# Key issues for enhancing citizen participation in co-constructing city futures

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**Abstract.** Citizen participation is often a goal of urban development. However, in reality levels of actual participation are often low, limited to certain sets of stakeholders, and the collaboration between them often poor. In engaging with this dilemma, we have established a new research project, *Co-constructing city futures (3C)*, which addresses current challenges to citizen participation in contemporary urban development. The project sets out to encourage and facilitate a shift from processes that intentionally or unintentionally exclude certain groups. Building on ideas about collective learning, it inquires and experiments with public debates and planning processes to enable citizens and other stakeholders to engage in the co-construction of ideas and visions for city futures. Democratic design experiments focusing on green mobility and blue-green infrastructures will be carried out in selected Norwegian cities in collaboration with planners, citizens, and other actors to identify their needs, challenges and interests, and to develop, test and evaluate ideas and prototypes for digital tools that can be applied both in Norway and in other global cities. As a point of departure, we pose three critical questions regarding citizen participation in urban development, with hopes that this can invigorate discussion around this emerging research agenda.

**Keywords:** Participatory design, co-creation, situated simulation, social media, cultures of participation, citizenship

## 1    Introduction

The existing methods used in participatory planning do not enable multifaceted and truly inclusive public involvement (Kahila-Tani 2016). While 'citizen co-creation' has recently become somewhat of a rallying cry in certain policy and planning circles (Hilgers & Ihl 2010), the reality is that integrating citizen perspectives into the development of urban futures has been an uneven process with mixed success. Significant organizational alignment within planning agencies is required in order to open up for community-based constructionist approaches, which would involve the agencies' organizational structures, processes and practices (Boxelaar et al 2006).

Current pressures on making planning processes more efficient present a risk of ruling out the involvement of the peripheral voices (i.e. those not required by law or institutional guidelines), especially when time is a scarce resource. The current challenges of low levels of participation and genuine co-construction, and its limitation to a certain set of stakeholders may therefore become more prevalent. Furthermore, planning procedures can generally be defined as step-by-step processes, where the starting point is a planning proposal setting certain agendas that may be difficult to modify. To address these issues and avoid exacerbating the static and linear planning procedures that may exclude citizens and burden future urban environmental sustainability, we view it as imperative to create better means for citizens to express and contribute to their views about urban futures. More importantly, tools that improve the process of genuinely taking these inputs into account must better fit the needs of planning practitioners.

Falleth et al (2010) list four major problems when it comes to true participation in Norwegian planning practices. The first concerns at which point in the planning process stakeholders are invited to participate. They argue that by the time the plan is made public and open for contributions by local communities the planners have already made major decisions about the purpose and layout of the plan. Changes as a consequence of public hearing will therefore be minimal.

The second problem is the asymmetry in the actors' resources to participate, and therefore their true opportunity to engage in the plan. Although everyone has an equal right to participate, there is inequality in stakeholders' abilities to voice their opinion.

The third problem is how the planning law defines who are affected by the plan, and how this is narrowly interpreted in practice. The law requires notifying those "directly" affected, such as landowners and neighbours. However, places in cities are used by a broad spectre of people, even if they do not live or own property there. As a consequence, not all those who are affected in reality will be involved in the participation process to the same degree.

The fourth problem is that although the planning system and the law aspire broad and thorough participation, most planning processes only use the minimum efforts required by law, i.e. information and hearing processes. Although there are examples of thorough participatory activities carried out in Norway, studies have found that in most plans the bare minimum stages of participation required by the Norwegian 'Plan and Building Act' are used (Falleth & Hanssen, 2012). A study of Norwegian participation practices in planning processes revealed that, when exceeding these minimum stages, the most common tools used in participation are town meetings, work meetings, referendums, surveys, workshops, field trips and city walks (ibid.).

One ongoing paradigmatic shift that may enable greater citizen engagement in planning processes is the increasing ubiquity and falling costs of Information and Communication Technologies (ICT). In several arenas, ICTs are being used to increase the communication and interaction between citizens and governments, and involve civil society groups in policy and planning processes (Saad-Sulonen 2014). There are several examples bringing advanced ICT into face-to-face planning workshops, encouraging and supporting participants to engage, individually and collectively, in action and reflection by means of tabletop computing environments, tangible

objects, sketching support, geographic information systems, and visualization software (see e.g. Maquil 2008; Arias et al 2015). However, these approaches are limited in terms of time, the number of participants, how participants are enrolled, how wide and serendipitous participation may be, and who is in control of the agenda for the planning activities.

A key technique for open innovation is crowdsourcing, which agencies may use to go outside their boundaries to find solutions to problems, issuing a challenge to a large and diverse group in hopes of arriving at new innovative solutions more robust than those found inside the organization (Seltzer & Mahmoudi 2013). There are several examples in the Norwegian planning context of using crowdsourcing. However, despite using participatory language, crowdsourcing has largely taken the form of information surveys and consultations, which correspond to tokenism in Arnstein's (1969) ladder of citizen participation. This is also the case for GIS data and maps, which are made public and used in experiments with public participation through the Internet. Public participation GIS (PPGIS) remains an expert system and thus bounded within the institution of urban planning and within the confines of employed expertise (Hemmersam et al 2016).

## 2     Key Challenges of Citizen Participation: Motivating Factors for the 3C Research Project

A key issue the project engages with is improving levels of engagement and democracy in the decisions of how cities are developed. Our proposal is that this can be achieved through enabling citizens to co-construct ideas and visions for city futures. The issue of democracy in planning has long been an important issue, and is expected to become increasingly relevant. This is particularly due to increasing political pressures to make planning processes more efficient, thereby risking the sidelining of citizen voice and input to fast-tracked, non-consultative urban planning processes. We maintain, however, that contrary to excluding citizens from these processes to speed up planning timeframes, early engagement of a wide range of stakeholders may also *contribute* to higher efficiency. This can be enabled by involving citizen groups and coming to consensus at the planning starting point before practitioners make significant decisions that can only be modified through a complete transformation of the original plan.

### 2.1    Transforming planning systems through ICT resources

Part of the challenge of the 3C project will be encouraging and facilitating a shift from a step-by-step planning participation, that intentionally or unintentionally excludes certain interest groups, into a more emergent, dynamic and responsive planning system, where shared and open representations are used actively in decision-making processes. The project seeks to make representations available and transformed into scenarios of what city futures might be. Due to the interactive and accessible ICT platforms, these scenarios will include inputs from the citizens, and will be

constantly changing during the participatory process and based on the collected input. Scenarios may constitute primary material for citizens to visualize and understand the future consequences of current activities and decisions. The development of future scenarios, which are visualized, enacted, and co-interpreted in the context of real life conditions is a breakthrough concept.

In 3C, scenarios are broadly understood and will be represented by knowledge objects, which will range in complexity, from simple digital notes, images, texts, videos, visualisations and simulations (e.g. 3D environmental data), as well as relations between them. In this way futures can be represented in diverse ways. The knowledge objects are geo-located, and are therefore attached to places, structures, infrastructures, events, or phenomena in the city and will be visualised overlaying on the physical urban landscape. This will provide opportunities for experiences and knowledge building (Scardamalia & Bereiter 2014) that is collaborative and situated in the city. Visualisations can be purposefully designed to trigger and encourage public debates concerning a wide range of issues (Schoffelen et al 2015).

Citizens have shown willingness to participate in urban planning events using smart-phones (Allen et al 2011; Bohøj et al 2011; Schröder 2014). 3C regards mobile media as important for fostering different ways for citizens to act and reflect on proposed plans while being physically close to the planning object, as mobile technology may provide situated and experiential enactment of prospective futures enabling people to make connections between their everyday practices and imaginaries that are represented in-situ and digitally. 3C will investigate a range of alternatives for mobile media in this work.

## 2.2 Research Design, Democratic Design Experiments and Stakeholder Engagement

The research and development in 3C is inspired by democratic design experiments (Binder et al 2015; Munthe-Kaas & Hoffmann 2016) and will be carried out across relevant practices, in order to incorporate what actually happens in different levels and phases of planning and participation processes. Methodologically, the project draws on a combination of theoretical studies and desk research, qualitative and quantitative methods, and methods from ICT, design and planning.

Identification of stakeholder groups, governmental bodies, and their matters of concern has been conducted in two large cities in Norway, in order to map the urban planning process, stakeholder involvement, the challenges and opportunities, and the level of citizen participation in the overall processes. In the mapping, a range of issues are addressed, such as governmental policies and practices, reorganization of municipality planning organizations to deal with higher demands for effective and cross departmental collaboration, the rise and organization of activist groups, e.g. their use of social media to enroll and lobby their interests. Of particular interest is the use and translations of material resources as such as plans, maps, videos, sketches, etc.

Based on the initial mapping, a number of design experiments will be carried out, addressing issues towards future sustainable cities. The design experiments will have a central role in the project, bringing together governmental bodies, stakeholder

groups, and research in ways that may foster collaborative learning and knowledge building.

A central idea is to inquire existing socio-material networks and how they may foster learning within practices (Sørensen 2009), and develop a compositionist design programme (Munthe-Kaas & Hoffmann 2016) that can be translated into interventions in practices of planning and participation. Composition is focusing on reconfigurations of the existing rather than radical invention of the new. 3C will be mainly based on interventions with digital material, ICT, such as compositions of social media, digital representations, and mobile media.

We are currently investigating governmental agencies, service providers, and stakeholders in two major Norwegian cities and have selected two arenas of urban sustainability; 1) green mobility and 2) urban blue-green infrastructure.

The aim for 3C is to contribute to organizational capacity in governmental and stakeholder groups, not only to recombine old ideas and synthesize and conceive new ones, but also to translate them into improved practices of planning and participation. 3C will innovate in many aspects, including how to better communicate plans, and how to improve dialogues between a diverse range of stakeholders.

## 3 Three Core Considerations related to Citizen Participation in Urban Planning

There are key impediments to citizens and other stakeholder articulating their desires in often top-down, linear, or fragmented urban planning processes. We outline three of these below.

1. ***How can the silos of planning and governance be managed?***
   Government intervention in local policy processes occurs frequently but may rarely be linked up to broader interests or effectively coordinated across bureaucratic 'silos' (OECD 2009; Entwhistle 2007). Moreover, centralised government planning and policy-making may often fail to achieve effective, coherent and inclusive governance practices (Kokx & van Kempen 2010). Underpinning this challenge of participatory engagement by multiple stakeholders in urban futures is the fragmentation of institutions, governance structures and planning processes in dealing with collective action or wicked problems.

2. ***How can the complexity of planning be embraced?***
   One way of dealing with urban planning as a wicked problem, is to divide tasks and themes as explained above, creating silos of knowledge within each stakeholder. However, there are also approaches to the challenges of dealing with complexity that seeks to embrace it rather than divide it into fractions. One approach is the "nexus thinking", addressing the interdependencies, tensions and trade-offs between different domains (Royal Geographical Society, 2016). Rather than looking at issues as separated and consequently deal with them separately, the aim of nexus

thinking is to be able to see challenges of resources holistically, and therefore achieve cost-efficient solutions.

3. ***How can the quality of dialogues and collaborative learning be improved?***
Goggin & Clark (2009) consider how mobile phones have been taken up by citizens to create new forms of expression and power, and how phones form a contact zone between traditional concepts of community and citizen media, and also form emerging movements in citizenship, democracy, governance, and development. Despite this uptake, 3C is also aware that social media such as Twitter and Facebook are somewhat limited both in the scope of activities they offer as well as the kinds of tools they offer, but are excellent ways to reach out to citizens for deeper engagement or participation (Haller & Höffken 2010).

A critical challenge is to foster environments where social media are used for 'exploratory talk' rather than 'accountable talk' in which participants prioritise development of ideas and issues over presentation and defense of their own positions (Michaels et al 2007). Such 'co-constructive talk' is fundamental for collaborative learning, and for more open-ended development of scenarios, which includes taking turns, asking for and providing opinions, generating alternatives, reformulating and elaborating on the information being considered, coordinating and negotiating perspectives and seeking agreements.

## 4 Expected Impact

A city that obviates its citizens' needs and wishes will have a hard time creating a quality of life. Co-construction and involvement in the decisions that create our surroundings is therefore crucial to making cities that work. The concepts of co-construction, collective learning and collaborative planning go beyond narrow notions of participation so often found in planning guidelines and regulations, improving the quality of debates and the final proposals for city development.

These themes are especially relevant in Norway, as the government plans to reduce the time spent in planning processes drastically, as well as using more ICT in order to reach the goals (Kommunal- og modernisrings-departementet, 2015). As mentioned above, our ambition is to make planning processes more resource efficient through use of ICT, so as to not be at the expense of stakeholder involvement. Thus our project directly answers and contributes to national strategies and expectations to planning processes.

There is also an obvious democratic argument to participation in planning. The new ways of interacting and co-constructing city developments will be of benefit to citizens, interest groups and other stakeholders, in that they can create a sense of justice in the process, as well as ownership to what is being executed in their urban environments. The project seeks to improve the stakeholder and societal dialogues about decisions that shape city futures.

# 5    Concluding Remarks

In this brief article we have outlined some of the important issues related to citizen participation in planning processes, and introduced the key aspects of the 3C project that aim to address these issues through the use of ICTs. Further, we present three key challenges that could be addressed by researchers and practitioners engaging with this field. In reflecting on these, we encourage others to consider how to develop research and practice agendas that grapple with them. In general, we see a considerable opportunity for ICTs to reshape how citizens and states engage with respect to urban planning and development processes. Enhancing citizen participation is however not only a question about developing and introducing new technical tools, but also about actually making them work in urban planning processes and systems of urban planning practice. We look forward to contributing to this emerging agenda.

# 6    Acknowledgements.

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