future is differentiated and green (used e.g. on roofs) and excess heat is reused, with central water storage for water supplies in the neighbourhood, includes biogas installation and provisions are made for animals. On the question regarding which measures to think of when aiming at a sustainable office, the following answers emerged: use of LED lights and sensors, green energy, waste management, air climate regulators, use of solar energy, energy from fitness, office garden with fruit trees. Ambassadors were thought to require skills and capacities such as being able to give and get feedback, inspire, confront others with waste, organise activities, be sensible towards signals, and gain knowledge.

In a reflection on this workshop with ambassadors it was acknowledged that a change in attitude towards e.g. climate change is achievable. One of the ambassadors was very cynical at the beginning of the workshop but after listening and watching experts on the topic and participating in workshops, the ambassador said, 'I am convinced now that we really need to do something'.

Table 6.6 displays a summary of the debates in the working group on Awareness, 2010–2012.

Table 6.6 Collective sensemaking, qualitative summary of the working group on Awareness, 2010–2012 (eight meetings).

Summary of collective sensemaking, Working Group on Awareness 2010–2012

Profit	Thinking in terms of profitability is important; in management of real estate and maintenance progress towards sustainability is best made. Measuring progress motivates employees.
People	Working group senses resistance of employees, shown by making jokes ('do you knit your sweaters yourselves?') to let go of old habits. Knowledge is needed, to address unconsciousness and draw attention, inspiration is needed (KNMI exposure). Other requirements: commitment, coordination, constructive cooperation, facilitating (time/money/budget). There is not enough attention for sustainability and movement of managers; competition moves people (e.g. Wattcher game), see remark made by FU about this competition! Decision proposals should be checked against sustainability in a Green Room; sustainability should be integrated in governance principles.
Planet	Meaning associated with sustainability by ambassadors is energetic quality of houses/offices and use of resources for building them, elements necessary in local living environment (energy, labour/social developments, water, animal species).

MANAGEMENT TEAM 2010–2011 AND MAINTENANCE POLICY WORKING GROUP 2011

In 2010, two meetings of the management team were participated in and observed, and another three meetings in 2011.

PROFIT DIMENSION

Five statements were noted reflecting a financial focus on sustainability. In a meeting in 2010, the issue of investing in the quality of the local environment was considered a strategic goal because it is connected to the financial value of the real estate. In 2011 a number of statements were made about the concern for budget. When providing the management team with feedback about progress, the budget was seen as an essential part of this. Affordable housing cost was considered to be directing all activities.

Four statements were made in which return on investments, financial and societal, were considered conditional for a sustainability transition.

Two statements were noted reflecting a desire of the management team for measurable results of implementation of sustainability.

PEOPLE DIMENSION

Six statements were made coded with ‘B’ for behavioural aspects of sustainability. Sustainability should be part of the ‘DNA’ of employees; employees (and particularly the management) should believe in sustainability and power to enforce integration. Noted in workshops was the remark that it is difficult to translate sustainability in behaviour of some departments of Welbions, e.g. customer service department.

The commitment factor was seen as success factor for a transition of behaviour. In the workshop the dilemma of working in an innovate way sometimes conflicts with the rules and laws.

Nine statements were made about ways to integrate sustainability in current processes. In 2011 for the first time the topic of communication with tenants in the context of implementation of sustainability measures was debated. Freedom of choice versus making tenants responsible for their energy use was a dilemma that was discussed; the question, however, that was raised was to what degree tenants have freedom of choice, considering their status as low income groups.

Five statements made in management teams reflected an association of sustainability with sustainable choices, which are considered different from routine choices. In spite of scheduling debates about sustainability in the management team every six weeks, this debate was cancelled more than once. In 2010 only two management team meetings were scheduling sustainability, due to a focus on financial issues and an interim manager on the Strategy team, who

did not consider sustainability to be very relevant, and the topic was postponed more than once.

PLANET DIMENSION

A sustainable supply chain, creation and development of lively urban areas in which sustainability is implemented and realisation of quality in the living environment based on integrated development are coded EB.

Where in 2010 affordable housing cost was considered the basis for a sustainable transition in the sustainable development project team, in management team meetings the main objective for investments in sustainability is considered the development of lively neighbourhoods and integrated urban area development.

Figure 14 shows that the management team dominantly uses a people dimension in making sense of sustainability.

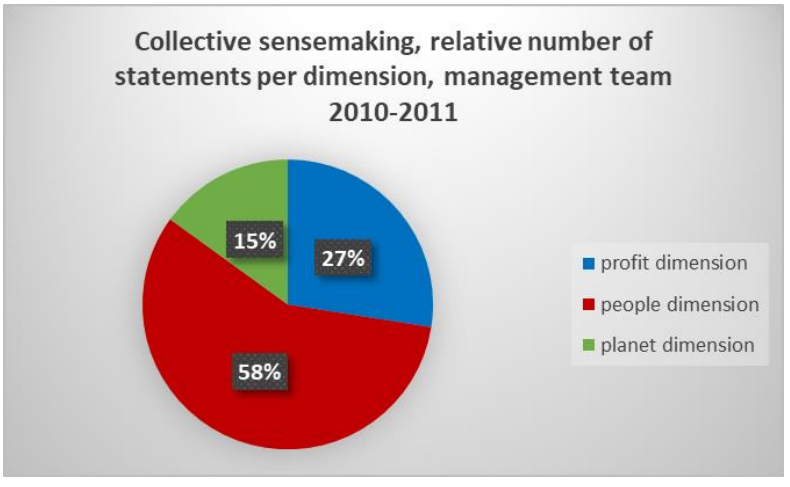


Figure 14 Collective sensemaking of sustainability, management team 2010–2011, per dimension.

Zooming in on codes shows that code S was used most often, followed by codes F, B and M (see Appendix 6.2). In Table 6.7 a qualitative summary of the findings of the management team is presented. The findings from the management team's observations and the maintenance policy working group are presented together because these teams consisted both of management team members (the maintenance policy working group was a sub-group of the management team).

MAINTENANCE POLICY WORKING GROUP

Due to developments in the organisation and in the institutional context, in 2011 Welbions felt forced to start a reorganisation. This reorganisation was structured by forming four teams. One of the teams, which focused on maintenance policy, was 'given' the topic of sustainability. Therefore it is worthwhile to analyse what part sustainability actually played in the debates with respect to maintenance policy. Although the aim of the working group initially was to integrate sustainability structurally into the processes regarding maintenance of existing buildings and of new buildings, the attention of the working group was paid mostly to the criteria and principles for building a policy for maintenance of existing buildings and to transparency in decisions. Criteria mentioned were rental price, investment space, technical quality, rentability. Sustainability, translated as energy labels, was seen as another criterion for investment decisions. Appendix 6.2 shows the relative number of statements per code for the Maintenance Policy working group.

Table 6.7 summarises the meaning of sustainability based on observations from the management team and the maintenance policy working group.

Table 6.7 Summary collective sensemaking of sustainability by management team 2010–2011 and working group Maintenance Policy, 2010–2011.

Summary of collective sensemaking Management team 2010–2011 / Maintenance Policy working group	
Profit	Research into methods to measure social and financial return on investments is assigned to two students; after their work no consequences were derived from their advice. The quality of the living environment is connected, according to the MT, to the (financial) value of the real estate and determination of profitability. MT aims at control of housing cost and realising quick wins, and sees what is most profitable: investments in existing property or newly build property. Innovative methods are seen as more sustainable techniques (smart equipment) but also as a cause of the rising cost of maintenance (working group MYF).
People	Integrating sustainability into the DNA of all employees; management should inspire employees and show belief in the topic.

	Sustainability requires different choices with a long-term scope; in 2011 a working group on prioritisation did not debate sustainability (one of four groups founded to debate organisational developments). Cooperation and commitment are considered essential but there was no agreement on how exactly: freedom of choice versus responsibility.
Planet	Sustainability is associated with a sustainable supply chain, vital urban areas based on integrated development (based on three dimensions of sustainability) and long-term issues.

NOTEWORTHY

Although the management team in early 2010 claimed responsibility for debates about long-term issues and for awareness raising, sustainability was scheduled only for two management team meetings in 2010. In these two meetings there was hardly any debate about long-term issues; instead the sustainable development project team was asked to report on progress and to consider the issue of awareness. The management team believed that rules and laws occasionally prevented pursuit of (sustainability) innovations. But in considering the vision document, management in particular was expected to believe in sustainability and enforce integration.

In the working group, sustainability was associated only with energetic quality of houses and seen as merely one of a list of criteria for determining the technical quality of real estate.

SUMMARY OF COLLECTIVE SENSEMAKING 2010–2011

As can be seen in Figure 15A below, the people dimension was used most often by teams in making sense of sustainability, followed by the profit perspective.

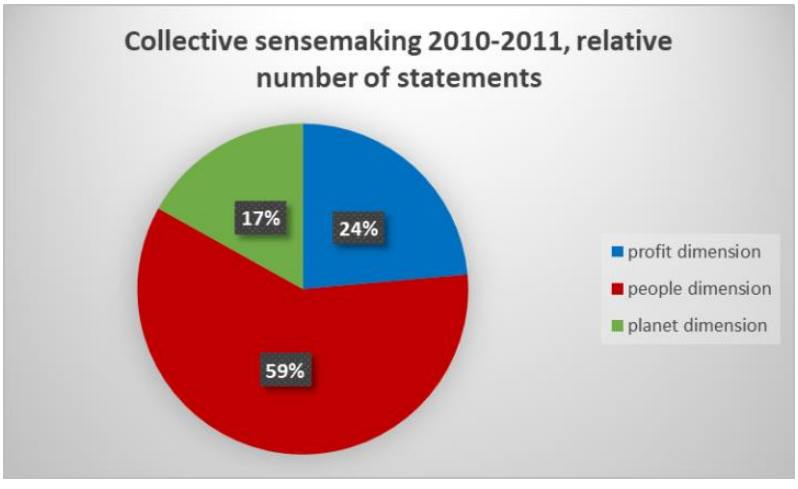


Figure 15A Collective sensemaking of sustainability, four teams, 2010–2012, relative number of statements per dimension.

Zooming in on codes that were used most often, all teams were dominantly interacting about ways to achieve more sustainable decisions and a more sustainable strategy (code S, 26.4%, see Figure 15B).

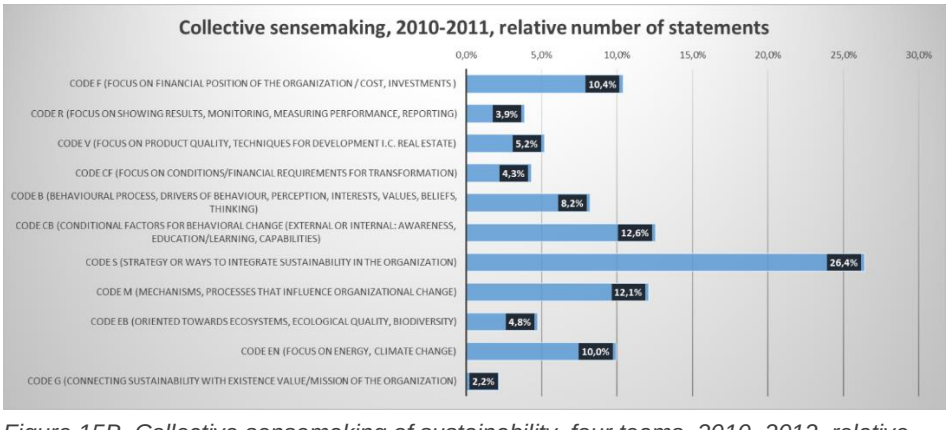


Figure 15B. Collective sensemaking of sustainability, four teams, 2010–2012, relative number of statements per code.

In Appendix 6.2, a comparison of the relative number of statements per code, per team is displayed. Some differences between the four teams can be noted. The awareness working group clearly focused mostly on behavioural elements, which

can be explained by their task to do so. Of all teams, the working group on maintenance policy spoke the most from a financial perspective; code F was ranked one together with code S – ways to integrate sustainability – and code M – integrating sustainability in criteria for assessing the quality of the real estate.

All four teams most dominantly spoke about ways to integrate sustainability (code S). This perhaps meant that the organisation still behaved from old patterns although sustainability was not ignored. Sensemaking theory suggests that disruptive events trigger sensemaking but sustainability is perhaps, as now becomes clear from practical findings, not regarded as a disruptive event but a meaning is constructed anyway.

Table 6.8 displays a qualitative summary of collective sensemaking of sustainability in the period 2010–2012.

Table 6.8 Summary of findings on collective sensemaking in the management team, the sustainability working group and the strategy & organisation team, period 2009–2010.

Summary: collective sensemaking of sustainability, based on participant-observation of four teams in the period 2010–2012

Profit	Financial conditions for investments in sustainability mentioned were financial and societal return on investments; however, the SROI was not taken into account in decisions made. The project team put the main focus on affordability, whereas the management team associated sustainability with investments in the quality of the living environment, that are justifiable due to their impact on the financial value of the assets. Measuring progress is motivating employees to work on sustainability.
People	Required for success, according to all teams, were commitment, belief and awareness, esp. management of Welbions. However, this was problematic; sustainability was not often scheduled for debates in the management team in spite of agreements and when discussed, it was only to report on progress in activities initiated by the project team. Sustainability should be integrated into strategic choices, sustainable choices are considered different than routine decisions, decision proposals should be assessed in a Green Room. However, sustainability was merely one of the criteria (and narrowed down to energetic quality) in assessing the technical quality of real estate.

	Cooperation was considered essential but there was no agreement about how to organise this/no time spent on the important issue of communicating with tenants, although the issue of tenants' freedom of choice versus responsibility was recognised.
Planet	Sustainability is associated with a sustainable supply chain, vital urban areas based on integrated development (based on three dimensions of sustainability) and long-term issues. However, in all initiatives the focus was on improving the energetic quality of houses (e.g. the pilot under Vereniging Woon to build a number of energy neutral houses).

NOTEWORTHY

In 2010 the S&O manager was replaced by an interim manager. This manager did not prioritise sustainability. When time was spent on sustainability, debates were only focused on financial consequences of sustainability measures and on budgets. At the time, contextual developments forced housing associations to show the national government and the EU that 90% of their houses were rented as social housing. This meant that extra time was needed to organise this in operational processes. It also meant that it was no longer an option to develop differentiated urban areas, and build more luxury houses to gain investment space for societal projects and sustainability. In a workshop with ambassadors, animal species were mentioned as one of the necessary elements in the (local) living environment.

In 2011 the board of directors (top down) required two sustainability initiatives to be developed by employees, though no specific assignment was formulated and the sustainable development project team was appointed to deliver these initiatives.

Sustainability was not mentioned in the goals under the strategic theme of customers. Although in 2010 the intention was to focus on employees first, it was also claimed that tenants should become more aware of their energy usage, in addition to the requirement that tenants should pay for half of the total investment budget for sustainability measures through an increase in rent. This requirement could only be fulfilled (rule) when at least 70% of the tenants agreed with the measures.

6.3.2 Strategic choices regarding sustainability 2010–2012

The following documents were analysed and coded: (1) Welbions Business Plan 2012–2017, (2) Strategic Letter 2012, (3) Decision document Veldwijk Noord and (4) Management Report for Quarter 2, 2011. These documents reflect strategic choices with respect to sustainability made in the period 2010 to 2012. This period is marked green in Figure 16 below.

At the end of this subsection, in box 1 a case is presented in which strategic choices are analysed in the early stages of an urban area development programme (Hengelose Es). This programme started in 2010; the choices that were analysed encompass a period between 2010 and 2013. The description of these choices shows that in a large and longitudinal project, choices are made continuously and the degree to which sustainability is taken into account may change during the process. This case presents a good view of strategic choices in real estate projects.

Figure 16 Second research stage: Strategic choices 2010–2012

Statements collected and analysed from these documents are coded and briefly described per dimension of sustainability.

Profit dimension

Twenty-three statements were made, categorised in the profit dimension.

Thirteen statements showed a focus on finances, e.g. when requiring tenants to invest in energetic measures as well, when focusing on control of housing cost and budgeting sustainability. In the decision proposal of the urban area Veldwijk Noord, ‘we focus strongly on sustainability, in the construction cost of the houses an amount of €700,000 is budgeted’. This budget, however, represented only a

small portion of the total investment, which was €27M. In the Business Plan, sustainability is seen as a tool for keeping houses affordable: 'To keep houses affordable, we strive for sustainability, and we search for ways and opportunities to divide rent after capacity'. In the Business Plan one can read measures to reduce cost, which needed to be taken due to a levy imposed by the government: 'We realise a reduction of our operational expenses of 10% from 2013. This means a reduction of our current staff. We aim to structure our organisation optimally in order to achieve our ambitions sustainably'. The Business Plan also claimed that Welbions implements innovative and affordable ways to integrate sustainability in processes and techniques. In the Plan of Action of the sustainable development project team, the impact of higher prices for gas, water and energy, as part of the total housing cost, is considered important because it may lead to 'climate refugees', meaning customers looking for energy-efficient houses. In the management report of 2011, the relevance of financial calculations is mentioned as a need for implementing sustainability.

Three statements expressed a sensitivity towards financial conditions; the (societal) return on investments is mentioned as a prerequisite for activities: 'Our social and physical activities are chosen under the condition of societal and financial efficiency.' (Welbions Business Plan 2012–2017).

Two statements specifically mentioned the relevance of translating sustainability goals into measurable results and more specific goals: '… [sustainability] is a way of thinking in which we consider carefully the impact on our world, we will translate this to specific results…' (Business Plan 2012–2017).

Five statements reflected a focus on translating the consequences of sustainability into the quality of stock. 'The expectation is that we can calculate the CO2 emissions of our real estate in the second quarter of this year [2011]', 'we aim to have sustainable assets'. For new buildings Welbions aims to take the environment into account 'as well as possible', and for existing buildings the aim is to improve energy labels. One of the goals chosen is a 20% reduction in the CO2 emissions of assets by 2020. 'On a small scale we are innovators in the field of sustainability; we usually apply proven techniques'.

PEOPLE DIMENSION

In total 30 statements were made from a people perspective. Two choices showed behavioural aspects of sustainability, one reflected the acknowledgement of financial motives and the other reputation damage as

drivers for Welbions to act more sustainably (Plan of Action for the Sustainable Development of Welbions, 2010). Ten choices were labelled ‘CB’, expressing conditions for sustainable organisational behaviour. In the chosen organisational goals, internal and external awareness raising was thought a condition for organisational change. One of the aims was ‘to raise knowledge about sustainability and integrated working and living among employees and customers’. Acknowledged and weighed risks regarding the Plan of Action for the Sustainable Development of Welbions were insufficient knowledge among the employees with respect to the ecological dimension of sustainability and impact of production activities on ecological quality; insufficient knowledge regarding sustainable development in general and implementation of it; internal communication; laws and government policies; learning capacity of staff; personnel capacity for the project team; available time for the sustainable development project team to achieve results; the degree of professionalism in project work at Welbions. Communication was considered an essential condition for reaching the long-term goals. Other factors influencing the success of a transition towards a sustainable organisation mentioned in the Plan of Action were available budget, integration of sustainability in the processes and strategy of Welbions and the commitment to sustainability by the board of directors and management.

Other influential external factors mentioned in a document about the organisational development of Welbions (2011) are the economic and financial climate at the time, a more directing and controlling government and a market forcing one to do the ‘right things’. These factors influenced the financial position leaving less investment space (Welbions Business Plan 2012–2017); ‘although sustainability need not always be expensive...the bottom line is to think in a way in which we consider effects of our activities on our planet...We aim to achieve specific, measurable results in the coming years but sustainability is not yet a routine in our choices and activities’.

Six statements were found in documents in which the integration of sustainability and its three dimensions were claimed to be chosen as guiding the decision-making process of Welbions. In the management report (2011) a risk that was considered as influencing the progress towards sustainability was the departure of the strategic consultant on sustainability. Sustainability was agreed to be integrated into procurement policies and tender criteria.

With respect to the strategy chosen by Welbions towards a more sustainable organisation, twelve remarks were found. A number of steps were mentioned. Integration and connection of sustainability in processes, e.g. in purchases and in procurement, management of waste and recycling of materials, translation of sustainability into choices (decision proposals and decision criteria) and activities, and an integrated approach towards urban area development, e.g. in the pilot Hengelose Es (see Box 1). A strategy of cooperation with stakeholders and experimenting on a small scale were considered an appropriate method for Welbions. Welbions did not aim to become an early innovator; 'we apply innovative and affordable but proven techniques... we support initiatives from tenants who are willing to contribute to sustainable living. We cooperate and make agreements with suppliers who also embrace our sustainability principle' (Business Plan 2012–2017).

PLANET DIMENSION

Twenty-three choices were labelled in the planet dimension. Seven statements reflected choices made from a broad perspective on sustainability (code 'EB'). One of the chosen organisational goals, use of raw materials, showed a focus on studying the whole supply chain, from the origin of materials to affordable housing to waste management. Another organisational goal was to develop urban areas in an integrated manner in 2020, in which there is a balanced attention for all three dimensions of sustainability. In the management report of the second quarter in 2011, it was claimed that 'Welbions aims to develop sustainably from a broad perspective. Sustainability and dealing with our living environment in a conscious way and considering the impact of our activities on the environment have become an important issue. We do not want to harm the ecological quality through our way of working and living and therefore we aim to work in an integrated way...'.

Three statements expressed the view of Welbions with respect to its licence to operate and sustainability (code 'G'). In the Plan of Action regarding the organisational development of Welbions (2011) the chosen aim was to develop the organisation towards becoming 'future-proof' via changes in the structure of the organisation and the culture. In the Business Plan for 2012–2017, Welbions stated that the main objective was to become a social and sustainable entrepreneur. 'In everything we do we ask ourselves what the added value is for our (future) tenants. With our physical and social activities we contribute to the Hengelose society from social involvement and a future-oriented vision....We

realise that ecological, social and economic interests need to be in balance'. Welbions felt responsibility for the quality of houses and living environment.

Thirteen statements were coded 'EN', showing a focus on energy. In the organisational goals (2010) one of the chosen themes was clean energy and reduction in CO2 emissions, in addition to changing towards using sustainable energy in 20% of all houses and in their own office by 2020. In 2008, Welbions already had its stock labelled, thereby enabling measurement (based on these energy labels) of the consequences of measures to improve the energetic quality of the stock. In the management report of 2011, second quarter, the first results could be shown; from 2008 onwards, a CO2 reduction of 4.1% was accomplished. However, is was also clear that 'the topic of transforming and using sustainable energy is not progressing, so it is decided to focus on this issue in 2012'. In the Welbions Business Plan for 2012–2017 the ideal situation is described as 'that everybody in Hengelo now and in the future will be able to find an affordable and suitable house and live there satisfactorily. We have a sustainable stock...'This is translated as energy-efficient. 'We offer our customers a choice: a luxurious, more expensive house or a simple, cheap house. Our houses are energy-efficient'. In newly built houses, Welbions 'wants to take the environment into account as well as possible'. In existing houses 'we aim at improvements in the energy labels....on a small scale we are innovators towards sustainability, we use proven techniques'. In the Business Plan for 2012–2017 it was acknowledged, however, as described earlier, that sustainability is not yet routine in choices and activities.

SUMMARY OF STRATEGIC CHOICES 2010–2011

As can be seen in Figure 17A, the people dimension was used most frequently when analysing statements made in documents, reflecting choices made. The profit and planet dimension are used equally. Perhaps it is good to mention that the analysis encompasses the period before the Dutch government imposed a levy, and changes in law were made (such as stricter governance rules).

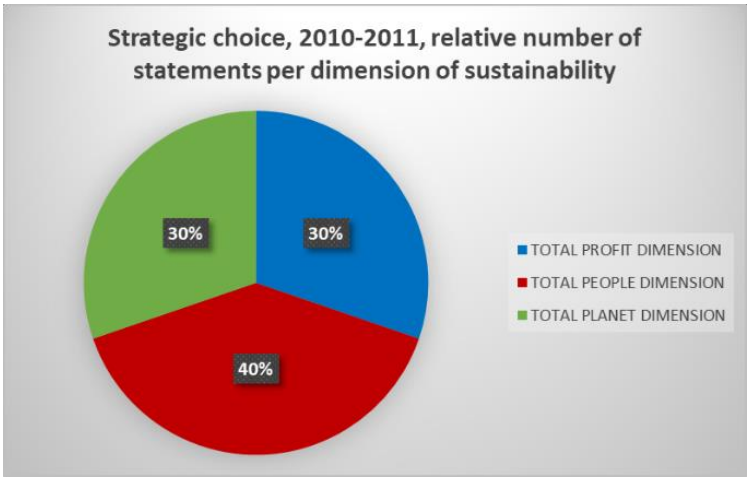


Figure 17A Strategic choices, relative number per dimension, 2010–2012.

In the figure 17B, the relative number of statements derived from documents per code in the period from 2010 to 2012 are visualised. Codes F and EN, showing a focus in finance and energy, are equally and most frequently used.

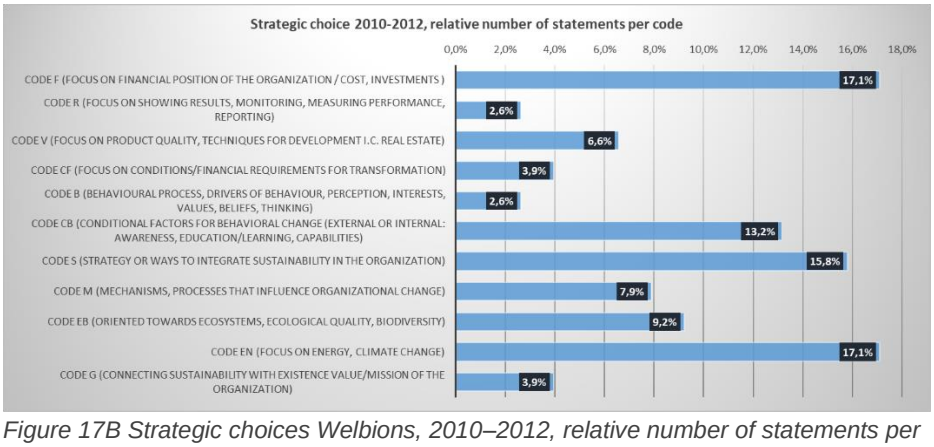


Figure 17B Strategic choices Welbions, 2010–2012, relative number of statements per code/dimension.

In Table 6.9 a qualitative summary of the findings is presented.

Table 6.9 Summary of statements derived from strategic choice documents, Welbions, 2010–2012

Summary of strategic choices 2010–2012. Findings from analysis of Welbions' business plan for 2012–2017, strategic letter 2012, decision document Veldwijk Noord, management report quarter 2, 2011.

Profit	In the business plan for 2012–2017 the aim of Welbions is 'to base our social and physical activities on societal and financial return on investments; the balance in people, planet and profit is our starting point'. The main objective of sustainability is to control housing cost, and keep this affordable ('the impact of higher prices for gas, water and electricity may result in climate refugees').
People	Motives for sustainability transition are financial in nature, or fear of reputation damage, governmental policy. Conditional for making a transition are awareness (the vision with respect to sustainability is formulated, the theme is on the agenda and awareness is rising), knowledge, insights into expected impact of sustainability measures before and after decision-making; external factors of influence are the economic and financial climate, a government that is more controlling and pressure from the market. However, sustainability is still not routine in decision-making.
Planet	Welbions feels responsible for both the quality of houses and the quality of the living environment (EB); the aim is 'not to negatively impact on the ecological quality of our planet' (management report, second quarter 2011). With respect to resources Welbions aims to reuse materials after demolition and study the sustainable character of building materials to better fulfil the role in the supply chain with respect to sustainability. Although a 4.9% reduction in CO2 is achieved, Welbions is not satisfied with progress in using clean energy; this is scheduled for 2012 and beyond.

NOTEWORTHY

Success factors mentioned in strategic choices were time, money, marketing and communication directed towards customers and stakeholders, relating sustainability to real estate management and multiyear forecasts, the internal processes of Welbions and commitment by the board of directors and management.

The vision of sustainable development seemed to be used as a guide for Welbions strategy and its new business plan for 2012–2017. However, at the same time it was claimed that Welbions still dominantly makes use of routines in deciding. With respect to the goals for existing buildings, the goals were more specific than before: 20% CO2 emissions reduction in 2020. For new buildings

the goals are more ambiguous as well as a choice made to work towards integrated urban area development.

In the new business plan the influence of the Dutch government and economic crisis can be read in the stated objective of Welbions to optimise income from rent, to adjust investments to realistic selling policy, realise cutback in operational cost from 2013 by 10% (which means reducing the number of jobs). While learning capacity of staff and knowledge of sustainability were considered a factor of influence in making progress, due to the focus on the financial position the strategic consultant on sustainability left the organisation.

In the choices reflected in the business plan, sustainability is seen as a tool for keeping houses affordable. As described in Section 6.3.1, in 2010 the sustainable development project team put the main focus on affordability, but the management team associated sustainability with investments in the quality of the living environment, these investments are justifiable due to their impact on the financial value of the assets.

CASE: STRATEGIC DECISION-MAKING. HENGELOSE ES, 2009–2013

In 2009 Welbions decided to demolish 235 houses in the urban area Hengelose Es, in the city of Hengelo. This decision, however, was disputed since in the business plan for 2009–2011, Welbions intended to develop in a sustainable manner. This strategic aim resulted in starting a pilot for this urban area, with the intention of designing a programme for Hengelose Es based on the three dimensions of sustainability. In the initiative phase and diagnostic phase of the development of this programme in the period from 2009–2011, analyses were made and debates were held in all three dimensions. In the period 2011–2012 a vision was developed which was supposed to result in an integrated strategic plan for the development of the urban area Hengelose Es. The decisions made in the three phases are described briefly.

In the initiative phase (2009–2010) it was decided to rebuild only houses, not flats, because it was thought that the latter were sufficiently available. Access to accommodations and care was considered relevant for the inhabitants of the area and so it was decided to at least build infrastructure. The aim, as decided upon in the initiative phase, was to strengthen the social structure in the neighbourhood via a more balanced population. A relevant theme for the development of the area was affordable housing cost. It was decided that the

rent and cost for gas, water and energy should remain affordable. To achieve this, it was decided to investigate the gas, water and energy cost of houses together with the tenants. Energy supplies should be as sustainable as possible, and CO2 emissions should be minimised. By choosing these goals, the programme Hengelose Es complied with the Welbions Business Plan. It was also decided to reduce the ecological footprint of Welbions, which is translated as reuse of materials after demolition, prevention of waste and use of materials from renewable sources. Negative impact on the environment should be prevented as much as possible. Reasons that were mentioned for reducing the footprint were to mitigate the risk of housing becoming unaffordable, loss of customers, rising building cost and deterioration of the quality of the living environment. On the theme of vitality it was decided that during the building phases (which take a couple of years) the urban area should remain vital, and so some of the tenantless houses should become available for social activities. Participation of inhabitants was considered relevant to keep the area vital during the building activities. It was decided to inform stakeholders in an open and honest manner about decisions that were made. Tenants of the 235 houses that were to be demolished were invited for dialogue about their movement and to talk about the impact of this on their personal climate. A major decision in this initiative phase was not to guarantee the return of tenants to the urban area, only to offer an option. The argument for this decision was financial in nature; it was considered not feasible to guarantee a return since newly built houses should be offered below the renewed rent. Another argument was that Welbions aimed to improve the vitality of the area, which is not expected to be achieved by only building social houses.

Diagnosis phase (2011). Contrary to the decisions made in the initiative phase, in this stage decision-makers thought it possibly worthwhile to develop social accommodations in the area, when asked. In this phase three workshops were held to debate social, ecological and financial/economic issues occurring in Hengelose Es. It was decided, based on an analysis of the social problems in the area, to start a few projects for the inhabitants. These problems included a low level of education, many illiterates in the area, low income level, multi-problem households, high unemployment level and disturbances due to noise. For example, projects were started to raise the awareness among inhabitants of health issues (a cooperation with the GGD) and to actively involve inhabitants by means of sport and varied activities (a project, ‘scoren in de wijk’, together with the premier league football club FC Twente). With respect to affordable housing,

it was decided to maximise the rent at 60% of the maximum reasonable rent. When debating reduction of CO2 emissions, it was ambiguous what exactly needed to be achieved, and a clear objective for the energetic quality of the houses was needed. So, the decision about what to accomplish was postponed to the vision phase, because more research was needed. It was, however, decided to rebuild using sustainable materials and to realise energy-efficient houses. With respect to communication and participation, in this phase the line was followed that was set in the initiative phase, to communicate with and involve tenants in each step of the process. Although the decision to demolish 235 houses was already made and could not be discussed any more, the tenants were given the opportunity to state their opinions with respect to the image quality of the new houses. Monthly sessions with employees of the municipality of Hengelo were scheduled to join forces. A working group on Participation was formed with the aim to continuously interact with all stakeholders in an active manner, to raise support and enthusiasm. It was decided to initiate studies to analyse the ecological quality of the area. Research of soil quality, acoustics, flora and fauna, air quality, external safety and archaeology was initiated to gain insights into potential risks and the influence of these criteria on the redevelopment of the urban area. Together with the municipality, the area's cultural, historical, urban planning and architectonic qualities were investigated. It was decided to use the results of these studies for development of a vision.

In the vision stage (2011–2012), after the initiative stage in which no flats were intended for (re)building and a diagnostic stage in which the option to build flats was left open, it was decided to develop flats in conjunction with stakeholders such as e.g. the health care industry. Welbions wanted to involve the park in the development of the urban area because this could positively affect the image of Hengelose Es. It was also decided to allocate a few employees with social tasks to the area. In the social plan, a 'rent accrual contribution' (huurgewenningsbijdrage) was considered, to compensate tenants for a possible raise in rent when they wanted to return to, or end up in, a more expensive house. It was decided, in accordance with the diagnostic phase, to rebuild the area in a more differentiated manner. It was decided to rebuild more luxurious social houses and owner-occupied homes next to social houses, to achieve a more vital urban area and to allow the area to become a social 'booster'. But this differentiated approach was considered necessary foremost because it was financially impossible to rebuild only social houses. It was chosen to rebuild 80%

of the demolished houses, 33% of which were social houses. In the next stage, 344 houses were marked for demolition, and the plan was to rebuild only 50% social houses and 50% owner occupied houses. In total 20% fewer social houses were targeted for rebuilding and at least 50% of the new houses will become available on the market. Government regulations prevent housing associations from taking advantage of the positive investment rules for building houses for the market. For these investments cooperation with more risk-bearing and financially powerful market parties is needed. Welbions, however, remained the orchestrator of the development to guarantee the long-term vision and vitality of the urban area.

In the vision phase it was decided to consciously deal with climate, energy, biodiversity and urban area climate. Conditions for implementation of the energetic quality were that techniques should be easily applicable, they should allow individual usage and be affordable. Awareness with respect to energy usage needed to be stimulated. Sustainable demolition and reuse of materials were still seen as important ecological criteria in this phase. Use of sustainable materials was considered relevant because of the expectation of rising material prices and the slowly diminishing stock of resources. In this vision phase it was also decided not to renovate flats in a sustainable, comfort-raising manner, because it was not financially attractive. It would result in a shortage of €30,000 per house. It was also decided that in the new area it was necessary to closely look into the relation between private, common and collective 'terrain', considering a new combination of new and existing housing environments. The green location of the urban area should be exploited.

Based on the diagnosis of social problems, in the vision phase it was decided to improve the educational level of the inhabitants, lessen multi-problem situations, lower the unemployment rate, raise the income level and improve development opportunities for children. Dealing with diverse cultural backgrounds was also considered relevant for achieving a vital urban area.

Although the themes of climate, clean energy and use of sustainable materials were mentioned in the vision document, in the strategic plan that was designed at the end of the vision stage, it was decided that if it was not financially feasible, the sustainable ambitions needed to be halved to €1.3 million. The meaning given to sustainable ambitions was based on a planetary perspective on sustainability. It was also decided to minimise investments in the open space to approx. €1 million. The real estate developer of Welbions stated that Welbions'

vision of sustainable development was not used in the final strategic choices with respect to the urban area development. In 2012 it was decided to search for market parties to develop the new, non-social buildings, at least 50% of which could not be developed by Welbions. In the procurement criteria and debates with these market parties, sustainability was not mentioned nor a requirement.

CONCLUSIONS

Assessing the strategic choices made in the three stages of the urban area development Hengelose Es, the people dimension was used most dominantly, as is shown in Figure 18.

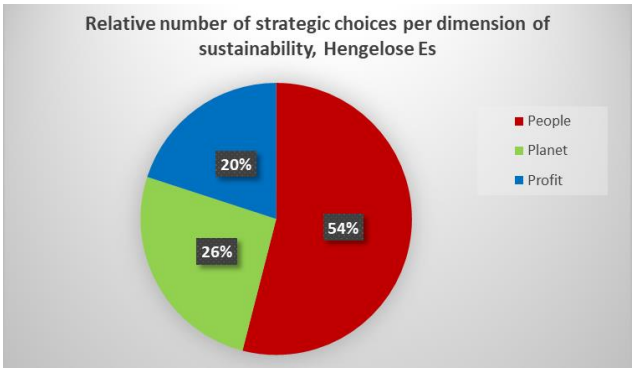


Figure 18. Relative number of strategic choices per dimension of sustainability made in initiative phase, diagnostic phase and vision phase in the urban area development project Hengelose Es, 2010-2013.

Until the vision stage, the profit perspective was not used that much. Only at the end of the vision stage, in deciding upon the directions of the urban area, the profit dimension appears to become dominant and most decisions are based on financial values. The planet perspective per phase becomes less and less used. At the end of the vision stage the sustainable ambitions are prevented by 'not being financially feasible'. One of the most striking decisions was that the budget for sustainable ambitions was cut to half its size.

Or, as the real estate development manager stated, 'It is my full belief that money is the decisive factor. Money in combination with vital urban areas are the core, and one sees that the planet and energetic measures are merely a PM'. He also stated that not one market party came up with a sustainable concept during the procurement process.

Box 1. Case Hengelose Es, intentions to develop an urban area in an integrated way.

6.4 Strategy implementation 2017

In the last stage of the research, one management team meeting was observed and a number of documents were analysed to be able to describe the sense made of sustainability collectively and how sustainability was reflected in the strategic choices that were made. Figure 19 shows the timeline of this period. In this section the results of one observed management team meeting and analysis of notes from management team meetings in 2017 in which sustainability was discussed, are described. A number of documents were analysed showing strategic choices made and the perspectives used in these decisions.

Figure 19 Stage 3, collective sensemaking and strategic choices regarding sustainability at Welbions, 2012–2017

6.4.1 Collective sensemaking of sustainability, 2017

In this subsection the results of analysing statements made by the management team of Welbions in 2017 are presented. Stage 3 in Figure 20 is marked with a blue oval in the figure below, while collective sensemaking is marked with a red bar. One management team meeting was observed. The findings from this observation are briefly described. The number of statements reflecting a meaning given to sustainability are scarce. Therefore these statements are mentioned and not coded. To gain more insights into topics debated in the management team notes from debates about sustainability were collected and analysed. The number of statements derived from this analysis could be coded.

Figure 20 Research, third stage of collective sensemaking of sustainability, 2017

In October 2017 a management team meeting was observed. In this meeting the multiyear budgets were discussed. Sustainability was discussed only a number of times, and only connected to budgets earmarked for sustainability. E.g. in the case of life cycle prolonging investments sustainability was mentioned: 'investments in energy labels are budgeted separately in project forecasts' and, 'it is routine to raise the energy label in these cases'. These statements show a meaning constructed of sustainability as energy efficiency of houses. The budget for sustainability was discussed before the management team meeting in the taskforce on sustainable development. This taskforce on sustainable development consists of three members of the management team including the CEO. In 2017 this team translated external developments with respect to sustainability into ten leading principles. Based on a reflection by the manager of Operations on the process resulting in a MYF 2018–2022, Welbions developed more knowledge with respect to sustainability and as a consequence the MYF were more specific when it comes to estimates about sustainability investments. 'Where the MYF 2017 lacked specific sustainability investments due to lack of connecting it to a sustainable policy and lack of knowledge with respect to what, how and which amounts', MYF 2018 shows a more detailed translation of the principles. Most parts of the sustainability budgets are reserved for making progress in raising the energy label of existing houses. A smaller part is reserved for sustainability projects. However, the question is how to finance it. One statement reflected an opinion about the financial value of sustainability: 'Sustainability will never be profitable'. These statements could all be coded 'F' showing a financial focus. One quote was coded CF, i.e. '…one cannot connect sustainability to the IRR'. From these quotes one can conclude that investments are dominantly assessed against the return on investments indicator, and there

also seems to be a disbelief in sustainability to provide higher return on investments.

Statements derived from notes made in management team meetings in 2017 that could be associated with debating sustainability were coded.

PROFIT DIMENSION

Seven remarks were coded ‘F’, e.g. in debating the leading principles (which were agreed upon) the controller stated that ‘the memo is clear but I expect it will reach our financial limits’. In the real estate strategy (underlying the financial multiyear forecast) it is claimed that ‘a diminishing demand for social housing and realising a higher sustainable value will result in too high a percentage loan to value’. In the agreed decision proposal, in which a number of houses were targeted for transfer into ‘nil energy using’ houses, the expectation was that this measure would not lead to progress for inhabitants but to rising operational cost. In remarks concerning purchases of energy for the office, ‘cheaper purchasing of energy and lowering of overhead cost are considered an objective too’. For new buildings to become energy-neutral, ‘large investments are needed’, according to the real estate development manager. One remark showed a condition for pro-sustainable investments, the internal rate of return.

PEOPLE DIMENSION

Two statements showed conditions for behavioural change (towards sustainability). The first was made debating the strategic letter for 2018. In debating progress towards sustainable houses and urban areas, one of the team members claimed that raising awareness is most relevant. The conclusions after discussing a decision proposal in which 48 houses could be transformed into so-called ‘nil energy using’ houses, was that it was too expensive to transform all 48 houses. However, considering the importance of creating a learning effect, the suggestion was to realise 12 ‘nil energy using’ houses.

Three remarks expressed ways for Welbions to make a sustainable transition. The leading principles were seen as ‘some sort of broad frame based on national and sector agreements to be used to realise quick wins’. In 2018, complying with the Aedes agreement, a plan of action is intended to be designed which provides a guideline on how to achieve CO2-neutral stock by 2050. Different sustainable alternatives will be tested in a pilot for new buildings.

Mechanisms influencing the debate in the management team that were mentioned (four remarks) were the leading principles of sustainability and the role of the audit committee. In the case of a large maintenance project, a check on the leading principles for sustainability, however, was lacking. The chairman of the taskforce on sustainability required that this should be noted (project proposals are made within the real estate development team and checked by the real estate development manager before they are discussed in the management team). In the debate the manager responsible for the development of real estate mentioned that ‘it is not about maintenance on the outside of the houses but the inside’, meaning that the project proposal was not checked against the leading principles – and so not aimed at reduction of fossil fuel use. Members of the management team insisted on noting that the project was not checked against sustainability principles. The manager operations in the same debate suggested to have a sustainability check become routine since ‘all investment proposals should answer to the criterion of sustainability’. From notes of one of the management team meetings, the role of the audit committee was shown to be more important and the multiyear forecast was discussed in this committee, which subsequently asked the management team to consider sustainability in the forecast again and sharpen its role in the forecast.

PLANET DIMENSION

Six statements reflected a focus on energetic quality improvement of the real estate. The aim of reaching energy-neutral or almost energy-neutral houses came to the surface in debates. With respect to energy use of their own office, ‘selection criteria are designed for the purchase of green energy’. The assumption is that it is more difficult to realise energy-neutral multilevel buildings.

SUMMARY OF COLLECTIVE SENSEMAKING 2017

Figure 21A visualises the relative number of statements made in the management team of Welbions in 2017 per dimension of sustainability. The people dimension is used most frequently in making sense of sustainability, followed (only 4% difference) by the profit dimension. Least often used is the planet dimension.

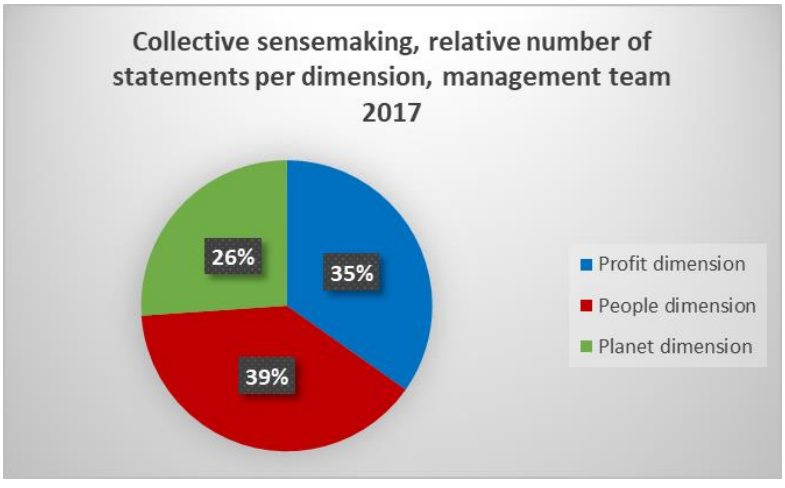


Figure 21A Relative number of statements per dimension, collective sensemaking of sustainability, Management Team Welbions, 2017

Figure 21B shows the codes that were used most often in making sense of sustainability in a number of management team meetings in 2017 at Welbions. Although in total the people dimension was used most often, by far the most dominant code that was used is the 'F' code, reflecting a financial focus on sustainability. An explanation may be found in the growing influence of the Dutch government on the financial position of housing associations after the Vestia debacle. The second most often used code is the 'EN' code, reflecting a dominant association of sustainability with energy. This can be explained by agreements to which housing associations need to comply. These agreements all show a focus on energy and are translated into sustainability principles that show a focus on energy.

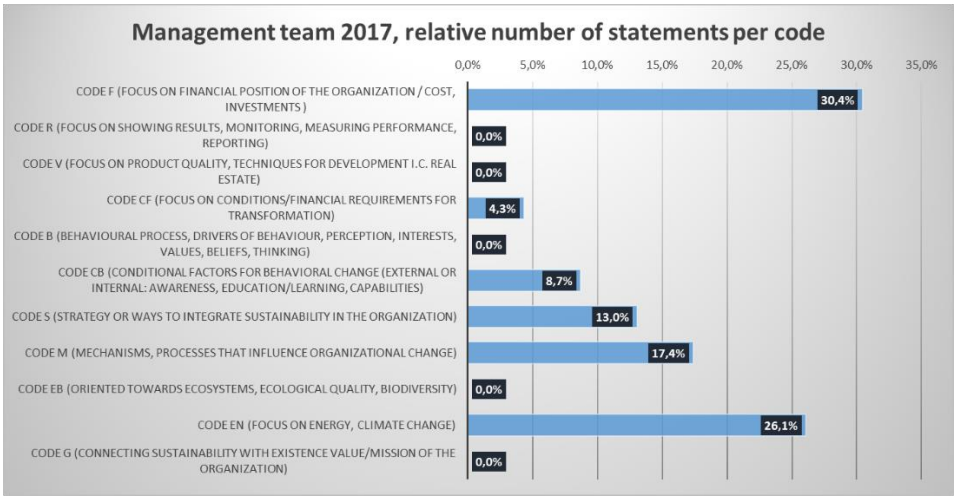


Figure 21B Collective sensemaking of sustainability, 2017. Relative number of statements per code.

A qualitative summary of the topics debated in the management team is displayed in Table 6.10.

Table 6.10 Summary of findings on collective sensemaking, period 2017.

Summary of collective sensemaking 2017, Management team, Welbions

Profit	The target of achieving an average of energy label B for property in 2020 needs to be assessed against the IRR. Realisation of energy-neutral buildings requires large investments; according to MT, it is too expensive to realise 48 zero-energy-use de Jeu houses; tenants are expected not to profit from the investments while maintenance cost will explode.
People	Awareness is of importance, partial implementation of sustainability goals (zero energy use, 25% of 48 so-called 'de Jeu' houses) to learn from it. In compliance with Aedes, Welbions (taskforce on sustainability) has to come up with a plan at the end of 2018 to realise the targets mentioned in the Energy Covenant. Although 10 principles are agreed to guide debates about sustainability measures, there is not yet one decision that is made in accordance with these principles.

Planet	Sustainability is debated from the point of view of energy targets for Welbions, e.g. reducing the energy cost of their own office; by 2023, 250 houses are aimed to have energy label A/B and 100 houses energy-neutral (but it was decided only to realise 12 de Jeu houses at zero energy use...)

NOTEWORTHY

Already in 2009 the Management team asked for sustainability criteria to be used to assess decision proposals against sustainability. These criteria were delivered by the project team in 2010. In the next period, statements showed that these integrated criteria were not used.

In 2017, 10 principles were agreed upon but not used in decisions. The principles show a focus on energy, narrowing down the meaning of sustainability given in previous years.

After the Energy Covenant (in 2023 at least 16% sourcing of clean energy; in 2030 an average label A for all buildings in the Netherlands; a 49% reduction in CO2 emissions), the Dutch government released the report 'Transitie naar Duurzaam', an integrated vision of future energy supplies in the Netherlands (source https://aedes.nl, date of retrieval 12 March 2018). In this report, the targets in accordance with EU policies are that in 2030 CO2 emissions must be reduced by 40% and in 2050 by 80–95% (source: Energierapport Transitie naar Duurzaam, 2016, min EZ).

6.4.2 STRATEGIC CHOICES REGARDING SUSTAINABILITY, 2012–2017

Three documents were analysed to get an idea of the perspectives used in choices made in 2017: (1) the audit report (2017), (2) the memo Leading principles sustainability (2017), and (3) the decision proposal collective energy system Hengelose Es (2017). Therefore, in Figure 22 below the blue bar marking strategic choices runs from 2012 to 2017.

Figure 22 Research, third stage: Strategic choices with respect to sustainability, 2012–2017

PROFIT DIMENSION

In total 18 statements derived from the documents were categorised in the profit dimension.

Eleven statements were made from which a financial focus can be deduced in making strategic choices regarding sustainability. In the decision proposal regarding the energy system Hengelose Es, the necessary investments and cost were described extensively. Application of a collective system for energy supplies was expected to result in higher housing cost; 'this is contradictive to the leading principles. To prevent this rise in housing cost, Welbions will have to compensate its tenants'. An individual system (on gas) resulted in the lowest investment. In the audit report, developments in the financial position of housing associations were mentioned. 'In 2012 the housing association sector was confronted with the consequences of the Vestia debacle, which resulted in an imposed levy in 2013. For Welbions this meant they had to contribute an amount of approximately €7.834 million in 2016 and in 2017 an amount of €8.718 million'. This levy had its consequences for the financial position of Welbions. 'Investments and disinvestments have to provide a future-proof stock that fits with households and target group...in our way of working… the most important principles are quality, cost, sustainability, innovation and risk'. (Factsheet Societal Performance, audit report 2017). In the leading principles the following statement showed a focus on financial position: 'the financial translation of our sustainability assignment will be made in the coming period. This translation will determine what our strategy and goals in the short and long term will be'.

Three statements showed that financial conditions played a role in making strategic choices. In the decision proposal regarding the energy delivery system Hengelose Es (2017), the application of a so-called collective pellet heater was expected to result in higher investments (compared to individual heaters running on gas) but a lower internal rate of return (abbr. IRR). Since this rate deviated from the financial policy, this decision proposal became subject to debates with the supervisory board (which showed the consequences of the new Governance code and the growing influence of the supervisory board in strategic decisions). Conditional for investment space are the rules with respect to spending limits drawn by the Dutch Secretary.

Four statements were made coded 'V', reflecting a focus on the quality of the real estate. In the decision proposal regarding the energy system Hengelose Es, the best sustainable alternative for replacement of individual heaters using gas was considered to be a collective pellet heater. The quality of the real estate asset management and sustainability were highlighted in the position paper audit 2017 as topics of growing importance for the Welbions business plan under construction. The Aedes goal of achieving a CO2-neutral stock also reflects a focus on the sustainable character of the real estate. Welbions stated to 'speed up investments in solar panels, heating systems and infrastructure to achieve the objectives from the Energy Agreement'(Leading principles for real estate sustainability by Welbions, 2017).

PEOPLE DIMENSION

Twelve statements were made reflecting a people perspective in decisions.

Ten statements reflected conditional factors influencing a sustainable transition. In the document 'Leading principles for sustainable real estate, Welbions' most of the statements described external contextual factors influencing a transition, such as the Paris Climate Agreement, the Dutch Energy Agreement of 2013 and 2016, the Regional Programme for New Energy 2017–2023 of the Province of Overijssel, the heating plan of the municipalities of Enschede and Hengelo and the Hengelose Programme New Energy 2017–2021. In the Aedes Agreement 2012, the agreed objective for housing associations was to reach an average of energy label B for its stock in 2021. In 2017 ('Woonagenda') sustainability was an important theme; the objective stated was a CO2-neutral housing stock in 2050. These agreements influence Welbions' sustainability strategy. To achieve objectives, Welbions stated that cooperation with stakeholders is necessary,

more specifically the municipality of Hengelo and the organisation of tenants of Welbions ('Ookbions'). Agreements with Hengelo are obliged as well as participation of tenants, according to the new Housing Law (2015). In the audit report of 2017, in addition to the role of the new Housing Law (2015), new financial regulations and assignments and a new Governance code for housing associations were marked as influential factors. Consequences of these developments were 'new frames for housing and care, treasury and allocation policy. Themes such as housing cost, energy savings and sustainability...received more attention.' An internal factor is considered awareness and support of tenants in making choices which require careful communication (Leading principles for sustainable real estate, Welbions, 2017).

In the position paper, made for the audit and review in 2017, it was stated that 'considering sustainability, Welbions chose to move from establishing new buildings to measures for existing buildings with a life-cycle-prolonging effect'. Principles influencing decision-making, as established in the 'dynamic' 'Warmte plan Enschede-Hengelo' mentioned were technological, legal, spatial and financial developments 'that provide solutions in the future that cannot be foreseen at present but nevertheless influence choices that need to be made' (Leading principles for sustainable real estate, 2017).

PLANET DIMENSION

Ten statements were categorised in the planet dimension, nine of these reflecting a focus on energetic measures. As stated in the Aedes Agreements, Welbions also strives to achieve an average of energy label B for its stock by 2021 and CO2-neutral stock by 2050. In 2016, 76% of the Welbions stock showed an average label C, while 46% of the stock had an energy label B. The decision proposal regarding energy delivery to Hengelose Es was checked against the leading principles, established in 2017. The proposal showed alternatives for energy systems. All the leading principles in themselves, except one, reflected a focus on energy. The one principle that showed a different perspective was the one in which was stated that 'investments in sustainability may not result in higher housing cost for tenants, but preferably result in lower housing cost'. Investments in solar energy and LED lights were aimed to reduce energy cost on the one hand and housing cost on the other.

In the position paper, designed for the audit and review in 2017, the licence to operate was related to ‘working together in a sustainable and active manner, with tenants, the tenant organisation and other organisations’. ‘Welbions is working towards a living environment in which people feel safe, connected and comfortable’.

Not one statement reflected a choice that takes the quality of the total living environment and biodiversity into account.

SUMMARY OF STRATEGIC CHOICES 2012–2017

In 2017 the profit dimension is used most often in strategic choices regarding sustainability, as can be seen in Figure 23A. Second most frequently used is the people dimension. Least used in strategic choices is the planet dimension.

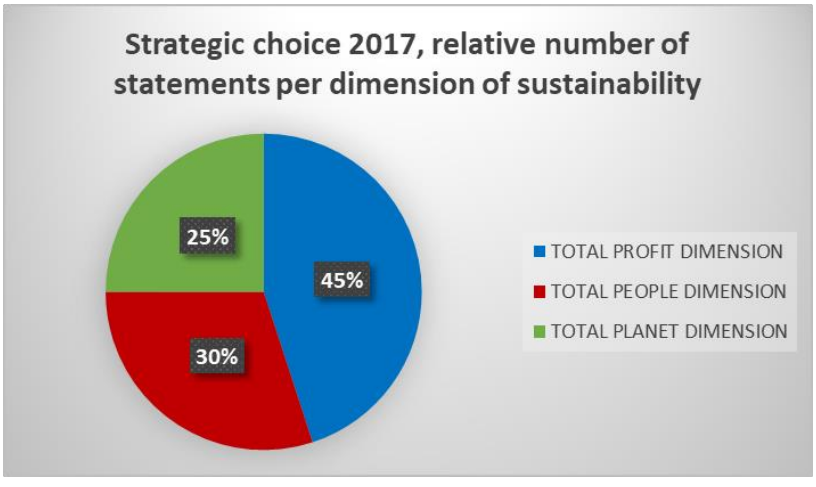


Figure 23A Analysis of strategic choices, relative number per dimension, 2017.

Zooming in on codes most frequently used, the ‘F’ code scores highest, closely followed, however, by the ‘CB’ code of the people dimension (see Figure 23B).

Figure 23B Analysis of strategic choices, relative number per code, 2017.

Not a single statement was made from the perspective of ecosystems, the quality of the living environment or biodiversity (code 'EB'). Most codes within the planet dimension were showing a translation of sustainability into energetic measures (code 'EN').

Table 6.11 summarises in qualitative terms the highlights derived from analysing the documents in which strategic choices were written.

Table 6.11 Summary of statements derived from strategic choice documents, Welbions, 2017

Summary of strategic choices 2017. Findings from analysis of the audit report (2017), the memo Leading principles for sustainability (2017), and the decision proposal regarding the collective energy system Hengelose Es (2017).

Profit	The idea to apply a collective 'pellet stove' is translated as resulting in higher investments and deterioration of the internal rate of return; the conclusion is that it is to be determined whether this idea then fits within the financial policy of Welbions; investments in sustainability may not result in higher housing cost, preferably lower cost of housing. Realising energy-neutral real estate requires large investments (the impact for new buildings on loan to value is highest, followed by building blocks); the

	impact of realising Zero Energy Use houses is that operational cost will double. Investments enable future-proof assets. The foundations for optimisation of asset management are quality, cost, sustainability, innovation and risk.
People	Conditional (or directing) for a transition are the performance agreements with the local government (based on new laws and rules, spec. for the housing association sector); cooperation with customers and local stakeholders is seen as a success factor; the culture of the organisation is seen as a necessary developmental issue to be able to adapt to changes in the environmental context. The goal of realising zero-energy-use houses is (apart from reducing energy use) to create a learning effect.
Planet	The quality of houses, asset management and sustainability are claimed to become more prominent issues in the new business plan. Sustainability is associated with the measuring of and decisions about how to achieve energy use reduction, enabled by the energy label; e.g. Welbions (visitation report) strives towards an average energy label B in 2021, which is following the performance arrangements. The aim is to achieve CO2-neutral real estate in 2050; in the coming years, collective heating systems will be replaced by preferably clean energy systems. The main goals of Welbions are to provide affordable and satisfactory housing; inhabitants of urban areas need to feel safe and familiar, and involved in their surroundings. Active and sustainable participation of tenants, the tenant committee and other stakeholders is required.

NOTEWORTHY

By stating that ‘it is too expensive to transform all 48 De Jeu houses to zero-energy-use (ZEU) houses, the proposal is to transform only 12 of them into ZEU, for creating a learning effect’, the goal of reducing energy use is adjusted and not seen as a goal in itself. No connection is made as to why it is necessary to reduce energy use, apart from the goal to learn – however, what it is that needs to be learned is unclear.

The decision proposal of a collective pellet heating system is declined, in part because it leads to a considerable rise in housing costs for tenants who now have an individual heating system. This rise needs to be compensated for (to

align with the main goal of affordable housing). The leading principles that are pointed to in this choice are: we aim at CO2-neutral property by 2050, there is no delay but temporary choices on the way to this goal are possible if motivated. In this decision, which declined application of a more sustainable (collective) heating system than the individual gas heating system, the motives not to invest were to prevent a rise in housing costs (which required compensation), prevent restricted freedom of choice for tenants in regard to the heating system and doubts with respect to the sustainable nature of the collective heating system (see collective sensemaking 2017, 'do we need a production forest in order to have pellets at our disposal?').

The Manager of Operations asked (October 2017) for sustainability to be discussed in every investment decision proposal; the emergence of the question reveals that this so far is not the case.

6.5 Summary and conclusions

The research question that was answered in this chapter was Which meaning of sustainability is constructed by teams of decision-makers and which meaning of sustainability is reflected in strategic choices? In every time period the people dimension was used most often when making sense of sustainability, although the percentage decreased and in 2017 a more balanced way of making sense of sustainability was noticed, as presented in Figure 24.

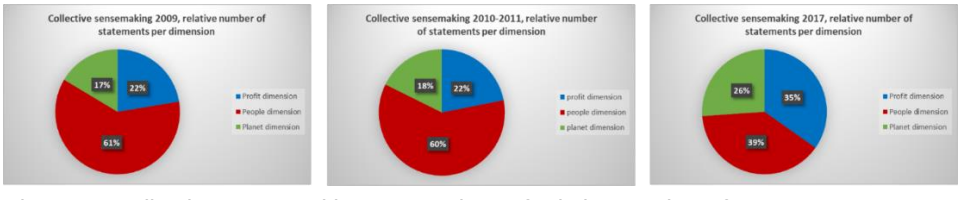


Figure 24 Collective sensemaking, comparison of relative number of statements per dimension 2009–2017.

In every period teams dominantly associated sustainability with energy labels and CO2 emissions. Central to working towards more sustainability are housing costs, quality houses and quality of living environment, although the quality of the

living environment was seen as a motive for raising the financial value of the real estate. Financial conditions for investments in sustainability measures are (societal) return on investments and profitability. But even in 2017 the SROI did not play any role of significance in decision-making. In 2017 the target of achieving an average of energy label B for property in 2020 was merely assessed against the IRR.

Financial position, costs, budget and level of investments determine boundaries of sustainability projects. Innovative technologies are seen as more sustainable techniques (smart equipment) but also as a cause of the rising cost of maintenance. A plan to realise 48 zero-energy-use houses was not chosen because it was too expensive and tenants were not expected to profit from the investments, according to the management team in 2017.

Sustainability also meant a necessary change of behaviour, individually but also the culture of the organisation. Commitment was seen as essential, but lax in the first two periods. This changed, however, in 2017. Knowledge is needed to address unconsciousness and draw attention, inspiration is needed (KNMI exposure). Other requirements: commitment, coordination, constructive cooperation, facilitating (time/money/budget). There is not enough attention to sustainability and movement of managers.

In the formulation of ways to make progress, in the first two periods integrated development of urban areas was thought to enhance the quality, and achievement of vital urban areas was considered important. However, in 2017, in compliance with the Aedes agreements, the taskforce on sustainability aimed to come up with a plan at the end of 2018 to realise the targets mentioned in the Energy Covenant. The meaning of sustainability was narrowed down to energy.

According to teams in every period, Welbions needs an integrated frame (strategy, governance principles) for its decision-making process. Integrating sustainability in procurement criteria, however, appears troublesome; suppliers do not present an outspoken/comparable sustainability view of urban area development, and price is still the decisive criterion. Although integrated criteria were already proposed by the project team in 2010, it is not until 2017 that ten principles (which were dominantly focused on energy and CO2 emissions reduction) were agreed upon by the management team to guide debates about sustainability measures. However, in the first decision proposal that was debated the management team chose not to comply with these guiding principles

In 2009–2010 resources were seen as a strategic theme, obligatory purchasing of sustainable materials marked as a way to make progress. This, however, was not mentioned at all in the next two periods.

The second question was how sustainability is reflected in the strategic choices that are made. In Figure 25 the findings are presented per period. In the first period the people dimension was used most often, but this percentage decreased to 30% in 2017. In 2017 the profit dimension was used dominantly in strategic choices.

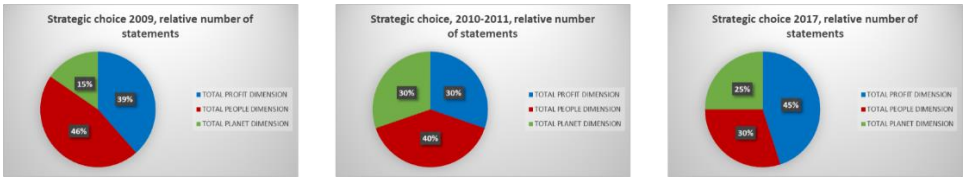


Figure 25 Sustainability reflected in strategic choices, 2009–2017.

In strategic choices, requirements for investments in sustainability, as with any other investment in real estate, are financial and societal return on investments (indirect and direct ROI, liquidity). The main objective of sustainability is to control housing costs and keep these affordable (‘the impact of higher prices for gas, water and electricity may result in climate refugees’). In 2017 the idea to apply a collective ‘pellet heater’ is translated as resulting in higher investments and deterioration of the internal rate of return. Investments in sustainability may not result in higher housing cost, preferably lower cost of housing. Every investment (in energy and sustainability, in society) must be assessed against the central objective of Welbions: financial continuity and generating efficiency; investments in society must contribute to lower operational cost and a rise in market value (value creation). Control of financial risks is central. The foundations for optimisation of asset management are quality, cost, sustainability, innovation and risk management.

Conditional for a sustainability transition are awareness and participation of tenants in collective energy purchases, cooperation with stakeholders (tenants, other housing associations, institutions in the field of living, working, care, well-being, contractors, architects). The institutional setting determines the focus of housing associations: quality of houses, financial continuity, liveability; and the political requirements: sustainable built environment, transparent governance.

Sustainability was not routine in decision-making. Decision criteria mentioned are: quality houses, affordability, contribution to local environmental quality, financial and societal ROI, energy and sustainability, cooperation with the city of Hengelo. However, the (financial) value of real estate and income from rent are determinant, the financial position is assessed against solvability and cash flow. Decision-making is focused on financial economic assumptions.

In the first two periods a broader meaning of sustainability was found. Sustainability was associated with social, physical and ecological aspects of housing (air, water and soil quality) and with spatial quality of the local living environment. In the vision document, Welbions claimed to strive towards balance, providing customers with good-quality houses and living environment at an affordable housing cost, making use of sustainable resources. The aim is 'not to negatively impact on the ecological quality of our planet' (management report second quarter 2011). With respect to resources, Welbions aimed to reuse materials after demolition and study the sustainable character of building materials, to better fulfil the role in the supply chain with respect to sustainability. As early as 2011, however, a narrowing down of the meaning was found; strategic choice documents reflected that the objective of sustainability was to lower energy use and reduce CO2 emissions, which were thought to be related to affordable housing cost and improvement in the comfort of houses.

In real estate management, external factors influencing strategic decisions that were mentioned are demographic (more elderly people, diminishing population growth, change in household composition), economic (rising welfare), societal, political and cultural developments, (housing) market developments (increasing demand for comfortable living), technological developments (home automation, web-based contact) and public administration developments (regional, local agreements).

Diminishing population growth is not seen as a possible success factor for sustainable development – globally, population growth is one of the biggest problems for deterioration of quality living environment but in the local context it is seen from a different view, where the shrinking of the target group means a reduction in property.

7 FACTORS AND FRAMES IN STRATEGIC DECISION-MAKING

7.1 INTRODUCTION

In this chapter the collected data on individual and collective sensemaking and strategic choice will be further analysed following first-order findings in chapters 5 and 6. This chapter aims to answer the following questions: *Which frames and values can be identified when actors (individual decision-makers, teams of decision-makers) make sense of the concept of sustainability, and which frames and values can be identified in strategic choice? Which factors influence the embedding/integration of sustainability in strategic decision-making?*

Firstly, a comparison is made between individual sensemaking, collective sensemaking and strategic choice per time period in Section 7.2. Secondly, patterns will be described that could be identified throughout the three periods in individual sensemaking, collective sensemaking and strategic choice (Section 7.3). Possible explanations and consequences of patterns and differences will be presented by using contextual developments and theory.

In Section 7.4 influential factors and decision criteria that are used in the case of strategic decision-making in the context of sustainability are presented. The values that can be identified in these factors and criteria indicate frame types used by individual decision-makers and groups, and in strategic choices in making sense of the event, i.e. sustainability. These frame types will be used to reflect on differences between (individual and collective) sensemaking and choice. Section 7.5 will compare some theoretical expectations with the findings, in particular factors influencing pro-sustainable strategic decision-making (SDM) and multiple frames as a requirement for effective strategic decision-making. Section 7.6 summarises the main findings and conclusions of the comparisons that were described in this chapter.

7.2 Individual vs. collective sensemaking and strategic choice

In this section, two comparisons are made in every time period. The first comparison is between individual sensemaking and collective sensemaking. A qualitative comparison will be given as well, including a possible explanation of differences between individual and collective sensemaking. The second comparison is a brief one, between collective sensemaking and strategic choice. Strategic choices are made by the management team of the organisation. Therefore, it is considered more useful to see whether is the strategic choices that they made are in line with the (collective) sense made of sustainability by the management team.

7.2.1 First time period: 2009–2010

Comparison 1 Individual sensemaking vs. collective sensemaking

In Figure 1 the results of comparing the relative number of statements per dimension of sustainability in period 2009 are shown.

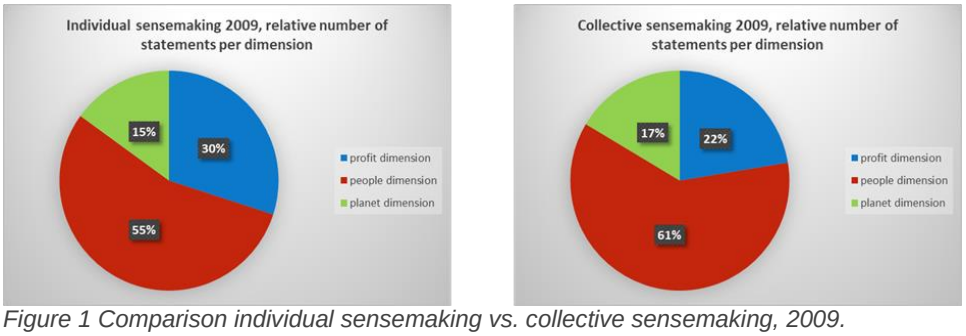


Figure 1 Comparison individual sensemaking vs. collective sensemaking, 2009.

The meaning given to sustainability by individuals and groups in both cases was dominated by a people perspective. In collective sensemaking, the relative number of statements made from a profit perspective, however, was lower than in individual sensemaking (22% vs. 30% among individuals). Perhaps this can be explained by the idea that, in groups, social influence may direct group members to produce socially desirable answers and provide a broader perspective on sustainability. Individuals possibly have more space to reflect and state their true intentions and assumptions with respect to sustainability.

Zooming in on the top three of codes most often used by individuals and teams in 2009, as presented in Figure 2, it is clear that indeed individual decision-makers used the financial code the third most and teams of decision-makers mostly used codes from the people dimension. Individuals and teams dominantly talk about ways to integrate sustainability in the behaviour of Welbions. In the top three codes (according to frequency) no codes from the planet dimension were used.

Relative number of statements, three most used codes	Individual sensemaking 2009	Collective sensemaking 2009
1	strategy (24%)	strategy (22%)
2	conditions for behavioural change (16%)	mechanisms (18%)
3	financial focus, mechanisms (9%)	conditions for behavioral change (14%)

Figure 2 Comparison of individual sensemaking vs. collective sensemaking (all teams), first time period (2009), top three codes most often used.

From a qualitative view, the perspective of individuals on sustainability was one in which the concept was associated with extra costs and investments which should be assessed against ROI. In teams, housing cost was the main focus when talking about sustainability, in addition to cost, budget, investments and reporting on energy labels and CO2 emissions.

Teams talked about sustainability in a broader sense than individuals did. Individuals mainly associated sustainability with energy use and CO2 emissions reduction, whereas teams deliberated more about resources as a strategic theme and about the connection between affordability and the quality of the living environment.

Both individuals and teams claimed decision-making based on the three dimensions of sustainability positively influenced a sustainability transition but Welbions lacked an integrated frame needed to make integrated decisions. Commitment was considered essential both by individuals and by teams.

From this result one could deduce that decision-making is central in transforming an organisation towards a more sustainable one, if the organisation lacks an integrated way of deciding then decisions are dominantly based on financial values.

COMPARISON 2 COLLECTIVE SENSEMAKING MANAGEMENT TEAM VS. STRATEGIC CHOICE

When comparing the sense made of sustainability by the management team to the strategic choices collected from documents (and actually made by the same team), as shown in Figure 3, it is evident that the management team *talked* about sustainability from a people dimension much more than is reflected in strategic decisions. In both cases the planet dimension was used least of all three dimensions. In strategic choices the profit dimension and people dimension did not differ that much in terms of the frequency of codes/statements. It is nevertheless remarkable that strategic choices seemed to be dominantly based on a people perspective.

Figure 3 Comparison of collective sensemaking by the management team vs. strategic choices, 2009.

In Figure 4 a comparison is shown of the top three codes that were used most often by the management team and in strategic choices. What is notable is that in strategic choices the financial code was used most often. This means that categorisation of statements into three dimensions may lead to a distorted conclusion, that strategic choices were based on a people perspective. This is contradicted when using a refinement of categories to label statements.

The conclusion based on a quantitative comparison is that talking about sustainability and making sense of it clearly does not result in the same perspective (code) being used in making strategic decisions.

RANK	top three most used codes	
	MT 2009	SC 2009
1	mechanisms (34%)	financial focus (27%)
2	strategy (19%)	strategy, conditions for behavioural change (17%)
3	conditions for behavioral change (16%)	mechanisms (12%)

Figure 4 Top three codes most used in the management team and in documents of strategic choice, 2009.

Comparing the highlights in qualitative descriptions of teams making sense of sustainability to the sustainable character of strategic decisions showed that teams talked about affordability, housing cost and quality of the living environment. In strategic choices the financial continuity of Welbions and efficiency were the main criteria against which every investment was assessed. Decisions were dominantly based on economic criteria. In strategic choices the position was taken that participation by tenants is essential. However, this choice of position was connected to the statement made in the Business Plan that 50% of investments in energy measured should be paid by tenants via a raise in their rent. In this perspective, laws and rules were seen as a barrier since at least 70% of the tenants need to agree with the investments and the proposed measures in order for the rent to be raised. Of course, tenants were only willing to do so if their housing cost would not be raised. This meant that investments should lead to lower energy costs. In the case where Welbions guaranteed this, the results in behaviour of tenants was that they used more energy, leading to higher energy costs because they thought their houses were insulated and so they did not need to be efficient in their usage (rebound effect).

In teams, sustainability was connected to – as stated above – integrated decision-making, which contradicts the statements found in documents and policies. This leads to the impression that teams may talk about ways to integrate sustainability into their (daily) activities, though these ideas are not reflected in their choices. Making sense of something does not result in making choices using the meanings constructed in interactions.

7.2.2 Second time period: 2010–2013

Comparison 1. Individual sensemaking vs. collective sensemaking

Comparison of individual and collective sensemaking was enabled, as stated above, by comparing the number of statements made by individual interviewees to the number of statements collected from (participant) observation.

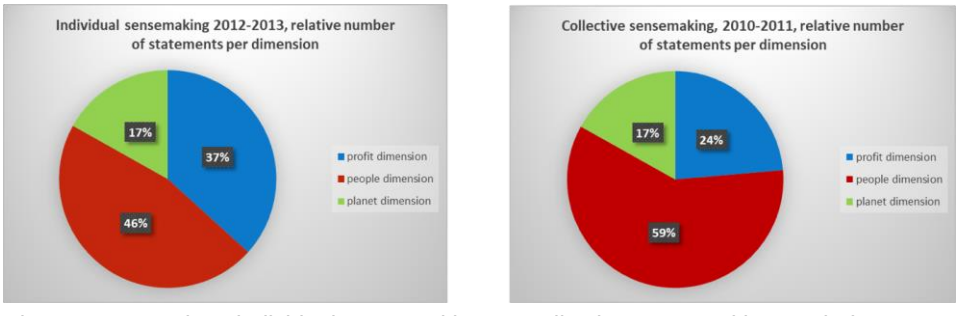


Figure 5 Comparison individual sensemaking vs. collective sensemaking, period 2010–2013.

In Figure 5 the relative number of statements per dimension is presented for individual and collective sensemaking. The people dimension was used most often by individuals and teams. The planet dimension was used similarly (17%) but least of the three dimensions. The same remark can be made in this case as in 2009; when comparing the relative number of statements made from a profit perspective, individuals used this perspective more than teams. This may be explained by group influences. Another possible explanation is that in this time period, sustainability was discussed quite often in teams due to the existence of a project team and a working group that was focused specifically on raising awareness.

Figure 6 shows the three most often used codes. The top three indicate that individuals made sense of sustainability dominantly from a financial perspective (cost, investments), whereas teams used code S most often, meaning that teams debated mostly about how to integrate sustainability into strategy and decisions.

Relative number of statements, three most used codes	Individual sensemaking 2012-2013	Collective sensemaking 2010-2012
1	financial focus (21%)	strategy (26%)
2	conditions for behavioural change (18%)	mechanisms (13%)
3	focus on behaviour (13%)	conditions for behavioural change (12%)

Figure 6 Comparison of individual sensemaking vs. collective sensemaking (all teams), 2010–2013, codes most often used.

As described in Chapter 5, the interviews held in 2012–2013 were more comprehensive, which enabled categorisation of the results into the three distinguished stages of strategic decision-making, specifically seeing: strategic events; analysis: perceptions with respect to strategic decision-making; and thinking: preferences and beliefs regarding sustainability.

From Figure 7, in which the findings per stage are shown and compared with collective sensemaking and strategic choice, it becomes evident that individual decision-makers perceived that strategic decisions were dominantly based on a financial perspective. Moreover their preferences and beliefs reflect a focus on the financial position of the housing association and financial issues such as affordability.

RANK	2010-2013				
	Individual sensemaking 2012-2013 (number of interviewees)			Collective sensemaking 2010-2012	Strategic choice 2010-2012
	strategic events	perceptions SDM	values		
1	conditions for behavioural change (87%)	financial focus (100%)	financial focus (80%)	strategy (26%)	financial focus, focus on energy (17%)
2	financial focus (73%)	focus on behaviour/ mechanisms (93%)	focus on behaviour, conditions for behavioural change (73%)	mechanisms (13%)	strategy (15%)
3	focus on behaviour (60%)	financial conditions for transformation,focus on behaviour (73%)	focus on ecosystems/quality living envir. (67%)	conditions for behavioural change (12%)	conditions for behavioural change (13%)

Figure 7 The three codes used most often, comparison of individuals vs. teams making sense of sustainability and to strategic choice, period 2010–2013

The strategic choices reflect this financial focus, together with a focus on energy measures. Sustainability in practice was mostly interpreted as energy measures. However, in the case of teams interacting about sustainability, the dominant theme was how to integrate to sustainability in organisational behaviour (code S). The influence of contextual factors needs to be taken into account. The influence of government, rules, law and agreements has grown in the last couple of years. Due to scandals in the housing association sector, which resulted in a levy imposed on the entire sector, Welbions was forced to focus on its financial position.

COMPARISON 2. COLLECTIVE SENSEMAKING MANAGEMENT TEAM VS. STRATEGIC CHOICE

When comparing the sense made of sustainability by the management team to the strategic choices collected from documents, as shown in Figure 8, it is evident that the management team *talked* about sustainability from a people dimension much more than is reflected in strategic decisions. In 2009 the planet dimension was used least of all three dimensions by the management team when making sense of sustainability (15%) but from the analysis of claims found in strategic choice documents, the profit and planet dimension were used equally. A possible explanation can be found in the presence of two directors, one with a vision of vitality of urban areas (reflected in an emphasis on urban area development based on sustainability, such as in Hengelose Es, see Chapter 6, Box 1), the other representing a focus on more practical, short-term results. This may have resulted in more balanced strategic choices.

Figure 8 Comparing collective sense made of sustainability by management team vs. strategic choice, per dimension, 2010–2012.

Taking a closer look at the codes that were used most often by the management team and in strategic choices, as presented in Figure 9, strategic choices reflect two codes being used equally in translating sustainability into choices. These codes show a focus on the financial position of Welbions (code F), and an interpretation of sustainability into energy measures (code EN). Teams did not seem to associate sustainability foremost with a financial focus but with ways to integrate sustainability (code S), and behavioural aspects of sustainability. These codes reflect a people perspective on sustainability. This may be explained by the fact that in this time period, teams were rather active in raising the awareness of employees and focusing their attention on sustainability. However, the management team had to take the levy imposed by the Dutch government into account, which affected the financial position of the housing association.

RANK (most used codes)	Collective sensemaking, management team 2010-2012	Strategic choice 2010-2012
1	strategy (23%)	financial focus, focus on energy (17%)
2	focus on behaviour (15%)	strategy (15%)
3	financial focus, mechanisms (13%)	conditions for behavioural change (13%)

Figure 9 Comparison of collective sensemaking of sustainability vs. strategic choices 2010–2012.

Comparing the highlights in qualitative descriptions of all teams, including the management team, making sense of sustainability to the sustainable character of strategic decisions show that in this period the main objective was to control housing cost. According to the Business Plan for 2012–2017, this was even the main objective of sustainability. Affordability and profitability, in addition to social and financial return on investments, were noted as financial goals and requirements for investment decisions. However, teams spoke more of ways to measure the societal rate of return (abbrv. SROI). Research into this topic, however, did not result in the SROI becoming a criterion for investments. In this

period investments in the quality of the living environment were expected to result in a higher financial value of the real estate. Innovative techniques were seen as more sustainable techniques, but also as a cause of increased maintenance cost.

In teams, as mentioned in Chapter 6, interactions and debate were often oriented towards ways to integrate sustainability in plans, in decision criteria and in criteria for tenders. An experiment (Sterrenbuurt) in which sustainability was used as one of the criteria, however, showed that suppliers had difficulties in delivering a concept that could be compared to that of other suppliers. Also, sustainability was merely one of the criteria and was associated with energy use reduction. Therefore, selection of suppliers depended in this case on the idealistic nature of the real estate developer, who was also a member of the sustainable development project team. Both by teams and in documents it was acknowledged that motives for sustainability were predominantly financial in nature. In addition to this was mentioned fear of reputation damage and government policy. Teams came up with the idea to start assessing and weighing decision proposals in a 'Green Room', to guarantee a more balanced way of making decisions. This idea, however, was not implemented. As also remarked by teams, there was no climate of open dialogue or debate about sustainability. The sense of urgency differed among decision-makers and thus also the level of commitment. There was still resistance to a change in routines.

More attention was given by teams to integrate sustainability in developing urban areas. Ideas that came to the surface in teams included paying attention to green/blue zones, animal species, social developments and energy in urban area development programmes. Via Vereniging Woon the focus was on energy. The case of Warmtenet showed that the municipality of Hengelo also focused on energy systems. The management team, however, paid attention to the sustainable character of the entire supply chain. In strategic choice documents, attention was given to building materials. Whereas the urban area development programme was triggered by a strategic choice to demolish buildings, which was quite common in the years before, now attention was paid to reuse of building materials and the sustainable character of the materials. In strategic choice, contrary to the collective, both the quality of houses and the quality of the living environment were in the centre of Welbions activities. This contradiction was discussed in the focus group and this group confirmed that Welbions focused on both goals.

7.2.3 THIRD TIME PERIOD: 2017

COMPARISON 1. INDIVIDUAL SENSEMAKING VS. COLLECTIVE SENSEMAKING

Comparing individual sensemaking to collective sensemaking in 2017, a difference can be seen, as presented in Figure 10 below. In 2017 individual interviewees dominantly used the people dimension (60%), but the management team that was observed used a more balanced perspective when giving meaning to sustainability (although the people dimension was used most, at 39%, this percentage lies close to the profit dimension (35%)). In both cases the planet dimension was used least. When looking at the most dominant dimension in strategic choices, however, the profit dimension was used most.

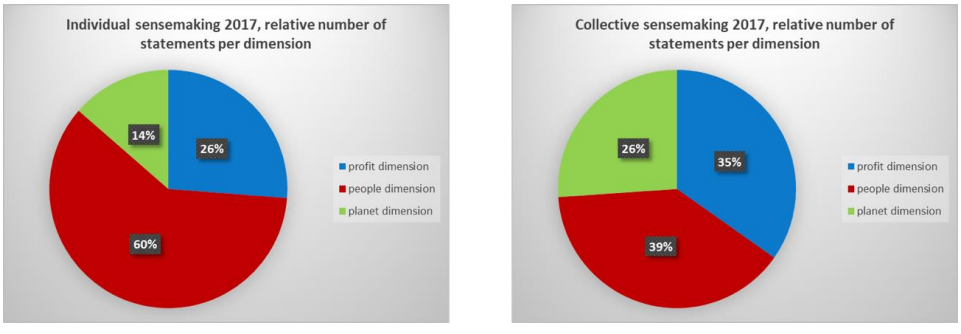


Figure 10 Comparison of individual vs. collective sensemaking of sustainability.

In Figure 11 a comparison is shown of the three most often used codes by individual decision-makers and the management team in 2017. Individual decision-makers and the management team most often used code F, reflecting a focus on financial issues, when talking about sustainability. The second figure shows that when asking individuals specifically about their perceptions regarding sustainability and strategic decision making, and in strategic choices this financial perspective was also used most often. To give an example, investments in sustainability were seen as achieving a higher loan to value, and a lower internal rate of return. Unlike the previous period, individual values did not dominantly reflect a financial focus; when talking about preferred goals and results, individual decision-makers mostly discussed ways to integrate sustainability into processes and conditions that influenced a transition in behaviour (such as the influence of rules and law).

Relative number of statements, three most used codes	Individual sensemaking 2017	Collective sensemaking 2017
1	conditions for behavioural change (29%)	financial focus (30%)
2	mechanisms (15%)	focus on energy (26%)
3	financial focus (13%)	mechanisms (17%)

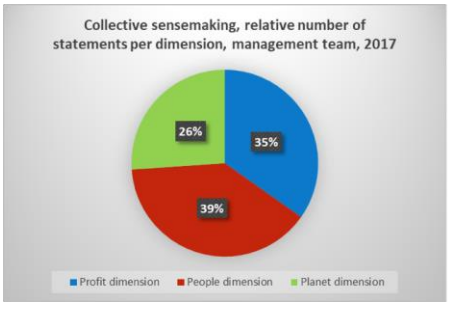
RANK	2017				
	Individual sensemaking (relative number of interviewees)			Collective sensemaking	Strategic choice
	strategic events	*perceptions SDM*	*values*		
1	conditions for behavioural change (100%)	financial focus (100%)	strategy, conditions for behavioural change (78%)	financial focus (30%)	financial focus (28%)
2	financial focus (78%)	financial conditions, conditions for behavioural change (89%)	behaviour, conditions for behavioral change, focus on living environment (44%)	Focus on energy (26%)	conditions for behavioural change (25%)
3	focus on behaviour (67%)	mechanisms (78%)	focus on results, license to operate (33%)	mechanisms (17%)	energy (23%)

Figure 11 Ranking codes, comparison of individual vs. collective sensemaking, 2017

Remarkable is that, contrary to previous years, sustainability was now visibly made sense of as an energy issue in teams and in strategic choices. However, individual values of decision-makers reflected a broader sensitivity to planetary issues, and code EB reached second place in most used codes in 2017.

COMPARISON 2. COLLECTIVE SENSEMAKING MANAGEMENT TEAM VS. STRATEGIC CHOICE

When comparing the sense made of sustainability by the management team to the strategic choices collected from documents (and made by the same team), as shown in Figure 12, it is evident that the management team talks about sustainability in a more or less balanced way although the planet dimension is still used least often. However, the choices made reflect a dominant focus on the profit dimension of sustainability.



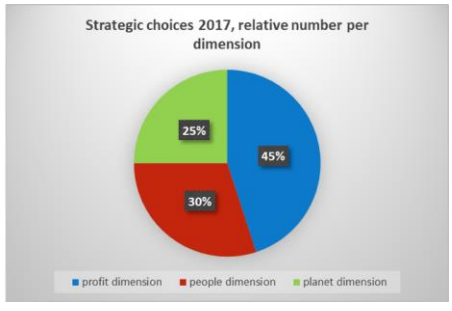


Figure 12 Comparing collective sensemaking and strategic choice, 2017.

Zooming in on the top three codes that were used most often (Figure 13) shows that in 2017, in the team and in documents, an association of sustainability with energy and CO2 was used often. This can be explained by agreements on the international and national level (Paris Climate Agreement, National Energy Agreement) that forced Welbions to comply with measures to reduce energy use and transform the stock in order to prevent gas usage in 2050.

RANK (most used codes)	Collective sensemaking, management team 2017	Strategic choice 2017
1	financial focus (30%)	financial focus (28%)
2	focus on energy (26%)	conditions for behavioural change (25%)
3	mechanisms (17%)	focus on energy (23%)

Figure 13 Comparing ranked codes, collective sensemaking vs. strategic choice 2017.

In qualitative terms, it can be concluded that in 2017 the IRR of investments in sustainability was decisive for making strategic choices regarding sustainability. Both from the management team and in documents, this appeared to be a decisive factor in strategic decision-making.

The goal of sustainability was now translated as raising energy labels of property. According to the management team, in compliance with agreements, realisation of energy-neutral buildings required large investments. The assumption was that this would result in exploding maintenance cost.

However, due to the Energy Covenant and performance agreements, Welbions needed to make progress. The (partial) realisation of Zero Energy Use houses was seen as offering a learning opportunity. The ten principles that were chosen, however, did not yet guide strategic choices.

Welbions had to deliver plans in 2018 for how to make progress towards energy-neutral real estate (target 2050). Cooperation with customers and local stakeholders was mentioned in documents as a success factor for a transition, as well as developing the culture of Welbions in order to raise its adaptive capacity for changes to come.

7.3 Longitudinal comparison

In this section patterns and developments of individuals and teams making sense of sustainability and strategic choices at Welbions will be described. Developments in the three time periods are presented and possible explanations for changes and developments are given, based on contextual developments and theory.

7.3.1 Individual sensemaking from 2009 to 2017

In order to compare the meaning given to sustainability in 2009 to the two later periods (2012–2013, 2017), the total number of statements per sustainability dimension is counted per period, and the relative number of statements per dimension is depicted in circle diagrams, as shown in Figure 14. In this chapter, a quick (quantitative) overview of the relative number of statements is chosen instead of a comparison of the relative number of interviewees per dimension, because this would present a rather distorted view. For example, the number of interviewees in 2012–2013 that used the people and profit perspective to make

sense of sustainability was 15 in both cases. But a different picture emerges when looking into the number of statements per dimension. In order to make a comparison with collective sensemaking, the number of statements provides a better basis for indicating which dimension is used most often by individuals.

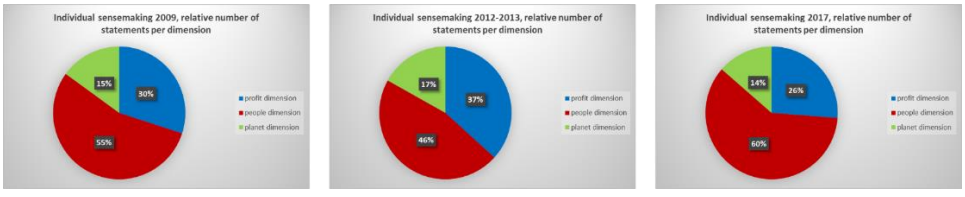


Figure 14 Comparing individual meanings of sustainability, 2009–2017.

As shown in Figure 14, the people dimension is used most often by individuals when they talked about sustainability, in every period. The planet dimension was used least often.

Getting an impression of development and changes throughout eight years of individual sensemaking, the number of interviewees per code is more helpful. In Chapter 5, the results from analysing data collected from exploratory interviews in 2009 and from a survey held in 2011 are presented together. In this chapter only the exploratory interviews from 2009 will be used in order to be able to compare the result to the other two periods.

The findings from exploratory interviews in 2009 were an answer to the general question of what the meaning of sustainability is. After this first stage of data collection in 2009, and based on a literature study, the researcher decided to zoom in on the different elements to reveal underlying assumptions with respect to strategic decision-making and sustainability. Interviewees in 2009 often spoke of the relevance of decision-making based on sustainability. After this first data collection round, theory on strategic decision-making was studied. Subsequently, in the next two periods more detailed questions with respect to this process were posed to individual decision-makers. These questions were categorised under the stages of strategic decision-making that were distinguished. In the interviews held in 2012–2013 and in 2017 three phases guided data collection from individual decision-makers: (1) seeing: observed strategic decision situations, (2) analysis: perceptions with respect to the current method of deciding (aiming at finding mechanisms occurring in these processes) and (3) thinking: the underlying preferences and beliefs of decision-makers with respect to sustainability.

Figure 15 shows the top three codes per dimension of sustainability that were used most often by interviewees per time period. The quotes by interviewees were coded, and the number of interviewees making statements per code was counted and expressed as a percentage of the total number of interviewees in that period (34 in period 1, 15 in period 2 and nine interviewees in period 3). For an explanation of the codes, see Chapter 4 Table 4.1.

Individual sensemaking of sustainability, top three codes most often used by individual decision-makers, 2009-2017

	2009	2012-2013			2017		
rank		*strategic events*	*perceptions DM*	*values*	*strategic events*	*perceptions DM*	*values*
1	S	CB	F	F	CB	F	CB,S
2	CB	F	CB,M	CB,B	F	CB,CF	B, M, EB
3	CF	B	B,CF	EB	B	M	

Dimension of sustainability	Code
Profit	code F: focus on financial position of the organisation / cost, investments
	code R: focus on showing results, monitoring, measuring performance, reporting
	code V: focus on product quality, techniques for development i.c. real estate
	code CF: focus on conditions/financial requirements for transformation
People	code B: behavioural process, drivers of behaviour, perception, interests, values, beliefs, thinking
	code CB: conditional factors for behavioural change (external or internal: awareness, education/learning, capabilities
	code S: strategy or ways to integrate sustainability in the organisation
	code M: mechanisms, processes that influence organisational change
Planet	code EB: oriented towards ecosystems, ecological quality, biodiversity
	code EN: focus on energy, climate change
	code G: connecting sustainability with existence value/mission of the organisation

Figure 15 Comparison of individual sensemaking of sustainability, top three relatively most used codes in 2009, in 2012–2013 and in 2017.

The first noteworthy element in this comparison is that in every time period interviewees often talked about conditions that need to be met before a change of behaviour can be accomplished (code CB, red circles in Figure 15). When interviewees talked about strategic events of relevance for sustainability, the top three codes in 2012–2013 are similar in 2017 (large yellow ovals). In the first period, as described in Chapter 5, least often expressed were statements reflecting an association of sustainability with the quality of the living environment (code EB). This changed in the next two periods. In 2012–2013 and in 2017 interviewees when asked about their beliefs and values with respect to

sustainability focused more on the quality of the living environment (code EB) than on energy efficiency (code EN). This is surprising in 2017 because in this period, due to agreements and covenants, housing associations were more pushed towards a focus on energy measures. Rank 1, however, in 2012–2013 was code F, reflecting a focus on financial values. This differs from 2017, when interviewees dominantly spoke about ways to integrate sustainability into Welbions' strategy (code S) and conditions for behavioural change (code CB).

In 2009 Welbions started constructing a meaning of sustainability. In this year the interviewees were mostly talking about *how* Welbions could make progress towards this strategic theme, which reflects a dominancy of people perspectives.

In 2010 and 2011 the sustainable development project team and working group on awareness were active in sharing knowledge and organising activities to raise employees' awareness of sustainability. After these years less attention for the strategic theme of sustainability was noted. A possible explanation for diminished attention is that the housing association sector had to deal with more laws and regulations from the Dutch government, influencing the financial position of housing associations. Another reason for sustainability to become 'pushed to the periphery' as Weick stated, was that the EU prescribed that a minimum of 90% of the property was obliged to be rented out to customers with a maximum annual income of €33,200. Commercial activities and activities aimed at raising the quality of the local living environment – an activity where housing associations stepped in due to negligence of investments by local municipalities in the years before – were reduced. This resulted in fewer revenues from more luxury property, which prevented investments in newly built houses and in sustainability of existing buildings. Another explanation can be found in the guidelines for (financial) valuation of property[71]. In 2012–2013 the value of the association's property was still based on operational value. There was no space for valuing the use of more sustainable materials, nor for valuing the remaining value of materials after demolition. Although this was changed in 2015, valuing property based on market value also meant, according to some interviewees, that the

[71] The valuation principles of housing associations before the new law were found at cfv.nl, after the new law at http://www.woningwet2015.nl/kennisbank/daeb/wonen/waarderen-op-marktwaarde, and in addition in https://www.rjnet.nl/globalassets/rj-uitingen/2018/rj-uiting-2018-2-toegelaten-instellingen-volkshuisvesting.pdf, retr. 2018/08/30.

financial position of housing associations became more sensitive to economic and market developments in the real estate market, which suffered quite severely from the economic crisis. Changes in the staff of Welbions also meant shifting the focus of attention to organisational development, which resulted in ignoring sustainability.

The fact that Welbions paid less attention to sustainability after 2011 fits with sensemaking theory. A disruptive event, such as sustainability, is initially ignored. When contextual changes imply a focus on old routines (financial position and values), a relatively new event such as sustainability will not lead to enactment.

QUALITATIVE COMPARISON

PROFIT DIMENSION

Every period showed a focus on cost and investments by the interviewees. In 2017 investment capacity was said to be influenced by the levy imposed by the Dutch government, but even before this levy, interviewees in 2009 talked about extra cost and investments that were necessary for implementing energy measures. It is remarkable that they were not very specific about these extra costs and investments, and they also counterargued this by stating that the financial consequences are unknown (2009), the profitability of sustainability measures is unknown (2012–2013) and that there are hardly instruments available to calculate these consequences (in 2017).

The main reason why sustainability was acknowledged as a strategic theme was the connection between affordability and sustainability. Investments in sustainability (energy) measures were thought to influence the affordability of housing, which is a core part of the legally established mission of any housing association.

The economic crisis was used by some interviewees to a certain extent in their arguments for the necessity to focus on efficiency and cost. But in 2009, before the crisis, an interviewee clearly stated that sustainability was not the decisive factor in decisions with respect to urban area development. This did not change, as became clear in the case of Hengelose Es (see Box 1 in Chapter 6).

Technological development was also said to influence a sustainability transition. But the speed of developments in techniques was also misused as an argument

not to invest in sustainability, by stating that the sustainable nature of alternatives was doubted and thought to restrict customers' freedom of choice, e.g. in the case of Warmtenet (2009) and in the case of collective heating systems based on pellets in 2017. On the other hand, one interviewee claimed that every technical improvement was already more sustainable than techniques used before.

PEOPLE DIMENSION

In every period, interviewees spoke of the importance of creating awareness, a sense of urgency and attention to sustainability. In 2012–2013 interviewees still claimed that there was insufficient sense of urgency; in 2017 an interviewee stated that growth in attention to sustainability was noticed. Also, in every period, interviewees thought that integrated decision-making – decisions assessed against the three dimensions of sustainability – would contribute to a more sustainable Welbions. Necessary to make progress was indeed the commitment and exemplary behaviour of the management. This changed throughout the three periods. Whereas in 2010 one of the ambassadors discussed the non-sustainable car of one of the directors, in 2017 both directors had electric cars. But in 2012 an indifferent attitude towards sustainability was noted. A possible explanation was that in this time period the influence of the (national and local) government grew and was focused on the financial position of housing associations, leaving less room for sustainability. In 2017 the role of the government and of rules and covenants meant a focus on energy, narrowing down the meaning of the sustainability concept. According to interviewees, intrinsic motivation was a necessary condition for behavioural change in every time period, but due to institutional arrangements the sector merely complied with this narrow version of sustainability. Strategies to implement sustainability were short-term and fragmented (executing pilots). There were conflicting assumptions with respect to the role of knowledge and information in making pro-sustainable decisions. On the one hand, interviewees in every time period thought is essential to have more knowledge, that there was insufficient information. On the other hand, some interviewees stated that knowledge and information did not play a significant role in decision-making. These interviewees stated that decisions were dominantly based on emotions, reputation and cost (knowing that calculating financial consequences of sustainability was complex, if not impossible). For example, in 2012–2013 some interviewees stated that fear of change prevented the entire housing market from transforming.

As was mentioned in Chapter 3, research has made clear that although human beings are greedy for information, this does not lead to better decisions (Mintzberg et al., 2009: pp. 163–164). Information is used more afterwards to discuss or explain decisions that were made (cognitive dissonance theory (Mintzberg, 2003)). In this perspective, perhaps the need for information is not so much to improve decision-making as it is to raise the credibility (explain and receive commitment afterwards) of the decisions that were made, reducing fear of not receiving support.

Conflicting arguments were provided about diversity of views and interests. In 2009, different views were acknowledged. However, when asking interviewees in the next two periods about possible divergent views (in theory seen as raising the effectiveness of decision-making), conflicting statements were made. Some interviewees stated that there were no opposite meanings about sustainability, while others explicitly claimed that there were differences in intentions and goals which prevented a collective movement. Different opinions also related to the speed at which Welbions would need to transform. But in every time period sustainability was associated with being proactive, a healthy environment, integrated decision-making, responsible behaviour and being flexible, long-term and organic.

PLANET DIMENSION

In 2009 interviewees spoke mostly about energy use and affordability of housing as a social responsibility of housing associations when asked about the relevance of sustainability. In 2012–2013 and in 2017 sustainability was spoken of from a broader perspective and associated with scarcity in resources, quality and healthiness of the living environment. Elements of sustainability that were mentioned were the reuse of materials and use of renewable resources, and Welbions should, according to informants, prevent a negative impact on the ecosystem. It seemed that after the first period (2009), in which resistance to sustainability was detected, and in which sustainability was often translated as ‘expensive’, decision-makers became more ‘accustomed’ to sustainability and gave it more thought. However, from remarks made by one member of the taskforce in 2017, not much action seemed to accompany this broader perspective, apart from complying with covenants and agreements that were focused on reducing the use of fossil fuels, energy use and CO2 emissions of

property. The remarks made by this interviewee showed that actions already suggested in 2009–2010 by the working group on awareness were still not part of the routine in the organisation.

7.3.2 Collective sensemaking from 2009 to 2017

This subsection starts with a quantitative comparison to get a first idea of the perspectives that were used most often by teams of decision-makers in making sense of sustainability.

In order to compare the meaning given to sustainability in 2009–2010 to the other two periods, the total number of statements per dimension is counted per period, and the relative number of statements per dimension is depicted in circle diagrams, as shown in Figure 16.

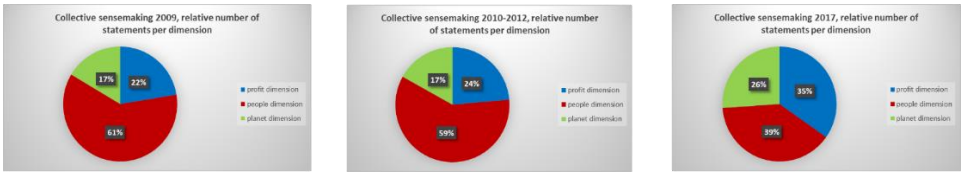


Figure 16 Collective sensemaking in 2009, 2010–2011 and 2017, relative number of statements per dimension.

As appears in these circle diagrams, in every time period the people dimension was used most often, and the planet dimension was used least in making sense of sustainability. However, in 2017 a drop in the use of the people dimension was noticed, whereas the use of the profit dimension and planet dimension grew. In 2017 a development towards an equal distribution of the three dimensions was noticed in the collective sensemaking of sustainability. In 2017 only one team was observed. To make a good comparison, the circle diagrams depicted in Figure 17 show the distribution of the relative number of statements per dimension noted from management team meetings only in every time period. Initially, the management team dominantly used the people dimension in making sense of sustainability. In 2009 the percentage was 78%. The planet dimension was used in only 9% of the total number of statements. However, in the two periods that followed, a more balanced way of sensemaking can be read from the diagrams; both the profit and planet dimension rose from 13% and 9% respectively in 2009 to 35% (profit dimension) and 26% (planet dimension) in 2017.

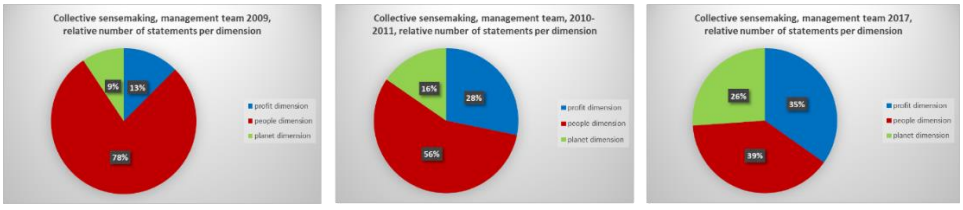


Figure 17 Sensemaking of sustainability by Welbions Management Team 2009–2017

Figure 18 shows the *codes* that were used most often. The top three codes are shown that were used most often by all teams of decision-makers and the codes used most often by the management team in the three time periods. This ranking is based on the relative number of statements (number of statements per code expressed as a percentage of the total number of statements) per code, per period. The lower half of Figure 18 expresses the top three codes used most often by the management team only.

Collective sensemaking, 2009-2017	2009		2010-2012		2017	
rank	CS all teams	CS, MT	CS all teams	CS, MT	CS all teams	CS, MT
1	strategy (22%)	mechanisms (35%	strategy (26%)	strategy (23%)	financial focus (30%)	financial focus (30%)
2	mechanisms (18%)	strategy (19%)	mechanisms (13%)	focus on behaviour (15%)	focus on energy (26%)	focus on energy (26%)
3	conditions for behavioural change (14%)	conditions for behavioural change (16%)	conditions for behavioural change (12%)	financial focus, mechanisms (13%)	mechanisms (17%)	mechanisms (17%)

Figure 18 Comparison of codes used in all teams in the period 2009, 2010–2012 and codes most frequently used by the management team.

With respect to all teams it is remarkable that the top three codes that were most used in 2009 are almost the same as in 2010–2012. Five years later, however, a financial focus dominates interactions about sustainability, approximately 30% of the statements showed a focus on the financial issues associated with sustainability. Code EN, showing a focus on energy, CO2 and climate change, appears among the top three most frequently used codes for the first time.

Comparing the codes used by all teams with the codes used by the management team in making sense of sustainability shows that in 2009–2010 the codes ranked 1, 2 and 3 were the same though their rankings differed slightly. In 2010–2012 the management team dominantly spoke of ways to integrate sustainability. However, the relative number of statements coded into behaviour (code B), mechanisms and processes involved in a translation of the concept (code M) and financial impact of sustainability (code F) were not that different from the codes that were used in fourth place, namely quality of the living environment (code EB) and financial conditions (code CF). The pattern that emerges is that in this stage the management team showed more diversity in making sense of sustainability compared to all teams.

In 2017 the management team dominantly talked about financial aspects connected to sustainability. A possible explanation for this change in ranking compared to the other two stages can be found in the changed institutional context. Two developments had an impact on the financial position of the Dutch housing associations. Agreements obliging the housing associations to achieve a reduction in CO2 emissions and a target to make a transition towards an average of energy label B in 2023, and CO2-neutral property in 2050, resulted in debates about how to achieve this and about measures to raise the energetic quality of the property. After scandals such as the Vestia debacle, the Dutch government imposed a levy on the housing association sector and a new law meant more supervision of the quality of governance in the sector. In the laws and rules there is a sharp focus on criteria for the financial position. The supervisory board at present debates with the board of directors about strategic decisions much more often, specifically the financial consequences of investment proposals (IRR). Code M was used in every stage, reflecting a focus by the collective on mechanisms influencing social interactions and processes operating at Welbions, particularly decision-making.

QUALITATIVE DESCRIPTION

PROFIT DIMENSION

In every period a focus on the financial position and financial conditions for sustainability were noted. According to teams, a (societal) return on investments and profitability are conditional for investments in sustainability. The available budget for sustainability measures, specifically for providing houses with an

energy label and for measures to reduce energy use, was €100 per house (per year), half of which was expected to be paid by tenants via a rise in rent. The payback period was labelled as problematic, considering the speed of mutations – 8% per year – but also considering the legal requirement that a minimum of 70% of tenants who are involved in projects aimed at raising the energetic quality for which investments are needed must agree with this raise in rent in exchange for an uncertain lower energy cost.

Sustainability in 2009–2010 and in 2017 was even more dominantly associated with energy labels and CO2 emissions. Realisation of energy-neutral buildings requires large investments, according to the management team. Reporting on these two items was seen as important (e.g. Welbions contributed a great deal of effort to developing an energy barometer in cooperation with Vereniging Woon).

Central to working towards more sustainability were housing cost and improving the quality of houses and the quality of the living environment. The connection is that a high-quality living environment is expected to result in a high financial value of real estate. The central aim is affordability of housing. In 2017 the IRR conditioned every strategic decision, due to the more active role of the board of supervisors in strategic decision-making.

PEOPLE DIMENSION

Based on the statements made by teams in 2009–2010, sustainability meant that a change in behaviour, and also in the culture of the organisation, was considered necessary. Commitment on the part of all managers was considered a success factor for a sustainability transition. But teams noticed that commitment to sustainability was problematic, in particular at the level of management. Even within the sustainable development project team (consisting of managers), intrinsic motivation was an issue.

In the formulation of ways to make progress, integrated development of urban areas (development based on three dimensions of sustainability) to enhance the quality and achieve vital urban areas was considered important. Pilots were suggested in addition to use of decision criteria based on three dimensions. Teams thought the organisation was in need of an integrated frame for its decision-making process.

In the next period, integrating sustainability in procurement criteria appeared problematic. Suppliers appeared not to deliver comparable offers. In the end, price remained the dominant decision criterion and proved a barrier to

implementing sustainability measures. Another barrier noted by the working group in this stage was the resistance of many employees to change and to even considering changing their daily routines. However, some proposed a ‘green room’ to check decision proposals before debate in management teams against the three dimensions of sustainability.

In 2017, the management team talked about delivering a plan in 2018 to realise CO2-neutral houses, as agreed to in the Energy Covenant. A taskforce on sustainability proposed 10 principles for guiding decisions to be based on sustainability, but admitted that no decision aligned with these principles had been made yet. The principles showed a narrower meaning of sustainability than in the previous years by focusing on CO2 emissions and the energy quality of real estate. In debating the multiyear forecast, however, sustainability/ energy measures (raising the label of houses) seemed to have become more routinely integrated into budgets than in the first two periods.

PLANET DIMENSION

In 2009–2010, resource scarcity in the stock of fossil fuels and building materials was seen as a strategic theme. Integrating sustainability as a criterion in tenders and in procurement policies was marked as a goal. The main aim of sustainability was, however, to keep housing affordable. This was considered to be connected to the quality of the living environment, climate and clean energy use.

In 2010–2012 thinking about pilot projects in urban area development seemed to be based on a broad perspective on sustainability. There was a debate about green and blue zones in city areas, green roofs and water storage. In the case of Hengelose Es, an external company was paid to analyse biodiversity, water and air quality in the area. In meetings about plans to develop the living environment, the ambassadors for sustainability, as well as clients, even mentioned the relevance of water and animal species when talking about sustainability. A sustainable supply chain was the topic of a meeting with suppliers, initiated by the director of Welbions.

In 2017 the management team focused completely on the energetic quality of the office, of Welbions’ property and the target to reach 250 houses with energy label A/B in 2023 and 100 energy-neutral houses.

A number of events could explain some of the differences that were noticed in collective sensemaking of sustainability throughout the time periods. Initially, in 2009, teams talked more about ways to integrate sustainability (energy measures) into daily operations. This task was assigned by the board of directors. In 2010, however, a change in this board occurred. One of the directors left the organisation, as did the Strategy Manager. The structure of meetings also changed and, in contrast to the outspoken commitment to sustainability in early 2010, the topic of sustainability and awareness raising was given low priority. Sustainability was not debated in management team meetings as agreed to. Therefore, the sustainable development project team also started focusing on long-term goals and creating a sub-team, the working group on Awareness. The financial position, cost, budget and level of investments determined the boundaries of sustainability projects, but sustainability was not integrated in the yearly planning and control cycle and was not even an obligatory element of departmental plans. According to members of the sustainable development project team, this low priority and focus on financial consequences was for a large part the responsibility of an interim manager of the strategy team who did not intend to pay much attention to sustainability and only considered, as one member of the project team stated, ‘selling the services of his company to support Welbions in calculating the financial consequences of sustainability’.

At the end of 2010 the HRM manager and interim manager of strategy left Welbions. Perhaps due to two new managers and certainly due to EU interference, debates about sustainability seemed, however, still of less importance than the development of the organisation and adjustment to new government rules. In 2011 the job of strategic consultant on sustainability was made redundant. In one of the working groups that were initiated to start organisational development, the working group on prioritisation, sustainability was not on the agenda for debate.

In 2012 the second director of Welbions left the company. The impact of this departure was perhaps that even less attention was paid to sustainability and debating long-term issues in teams. In the case of Hengelose Es, the suppliers that were chosen were not instructed to develop the area in the original three-dimensional, sustainable way.

In 2015, a merger with the Bornsche housing association meant a focus on organisational development and less attention to sustainability. After this merger, agreements and covenants, such as the Paris climate deals and the Energy

Agreement, forced housing associations to make progress in the energy transition. The collective meaning of sustainability in this period was primarily based on the energetic quality of real estate, energy use and CO2 emissions.

7.3.3 Strategic choices from 2009 to 2017

This subsection starts with a quantitative comparison to indicate the perspectives that were used most often in strategic choices with respect to sustainability.

From analysis of the remarks reflecting choices, derived from (decision) documents in 2009, in 2010–2011 and in 2017, the following picture emerges (Figure 19).

In the first and second period, the people dimension was used most often. In 2009 the planet dimension was used least (15% of the choices) but in 2010–2012 the planet and profit perspective were used equally in strategic choices (both 30%). In the last period, a change in perspective can be seen; the profit dimension was used most often (at 45%), followed by the people dimension (30%) and least used is the planet dimension (25%).

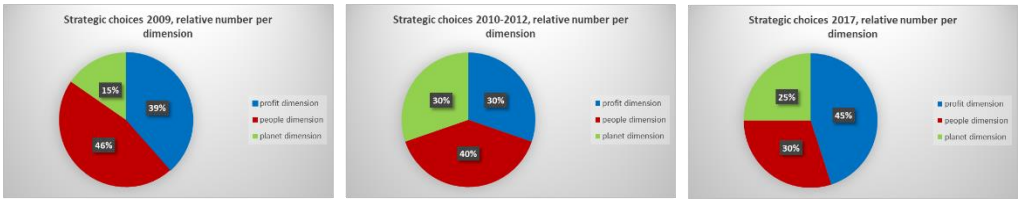


Figure 19 Comparison of dimensions reflected in strategic choices made in the three time periods.

Zooming in on the codes that were detected in the strategic choices, in all three periods the financial perspective was used most often in choices that were made, as shown in Figure 20. In 2010–2012, in addition to this financial focus, sustainability seemed to be translated mostly as implementing energy measures (code EN). This association of sustainability with energy measures ranked third in 2017.

top three most used codes	SC 2009	SC 20102012	SC 2017
1	financial focus (27%)	financial focus, focus on energy (17%)	financial focus (28%)
2	strategy, conditions for behavioural change (17%)	strategy (15%)	conditions for behavioural change (25%)
3	mechanisms (12%)	conditions for behavioural change (13%)	focus on energy (23%)

Figure 20 Strategic choices in the context of sustainability, period 2009–2017, Welbions.

QUALITATIVE DESCRIPTION

PROFIT DIMENSION

In every time period the same financial conditions for investments decisions were mentioned: societal and financial return on investments. Investments in sustainability are restricted by the financial position of Welbions. Some slightly different accents were noted over the years. In 2009 *every* investment was assessed against its ability to create financial value, which was considered the main goal. Thus, investments in sustainability were expected to contribute to lower operational cost and result in a higher market value. In 2010–2012 the balance in people, planet and profit was considered 'our starting point' for investments in sustainability. This can be read as a more balanced goal. However, also found was that 'the main objective of sustainability is to control housing costs and keep these affordable'. Connecting sustainability to this starting point, which represents the profit dimension of sustainability, seems to contradict the other starting point, representing all three dimensions of sustainability. This ambiguity is recognised in later years as well. In 2017 investments in sustainability 'may not result in higher housing cost, preferably lower cost of housing'. Decision proposals were also assessed against the goal of making progress in energy use and CO2 emissions reduction but financial values were still given priority in the choices that were made.

From this development one can conclude that there was ambiguity with respect to the main objective of the organisation in the context of sustainability. The main objective throughout the years seemed to be to create financial value. In the second period, the goal that was stated was to balance people, planet and profit, though there seemed to be discussion about this. In the last period, however, it became clear that, although goals with respect to energy use reduction were mentioned in decision proposals, choices were based primarily on financial values. One could conclude that if there is clarity about the 'traditional' main goal of the organisation – which is to create financial values, choices are also based on financial values and the goals that are debated, ambiguous or uncertain are not guiding choice.

PEOPLE DIMENSION

From the choices expressed in documents in 2009 a focus on the goal of raising the awareness and involvement/participation of both employees (firstly) and tenants (secondly) can be noted. Institutional settings determine the focus of housing associations; in the BBSH in 2009 sustainability was not integrated in a broad sense but focused on energy measures. In decision criteria sustainability was also translated as energy, and the main criteria were affordability, contribution to the quality of houses and local environmental quality, and financial and societal ROI. Welbions did not make use of tools to check the degree to which investment proposals were sustainable, such as DPL, GPR.

In 2010–2012 motives for sustainability were financial in nature, such as fear of reputation damage, governmental policy and pressure from the market. Awareness was still noted as conditional for making a sustainability transition. In 2017 the influence of rules, laws and agreements, expressed e.g. in obligatory performance agreements with the local government, cooperation with customers and local stakeholders and the culture of Welbions itself were noted as success factors in sustainability transformation. 'Creating a learning effect' was stated as the goal for realisation of pilots aimed at achieving zero-energy-use houses.

PLANET DIMENSION

From decision documents in 2009 sustainability appeared to be associated with social, physical and ecological aspects of housing (air, water and soil quality), and spatial quality of the local living environment. The objective was to lower energy use and reduce CO2 emissions, which was related to affordable housing cost and improvement in the comfort of houses.

2010–2012: Welbions felt responsible for both the quality of houses and the quality of the living environment; the aim was ‘not to negatively impact on the ecological quality of our planet’.

This seems a much higher abstract goal, almost idealistic, which was considered at the time to match the social nature of the housing association. With respect to resources, Welbions aimed to reuse materials after demolition and study the sustainable character of building materials to better fulfil the role in the supply chain with respect to sustainability.

In 2017 the quality of houses, asset management and sustainability were claimed to become more prominent issues in the new business plan. But in decisions made, sustainability was associated with the measuring of and decisions about how to achieve energy use reduction, enabled by the energy label; e.g. Welbions (visitation report) strives towards an average of energy label B by 2021.

In 2017, due to agreements, rules and law, sustainability in choices was focused predominantly on energy measures. However, in final strategic choices the financial criteria are prioritised even above making steps towards complying with the Energy Agreements. Partly, this can be explained from the role of the IRR as a decision criterion, partly because of the changed governance in the housing association sector. The role of the board of supervisors has changed. Decision proposals show that Welbions really aimed to focus on raising the energetic quality of property. However, since these decisions have to be debated with the board of supervisors, and acknowledging that the Welbions board strictly focuses on (a 2.8%) IRR, there seems to be no room for a lower IRR and investments in energy. It is remarkable that although the societal rate of return on investments was already noted as being of strategic relevance for sustainability, in 2017 the choices made showed that there was no SROI ‘calculated’. This could have been supportive for the board of directors in debates with the board of supervisors about the value created by e.g. a more sustainable collective heating system in the urban area Hengelose Es. In the midst of the latter debate, a divergent decision criterion emerged that was not noted in decision documents. This criterion, ‘freedom of choice’ for customers, appeared to be decisive in the case of the collective heating system but contradicts earlier decisions to invest in sustainable property only if tenants partly pay for these investments.

7.4 FRAMES USED IN STRATEGIC DECISION-MAKING

Strategic choice, as described in Chapter 3 and depicted in the conceptual model, is preceded by a process of sensemaking and comprises three stages (see conceptual model): enactment, or seeing, analysis and thinking. Sensemaking starts when an actor connects his *frame* to an event that has occurred (Weick, 1995, 2011; Weick et al, 2005). Frames serve to filter cues in the real world. Individuals, groups and organisations develop frames[72] to cope with prevailing circumstances (Kolkman, 2005: p. 47; Schon & Rein, 1994; Van Marrewijk & Werre, 2002; Weick, 1995).

Frames can be identified from the underlying assumptions, from beliefs and values that come to surface in narratives, speeches, texts, decisions, laws and from routines that make up policy practice (Kolkman, 2005: p. 51; Fischer 2001; Kuhn, 1964; Schon & Rein, 1994: p. 57). Values are the content of frames. Identification of values enables identification of frame types.

Using Table 3.1 as suggested in Chapter 3, values are identified in the factors and decision criteria, and next connected to the distinguished frame types. In this section, the frames used by decision-makers at Welbions are deduced from (1) values reflected in the factors, noted by decision-makers as *influencing* strategic decision-making in the event of sustainability or causing attention to sustainability; (2) values reflected in the perceived decision criteria, indicating values that *are* used in strategic decision-making and how individual decision-makers and teams of decision-makers analyse their process of strategic decision-making; (3) values reflected in the factors of which decision-makers think Welbions *should* use them to make pro-sustainable decisions.

(1) VALUES AND FRAME TYPES DEDUCED FROM FACTORS

In the system perspective, each organisation must interact with the environment to survive (Boulding, 1966) and derives its right to exist from the environment. The organisational context is complex and local in nature and people in organisations continually interact with others, constrained by external forces,

[72] Frames are defined as an actor's internalised, invisible worldview, as value systems, or underlying structures of belief, perception, and appreciation that unconsciously and consciously guide individuals and groups in meaning constructions from which a pattern of decisions emerges (see Chapter 3).

structures, institutionalised instruments of power, technologies and allocations of resources (Stacey, 2005).

In the first stage of sensemaking (seeing, enactment), the guiding research question was which factors in the case of the event – sustainability – are seen as influential with respect to strategic decision-making by individual decision-makers and teams of decision-makers, and written in strategic choice documents. The answer provides an image of which events in the environment of the housing association are noticed.

A number of factors that influence strategic decision-making in the event of sustainability were mentioned in every period and by individuals and teams and described in strategic choice documents. Table 7.1 presents a list of these factors. Factors that were mentioned by either individuals or teams, or in documents, are not presented here.

Table 7.1 Factors influencing strategic decision-making, mentioned by individual and teams of decision-makers and in strategic choice documents, 2009–2017.

Factors influencing strategic decision-making in the context of sustainability, mentioned in every period by individual decision-makers, in teams and in strategic choice documents, 2009-2017	
1	institutional contextual factors (governmental influence: levy, subsidies; laws, rules, agreements) influence financial position of housing associations
2	financial position, availability of budget (time, money)
3	knowledge & information, knowledge sharing, knowledge of developments in natural resources, low intentions to share knowledge among housing associations
4	integrated frame for sustainability: integrating sustainability in mission, vision, goals, strategy, policies and processes
5	integrated strategic decision-making; strategic decisions based on sustainability criteria; in addition to IRR/ROI, reputation
6	organizational culture
7	conditional: attention, seeing usefulness and sense of urgency of sustainability, awareness, exemplary behaviour by the management of Welbions, commitment & support by the management/employees of Welbions, experiencing, open mind, perception of/seeing risks (in the environment)
8	cooperation, communication and support of and cooperation with stakeholders - suppliers/co-makers, tenants, employees
9	technological developments
10	economic developments, financial climate

In these factors, collected and analysed from interviews with individual decision-makers, (participant) observation of teams, and documents, it is possible to distinguish values that underlie sensemaking and strategic choice. Table 2, third

column shows the identified values per factor. Values are the content of frame types, so the identification of values enables identification of frame types. The frame types are then mentioned in the fourth column of Table 7.2.

The technical, personal and economic frames were used mostly when actors mentioned factors influencing strategic decision-making in the event of sustainability. The organisational frame and ethical frame were both used once, the latter only when actors referred to a broader set of criteria to be used in making strategic decisions. The aesthetic frame was not used at all.

Table 7.2 Factors influencing strategic decision-making in the event of sustainability, mentioned by individual and teams of decision-makers and in strategic choice documents, 2009–2017, connected to values and beliefs and frame type per factor.

	Factors influencing strategic decision-making in the context of sustainability, mentioned in every period by individual decision-makers, in teams and in strategic choice documents, 2009-2017	**Values derived from factors**	**Frame type**
1	institutional contextual factors (governmental influence: levy, subsidies; laws, rules, agreements) influence financial position of housing associations	compliance with power, influence, prestige	Personal (P)
2	financial position, availability of budget (time, money)	profit/utility maximisation, usability of products/goods, money driven	Economic (EN)
3	knowledge & information, knowledge sharing, knowledge of developments in natural resources, low intentions to share knowledge among housing associations	truth depends on knowledge, scientific data underlies choice, there is one best solution to each problem, rationality	Technical (T)
4	integrated frame for sustainability: integrating sustainability in mission, vision, goals, strategy, policies and processes	functional orientation (design of organisational processes)	Technical (T)
5	integrated strategic decision-making; strategic decisions based on sustainability criteria; in addition to IRR/ROI, reputation	functional orientation (T), balance, equality, transparancy, integrity as leading principles (ET)	Ethical (ET)/Technical (T)
6	organizational culture	shared meaning, belief in collective system	Organizational (O)
7	conditional: attention, seeing usefulness and sense of urgency of sustainability, awareness, exemplary behaviour by the management of Welbions, commitment & support by the management/employees of Welbions, experiencing, open mind, perception of/seeing risks (in the environment)	human behaviour focused; experience, (defensive) routines, personal gain (how one should behave)	Personal (P)
8	cooperation, communication and support of and cooperation with stakeholders - suppliers/co-makers, tenants, employees	relevance of communication and interactions (O), personal gain and well-being at the centre (P)	Organizational (O) / Personal (P)
9	technological developments	developments in technologies influence abilities	Technical (T)
10	economic developments, financial climate	finance, financial position determines capabilities for sustainability	Economic (EN)

With respect to some of the factors, different perspectives were noted. When individual decision-makers spoke of the role of information and knowledge, they stated that the organisation lacked employees with sustainability expertise, saying ‘we don’t know what we are talking about’. Interviewees often mentioned information and credibility as factors influencing decision-making. The issue is that information sometimes was not believed, e.g. in the first period climate change was doubted until the KNMI exposure could be shown, water (quality) problems were not identified (‘the water is still running from the tap’) and biodiversity, although mentioned in this first period, was not a topic for debate (if so, one should be aware of the image of ‘granola’ – in Dutch: ‘geiten wollen sok-image’). On other occasions a decision-maker had to list 10 arguments based on information why a certain (sustainable) alternative was a good one, before the alternative was debated in the management team. But other interviewees (members of the management team involved in debating decision alternatives) in different time periods stated that information was not determinant in decision-making, that it is about trustworthiness and credibility of alternatives.

The role of a shared meaning of sustainability was mentioned as relevant in all periods; in the last period, interviewees stated that they all agreed on the leading principles of sustainability. However, when it came to making decisions, diverse opinions with respect to the speed at which to transform and the sustainable character of alternatives came to the surface and influenced the choices that were made. From this, it is concluded that there were shared meanings about compliance with energy agreements but not with respect to the strategy nor to the content of sustainable decisions.

Political developments were mentioned as of influence by interviewees in the second time period (2010–2013) and in the third period (2017). This may be explained by the changes in the institutional setting: the Dutch government imposed a levy after governance scandals in the sector. This limited the investment space for sustainability measures, according to interviewees.

Differences between frames used by individual decision-makers and teams, and strategic choice may be explained from mechanisms operating in and influencing group interactions. Mechanisms may prevent individual frames from coming to the surface in group debates about sustainability. This became evident in the quotes noted of the manager of team Strategy, who claimed to be very pro-sustainable but acknowledged that she did not mention her beliefs and values

with respect to sustainability in management team meetings. Detected mechanisms were:

- The use of power and authority to enforce integration of sustainability in decision-making; in the first period one interviewee mentioned that ‘if my superior does not ask me to account for my progress in sustainable actions, I am spending my time on those activities that are needed to be accounted for’. In the last period the influence of authority was again stated when some interviewees remarked that it was due to the ambition of the board of directors that sustainability was debated more in the management team.
- Directions, leadership and governance of Welbions: focused on short-term successes (‘short-term realisation of quick wins’). In 2017, due to the more important role of the Board of Supervisors in strategic decision-making, the IRR (internal rate of return) was prioritised over investing in sustainability; the ambition of the CEO with respect to sustainability was also a factor that influenced interactions and debates in (management) teams.
- Commitment; this factor is often mentioned as being of influence but as a process influencing group interactions it is hard to identify, although interviewees often stated that there is a lack of intrinsic motivation to do something about sustainability. One example showed an absence of commitment. In the sustainable development project team (collective sensemaking, second period) one of the team members used to dominate debates in team meetings and made promises to come up with a specification (goals) of the theme of affordable housing cost. However, it took more than a year before a draft was made, and this draft was made by one of his team members who was given the task to do so. When evaluating team performance halfway through the year, the project team mentioned commitment as a barrier to making progress. Lack of commitment and intrinsic motivation undermined progress.
- Conflict; different answers were given on the question asked in interviews in the second and third period regarding contradictory opinions about sustainability. Some stated that there were different opinions, while others stated that there weren’t. Individual decision-makers who spoke of conflicts claimed that the divergent thinkers were not appreciated. In collective sensemaking in the second period it was noted that differences in interests and perspectives prevented progress from being made towards sustainability.

- Culture; the mechanisms operating in teams and influencing strategic decisions were influenced by the shared norms and values that are typical of Welbions. One of the routines was ‘to be too kind towards each other’. Another aspect of the culture is that in the region of Twente, people tend to wait for proof before acting. This proved to be influencing the chosen strategy of Welbions with respect to sustainability, captured in the chosen way to apply proven techniques and debate the sustainable character of alternatives.
- Strategy and structure; although the first Welbions Business Plan (2009–2011) enumerated sustainability as a strategic choice that Welbions should focus on, from individuals and teams of decision-makers it became clear that sustainability was not integrated in the planning and control cycle and was not used in making strategic decisions. In the structuring of tasks and allocation of responsibilities, initially a strategic consultant for sustainable development of Welbions was appointed but in 2011 this function was considered redundant. In the interviews after this period, individual decision-makers stated that long-term thinking and knowledge of sustainability were lacking, that the Welbions culture was a culture of short-term activities and actions.

(2) VALUES AND FRAME TYPES DEDUCED FROM DECISION CRITERIA

Decisions are predominantly based on financial criteria, as appeared in chapters 5 and 6 and sections 7.2 and 7.3. The first column of Table 7.3 shows a list of the decision criteria that were used according to individual decision-makers (individual level), teams of decision-makers (group level) and as appeared in documents in which strategic decisions were described (organisational level).

Financial criteria and affordability were mentioned in every period and at every level (individuals, group, organisation). The criteria ‘quality of real estate’ and ‘quality of the living environment’ were mentioned at every level in the first two periods, but they were not mentioned at all in the third period. Although in the first two periods there was some debate about the quality of the living environment, some claimed these investments should be made to make the real estate future-proof and to raise its quality. Others claimed that investments in the quality of the (local) living environment were necessary and these would result in a higher financial value of the real estate. In 2017 the aim was to raise the energy label of

the stock, in compliance with energy agreements. The goal of raising the quality of the local living environment was no longer considered a main goal. Some of the individual decision-makers across every period claimed that reputation and support of tenants for investments in sustainability were an important motive to decide in favour of sustainability measures. It is of course not a criterion that is laid down in strategic decision documents. Strikingly, the societal return on investments (SROI) criterion was mentioned in every period and layer. However, when taking a closer look into some decisions that were made, no sign of use of any of the tools available to calculate an SROI was found. In 2010 two students examined SROI tools and advised to use the so-called 'Effectenkaart' (mapping the impact of investments in sustainability) which was used by other housing associations, but after this period no efforts were noted in which Welbions was basing its decisions on both ROI and SROI. In the second column of Table 2, the decision criteria used by Welbions are connected to the decision criteria and values that belong to the frame types to attach a frame type to each decision criterion.

In the second column of Table 7.3, values are identified in the criteria used in making strategic choices in order to label each decision criterion with a frame type. Since the first criterion was identified at all levels (individuals, group, organisational) and in every period, one can conclude that the economic frame is determinant in strategic decision-making. The criteria mentioned by teams are predominantly based on values from the economic and technical frame. Individuals perceive more frames used in strategic decision-making, which perhaps can be explained as 'wishful thinking'. Although in every period financial criteria were said to be decisive in strategic decision-making, differences between individual and collective frames used in making sense of sustainability in connection with strategic decision-making can also be explained from operating group mechanisms. A broader view can also be detected in written documents containing strategic choices. However, in practice, e.g. in the case of the strategic decision with respect to a collective heating system in an urban area, cost and IRR appeared to be decisive. As Mintzberg stated, there is a difference in what strategy is said to be and strategy as executed. The ethical frame, connected to the issue of the quality of the living environment, was used only once in the first two periods but did not once dominate strategic decision-making. The aesthetic frame was not used at all.

Table 7.3 shows the decision criteria used in making strategic decisions at Welbions.

Table 7.3 Decision criteria used in making strategic decisions, Welbions, perceptions by individual decision-makers and teams of decision-makers and derived from decision documents.

Criteria used in making strategic choices	Decision criteria based on frame types (theory) / values	Frame type
financial criteria: solvency, cash flow, financial continuity and feasibility, balance between rent and investments, (S)ROI, pay back period, feasibility, IRR	highest cost/benefit ratio, cost minimisation, efficiency	Economic
affordability, housing cost control	highest cost/benefit ratio, cost minimisation, efficiency	Economic
(technical) quality real estate / comfort improvement / life cycle extension	improvements based on techniques	Technical
support of society, tenants and local politics / reputation /credibility	influence, power, status / reputation	Personal
compliance with rules & agreements	influence, power, status / reputation /legitimacy	Personal / Organisational
energy label / energy neutral (technical requirements)	improvements based on techniques	Technical
freedom of choice tenants (wrt energy supply)	influence, power, status / reputation	Personal
short term realisation of quick wins	highest cost/benefit ratio, cost minimisation, efficiency	Economic
learning effect / experience	plausibility, legitimacy, responsibility / relevance of interactions (social nature)	Organisational
quality living environment (air quality / water quality / soil quality)	highest level of understanding / idealistic / interactions between self,	Ethical

VALUES AND FRAME TYPES IN SUCCESS FACTORS FOR SUSTAINABLE STRATEGIC DECISION-MAKING

Frames can also be detected from the factors which actors – individuals and teams – think successfully contribute to pro-sustainable decision-making. These factors, presented in Table 7.4, display their beliefs and values with respect to what is needed and *should* be done to achieve pro-sustainable strategic decision-making.

In the second and third period, individual decision-makers were asked about their beliefs and preferences with respect to strategic decision-making, in the context of sustainability. Their answers were almost the same in the two periods.

The factors knowledge and information, and tools for measuring impact and revenues, were also debated in the two periods. On the one hand, more knowledge and information was preferred and believed to contribute to more sustainable strategic decision-making. This was, however, counter-argued by some who stated that confronting people with negative effects would be more efficient. Regarding the measurability of impact of sustainability measures, some claimed that tools were needed. Strikingly, the manager of finance and business operations stated that people need room for creative thinking, and not to think in monetary terms first.

Values reflecting preferences of how strategic decision-making should be are derived from the factors that were collected from interviews, observations and strategic choice documents, based on Table 4.2 in Chapter 4. The values are linked to frame types. A discrepancy may be noted when comparing the frame types from Table 7.4 to those in 7.2 and 7.3. In this case, the ethical frame type is predominantly used, whereas the technical and personal frame type were used most in identifying influential factors in strategic decision-making and the economic frame in decision criteria.

Table 7.4 Factors contributing to pro-sustainable strategic decision-making based on the Welbions case, 2009–2017.

	Factors contributing to pro sustainable strategic decision-making, mentioned by individuals, teams and in strategic choices	Values derived from success factors	Frame type	Decision criteria
1	knowledge & information	functional orientation (T) / compliance to influence, power, prestige (P)	technical / personal	improvements based on techniques; status/reputation
2	tools for insights in impact and revenues from sustainability measures vs room for creative thinking without financial boundaries upfront	functional orientation (T) / interactions	technical / ethical	improvements based on techniques; highest level of understanding / idealistic / interactions between self, organisation and environment
3	role of management: exemplary behaviour, ambitions, passion, inspiration, providing a frame and time for sustainability activities; the role of the CEO (push and pull)	relevance of communication and interac	organisational / person	plausibility, legitimacy, responsibility / relevance of interactions (social nature); status / reputation
4	awareness in weighing short-term vs long-term, sense of urgency and intrinsic motivation	focus on integrity, interactions between	ethical	highest level of understanding / idealistic / interactions between self, organisation and environment
5	culture, shared meanings about what to achieve	shared meanings, interaction and comm	organisational	plausibility, legitimacy, responsibility / relevance of interactions (social nature)
6	agenda setting for sustainability	structuring tasks, design of plans, focuse	organisational	plausibility, legitimacy, responsibility / relevance of interactions (social nature)
7	assessment of decision proposals in a 'green room', development of more decision alternatives	balance, transparancy, integrity	ethical	highest level of understanding / idealistic / interactions between self, organisation and environment
8	more debates in management team meetings	relevance of interaction and communica	organisational	plausibility, legitimacy, responsibility / relevance of interactions (social nature)
9	weighing soft factors	balance, transparancy, integrity	ethical	highest level of understanding / idealistic / interactions between self, organisation and environment
10	prioritisation of sustainability in decision-making	leading principles, balance / equality, tra	ethical	highest level of understanding / idealistic / interactions between self, organisation and environment
11	solid financial position	driven by monetary values	economic	highest cost/benefit ratio, cost minimisation, efficiency

With respect to sustainability used in decision-making in 2017, 10 leading principles were meant to guide strategic decision-making based on sustainability. Assessment of these principles, however, showed that the meaning of sustainability was narrowed down to energy. Moreover, as interviewees

expressed, in the first decision proposal in which these 10 principles could be used, other arguments were given that resulted in not deciding on compliance with these principles. Criteria that were given higher priority in this case were the impact of the proposed measures on cost and on tenants' freedom of choice. Sustainability, even in a narrowed meaning, was not prioritised. This suggests that although the ethical frame dominates in success factors, it seems merely wishful thinking and talking.

7.5 Comparing empirical findings to theoretical expectations

In this section the conceptual model of strategic decision-making is used to compare empirical findings to the theoretical assumptions as described in Chapter 3. The event in this case that triggers a process of sensemaking is sustainability. As depicted in the conceptual model, sensemaking starts with enactment (a term used by Weick (Weick, 1988), or seeing (a term used by Mintzberg (Mintzberg, Ahlstrand, & Lampel, Strategy Bites Back, 2005)), followed by analysis and thinking (Mintzberg). The outcome of strategic decision-making is the choice of one alternative that is preferred over others (Simon H. , Administrative behavior, A Study of Decision-Making Processes in Administrative Organization, 1976)(Simon, 1976). The highlights of empirical findings per stage of strategic decision-making are described.

Enactment/seeing

Housing associations in general enacted to sustainability when the branch organisation, Aedes, signed a covenant with the Dutch government in 2008. In this covenant, the meaning of sustainability was centred on measures for the building environment to reduce CO2 emissions and energy use from fossil fuels. The goals in the covenant were defined on the national level, triggering a process of sensemaking on the local level.

At Welbions sustainability was one of the five strategic themes in the Business Plan in 2009–2011. From analysis of this document it may be concluded that sustainability was initially translated, aligned with the Aedes covenant, from a narrow view, i.e. as measures to reduce CO2 emissions and to improve energy

efficiency, thereby contributing to affordable housing cost. In this view an economic and technical frame can be recognised.

Data analysed from interviews, observations and documents in the first period (2009–2010), however, showed that sustainability was made sense of from a broad view. For example, in the executing of an Ecosystem Services Review, used by team strategy to design a vision for Welbions on sustainable development, an awareness was observed of dependencies and impact of the housing association on ecosystem quality. In the second period, however, a change in perspective was noticed. Due to scandals in the housing association sector, the Dutch government imposed a levy and the EU forced housing associations to focus on renting and building at least 90% of their stock for the social income group. Internal factors in this time period were changes in staff (HRM manager and strategy manager, departure of one of the directors) and the subsequent launch of an organisational development programme. Together with the institutional arrangements, this explains why the housing association was thrown back onto taking care of its financial position. In 2017 changes in the institutional setting were the climate deals of Paris, and the Energy Agreement. These agreements implied a focus on climate change and a translation of sustainability into energy measures, as the early covenant of 2008. The agreements, however, again triggered a process of sensemaking, since housing associations were obliged to come up with a plan in 2018 that showed how to reach CO2-neutral stock by 2050. Internally, 10 guiding principles were stated to guide decision-making. In these principles a narrow view of sustainability was used, aligned with the institutional agreements.

Strategic seeing in terms of Mintzberg (1998, 2005) means comprehending and managing strategic events, in or outside the organisation. This stage, referred to as intelligence by Simon, is not just a matter of the discovery of ecological change or events that have already occurred (Weick, 2005). Strategic seeing requires deliberately searching the environment for those events that may influence an organisation's licence to operate or the achievement of its objectives. These events are not events that have already occurred but are more or less estimated to occur, and the consequences impact heavily on the organisation.

The conclusion is that although sustainability was enacted, it was not seen as a strategic event. In the second period in particular, it became clear that the organisation used routine ways to deal with events. As interviewees stated, there

was no intrinsic motivation to do anything about sustainability. Empirical findings also showed that in the factors that were identified and mentioned by individual decision-makers and teams of decision-makers, and written in strategic choice documents, ecological developments and biodiversity were not mentioned.

ANALYSIS

Analysis, according to Mintzberg, means diagnosing a situation and breaking down a goal or set of intentions into steps that are needed to carry out the vision (Mintzberg, 2007). In the first period, team strategy executed a SWOT analysis to construct a meaning for the context (internal and external) in which a vision for sustainable development was needed. The SWOT analysis was the only document in which biodiversity decline was mentioned. In the second period, when actors analysed strategic decision-making at Welbions in the context of the event sustainability, they mostly elaborated on ways to integrate the concept into their daily routines. Strategies of realising quick wins and pilots per theme in the vision document (affordable housing cost, awareness, climate change and clean energy, resources) were mentioned in every time period. From a pilot in integrating sustainability in procurement criteria (‘Sterrenbuurt’), no actual lessons were learned. In this case the criteria were representing all three dimensions of sustainability but suppliers did not present integrated, comparable project plans and all translated sustainability differently. The case of Hengelose Es, in which a vision of this urban area was deliberately made based on the three dimensions of sustainability, showed that when it came to choosing suppliers, the integrated perspective, on which the vision was originally based, was not used. An often heard argument in making sense of sustainability in teams in the second period was that budgets should become available to deliver short-term successes. A method to measure financial and societal revenues from investments was seen as a success factor but a method to do so (the ‘Effectenkaart’) was not used in analysis.

A strategy aimed at short-term successes indicates a sense made of sustainability based on routines and fast judgments. Theoretically this can be explained by the fact that people become committed to their prior ways of behaving, initially using defensive routines in cases where they are confronted with disruptions (Argyris, 1995), and in retrospect arguing in favour of their judgements to reduce tensions (cognitive dissonance) (Festinger, 1962) (Rojot, 2008).

THINKING

The intention of strategic thinking is to develop a vision, and direction from all sources available, and to design decision alternatives. The outcome of strategic thinking is an integrated perspective that emerges from ‘messy processes of informal learning carried out by people at different organisational levels’ (Mintzberg, 1994).

Events that invoke uncertainty and high stress levels urge individuals to search for and make sense of these events in dialogue with others. This means that different frames come to the surface. In this case, the group sensemaking process, aimed at making a strategic choice, can be characterised as a process of bargaining, or exchange of ideas, images and information (Kaplan, 2008).

Empirical findings showed that only a few perspectives were used in the development of decision alternatives, if more than one alternative was developed. This may be explained by the fact that only a limited number of key decision-makers are involved in the process of designing a decision proposal. As an interviewee already stated in the second period (and confirmed by others in the third period), most decisions are merely go/no-go decisions, without debating their content in the management team and without an actual choice from a number of alternatives. Another explanation is that in groups, framing practices were observed – sustainability is made sense of as necessary energy measures – and the impact of the influential role of the CEO was observed in those cases where there was debate about sustainability and decision proposals.

Group mechanisms prevented the surfacing of different perspectives. One interviewee clearly stated that although she had a green mindset, she did not surface her ecological ideas in management team debates because the agenda of the team is set and time prevents debating or surfacing issues that are not scheduled for debate. Other interviewees stated that there is no debate about sustainability issues in the management team when a decision alternative is not explicitly referring to it. The number of decision alternatives in decision proposals is either restricted or simply not present. As one interviewee stated, decisions proposals are made after a stage of research. In this stage, alternatives are weighed. The decision proposal merely represents the best alternative.

The conclusion is, considering that an open mind is required for divergent thinking, that a change is noticed in the beliefs of decision-makers with respect to sustainability. In the last period there seemed to be more awareness of

sustainability as a broader concept that needs to be debated although decision proposals do not often represent more than one alternative. Weighing of alternatives is not done by the management team.

CHOICE

A diversity of frames and values when elicited are expected to lead to conflict in collective processes of sensemaking. Conflicts may arise when no agreement or synthesis is reached which may threaten the functioning of the group (Peterson & Behfar, 2003). This could cause the use of *power*; the effect of power is that one voice is more heard than others (Weick, 1995). The use of authority, defined by Simon (1976: p. 125) 'as the power to make decisions which guide actions of another', is central to organisations – be it persuasion, suggestion or command. However, disagreement leads to conflict and greater use of power to resolve choices (Pfeffer, 1981) which may lead to loss of multiplicity and ignoring sustainability as a guiding frame in strategic choice.

In the first and second period, sustainability was listed as one of the criteria against which decision alternatives were weighed. But, as interviewees stated, when the criterion of sustainability was empty and not given meaning, decisions were made anyway. There was no conflict about this in the management team, possibly because the CEO, responsible for the strategic decisions made in the management team, did not force decisions to be based on sustainability.

In the second period one interviewee gave an example of a decision in which sustainability measures were not granted by the management team, by giving an argument that with the budget for sustainability some members of staff that were outplaced could have been saved. In retrospect the interviewee acknowledged that the decision was based on emotion, and compared two completely different elements ('it was a comparison between apples and pears'). Another interviewee stated that in the case of a decision proposal he needed to list at least 10 arguments for choosing against the proposal of the municipality of Hengelo to comply with their intentions to implement a collective heating infrastructure ('Warmtenet'). In some cases then, intuition prevails while in others more reasoning seems present in the stage of synthesis and choice.

As described in Chapter 2, based on a literature review, Dutch housing associations were expected to take values such as affordability, financial continuity, quantity and location of houses, quality of houses and housing environment (Koffijberg, 2005; Priemus, 2003) (Nieboer, 2011) into account

when making strategic choices. The elicitation of frames in decision criteria showed that a limited number of perspectives were used in analysis. Strategic choices were still dominantly based on financial values, such as cost. Reputation and image as 'hidden' decision criteria indicate a personal frame underlying strategic decision-making.

In theory, goals are claimed to be a convergence tool. However, this was not found in practice. Goals stated in the Business Plan initially were said to be relevant to decision-making, but they were not guiding the weighing of decision proposals. Goals did not serve as value premises, as inputs to decision (Simon, 1976: p. 258).

As was described in this chapter and in chapters 5 and 6, in strategic decision-making economic and financial values were prioritised over sustainability. This was again shown in the decision in 2017 when a more sustainable heating system was not chosen because of the negative impact on cost, in spite of sustainability principles that were designed to guide strategic choice.

FACTORS INFLUENCING STRATEGIC DECISION-MAKING

In Appendix 3.1 a list of influential factors was presented based on theory. All empirical factors presented in Table 7.1 in this chapter were also mentioned in theory. However, a number of factors were very occasionally (once or twice) mentioned by individuals or teams.

These factors are:

- Competition; this is not surprising since housing associations operate in certain regions and do not compete with each other in a marketing sense.
- Ecological developments; the trigger for sustainability to be on the agenda for debate in the housing association sector is not the severity of the biodiversity crisis nor the deterioration of the quality of ecosystems nor the growing scarcity in natural (building) resources but agreements between the branch organisation, Aedes and the Dutch government.
- Diversity of perspectives (frames); although diversity of frames as a requirement for effective decision-making was mentioned in 2017 there seemed to be conformity with respect to a 'narrow' meaning constructed of sustainability (energy-neutral buildings).
- Bounded rationality in decision-making; with respect to limited rationality of decision-makers in 2017 a specific statement referred to a learning effect as a motive for deciding pro-sustainable measures (energetic quality). But no

attention was given to feedback mechanisms (evaluating e.g. the two-dimensional character of strategic choices made with respect to Hengelose Es instead of the intended three-dimensional, sustainable character of this urban area development programme).
- Emotion; the role of emotion in decision-making was mentioned but only once, in 2017 by the controller.
- Adaptive capacity of the organisation; regarding the adaptive capacity of Welbions, as stated only once by a key individual decision-maker in 2012–2012, Welbions' willingness to change was rather low, which in general was acknowledged by some other individual decision-makers (people tend to stick to routine and habits).

MULTIPLE FRAMES, SUSTAINABILITY FRAME

Another expectation based on theory was that multiple frames are necessary for solving complex problems (Mitroff & Linstone, 1993; Courtney, 2001). Acknowledging that sustainability is a complex, multifaceted problem, multiple frames are expected to emerge from the data.

Comparing the frames used by individuals and teams – as presented in Table 7.2 and Table 7.3 – reveals some differences in the frame types that were used. Teams initially showed more diversity in frames. In the first period, the biodiversity crisis, the impact of a growing world population, climate change and the affordability of and access to clean energy were mentioned, showing an ethical frame in combination with an organisational frame. However, teams showed no consistency in this diversity of frames, e.g. in the first periods affordability and the quality of the living environment were both mentioned as the main objective of the organisation, but in the last period affordability was emphasised more from a financial point of view, reflecting an economic frame. The beliefs and values in the first years were more social in nature, reflecting an organisational frame.

Individuals used a number of frames consistently: the technical, economic, personal and organisational frame. Individuals only once used the ethical frame, when they mentioned the influence of integrated decision-making on the sustainability transition of Welbions. Individuals sometimes made more remarks about a factor, showing some nuance in the element and its relevance for a sustainability transition, e.g. different opinions were noted regarding the role of information and knowledge. However, basically they agreed that the organisation

lacked employees with sustainability expertise: ‘we don’t know what we are talking about’. Interviewees often mentioned information, credibility and reputation as being of influence in making decisions.

By comparing the frame types one can conclude that the way individuals and teams make sense of sustainability differs from the way sustainability is reflected in strategic choices. The pattern that emerges from the frames underlying individual and collective sensemaking shows that a dominant technical and personal frame is used with some minor differences between individuals and teams. The economic frame and the ethical frame are least used; the aesthetic frame is not used at all. In strategic choices the economic frame and technical frame are most used. The aesthetic frame is again not used at all.

The ethical frame was only used once at every level, and this frame does not encompass ecological aspects. Actors spoke of integrated decision-making but the analysis of the value system showed that even in the last period strategic decision-making was not based on an integrated frame.

As was already clear throughout this study, little or no attention was given to ecological development or to the biodiversity crisis. These developments were not mentioned by individuals nor expressed in strategic choices. The biodiversity crisis was mentioned only once, by the S&O team in 2009, but the concept of biodiversity was given an image of ‘granola’ (‘geiten wollen sok’) and was not mentioned after that.

SUMMARY

In the first period, sense of sustainability was made from a broad range of perspectives. In the second period, sustainability was pushed to the periphery due to external factors but also due to the values and beliefs of decision-makers at Welbions, which were dominantly based on routines, short-term successes and financial values. Factors are filtered by the frames of decision-makers. Not recognising ecological developments as being of strategic importance means that a truly sustainable character of strategic decision-making is out of reach.

In the last period, sustainability was made sense of as energy-saving measures, which reflected a narrow meaning of the concept. In every period, choices were based predominantly on economic values. The conclusion is that sensemaking of sustainability does not result in strategic choices based on sustainable values.

The stages of thinking and synthesis seem to be crucial stages in strategic decision-making. The latter, synthesis, has not gained much attention in theory. One can imagine that if there is a strict discipline, or decision rule, in weighing more than one alternative against the people, planet and profit criteria, or values, a more balanced choice is the outcome of this process. The conclusion based on empirical findings is that, although multiple frames were used in sensemaking, this does not automatically result in choices based on (the same) multiple frames. The frames do not reflect a balance among all dimensions of sustainability, as can be seen in the decision criteria that were used in strategic decision-making.

7.6 SUMMARY AND CONCLUSIONS

In this chapter an answer is given to the following question: Which frames and values can be identified when actors (individual decision-makers, teams of decision-makers) make sense of the concept of sustainability, which frames and values can be identified in strategic choice and which factors influence the embedding/integration of sustainability in strategic decision-making?

Comparing individual sensemaking, collective sensemaking and strategic choice per period in quantitative terms, Figure 21 summarises all findings and captures the perspectives that were used most often per level (individual, collective, organisational) and per period.

RANK	2009			RANK	2010-2013			RANK	2017		
	Individual sensemaking	Collective sensemaking	Strategic choice		Individual sensemaking	Collective sensemaking	Strategic choice		Individual sensemaking	Collective sensemaking	Strategic choice
1	strategy (24%)	strategy (22%)	financial focus (17%)	1	financial focus (21%)	strategy (26%)	financial focus, focus on energy (17%)	1	conditions for behavioral change (29%)	financial focus (30%)	financial focus (23%)
2	conditions for behavioral change (16%)	mechanisms (18%)	strategy, conditions for behavioural change (17%)	2	conditions for behavioral change (18%)	mechanisms (13%)	strategy (15%)	2	financial focus, mechanisms (14%)	focus on energy (26%)	conditions for behavioral change (25%)
3	financial focus, mechanisms (9%)	conditions for behavioral change (14%)	mechanisms (12%)	3	focus on behavior (13%)	conditions for behavioral change (12%)	conditions for behavioral change (13%)	3	focus on required behaviour (10%)	mechanisms (17%)	focus on energy (23%)

Figure 21 Comparison based on relative number of statements, perspectives most often used in individual sensemaking, collective sensemaking and strategic choices per period at Welbions, 2009–2017.

What we have seen in this chapter is that the perspectives that are used most often by individual decision-makers show minor changes over time. The changes that occur (as can be identified in Figure 21) may be explained by changes in the context of the housing association and different strategic events that confronted the decision-makers. Among decision-makers there were different opinions about sustainability, but sustainability did not become integrated in daily routines, except when it concerns thinking and acting on raising the energy quality of houses. In retrospect one could argue that the national and internal energy agreements and covenants, in which the focus was only on energy measures, narrowed down the meaning of sustainability.

It is remarkable that the development over time of collective sensemaking of sustainability shows that after a start of constructing and finding a meaning for sustainability in 2009, a broad perspective on sustainability dominated interactions in 2010–2012, but in 2017 the focus was solely laid on the energetic quality of houses/offices. Where in 2009 biodiversity was mentioned in a SWOT analysis executed by strategy team, and research was executed to develop an integrated urban area development programme including ecosystem criteria, these ideas were abandoned in later stages of strategic decision-making. The question of course then is whether collective sensemaking is influenced by a number of (powerful) individuals who decide on which debates are held in teams (agenda setting), or whether individual sensemaking is influenced by the collective. In individual sensemaking more diverse opinions were noted and more background motives were found for the developments in sustainability.

In every period strategic choices were dominantly based on financial criteria. Sustainability was associated with extra cost. It is remarkable that although societal rate of return on investments (abbrv. SROI) was already noted as of strategic relevance for sustainability, in 2017 the choices made showed that there was no SROI ‘calculated’. This could have been supportive for the board of directors in debates with the board of supervisors about the value created by e.g. a more sustainable collective heating system in the urban area Hengelose Es. In the midst of the latter debate there also emerged a decision criterion which was not noted in decision documents, the criterion ‘freedom of choice’. This criterion almost contradicts the earlier decisions to invest in sustainable property only if tenants partly pay for these investments.

Looking into the codes that were used most often by individuals and teams and in choices shows a pattern. In strategic choices the most dominant code in every time period is the financial perspective, reflecting a focus on costs and investments. This is aligned with individual decision-makers' perceptions of these choices. But in sensemaking a broader perspective is used for sustainability. The conclusion may be that making sense of sustainability is not reflected in the choices, and so the activities of the organisation are not directed towards a more sustainably behaving organisation. Also remarkable is that the concept sustainability initially (in the first two time periods) got more attention and was defined in a much broader sense than in 2017. An explanation for this change is found in the motives of decision-makers. As stated by some interviewees, Welbions is not intrinsically motivated to do something about sustainability or make pro-sustainable choices, it is a matter of compliance. Sustainability is not internalised in the value system of the organisation. This leaves the question of whether the motives, preferences and beliefs (or values) used in making sense of sustainability, individually or collectively, result in strategic choices favouring sustainability. In the period 2009 and in 2010–2013 it was evident that this was not the case. In 2017, however, things looked slightly different.

Whether strategic choices are influenced by individual perceptions and values or whether individual perceptions and values are influenced by strategic choices cannot be explained from these results but it seems worthwhile to investigate this. Initially, in the first period, there was no debate about the impact of sustainable investments on maintenance cost. The assumption in teams in the second and third period, however, was that investments in sustainable, more innovative techniques result in 'an explosion' in the cost of maintenance.

In general, the meaning constructed of sustainability changed from a broad perspective to a narrowed-down interpretation of sustainability limited to a reduction in energy and gas use. As already stated, this may be explained by the agreements and focus of energy deals with which the housing associations sector must comply. On the other hand, intrinsic motivation to debate sustainability from a broader perspective is lacking.

The values that are used to make decisions are primarily financial in nature, and this did not change throughout the years. When zooming in on the mission of housing associations, providing low-income groups with affordable housing, the focus of Welbions on affordability and housing cost control is not very surprising. By their very nature, housing associations are legally obliged to focus on financial values. Although in the first two periods there was a collective belief that contributing to vital urban areas and integrating sustainability in urban area development would result in higher financial values and SROI, and thus fit with the social nature of housing associations, this strategy was not prioritised in later years. The main goal in 2017 appeared to be to raise the energetic quality of the real estate.

Sustainability was only given weight on the condition of positive financial consequences for tenants and for the organisation. As noted by the teams, 'there is a huge gain factor, the willingness to invest in sustainability depends on what's in it for me'. Although measurement of the societal impact of sustainability investments is said to be important, in practice it was strictly translated into creating monetary value. Welbions, however, is aware that sustainability required changing old ways of thinking, and changing routines such as focusing on financial values. The economic crisis was even said to be of positive influence because it raises employees' financial awareness. In this way, one could conclude that when people make sense of sustainability from their old perspectives, it is not a big surprise that strategic choices are (still) based on dominantly financial decision criteria. In 2017 a first exercise in stating guiding principles showed that even when there is a frame agreed upon by all decision-makers, this frame was not decisive for the choices that were made. Instead, the underlying motives and values regarding what to achieve, such as freedom of choice, reputation/image and cost, were decisive. Also of influence in the decision was sometimes the lack of clarity about which goals are intended to be achieved by making strategic choices (e.g the debate about debating the quality of real estate versus the quality of the living environment, where the former narrows down the meaning of sustainability to energy while the latter takes on a much broader perspective). The materials used were mentioned but initially this was a theme in the vision document on sustainable development.

The frame types that were used most were the technical, personal and economic frame. Thus, the conclusion is that multiple frames are used when identifying

factors that enable pro-sustainable decisions, but these frames do not represent sustainability. The ethical frame is scarcely used and even when it is referred to in decision criteria, the criterion remained empty and meaningless, not debated and also not used in choosing one alternative. Ecological developments were not even mentioned as a factor of strategic relevance. The aesthetic frame was not used at all. The expectation that decisions are mostly based on economic values is confirmed.

8 CONCLUSIONS AND DISCUSSION

8.1 INTRODUCTION

This study started in 2009 with a deeply rooted belief that debating scientific data about environmental decline, available for decades now, does not lead to changes in our currently operating economic system. Our human lives are heavily reigned by economic principles, leading, among other things, to neglecting the ecological crisis. If data shows that human behaviour causes environmental stress, and if we accept that we live in a closed ecosystem called Earth, then sooner or later we will be confronted with the damage caused by our own behaviour. Some places on our globe already show this damage. What happens if we see it? Do we close our eyes, continue in our routine ways and carry on with our daily lives? Or are we prepared to not only interact with others but make different choices, leading to different behaviour with the aim to at least reduce our negative impact? This study not only has been a learning experience in the operations of the scientific world, into methodological foundations of research and field work, but has also been a confronting study in the sense that collected data pointed to the boundaries of our planet and the negative impact of human, organised economic behaviour. This makes one aware of one's own behaviour, choices, routines, emotions and thoughts. If I do not see and acknowledge biodiversity decline and loss of quality in ecosystems, if I do not make different choices, we will not achieve a more sustainable, healthy living environment. Surely individuals can take effective action, e.g. by reducing waste or encouraging changes in governmental policies. But most environmental damage is caused by organisational behaviour (Gardner & Stern, 2002). Strategic decision-making is central to organisational behaviour. Changing this process, however, means changing the value system that underlies it. Internalisation of sustainable values as guiding strategic decision-making, and understanding the frames, mechanisms and factors influencing strategic decision-making might successfully contribute to a more effective, sustainable way of dealing with the current environmental problems threatening all life.

We are all confronted with these dilemmas and in this thesis, I focused on how these play out in one actor in the construction industry: a housing association. Construction of houses consumes valuable environmental resources such as

wood, minerals, energy and water (Chang, Wilkinson, Brunsdon, & Seville, 2011; Haase, 2009; Holden, 2004; Huovila & Koskela, 1998; Kim & Yu, 2018). Housing is of considerable importance for environmental, social and economic sustainability (Bhatti, 2001; Dong & Ng, 2015; Priemus, 2005; Priemus and Ten Heuvelhof, 2005; Tosics, 2004; Winston, 2009). In the Netherlands, about 2.2 million out of 7.2 million houses (CBS, 2017) are owned by housing associations that perform a public task, providing lower income groups with affordable housing. They are important to the Dutch economy and to Dutch society, and in developing towards a more sustainable built environment.

Thus, the aim of this study was to describe the ways a housing association integrates sustainability into its strategy, specifically in its strategic choices, and to explore factors that contribute to integrating sustainability into strategic choice.

This chapter outlines the main findings and conclusions of this theoretical and longitudinal empirical study of strategic-decision-making in a Dutch housing association, Welbions (Section 8.2). In Section 8.3 the conceptual model that was developed in this study is revised based on the main findings. The following section reflects on the methodology and theories that were used and discusses alternatives and criteria for assessing qualitative studies. In the last section, possibilities for future research are given and some recommendations for practice are offered.

8.2 Summary of Main Findings

Initially this research started with wondering why organisations in the industrialised world seemed to ignore biodiversity decline and to not take diminishing quality of ecosystems into account in organisational strategies. Although biodiversity decline seems to be acknowledged by organisations as a strategic issue, only a small number of organisations explicitly integrate biodiversity into their strategies[73] (McKinsey&Company, 2010). A literature review about the connection between organisations and biodiversity pointed to the concept of sustainability as a concept that bridges the world of economists and the world of ecologists. Strategies aim to match ecological changes with

[73] https://mvonederland.nl/biodiversiteit/over-biodiversiteit, retr. 2018/08/29

organisational performance and to improve the adaptive capacity of the organisation. The object of study then became to assess the sustainable character of organisational strategies. Access to empirical data was guaranteed via my work as a strategic consultant at the Dutch housing association Welbions. Findings from data collected in the first period (2009–2010) pointed to the relevance of strategic decision-making in transforming organisational behaviour into a more sustainably behaving organisation. The central research question in this study is:

> Which meaning is given to sustainability within a Dutch housing association and does making sense of the concept of sustainability lead to sustainable strategic choices?

Several component inquiries were formulated to make progress in answering this central question:

1. What is the (theoretical) meaning of sustainability, particularly in the Dutch housing association sector?
2. What is the role of frames and values in strategic decision-making, from a decision theory perspective?
3. Which meaning of sustainability is constructed by individual decision-makers and teams of decision-makers and which meaning of sustainability is reflected in the strategic choices of a housing association?
4. Which frames and values can be identified when actors (individual decision-makers, teams of decision-makers) make sense of the concept of sustainability and which frames and values can be identified in strategic choice?
5. Which factors influence the embedding/integration of sustainability in strategic decision-making?

1. What is the (theoretical) meaning of sustainability, particularly in the Dutch housing association sector?

The sustainability concept is an ambiguous concept; it is defined in many ways and no single definition or approach seems to exist (McElroy, 2008). The main reason for the ongoing discussion is its complexity and its dynamic and relative nature, the concept has developed over time under the influence of societal, philosophical, political, cultural and organisational debates (Carréon, 2012; Faber, Jorna, & Van Engelen, 2005). The Brundtland definition of sustainable

development still is the most commonly agreed upon: ‘Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED, 1987). This definition, however, does not enable one to transfer organisational decision-making and behaviour into a more sustainable, values-based definition. The sustainability concept is grounded in ecology. The basic principles required for sustaining ecosystems can serve as guidelines in the development of corporate sustainable strategies and for strategic decision-making (Beder, 2006; Decker et al., 2016; Stacey, 1995). These basic principles, however, conflict with contemporary economic principles that underlie the economic system (Odum, 1969) Ophuls, 1977, in Gardner & Stern, 2002).

Several reports call for fundamental changes in the way nature is treated at every level of organisational decision-making, which is now a central theme in the sustainability debate (Jonker et al., 2011; Milennium Ecosystems Assessment, 2005; Royakkers, 2006). Decisions made in organisations are still primarily based on economic values and tend to overlook social, ethical and ecological values (Gibson, 2006; Menzel, 2013); Senge, 2008). The aim of incorporating ecological, economic and social aspects and values into decisions is to reach balanced and sustainable decisions and, subsequently, sustainable organisational behaviour (Elkington, 1999; Kolkman, 2005; Schaltegger, Beckmann, & Hansen, 2013).

Dutch housing associations take values such as affordability, financial continuity, the quantity and location of houses, the quality of houses and the housing environment (Priemus, 2003; Nieboer, 2011; Koffijberg, 2005) into account when making strategic choices and interpret sustainability mainly as investment measures in energy savings, reducing gas usage and CO2 emissions in compliance with national and international covenants. The Dutch social housing sector primarily focuses on financial results and a narrow definition of sustainability by focusing on energy measures. Other valuable resources, such as materials, water, and recreational values that support the quality of the local environment seem to be relatively out of scope of housing strategies and investment decisions.

2. *What is the role of frames and values in strategic decision-making, from a decision theory perspective?*

This question is answered in Chapter 3 from the perspective of different theories – strategic management, decision theory and social psychology. Aligned with the Carnegie School (Cyert, Simon, March), this research puts the focus on (strategic) decision-making. Organisational behaviour is determined by strategic decision-making and the values that underlie the process of sensemaking and strategic choice. Understanding strategic decision-making requires understanding the underlying values, perceptions and meanings created by decision-makers (Mittroff & Linstone, 1993; Schein, 1984) of events or triggers that disrupt organisational behaviour and pose risks to achieving the organisational objectives.

Strategic decision-making is an iterative process that involves multiple actors and comprises a number of blending phases: seeing, analysis, thinking and choice (Mintzberg et al., 2005). In strategic choice theory, the phase in which events or situations are identified that need to be decided upon, and in which a diagnosis of cause and effect takes place, have hardly been studied (Mintzberg, 2003). Sensemaking theory fills this gap by referring to the stages preceding choice as ongoing meaning constructions, or flow of interactions in an organisation, starting when an actor's frame is connected to a disruptive and ambiguous event that causes uncertainty (Weick, 1995). A frame contains values that are internalised and are unique to each actor. Actors develop value systems to cope with environmental change. Values can be hierarchically ordered into relatively enduring value systems (Bateson, 1972; Rokeach, 1973). Although a universal list of values may be composed (Schwartz, 1996), people usually use one or two value systems, or frames, that express their preferences and beliefs (Van Marrewijk & Werre, 2003).

A diversity of frames enables more effective decision-making and raises decision quality. However, surfacing frames from multiple actors may also result in conflict and serve as constraints in the stage of synthesis of developed alternatives. The organizational frame, or goals, may overcome possible conflicts in sensemaking caused by elicitation of diverse values, and serve as criteria in choosing one course of action out of feasible alternatives.

In groups, conformists are preferred over non-conformists (Aronson, 1995), which may prevent individuals from sharing their views with the group. Group rules, or mechanisms, are developed and used to make decisions (Bower 1970; Kaplan 2008; Pettigrew 1973). Culture is such a mechanism (Baumgartner, 2009; Gond et al., 2012). Leaders are group members with a strong influencing position in meaning construction (Mills, 2003: p.153). They may persuade or even force group members to adjust their frame to the group frame, which may prevent surfacing of divergent views and result in less effective decision-making. Goals may be used to synthesise and overcome possible conflicts caused by surfacing diverse values and serve as criteria in choosing one course of action out of feasible alternatives (Keeney, 1992, 1996).

For sustainability to become an integrative part of strategic decision-making, the concept itself first needs to be enacted or seen. This means that a connection must be made between sustainability and the frames of actors (individually or collectively) within the organisation. Without this connection, disruptive events, such as the ecological crises, will not be noticed. In the case of sustainability, this may lead to not using a multiple, sustainable value system, as the concept of sustainability suggests, in making strategic decisions.

Three relevant elements of strategic decision-making with respect to sustainability can be derived from the above: (1) enactment of strategic events: which cause-effect relationships that influence organisational strategies are detected, is sustainability enacted by key individual decision-makers, groups in organisations and in strategic choice; (2) the role of values in strategic decision-making and the consequences of sustainability for these values; (3) factors influencing synthesis and choice, especially with respect to sustainability. The conceptual model presented in Figure 1 shows the connection between events (sustainability), frames and values, sensemaking and choice, which fills a gap in both decision theory and in sensemaking theory as to how to integrate a disruptive event, in this case sustainability, into values underlying the process of strategic choice.

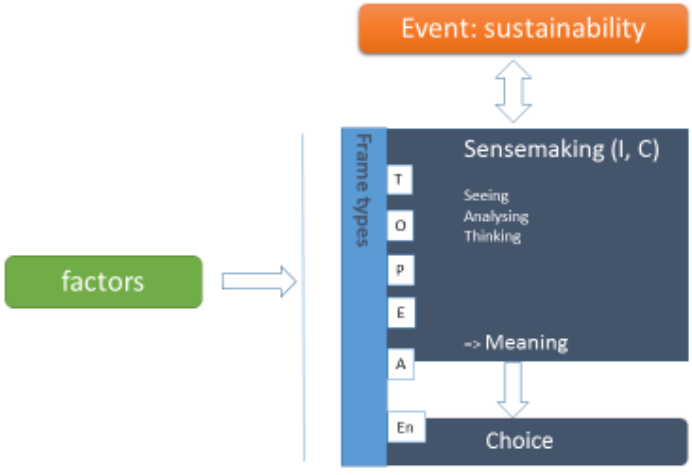


Figure 1 Conceptual model of decision-making. The event triggering this process is sustainability (orange box). The process of decision-making is influenced by factors (green box). Stages preceding choice are referred to as sensemaking, consisting of seeing, analysing, thinking, resulting in meaning construction (dark blue box) and next, choice. Factors and events are filtered by frames (light blue box). The 'I' after sensemaking refers to individuals making sense, the 'C' to collective sensemaking. The frame types are Technical, Organisational, Personal, Ethical, Aesthetic or Economic.

Frames connect sustainability to the process of sensemaking and strategic choice; without this connection strategic decisions are not made based on sustainable values. Defining strategic decision-making as a theory of attention, sustainability must catch the attention of individual decision-makers (the 'I' in the conceptual model) and teams of decision-makers (the 'C' in the conceptual model) out of a range of (disruptive) strategic events.

3. *Which meaning of sustainability is constructed by individual decision-makers and teams of decision-makers and which meaning of sustainability is reflected in the strategic choices of a housing association?*

This question is answered by studying one case, a Dutch housing association, Welbions, which is located in Hengelo in the region of Twente. Welbions owns 14,365 houses, divided into energy labels varying from A++ to G. Approximately 90% of these houses are rented to people with an income lower than €36,798 (reference date 2018). Welbions chose sustainability as one of the five strategic themes in its business plan for 2009–2011. The goals for the strategic theme of sustainability were to develop a vision of sustainability in a broad sense and balance ecological, social and economic aspects. In the business plan and

consequently in the operations of Welbions for 2012–2017, sustainability was given less attention, but in the business plan for 2018-2020 sustainability, now translated as measures to reduce CO2 emissions and energy use, is referred to as a so-called ‘green line’. This green line indicates that sustainability should become integrated into every aspect of the organisation.

The meaning constructed of sustainability emerged from an interactive process of data collection and data analysis. Sustainability was used as a sensitising concept. Theories were studied for each dimension of sustainability. For the profit dimension some keywords were derived from basic economic principles. For the people dimension some sensitising codes were found via studying strategic management, decision theory and social psychology. Basic ecological theory was used to find some sensitising codes for the planet dimension. These keywords and codes are presented in Appendix 5.1 (see also Chapter 4, Table 4.1).

Individual decision-makers have different opinions about sustainability, but sustainability is not integrated into their daily routines. The ranking of perspectives (codes per dimension) used in making sense of sustainability by individuals differed per period, although financial values and conditions for behavioural change were found in every period. An intrinsic motivation to debate sustainability from a broader perspective was lacking. Energy labels were used only after the first Aedes covenant in 2008. Compliance with energy covenants narrowed down the meaning of sustainability to energy quality, thereby reducing the complexity of making sense of a multidisciplinary concept.

It is remarkable that the development over time of collective sensemaking of sustainability shows that after a start of constructing and finding a meaning for sustainability from a broad view in 2009–2010, this perspective was not continued in the interactions in the years after the first period. In 2017 the focus was solely laid on the energetic quality of houses. Whereas in 2009 biodiversity was mentioned in a SWOT analysis executed by team Strategy & Organization, and research was executed to develop an integrated urban area development programme including ecosystem criteria, these ideas were abandoned in later stages. The question then, is whether collective sensemaking is influenced by a few (powerful) individuals who decide which debates are held in teams (agenda setting) or whether individual sensemaking is influenced by the collective. In individual sensemaking more diverse opinions were noted and more background motives were found for necessary organisational developments towards

sustainability. Teams made sense of sustainability in the first two periods mainly from a people perspective, most interactions were about ways to integrate sustainability in processes and conditions for behavioural change. In 2017, however, a change was noted. No references were made to factors associated with the people perspective, and sustainability was made sense of predominantly from a financial perspective.

In every period strategic choice was dominantly based on financial criteria. Sustainability was associated with extra costs. It is remarkable that, although the societal rate of return on investments was already noted as of strategic relevance for sustainability in the first period, in 2017 the choices that were made showed that the SROI was not 'calculated'. Using the SROI as a decision criterion could have been supportive for the board of directors in debates with the board of supervisors about the value created by e.g. a more sustainable collective heating system in the urban area Hengelose Es. During the latter debate, a decision criterion also emerged which was not noted in decision documents, the criterion 'freedom of choice'. This criterion almost contradicts the earlier decisions regarding investments in sustainable property which were only made if tenants would partly pay for these investments.

Comparing individual sensemaking, collective sensemaking and strategic choice per period does not point to a connection between individual and collective sensemaking. Nor does there seem to be a connection between sensemaking and choice. Whether strategic choices are influenced by individual perceptions and values or whether individual perceptions and values are influenced by collective values or strategic choices cannot be explained from the findings, but it seems worthwhile to investigate this further.

When zooming in on the mission of housing associations and goals stated in the vision document on sustainable development from 2010, it is noted that (sustainability) goals were not used in making strategic choices. Although measurement of the societal impact of sustainability investments was claimed to be important in every period, in practice these investments were assessed against monetary revenues. Although in the first two periods there was a collective belief that contributing to vital urban areas and integrating sustainability into urban area development would result in higher financial values and SROI, and thus fit with the social nature of housing associations, this strategy was not prioritised in later years. The main goal in 2017 appeared to be to raise the energetic quality of the real estate. Sustainability was only given weight on the

condition of positive financial consequences for tenants and for the organisation. As noted by the teams, 'there is a huge gain factor; the willingness to invest in sustainability depends on what's in it for me'. Welbions, however, is aware that sustainability requires changing old ways of thinking and changing routines such as focusing on financial values. The economic crisis was even said to be of positive influence because it raised employees' financial awareness.

4. *Which frames and values can be identified when actors (individual decision-makers, teams of decision-makers) make sense of the concept of sustainability and which frames and values can be identified in strategic choice?*

The factors and decision criteria identified by individual and teams of decision-makers, and identified in the strategic choices, were used to detect values and consequently frame types used in strategic decision-making within the housing association.

From the factors listed that were identified in every research stage, the technical and personal frame appeared to be used mostly, followed by the economic frame. The technical frame contains elements in which financial values can also be found, which leads to the conclusion that the three frames together are mostly used in identification of factors influencing strategic decision-making. Notably, the organisational and ethical frame were used only once, and the aesthetic frame was not used at all. Another noteworthy point is that when talking about developments that influence strategic decision-making, actors did not mention the ecological crisis. Although the vision of sustainable development was drawn based on a tool (the Ecosystem Services Review) which pointed to the dependency of building processes on the availability of natural resources, biodiversity decline was mentioned only once, in team Strategy & Organization, in 2009. The relevance of materials for core processes of the housing association was mentioned in 2017 by only one interviewee.

In order to get a more complete picture of the frames used by actors at Welbions in strategic decision-making, frames were also derived from the decision criteria. Decisions were, according to individual actors, predominantly made from an economic frame, as described in previous chapters. Strikingly, the societal return on investments (SROI) criterion was mentioned in every period and layer. However, when taking a closer look into some decisions that were made, no sign

of actual use of this criterion was found. In the second column of Table 7.3 in Chapter 7, the decision criteria used by Welbions are connected to the decision criteria and values that belong to the frame types.

Decision criteria mentioned by teams are predominantly based on values from the economic and technical frame. Individuals perceived more frames used in strategic decision-making, which perhaps can be explained as 'wishful thinking', although in every period financial criteria were said to be decisive in strategic decision-making. Differences between individual and collective frames used in making sense of sustainability in connection to strategic decision-making can also be explained from operating group mechanisms. In written documents containing strategic choices, a broader view can be detected. However, in practice, e.g. in the case of the strategic decision with respect to a collective heating system in an urban area, cost and the internal rate of return (IRR) appeared to be decisive. The ethical frame, connected to the issue of the quality of the living environment, was used only in the first two periods but did not once dominate strategic decision-making. The aesthetic frame was not used once.

The conclusion is that multiple frames are used when identifying factors that enable pro-sustainable decisions, but these frames do not represent sustainability. The expectation that decisions are mostly based on economic values is confirmed.

5. *Which factors influence the embedding/integration of sustainability in strategic decision-making (reframing)?*

Eleven factors were mentioned in every period, by individuals and teams, and in strategic choice documents, which are expected to enable pro-sustainable strategic decision-making. These 'success factors' are presented in Table 8.1.

Table 8.1 Factors enabling sustainable strategic decision-making at Welbions 2009–2017

Factors contributing to pro sustainable strategic decision-making, mentioned by individuals, teams and in strategic choices
knowledge & information
tools for insights in impact and revenues from sustainability measures vs room for creative thinking without financial boundaries upfront
role of management: exemplary behaviour, ambitions, passion, inspiration, providing a frame and time for sustainability activities; the role of the CEO (push and
awareness in weighing short-term vs long-term, sense of urgency and intrinsic motivation
culture, shared meanings about what to achieve
agenda setting for sustainability
assessment of decision proposals in a 'green room', development of more decision alternatives
more debates in management team meetings
weighing soft factors
prioritisation of sustainability in decision-making
solid financial position

The frame types that are derived from these factors by connecting them to values are predominantly ethical. A discrepancy may be noted when comparing these frame types to the frames used in identifying strategic factors and perceived decision criteria. In this case, the ethical frame type was predominantly used, whereas the technical and personal frame types were used most in identifying influential factors in strategic decision-making, and the technical and economic frame in decision criteria.

With respect to sustainability used in strategic decision-making in 2017, ten leading principles were meant to guide the process. The principles reflect a narrow meaning of sustainability (energy quality and use). Moreover, as interviewees expressed, in the first decision proposal in which these ten principles could be used, other arguments were convincing, so that the choice

did not comply with these principles. Criteria that were given higher priority in this case were the impact of the proposed measures on cost and on tenants' freedom of choice. Sustainability, even in a narrowed meaning, was not prioritised. This suggests that, although the ethical frame dominates in success factors, it seems merely wishful thinking and talking.

In every period, individual decision-makers marked a change in the culture of Welbions as necessary for sustainability. Employees are too kind towards each other and short-term successes as well as practical thinkers seem to be preferred over debating long-term issues. Another factor that contributes to more sustainable strategic decision-making is changing the current business model of the housing association. This model now prevents a healthy financial base from which to invest in sustainability measures. Integrating sustainability into the structure and processes of Welbions is a third factor. Innovative and flexible human capital and conscious implementation of measures, learning effects included, are two others. Clarity about the main goal of the housing association, contributing to the quality of the living environment and fulfilling a societal task by providing good-quality houses, is seen as important.

With the above an answer is given to the first part of the main question: which meaning is given to sustainability. The second part of the main question is whether sensemaking of sustainability results in sustainable strategic choices. The answer to this second part is that making sense of sustainability does *not* result in strategic decision-making based on sustainable values.

The main findings after the initial literature review on biodiversity and organisational strategies was that most organisations do not take biodiversity or ecosystems into account in their strategies.

When broadening the perspective and replacing the term biodiversity with sustainability, the main finding is that most organisations make decisions based on economic values. In this way one could conclude that when people make sense of sustainability from their old perspectives, it is not a major surprise that strategic choices are (still) based on predominantly financial decision criteria, as can be observed in our case study. In 2017 a first exercise in stating guiding principles showed that even when there is a frame agreed upon by all decision-makers, this frame was not decisive for the choices that were made. Instead, the underlying motives and values regarding what to achieve, such as freedom of choice, reputation/image and cost, were decisive.

Factors influencing sustainability and strategic decision-making showed that more than one frame was used; the frames that dominate are technical, personal and economic. The expectation that decisions are primarily based on economic values is confirmed. The ethical frame is scarcely used and even when it is referred to (in case of factors and criteria), the element itself – integrated criteria – remained empty and meaningless, not debated and not used in choosing one alternative. The aesthetic frame was not used at all, and ecological developments were not even mentioned as a factor of strategic relevance. When zooming in on criteria used in making strategic choices, the economic frame dominates.

Acknowledging the fact that sustainability requires balancing frames in three dimensions, and multiple frames enhance effective decision-making, the conclusion is that, in practice this balancing and integration of sustainability in decision-making, was not the case.

The conclusion from the empirical findings is that making sense of sustainability does not result in sustainability-based actions, or choice. The values that are used in sensemaking differ from the values used in choosing an alternative. Apparently, something happens after the construction of a meaning of sustainability that prevents sustainability values from having influence on the process of weighing and choosing one alternative over others. This indicates that sustainability – in a broad view – is not internalised in the frames of the decision-makers, or at least has not gained an equally dominant position compared to traditional values such as cost-efficiency and affordability.

8.3 Revised Conceptual Model

Based on this research, it can be argued that decision-makers did not acknowledge or recognise ecological developments as strategic events. The frames derived from influential factors and decision criteria mainly comprise three frame types: a technical, personal and economic frame. These frames do not cover sustainable values (values reflecting a profit, people and planet perspective). Financial values (an economic frame) dominated strategic choices.

Acknowledging the crucial role of frames and values in strategic decision-making, which filter events and underlie the entire decision-making process, and acknowledging the relevance of sustainability for organisations' licence to operate, requires connecting the frame types as already distinguished in literature to the sustainability frame (theoretical contribution) and connecting the frames (reflecting sustainability dimensions) to the process of sensemaking and choice.

Theorising about the patterns identified and conclusions made in this study, I focus on four issues in the process of sustainable-values-based strategic decision-making. The revised conceptual model is visualised in Figure 2.

A sustainable-values-based process of strategic sensemaking requires deliberately searching for strategic events (or decision situations) that influence the organisation's licence to operate. Enactment, defined in sensemaking theory as a process of noticing and bracketing disruptive events, may be meaningless when overlooking or not recognising events that pose a risk to the organisation's licence to operate. But sustainability requires deliberately searching the environment for such strategic decision situations, using frames reflecting three dimensions of sustainability. Since organisations all depend on healthy and biodiverse ecosystems, the ecological crisis is expected to trigger a process of noticing and seeing and labelling these developments as strategic decision situations.

The second issue is the bounded *capabilities* of actors. Actors use frames mostly in a fast, routine way (Kahneman, 2011). Events are connected or associated with past events, the way of coping is based on previous experiences and learning and is socially influenced. When the context changes, this routinely based coping behaviour may not suffice and may lead to short-termism and defensive routines. Bounded capabilities also mean that decision-makers use heuristics, which leads to biases. The stage of frame development is added to the model to enable decision-makers' identification of a broader range of strategic decision situations. The design of decision criteria and decision rules based on multiple frames may prevent emphasis of one or two frames in selection. Using predefined, multiple frames in every stage of strategic decision-making raises the chance of more effective and sustainable values-based

strategic choices. Since the six frames identified in theory do not specifically comprise ecological developments[74], a seventh frame type is included in the revised model. Explicitly integrating this frame type into the range of frames enables the construction of a broader meaning of sustainability. The ecological frame (EL in the figure below) highlights the consideration of dependencies and the impact of organisational behaviour on the quality of ecosystems in strategic decision-making.

A third issue is that in making sense of complex reality in local interactions, group mechanisms (e.g. group think) may prevent the surfacing of different frames. Power used by the one with authority in these local interactions may be useful for convergence but constrain divergence in the stages of analysis and design of decision alternatives. The study of the housing association showed that often there were no decision alternatives designed, and for instance in the case of the collective heating system, the content of the decision proposal was influenced by the manager before being debated in the management team. Results also showed that making sense of sustainability did not lead to the constructed meaning being used in strategic choice.

The fourth issue is connected to the stage in which decision alternatives are weighed and one is preferred (if there are any). A diversity of frames may result in conflicts. In the stage in which decision alternatives are weighed and converged, the use of power and routine may prevent (or enable) the use of sustainability dimensions in judgements of decision alternatives. Synthesis of decision alternatives (if there are any) may lead to preferring one value over the other. As the case showed, economic values were preferred.

[74] Empirical findings showed that ecological developments were not seen as of strategic importance – while evidence shows that building materials, extracted from natural resources, are becoming more expensive due to scarcity.

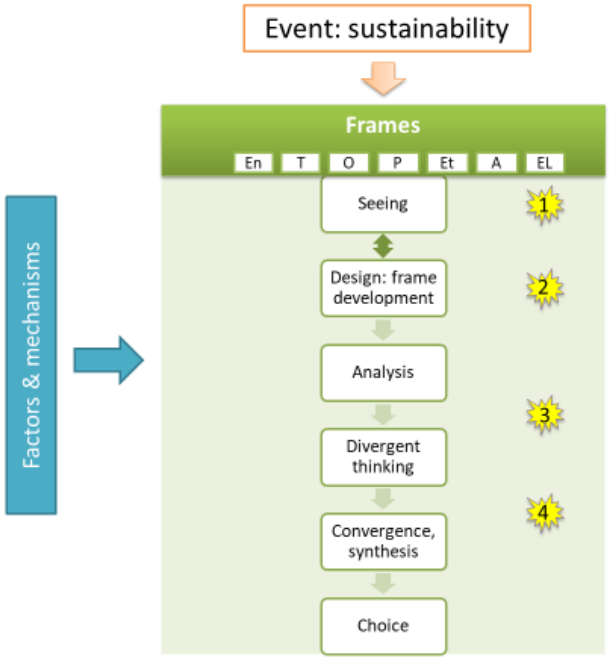


Figure 2 Revised conceptual model of strategic decision-making. The event that triggers the process is sustainability. Sustainability aims to integrate a variety of frames. The distinguished frame types are the economic, technical, organisational, personal, ethical, aesthetic and ecological frame type (dark green box). Frames filter attention and noticing (seeing) of events that trigger a process of strategic decision-making, but also of factors and mechanisms that influence this process. The stages that precede choice are seeing, a conscious design of frames that are used in the stages of analysis, thinking, synthesis and choice. The design of a framework comprising multiple frames may trigger a deliberate search of the environment for strategic events.

8.4 Reflections and debate

In this section I reflect on the methods used in this research and the value of this study for theory and practice.

8.4.1 Methodological reflections

This thesis contributes to advancing methodology for exploring frames in strategic decision-making, in the context of sustainability. This study contributes to methods for frame elicitation by not merely restricting to a distinction between

rhetorical frames or action frames[75]. What is making elicitation messy is the identification of values. The concept of values was not predefined in this study but emerged from data. Defining values as judgements of what should be and judgements of what is and accepting that these are related, complicated the separation between these judgements in the data. I did not design a questionnaire beforehand to make this distinction clearly, which is the effect of using Grounded Theory as a research method. In this research, evidence of values and beliefs – judgements of what is – are found in the *consistently* mentioned influential, contextual factors (enactment of strategic events – action frames) and decision criteria by actors and in texts (policy documents). Judgements of what should be are found in elements (influential factors and decision criteria) in strategic decision-making that are needed to integrate sustainability into strategic decision-making. To distinguish more clearly which factors *should* be used and which decision criteria *are* used (both expressing values), an option for future research is to use a pre-structured tool/questionnaire to detect and compare values of individuals and groups, and in documents. The categories of values as described in Gardner & Stern (2002) could be helpful in revealing an actor's attitude, preferences and beliefs specifically with respect to the environment.

The concept of sustainability was chosen as a sensitising concept early in this research. After the first stage of data collection, strategic decision-making emerged as a central theme in making progress towards a more sustainable organisation. Accepting the multidisciplinary character of sustainability meant making choices in which disciplines to involve in data collection and analysis. The choice of theories used to enlist keywords per dimension of sustainability reflect a focus on organisational behaviour and decision theory, as instigated by the emerging theme of strategic decision-making, thereby narrowing down other options. For example, the influence of stakeholders – tenants – in strategic

[75] Frame elicitation methods suggested by Schön & Rein (1996) meant identification of rhetorical frames and action frames from resp. texts and patterns of action. In this thesis, 'rhetorical' frames were identified from policy documents in which strategic choices were described, meaning (aligned with Schön & Rein's statements) answering the question 'how does the writer [of the document] make the normative leap from is to ought'. Schön & Rein next distinguish action frames, answering the question of 'how actors make diagnostic/prescriptive sense of a situation in order to act in the ways we find them acting'. The evidence is derived from data of observed action.

decision-making with respect to sustainability was not investigated. But focusing on studying strategic management theories, decision theory and sensemaking theory enabled more comprehensive data and thick descriptions from interviews with individual, key decision-makers in 2012–2013 and 2017. The exploratory interviews in 2009 and participant observation in groups during 2009–2012 were in retrospect analysed in the same way as the interviews in 2012–2013. The sensitising codes were also used in the subsequent analyses, to overcome difficulties in comparing collected data.

In short, I could say that my choices of which theories to study evoked the code list. Different options would have been to zoom in entirely on frames of individual decision-makers and to use a combination of codes from strategic management, decision theory and neuroscience, for example. The research would then result in an understanding of meaning construction and frames of individual decision-makers entirely.

The instrument of participant observation may be improved by including a list of themes before noting statements or using video recording. This would, however, imply leaving Grounded Theory as a research method. Predefined questionnaires or observation lists may constrain respondents in surfacing their assumptions, values and beliefs and loss of the larger patterns of behaviour. I thought it wiser to create a research climate in which respondents would have the trust and liberty to express their inner mind, and to keep view of patterns in interactions. A disadvantage of working in this way is that it is time-consuming and demanding.

Another way of improving observations of teams in sensemaking and strategic decision-making with respect to sustainability could be the use of serious games (Hodgkinson & Starbuck, 2008). However, the aim of these tools is to find a shared outcome, whereas I was more interested in surfacing a diversity of meanings of sustainability. Serious games could be used in more deductive studies of strategic decision-making.

Reflecting on the use of documents to detect values in strategic choices leads to the debate about whether the actual decisions that were made are written down as plainly as they were debated in the management team. I did not investigate

the possible differences in strategic choices written in policy documents and notes made from Board of Directors meetings in which strategic choices were made. An option for future research is to make this distinction more clearly.

In cases where the researcher is the instrument, awareness is demanded that the frame of the researcher may filter data, and methodological choices are made based on preferences and beliefs. However, many acknowledge that social sciences research is a political process, and a human construction conducted in a social context. This study made me more aware of seemingly natural Western views and beliefs underlying choices such as rationality, the availability of limitless natural resources, decisions based on information and the possibility of predicting the future. This awareness opened new ways of seeing and explaining things. With respect to filtering data, by collecting and analysing data at three distinct levels and using different data sources, the quality of my research is raised. Measures such as checking interview reports, focus group interview, unstructured interviews with others and attention for deviant opinions, and leaving the organisation as a colleague contributed to avoiding the 'going native' pitfall. The longitudinal character of the research may also have limited this effect of filtering. Being a colleague and researcher in one person is exhausting because one needs to be constantly aware of keeping away from transferring notes too subjectively and keeping distance. Therefore, after being a colleague for 2 years, I chose to leave the organisation to keep distance from those I investigated. The advantage after departure of being a former colleague was the openness I still found in interviews, even when some respondents left the company and others stepped in their place.

This thesis contributes to methodology by the suggestion to allow a sensitising concept to become a consistently used tool to analyse data to overcome difficulties in comparisons of data gathered in a longitudinal research based on grounded theory. Grounded theory as a research method complicates the structuring of findings in a longitudinal study. Using different methods of data collection and analysis techniques may result in different, incomparable interpretations. The constant factor, however, was the research instrument; in this case the interpretations were all executed by one person. This method, analysis of strategic decision-making by using codes per dimension of sustainability, is applicable to any organisation, in any area of the world.

CRITERIA FOR ASSESSING THE QUALITY OF RESEARCH

The quality of research can be assessed in terms of a set of criteria. In the social sciences, however, there seems to be an emerging consensus that there is no possibility of a neutral method of inquiry. In a postmodern view there is no such thing as an 'objective' reality, and no absolute methodological certainty can be guaranteed (Babbie, 2001; Denzin & Lincoln, 2000:872). What are the options, then, to assess the quality of this study, which is based on an interpretivist-constructionist epistemology? The first option suggests using the same criteria as in quantitative research: internal and external validity, reliability and objectivity. In qualitative research, however, the applicability of these criteria is debated (Swanborn, 1995; Bryman and Bell, 2011; Gibbert, Ruijgrok, Wicki, 2008). The generally agreed meanings of validity and reliability have largely been developed from a quantitative stance. Some qualitative researchers have altered these meanings to match the criteria with qualitatively gathered and analysed data. Others suggest using different criteria for assessing the quality of qualitative research[76]. Combined with the general aims of research[77], I will assess my study against the trustworthiness criteria as suggested by Lincoln and Guba (1985), and authenticity. Trustworthiness comprises four sub-criteria: (1) credibility (paralleling internal validity), (2) transferability (paralleling external validity), (3) dependability (paralleling reliability) and (4) confirmability (paralleling objectivity) (Bryman & Bell, 2011).

Credibility

The credibility criterion is about the acceptability of the findings, accepting that there can be several interpretations of social reality. Is the research executed in line with good practices and are the findings acceptable to members of the research informants? (In other words, did I understand the social world of strategic decision-making correctly?) In this study, the credibility of the findings was increased in several ways. The findings were reviewed and confirmed by the people that were the subject of the study. Multiple methods of data collection were used. Management meetings and informal employee meetings have been

[76] See e.g. a framework for assessing qualitative research produced by Spencer et al. (2003).
[77] In general, the aim of any research is to produce knowledge that is true and as informative, simple, logical and useable as possible (Swanborn, 1995).

used to confirm the results of the research. Interview summaries have all been sent to the interviewees for review and confirmation. The results of the first two periods have been discussed with a focus group, consisting of a diverse group of decision-makers, representing all layers.

Transferability

Transferability refers to the options that a study offers to translate its findings and conclusions into other, similar cases (Ketchen, Boyd, & Bergh, 2008). Qualitative research is not specifically aimed at producing results that are transferable to other contexts but aimed at 'thick descriptions' (Geertz, in Bryman & Bell, 2011). Intensive study of a small group sharing the same characteristics that function within a unique context implies emphasis on depth rather than breadth. According to Guba and Lincoln (1985: 316), it is up to others to see if there are possibilities to transfer the findings to other contexts. The findings of strategic decision-making within the context of the Dutch housing sector, however, possibly provides insights that are useful for other organisations operating in the same context. Also, results with respect to the role of frames as filter in the strategic decision-making process may be applicable to other organisations that aim to answer the question of how to integrate sustainability into their decision-making process.

Dependability

This criterion resembles reliability. Transferred into an 'auditing' approach (Guba and Lincoln, in Bryman & Bell 2011), it means that records of all data, analyses, selection of informants, etcetera, must be kept in an accessible manner for others, or: peers, to check. This also includes checking the degree to which theoretical inferences can be justified. Auditing datasets and analyses could also enhance the 'validity' of the research. However, the researcher only chose to ask peers to audit the data and representations of data in one case, the case of the urban area development project Hengelose Es Noord. The reason for not extending this audit is that it is rather time-consuming for peers to screen and assess huge datasets (the question also being which criteria to use in the assessment, which is especially difficult in grounded theory-based research).

Confirmability

It should be clear that the researcher 'has not overtly allowed personal values or theoretical inclinations' to influence the study and findings (Bryman & Bell, 2011). This criterion causes difficulties when accepting the stance that research is not value-free. The mind of the researcher intervenes in transforming uninterpreted data (Bateson, 1972). The scientific disciplines used in this study are multidisciplinary in nature, and dynamic, complicating the process of maintaining an overview of accepted claims. In the strategic management field, for instance, the strategy-as-practice movement seems more accepted now than in the first years of my study. The same applies to sustainability research, which now seems more accepted as a scientific discipline. In decision theory, some of the movements were displayed in Chapter 3; at present a more qualitative approach to studying decision-making seems accepted. To my belief, the researcher's personal values will always have some influence in an interpretive-constructivist study. A difference may arise in the entrusted information, compared to someone who did not actively work together for two years with many of the informants.

Authenticity

Although this criterion, according to Bryman & Bell (2011), has not been very influential, I believe it is an important aspect of qualitative research when it comes to answering the question of whether the study represents different viewpoints and ontological authenticity, i.e. does the research enable others to have a better understanding of the context. As far as educative and catalytic authenticity is concerned, I agree that helping others to appreciate different frames, and stimulate others to act, are not the main tasks of the scientific researcher. Tactical authenticity, referring to the possibility of the research to enable others to take steps necessary for engaging in action, is more applicable to this study since it has a theoretical component and a practical one. Through describing and exploring the underlying values of strategic decision-making in the case of sustainability, practitioners may be more focused on the impact of filtering and use of diversity of perspectives in decision-making.

8.4.2 Theoretical reflections

Considering the intention to contribute to strategic decision theory by connecting it to sustainability and sensemaking theory, it is relevant to address issues pertaining to theory application that emerged during this study. Issues that will be debated here are rationality in strategic decision-making, integrated thinking and reframing and convergence.

Rationality in strategic decision-making

In strategic decision-making the aim is to be as rational as possible (Simon, 1976; Hoogerwerf, 1989). Solutions are more effective if based on systematic reasoning and considering different viewpoints (Ben-Ner, 2013). Strategic decision-making implies rationalising the stages preceding choice (Weick, 1995, Weick et al., 2009), resulting in more conscious, adaptive, resilient organisational behaviour[78]. To do so information and goals are essential elements.

Information

Empirical findings with respect to the use of information regarding sustainability in strategic decision-making gave an ambiguous image of the relevance of information. Information may provide a basis on which to make predictions more accurate. However, as Tsversky and Kahneman (1983) were able to demonstrate, decision-makers use heuristics and are biased (Kahneman, 2009; A Tversky & Kahneman, 1981; Amos Tversky & Kahneman, 1986). Although information and analytical tools gain a lot of attention among scholars, it is good to bear in mind that the role of information, when it comes to choosing a future, preferred alternative, is always made with errors. People use decision rules, or heuristics, to make choices. The decision-maker's system of *values* serves as a criterion for selecting one from a set of alternatives (Simon, 1976), which limits rationality in decision-making.

[78] When Weick (1995) talks about rationalising behaviour, he means finding arguments for behaviour in retrospect. This refers to Festinger's cognitive dissonance theory and could imply that people make sense of unsustainable behaviour by arguing that 'given the circumstances and time' it was normal to act unsustainably (routine behaviour dominated by the Industrial Revolution/economic paradigm).

THE ROLE OF GOALS

At Welbions, changes in goals regarding sustainability were noted in the three business plans and from interviews. Initially, the goal of sustainability was to contribute to a high-quality living environment, and affordable houses. In the last period the primary objective was affordability. Guidelines with respect to sustainability, defined from a narrow view as necessary energy measures, were not used in making strategic choices. The theoretical assumption is that goals are used as guidance in making choices. Values in organisations are bound to the goals the organisation wants to achieve and are established in the culture (Eccles, Ioannou, & Serafeim, 2011; Lindenberg & Steg, 2007; van de Poel & Royakkers, 2006). Individuals within organisations are purpose-oriented towards goals or objectives; in exchange for achieving their goals, individuals conform to the organisations' objectives. Purposiveness brings about integration in the pattern of behaviour, organisational goals facilitate individuals to overcome limits to rationality by giving them constraints within which to make choices (Simon, 1976). Empirical findings from the Welbions case, however, did not lead to the conclusion that the sustainability goals were used in making strategic choices.

INTEGRATED THINKING

The intention of thinking is to design and develop decision alternatives. The outcome of strategic thinking is an integrated perspective that emerges from 'messy processes of informal learning carried out by people at different organisational levels' (Mintzberg & Waters, 1985). The theoretical assumption is that choice involves the selection of one preferred alternative over another, whereas in practice in many cases only one alternative is 'debated' by the formal decision-makers. Empirical findings showed that, in many cases, decision proposals contained only one or two decision alternatives. An example was given in 2017 where a strategic choice showed that the alternatives dominantly focused on cost and energy alternatives, thereby narrowing down perspectives in decision alternatives.

Integrated thinking suggests a diversity of values to guide organisational decisions. The concept of sustainability provides a framework for organisations to categorise this diversity by organising them into three lines: people, planet and profit. The study shows, however, that the frames used in sensemaking were not representing all dimensions of sustainability. This may be caused by the desire of

people to conform, identify and comply with pressure, while a diversity of perspectives on events may remain invisible. In groups, conformists are preferred over non-conformists (Aronson, 1995). I specifically asked in interviews about possible conflicts in meaning construction of sustainability. Some stated that there were opposite meanings, but there seemed to be consensus on the meaning of sustainability, especially in 2017.

People informally develop and mutually enforce rules used to make decisions without the involvement of an official authority (Gardner and Stern, 2002: p. 28). Individuals tend to follow these group rules, or group norms, for reasons such as mutual respect and concern for one another, out of a sense of obligation to the group, or due to social pressure. Leadership and power are main themes in making sense of disruptive events (Kahane, 2010; Pfeffer, 1981). CEOs can refocus managerial attention they deem crucial to enact a new strategy (Boonstra & de Caluwé, 2007; Gond, Grubnic, Herzig, & Moon, 2012; Simons, 1995, 2006). It was not until the last period that the CEO of Welbions directed the organisation towards sustainability as chairman of the taskforce on sustainable development, and as chairman of the management team. But sustainability, in the sense of energy measures, was not the debated in, nor decided upon from a broader sense.

Reframing and convergence

In the stage of enactment of sustainability, the frames of actors are determinant. According to Weick (1995, 2011) and Scharmer (2009), reframing starts with the ability of actors to have an open mind. But when confronted with disruptive events, actors firstly respond in an emotional manner, after which the event may remain ignored. Or when a connection is made between an event and a frame, complexity, ambiguity and uncertainty cause actors to use routine ways of coping with events (Weick, 1988). Despite intentions to do so, debates about sustainability from a broad view at Welbions were postponed repeatedly. Partly due to contextual influences, the organisation was thrown back on its routine, i.e. making decisions based on economic values. In the third period, the meaning of sustainability was narrowed down to the energy efficiency of houses, and measures that were aimed at diminishing CO2 emissions can be related to the technical frame.

In the case of strategic decision-making based on sustainability values, the question is how to create an open mind. Development of multiple frames based on the concept of sustainability may enable one to establish a connection with sustainability in a broad sense and prevent it from being ignored, or to be dealt with in fast, routine ways. Frame diversity, however, leads to different interpretations of the meaning of situations or available information and differences in the valuation of information. Frames shape decision positions (Kolkman, 2005: p. 28) and lead to conflicts in decision-making. Which factors influence the convergence of multiple frames into a strategic choice?

Changes in the content of the memory take place relatively slowly through learning. Learning can be substituted for rational decision-making (Mintzberg & McHugh, 1985; North, 2010). Mintzberg et al. (1976) enumerated some guidelines for convergence. Selection of an alternative is made through the determination of criteria for choice. In the field of policy science, Hoogerwerf (1989), in describing the policy design process, refers to these criteria as decision rules. Design of decision rules in which the values to be achieved are explicated could enable convergence. Another idea can be derived from the keys to sustainable community management as enumerated by Gardner & Stern (2002). These keys are participatory decision-making in local communities (or, in terms of organisations, in local interactions in groups (Homan, 2005)), monitoring, social norms, and community sanctions (Gardner & Stern, 2002: p. 135). Participatory decision-making is making use of the desire of people to conform to groups. Most people do what is good for the group and *internalise* the group's goals, rather than acting out of compliance with a set of external incentives.

The question is if it is possible to base choices on multiple value systems. This appears to be possible in scenario analysis (Van Reedt Dortland, Voordijk, & Dewulf, 2014). An example from practice is the use of GPR as an assessment tool. GPR for buildings consists of five quality criteria and enables decision-makers to judge and weigh different alternatives for rebuilding houses. Each of the criteria may be calculated and agreed to reach an average score (or target) or a specific score per criterion before the design of alternatives.

An option to overcome difficulties in convergence, such as one frame used in selecting one alternative, is to institutionalise decision criteria in such a way that they represent multiple, sustainable value systems and require integrated thinking.

MORE ATTENTION TO FRAMES

A diversity of frames and values in strategic decision-making raises the quality, legitimacy and effectivity of the decisions. But a diversity of frames may lead to conflicts in collective sense and decision-making processes. Using decision criteria that are agreed upon in advance and surfacing (and reframing) decision rules may result in more conscious strategic decision-making based on sustainability. Implications for further theory development in the field of sustainability and decision theory are that more attention is given to the impact of frames, of using routines or fast thinking processes, intuition and experience on making sense of events that need a broad perspective and the likelihood that strategic events, such as the ecological crisis, remain unnoticed. Attention to the learning processes of actors to reframe their underlying values systems and use a more balanced frame, especially in the stages of thinking and convergence, may lead to more sustainable organisational behaviour. Embracing sustainability as a multidisciplinary frame means accepting an integrated control mechanism in which not only agenda setting is of importance but also the willingness of actors to internalise a common frame. Without internalisation the strategy and goals based on sustainability will not be used in sensemaking nor in choice.

8.5 AVENUES FOR FUTURE RESEARCH

To solve the issue of how to shift value systems, more research is suggested focusing on the influence of conditions for learning (internalisation) and contextual changes on frames and values, and on the connection between conditions for behavioural change and mechanisms influencing social interaction (such as culture).

Methodological suggestions for future research into sustainable-values-based strategic decision-making are to combine qualitative with quantitative methods in detecting frames and values underlying strategic decision-making. By using

quantitative methods, it is possible to state with more certainty which perspectives are used the most. Comparison between individual and collective sensemaking is complicated when based on words. Transferring quotes and statements into predefined frames and values may allow for quantification of qualitative collected material (e.g. Q-methodology). Another suggestion is to further develop methods of elicitation of value systems and identification of judgments of what is and judgments of what should be, per stage of strategic decision-making.

Not researched but nevertheless interesting is the influence of the position of a decision-maker in the organisation on the frame used in making sense of sustainability (e.g. does the HRM manager make sense of sustainability from an organisational frame, the CEO from a personal frame, the real estate manager from a technical frame); is there a correlation between decisions made by strategic decision-makers, their role and function in achieving long-term objectives of the organisation and their meaning constructed of sustainability? And if a management team consists of distinct functions, do they represent seven frame types?

Further research on the elicitation of frames of relevant stakeholders, influencing strategic decision-making, e.g. the local government and tenants, may be useful for gathering more insights into the influence of stakeholders on decision criteria used in making choices. However, connecting this to sustainability, the tempting question is how to represent nature as stakeholder in strategic decision-making.

Another development that is of interest in the perspective of the aim to base strategic decision-making on multiple, sustainable values is big data and data-driven decision-making. The development of a supportive tool, which provides people, planet and profit data in the stages of analysis and thinking, may enhance the design of sustainable goals and sustainable decision alternatives.

RECOMMENDATIONS FOR THE FIELD

When sustainability, or ecological crisis, is the event that needs to be enacted, a frame of reference should be internalised that allows for identifying these developments, analysing them, designing decision alternatives, taking them into account in weighing and choosing one preferred alternative.

Frames enable decision-makers to make fast judgments of decision situations. The question then becomes if it is possible to organise strategic decision-making[79] in a more conscious, reasoned way, making 'slower' decisions (Kahneman, 2011) and taking a long-term view into account. The challenge then is to become more strategic, more multidisciplinary, and more rational in the stages preceding choice. Frames and values are hard to change. They are internalised in the mind of the actor. Due to group mechanisms, the frames and values used in organisations may remain invisible. And conflicts may emerge when they come to the surface in group interactions. Short-termism, heuristics, defensive routines and other factors may prevent more reasoned sensemaking and multiple frames from being used in making decisions. To enlarge more conscious thinking in making strategic decisions, sustainability could serve as a guiding frame, stimulating design of decision alternatives in its three dimensions. Thinking and synthesis based on multiple frames result not only in more rational decision-making but also in forecasts that are assessed against (sustainability) impacts.

Deliberately eliciting multiple frames and values, however, although providing the organisation with a way to cope with a complex, dynamic environment, may lead to conflicts. If different frames and values are elicited in strategic decision-making, in what way are they synthesised or converged into a choice? Goals serve as a common frame of reference. Empirical findings, however, showed that goals were not used in weighing and choosing. Further research into the effectivity of institutionalisation of control mechanisms, i.e. decision rules, could support SDM based on sustainability. Consciousness with respect to the challenges of making sense of sustainability from different frames could enable those involved in making strategic choices to raise the quality of SDM in the context of sustainability, thereby improving the resilience of the organisation.

Internalisation of multiple, sustainable, frames-based strategic decision-making requires an open mind and willingness to change the decision-making routine.

[79] In this research, strategic decisions were defined as consciously made choices to which no standard solution applies, which affect the organisation's licence to operate and require a long-term view, and a specific commitment to action (Mintzberg et al., 1976). Strategic choice is the outcome of a process of strategic sensemaking and selecting one decision alternative over others (Simon, 1976), which is influenced by dynamic factors (external factors and internal mechanisms) and based on values.

This routine is based on frames, which implies that ecological change is filtered, and some events, although strategic in nature, may remain unnoticed. Attention to events is limited or bounded. Taking a broad range of decision situations, ecological developments and events into account, using a multidimensional frame (sustainability), increases the resilience of the organisation. Acknowledgement of the bounded attention to the ecological crisis, for biases and the use of heuristics, group mechanisms, the role of power in the process and bargaining practices, is a start to not only raise the awareness of decision-makers but also to strategically enact to the ecological crisis and to develop a new routine. Institutionalisation and internalisation of an integrated, sustainability-based frame as guidance for strategic decision-making could be supportive of accepting cognitive conflict and the emergence of multiple values in social interactions. Decision rules based on sustainable values may guide the judgement and selection of a decision alternative that addresses ecological boundaries, while creating social and economic values.

This study provided a method for identifying frames and underlying values at different layers in the organisation. The findings showed that making sense of sustainability does not result in sustainable strategic decision-making. For organisations to transform into more sustainably behaving ones, reframing is necessary.

APPENDICES

APPENDIX 3.1 FACTORS INFLUENCING STRATEGIC DECISION MAKING

With respect to the degree to which the organizational environment can be controlled: the present context of organizations can be characterized as complex and dynamic, highly uncertain, continuously and fast changing (Mintzberg, Lampel, & Ahlstrand, 2009; Hutzschenreuter & Kleindienst, 2006). Apart from mechanisms that influence the interplay between individual, group and organizational frames a number of factors influence strategic decision making.

At the individual level, meaning construction may be constrained by an inability of actors to deal with *information*, which may be too much information or a matter of not enough information (Suthcliffe and Weick, in Hodgkinson & Starbuck, 2008). The capabilities of individuals to *attend* to information or events is limited due to limited knowledge (March, 1987) or to the quality of information (or: data sources) itself (Feldman & March, 1981). Cognitive abilities differ per individual (Frederick, 2005), cognitive bias and attribution errors influence decisions (Daniel Kahneman, Lovallo, & Sibony, 2011; Tversky & Kahneman, 1981); March & Shapira, 1987; Hodgkinson & Starbuck, 2008). *Frames and the use of (cognitive) heuristics* (Tsversky & Kahneman, 1974, 2000) enable people to filter and make a fast judgement and selection of appropriate strategies to cope with confronted events. The coping strategy then is aligned with past experiences and successes. The conscious or unconscious use of frames (deliberate use: framing) and heuristics (decision rules) may lead to *short-termism*, in a sense that previous successes prevent the time consuming development of a multiple values based meaning construction (Laverty, 1996; Aronson, 1995; Solomon, 2013; (Liljeblom & Vaihekoski, 2009).

According to Amason (1996:p.124) when making complex, non-routine (strategic) decisions due to *cognitive diversity* in teams, debating differentiated positions produces choices of higher quality than teams with no diversity. However, a diversity of frames and values when elicited are expected to lead to conflict in collective processes of sensemaking. Conflicts may erose commitment of individuals. The desire to conform to groups may lead to group think (Janis) and prevent use of balanced, multidisciplinary thinking when making decisions.

Biased decision-making (related to cognitive dissonance theory) and the use of defensive routines (Argyris, 1995) can also be consequential of the use of frames.

Framing, the deliberately positioning of a decision situation by actors, influences the shared construction of meanings. Meanings are negotiated and part of a political, bargaining process (Kaplan 2008). The analysis of decision situations, meaning constructions may be constrained by preferences and goals of an actor or influenced by managerial values (Selznick, 1957; Fréry, 2006; (Keeney, 1992); North 2010; (Gioia & Chittipeddi, 1991).

Culture – shared values and norms within an organization – limits rationality in decision-making (Schein, 1984; Cyert & March, 1963; Rojot, in Hodgkinson & Starbuck, 2008) in a sense that the shared frame filters events and results in selective attention. Culture reflects many outside factors and may foster group think (Janis, 1982).

Under influence of *time*, decision-makers may focus on short term solutions and overlook alternative courses of action. Brain games have shown that human brains often exchange accuracy for speed, causing bias in decision-making and attention for more urgent then relevant matters (Elkington, 1999). The time dimension narrows down the alternatives but on the other hand restricts strength of influence of group behaviour on decision making. One of the main challenges in actual decision processes is to take the time dimension into account in decision making (Simon, 1976; Elkington, 1999).

The organizational structure – division of roles – direct attention to a particular set of values which may narrow perceptions. Leaders with power and/or authority may force group member to convergence, bargaining processes may limit rationality in decision-making and prevent divergent thinking. (Hodgkinson & Starbuck, 2008:p.142; Mitroff & Linstone, 1993:p.23; Kaplan, 2008).

In a society in which a mechanistic and economic view prevails this means that economic values focus attention and underlie the process of SDM. As a result signals about irreversible loss of ecosystem resilience and biodiversity are often not observed, wrongly interpreted or just not received by decision-makers (Arrow et al., 1995). Although data about environmental decline is at hand ever since the 1960s and in recent years became less and less debated, this information does not seem to belong to the set of signals that is commonly received or searched for by decision-makers (Arrow et al., 1995).

Environment itself is a constraining factor to take into account when deciding (Vlaev & Chater, 2006); Mintzberg, 2003). Geographical constraints may enforce prioritization of certain values above others.

Due to globalization the number of stakeholders affected by and with an interest in organizations increase which complicates strategic problems (Courtney, 2001). This raises the question to what degree stakeholders participate in and influence strategic decision making. E.g. Malsch, Tremblay and Gendron (2012) claim that stakeholders involved in sensemaking (around executive compensation policies) are culturally biased. Cultural biases according to Douglas (1992) are individualism, hierarchy, egalitarianism and fatalism. Weber and Glynn (2006) identify three mechanisms by which institutions are woven into sensemaking - priming (providing social cues), editing (through social feedback processes) and triggering (posing mysteries through contradiction and ambivalence).

Figure 1 summarizes the above mentioned factors influencing strategic decision making. The factors are visualized and grouped without the belief that this list is all-encompassing, but based on the studied literature. In the midst of this figure the concept of frames, which in this research is considered to be central to and conditional for group processes of sensemaking preceding strategic choice. External and internal factors influencing the processes of sensemaking and strategic choice are filtered through the frames of decision-makers (individually and collectively).

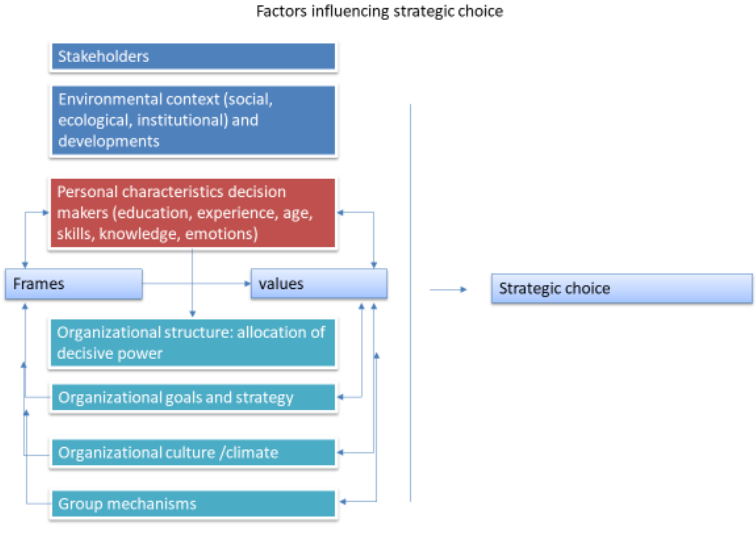


Figure 1 Factors influencing strategic decision-making processes. The boxes are not ordered based on some kind of logic nor is the list of factors all-encompassing.

CONTEXTUAL FACTORS

In Table 1 external and internal factors influencing effectiveness of group decision making are enumerated. The list is based on books, papers and review articles in the field of on group effectiveness, social influence in organizations, strategy formation, policy processes and strategic decision making and in combining these terms.

Table 1 Internal and external factors influencing group decision making

Internal forces/mechanisms	External factors
Organisational level: Organisational design factors (task design, group composition, organisational context such as reward policy, supervision) [1] Policies & procedures / decision rules [3] *Group level:* Group processes (interaction processes in and outside groups) [1] Group psychosocial traits (shared understandings / culture, beliefs, number and pattern of linkages among relevant groups, or group climate: emotional tone) [1,2] Politics (solving conflicts via use of power) [3, 8] Culture *Individual level:* (functional) experience/ history of precedents [2,3] Politics (solving conflicts via use of power) [3, 8] Emotions [8] Personality [8] Cognitive capacities [8]	Size of power of competition [4] Economic and financial markets [4] Stakeholders Technological developments [5, 10] Political factors [5, 8] ; Legitimacy, compliance (North) Institutions, government laws and regulations [8] Degree of uncertainty and risk in decision situation Environmental forces [8] / ecological developments [6] Time dimension (timing delays, speedup, feedback delays) [8]

References: 1: Cohen & Bailey, 1997; 2: Chattopadhay et al., 1999; 3: Smith, G.F, in Hodgkinson & Starbuck, 2008; Mitroff & Linstone, 1993; 4: Porter, 1998; 5: Boonstra, 2000; 6: Gardner & Stern, 2002; 7: Aronson, 1995; 8 Mintzberg et al., 1976; 9 Kassin et al, 2014; 10 Griffith et al. In Hodgkinson & Starbuck, 2008:p. 100)

INDIVIDUAL LEVEL:

Our cognitive abilities to interpret are subject to *bias*. Confirmation bias means that we tend to seek to confirm our original hypotheses and beliefs (Aronson, 1995). Hindsight bias means that humans are usually overconfident that their beliefs are true and predictable. These biases also mean that humans prefer to maintain their existing knowledge, attitudes and beliefs. This may cause important information to remain unnoticed and may lead to poor decision making.

Learning. Individuals and groups "suffer" from misperceptions of feedback between decisions and the environmental context in which decisions are made (Argyris, 1993) (Hodgkinson & Starbuck, 2008).

Time dimension: brain games have shown that human brains often exchange accuracy for speed, causing bias in decision-making and attention for more urgent then relevant matters. Most actual organizational decisions are focused on realizing results in a short time period (Laverty, 1996; Liljeblom & Vaihekoski, 2009). The time dimension narrows down the alternatives but on the other hand restricts strength of influence of group behaviour on decision making. One of the main challenges in actual decision processes is to take the time dimension into account in decision making (Simon, 1976; Elkington, 1999).

GROUP LEVEL:

Group pressure leads to conformity which is the mode of thinking that persons engage in when concurrence seeking becomes so dominant in a cohesive group that it tends to override realistic appraisal of alternative courses of action (Aronson). An illustrative example of this groupthink is the conformity in the circles around Hitler. Conformity means that values and norms are determined by the group and individual behaviour is in line with these collective norms. In collective choice group conformity and group pressure restrain the emergence of diverse perceptions, opinions, attitudes and meanings given by individual decision makers to events that disrupt normal routines. In groups, people tend to conform to the "established" group mainly because people have two main goals,

the goal of being correct and the goal of satisfying other people's expectancies, of which the latter is most dominant[80].

Every group of people can be characterized by some sort of formal authority (Diamond, 1997; Mintzberg, 2003; Simon, 1976). A primary function of organization is to enforce the conformity of the individual to norms laid down by the group, or stakeholders. To be able to do so, a certain amount of *power* is needed. Group decisions require the exercise of authority or other forms of influence that is adopted by the group. Authority is not derived from hierarchical position in an organization. According to Senge, a unique mix of different people in different positions, who lead different ways, is required to face complex, systemic issues (Senge, 1995).

Culture limits rationality and directly influences decision-making (Rojot, in Hodgkinson & Starbuck, 2008). Relationships among individuals rest on systems of shared meanings based on commonly held values (Boltanski & Thevenot, 1991). These normative elements of an organization are usually referred to as culture (Eccles, Ioannou, & Serafeim, 2011). A distinction can be made in general individual values, management values as the beliefs and preferences of those that have the authority to decide, and social values (the values of the societal context in which the organization operates as they are interpreted by the management (Mintzberg, Ahlstrand and Lampel, 2009; Ashkanasy, Wilderom, & Peterson, 2004).

Intuition and emotion play a role in decision making (Kahneman, 2003, Kotter, 2013,Menzel,2013). The emotional state of a decision-maker can influence the outcome of the decision-making process (although in strategic decision this depends on the position and influence of the individual decision-maker). Affect might influence the judgement of risk and whether decision options are viewed as optimistic or pessimistic (Hodgkinson & Starbuck, 2008, p. 332). Positive affect can stimulate creativity through motivations of decision-makers. Selective attention can also be influenced by the emotional state of the decision-maker. People are influenced in their choices by the mood they are in. Feelings impact choices made. (e.g. fear, Kloosterboer, 2005).

[80] Variables that increase or decrease conformity are (1) whether or not the majority opinions is unanimous; (2) commitment to initial judgment; (3) the individual's personality (self-esteem, belief in abilities, cultural differences, sexual differences); (4) group constitution (experts/authority) (Aronson, 1995).

Group dynamics. The desire to identify with groups, or teams gives space to the use of authority. Consequently innovative, creative thoughts or signals could go lost in collective decision making. Two other influential factors in team work are group think and social loafing. Group think occurs when group member are primarily concerned with unanimity, and make poor decisions by failing to realistically assess alternatives. Social loafing is the tendency for group member to reduce their effort as the size of the group increases (DeSimone & Werner, 2002).

The *nature* of the problem: in situations or problems where outputs will not be numerical and well-structured (which is the case in the situation where organizations extract fossil fuels that can only be “restored” n=by nature after millions of years, how to measure this negative impact, or how to measure an operator such as quality of life, or healthiness?) an inductive analytical, technological decision making perspective will do, but in unstructured unbounded problems multiple perspectives and outcomes prevent a strict technological approach (Mitroff and Linstone, 1993).

Goals. Choice is influenced by expectations of what ends may be realized at different times (Simon, 1976: p.65). By choosing one alternative above the other, what is sacrificed? Some decisions have irrevocable consequences, they create new decision situations in which they can constrain alternatives.

Market functioning. Efficient markets are created in the real world when competition is strong enough via arbitrage and efficient information feedback to approximate the Coase zero transaction cost conditions. But: in formational and institutional requirements necessary to achieve such efficient markets are stringent. Players must not only have objectives but know the correct way to achieve them. Influences on strategic decisions originate not only from traditional industry-based competitive forces identified by Porter.

APPENDIX 3.2 SUSTAINABILITY FROM DIFFERENT FRAMES

As described in chapter, the meaning of sustainability is debated and the concept is defined from different perspectives. See e.g. Dahlsrud (2008)[81] and Carreon (2012). Carreon listed, derived from Jickling and Wals 2002, 11 meanings of sustainability. Derived from Wals and Jickling these 11 meanings of sustainability are:

1. sustainability as (socially constructed) reality
2. sustainability as ideology and therefore political
3. sustainability as negotiated, the result of ongoing negotiations (participation principle)
4. sustainability as contextual, its meaning dependent on the situation in which it is used
5. sustainability as a vision to work towards (sus is a dynamic process, Jorna 2006)
6. sustainability as a dynamic and/or evolving concept
7. sustainability as controversial and the source of conflict (sus as a belief)
8. sustainability as normative, ethical and moral
9. sustainability as innovation or a catalyst for change, sus as a learning process (Faber, 2006)
10. sustainability as a heuristic, a tool-to-aid-thinking
11. sustainability as a (temporary) stepping-stone in the evolution of environmental education and of environmental thought

This list clarifies that there is not one way to look at sustainability, an unequivocal interpretation of what sus is or should be does not exist.

When related to organizational behaviour one of the most common characteristics is the presence of goals. Organizational goals guide the behaviour of its members. Acknowledging the idea that most organizations still base their goals on economic principles than it is only logical to shift this base towards sustainable goals. Goals seen as the organizational frame that filters the actions and thoughts of its members.

Underlying assumptions and values of the meaning of sustainability can be categorized using the frame types as developed by Mittroff & Linstone, Courtney

[81] Dahlsrud, A. (2008)[81]. How corporate social responsibility is defined: an analysis of 37 definitions. *Corporate social responsibility and environmental management*, *15*(1), 1-13.

and Hall, Guo & Davis (see chapter 3). Each frame is characterized by some central values. In line with Caccia (in Jonker, Diepstraten & Kerkboom, 2011:p.35) leadership needs to translate emerging values into decisions. The key to transforming organizations into sustainable organizations lies in the capacity to use values based on all dimensions in decisions and behaviour of organizations. Table 1 explores the challenges for each frame with respect to the meaning of sustainability.

Table 1 Frame type, key values and challenge for constructing a meaning of sustainability.

Frame	Key aspects & values	Challenge
Sustainability from the perspective of technology	Technologic progress is able to compensate for (the growing scarcity in) natural resources Scientific perspective with a rational and functional orientation	Prevent negative impact on the quality of the environment due to using technology Development of clean technology Dealing with unstructured problems Acknowledgement of the force of emotions and role of intuition in technological progress
Sustainability from the view of organizations	Group interactions and influence Organizational responsibilities and role attitudes Structuring tasks, design plans focused on stability Organizational culture	Sustainability as a framework for strategic decision making means attend to thinking process, individual sensemaking and awareness of group think risks Triple bottom line based values and decisions, reflecting in integrated organizational behaviour and reporting, avoid greenwashing practices and discrepancy between declared principles and actual behaviour Institutional context as a barrier to value TBL Emerging strategies and planned strategies: resilient organizations are able to move with changes in the environment and stabilize behaviour
Sustainability from the view of the individual or personal perspective	Psychological view: basic need of humans at the centre	Shift from egocentric to ecocentric values, attention for consequences of fulfilling one's own needs on environment Accepting non dominance of humans above other species and dependency on nature

Sustainability as an ethical issue	Integrity Identity, culture Values and beliefs about interactions and relations between self, organization and environment (normative goal frame, ideology)	Bridging gap towards daily activities and events Debate about taken-for-granted assumptions requires courage to divert from group think
Sustainability from the view of economics	Functional, practical (short termed) view, focused on usability and material goods Welfarist economists assumption: each individual decides in terms of maximization of his profit (or utility). Rational decision-making: cost analysis, cost minimization, efficiency criterion and inside view of organizations are at the heart of micro economics.	Intuition, experience and emotions as basis for decision making Financial system taking into account sustainable values and benefits Information about trends and developments in ecosystem resources to support integrated decisions (prevent extractions) Use of long term criteria to weigh investment decisions and focus on effectivity in long run Consideration about societal outcome and quality of the whole supply chain.
Sustainability from the view of aesthetics	Beauty and harmony of a solution design Preferences of people for things influenced by experience and emotions	Relate to health issues (healthiness defined in the same terms as sustainability, WHO) Link with organizational (human) behaviour: provide tools and support to emotional and rational decision makers Focus on sharing perspectives (cocreation, participatory decision-making)
Sustainability from the view of ecologists	Biodiversity is main indicator of healthiness of ecosystems Conservation and sustainable use of natural resources Intrinsic value of nature (Deep Ecology movement, organic society)	Embracing advances made in society and technology Use of science and technology to support development of organic society

APPENDIX 4.1 LIST OF ATTENDED MEETINGS 2009-2011

	Topics	Number of meetings in 2009/2010	Number of meetings 2011 (until August)
Project group sustainable development Welbions	To implement the long term objectives in the vision document (per theme) and to rethink if these objectives are specific, measurable, acceptable, realistic, in time phased.	14	14
Working group awareness	Raise knowledge, stimulate positive attitude and sustainable behaviour.	8	8
Informational gatherings employees	Explaining sustainability; the vision document and the four Welbions themes.	2	1
Working group affordable housing cost	Measures to limit rise in housing cost due to rise in energy, gas and water charges	4	3
Theme materials / working meetings real estate departments (development and management)	What measures to take to give shape to dependencies in the supply chain and to use sustainability as criterion in assignments to constructors of new buildings. In 2011: sustainability on the agenda of department meeting real estate development.	16	6
Theme climate and clean energy	Department Real Estate management takes the lead in rising energy label of property during maintenance; goal is to raise the energy label to level B	Frequent during the year (every 2 / 4 weeks)	Frequent during the year (every 2 / 4 weeks)
Budget / planning / indicators for sustainability	Meetings discussing the role of sustainability in yearly organizational budgets and maintenance budgets	2	14

Finance/Societal return on investment	Taking valuation of effects in society and environment into account of decisions and monitoring; in 2010 this subject is only discussed, no progress made	9	21
Warmtenet / energy concept	Use of rest warmth to warm houses in certain urban areas; a measure of the local government that obliges Welbions to make installation costs, that obliges tenants to use this rest warmth and therefore restricts their freedom of choice ico energy supply, and without considering options for more sustainable energy sources or systems. In 2011 meetings held to discuss which energy concept could be used in restructuring urban areas	5	5
Sustainable development and urban area development	In most meetings the central topic was how to raise energy quality of property. In the project Hengelose Es Noord, the development of the area from starting point to vision phase (July 2011) is built on the three dimensions of sustainability, so the broad perspective of the concept of sus.dev. is used as guideline. Woolder Es will be subject of evaluating of effects of taken measures on housing costs (Autumn 2011).	Klein Driene: 2 Woolder Es: 6 Veldwijk Noord: 12 Wilderinkhoek: 7 Hasseler Es: 1 Hengelose Es Noord: 15 Overall: 2	Woolder Es: 3 Wilderinkshoek: 1 Hasseler Es: 5 Kasbah: 4 Hengelose Es Noord: 16
Communication strategy plan for tenants ico maintenance project	Due to 70% rule plan of action is developed in 2011 to persuade tenants to invest in improving energetic quality of the property (benefit: lower housing cost)	-	10
Bilateral meetings with director Welbions	To discuss progress in the project group sustainable development and other issues related to sustainability	6	6

Management Team	Agreed was to put sustainable development on the agenda every 6 weeks and to take time to discuss long term objectives next to progress in the project group; in the meetings in 2010 the subject sustainable development is discussed only in terms of progress in implementation of the vision document by the project group instead of translating the vision document to every department and discuss strategic issues (such as return on investment, and other issues that were noted in the document “long term issues related to successful implementation of sustainability”).	6	3
Working group sustainability and energy	Broader debate about the meaning of sustainability , developments within Woon, energy labels stock	7	
Team Strategy & Organization	Strategic developments, team function in the organization, ESR, SWOT	9	

APPENDIX 4.2 LIST OF INTERVIEWEES 2009

Total number of interviewees in 2009: 34

Guiding questions were:

- What does sustainability mean?
- Which aspects of sustainability are important for Welbions?
- What should Welbions do, in short term, in long term?

Manager Strategie (A. Visscher)
Controller (M. Jonge Poerink)
Manager HRM (W. Willemsen)
Manager Finance (A. Seppenwoolde)
Manager Vastgoedbeheer (T. Smits)
Manager Vastgoedontwikkeling (F. Ufkes)
Manager Vastgoedonderhoud (G. Bosch)
Manager Wijken (B. Schipper)
Manager Markt (P. Kip)
Manager THB (H. Leferink)

Manager Klantenservice (H. Pierik)
Manager Bedrijfsvoering (H. Bruinink)
Directie (P. Pinkhaar, H. Rupert, W. de Bruijn)
Gebiedsregisseurs (R. Olde Heuvel, R. Gockel, A. de Boer)
Coördinator herstructurering (N. Witteveen)
Beleidsmedewerker Wonen (M. Bentert-Zwijnenberg)

Beleidsmedewerker Financiën en beleidsmedewerker interne controle (E. ter Keurs, L. Besselink)
Coördinatoren vastgoedbeheer (C. Overbeek en P. Donderwinkel)
Klant (mw. M. van Eck)
Beleidsadviseur gemeente Hengelo (R. Frank)
Adviseurs afdeling strategie (R. Welhuis, A. Braamburg, K. Meijer)
Adviseur/projectleider Veldwijk (P. Buijsman)

Extern adviseurs (P. Wolbers, S. van Tongeren)
Extern adviseur strategie (P. Gerritsen)
Vastgoedontwikkelaar (R. Hoek)

APPENDIX 4.3 SURVEY QUESTIONS 2011

Sustainability survey questions, August 2011

Exportdata: Vragenlijst Duurzaamheid van 04 aug 2011 tot 22 aug 2011

1_ Wat betekent duurzaamheid voor jou?
2_ Ken je de visie van Welbions op duurzaamheid?
3_ Welke thema's zijn voor Welbions benoemd?
4_ Denk je dat werken aan duurzaamheid nodig is?
Als je hier "ja" hebt ingevuld, waarom is dit dan nodig?
Als je hier "nee" hebt ingevuld, waarom is dit dan niet nodig?
Als je hier "weet ik niet" hebt ingevuld, wat maat dat je hiervoor hebt gekozen?
5_ Doe je thuis iets aan duurzaamheid?
Als je hier "ja" hebt ingevuld, wat is dat dan?
6_ Doe je op het werk iets aan duurzaamheid?
Als je hier "ja" hebt ingevuld, wat is dat dan?1
7_ Klimaatverandering is onzin_
8_ Duurzaamheid is een modeverschijnsel, het waait wel weer over_
9_ We zijn goed bezig, er zijn voldoende grondstoffen om door te gaan met hoe we het nu doen_
10_ Werken aan duurzaamheid is goed voor je imago_
11_ Ik maak me druk over het uitsterven van andere soorten_
12_ Klimaatverandering is een natuurlijk verschijnsel, wij hebben hier geen invloed op
13_ Ik maak me zorgen over stijgende energielasten, dat ga ik voelen in mijn portemonnee_
14_ Doe je thuis aan afvalscheiding?
15_ Doe je op het werk aan afvalscheiding?
16_ Print je dubbelzijdig?
17_ Denk je dat meewerken aan duurzaamheid iets oplevert?

Appendix 4.4 List of interviewees 2012-2013

In the period between October 2012 and March 2013, 15 key decision-makers were interviewed:

Name	Position	Date of interview
Harry Rupert	Directeur-bestuurder	23-11-2012
Peter Pinkhaar	Directeur	28-11-2012
Claudia Beumer	Manager HRM	19-11-2012
Arjan Seppenwoolde	Manager bedrijfsvoering, MT-lid	9-1-2013
Debby Hogeweg	Communicatie-adviseur, lid werkgroep Bewustwording	28-11-2012
Sandra van Zaal	Manager Strategie	8-11-2012/ 15-2-2013
Hans Bruinink	Afdelingshoofd Facilitair, lid projectteam DZO	7-12-2012/ 16-01-2013
Rene Welhuis	Adviseur strategie en beleid	09-01-2013
Ernest ter Keurs	Beleidsadviseur financiën, lid projectteam DZO	19-12-2012
Ton Smits	Manager Vastgoedbeheer, lid projectteam DZO	16-01-2013
Maarten Jonge Poerink	Controller	14-11-2012
Frank Ufkes	Manager Vastgoedontwikkeling	22-02-2013
Ragnar Hoek	Vastgoedontwikkelaar, lid projectteam DZO	23-01-2013
Paul Donderwinkel	Medewerker Vastgoedbeheer, lid projectteam DZO	03-12-2012
Bert Schipper	Manager Wonen	16-01-2013

Appendix 4.5 List of interviewees, Welbions 2017

In 2017, 9 individual decision-makers were interviewed:

Name	Position	Date of inteview
Annemieke Braamburg	Adviseur communicatie	11-09-2017
Harry Rupert	directeur-bestuurder	29-09-2017
Erik Markvoort	Directeur	08-09-2017
Claudia Beumer	Manager Staf	01-09-2017
René Welhuis	Beleidsadviseur	26-09-2017
Arjan Seppenwoolde	Manager Finance	08-09-2017
Andre Timmer	Controller	29-09-2017
Frank Ufkes	Manager Wijkontwikkeling	18-09-2017
Bert Schipper	Manager Wonen	12-09-2017

Interview questions in the period 2012-2013 and in 2017:

2017			20122013		
number	topic	question	number	topic	question
1	strategic events	Welke ontwikkelingen / gebeurtenissen zijn volgens u van groot belang voor het bestaansrecht van Welbions? (wat is er anders dan 5 jaar geleden?) welke gebeurtenissen beïnvloeden de strategie en doelen van Welbions?	1A	strategic events	Wat zijn volgens u de grootste risico's in de omgeving van Welbions?
4	strategic events	Welke (externe) factoren beïnvloeden volgens U de toepassing van duurzaamheid(smaatregelen)?	1B	strategic events	Welke risico's of externe factoren beïnvloeden de toepassing van duurzaamheid(smaatregelen)?
2	norms & beliefs values	Is duurzaamheid van strategisch belang voor Welbions? (Is het überhaupt wel van belang om te verduurzamen?)	2	norms & beliefs values	2. Hoe groot is het probleem van duurzaamheid eigenlijk voor de corporatie, is het überhaupt wel van belang om te verduurzamen?
5a	stakeholders	Wie zijn betrokken in het besluitvormingsproces	3	stakeholders	Welke partijen/stakeholders zijn betrokken in het besluitvormingsproces (bij toepassing van) m.b.t. duurzaamheid?
5a	decisions	Welke elementen/aspecten/factoren spelen een rol bij het nemen van beslissingen (m.b.t. investeringen in vastgoed)?	3a	decisions	Welke elementen spelen een rol bij het nemen van (investerings)beslissingen ig.v. toepassing van duurzaamheid?
5b	norms & beliefs	Aan welke eisen of voorwaarden (condities) moet een strategisch besluit in het algemeen tegemoet komen/ voldoen?	3b	norms & beliefs	Aan welke eisen moet een besluit voldoen?
5c	perceptions	Zijn de doelen zoals verwoord in de duurzaamheidsvisie van Welbions richtinggevend bij het nemen van (strategische) beslissingen?	3c	perceptions	Zijn de doelen zoals verwoord in de duurzaamheidsvisie richtinggevend bij het nemen van beslissingen?
5d	perceptions / decisions	Welke feiten, kennis of opinies, zijn doorslaggevend, welke leiden tot pro duurzame beslissingen?	3d	decisions	Welke feiten, kennis of opinies, zijn doorslaggevend, welke leiden tot pro duurzame beslissingen?
6	perceptions / internal mechanisms / diversity	Zijn er tegenoverliggende meningen t.a.v. duurzaamheid en komen die in het neme van beslissingen over maatregelen ter sprake (waarom wel of niet)?	4	perceptions / internal mechanisms / diversity	Zijn er tegenovergestelde meningen t.a.v. duurzaamheid en komen die naar voren bij het nemen van beslissingen over maatregelen (waarom wel of niet)?
7	shared values	Hoe zou u de cultuur van Welbions willen omschrijven?	8	shared values	Hoe zou u de cultuur van Welbions omschrijven?
8	finale relaties/values	Wat moeten de resultaten en effecten zijn van implementatie van duurzaamheid?	5, 6	finale relaties/values	Wat moet het resultaat zijn volgens u van implementatie van duurzaamheid? (welke doelen moeten worden behaald); Wat moeten de effecten zijn van duurzaamheid?
9	needs	Wat kan volgens u bijdragen aan/leiden tot implementatie van duurzaamheid? /wat is nodig om duurzaamheidsdoelen te behalen?	9		Wat kan volgens u leiden tot implementatie van duurzaamheid?
10	values	Welke bijdrage levert u zelf of bent u van plan te gaan leveren aan verduurzaming van Welbions en een duurzamere samenleving in het algemeen?	10		Welke bijdrage levert u zelf of bent u van plan te gaan leveren aan verduurzaming van Welbions

APPENDIX 5.1 SENSITIZING CODES PER DIMENSION OF SUSTAINABILITY

Table 1 Open, sensitizing codes based on the sensitizing concept sustainable development.

Dimension and keywords from literature	Sensitizing codes
Profit (business economics, financial management)	
- cost minimisation / return on investments - information based & rational decisions - monitoring performance - production quality and cycle: input, throughput, output	- F (focus on financial position, return on investments, affordability) - CF (focus on financial requirements and conditions, use of financial information for sustainable strategy/strategic decision making) - R (oriented on measuring performance and results) - V (focus on technical quality and primary processes: renting, maintenance, building real estate)
People (organizational science, environmental psychology, strategic management)	
- perceptions / interests / beliefs & values / motivation - awareness / learning and education / knowledge / commitment - social influence (power, information, responsibilities, allocation of decision making authority) - strategy / goals / pattern of activities / bounded rationality / perspective	- B (behavioural process – attention, interests, beliefs - drivers of behaviour, individual/collective) - CB (behavioural conditions and requirements for integrating sustainability into organisation) - M (internal processes/mechanisms/factors influencing sustainable SDM) - S (ways of integrating sustainability into organisation)
Planet (natural resources management, ecological principles, ecosystem valuation)	
- dependency and impact (outcome): risks and opportunities related to operating license (use and non-use value (existence value) of ecosystems) - ecological quality/biodiversity decline - drivers of biodiversity decline: 1) habitat loss, fragmentation or change, especially due to agriculture; 2) overexploitation of species, especially due to fishing and hunting; 3) pollution; 4) the spread of invasive species or genes and 5) climate change[82].	- G (focus on goals/existence value of the organization, supply chain position) - EB (concern for diminishing ecological quality or/and biodiversity decline) - EN: climate change: focus on reduction CO2-emissions and energy consumption; orientation on measures to reduce energy use

[82] (Global Biodiversity Outlook 3,abbrv. GBO3,2010[82]).

APPENDIX 5.2 FINDINGS EXPLORATIVE INTERVIEWS 2009

QUANTITATIVE RESULTS OF INTERVIEWS AND SURVEY IN 2009, 2011.

2009

The findings from explorative interviews in 2009 are qualitatively summarized in figure 1. Interviewees relatively most often talk about how to transform the organization into a more sustainable one, 62% of the quotes are coded with an S for strategy. Second most often mentioned are conditions or requirements necessary for changing the collective behaviour, 35 % of the interviewees made statements in this code. And third code, used by 32% of the interviewees, is code CF for financial conditions that need to be met before change is possible. Least often used is code EB, 11,8% of the interviewees associated sustainability with the quality of ecosystems or biodiversity decline.

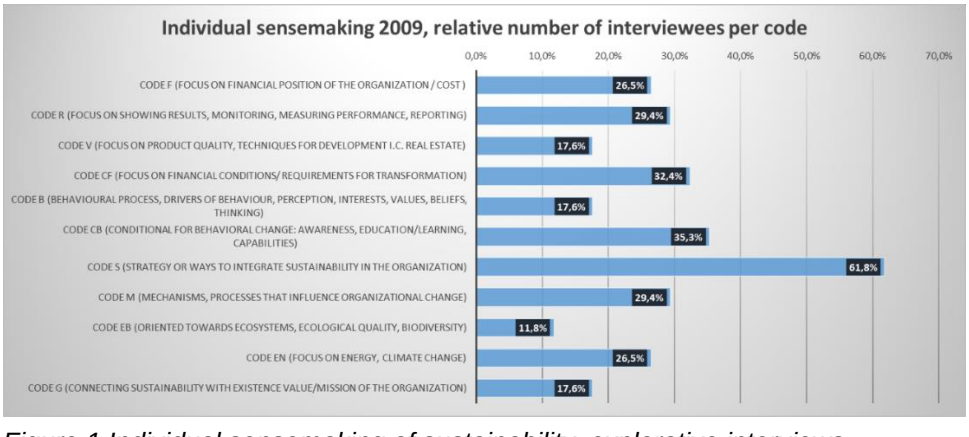


Figure 1 Individual sensemaking of sustainability, explorative interviews Welbions, 2009, relative number of interviewees per code.

2011

In figure 2 the number of respondents per code from the survey in 2011 is presented. This figure shows that the EB code – associating sustainability with the quality of the living environment, biodiversity – is used most often in meaning construction of sustainability.

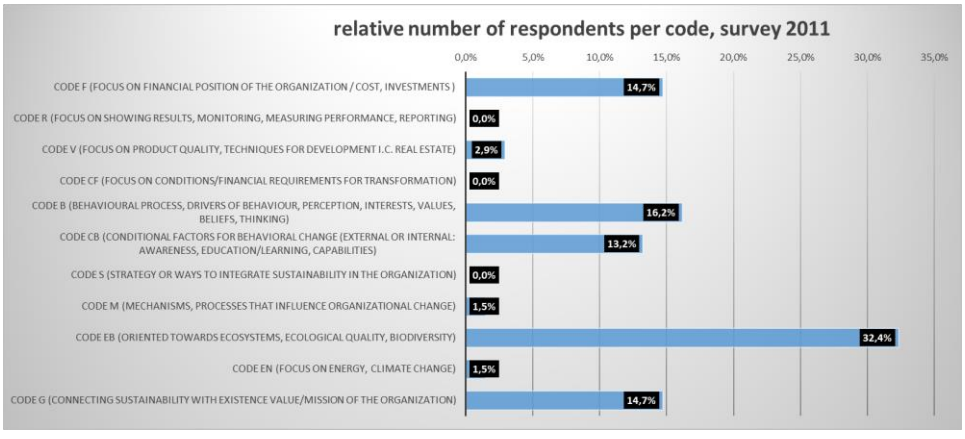


Figure 2 Relative number of respondents per code, survey 2011.

Figure 3 below visualizes the results of the interviews in 2009 (blue bars) compared to findings from the survey in 2011 (yellow bars). In the survey no questions were asked about how to transform into a more sustainable organization.

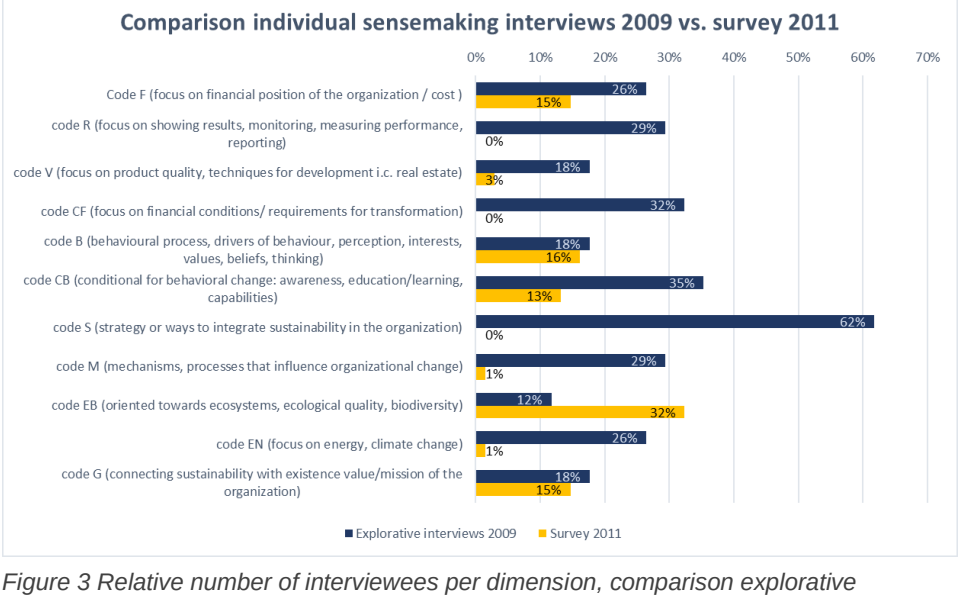


Figure 3 Relative number of interviewees per dimension, comparison explorative interviews in 2009 and survey 2011

APPENDIX 5.3 QUANTITATIVE RESULTS INDIVIDUAL SENSEMAKING 2012-2013 AND 2017

2012-2013

STRATEGIC EVENTS/CAUSES FOR SUSTAINABILITY

In figure 1A below the relative number of *statements* per code is visualized. As the figure shows, interviewees mostly talked about conditions that are required for behavioural change, such as awareness of employees.

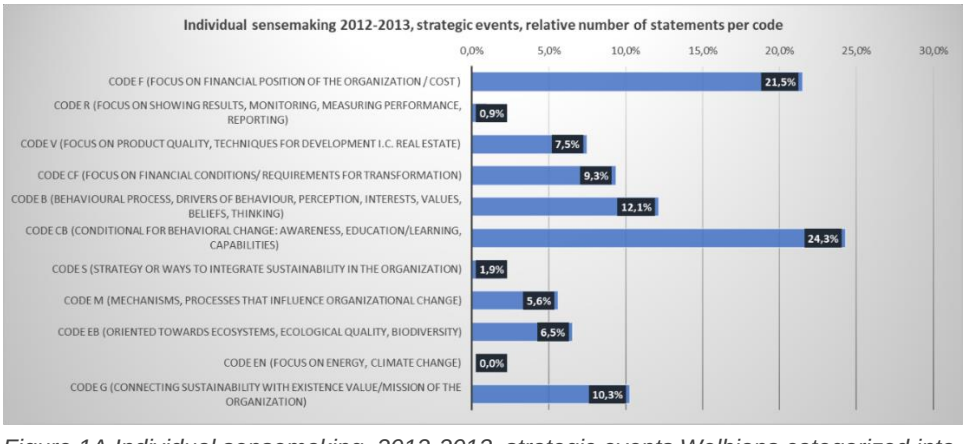


Figure 1A Individual sensemaking, 2012-2013, strategic events Welbions categorized into sensitizing codes. The percentage of statements per code.

From figure 1B the relative number of *interviewees* making statements with respect to strategic events are displayed and categorized into the codes per dimension of sustainability. From this graph can be read that code CB, representing a focus on conditional factors influencing a change in organizational behaviour towards sustainability is used most often in making sense of sustainability. Second, code F is used. Third code M, reflecting a focus of individual decision-makers towards connecting sustainability to esp. the process of decision-making.

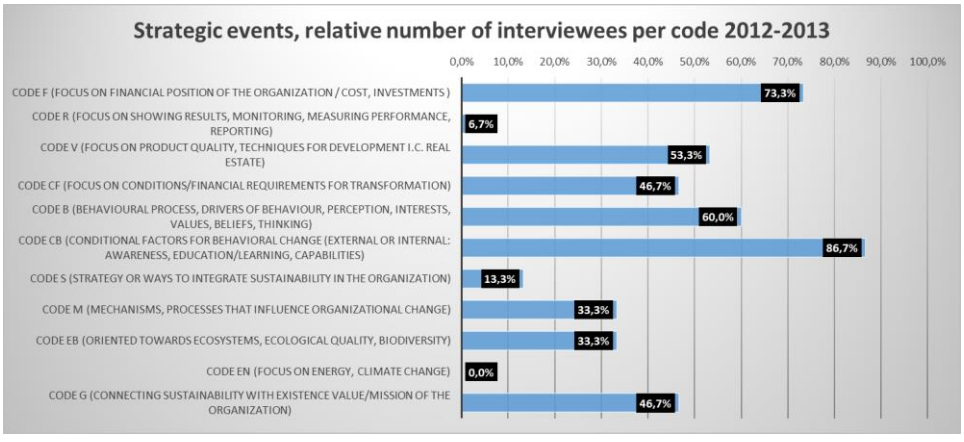


Figure 1B Strategic events, relative number of interviewees per code, Interviews 2012-2013.

PERCEPTIONS WITH RESPECT TO CURRENT PROCESS OF STRATEGIC CHOICE

In figure 2A below the relative number of *statements* per code is visualized. As the figure shows, interviewees mostly talked about mechanisms driving the decision making process (code M), and financial indicators when making claims about the current way of strategic decision making.

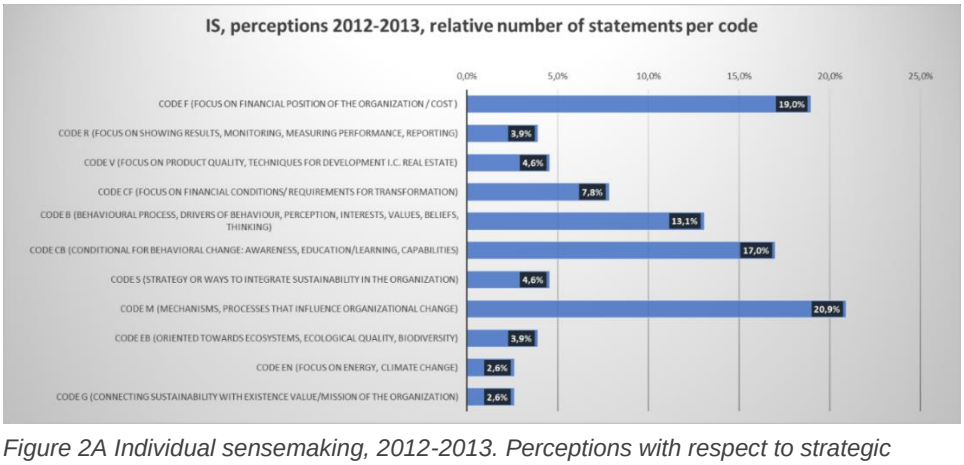


Figure 2A Individual sensemaking, 2012-2013. Perceptions with respect to strategic decision making, relative number of statements per code.

As can be read from figure 2B, which depicts the relative number of interviewees making statements categorized into the sensitizing codes, every interviewee claimed that decisions are based on financial motives (code F). Second most often used codes are CB and M, reflecting a focus on conditions that are required for a behavioural transition and a focus on mechanisms influencing the process of organizational change. Least used are codes R and G, which indicates that at that moment interviewees were not so much focused on how to measure results and they were not linking sustainability to the license to operate.

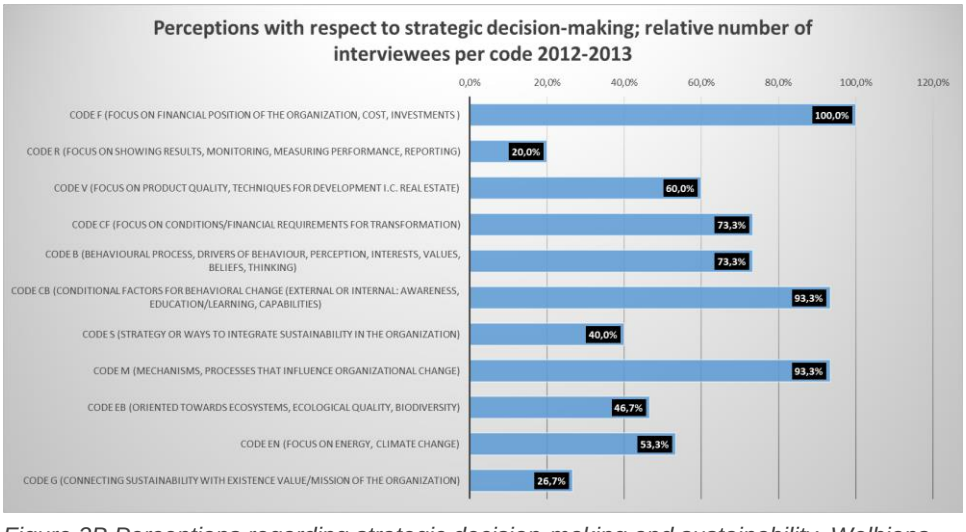


Figure 2B Perceptions regarding strategic decision-making and sustainability, Welbions. Percentage interviewees per code 2012-2013.

VALUES

Figure 3A shows the relative number of *statements* per code. As the figure shows, interviewees mostly believed in and preferred sustainability when contributing to financial values.

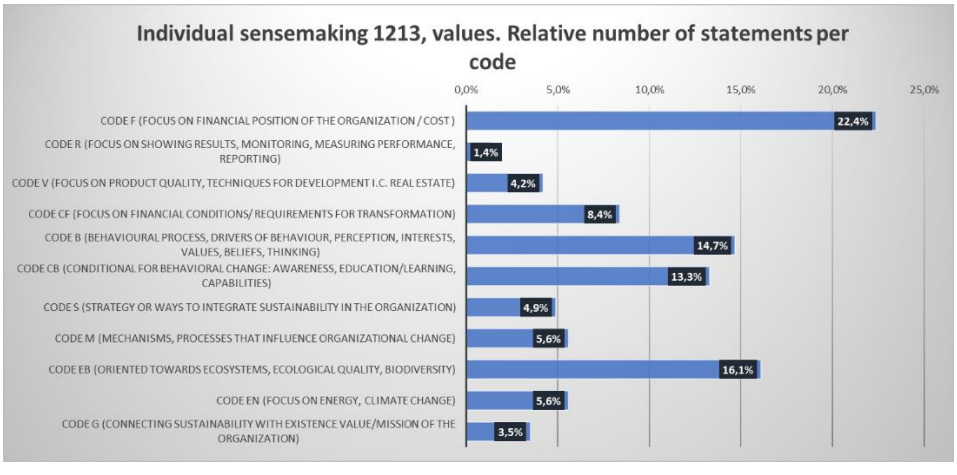


Figure 3A Individual sensemaking 2012 2013. Beliefs, preferences, values regarding sustainability. Relative number of statements per code.

Figure 3B shows the percentage *interviewees* per code. The categorization is based on answers about which results or effects are desired, which goals should be aimed at in the case of sustainability.

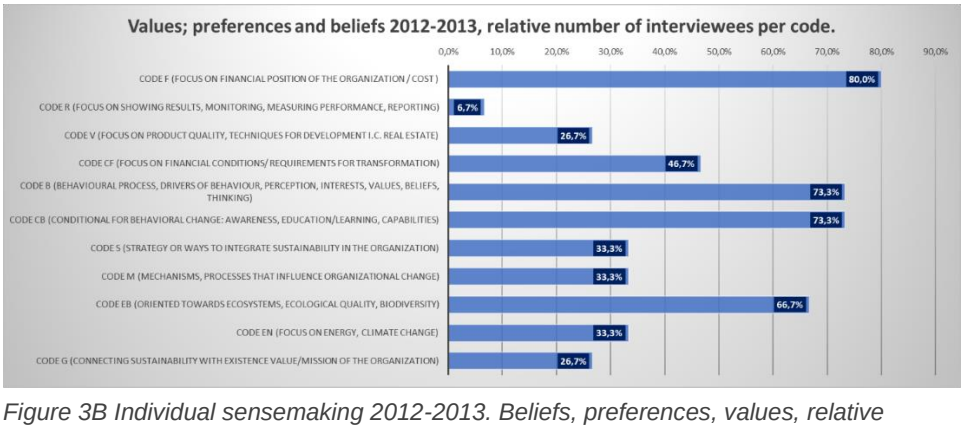


Figure 3B Individual sensemaking 2012-2013. Beliefs, preferences, values, relative number of interviewees per code.

2017

STRATEGIC EVENTS/CAUSES FOR SUSTAINABILITY

In figure 4A below the relative number of *statements* per code is visualized. As the figure shows, interviewees mostly talked about conditions that are required for behavioural change, such as awareness of employees.

Figure 4A Individual sensemaking, 2017. Strategic events Welbions categorized into sensitizing codes. The percentage of statements per code.

From figure 4B the strategic events that were mentioned by the *interviewees* are categorized into the codes per dimension of sustainability. From this graph can be read that code CB, representing a focus on conditional factors influencing a change in organizational behaviour towards sustainability is used most often in making sense of sustainability. Second, code F is used. Third code B, reflecting a focus on behavioural aspects of sustainability.

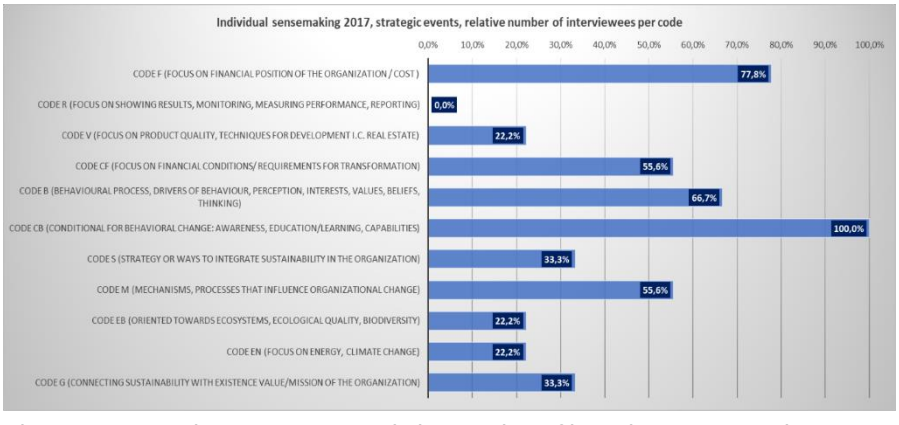


Figure 4B Strategic events 2017. Relative number of interviewees per code,9 interviewees.

PERCEPTIONS WITH RESPECT TO CURRENT PROCESS OF STRATEGIC CHOICE

In figure 5A below the relative number of *statements* per code is visualized. As the figure shows, interviewees mostly talked about conditions for behavioural change (code CB), closely followed by mechanisms driving the decision making process (code M).

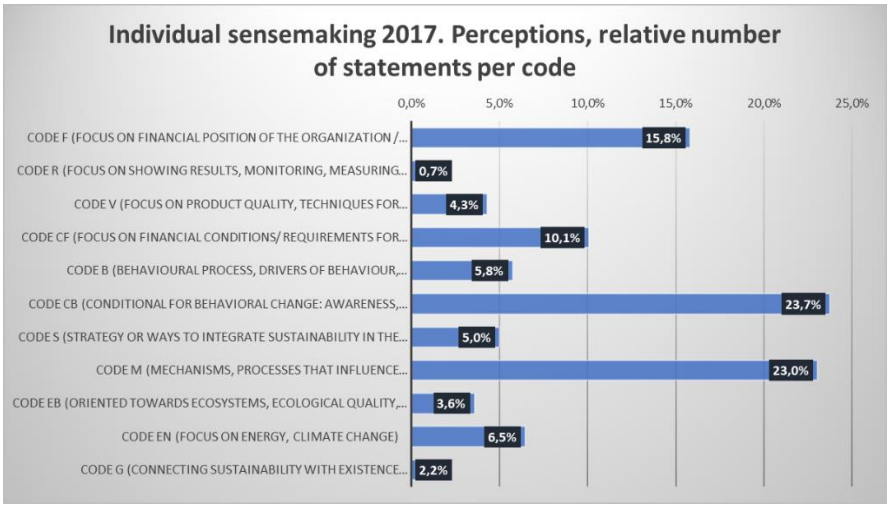


Figure 5A Individual sensemaking, 2017. Perceptions with respect to strategic decision making, relative number of statements per code.

Figure 5B depicts the relative number of *interviewees* making statements categorized into the sensitizing codes. All interviewees claimed that decisions are based on financial motives (code F). Second most often used codes are CF and CB, reflecting a focus on financial and behavioural conditions that are required for a transition.

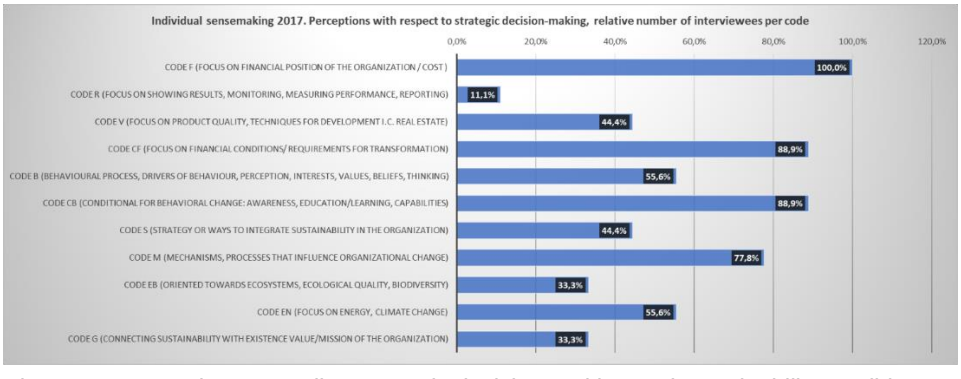


Figure 5B Perceptions regarding strategic decision-making and sustainability, Welbions. Percentage interviewees per code 2017.

VALUES

Figure 6A below shows the relative number of *statements* per code, revealing the beliefs and values of decision-makers. As the figure shows, interviewees mostly believed in and preferred sustainability when people are aware of its relevance (behavioural conditions need to be met).

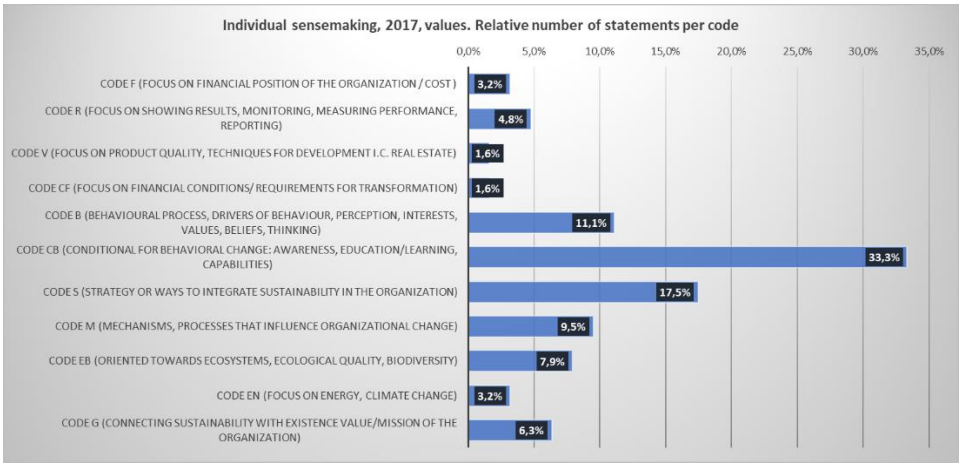


Figure 6A Individual sensemaking 2017. Beliefs, preferences, values regarding sustainability. Relative number of statements per code.

Figure 6B shows the percentage *interviewees* per code. The categorization is based on answers about which results or effects are desired, which goals should be aimed at in the case of sustainability. Interviewees mostly believed in the relevance of meeting conditions for behavioural change and a clear strategy for integrating sustainability into decision making.

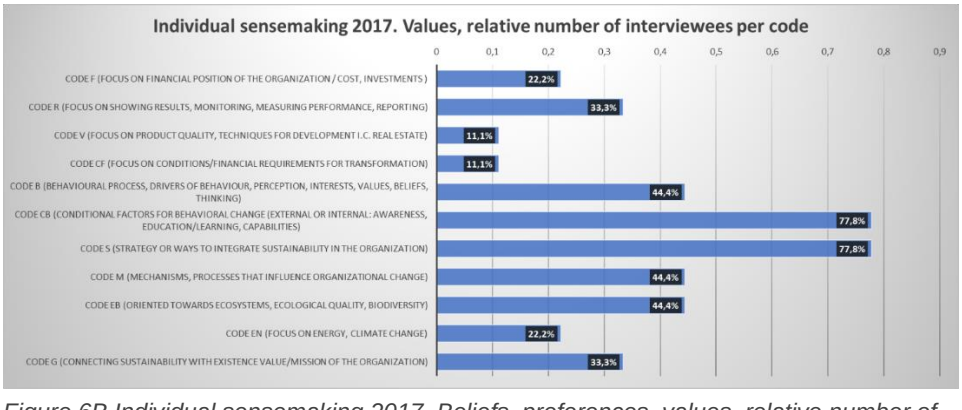
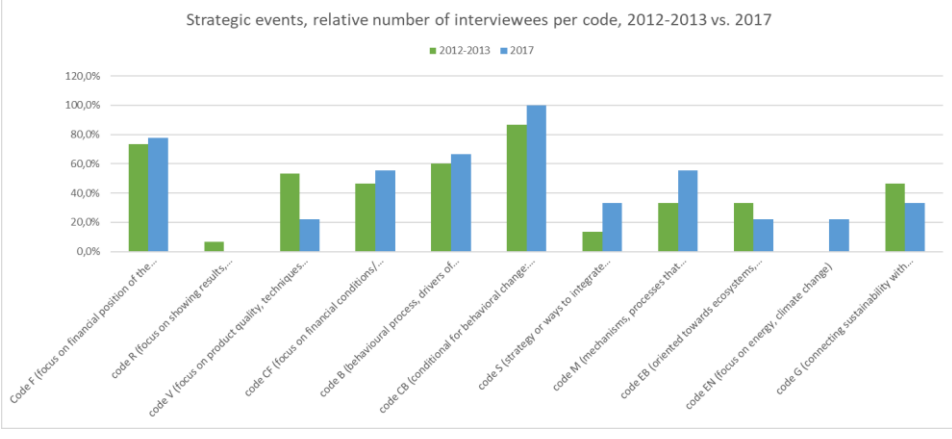


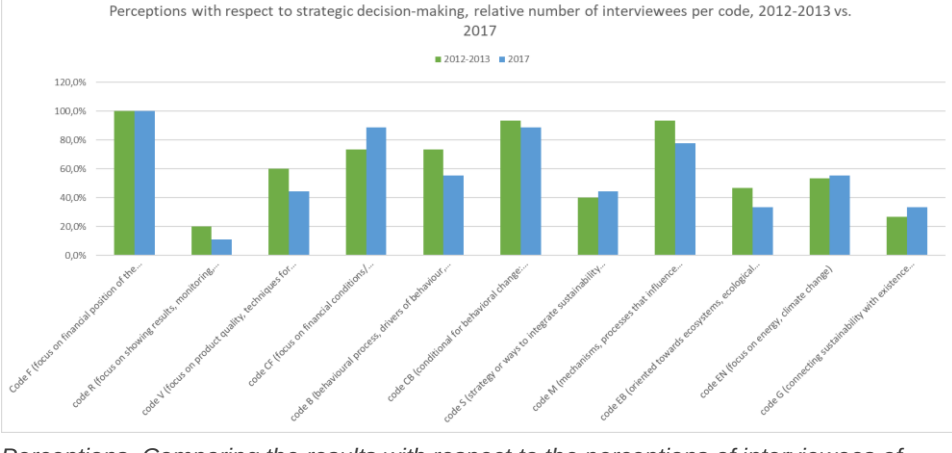
Figure 6B Individual sensemaking 2017. Beliefs, preferences, values, relative number of interviewees per code.

COMPARISON 2012-2017

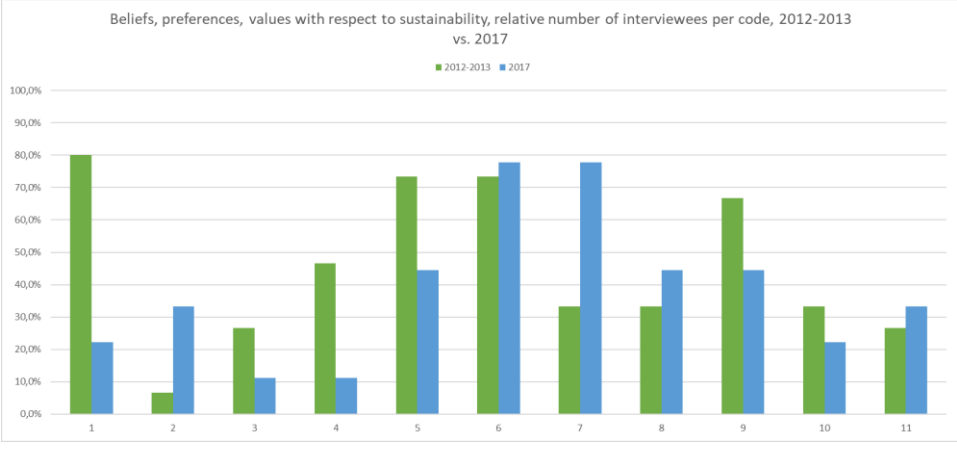
Below three figures, showing a comparison of the relative number of interviewees making statements about strategic events, decision-making and about their beliefs, preferences and values.



Comparing the percentage of interviewees making statements about strategic events influencing Welbions in the 2012-2013 (green bars) compared to 2017 (blue bars) shows that there were minor differences. In both periods interviewees mostly spoke of conditions for behavioural change.



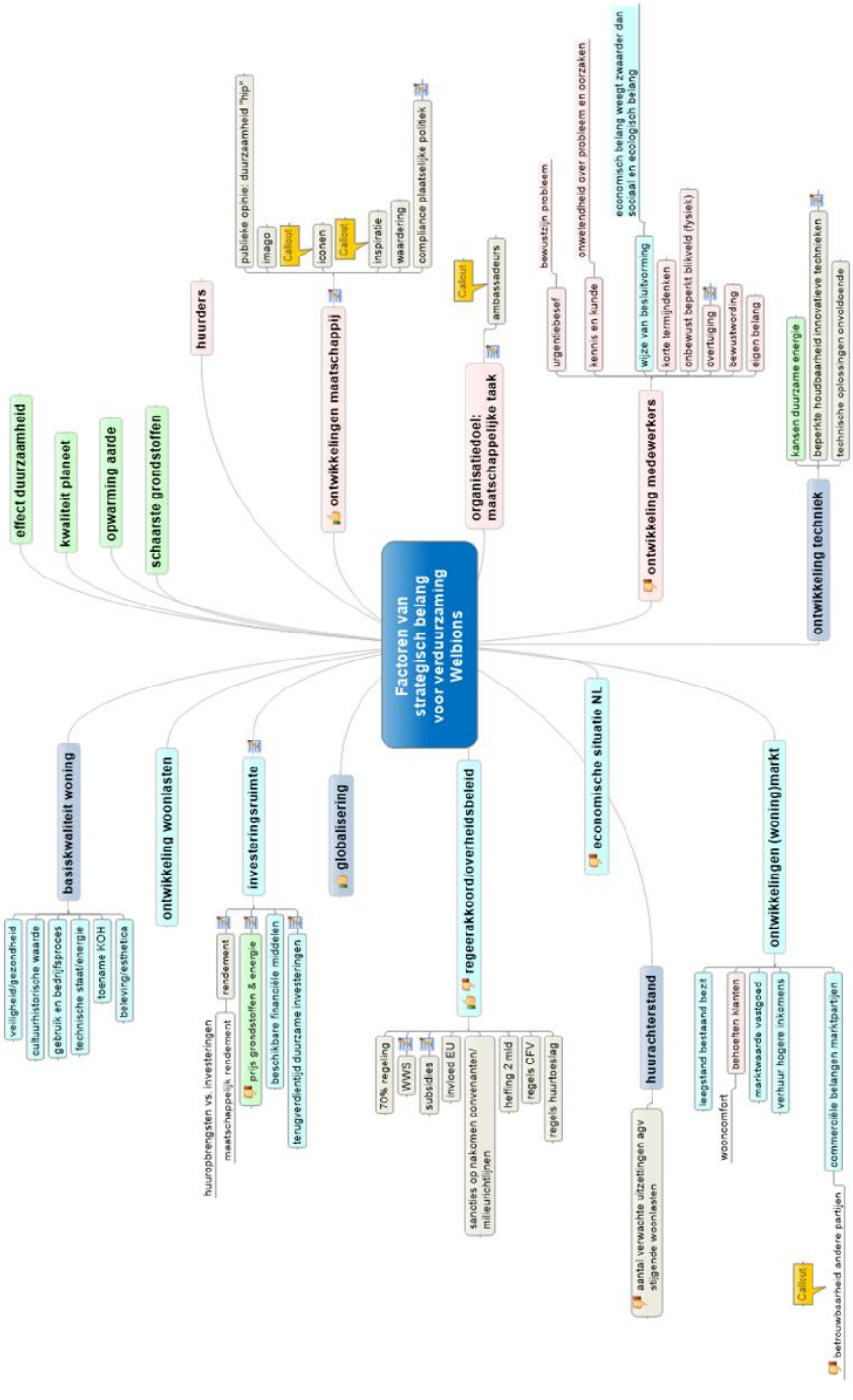
Perceptions. Comparing the results with respect to the perceptions of interviewees of decision making shows again almost no differences. In both periods, all interviewees claimed that financial motives dominated strategic choices.



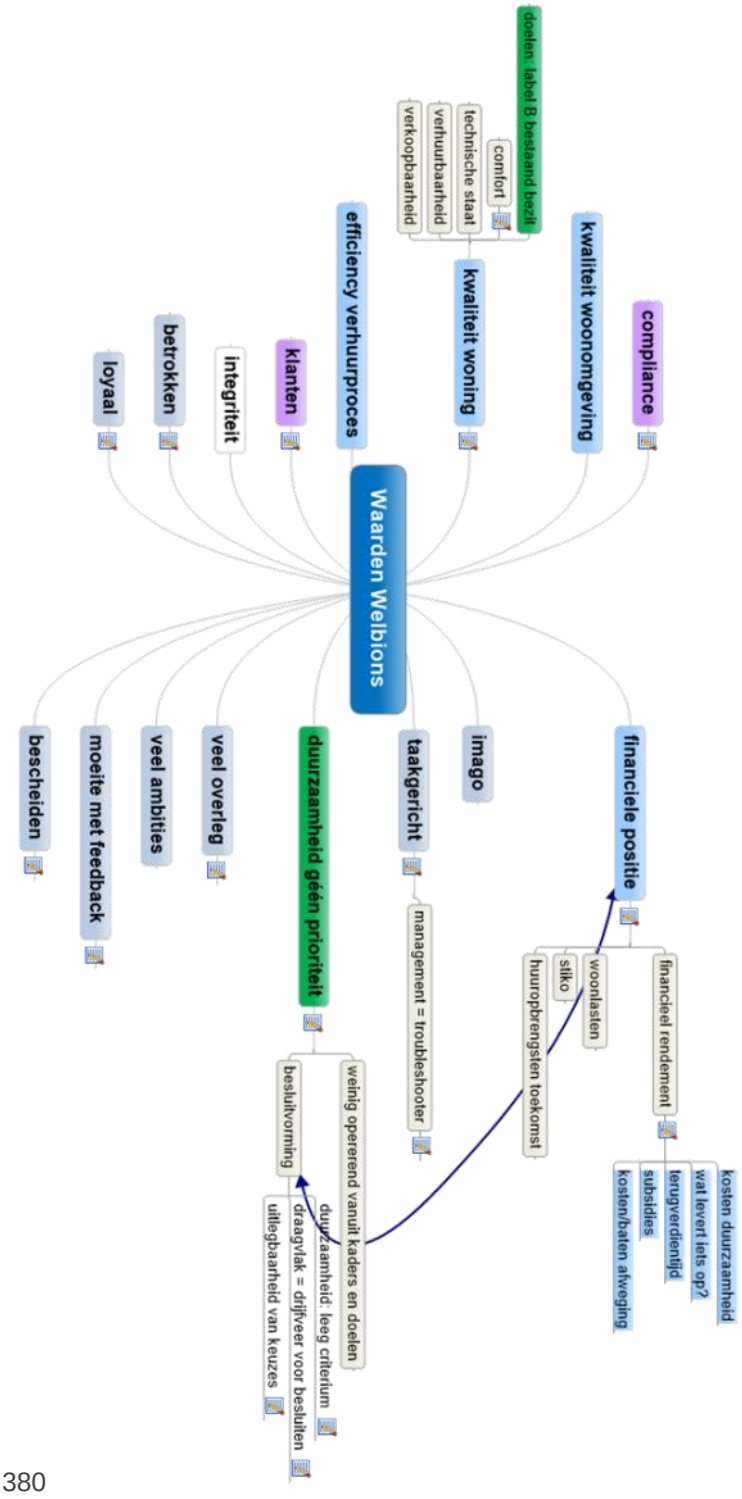
Comparison of beliefs, preferences and values with respect to sustainability. Relative number of interviewees in 2012-2013 (green bars) versus 2017 (blue bar). Comparing the beliefs of interviewees regarding the desired results, effects and goals of sustainability, as displayed in the figure above, shows some differences. In the first period (green bars) financial values ranked highest (number 1 in the diagram). In 2017 the dominant values related to conditions for behavioural change (number 6) and mechanisms, referring to integrated decision making (number 7).

APPENDIX 5.4 MINDMAPS INTERVIEWS 2012-2013

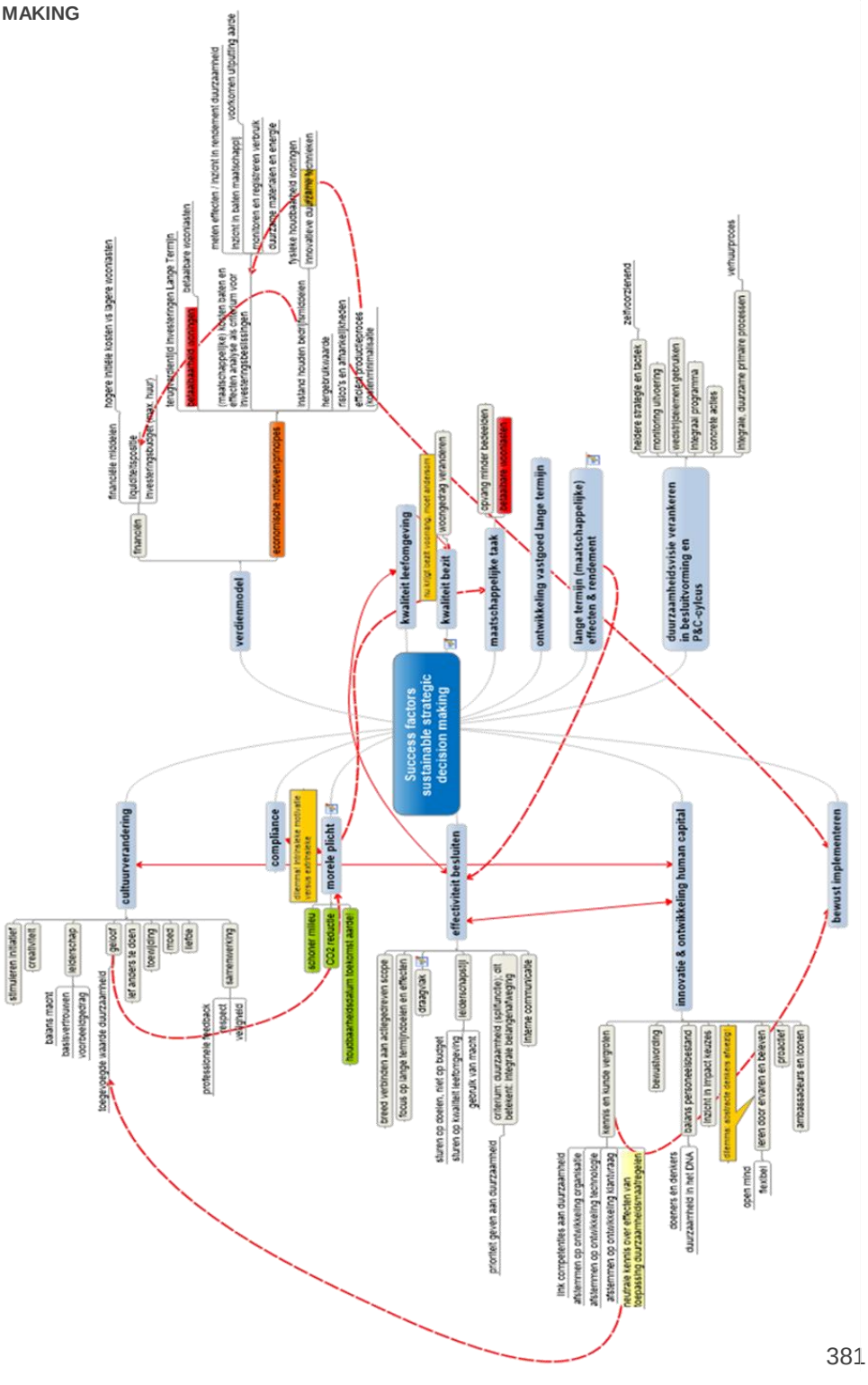
MINDMAP DISPLAYING MENTIONED STRATEGIC EVENTS



MINDMAP DISPLAYING REVEALED VALUES



MINDMAP DISPLAYING FACTORS STIMULATING PRO SUSTAINABLE STRATEGIC DECISION MAKING



APPENDIX 6.1 SWOT-ANALYSIS 2009

SWOT-analysis 2009 executed by team Strategy & Organisation

Opportunities	Threats
- Economic crisis - Technological development - Few rules: chances for innovation - Educational: nature experience - Sustainable exploitation of resources - New (sustainable) product/market combinations	- One dimensional focus on economy / monetary values / short term profits and successes (‘greedy culture’) - Unknowing of developments in natural resources - Clarity in return on investments - Biodiversity crisis - Climate change - Growing world population - Large amount of cultivated Dutch areas: no experience with natural processes - Behavioural change: hard to influence - Reputation damage for organizations that do no operate in a sustainable manner - Rising cost for water/gas/electricity and effects on housing cost - Dilemmas housing association sector: building for lower income groups while gaining revenue from sustainable houses, cooperation (and the role of Aedes) versus positioning (no readily shared knowledge due to motivation to show results e.g. from energy projects, reputation sometimes more important than societal revenues, focus on monetary value real estate and ROI, influence government (in financial position in spite of privatization sector) - Affordable access to clean modern energy services
Strengths	Threats
- Commitment for sustainable Welbions board of directors and management - Employed urban area developers with a broad perspective - Open mindedness for sustainable processes and organization	- No goals for energy reductions measures - After the merger the focus in the organization is on streamlining daily operations and routine - Image/reputation associated with sustainability and energy is ‘granola’(in Dutch: ‘geiten wollen sok’) as deduced from remarks as ‘you knit your sweater yourselves?’, a remark made by an architect in a meeting on urban area development programme Veldwijk) - Formation of an integrated approach not clear - Strategic decisions based on financial criteria - Quality of strategic decision making and assessment of effective policy is low

APPENDIX 6.2 COLLECTIVE SENSEMAKING 2010-2012

RELATIVE NUMBER OF STATEMENTS PER CODE, PER TEAM

Zooming in on the codes that were used, Figure 1 shows that code S – ways to integrate sustainability into behaviour of the organisation - was used most often. Codes G (connecting sustainability to the license to operate of housing associations), EB (showing a focus on the quality of the living environment) and CF (financial conditions for a sustainability transition) were used least often.

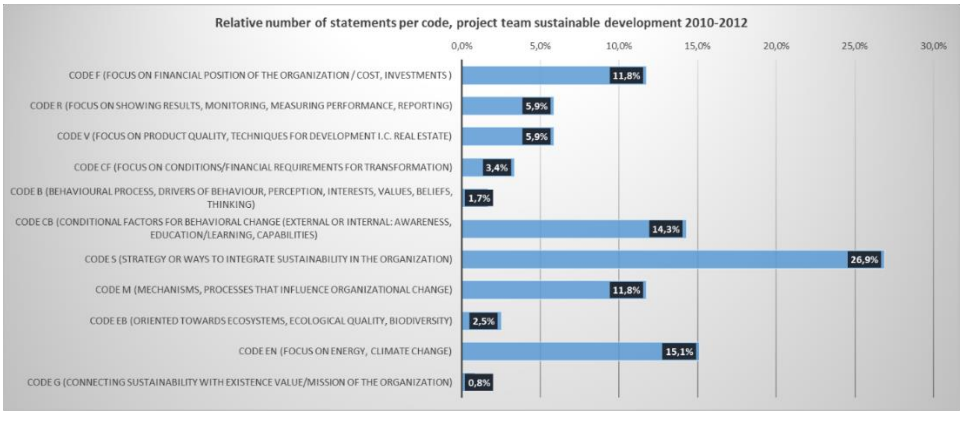


Figure 1 Collective sensemaking of sustainability, project team sustainable development 2010-2011, per code.

Figure 2 shows the relative number of statements working group on awareness, period 2010-2012.

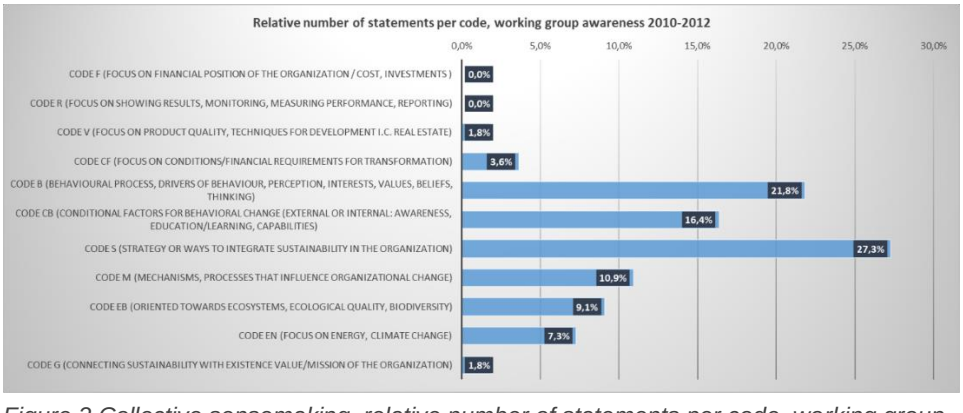


Figure 2 Collective sensemaking, relative number of statements per code, working group awareness, 2010-2012

Figure 3 visualises the relative number of statements noted when participating and observing five management team meetings in 2010 – 2011.

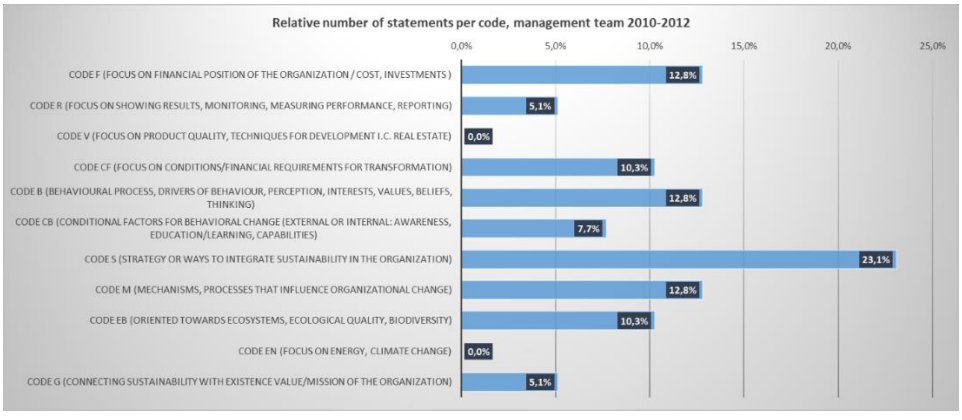


Figure 3 Collective sensemaking of sustainability, management team 2010-2011, relative number of statements per code.

In Figure 4 the relative number of statements per code are visualised of the four meetings that were attended of the Maintenance Policy working group in 2011. This working group was one of the four groups operating under the organisational development plan that was initiated in 2011.

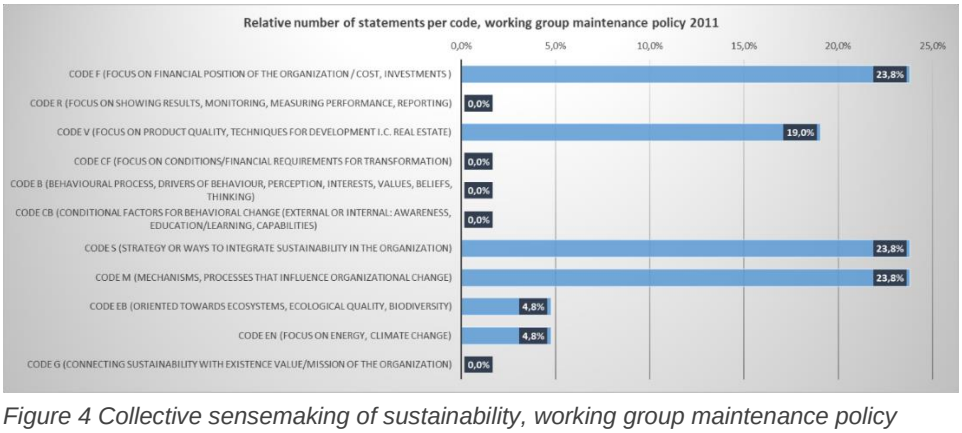


Figure 4 Collective sensemaking of sustainability, working group maintenance policy 2011, relative number of statements per code.

Figure 5 visualises the differences per team in their making sense of sustainability in the period between 2010 and 2012.

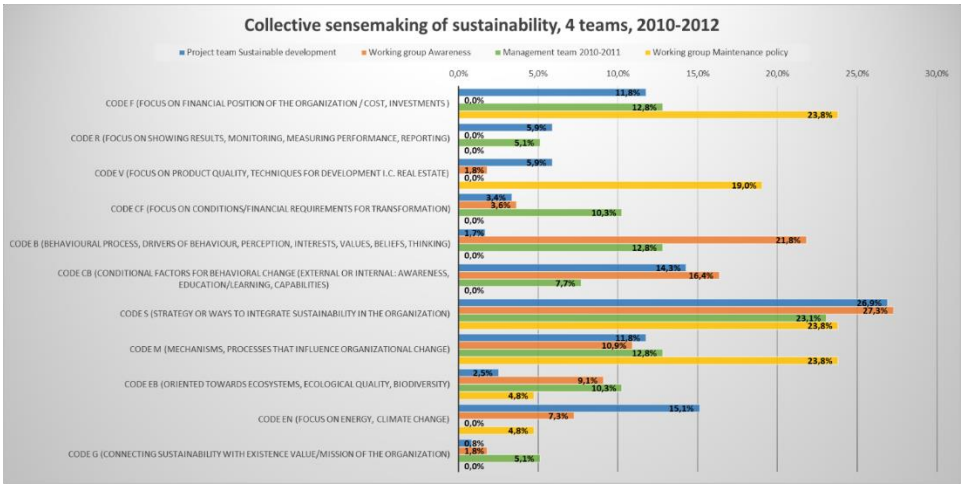


Figure 5 Collective sensemaking of sustainability, 2010-2011. Relative number of statements per code and dimension, total of 4 teams and per team.

The project team sustainable development (blue bars) mostly spoke about strategies to integrate sustainability at Welbions. The working group on awareness (orange bars) mostly focused on behavioural elements, which can be explained by their task to do so. The maintenance policy working group (yellow bars) spoke mostly from a financial perspective (code F), about ways to integrate sustainability (code S) and mechanisms influencing a transition of organisational behaviour (code M). The management team (green bars) mostly spoke about ways to integrate sustainability in the organisation.

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BIOGRAPHICAL NOTE

Sandra Hoomans was born on June 23rd 1969 in Enschede. After primary and secondary school she initially wanted to join the police force. This narrowly fits with the Hoomans family principle of justice, but being too young to start at the police academy, she started studying commercial management and next, public administration at the University of Twente. She was especially interested in the topic of policy processes.

After working as (project) manager, business controller, and strategic advisor, she felt something was missing in the strategies of the organisations she worked for. A gap year, spent mostly in Africa, taught her that it was ecological thinking that was missed in these strategies. In nature conservation areas in Namibia and South Africa, where she worked on a volunteer basis, she learned that the decisions made by local wildlife and conservation authorities seemed to be focused on economic progress. Decisions were made by an organisation at distance from the actual events that were disrupting the daily activities in nature conservation.

Debating these issues with a professor of the Faculty of Wildlife Management in Pretoria resulted in starting a PhD research, in which ideas and experience in the strategy field were connected to ecological thinking. The initial idea was to combine studying strategic decision-making both in South Africa as in the Netherlands. However, being an external PhD student there was the issue of fund raising. The focus therefore was solely laid on investigating the process of strategic decision-making in the organisation she joined in 2009, Welbions. Welbions allowed her to fulfil the role of researcher and collect data together with being a member of the team Strategy & Organisation.

She left Welbions in 2011, to prevent too much interference with the activities that were studied. In times of economic crisis however it was difficult to find financial support but after starting a new job as lecturer at Saxion UAS in 2012, she was allowed a fund to complete her thesis. After a break in the PhD-study in 2016, she finished this thesis under supervision of Prof.Dr. V.H. Gruis.