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Chapter 12
Heritage Requires Citizens' Knowledge: The COST Place-Making Action and Responsible Research

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Abstract This chapter reflects on responsible science with an eye toward concrete research practice. To this end, we briefly introduce the RRI paradigm (Responsible Research and Innovation) and then highlight seven EU research projects in the context of a transnational COST Action project. This COST Action will investigate how placemaking activities, like public art, civil urban design, and local knowledge production, reshape and reinvent public space, and improve citizens' involvement in urban planning and urban design, especially in the context of heritage sites. The chapter introduces heritage case studies that either contrast, differentiate, and add to existing knowledge and practices in placemaking through specific initiatives, or enable the establishment of common ground within a wider constellation of societal actors and both, as we see, contribute in different ways to responsible research. We analyze how the four criteria of RRI, namely anticipation, reflexivity, inclusion, and responsiveness are considered and implemented, and the extent to which digital tools are supportive. Obviously, coproduction of knowledge is not sufficient when we call for responsible science in the narrow sense, hence the development of common ground also appears necessary.

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This chapter reflects on responsible science with an eye toward concrete research practice. To this end, we briefly introduce the RRI paradigm (Responsible Research and Innovation) and then highlight seven EU research projects in the context of a transnational COST Action project. In this project, citizens' knowledge creates visibility of alternative perspectives that mobilizes for engagement and inclusion. Obviously, coproduction of knowledge is not sufficient when we call for responsible science in the narrow sense, and hence the development of common ground also appears necessary.

A New, Responsible Role of Science Defined by the European Research Initiatives

Responsible Research and Innovation

Responsible Research and Innovation (RRI) is a conceptual framework for integrative research policy, primarily at the EU level. The RRI approach emerged from poor experience with large-scale technology implementation and technology-oriented policy making (Macnaghten & Owen, 2011; Sutcliffe, 2011). RRI is integrative insofar as different streams come together: technology-reflective innovation, gender mainstreaming, opening science for social participation, and the ethics of science. Since about 2010, RRI has found its way into the definition of European research.

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> *Responsible Research and Innovation means that societal actors work together during the whole research and innovation process in order to better align both the process and its outcomes with the values, needs, and expectations of European society. RRI is an ambitious challenge for the creation of a Research and Innovation policy driven by the needs of society and engaging all societal actors via inclusive participatory approaches.* (European Commission, 2012).

Subsequently, a number of seminal papers have been published on RRI. The definition of RRI as an open process became significant (von Schomberg, 2013, p. 63):

> Responsible Research and Innovation is a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society).

RRI constituted the basis for the SwafS (Science with and for Society) subprogram of the EU research framework program Horizon 2020 (2014–2020). SwafS was "instrumental in addressing the European societal challenges tackled by Horizon 2020, building capacities and developing innovative ways of connecting science to society" (European Commission, 2021). SwafS clearly linked societal issues to innovation: "It makes science more attractive (notably to young people), raises the appetite of society for innovation, and opens up further research and innovation activities." (loc. cit.) SwafS included a monitoring project for RRI (Monitoring the Evolution and Benefits of Responsible Research and Innovation. See: http://morri-project.eu/).

How can RRI be implemented or captured? At the level of EU research, a criteria-oriented approach has become established—for the sake of manageability. The following six criteria or "keys" are considered indicative of RRI (op. cit.), namely: [public] engagement; gender equality; science education; open access; ethics; and governance. Better-founded support for implementation can be found in the "framework for responsible innovation" developed by Stilgoe et al. (2013), which became determinant for RRI. Their approach distinguishes four dimensions:

- *Anticipation*: Anticipation means thinking ahead of possible event sequences (what if?) and looking at strategic action.
- *Reflexivity*: Reflexivity means a rethinking of one's own (moral) position and refers to individuals as well as institutions;
- *Inclusion*: Inclusion refers to open, pro-active cooperation with other social actors;
- *Responsiveness*: Responsiveness refers to the ability to remain open to change, especially in order to be able to correct possible wrong decisions.

COST: A Case of RRI?

The RRI approach is located within the context of a general debate about opening science to social issues and valuing non-formal, societal knowledge, which started at the latest with the discussion about environmental protection in the 1980s. A

coproduction of knowledge was demanded (cf. Callon, 1999; Mieg & Evetts, 2018), similarly understood as "mode-2" science (Gibbons et al., 1994) or transdisciplinarity (Scholz, 2013). Since the inception of mode-2, which has mainly focused on the relationship between academia and society, and the evolving role of universities as a mediator of that relationship, various additions and updates have been made to the idea. Mode-2 similarly acknowledges the importance of knowledge produced in society or the "agora" (Nowotny et al., 2001). These approaches include engaged scholarship (Van de Ven, 2007; Van de Ven & Johnson, 2006), and collaborative research initiatives between academics and practitioners (Ren & Bartunek, 2020; Sharma & Bansal 2020; Rynes et al., 2001).

In this light, we examine an established EU research initiative (COST), and a current project focusing citizens' knowledge. The aim is to assess the contribution made by such a project in terms of the responsibility of science for society. COST (European Cooperation in Science and Technology) is a funding organization founded in 1971. Through projects called COST Actions, it offers scientists in Europe the opportunity to hold joint conferences, network, and publish together. COST further elaborates the network idea as follows:

> COST is bottom up, this means that researchers can create a network—based on their own research interests and ideas—by submitting a proposal to the COST Open Call. The proposal can be in any science field. COST Actions are highly interdisciplinary and open. It is possible to join ongoing Actions, which therefore keep expanding over the funding period of four years. They are multi-stakeholder, often involving the private sector, policymakers as well as civil society. (COST, 2021: https://www.cost.eu/about/about-cost/)

The main success of COST projects lies—according to their own statements—not only in scientific networking but also in building bridges to society and linking up with societal concerns. Thus, COST's impacts can be defined as (COST, 2019):

- *Scientific impact*: Interdisciplinary collaborations leading to breakthrough science;
- *Societal impact*: Bridging the innovation divide and participation gaps, and enabling skilled labor mobility and networking throughout the European Research Area.

Inclusion and Coproduction of Knowledge in Placemaking in Europe

In the following we present the COST project "Dynamics of placemaking and digitization in Europe's cities" (CA18204). This project includes participants from 34 countries with diverse disciplinary backgrounds (see Box 12.1). The project demonstrates how inclusion and coproduction of knowledge can redefine the role of research. Here we present the project based on four characteristics: (1) placemaking, (2) heritage, (3) civic engagement, and (4) digital culture.

Box 12.1: Dynamics of Placemaking and Digitization in Europe's Cities (COST Action CA18204, 2019–2023)

This Action will investigate how placemaking activities, like public art, civil urban design, and local knowledge production reshape and reinvent public space, and improve citizens' involvement in urban planning and urban design. Placemaking implies the multiplication and fragmentation of agents shaping the public realm. The Action aims to empower citizens to contribute by means of citizen knowledge, digitization, and placemaking to diverse ways of interpreting local identities in European cities. The added value of digitization—understood here basically as the ongoing process of converting any kind of data from an analog into a digital format—will be analyzed through the ways in which it impacts urban placemaking processes of local communities (the project explicitly addresses digitization beyond smart city concepts). Studying urban placemaking and digital practices of various local communities throughout Europe's cities, this Action will understand and analyze:

- The impact of digitization on the common placemaking practices of urban local communities;
- The changing processes of citizens' local knowledge production of placemaking;
- The influence of digitization on the governmentality of local neighborhoods and co-creation of public space by various societal actors.

Drawing on recent theoretical insights that point to the importance of placemaking, widening citizen knowledge, and broader application of digitization and digital communication, the Action seeks to develop new methods for studying and comparing the effects of disseminating local urban knowledge beyond cultural and societal borders. By doing so, it develops European urban research both theoretically and methodologically, finding ways of channeling the results into the wider urban planning and governance processes.

The introduced cases are:

- Housing estates in Accra and Douala
- Living Memorial in Budapest
- Memorial Mapping of Violence Against Women in Europe
- Haydarpaşa train station in Istanbul
- Lost heritage in Tirana
- Port cities in Europe
- Russian Tsar neighborhood in Ljubljana

The project duration is four years (2019–2023).

Placemaking

This specific COST Action focusses on placemaking. Placemaking has become one of the central concepts of designing urban environments and a powerful people-based instrument for intervening in urban development processes at the local scale (Fürst et al., 2004). Three major aspects may be highlighted. First, placemaking is a **locally** determined response by planners, politicians, and people to the phenomena and processes of globalization, in which local and intercultural knowledge and local particularities are expressed as a counterpart to global interdependence. Second, placemaking as a **participatory** strength in urban development aims at preserving cultural identities and promotes bottom-up processes of urban renewal and urban design. Third, placemaking as an agent for inclusion is primarily in conflict with economic processes of displacement, gentrification, and differentiation, and is thereby situated in the context of a **socially sustainable** city (Dupre, 2019).

Placemaking, in its critical normative dimension, claims that local practices and local knowledge are the most sustainable approaches for development processes at the local scale. Placemaking may offer a critique of current urban development practices, consequently facilitating a change in the governance of urban development in general, namely towards bottom-up, participatory, community-led processes (Drilling & Schnur, 2019).

Heritage

Heritage and heritage sites are often highlighted within placemaking processes, and thus all of the introduced case studies of the COST Action on dynamics of placemaking and citizens' knowledge deal with heritage and, more specifically, with heritage in the context of urban planning. The disciplines of heritage and urban planning emerged in response to the massive and rapid uncontrolled urbanization associated with industrialization of Europe's cities in the nineteenth century. Since then, heritage and urban planning share some approaches when considering single monuments, but also contrasts through their positions on careful enhancement of urban structures in heritage conservation versus tabula rasa approaches seen in planning. At the beginning of the twentieth century both were scientific, rationalized fields of expert knowledge that became part of local politics through formalized administrative procedures, but the situation changed slightly in the second half of the twentieth century. Starting with the **rediscovery of the historic city** as places to live and work in the 1970s, communities requested greater involvement in decision- and place- making (cf. Choay, 1992; Hosagrahar, 2017). There is an ongoing **critical debate** in heritage studies that challenges the established knowledge on monuments and heritage conservation. The debate even challenges ideas of what constitutes heritage, who defines it, and how and by whom historic site, memory, and memorization are constituted, performed, and (re-)framed (cf. Smith, 2006; Waterton & Watson, 2015). Agents and **access** have become predominant issues in

this discussion (Oevermann & Gantner, 2019), and have broadened the scope of research into how citizens' knowledge contributes to science and practices.

Civic Engagement

In terms of heritage concerns within urban planning, the role of science is blurred between theory and practice, and generally includes diverse constellations of actors and varying perspectives. The contribution of civic engagement is obvious and increasingly acknowledged as expertise in this transdisciplinary field. Institutional and social innovation are ongoing (although not in all places or countries), and is necessary to conceptualize and implement locally appropriate forms of sustainable urban development (cf. Mieg & Töpfer, 2013). The focus of RRI and this COST Action is less the market-driven innovation problematized by von Schomberg (2013) but rather the societal impact of knowledge as highlighted by the Lund Declaration (2009, 2015).

A core issue of today's placemaking is the application of two sides of knowledge: **research 'from above,'** namely looking into planning regulations and interviewing city planners, politicians, and other authorities and specialists, and **research 'from below,'** such as phenomenological studies of places at eye-level, interviews with local citizens, and more. In this sense, a mixed methods approach (cf. Bryman, 2008; Hesse-Biber, 2010) is often beneficial, combining knowledge from both quantitative sources (e.g., statistics) and qualitative sources (e.g., interviews, questionnaires, fields studies, observations), since:

> There is no single best method—questionnaire, interview, simulation, or experiment—for studying people's adaptions to their environments. One chooses methods to suit the problem and the people and not vice versa. These methods are generally complementary rather than mutually exclusive (Sommer, 2007, p. 221).

Thus, the production of knowledge in research is broad; as such, many perspectives (including contrasting perspectives) of a case allow a better and deeper understanding of its complexities. As a result, methodological approaches are manifold (see Box 12.2).

Box 12.2: Dialogical Research
Various approaches born out of social interactionism, dialectical theory, and dialogism, which are grounded in such fields of organization studies, including knowledge management, have offered various views of dialogical production (Tsoukas 2009a, b, 2019). Further methodological approaches, and specifically ethnography, emphasize breaking down the distinction between the observer and the observed, and aim for dialogical co-production of knowledge in order to deal with the complexity of urban environments in research (cf. Stoller, 1989, 2009; Shah, 2017).

Digital Culture

The emergence of digital culture and the ubiquity of digital technologies have added an additional layer to placemaking, especially in the neighborhood context. With neighborhood being a place-based concept, the digital and the analogue space are always interrelated to each other, leading to the emergence of hybrid spaces and **hybrid networks** (Jonuschat, 2012). Neighborhood platforms, apps, social media, and community websites are increasingly used by residents to address local concerns, to create and extend dense networks of weak ties that facilitate action, and to gain and provide access to resources and information for action or **mobilization** at the local scale. Networks and resources can be mobilized sporadically and at short notice for placemaking activities, such as cleaning public spaces together, mobilizing for a demonstration against top-down-initiated activities in the neighborhood, but also for long-term projects such as urban gardening and collective actions to reactivate public space (Johnson & Halegoua, 2014).

The use of digital tools may enhance the visibility and publicness of residents, their concerns, and placemaking activities, which, in turn, can increase their impact on politicians or create an effective counter-public and, thereby, create opportunities to co-create urban space. The use of digital tools in the neighborhood context can also foster **a sense of belonging** and strengthen place identity. It can help to create powerful collective narratives, imageries, and representations of neighborhoods and, thereby, produce a sense of community (Menezes, 2019). Nevertheless, digitalization also raises questions of in- and exclusion. In a society of access, where being connected and having access is crucial, pre-existing inequalities and segregation can be perpetuated or even exacerbated (Rifkin, 2014).

Focus of Research

To sum up, we can identify four main domains of science for heritage case studies:

1. The initial contacts of planners, politics, and investors with citizens and citizens' organizations;
2. Creating and/or supporting processes and dynamics of engagement, ideas, and visions;
3. Collecting, analyzing, systematizing, and evaluation of data, including an open debate on the production and results of citizens' knowledge,
4. As well as the transmission of outcomes to all involved.

The following two subchapters introduce the heritage case studies, which either contrast, differentiate and add to existing knowledge and practices in placemaking through specific initiatives, or else facilitate establishing common ground within a wider constellation of societal actors and both, as we see, contribute in different ways to responsible research.

Citizens' Knowledge: Contrasting, Differentiating, and Adding Perspectives

This section introduces and reflects and cases that contrast, differentiate, or add knowledge to already established definitions and uses of heritage. Section 12.3.1 explains that heritage is not only about present concepts of definition and use, but is also constituted by its historic dimension. Section 12.3.2 discusses three cases that contrast top-down decisions of heritage and placemaking. Section 12.3.3 introduces the ways in which lost built heritage can be substituted through citizens' narrations and digital tools. In Sect. 12.3.4 these cases are reflected along the four criteria of RRI defined by Stilgoe et al. (2013), and an overview is provided on modes of implementation.

The Historic Dimension of Heritage: The Case of Housing Estates in Sub-Saharan African Cities

Citizens' knowledge and the historic dimension of heritage are discussed in the case of housing estates in Nairobi, Accra, and Douala, among others. The case shows how citizens' knowledge improves the understanding of this historic dimension regarding built forms and typologies, use, informal adaptations over time, and the current state of the art.

Native Housing Estates in Sub-Saharan African Cities

This case study critically compares a series of little-researched, twentieth century publicly commissioned 'native' housing estates in Nairobi (Kenya), Accra (Ghana), and Douala (Cameroon) as of the 1920s. Local and/or citizens knowledge was and still is produced in various ways and is crucial for insights into the estates' forms, typologies, and adaptations over time. The ANT-related method (actor-network-theory-related method), as applied in this research, intends to identify the human and non-human actors involved in the planning and design of the estates, as well as in their subsequent (often informal) adaptations (Martin & Bezemer, 2020). Their complex and ongoing interaction has resulted in hybrid estates wherein global (here meaning Western), colonial models merged with/have been adapted to local native housing typologies, dwelling rituals, land ownership rules, and to societal and economic changes over time. Most estates are now at risk of replacement and/or gentrification, partly due to lack of local and historical awareness. Due to a lack of formal sources regarding planning documents, residents are involved in in-situ fieldwork, including mapping practices and interviews, initiated by a young researcher as part of her PhD research. As such, local citizens are invited to contribute their knowledge on issues related to historical awareness, placemaking, identification, and

place-boundness. A crucial side-effect is that citizens' knowledge allows for understandings of the estates' value—such as in ethnic, emotional, historical, and material terms—which, in turn, might influence heritage and conservation matters.

In contrast, local knowledge was only rarely sought as a source for the original design and production of public 'native' housing estates in Sub-Saharan Africa; especially under colonial regimes, its role and transfer were unforeseen side effects of the complex interplay of actors involved in shaping the housing estates (Ese, 2014; Ese & Ese, 2020).

Three findings can be highlighted: first, citizens' knowledge is traceable in the way that 'native' dwelling habits and building practices prompted the transformation and mutation of global—including colonial—urban models and dwelling typologies used in the design and planning of these housing estates. Second, citizens' involvement incited the estates' subsequent non-legal adaptations and transformations. Third, the estates' residents still participate in local knowledge production via their active role in the digital mapping of their estates' current situation and conditions; in doing so they draw on their own experiences, symbolic-physical landmarks, surviving stories, and so on. Potentially, conservation and development paths alternative to gentrification can be established that build on this citizen knowledge.

Contesting and Enriching Perspective: The Cases of the Living Memorial, the Memorial Mapping of Violence Against Women, and Haydarpaşa Train Station

Citizen knowledge and contesting top-down memorization is the focus of the Living Memorial and the Memorial Mapping of Violence Against Women (both Budapest); the enriching potential of citizens' knowledge is illustrated through the case of Haydarpaşa Train Station (Istanbul). The three cases show how people contest top-down, established imagination, narratives, and memorization, and thereby broaden the cultural heritage landscape in Europe though citizen knowledge.

Living Memorial, Budapest

The Memorial to the Victims of the German Occupation became the object of heated discussions for various reasons. On the one hand, the memorial got inaugurated in a hurry without any kind of public dialogues: from the date of announcing the government's plan of erecting a memorial to its actual realization only six months have passed. On the other hand, its "message" articulating that Hungary was the victim of Germany—thus also shifting the responsibility over the Holocaust to the German authorities—was also found unacceptable by many (Kunt et al., 2017).

The appearance of the living memorial was closely connected to eight actions and communities created on Facebook, most importantly "*Holocaust and my Family*" and "*Living Memorial.*" In both groups, knowledge production activities

were crucial: personal memories of the Holocaust—many of which had never previously been narrated—started to flood the digital space, and were later read aloud in theatres and then also published in a book, thus further strengthening the aspect of knowledge sharing. At the same time, these happenings also reinforced the physical appearance of a number of practices at the very site of the Memorial to the Victims of German Occupation in Budapest. As a result of these guerrilla actions, Living Memorial was spontaneously created from the personal objects and messages of people protesting, which currently serves as a counter-monument to the Memorial to the Victims of German Occupation. This not only symbolizes a bottom up approach to placemaking activities vis-à-vis the top-down process of erecting the official memorial, but also represents an approach that argues for the importance of citizens' involvement in commemorative projects.

From a critical perspective, an action might struggle with how to exert influence outside the frames of particular projects, and sometimes also how to maintain a practice at the site of a project in the long-term, but is responsible in the sense that citizens articulate that living with the past has serious social and political implications. Here, digital space clearly served as a primary field of protest, but what is interesting is how digital practices became connected to actual placemaking activities in the urban space.

Memorial Mapping of Violence Against Women

A similar contesting placemaking is the ongoing project of the Memorial Mapping of Violence Against Women (based on the planned erection of a memorial in Budapest dedicated to the "Memory of Rape in Wartimes: Women as Victims of Sexual Violence": Elhallgatva, n.d.). These 'performative monuments' memorialize violence against women and gender-related traumata in public space in Europe. In the context of the Budapest case study, the Memory of Rape in Wartimes promise to be an exercise in the democratization of placemaking: the democratic awareness of how public memorials should be conceived and realized in the framework of a wide public discourse and acceptance. In contrast to the current Hungarian government's cynical and neglectful practice, which is imbued with revisionist and nationalistic narratives of some imagined 'heroes' of Hungarian history carved in nineteenth-century-style sculptures and erected almost 'overnight' without any public, scientific, or expert consultation and debate. In contrast, the Memorial Project includes citizens' knowledge through oral historical interviews and documents from private archives, and counteracts dominant xenophobic, gender-hostile, nationalistic narratives.

Citizens' knowledge on this special issue of rape in wartime is especially relevant, since it is rarely documented in historical archives. Within the framework of the COST Action the interest in this particular case is (at least) twofold: not only is the topic newly raised in the public discourse, but it also empowers citizens to contribute with their own history and memory to a process, when the realization of a memorial becomes traceable in public debates, in public lectures, in a transparent procedure of the applications and selection process of artists.

The Memorial Mapping project will create a digital map that will not only show these memorials throughout Europe, but also indicate the process through which they have been realized. The research aim is to digitally visualize, detect, analyze, and systematically map these forms of placemaking as 'performative monuments' in Europe. Furthermore, it highlights the omission of this issue from urban space—whether in the sense of failed attempts or to-be-realized projects. These mappings will also include 'collateral' events, such as performances, actions, demonstrations, etc. in and around the memorials, and focus on the interactivity between the monument and the spectator.

Haydarpaşa Train Station

Haydarpaşa Train Station in Istanbul is a site demonstrating the contestations in recent urban transformation and citizens' involvement to become core actors in the process. The station, constructed in 1908, is an iconic building of the early twentieth century and served as one of Istanbul's two main centers of water and transportation infrastructure. The station was closed during the last decade, amid speculation that it would be turned into a hotel and shopping mall. It was also defined as cultural heritage by local stakeholders and the community, and inspired ongoing public protests at the site. The multiple ways to narrate and reimagine heritage, in addition to the dialogical intersection of the people, the site, and the practices, reveal a shifting phenomenon of place, site, and memory. Located each time differently in spatial and temporal contexts and cultural values, Haydarpaşa Train Station showcases the citizens' knowledge in reimagining and redefining cultural heritage, negotiating formal and informal ways of making heritage and place.

In this sense, many events organized by the community introduced dynamic understandings of space: a book festival, advertised with narrations of the sea and the animals that made up this territory; a social media channel for sharing and narrating the past and the present of the site, referencing it as a site of memory across generations; marches, picnic, and dance events at weekends; identifying the site as a graveyard if not used for its original function; and opposition to the musealization of the space, imagining this cultural heritage site as lived space. All referred to the urban, social, and cultural importance that citizens attach to the site. The citizens' involvement produced a lively period for this heritage site after 2012, and introduced "a dynamic understanding of space that no longer appears as a fixed entity but depends on how it is visited, used and dealt with" (Haldrup & Bærenholdt, 2015, pp. 54–55). The Haydarpaşa case demonstrates "heritage as practices and performed, subjective and situational and emergent in particular settings" (Haldrup & Bærenholdt, 2015, p. 52), hence open-ended and site-specific, therefore with potential for criticism.

COST Action provides the possibility of creating environments of participatory dialogues among multiple actors—community, governments, NGOs, public and private sectors, academics, creatives, and more—to better understand each other, to understand the perceived contradictions and controversies, and the possibility of

empowering citizens' knowledge in contributing to the process of 'making' the future.

Citizens' Knowledge as Substitution for Lost Heritage: The Case of Tirana

The Tirana case demonstrates how citizen knowledge can help to substitute for lost heritage, with digital redefinition of the city's communist-era built heritage (see Table 12.1).

Table 12.1 Citizens' knowledge: contrasting, differentiating, and adding perspectives and the four dimensions of responsible research

	Cases				
Dimensions	Housing estates in Accra and Douala	Living memorial, Budapest	Memorial mapping of violence, Europe	Haydarpaşa train station, Istanbul	Tirana's lost heritage
Anticipation	Mapping of alternative heritage values as basis for community-led conservation and development	Chronicling the lives of civilian victims of war and occupation	Showing a barely visible dimension of life in wartime	Reimagining and redefining cultural heritage	Substitution of lost built heritage through memories, experiences, and stories
Reflexivity	–	–	–	–	–
Inclusion	Residents as experts of the heritage (e.g., oral history, mapping the transitional, informal)	Citizens' private archives and knowledge as part of the history (mapping) & collateral events, blending analogue and digital spheres	Citizens' private archives and knowledge as part of the history (mapping) & collateral events, blending analogue and digital spheres	Reuse of cultural heritage by citizens	Mapping, games, application for accessing, interacting, and contributing
Responsiveness	Citizens' knowledge as part of heritage conservation; countering potential loss through private development	–	–	–	–

Lost heritage in Tirana

After the fall of communism, Tirana underwent very dramatic dynamic urban morphological and aesthetical change. In the new capitalist economic system, the urban texture of the city is densified at the expenses of public and green spaces. Furthermore, the capitalist system has notably altered the sense of place, from a city characterized by mid-rise buildings to one that has rapidly added high-rise developments.

Such turbulent urban development is leading to the demolition of cities' older and historical physical pattern (Manahasa & Manahasa, 2020). In many cases, pressure from developers shows no appreciation even for those buildings of great importance to a city's collective memory or those of outstanding architectural or historical value. To date, urban villas from the pre-socialist period (pre-1944) are still being lost daily, replaced by high-rise apartment complexes.

In this context, the digitization of knowledge, especially that of citizens who experienced the socialist period, is used as an important source—firstly to register memories and stories about the lost buildings and landmarks or atmospheres of the demolished and transformed streets and neighborhoods. Beyond old images, the digitization of personal experiences regarding the lost city's physical component is also very important. Due to the very specific context of Tirana, whose post-socialist physical urban texture is very different from the socialist period, digital mapping is used to re-locate lost landmarks, gathering neighborhood locations and measuring nostalgia for cardinal urban spaces such as the city's main boulevard.

The COST Action uses several tools to encourage citizens to contribute with their knowledge, using first those methods that aim to stimulate the citizen involvement and participation with a series of workshops, community meetings, or open lectures regarding specific themes targeting a particular audience. Secondly, beyond digitizing and recording the collected data, methods such as mapping, games, applications, and programs are combined to reassemble memory, reflection, will, desire, or other contributions to the placemaking process. At the same time, various technological means facilitate access, enable joyful interaction, and add diverse contributory tools to the placemaking process.

Reflecting the Four Dimensions of Responsible Research

Placemaking and the introduced heritage cases highlight some aspects within the four dimensions presented by Stilgoe et al. (2013) that seem most relevant to understanding responsible research in this field: *Anticipation* includes consideration of alternatives and strategic actions that allow both the integration of complexity and different perspectives. *Reflexivity*, namely the rethinking of one's own (moral) position, is necessary to take citizens' engagement seriously and to establish a dialogue as equals. *Inclusion* refers to open, pro-active cooperation with other social actors and is a prerequisite for access to heritage and heritage sites. *Responsiveness* refers

to the ability to remain open to change but also include consideration of long-term resources, thus the initiative and running of projects can become facilitated. Mutual learning is part of this responsiveness.

As Table 12.1 shows, inclusion is realized in all of the projects presented. What is surprising is that we see anticipation implemented in all cases, and their significant contributions to making visible and accessible further, alternative dimensions of heritage. This anticipation thus allows for access, engagement, and inclusion, with the process of mapping being especially supportive. Responsiveness seem to be implemented only in one case, and functions as part of a risk management strategy against the loss of heritage through unconstrained redevelopment. Reflexivity is less considered or contingent as a component of RRI.

Citizens' Knowledge: Developing Common Perspectives

For placemaking projects the involvement of citizens is key (cf. Ellery & Ellery, 2019; Urbact, 2019). In this respect, it is relevant to think about who has been involved (using criteria such as gender, age, occupation, and others); how many people have been involved; whether it is possible to regard them as being representative of the wider community, or whether their knowledge should be interpreted and included in the project as mere insights; and how they have been involved (Kvale, 2008). This is possible to analyze with several follow-up interviews, or through questionnaires, workshops or observations or other appropriate research methods. Placemaking planning-processes require common ground among a broad constellation of actors in order to achieve societal acceptance. Section 12.4.1 introduces two cases, namely port cities and the Russian Tsar neighborhood of Ljubljana, Slovenia. The cases show how different forms of knowledge, including citizen knowledge, are integrated and—despite the challenges of such work—achieve consensus. Section 12.4.2 reflects on the two cases in accordance with the four criteria of RRI defined by Stilgoe (2013), and provides an overview of modes of implementations with respect to Sect. 12.3.4.

Common Ground: Historic Port Areas of Europe and the Russian Tsar Neighborhood of Ljubljana

The degree to which placemaking activities around heritage take place in European port areas depends largely on the long-standing relationship between local port and city actors. Common ground is needed for further conservation and development. Also, in the case of Ljubljana, consensus was reached after establishing dialogues that give respect to citizens' perspectives.

Historic Port Areas of Europe

The importance of ports and the existence of port authorities as economically important and powerful actors makes placemaking around and in ports a particularly challenging topic. In this respect, many different data have to be managed; the Waterwheel methodology is a suggestion for systematization of such tasks.

Citizen involvement in the planning of (former) port areas varies extensively from between cities and countries; nevertheless, ports are often large industrial areas under the control of largely independent port authorities with their own planning rights. Their primary goal is to facilitate the transport and transportation of goods and people, and the needs of the locality are often secondary. Placemaking activities often only occur in historic port areas around selected heritage sites that are no longer used for port activities. Placemaking of port heritage sites can contribute to the creation of maritime mindsets, i.e., an awareness of the particularities of port cities, and therewith also contribute to future placemaking activities in active ports.

RRI can help evaluate programs that assess the environmental sustainability, and societal desirability of an innovation by considering input from multiple stakeholders, including in historic and contemporary port areas (von Schomberg, 2011; see Table 12.2). Transparent communication within these evaluations helps the various innovators in the built environment—governments, urban planners, and industry representatives, and the general public—to optimize current planning, making it more reliable and acceptable to society and reducing its risks. Understanding the inherent qualities and path dependencies in port/city relationships through deep-mapping can facilitate future planning. Through an agile methodology of exploring and analyzing historical sources, this approach seeks to show how different spatial and institutional frameworks facilitate or hinder collaboration collaboration among local actors and the efficacy of placemaking (Hein & van Mil, 2020). The outcome is organized as a datawheel that brings together and makes accessible the knowledge produced on multiple levels, such as policy making, branding, funding, media, etc., and consisting of varying perspectives.

Table 12.2 Citizens' knowledge: Developing common perspectives, and the four dimensions of responsible research

	Cases	
Dimensions	Historic Port Areas	Russian Tsar neighborhood
Anticipation	Understanding path dependencies	Shared vision of heritage-based urban regeneration vs. top-down planning
Reflexivity	Deep-mapping as a tool to reflect and better understand collaboration	Rethinking the participatory process (new tools, both analogue and digital)
Inclusion	Building a broad consensus	Coalition of self-organized, citizens' placemaking projects
Responsiveness	Waterwheel as data management tool	Established, heterogeneous, local citizens' network in cooperation with institutions

Various projects—such as the Elbphilharmonie in Hamburg and the M4H in Rotterdam (Rotterdam Makers District)—analyze and continue historical placemaking practices which serve as an orientation for the ongoing structuring of (historical) information and the analysis of established relationships among different actors as a foundation for design. Such understanding can help facilitate citizen involvement, knowledge development and engagement, and also present an opportunity to emphasize the role of imaginaries and narratives for the development of shared values. This approach can also facilitate the development of other carefully promoted placemaking projects at the intersection of land and water. At a time of climate-induce sea-level rise, it is important to acknowledge and collectively plan for water as a continuous element. The proposal of a datawheel has therefore been explored as a Waterwheel by a group of researchers at TU Delft working on digital humanities (Hein et al., 2020).

The Russian Tsar Neighborhood, Ljubljana

The Russian Tsar neighborhood of Ljubljana, Slovenia, is mainly influenced by a major socio-economic change from the former socialist society with a planned economy, to a capitalist society with an open market economy, including rapid motorization, the dream of a suburban detached house with garden, shopping malls, and neglected, diminished, or privatized public areas (Nikšič et al., 2018). The current rigid, top-down-oriented urban planning system in Slovenia still develops urban regeneration strategies within the rather closed professional circles as part of the briefing of strategic development goals. At the same time civil society is activating itself to address the most pressing problems within the neighborhoods. Citizens self-organize to improve their living environments through volunteered activities, very often in the form of community-led placemaking and tactical urbanism. While these activities have immediate and clearly positive short-term effects resulting in improved living conditions in some particular locations, no major long-term or systemic influence is achieved for better living in the aged housing estates, also because civil initiatives lack any systematic support and thus eventually lose momentum (Nikšič, 2018).

In such conditions it is essential that actors start to cooperate: The local knowledge that exists and is performed through bottom-up activities must become recognized by official urban planning actors; at the same time, the readiness of the civil initiatives to cooperate with the planning system must also increase in order to achieve any breakthrough and enable the two sides to benefit from their joint action and cooperation. This approach is far from easy in practice, which was well reflected in the case study of urban regeneration endeavors in the Russian Tsar neighborhood of Ljubljana during the Human Cities project that ran from 2014 to 2018 (Cité Du Design & Clear Village, 2018). The residents were not only seen as partners in the process from the very start but were also given the role of the best local experts with the most precise insights into the state of the neighborhood, its potentials, as well as obstacles to qualitative improvements. Citizens pointed out both assets as well as

problems of the neighborhood that were not mapped by the business-as-usual-analyses conducted by the urban planning office. This was only possible through the development of a series of get-together activities in which citizens and professionals spent time together within the neighborhood and talked and listened to each other via various communication tools, such as neighbors' walks, local roundtables, public picnic, hands-on workshops, and exhibitions. Only some of the classical participatory tools were used (on site, face to face interactions) and these were almost always attended by the same groups of residents. Therefore, secondly, the digital tool *Photostory* was tailored to allow residents to pass on their knowledge through photography and their captions within various categories, such as 'My neighbor' to seek local insights into who constitutes the local community in the eyes of the community itself; 'Professions in my neighborhood' to reveal the problem of the existing and absent services in the neighborhood; and 'Shared values of my neighborhood' to reveal the intangible cohesive elements that contribute to the notion of the community. This digital tool managed to attract new groups of residents to contribute their knowledge, ideas, and insights to the common debate, and new understanding of the place was also gained by the official urban planning actors.

Reflecting the Four Dimensions of Responsible Research

Both case studies illustrate the importance of matching citizens, politics, and administration, and of defining a common perspective, in order to contribute to all four dimensions of responsible research. Unlike the cases presented in Tables 12.1 and 12.2 shows how reflexivity and responsiveness also contribute in these two common-ground cases. Ethical engagement with citizens and communities seems to be paramount in that such groups are involved in research projects and initiatives as partners from the start. Engaged scholarship advocates for a strategy of arbitrage: rather than urban design being presented to communities, communities are instead worked with from the start to improve the final outcome. In both cases, the projects are not 'done to' communities but instead are 'partnered with' communities for better outcomes. Science and politics both have a role in bringing into play the citizens' knowledge over the long term. The presented case studies exemplify the objectives of the Science with and for Society (SwafS) program.

Speaking normatively, the safeguarding of responsibility, on the one hand, depends on guaranteeing certain performance criteria and procedures, in particular the transparency with which the entire placemaking process is conducted. Ranging from the transmission of the objectives of the action, to communication and information, and the use that is made up of the knowledge produced, that is, it always has a political component. On the other hand, during the process and respective completion of each of its phases and a given objective or product, it is important to find ways to guarantee citizens some type of social control over the ways in which knowledge produced is used. In this sense, researchers have a responsibility to

safeguard the appropriate status of citizens' knowledge and to address issues of communication and transparency.

This may demonstrate the need to safeguard an arena of debate and decision that, from a democratic point of view, safeguards interests, impacts, and risks in a considered way.

Reflexivity is fundamental, namely to evaluate procedures, achievements, and challenges, allowing fine-tuning of subsequent phases, actions, or procedures, as well as approaches to producing knowledge (theoretical and more scientific). That means reflectivity can be related the notions of shared authorship or shared knowledge. This principle depends on the context of the placemaking and the underlying actions, the particular stage of the process, the way the process is outlined and streamlined, and on the specificities and characteristics of social actors involved in the process.

The Role of Science: From Coproduction of Knowledge to Responsible Science

Our reflection on placemaking projects in light of RRI (Stilgoe et al., 2013) yielded two unexpected findings. Firstly, that inclusion and anticipation occur together. Anticipation appeared here in the form of alternative perspectives, and seems relevant—although the projects were not specifically about innovation (as presupposed by RRI). Inclusion, in turn, was often implemented through citizen science: citizens doing research. Thus, citizen science as a success story of SwafS (European Commission, 2020) is also visible in placemaking. This becomes obvious in the case studies where citizens' knowledge contrasts, differentiates, and adds perspectives on heritage issues. The case of the Memorial Mapping of Violence Against Women and its approach to using oral history and open private archives provides a good illustration of the importance of these specific research tasks. We can argue that, in our context of planning and heritage, *anticipation of alternative perspectives is conducive to inclusion*. In our cases, the coproduction of knowledge (as required by SwafS) seems to work only with anticipation. This is evidenced by our first five placemaking cases.

The second finding concerned *reflexivity*. Reflexivity occurred when placemaking projects aimed to develop common ground in planning practices. Even though all the COST Action projects demonstrated that—and showed how—citizens' knowledge contributes to science and allow for inclusion, further dimensions of RRI as defined by Stilgoe et al. (2013), such as reflexivity or responsiveness, were not addressed. However, cases that allow for developing common ground in planning practices might not only involve reflexivity but also better contribute to *responsiveness* in gaining institutional stability, be it through the acknowledgment of citizens as partners or specific analytical and data management tools as the Waterwheel. We can even assume that the reflection of different perspectives

develops an ethical quality, and from there promotes responsible action (cf. Mieg, 2015).

In addition, *digital* tools help to bridge participation gaps, encourage brain circulation within the ERA, and thus have a societal impact (even beyond smart city concepts). The cases show that digital tools broaden access to and engagement with processes of defining, using, and conserving heritage through collecting, systematizing, and presenting findings, and in this way stimulate anticipation and support inclusion. The use of digital interfaces, digital tools, online platforms, or social media channels may create different engagement channels that enhance processes of local networking, exchange, discussion, community learning, and action, and thereby allow for a citizen-centric approach. However, as already mentioned, those groups who lack access to digital technology or knowledge about how to use digital tools are at risk of exclusion from such processes and opportunities.

What do we learn from the COST project, from the perspective of the responsibility of science? The cooperation between research with society, as it has been presented as mode-2 research (Gibbons et al., 1994), has evolved. It is not simply about exchange and collaboration, but more about "*mutual learning*," on the part of citizens as well as science, in the sense of the transdisciplinary approach (cf. Scholz, 2013). Science—and scientists—can learn to think along other dimensions in planning and dealing with heritage. Here, *imaginaries* (cf. Strauss, 2006) play a new role, not as cultural beliefs to be studied but as productive research and design tools in placemaking, because it is also about the power to define local development (cf. Jasanoff & Kim, 2015), see for example the case of the lost heritage of Tirana.

Responsible science seems particularly relevant for dealing with *heritage*. We see that citizens' knowledge contributes in different ways to heritage studies and heritage practices. Citizens' knowledge improves the understanding of the historic dimension of the heritage and the sites, e.g., the history of uses by people; this knowledge contests and contrasts governmental memorization, and may compensate—to some extent—for lost heritage through narration and digital tools. These contributions of citizens' knowledge are needed to understand the complexity of heritage, sites, and placemaking. The high value of these added perspectives is the real benefit of making heritage dimensions visible and accessible. This mode of anticipation, as the cases in Sect. 12.3 show, allows the mobilization of people, to engage and to become included. In the field of heritage and placemaking citizens' knowledge is of the greatest value, because they know what outsiders, professionals, or politicians do not know—or are unwilling to recognize.

Furthermore, citizens' knowledge adds to formal planning processes and enables heritage identification and acceptance of planning procedures. The cases in Sect. 12.4 show that the inclusion of citizens' knowledge is challenging and requires the establishment of a dialogue that takes citizens seriously—only then may acceptance and consensus be possible. Additionally, these cases implement modes of reflexivity and responsiveness, through which the uses of heritage can be balanced over the long term, within a changing society and uncertain future.

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