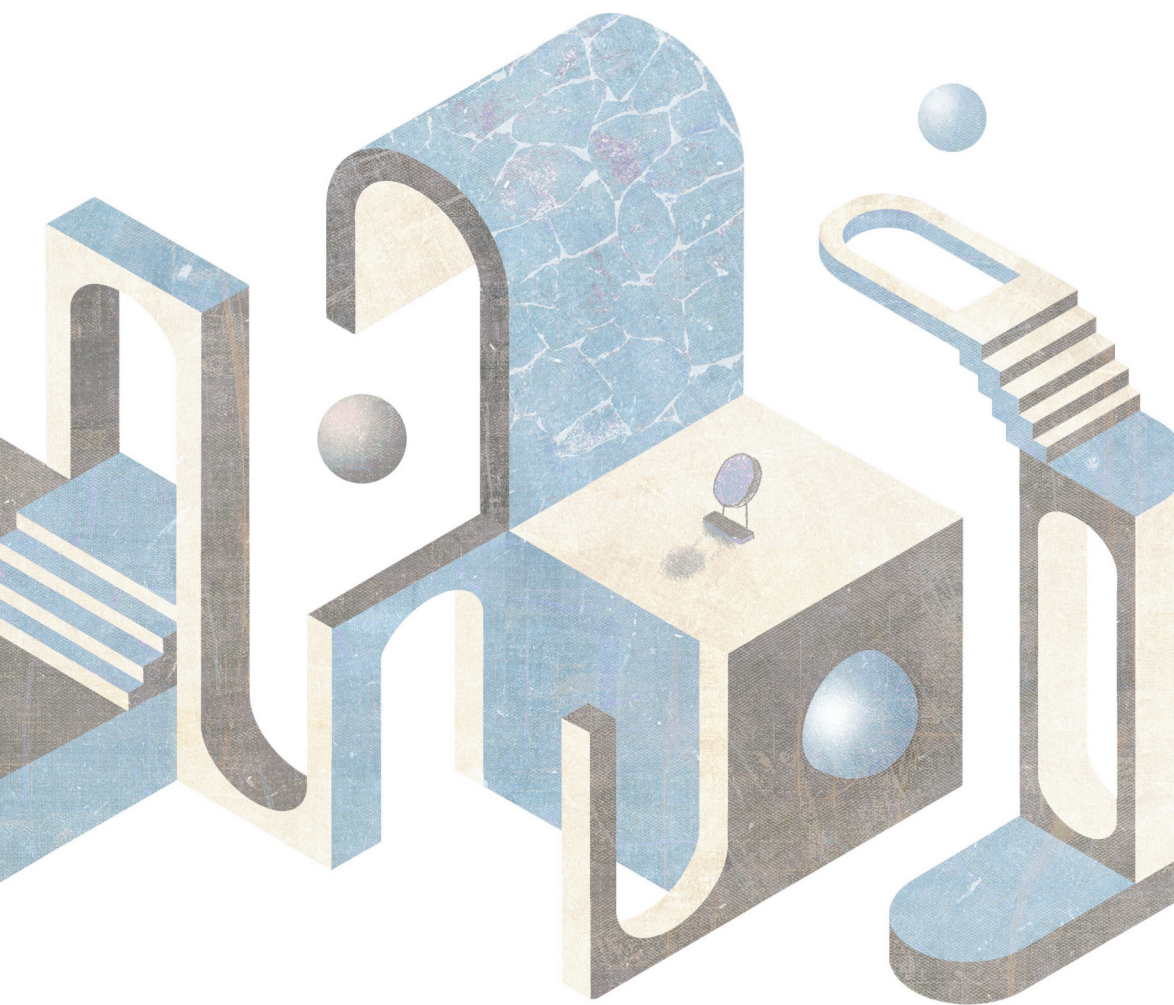


# ENGAGING SPACES

How to increase social awareness  
and human wellbeing through experience design

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edited by Barbara Camocini, Annalisa Dominoni



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How to increase social awareness  
and human wellbeing through experience design



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D.I. **FRANCOANGELI** OPEN  ACCESS  
DESIGN INTERNATIONAL

Cover image by Sara Sciannamè

ISBN e-book Open Access: 9788835141747

Date of first publication: July 2022

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## 5. Experiential ways of mapping: revisiting the Desktop Walkthrough

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### **Abstract**

Design has formed as a professional field, over time, in relation to social, political, cultural, and industrial transformations. In this process, the ways that designing itself is carried out have responded to these changes as well. There is not one singular way of doing design. The varieties of tools, methods, materials, and situations that design now engages with spans from practices that are well-established since more than a century, to emerging and experimental endeavours that contribute with new approaches and methods. However, attention to the historical origins of design methods is seldom present in contemporary design practice. Instead, methods and tools seem almost timeless, if not neutral. Design's ways of working are generally not framed in relation to the diverse historical contexts, constellations, and cultures in which they once were formed and introduced. Embedded in the methods applied in design today, however, we can still find traces of the historical situations, concerns, and ideas that they once were made to respond to. An awareness of these embedded historical aspects of designing can bring forth perspectives that support developing what we do in design, and how we relate to the methods that we use. The point of attempting to map a certain design method in relation to its history, therefore, is here not intended as simply a matter of tracing a linear historical genealogy of from where and how this method has come to enter design practice. Through an attention to the historicity of designing, we wish to point to a complex cartography of multi-level relationships between different design practices, diverse conceptual

understandings of design, and various trajectories that designing could take towards the future.

In this chapter we revisit a specific method used within design projects that deal with integrating spatial and service design solutions, the desktop walkthrough. Through exploring its possible connections to and relationships with previous experiential ways of mapping spatial and environmental interactions, we wish to move beyond discussing what such a method instrumentally “does” and highlight some of the embedded historical and conceptual understandings it brings into designing.

## **5.1 Design methods and the evolution of practice**

Design processes, approaches, methods, and tools have evolved over time, creating specific narratives and geographies of designing that have become embedded in design practice. Practitioners and scholars have influenced each other along the way in both maintaining and developing design methods and processes. Designing has on the one hand built on tradition – ways of doing and thinking passed on from one generation to another – and on the other on intentionally innovating designing through bringing in methods and tools from fields external to design (complementary, adjacent, intersecting or far from the field). From the latter decades of the 20<sup>th</sup> century, ‘designing designing’ (Jones, 1984) has increasingly become a focus for design practitioners and design scholars alike. As new materials, new contexts and new collaborations have been established as relevant for design to engage with, the invention and adoption of new methods and tools for design has come to hold a central position in developing design as a professional and scholarly practice.

Despite this strong presence of methods development in design, the attention to the historical roots of different design methods and tools is very limited (Göransdotter, Redström, 2018). In design, focus is on the future rather than on the past. The question is what different methods may support in terms of results and insights that lead to a successful design outcome, rather than questioning why and from where these methods once have sprung, and what that might mean for their inherent limitations and possibilities.



In contemporary design, it is often difficult to map when and from where different design methods and tools actually were introduced. In some cases, one can follow a method's development trajectory over in various publications – as, for example, the various ways in which the HCI community has interpreted the method of cultural probes through adaptations of its application within different contexts (Gaver *et al.*, 1999, 2004; Boehner *et al.*, 2007).

In the case of cultural probes, it is interesting to see how Boehner *et al.* (2007) have shed light on how these have been adopted and adapted in a proliferation of situations, with divergent uses and scopes. In an attempt to clarify the relationship between methods and their underlying methodology, the application of cultural probes was investigated with regard to how different researchers had responded to the work of Gaver *et al.* (1999), adapting the understanding of their work to their own needs. The main issue was that “some uses of probes had been criticized as poor substitutes for ethnographic and other methods for generating qualitative analyses of the practices of everyday life” instead of building further on the intended experimental and subversive nature of the method, which was originally inspired by a Situationist approach to experimental art.

As cultural probes became a method made part of a ‘design toolbox’, the original intent of *why* this method was developed and introduced became diluted leading to a “striking (...) extent to which some attributes of the original cultural probes have been broadly left behind” (Boehner *et al.* 2007, p. 1080). As the method was distanced from its contextual coming-to-be, it often became operationalised as an instrumental tool for adapting design outcomes to user needs rather than applying it as a method for opening up more imaginative and ‘irrational’ design spaces. The authors point to the shift in focus that follows when a “method” such as the cultural probes is detached from its methodological framing and applied instrumentally without connecting to its original aim and context: “For instance, the attraction to ‘design-y’ methods and results but discomfort with the corresponding value of uncertainty leads to an overwhelming desire for codifying a design approach into easily-reproducible methods, or research recipes” (Boehner *et al.* 2007, p. 1084).

This brief example around the case of cultural probes serves to exemplify a tendency that can be extended also to other practices and

methods in design, that over time have gone through different stages of interpretation and adaptation. But the lack of literature documenting the historical origins of different design methods and opening epistemological debates on their application leads to the acceptance of a “general toolbox” without any real traces of why, where and when design methods entered designing. Gradually, these methods become part of design educations, handbooks, and professional practices. The methods somehow just seem to be there, stable and reliable, adapted to certain purposes and ready to use (Stickdorn *et al.*, 2011).

Tracing trails of why and where design methods once have come about is of importance for the evolution of design itself as a practice and as a discipline. Unpacking the original thoughts and circumstances that led to the development of a method or tool contributes to making visible aspects of design that have so far not been addressed, neither in design nor in design history. Even more so, this activating of the historicity of designing can also open spaces for critically re-thinking what design can become (Göransdotter, 2020; Riccini, 2001).

A critical view on methods development in design as on the one hand necessary for exploring new ways of designing, and on the other simultaneously at risk of contributing to fossilising or stabilising certain understandings of design, was adopted already by proponents of the Design Methods Movement of the late 1960’s and early 1970s (Jones, 1970; Alexander, 1964). Looking back at these attempts to develop new methodological and processual approaches in designing, John Chris Jones called out the tensions between methods innovation and methodological fossilisation in relation to design’s aims and outcomes already in the 1980s:

A time for relearning.

Ten years later [from the Design Methods Movement] we realize that, as makers of methods, we have got lost.

The situation created by what we did, and by the reactions to it, does not allow us to proceed. We are obliged to pause, to rethink, to discover what went wrong. The obstacles that now confront us give us the opportunity to relearn, to develop, to grow. To give up whatever it was that led us astray... [...]

We sought to be open minded, to make design processes that would be more sensitive to life than were the professional practices of the time. But the result was rigidity: a fixing of aims and methods to produce designs that everyone

now feels to be insensitive to human needs. Another result was that design methods became more theoretical and many of those drawn to the subject turned it into the academic study of methods (methodology) instead of trying to design things better. [...] though we saw the need to change the processes of designing we did not see the need to change its aims. We retained the concept of ‘product’ as the outcome of designing. We did not see that we were accepting only a part of the challenge which we took up: the challenge to transform the idea of progress, which presumes a specific goal, into the idea of process, which does not. This transformation is, I now realize, a main event of the twentieth century, though it may have started earlier. A change which is happening in many areas of life, not only in design (Jones, 2021, pp. 158-159).

In his text Jones advocates for a critique of design methods and the need to develop a language for thinking, conceiving, articulating and exploring design that opens for flexible approaches and collaborative work in designing (Dilnot in Jones, 2021). In this line of thinking, design methods could be seen as evolving infrastructures, which undergo incremental metamorphoses, to be reconfigured according to the context and aim of design and not as a given algorithm that one should learn by heart and apply to the letter.

Following this reasoning, rather than providing a road map towards a certain design outcome, the development and application of design methods become scaffoldings that support exploring and allowing intuition, judgement, and uncertainty to emerge in given circumstances (Nelson, Stolterman, 2012). When defining a design strategy one can be inspired by previous applications of methods and change their structure according to the aim of the project. But to do so, one must understand what methods bring to designing – both on an instrumental level and on a conceptual level – and reconfigure the scaffolding accordingly. In assessing and assembling design methods appropriate for responding to a certain design situation, a critical attention needs to be geared towards the inherent values, logics, and limitations that certain tools, practices and perspectives carry due to the historical contexts of where, and why, they once entered design.

As Christopher Alexander once pointed out very clearly in his preface to the paperback edition of *Notes on the Synthesis of Form* (1964), focusing too strongly on a method in itself will risk losing track of the overall aims with the methodology, and process, it forms a part of:

Poincaré said: “Sociologists discuss sociological methods; physicists discuss physics.” [...] Study of method itself is always barren, and people who have treated this book as if it were a book about “design method” have almost always missed the point of the diagrams, and their great importance, because they have been obsessed with the details of the method I propose for getting at the diagrams.

No one will become a better designer by blindly following this method, or indeed by following any method blindly. (Alexander, 1971, Preface to the paperback edition, in *Notes on the Synthesis of Form*, 1964).

In light of such strong testimonies “against” detailed examinations of design methods, one could conclude that we should not dig very deeply into the detailed workings of specific methods. However, entering the analysis of these issues, perhaps it is not about the methods themselves, but about the way in which they are “blindly” used, to speak with Alexander, advocating instead for a more conscious and informed way of relating to design methods.

In this chapter we explore and begin to unpack one specific method that we have been experimenting and using within design education in S+S – Spatial Design + Service Design (De Rosa, *forthcoming*; De Rosa, 2019; Fassi *et al.*, 2018): the Desktop Walkthrough (DW). In design education, teaching the history of design methods by unfolding the pluralistic idea of design (Margolin, 2015) as an approach to design methods may allow students to develop a more actively critical attitude towards approaches, processes, methods, and tools. This approach is needed to overcome the blindness with respect to the historicity of design methods, unpacking design’s conceptual foundations critically and creating a fertile ground for a deeper understanding of how designing can continue to evolve and respond to emerging contemporary and future situations (Redström, 2017).

The Desktop Walkthrough is a method that has become firmly established in service design practices, as well as in areas of participatory or co-design settings in commercial, civic, and social contexts. While the DW is widely adopted and described as a means for prototyping experiences, for generative collaborative work and for predicting and perfecting design outcomes, its origins are hardly ever foregrounded. In fact, when homing in on trying to trace the emergence of the Desktop (previously Service) Walkthrough, it is not easy to find

its entry points into the realm of designing. But despite this, an attentiveness to the embedded historicity of this method can nonetheless contribute to a critical unpacking of the DW regarding the different ways in which it can move into yet a new area of designing: as an experiential way of mapping interactions within a physical environment, to better understand and explore the relationships between space and service systems in contexts in which services intrinsically inform the spaces we live in and vice versa.

## **5.2 Revisiting the Desktop Walkthrough**

Many design methods have been invented or borrowed from other disciplines, contributing to giving form to a beautiful pluralistic array of design languages and design practices. These influence the ways in which we act but also shape understandings of what design is, could be, and what it gives form to (Jones, 1970; Banathy, 2013). Design methods change over time, evolving and adapting to new contexts: sometimes through incremental refinement, sometimes through radical rethinking of how designing is understood.

The Desktop Walkthrough is no exception to this pattern. It has emerged in the field of Service Design, which began to take shape during the latter decades of the 20<sup>th</sup> century. The emergence of the term “service design” seems to take place in the early 1980s in a management and marketing context (Lynn Shostack, 1982). By the early 1990s calls were made to include this new area into the realm of design practice and research (Pacenti, Sangiorgi, 2010). The Desktop Walkthrough could thus be considered as part of a younger generation of methods with respect to those relative to more ‘traditional fields’ of practice such as product and communication design. Its boundaries of application are multiple, but some pillars of its scaffolding can be defined. We can start by positioning the DW within a broader design process to understand where it stands, where it can be positioned and with what aim, and after we will focus on the approaches that characterize this method.

According to previous research, the origins of the DW are to be found within the broader studies and evolutions of prototyping tools for designing services (Blomkvist, Bode, 2012).

Under its former name of ‘service walkthrough’, this method was described as a process for prototyping whole services rather than individual parts in isolation. This was perhaps an anticipation of the DW emerging from analysing, combining, and testing ways of doing and thinking of other existing prototyping methods and techniques such as bodystorming, roleplaying, experience prototyping and pluralistic walkthroughs (Blomkvist, Bode, 2012). If we take another step back to the early prototyping tools that emerged from studies around service design in the beginning of its formation, we can see that also scenario-building and storytelling (through various forms of visualization, narration and representation) were some of the first building blocks for testing a service through involving and observing the final user through a situated prototype put in the place where the service would actually exist (Diana *et al.*, 2009; Tassi, 2009; Blomkvist, 2011).

These first experiments in prototyping services were mainly ‘place based’, meaning that they involved real people in real spaces, taking part in the service representation in order to understand the physical and immaterial qualities of the service and the interlaced interactions, by physically ‘walking through’ the different sequences of touchpoints (Blomkvist, Bode, 2012).

It seems that the first academic characterisation of the ‘desktop’ walkthrough can be found in a paper for the ServDes 2016 conference, written by scholars Johan Blomkvist, Annita Fjuk, Vasilisa Sayapina (Blomkvist *et al.*, 2016). However, as they also underline, at the time the DW was already well known and established among practitioner’s working with service design.

In *This is Service Design Thinking*, the Desktop Walkthrough was defined as: “a small-scale 3D model of a service environment [where] simple props like LEGO® figures let designers bring the situation to life, acting out common scenarios and helping develop prototypes” (Stickdorn *et al.*, 2011). The same publication underlines the use of the DW for iterative analysis providing a common language in which various people can assess and co-develop a prototype. In a revisited description of this tool by the same authors in the #TISDD – *This is Service Design Doing method library* on-line repository, the DW is identified as a “signature method of service design” for prototyping as it makes the “experiential process nature of a service – a story unfolding over time – tangible... [its role is to] help the design team to quickly

simulate a service experience using simple props like toy figurines on a small-scale stage (often built from LEGO® bricks or cardboard), and test and explore common scenarios and alternatives. The critical deliverable is not the model of the map/stage but the experience of playing through the service experience step by step”.

These last definitions of the DW bring to life two other aspects of its scaffolding. The first has to do with expanding the idea of the DW from being a prototyping tool, used for evaluating and communicating, to a method in use also for exploring: an iterative thinking tool, between creating and prototyping (Stickdorn *et al.*, 2011). The second aspect introduces the idea of the DW as a participative tool, a way to help different stakeholders (also non-designers) rapidly and easily to codesign a service. In fact, to understand these aspects of the method and its applications in practice, we need to go deeper into looking at two of the main references to the Desktop Walkthrough as these emerge from scholarly research and practitioners’ work: (1) LEGO® Serious Play (LSP) and (2) generative prototyping:

**(1) LSP** is a method developed in the mid-1990s emerging from cross-disciplinary research lead by researchers Johan Roos and Bart Victor with the aim to design more imaginative, effective, and responsible ways to guide leaders and organizations in their strategy making (Roos, Victor, 1999; Roos, Victor, 2002; 2018; Stalter *et al.*, 2009). The method is based on influences from different disciplines forming a set of strategies in which organizational narratives, heuristic reasoning and emotional content are combined with metaphors and storytelling as powerful sense-making tools. The use of LEGO® bricks only emerged in a second evolution of this research as a consequence of a commissioned work that put this knowledge into action. However, perhaps, as design practitioners, we tend to only see the LEGO® without grasping the depth of the research that led to this method.

**(2) Generative prototyping** is part of a broader set of tools under the umbrella of generative techniques within what has been defined as generative design research (Sanders, 1999; 2000; Stappers *et al.*, 2004; Sanders, Stappers, 2012). Generative design research is an

approach that allows people (non-designers) to be actively involved in the design process. It comprises a set of methods and techniques that give people the language to express their ideas within a given design context or problem setting. In many of their experiences as practitioners, Sanders and Stappers have used a set of toolkits that go from more abstract triggers for ideation to 3D toolkits for generative prototyping. The toolkits are used to set up a playing field for participants of the generative session in which they can play and co-design.

As emerges from this brief excursus of contributions, the DW has evolved in time through multiple contributions coming from a constant dialogue and exchange between scholars and reflective practitioners (Schön, 1987).

The adoption of the DW in settings of Serious play and generative work in participatory design highlights how this method can be framed and performed in the contexts of quite diverse methodologies. While adopting the same method in both cases, the approaches that call for its inclusion are different – as are the methodologies framing it. In relation to methods and techniques, an approach can be defined as a way in which practitioners orient themselves towards all aspects of their work (Hofler, 1983). Within the many ways in which generative tools have been applied to aim for supporting a move towards design solutions, we will in the following focus more on those in which they have been used to map experiential contexts where physical spaces (spatial design) are designed together with services (service design). Here, two examples are given of how the DW has been applied in educational experimentations where spatial and service design solutions are integrated: first in a Product Services System Design Master course in Politecnico di Milano (2018-2021); second in a Product Design Course at the Universidade Federal do Rio de Janeiro (2017).

These two experiments, in an educational setting, inform and integrate existing knowledge about the DW: how it is used within design processes and how it builds a dialogue with other design methods within the design process. Doing so, this opens new opportunities to reflect on how, in which contexts, and with which objectives the method is called into action.



### 5.3 The Desktop Walkthrough: an application in S+S – Spatial Design + Service Design

As an experiential way of mapping, the Desktop Walkthrough allows for exploring and further developing research on the narrative dimension of the design process and its representation through examining the relationship between service design and spatial design (De Rosa, *forthcoming*; De Rosa, 2019; Fassi *et al.*, 2018). S+S is an emerging topic in design research, education, and practice. It explores converging factors and perspectives for the mutual influences between the theoretical background and the milieu (Margolin in Buchanan, Margolin, 1995, p. 122) of Spatial design with the tools and the language of Service design (Fassi *et al.*, 2018, p. 848). This area of exploration has evolved through multiple inputs, from a constant dialogue and exchange between design research practice and design practice.

This interchange has converged in the following assumptions: i) service innovations are reshaping spatial experiences and ii) spaces are a part of the service system to be designed (De Rosa, *forthcoming*; De Rosa, 2019). Given this, the Desktop Walkthrough stands out as a tool for exploring possible connections between the interactions and relationships occurring in a place with the environment itself, as it supports a two-fold analysis on how to experiment on tools for education and on the advancement on S+S.

Design developed a diverse range of methods and tools for managing the complexity of the systems considered and to be designed, and for triggering the creative thinking, in order to “guide their perception and understanding of design problems and solutions” (Dalsgaard, 2017, p. 21). In this sense, tools have a generative power, pivoting research insights into imagining preferred futures. It is about shifting from research analysis, made up of issues and constraints, to creative synthesis for project development (Penin, 2018, p. 239) (Fig. 1).

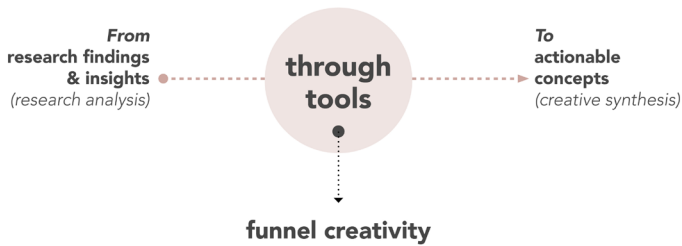


Fig. 1 – The iterative process from analytical thinking to creative thinking through design tools. © Annalinda De Rosa.

Building on Dalsgaard’s (2017) five qualities of instruments of inquiry, the DW is here categorised in the *knowing-through-action* quality. It is a tool that enables and supports new knowledge generation through acting with the instrument (Dalsgaard, 2017, p. 28) and that allows expansion and transformation of design concepts through manipulation and development of them in more detail and complexity (Meroni *et al.*, 2018, p. 48).

### 5.3.1 The distinctive features of the Desktop Walkthrough in S+S – Spatial Design + Service Design

The DW is not only a category of *generative* toolkits, but it also acts in a *representational* way, contributing both to the search for new understandings and for refining existing knowledge, making generated ideas visible. Visualisation plays a crucial role as it makes ideas more tangible, complexity more readable, and alternatives shareable between different participants and recipients (Diana *et al.*, 2009). In this sense, the DW may act as a *boundary object*, as it *represents* the subject matter of design in the material form of design artefacts, whose function is to align designers and users in synchronous design processes (Star, 1988), facilitating the engagement and interaction with the design subject matter (Meroni *et al.*, 2018, p. 44).

Visualizations are also means for inquiry, for translating raw data into insights and work as ways to communicate insights: to highlight and question assumptions, to make tangible the service performance, to reframe and to understand, and to interpret data more than to describe data (Segelström, Holmlid, 2009).



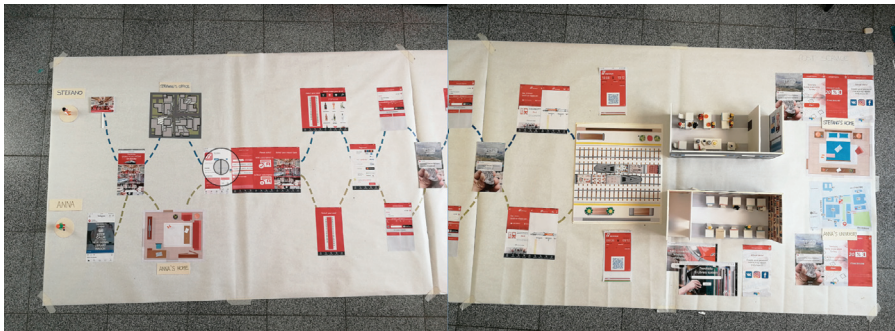
*Fig. 2 – Example of scene of a Desktop Walkthrough where actions and interactions between actors and touchpoints of the designed project are played by the designers. © Design Methods Course. Instructors: Valentina Auricchio and Davide Fassi. MSc in Product Service System Design, School of Design – Politecnico di Milano. Ph. Annalinda De Rosa, 2019.*

The relationship between the representational and visual role of the DW has been explored in the “Design Methods” course at the MSc in Product Services System Design in Politecnico di Milano between 2018 and 2021. Here, students learn and test the opportunities of specific design tools and methods through the development of a conceptual design project in which service and spatial aspects are intertwined. Employing simple props, the DW lets designers bring a situation to life, acting out the scenario and developing the idea by moving the characters around the model, simulating the interactions they may have (Fig. 2). It allows iterative analysis of the situations depicted, envisioned through testing behavioural hypotheses of a specific timeframe of a chronological sequence of the idea / project in a specific physical environment. It can represent not only specific parts (moments or touchpoints) but also transitions in and coherence of the service proposition (Blomkvist, Bode, 2012). Fig. 3 shows examples of scenes of a Desktop Walkthrough – the 3D models on the left side –

integrated with a Customer Journey Map. The students tested a unified visualisation in which two intertwined Customer Journey Maps were integrated, at a certain moment of the interaction process, through a DW in order to represent and introduce the spatial component of the designed project.

It becomes evident how the DW acts in three dimensions:

- in the **temporal dimension**, playing out the chronological sequences of actions (time-based nature of services);
- in the **relational dimension**, showing the actors involved, the mutual links among them (relational-based nature of services);
- and in the **spatial dimension**, introducing the materiality of services into the physical nature of space.

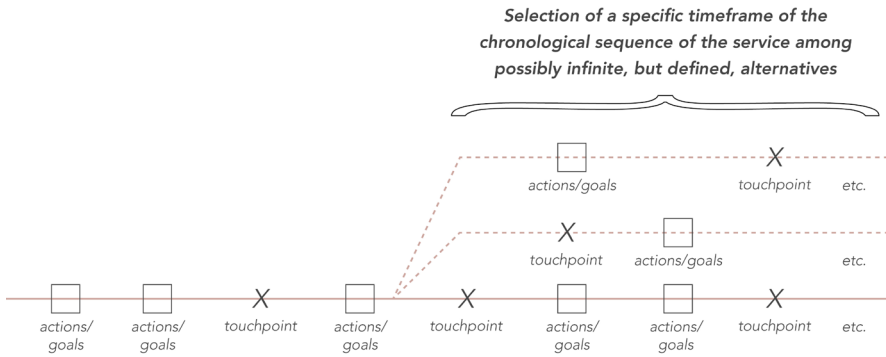


*Fig. 3 – Example of scenes of a Desktop Walkthrough (3d models on the left side) integrated in the representation of two intertwined Customer Journey Maps. © Design Methods Course. Instructors: Valentina Auricchio and Davide Fassi. MSc in Product Service System Design, School of Design – Politecnico di Milano. Ph. Valentina Auricchio, 2019.*

The intertwined relationship between these three dimensions makes the DW an experiential way of mapping since it performs actionable concepts: the DW owns a *performative* nature, thus it is one of the forms of representation that act through embodiment and live narrative such as performances, service enactment and bodystorming, i.e., where designer-actors embody people, as well as organizations and systems, (Penin, 2018). It is when the service is performed (through a face-to-face interaction, a digital one or through a combination of channels

between the user and the provider) that the scene of the performance comes alive.

In that, the service scene includes the design of the physical environment, of the tools used by the operators, of the products that the user uses directly to obtain the result and of the communicative and visual elements. The physical evidence constitutes the scenography and the props of the service interface. But the design of the interface also includes the plot of the interaction between the user and the delivery system, including the interaction with service operators, and the human elements of the interaction scene (Pacienti, 1998, p. 97). And this plot is potential, among infinite but defined alternatives (De Rosa, 2019, p. 34). The example in Fig. 3 represents how a DW can be focused on a specific timeframe of the designed project while also serving to test alternatives in the prototyping phase of any project idea, as shown in the diagram of Fig. 4. In this case, the DW supports building the narration of the final idea of a project: the selection of a specific part of a defined customer journey acts as a representation of the service display in the physical space, showing the impact of its tangible components in the transformation of the space and in the interaction between users and touchpoints. As an example, the DW developed by one of the student teams served first to highlight the hotspots of the project area – the external spaces in-between the buildings of the university campus – in relation to the analysis of their uses according to the behaviours and daily routine of the users – the students. The actual uses brought to light the lack of common and equipped areas for students' activities, identifying the need to revitalize and to turn them into places where students can study and meet other people. The concept ideas that followed, proposed innovative services which would support interactions and knowledge exchange among students and between students and faculty. Through the Desktop Walkthrough, the in-between spaces and the potential new services are drawn forth by playing out the possible user experiences, the needed touchpoints, the kind of users involved and the potential user journey. In this manner, the DW helps to both generate, make tangible, and test first project assumptions of the orchestrations of various aspects of the service in the physical space of the project.



*Fig. 4 – Simplified diagram of a Customer Journey Map, representing how the selection of a timeframe to be then performed through the Desktop Walkthrough may serve to explore design alternatives during the project development*  
 © Annalinda De Rosa.

Services exist only when the relationship between the user and the service takes place at a designed touchpoint. Otherwise, they fall back into non-existence. Service design usually adopts the concept of sequencing to break down actions and interactions in order to focus on the different components of the service. This is the service period, divided into pre-service, during-service, and post-service phases. Various methods and tools are used to explore and exploit the steps and the variables along the sequence, both as generative and representational tools that visualize the service as a sequence of interrelated actions to be performed both in the service’s design and in the service exploitation.

Service design focuses its attention on the interaction moment between the user and the service, making the rest of the design consistent with that. The timespan of spatial design, on the other hand, searches for a longer relationship between the user and the space designed, building a world of references in the design as well as envisioning the intangible connection that – through time – human beings create with the space. How to make this temporal misalignment work when designing spatial and service design solutions? Here, the Desktop Walkthrough bridges these timescales in acting out the relationships between human actions and places through the

sequencing breakdown of actions and interactions in a designed environment. The sequencing dimension of the performance, overlapping its time-component with the unfolding of the actions designed in the space, can inform the design of spaces by narrating all the sequences of the interactions and of the activities in a complex view. The DW could thus be used in the *front-end of the design process* to explore this complexity while designing spaces components and features with their services, also engaging novice designers as well as learners or experts with different backgrounds.

This aspect was explored in a workshop run in 2017 within the Product Design Course (Workshop Instructor: Annalinda De Rosa; Course leader: Carla Cipolla) at the Universidade Federal do Rio de Janeiro, Brazil in 2017. The brief of the course required students to envision innovative solutions for urban public spaces able to foster social cohesion and inclusivity in Rio de Janeiro. The topic focused on how people's actions can be the driver of change concerning the transformation of urban public spaces through new forms of mobility, new forms of interactions, unexpected forms of interactions, unexpected workplaces, and unexpected meeting areas. Through placing attention on the analysis of complex locational factors, this experiential learning method served to enrich S+S design skills of students.

Focusing on the methodological process (Fig. 5), students were guided through the following phases:

- “Learn from the context”, on-site field research, based on observation, interviews and mapping activities. These three directions served to build a complete analysis of the selected area in terms of understanding the physical evidence and the relevant social issues of the context.
- “Ideate – Brainstorm & development”, a defining and developing phase for identifying an opportunity for design (the design challenge) through systematisation of the collected data (key learnings). This phase aimed at getting students to interpret a multifaceted environment through personal explorations, direct contacts with citizens, and a critical understanding of the physical components. At this step, students clearly defined the spatial highlights and insights, and the possible chronological sequence of actions to take place in their project.

- “Scenario – A journey in the solution”: the goal was to tell an innovative spatial story, showing the actions taken, the actors involved, the time of the action and the spatial values. After the definition of the contextual constraints and the design opportunities until the design concept, the final phase was dedicated to understanding where the developed idea takes place and how in relation to the physical area selected. Here, the DW was employed and integrated with other design tools.

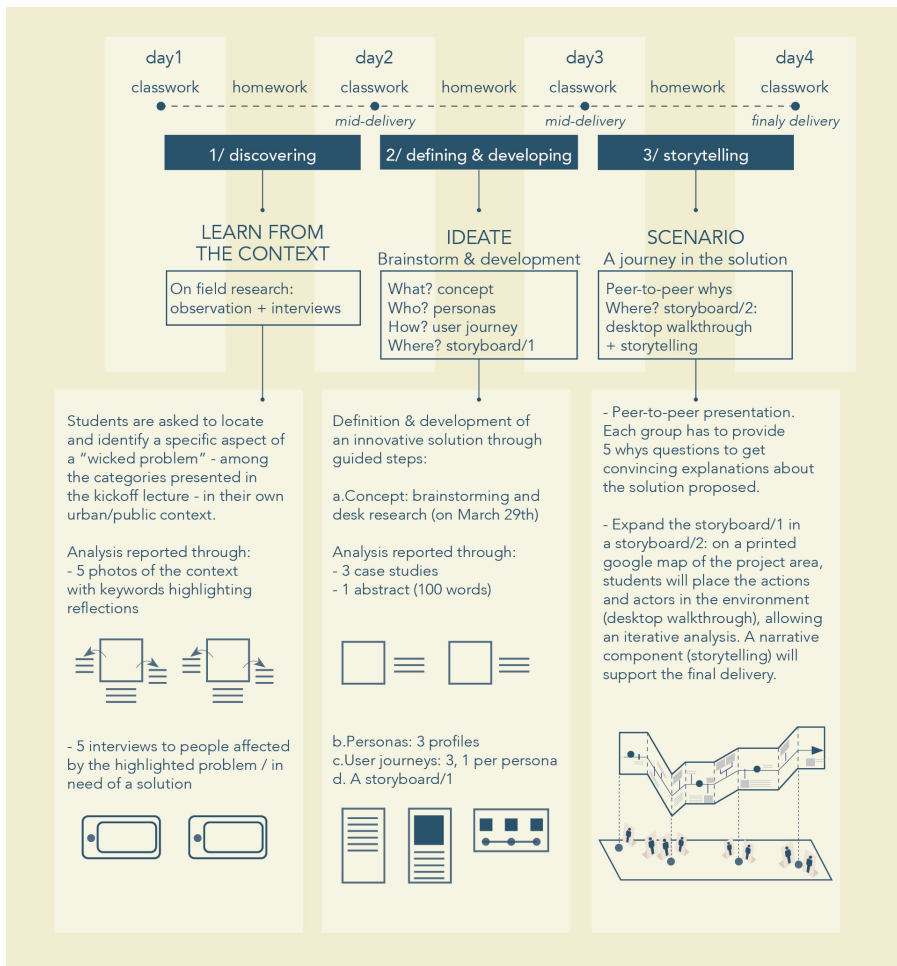


Fig. 5 – Explanation of the design studio process: calendar, phases and focus on tools and methods. © Annalinda De Rosa.



To do so, the tool tested was the *Spatial Storyboard Plus*, a mix of existing tools – Desktop Walkthrough, Scenario description swimlanes and Storyboard. These were chosen in order to find ways to express the complexity of multiple factors, its variables and its unfolding in space and time. This convergence of tools was created also to meet the entrepreneurial background of the students involved. In short words, this sum of instruments served to include the following components:

- The enactment of the performance, envisioning the intangible connection in time and space, through the *Desktop Walkthrough*.
- The visualisation of the activities of multiple actors in a flow of events with a holistic perspective, through the *Scenario description swimlanes* (Fig. 6). This tool can benefit any project where several processes or actors have to come together to shape the outcome of the same flow of events. Its direct, visual nature provides a bird’s-eye view of all the moving parts within a story (Hanington, Martin, 2012).
- The representation of the narrative dimension to show the manifestation of every touchpoint and the relationships between them and the user in the creation of the experience, through the *Storyboard*.

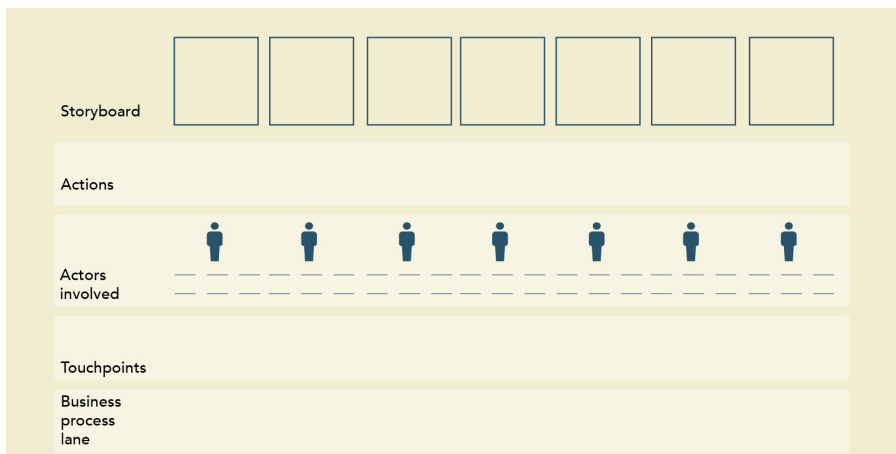


Fig. 6 – The Scenario description swimlanes form provided to the students.  
© Annalinda De Rosa.

Matching these tools in the *Spatial Storyboard Plus* provided a way to transform the students' final presentation into an acting performance, overlapping its time-component with the unfolding of the actions designed in the space designed. While Figure 7 shows the logic required to match the information of the designed project between a schematic representation and the DW, Figure 8 illustrates the visual strategy to represent the plot of the interaction between the user, the service system, and operators and all the human elements of the interaction scene within the spatial and temporal dimension to get a unified visualisation. This served to express the complexity of multiple factors, its variables and its unfolding in space and time.

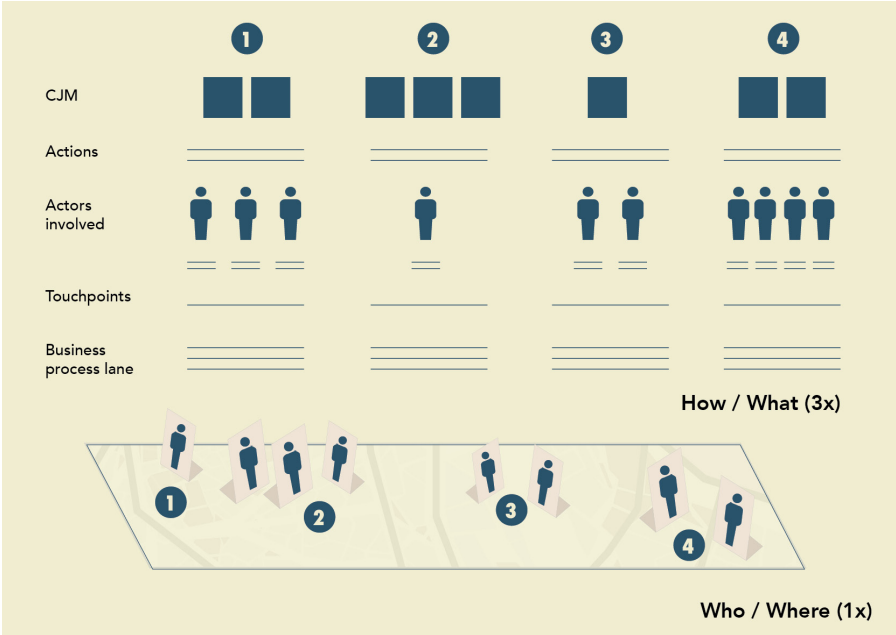
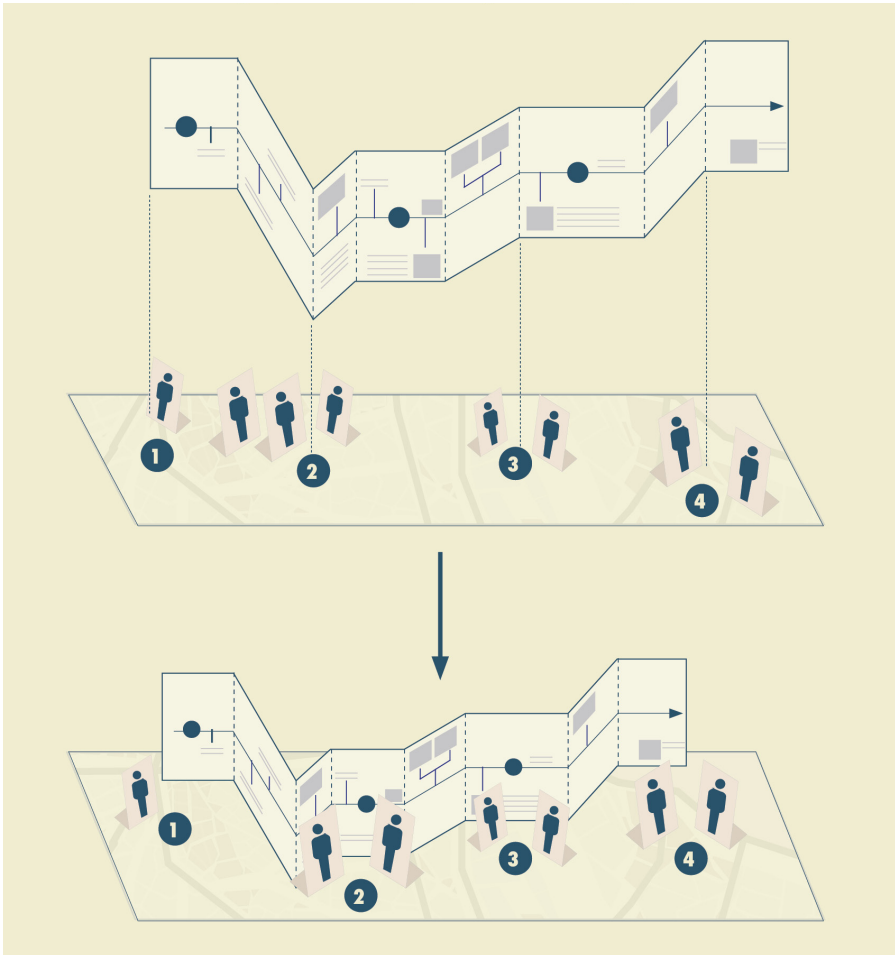
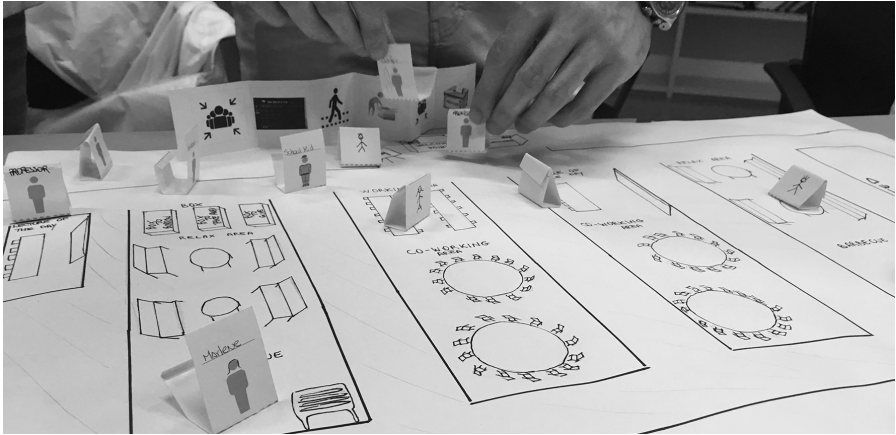


Fig. 7 – The Scenario description swimlanes visually matched with the Desktop walkthrough components. © Annalinda De Rosa.



*Fig. 8 – The Storyboard integrated and “inhabited” within the Desktop walk-through. © Annalinda De Rosa.*

Finally, Figures 9 and 10 show the result of this experimental version of the DW. Simplified representations of the plot were developed using icons or through the integration of real context pictures with imagined actions to take place in the physical environment. The experimentation provided the environment to test for a deeper hybridization of tools and approaches from Service and Spatial Design.



*Figs. 9-10 – Final presentation of the students’ projects, April 13th, 2017 at Universidade Federal do Rio de Janeiro. Ph: Annalinda De Rosa, 2017.*

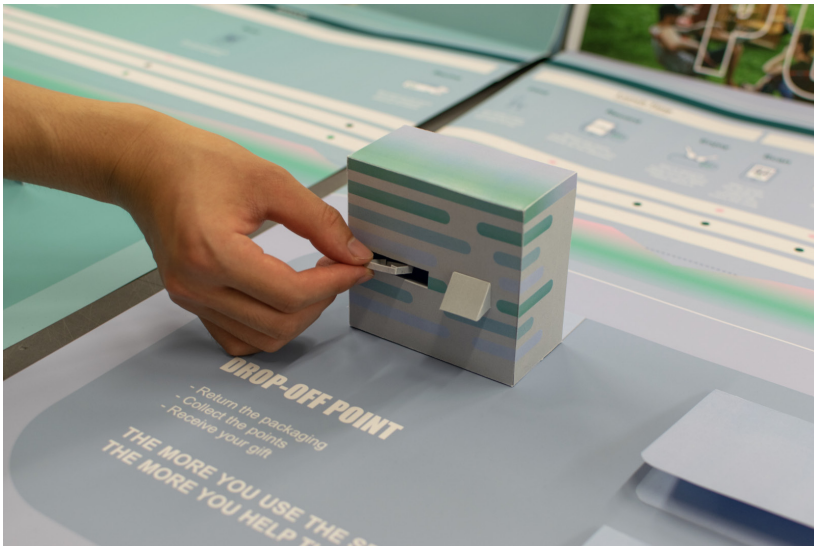
The expected results were to explore the way in which students approach the problem-seeking rather than the problem-solving process. Since dealing with management engineering students, it was not so evident for them how to handle the unpredictable side of the creative process, nor how to work with iteration, in a such a short amount of time. For this reason, the process was strongly guided by specific tools and methods, all of which were new ways for

these students to approach a project. The elaboration of the “Spatial Storyboard Plus” tool served to explore the deconstruction of a sequence of actions (time-component) in a space, supporting the identification of possible functions of the service and, consequently, of related tangible solutions to be displayed and distributed in the project area. The DW helped to express the complexity of multiple factors, its variables and its unfolding in space and time in a unique representation able to illustrate the possible impact of a service concept on the design of spaces.

## 5.4 Conclusion

The Desktop Walkthrough is undoubtedly a simple tool for capturing some intangible, temporal, and dynamic aspects of a service, making it easy to use also by design novices or in facilitation sessions (Blomkvist, Wahlman, 2018). Beyond this and for the purpose of this chapter, the DW aims at exploring the experiential ways of mapping for designers, as part of the process of design development.

A method such as the Desktop Walkthrough was once brought into design situations to support a quite specific design action: rehearsing a proposed service flow in order to test or refine it – by designers, or by users under the lead of designers. The DW has been introduced in participatory and co-design contexts as a method supporting processes where designers and non-designers collaboratively generate ideas and insights that can take a design idea in diverse directions. It thus supports relational, temporal, and spatial negotiations in the design situation, between the participating people, the materials made to support envisioning and enacting, and the shared physical space – classroom, office, or other – where all this takes place. However, as shown above, this method can be applied in ways that evoke not only temporal but also spatial qualities and aspects in designing services. But the spatiality is not only the imagined future settings of the service touchpoints, or the foreseen movements in spaces and places where a service would play out.



*Figs. 11-12 – Enactment of a Desktop Walkthrough in the final presentation of the course. © Design Methods Course. Instructors: Valentina Auricchio and Davide Fassi. MSc in Product Service System Design, School of Design – Politecnico di Milano. Ph. Tommaso Bernardi, Zhengang Lou, Federica Piazzzi, Qiuyue Wang, Chenfan Zhang, 2019.*

In activating different aspects of collaborative designing – the imaginative, the relational, the result-oriented – through the DW, the method itself also shapes ideas and practices of what designing is and, what it is that should be designed. This means that embedded in the method, is a negotiation not only what is made, or how a future service experience might be approached from “users” or “providers”, but of who is engaged – and how – in making decisions and influencing how designing is done. As the DW continues to be applied in a variety of design situations, it enters methodological contexts that begin to differ from the historical settings in which it once emerged. From focusing on including users in testing and refining services from a business perspective, by way of co-designing, the method is here proposed as supporting also the bridging – and merging – of temporalities, scopes and considerations in an intertwined designing of spaces and services.

The introduction of the DW in the Italian project culture calls for a reflection on how this method integrates, or builds a dialogue, with previously established practices – and also on the embedded values it brings into these situations. The examples of application presented in this chapter have not only positioned the method within the S+S context but have also shown how it can be integrated in education as an experiential learning method, serving to enrich S+S design skills. Future adaptation and evolutions of the use of the DW, as with any other design method, will most certainly be expected in order to respond to emerging design challenges.

This continuous process of integration of methods in new areas of designing and their hybridization with other methods (as shown in the examples above), asks for flexibility in exploring where, how and why these possible evolutions take place. Doing so, requires that such implementation of methods also is paired with a reflective probing and documenting of their introduction in different contexts. An attention to the scope and aims of historical, contemporary and emerging methodologies in which methods have been, and can become, applied and introduced can help us avoid rigidity and automated blind use of methods while also encouraging a constant dialogue between design scholars and design practitioners. In this way, in the future, rather than seeing methods as elements of a given toolbox, we might consider them as an integral part of the debate on what design was, what design is, and what design could become.

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The book presents different perspectives of analysis and new models of experience, reconfirming the importance assigned to the wellbeing and human-centered approach in the contemporary spatial design disciplinary debate. The focus on “engaging spaces” is due to the increase of participatory experiences in the design strategies supporting designers who want create tailor made environment to feel people more conscious of the great value of social relations.

The title of the book anticipates the aim to explore the transformation process which we are living, both in private and in public spaces, underlining the central role of design to define new qualities of connections to live together in relation with the space around us. The volume is divided into two parts described below.

The first, “Social design for engaging spaces”, explores private and public space case studies introducing new hybrid dimensions through the social engagement in “living communities” and reports participatory design approaches in the transformation processes of shared common spaces, such as schools, intended as incubators of social practices.

The second, “Experience design for engaging spaces”, describes more in-depth the experience of human beings in relation to physical and emotional aspects of space, focusing on the quality of the built environment that deeply affects people’s wellbeing, social interaction, and cohesion, and investigating ephemeral practices and projects to experience design through a conscious sensorial approach.

The pandemic and the return to a “post-pandemic new normal” have led us to further reflect on the spatial processes of transformation and hybridization and their shared use in both the private and public spheres, exploring the importance of participatory and engaging strategies in the different phases of the design process with the aim to increase social awareness. Being back to the physical perception of spaces has confirmed the importance of evaluating the project’s sensorial aspects with a new awareness. This novel attitude leads to rediscovering the values of measurable space in the constant confrontation with the virtual perspective that triumphed during the pandemic, introducing the “time” factor in the design discipline even with a broader complexity than before.