

MAP-IT: THE ART OF DESIGNING A PARTICIPATORY MAPPING METHOD

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Abstract

Operating within a complex design context, research group Social Spaces (MAD-Faculty, LUCA/KU Leuven) experiences that solving design problems is not straightforward and sometimes requires the design of new methods. Therefore, Social Spaces designed 'MAP-it': a participatory mapping method that enables designers to moderate design processes through workshops with diverse participants. This paper shows how we 'designed' MAP-it. First, we will show that we conducted several case studies (of which we illustrate one), allowing us to iteratively evaluate the method. Second, we discuss our exploration of PD literature to research how a method can allow people to exchange and disagree. Third, we provide an insight in the three, connected dynamic layers of MAP-it, designed to facilitate participants' exchanges and disagreements. A first layer entails the way the method allows participants to visualize ideas through a common language. To provide participants with sufficient agency in the process, a second layer involves MAP-it's low-tech, cut-and-paste character that allows the 'redesign' of this language and the ideas expressed with it. Finally, in a third layer, the method facilitates sharing, essential to make the participatory process redesignable and readable for both participants and third parties not involved in the mapping. Finally, we discuss some concluding remarks.

Keywords

Participation; methods; mapping; MAP-it.

Introduction

Design problems are in general complex (Rittel & Webber, 1973; Simon, 1973; Schön, 1987; Cross, 1982). However, dealing with social design adds additional layers of complexity, like working with many participants. Numerous methods have been developed to deal with such complex design problems, of which most originate from classical research-oriented disciplines (Visser, 2009). Some also emerged from the design discipline itself (Mattelmaki, 2006; Gaver, Dunne & Pacenti, 1999). Social Spaces has especially experimented with design methods that allow dealing with a diversity of participants. These can be framed within Participatory Design (PD), a set of theories and practices related to the concept of involving end-users and other disciplines as participants in the design process (Ehn & Badham, 2002). Since every design problem is unique and requires an adapted approach (Sanders, Brandt & Binder, 2010), we also regularly develop our own design methods. An example is 'MAP-it': a participatory

Conference topics

Aspects of improving the artist's "own" awareness of his/her own practice and the knowledge it incorporates;

Aspects of insight, understanding and knowing in the work;

Discussion of the processes of making the work/design/music in the context of own and other practices;

Discovery/definition of values in the process of designing/making/doing/performing;

Implications of uncovering the aspects considered as tacit;

Exploration of the tension between the understanding and emotional experience of the work of art or design;

Forms and frames relevant to represent knowledge based on creative practice;

Investigation of the relation between the creative work and its description – interpretation – explanation;

Inwards and outwards communication in designing/music/arts.

mapping method and toolkit that enables designers to moderate participatory design processes through workshops in which people from different backgrounds collaboratively reflect on and set up new projects.

This paper shows that the process of ‘designing’ the participatory design method MAP-it - like solving design problems in general - is not straightforward, since it intends to bring people together to exchange and disagree. To deal with this design challenge, we set-up several case studies (of which we will discuss one) and researched other PD methods. In this process, we distinguished three dynamic layers in MAP-it that facilitate participants’ and makers’ exchanges and disagreements.

A case study: what is MAP-it?

The MAP-it method is adaptable and can be used for a wide range of aims and contexts. It works as follows: guided by a well-defined scenario, the participants – supported by a moderator – try to answer a question by (re)positioning stickers on a background map. During a mapping, participants (re)move and add components to the map in the form of stickers which are pre-printed with objects or people or are left blank. MAP-it also includes so-called ‘risk-stickers’ that playfully introduce friction and push people to share their opinions and give feedback to others, as they see it as a game-element (Schepers, Huybrechts & Dreessen, 2011) (see: Figure 1). To illustrate the use of MAP-it, we discuss a series of mappings that took place in the context of sustainable community development work in the European Quarter in Brussels (BE), organised by the urban interventions network ‘CityMine(d)’. The mapping, in which international artists, architects, urbanists and neighbourhood organisations took part, focussed on exchanging ideas on how cities can benefit from bottom-up actions (Dreessen, Huybrechts, Laureyssens, Schepers & Baci, 2011).

The three groups of participants used ‘traffic light’ (risk-)stickers to indicate - on a map of the area - the places they liked, disliked and the ones that pose threats or offer opportunities. Next, the participants defined points for improvement and discussed new, possible projects. After designing a map which visualised their ideas, each group added ‘locks’ to the map to indicate the essential elements that cannot be ‘bombed’ in a later phase. In each group, presenters were chosen to explain the map of their group to the participants of another table, who were asked to re-design the map, e.g. by adding risky ‘bomb’-stickers.

The mapping particularly showed that participants experienced the European Parliament as being disconnected from the neighbourhood on a social, functional and aesthetic level. To draw conclusions from the three resulting maps, a summary map (see: Figure 2) was created that served as the background map in a second mapping. In this second workshop, local artistic, social and governmental actors explored the realisation of some of the project ideas and collaborations (raised in the first mapping) by commenting, critiquing and adding elements to the map. Several participants continued to develop the mapped projects as ‘Projet/participation Urbain/urgent Maalbeek’ by using the resulting maps to open up dialogue with local governments, making MAP-it a sustainable driver of action and creativity in the neighbourhood.

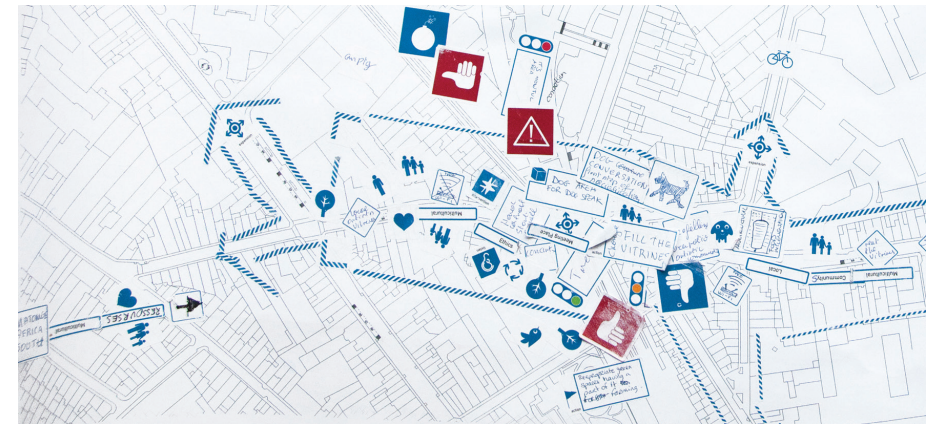


Figure 1
MAP-it's background map, stickers and 'risk-stickers'

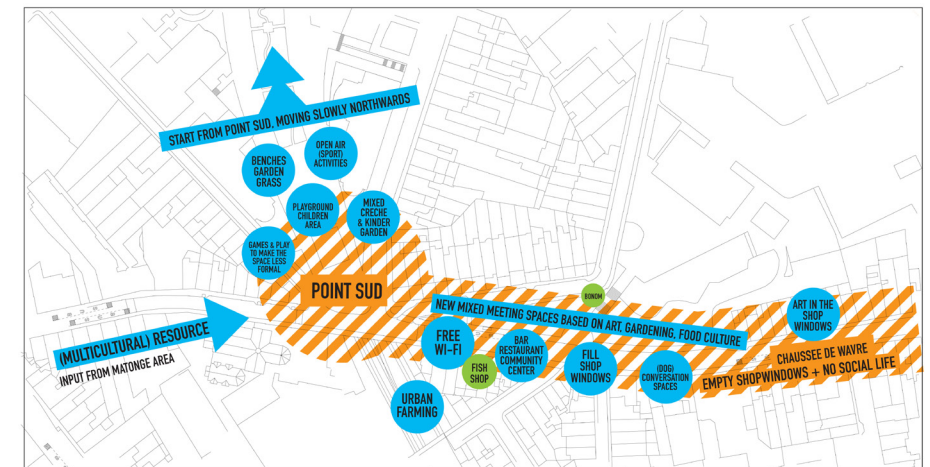


Figure 2
A MAP-it summary map

MAP-it and Participatory Design: a State-of-the-Art

At the beginning of the design research trajectory of MAP-it, we looked into artistic and design methods that permitted to map out issues in all their complexity. MAP-it is particularly inspired by PD methods - such as card-based practices and collage-like techniques - and research into data visualisation and mapping.

First, card methods are flexible visualisations that aid people in collaborating in participatory workshops. CARD, for instance, is a “game-like procedure through which a diverse group can lay out, design, or critique a task flow or activity flow” (Muller, 2001, p. 1). It uses cards, which participants fill in based on their knowledge and experience. New

cards can also be designed, ensuring that all participants are involved in creating a new language. PictureCARD is a related method that, by introducing pictorial cards, creates a new way of expression for all participants involved (Muller, et al, 1999). Second, collage-like techniques allow artistic liberty of complex expressions, both visually and verbally. For instance, Sanders' (2000) generative tools facilitate people's expressions by creating 'toolkits' from which participants can select ambiguous, low-tech, visual and verbal elements and combine them into collages, stories, feeling boards, etc. Finally, we researched the possibilities of data visualisation and mappings for visualising and designing complex projects in participatory set-ups (Tufte, 1990; Abrams & Hall, 2006; Manovich, 2008). Mapping methods allow the visualisation of specific regions, communities or ideas in a spatial way, for instance, through scale maps. In PD, using scale maps is called blueprint mapping, allowing stakeholders to place pictures of work environments, tools and people on a blueprint of an organisation or building. The actual form of the building is something they share and understand, grounding the discussion in a real-life situation and making it tangible (Muller, et al, 1999).

While designing MAP-it, blueprint maps were used to ground the discussions between participants in a tangible situation. Depending on the goal of the mapping, being more practical or exploratory, the map could be made more concrete or abstract. Also, we included various elements, in the flexible form of the card methods or the generative toolkits, that allowed people in group to express themselves in a visual and verbal way. This resulted in artistic, pictorial stickers pre-printed with words and images. Blank, empty stickers were also integrated, allowing people to create a common language; an often used strategy in PD (Muller, 2001; Sanders 2000).

MAP-it's dynamics

While iteratively testing MAP-it in several case studies, we found that developing a participatory design method is not a straightforward process. Based on an analysis of these case studies through video reports, interviews, moderator reports and the resulting maps, we distinguished three dynamic layers inherent to MAP-it.

MAP-it as a visual exchange

In the design of MAP-it, we explored how visualisation stimulates people to engage with people from other disciplines and end-users in creative processes (Huybrechts, 2008). Visualisation seemed important, since participatory processes are often complex and difficult to talk about verbally. The choice for developing a visual participatory method was twofold.

First, inspired by the process of graphic elicitation (Bagnoli, 2009), we believe that working with visual stimuli (like icons and maps) encourages participants to contribute both verbally and visually. Participants do this, on the hand, by collaboratively placing the stickers on the background map and, on the other, by discussing while pointing to or placing stickers on the map. In this way, richer information can be collected, which is relatively inaccessible by verbal transactions alone. After all, these visual stimuli provide

the participants with a shared conceptual foundation upon which discussion can take place (Crill et al, 2006). For example, in the above-mentioned case, the summary map functioned as a visual stimulus for the second mapping. Second, visualisation also aids participants to form a common language. MAP-it features a (re-designable) visual background map that provides people with a clear view on the context they are mapping for. Also, the visual stickers - depicting icons - help participants to add thoughts to the map. At the same time, empty stickers allow people to create a new, common language. This permits participants, using a different terminology or coming from different backgrounds, to discuss and create on equal grounds (Dreessen et al, 2011). For instance, the participants in the European Quarter case study, all coming from different backgrounds or disciplines, found a shared language in the elements (stickers, background maps) of MAP-it. MAP-it thus functions as a medium for the participants to jointly map their interpretations, knowledge and experiences in a visual language and come to a collective design.

MAP-it as a process of re-design

In MAP-it, the visual and verbal definition of the research question, the formulation of a scenario and the selection of stickers, etc. already define the mapping to a large extent. To make MAP-it open for re-design by participants, we discovered that methods based on artistic techniques - such as Sanders' collage-like generative tools - were particularly interesting. Sanders (2000) stresses that these methods allow freedom to express emotion, bringing not immediately visible problems in and underlying solutions to design problems and projects to the surface by visualising them. Therefore, the MAP-it toolkit was designed in a low-tech, cut and paste way, which allows the maker¹ to put all - or a selection of - his/her ideas on the table in a collage-like manner (in the form of a map and stickers). In that way, they become open for changing, critiquing and re-designing, meaning that they can be transformed by the participants for new, unexpected contexts and agency remains with them (Huybrechts et al, 2012). The re-designability of MAP-it manifests itself in two ways.

First, during the mapping, MAP-it allows for the re-design of content that is visualised on the map. Collaboratively, the participants build further on the visualised ideas or critiqued them, for instance, by using 'risk-stickers' and game rules that introduce friction to the mapping in a playful manner and encourage participants to - critically - 're-design' the ideas of the maker and fellow-participants (Huybrechts et al., 2009). Second, the MAP-it toolkit itself may be 're-designed': not only *what is* on the background map, but *the map and the stickers itself* are subject to re-design by the participants within the limits of the mapping scenario set out by the maker. On the one hand, as mentioned above, the shared, evolving language constructed via MAP-it allows for redesign *during* the mapping. It is, for instance, not uncommon that participants 'hack' the stickers that are used. On the other hand, *after* a mapping session, MAP-it allows for being 're-designed' via 'open sourcing' its materials: adapted versions of the MAP-it toolkit and their creative re-uses in real-life contexts are visually and textually

documented online on www.map-it.be and can thus be adapted and then downloaded by others (Open Source Initiative, n.d).

MAP-it as a process of sharing

The European Quarter case study showed that the three maps resulting from the first mapping, appeared to be difficult to read for people not involved in the mapping. To increase the readability, a summary map was created, which served as a form of documentation but also as a background map, used in a follow-up mapping. This visual summary map - in contrast to a mere textual documentation report of the mapping - allowed for visual exchange and redesign during and after the mappings (cfr. infra). Readability allows sharing. Sharing can be a means to rethink traditional forms of authorship, stimulating mutual learning and collaboration in various settings (Hannemyr, 1999; Raymond, 1998; Shedroff, 2003). In PD literature, sharing is stressed as a way to encourage ongoing participation and refers to making the way a project functions and its intentions 'accessible' via documentation (Fischer & Giaccardi, 2004; Kanstrup, 2012; Dix, 2007). This need for sharing was explored on the level of redesign and readability.

First, in all case studies, the function and intention of the mapping and the specific mapping kit were shared after the mapping, in order for the toolkit to be used and *redesigned* by others (cfr. infra). This included a (visual and/or textual) report explaining why and how the kits were (re-)designed, in which context they were used and what happened during the mapping. Also, all designed and used mapping kits can be (adapted and then) downloaded from the website (Dreessen, et.al, 2011). Second, in order to share, MAP-it was evaluated on its *readability*. The maps appear to be sufficiently readable during a mapping but do not immediately speak to others not involved in the mapping process. Summary maps are a possible solution, however they are only created by the maker and a few engaged participants after the mapping, leading to a rather limited interpretation of the mapping. Also, making more readable, textual notations during a mapping may solve this issue. However, they disturb the 'flow' of mapping, since not every participant feels comfortable in working in such a textual way. Readability is thus an issue that requires further research.

Conclusion/discussion

This paper explored the process of designing method, which is not a straightforward process. The question we asked was how we could design a method that brings people together, willing to exchange and disagree. While designing MAP-it, we first had a look at other PD methods, conducted case studies and found that the design method has three inherently connected dynamics. The method required to jointly making ideas visual through a common language. To provide participants with sufficient agency in the process, MAP-it's low-tech, cut and paste character allows for the 'redesign' of ideas and of the toolkit itself. And finally, the role of sharing was seen as essential, for making the participatory process re-designable and readable for both participants and third parties not involved in the mapping process.

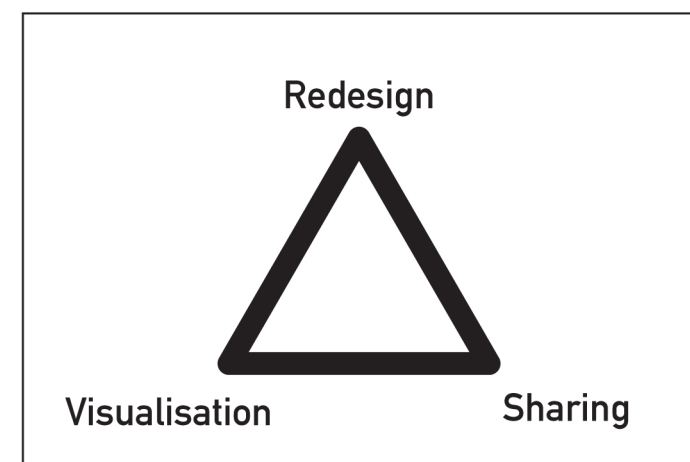


Figure 3

MAP-it's three dynamics (visualisation, redesign, sharing) are intrinsically connected to each other

The three dynamics of MAP-it (visualisation, redesign, sharing) are intrinsically connected to each other (see: Figure 3). Changing one dynamic influences the workings of the other one(s). For instance, using pre-determined visualisations increases the readability during the mapping session but limits the freedom to re-design. On the other hand, the cut and paste character of MAP-it enhances the re-design possibilities but can hinder the construction of a common, visual language during a mapping. Therefore, the dynamics of MAP-it are in balance: changing one element influences the others. In the future, we foresee to analyse the (now more than 20) conducted case studies in relation to the above dynamics.

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(Endnotes)

1. To simplify things, we will refer to the designers, artists and MAP-it organisers as 'makers'. Referring to the users, audiences or stakeholders participating in a mapping, we will use the term 'participants'.