



Managing public space – A blind spot of urban planning and design

Eva Duivenvoorden^{a,*}, Thomas Hartmann^a, Marlies Brinkhuijsen^a, Ton Hesselmans^b

^a Environmental Science, Wageningen University, the Netherlands

^b CROW, Knowledge Platform, Ede, the Netherlands

ARTICLE INFO

Keywords:

Public space
Asset management
Managing Public Space
Urban transitions
Wicked problems
Netherlands

ABSTRACT

Managing public space is a big and important blind spot of urban and regional planning and design. Important, because major transition challenges, such as climate adaptation, energy transition, circular economy, mobility, and governance require substantial changes in public space – both physical and social changes. Big, because managing public space entails enormous budgets and potentials over a long period of time in which management and maintenance takes place, which are largely spent operational and sectoral. A more integral and strategic management of public space entails huge potentials, which are hitherto neglected in the academic debate on public space in general and that of cities in particular.

This contribution builds on explorative work on management of public space in academia and on a survey of Dutch managing public space practice and pleads for a more systematic academic debate and research on management of public space.

1. Introduction

Public spaces are essential for the functioning and the quality of life of cities and regions. They provide public and private infrastructure – such as roads, sewage systems, parks, energy grids, telecommunication networks, etc. Public spaces serve, next to this technical function, also social functions (Van Melik, 2008). High quality public space thereby contributes to health, economy, social cohesion, wellbeing, and biodiversity (UN Habitat, 2017). Public space is an important asset that requires not only professional, but also academic attention.

But whereas the design and use of such public spaces attracts a lot of attention in the academic debate (Carmona, 2010; Hartmann & Jehling, 2018; Müller, 2019), managing public spaces – its maintenance and renewal – is largely neglected in academia and policy. There seems to be a discrepancy between a lack of interest of policymakers and academia in managing public space on the one hand, and on the other hand the importance of functioning public space for residents; the academic literature instead largely focuses on the delivery of public spaces (Maring & Blauw, 2018).

Within the framework of the 2030 UN sustainable development goal 11 and target 7, public space deserves full attention: “by 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities”. This gives all countries in the world until 2030 the

legal platform and the task to develop and manage public space through an integrated approach (UN Habitat, 2017).

At the same time, public space plays an important role in the huge challenges ahead of cities and regions: energy transition, climate adaptation, circular economy, and mobility (Maring & Blauw, 2018). We are facing a range of transitions that require adjustment of above- and underground public spaces in the existing urban areas within which, due to the high degree of urbanisation, public space is becoming increasingly scarce. At the same time, windows of opportunity arise since many public infrastructures are at the end of their lifecycle and about to be replaced. It emphasizes the sense of urgency to make use of these windows of opportunity and to respond to the challenges described.

These complex, combined challenges need to be realized effectively in the existing urban realm under the responsibility of fragmented departments responsible for the management and maintenance of public space. This fragmentation in objects and institutions provides a constraint in meeting the future challenges. In addition, managing public space requires locational-specific solutions. It could be concluded that such fragmentation bears the risk that windows of opportunities for realizing urgent transitions in public spaces remain unused. One of the common responses to fragmentation is integration. However, in practice, such integration is at its infancy. Integration in general often fails “due to barriers and challenges embedded within the governance

* Corresponding author.

E-mail address: eva.duivenvoorden@wur.nl (E. Duivenvoorden).

<https://doi.org/10.1016/j.cities.2020.103032>

Received 2 April 2020; Received in revised form 7 October 2020; Accepted 7 November 2020

Available online 11 November 2020

0264-2751/© 2020 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

system” (Cumiskey et al., 2019). This contribution discusses the knowledge gap of managing public space and explores the need for an academic discipline in order to face the fragmentation that hinders effectively tackling the transitions mentioned above.

Empirically, it builds on a survey, interviews, and a focus group of managers of public space in the Netherlands to reveal knowledge gaps in the practice of managing public space. In order to gain insight into the knowledge gaps, the survey was conducted in April 2019 among municipalities, provinces, consultants, knowledge organizations and educational institutes involved in the practice in managing public spaces. 47 out of 76 respondents completed the survey. To validate the results, a focus group was conducted. As a follow-up to this research complementary research was carried out to identify which specific competencies current managers of public space are lacking and to what extent. Therefore, a survey has been conducted which formed the basis for eight additional in-depth qualitative interviews with managers of public space to explore the specific competences and the gaps thereof.

Academically, not much is known on managing public space. A systematic literature review showed that international literature on this topic is scarce. By the end of 2019 only about 1.000 publications were linked to the relevant keywords of managing public space, of which only 58 explore the major challenges in this field. So, though there is a rich body of literature on the specific transition challenges, publications analysing and evaluating a long-term perspective on integrated managing public space are scarce. This lack of knowledge and scientific literature on managing public space has been pointed out several times since 2008 (Dempsey & Burton, 2012; UN Habitat, 2017; Wild et al., 2008). Nevertheless, it seems that managing public space is a hitherto widely neglected topic in the academic debate.

2. Exploring the Dutch practice of managing public space

It seems that public space is not only well-maintained in the Netherlands, but compared to many other European countries, the extent of public space, including its infrastructure, is comparatively high and the Netherlands are one of the most urbanized countries in Europe (PBL, 2016). Because of this, dealing with increasing scarcity of public space is the norm in the Netherlands.

Public space is managed in different ways over time. Originally, managing public space has been dominated by frequency-driven, quality-driven and risk-driven approaches. These approaches had in common that they were all very asset-centred and dominated by a civil engineering perspective: usually an economic and rationalistic perspective is taken (Giglio et al., 2018). Recently, also societal forms of management arose which entailed responding to the wishes and needs of the people. Asset management -the current dominant approach- describes “a coordinated activity of an organization to realize value from assets, [an asset being] an item, thing or entity” (Maring & Blauw, 2018) with value for a group of actors, such as users. Asset management distinguishes different asset systems, from systems of homogeneous assets to portfolios consisting of heterogeneous assets (Petchrompo & Parlikad, 2019). Maring & Blauw suggest adjusting asset management for the management of subsurface assets in the urban realm; a focus on systems of assets instead of objects, also including a shift to maintain functions instead of objects (Maring & Blauw, 2018). Over the years, there has been a shift from sectoral approaches to more integrated and system-oriented approaches. However, the current management approaches are probably not sufficient to deal with the complex, combined challenges we are facing nowadays. Managing public space needs to explore new approaches that can deal with these challenges and can contribute at the same time to the wider and underlying values of public space.

3. Conditions and constraints – an observation of Dutch practice of managing public space

Respondents from practice of managing public space have been

asked about existing approaches, challenges, and required knowledge to tackle these challenges. The aim of this survey was to reveal an indication of the knowledge gap in practice for integrated management of public space. Based on this knowledge gap, future research fields and questions have been explored, which shall be discussed later.

The survey showed that 83% of the respondents think that the current approach is well-equipped for dealing with daily operational management and maintenance, but that knowledge is lacking on how to deal with midterm and long-term challenges in public space, including area redevelopments and replacement of whole public infrastructures systems. These challenges require in the opinion of the respondents a more integrated and strategic approach in collaboration with other domains, particularly with planning and design, and with other societal actors. Five major challenges came to fore: climate adaptation, energy transition, circular economy, urban mobility, and governance. The survey also revealed that most participants (91,5%) consider a trans-disciplinary approach most suitable that embraces governance of managing public space with a huge variety of stakeholders. It has also been confirmed that the current knowledge and action on managing public space is primarily sectoral-operational in nature, while the challenges ahead are mainly of an integral-strategic nature. Further empirical research based in a survey with 100 respondents from the management of public space and additional seven in-depth interviews into the knowledge and skills of managers at strategic and tactical level confirms this knowledge gap and reveals the widespread lack of managers with academic work and thinking level. The almost complete absence of academic competences in practice indicates that there is a knowledge gap in science.

4. Discussion: the need for comprehensive research on managing public space

This explorative paper will not provide a conclusion – the best it can provide is a discussion instead. The survey and interviews in Dutch practice of managing public space and the systematic literature study reveal that first, there is a need in society for effectively managing public space and a demand for a more integral-strategic approach to avoid ineffectiveness of fragmentation, and second, that there is a knowledge gap in academia addressing such management of public space. The discussion above points at a need for a comprehensive academic debate – covering the object, the process, and the context of managing public space. A central question that emerges from the academic and professional debate is: under which conditions can an integral-strategic approach contribute to a more effective management of public space and the value of public space? This question asks for a comprehensive analysis of substantive, procedural and contextual conditions of managing public space (Spit & Bertolini, 1998; Spit & Zoete, 2016).

The substantive component of integration means using synergies of the different objects of public space, i.e. the infrastructure systems, hardware, etc. It is therefore essential to explore these synergies systematically. These synergies depend especially on the spatial scale and time horizon of the systems. The lifecycles of systems are very diverse. Such desynchronized life cycles make integration challenging. Also, different systems in public space operate – technically and budgetary – on different spatial scales from the street level to national level and some subsystems have more flexibility than others. This raises a challenge of lifecycle management and separated budgets for an integrated approach. How can smart handling spatial scales and time horizons contribute to an integral-strategic management of public space and an effective performance of public space?

Integration of management does not only entail substantive challenges; it also requires integrating procedures. Procedurally, integration is understood as the degree to which governance schemes realize joint knowledge, aligned policies and synergies, and more efficient interventions across policy sectors (Cumiskey et al., 2019). A governance scheme describes a specific involvement of different actors that are

“independent of a central power and operate at different levels of decision-making” (Klůvanková-Oravská, 2010). Next to these practical challenges of administration, an integrated managing public space specifically asks for new forms of stakeholder involvement. There are different approaches to managing public space possible, such as management to provide high quality of public space (positivistic approach), risk-avoidance (what is the risk of not maintaining/renewing), provision of values (teleological approach). What types exist in practice and what are consequences of the different approaches? In other words, the procedural aspects of an integral-strategic management of public space require a public policy analysis. Accordingly, this also raises – next to questions of financial and procedural efficiency and effectiveness – issues of legitimacy and justice (Salamon, 2000).

Although general guidelines on substantive and procedural aspects can foster an integrated approach, public space is a highly locational-specific domain. For example, the urban form and morphology of a neighbourhood affects the possibilities for renewal of public space. A heterogeneously and organically grown neighbourhood asks for different solutions than a homogeneous one. Also, the type of neighbourhood matters – mixed uses, diverse demographics or socio-economic circumstances have an influence on the possibilities and demands on public space. How does the locational-specific and regional context influence an integrated management of public space at different scales?

An overarching aspect of managing public space is on the effect of well-maintained public space for urban and rural life. What values do citizens link to public space and how do they appreciate an integrated management of public space? And the underlying question: how do we measure the quality of public space? Until now, there are only methodologies that measure the quality of assets and systems separately from each other and not as a whole (Durmisevic & Sariyildiz, 2001; Wojnarowska, 2016). This is a fourth, more fundamental aspect of management of public space than the earlier aspects: Managing public space seems to face similar challenges as spatial planning did in the 1970s. In the post-war period spatial planning had to resolve urgent and rather technical tasks – rebuilding destroyed cities in Europe, constructing roads, infrastructure, and public spaces, and providing essential facilities. Spatial problems appeared to be relatively easy – “definable, understandable and consensual” (Rittel & Webber, 1973). Around the 1970s, however, when city centres were restored and life functioned to a solid and basic degree, planners recognized that planning changed. Citizens became assertive and claimed participation and active involvement in decision-making. Spatial planning became complex, normative and inherently uncertain (Hartmann, 2012). Rittel and Webber coined the term “wicked problems” to describe these planning intricacies (Rittel & Webber, 1973). It seems that managing public space faces increasingly wicked problems.

If that is the case, integration has great potential in managing public space, but it will not resolve a wicked problem. The wicked problems call for two major policy changes in managing public space. Firstly, fostering an academisation of management of public space. Secondly, training current managers and those of the future will also have to be trained on an academic level. In doing so, they will have to evaluate and reflect on the currently missing crucial competences as critical analyses. On top of this and to facilitate these policy recommendations, more research and academic debate are needed to better understand managing public space as a key discipline between, and overlapping with, spatial planning and design that can contribute to the major transition challenges of our cities and metropolitan areas. Therefore, academia needs to pay attention to managing public space as a blind spot of urban planning and design.

CRediT authorship contribution statement

Eva Duivenvoorden

Writing – original draft, Data curation; Formal analysis; Investigation; Methodology; Validation; Writing – review & editing.

Thomas Hartmann

Conceptualization; Writing – original draft, Methodology; Writing – review & editing; Supervision.

Marlies Brinkhuijsen

Conceptualization; Writing – original draft, Formal analysis; Methodology; Validation; Writing – review & editing; Supervision.

Ton Hesselmann

Conceptualization; Writing – original draft, Writing – review & editing; Supervision.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- Carmona, M. (2010). *Public places, urban spaces: The dimensions of urban design*. Amsterdam, Boston: Architectural Press/Elsevier.
- Cumiskey, L., Priest, S. J., Klijn, F., & Juntti, M. (2019). A framework to assess integration in flood risk management: Implications for governance, policy, and practice. *Ecology and Society*, 24(4). <https://doi.org/10.5751/ES-11298-240417>.
- Dempsey, N., & Burton, M. (2012). Defining place-keeping: The long-term management of public spaces. *Urban Forestry & Urban Greening*, 11(1), 11–20. <https://doi.org/10.1016/j.ufug.2011.09.005>.
- Durmisevic, S., & Sariyildiz, S. (2001). A systematic quality assessment of underground spaces—Public transport stations. *Cities*, 18(1), 13–23. [https://doi.org/10.1016/S0264-2751\(00\)00050-0](https://doi.org/10.1016/S0264-2751(00)00050-0).
- Giglio, J. M., Friar, J. H., & Crittenden, W. F. (2018). Integrating lifecycle asset management in the public sector. *Business Horizons*, 61(4), 511–519. <https://doi.org/10.1016/j.bushor.2018.03.005>.
- Hartmann, T. (2012). Wicked problems and clumsy solutions: Planning as expectation management. *Planning Theory*, 11(3), 242–256.
- Hartmann, T., & Jehling, M. (2018). From diversity to justice – Unraveling pluralistic rationalities in urban design. *Cities*, 91. <https://doi.org/10.1016/j.cities.2018.02.009>.
- Klůvanková-Oravská, T. (2010). *From government to governance? New governance for water and biodiversity in an enlarged Europe*. Prague: Alfa.
- Maring, L., & Blauw, M. (2018). Asset management to support urban land and subsurface management. *The Science of the Total Environment*, 615, 390–397. <https://doi.org/10.1016/j.scitotenv.2017.09.109>.
- Müller, A.-L. (2019). Voices in the city. On the role of arts, artists and urban space for a just city. *Cities*, 91, 49–57. <https://doi.org/10.1016/j.cities.2018.04.004>.
- PBL. (2016). *Cities in the Netherlands- facts and figures on cities an urban areas*. The Hague, The Netherlands: PBL.
- Petchrompo, S., & Parlikad, A. K. (2019). A review of asset management literature on multi-asset systems. *Reliability Engineering & System Safety*, 181, 181–201. <https://doi.org/10.1016/j.res.2018.09.009>.
- Rittel, H. W. J., & Webber, M. A. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, (4), 155–169.
- Salamon, L. M. (2000). The new governance and the tools of public action. *Fordham Urban Law Journal*, 28(5), 1611–1673.
- Spit, T., & Bertolini, L. (1998). *Cities on rails: The redevelopment of railway station areas*. London, New York: E&FN Spon.
- Spit, T., & Zoete, P. R. (2016). *Planologie*. Groningen: InPlanning.
- UN Habitat. (2017). *Global public space programme*. Nairobi: UN-Habitat.
- Van Melik, R. (2008). *Changing public space: The recent redevelopment of Dutch city squares* (p. 373). Nederlandse geografische studies: Vol.
- Wild, T. C., Ogden, S., & Lerner, D. N. (2008). An innovative partnership response to the management of urban river corridors—Sheffield’s River Stewardship Company. In *11th international conference on urban drainage*.
- Wojnarowska, A. (2016). Model for assessment of public space quality in town centers. *European Spatial Research and Policy*, 23(1), 81–109. <https://doi.org/10.1515/esrp-2016-0005>.