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DOI

[10.1108/JCRE-05-2020-057](https://doi.org/10.1108/JCRE-05-2020-057)

Publication date

2020

Document Version

Accepted author manuscript

Published in

Journal of Corporate Real Estate

Citation (APA)

van der Voordt, T. (2020). Healthy work environments - Guest editorial. *Journal of Corporate Real Estate*, 22(2), 93-94. <https://doi.org/10.1108/JCRE-05-2020-057>

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Healthy work environments - Guest editorial

Theo van der Voordt

To be cited as: Van der Voordt, Theo (2020), 'Healthy work environments', Guest Editorial, *Journal of Corporate real Estate* Vol. 22 No. 2, pp 93-94. Special issue. DOI [10.1108/JCRE-05-2020-057](https://doi.org/10.1108/JCRE-05-2020-057)

The last decades we have seen a shift in Corporate Real Estate Management (CREM) and Facilities Management (FM) from a primary focus on cost reduction to a growing awareness of the added value of CREM and FM. Two books on respectively *The Added Value of FM: Concepts, Findings and Perspectives* (Jensen, van der Voordt and Coenen, eds., 2012) and *FM and CREM as Value Drivers: how to manage and measure adding value* (Jensen and Van der Voordt, eds., 2017) have shown that added value and value adding management have become common issues in decision making processes in practice and in academic research. One of the possible added values of appropriate buildings, facilities and services is their contribution to employees' health and wellbeing. Important questions are for instance: what are relevant physical and behavioral characteristics of healthy workplaces? How to manage healthy workplaces? How to measure which interventions result in increased health and wellbeing? Are there any positive or negative side effects? Are the WELL standard and Happy Building Index reliable and valid assessment tools that can also be used ex ante to support the design and management of healthy work environments?

A recent literature review of the relationship between interior office space (layout, furniture, light, greenery, controls and noise) and employee physical, psychological and social well-being by Colenberg, Jylhä and Arkesteijn (2020, published open access in *Building Research & Information*) showed that research to find appropriate answers is limited and scattered. Evidence on the relationship between interior space and health has accumulated only within a few topics. On the one hand, open-plan offices, shared rooms and higher background noise are negatively related to health. On the other hand, positive relationships are found between physical well-being and aspects that encourage physical activity; between physical/psychological well-being and (day)light, individual control and real/artificial greenery; and between social well-being and small shared rooms. Therefore I am happy that this special issue of the *Journal of Corporate real Estate* presents four papers that shed more light on this complex relationship.

The paper by Jensen and Van der Voordt presents a literature review of all papers in four Corporate Real Estate Management (CREM) and Facilities Management (FM) oriented journals in a ten year period that discuss possible impacts of buildings, facilities and services on employees' physical and mental health and wellbeing. One of the results is a conceptual model that visualizes the possible influence of many different variables. This complexity makes it rather difficult to "prove" cause-effect relationships. Most reviewed papers regard the impact of indoor climate (indoor air quality, light, sound) and plants, with only a few

focussing on the impact of office layout and office use. This paper also explores possible relationships between healthy workplaces and other values such as employee satisfaction, productivity, creativity and sustainability. The paper confirms the scarcity of sound research on healthy workplaces.

The paper by Cobaleda Cordero, Babapour and Karlsson presents a post-relocation study on the relationships between employee wellbeing and office landscape. The case regards a division of employees at a Swedish university that moved from a cellular office to a combi office, still with assigned desks. The data collection involved 16 semi-structured interviews with employees, an interview with the leading architect of the office renovation, study of a dossier on the renovation project, and observations. The authors make a distinction between *Hedonic Wellbeing* (HWB), which refers to frequent positive feelings, infrequent negative feelings and overall life satisfaction, and *Eudaimonic Wellbeing* (EWB), which is associated with engagement, self-realization, autonomy, and meaning in life. The findings reveal that spatial attributes such as visual openness influenced the hedonic components of affect and satisfaction, as well as the eudaimonic components of social relations and environmental mastery.

The paper by Roskams and Haynes discusses the *salutogenic* approach to healthcare i.e. interventions that aim to support human health and wellbeing, in contrast to the *pathogenic* approach which is primarily concerned with how to cope with impairment impacts that cause disease. Based on a narrative review of the literature, this paper explores in what ways the work environment could influence an individual's sense of comprehensibility, manageability, and meaningfulness. The discussion is positioned in the Environmental Demands-Resources (ED-R) model and linked to Herzberg's hygiene factors and motivators. As such, the paper aims to contribute to a better understanding of the effects of the workplace environment on knowledge worker job performance and the extent to which employees are able to minimize pathogenic 'demands' and maximize salutogenic 'resources'.

The fourth paper by Forooraghi, Miedema, Ryd and Wallbaum, presents a scoping review of 7432 papers collected from four electronic databases and five scientific journals, resulting in the selection of 18 papers for content analysis. This paper, too, advocates a perspective shift from design approaches focused on limiting determinants of disease to stimulating determinants of health. The positive aspects of health such as meaning, personal growth, life management, social cohesion and a sense of community appeared to be not abundant in the literature. Only a few authors included design features that present opportunities to address needs related to those aspects. The findings highlight various challenges for this emergent field, in particular a lack of clear definitions of health and healthy offices, ambiguous design strategies, a paucity of literature on office design approaches, and a lack of a holistic office design approach.

In addition, two other papers have been submitted to this special issue, one regarding a Post-Occupancy Evaluation of a Healing Office, the other one assessing the relationship

between activity based workplaces and employees' position on the burnout-engagement continuum. Due to lack of space these papers have been postponed to future issues. A third paper on the added value of healthy work places is work in progress. So keep a close eye on the next issues of this journal as well. Hopefully more and in particular transdisciplinary research will appear in the near future, in order to build to a body of knowledge that enables evidence based design and management of healthy work environments.

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About the editor

Theo van der Voordt is emeritus associate professor in corporate real estate and facilities management. His research focuses on the best possible fit between the physical environment and user needs and preferences, workplace studies, and adding value through FM and CREM. Theo van der Voordt can be contacted at D.J.M.vanderVoordt@tudelft.nl.

A special thanks to Rianne Appel-Meulenbroek for the careful selection of good reviewers, and the reviewers themselves for their valuable comments to earlier drafts of the papers.