~~Smart Cities~~ Shared Cities, Smart Citizens

Brief for Citymakers

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SHARED CITIES
SMART CITIZENS

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The Shared Cities, Smart Citizens Approach[1]

Who has the right to appropriate, design and develop smart cities? What rights are involved in citymaking, and who defines them? These questions are often answered by the people and companies who deploy a city's technology and spaces, rather than by the people who reside and work there; they are questions that are all too often answered behind closed doors and closed code, rather than through open public processes. These problems arise as part of the smart city approach – an approach in which proprietary technology is embedded in public spaces, often without meaningful citizen participation.

In name and in principle, we live in a democratic society. How then, in practice, can communities exercise greater control over public spaces, common resources, technology and data in cities? Who gets to be a citymaker, and how?

There are formal roles and categories such as policymakers, urban planners, industry, academia, citizens that each play a specific role in citymaking. However, we need to be careful to include all people with a stake in a place (both residents and non-residents, and not only the 'usual suspects') to have a say in the processes which define how that place will look and how it is governed, now and in the future.

A first step in opening the role of citymaker and placing people in an empowered position within their own cities is to adopt a 'shared cities' and 'smart citizens' approach, rather than a 'smart city' approach. As Veenkamp, Kresin, and Kortlander (2020) describe, a model for shared cities and smart citizens embraces a citizen-led approach to citymaking which makes use of open source technology and co-creative design processes. This approach considers public spaces and data gathered within them as 'commons' – shared resources that are community-managed so as to promote shared values like sustainability, inclusivity, and privacy (Veenkamp, Kresin & Kortlander, 2020).

The process to include all people fairly and practically as citymakers is a challenge. In the Shared Cities, Smart Citizens project, three pilots in the Netherlands explored

[1] This brief was written by researchers in the Shared Cities, Smart Citizens project. It is intended for those who study, facilitatie, or wish to take part in participatory citymaking. The brief presents our main insights and recommendations regarding people & roles, problems & urgency, design-driven action research, and living lab life cycles. All project outputs are available at https://shared-cities-smart-citizens.nl/

how to open the city and its technology to the people to create shared cities and smart citizens through participatory and action-driven public research. The North Holland pilot researched how a commons (Hollandse Luchten) could utilise a public stack perspective to help root the governance over its many layers in shared community goals and values. The South Holland pilot held a co-creative and futures and design-driven process with local residents, entrepreneurs, designers, artists and social workers, which explored what their future neighbourhood would look like if it were to meet their values and concerns, and which technologies and governance models would then be needed or beneficial to realise these imaginaries. The Utrecht pilot researched the availability and usability of open government data through a Living Lab in Utrecht Overvecht, exploring how public data could be utilised in a new vision for the Einsteinkwartier neighbourhood.

When technology is deployed in a city, when new development plans are made, or when data is gathered in public spaces, we should ensure that the process of citymaking is open, fair, and inclusive. Decisions that affect communities and our cities should not be decided by private owners or in closed processes between companies, lobbyists, and politicians. Instead, communities should be included in decision-making about technology in cities. Following our research over the past eighteen months, we recommend the following strategies and approaches to empower the people to be the citymakers of their own environment.

People & Roles: involving the quadruple helix in relevant participation; growing 'publics'; organizing support from *intermediaries*

If we strive to support citizens' 'Right to the City', i.e., to support citizens to become a relevant force and to play a more decisive role in the development and governance of (technology in) cities, we will need to consider that such processes are the outcome of political struggles among various parties with various concerns. Projects and interventions to support citizens' 'Right to the City' take place in an 'arena,' with a variety of (established and new) parties (governmental, societal, commercial, academia), whose representatives all act from their own interests, concerns and values, and whose choices and actions affect the options and the leeway of others: Ideally they find shared values and common ground to productively cooperate, but it is equally possible that they frustrate and limit each other due to conflicting interests, concerns and values.

In order to support citizens' 'Right to the City' we suggest that actors from all quadrants of the quadruple helix (government, citizens/civil society, industry, academia) would be equally involved in co-creative processes "to rethink 'smart

citizens' and 'smart citizenship' and to remake smart cities [...] to truly become 'citizen-centric'" (Cardullo & Kitchin, 2018: 1). Ideally this would lead to a redefinition of roles, whereby governmental institutions set and enforce clear and ambitious rules, while, at the same time, leaving room for citizens to grow as 'publics' (Le Dantec, 2016) and communities and to generate local (financial, ecological, social and cultural) value and for private actors to innovate and to scale up.

In each of the three projects performed in this research, specific experts or intermediaries (see Baack, 2015[2]) played a decisive role, i.e.:

- In Hollandse Luchten (the use case for the Shared Cities, Smart Citizens pilot in Noord Holland), a number of stakeholders took part in a community-driven initiative to measure air quality. In addition to a community of local people, stakeholders included Waag (as a facilitator of participatory processes and a technical intermediary); The Province of Noord Holland (as the main funder and driver of the project); RIVM (the Dutch Ministry for Environment and Health); and at times even Tata Steel (representing local industry), among others.
- In Utrecht Overvecht data-scientists from Utrecht University supported citizens and local entrepreneurs to identify which data-sets were available, which analyses could be performed and which visualisations could support their concerns, visions, statements and requests;
- In the Data Empowerment Design Studios (the use case for the Shared Cities, Smart Citizens pilot in South Holland) a futurist supported citizens and local entrepreneurs to embed their values and urgencies into comprehensive and inspiring future scenarios/imaginaries that could serve as a reference/common ground for future smart city development and governance.

We therefore recommend actively involving experts and intermediaries in projects that intend to support citizens' 'Right to the City.'

[2] "Even though the idea behind the democratisation of information is to potentially allow everybody to interpret raw data, activists are well aware that the average citizen does not have the time and expert knowledge to do so. They recognize that their vision of empowerment through open data can only be realised with intermediaries that make raw data accessible to the public." (Baack, 2015: 6)

Problems & Urgency: defining urgencies rather than problem statements

In 'classic' transactional service models, urban 'problems' are defined – based on seemingly rational data and insights – for which appropriate 'solutions' are designed within the context of available time and budget. Within this process, citizens are perceived as 'clients' or 'consumers,' who are informed about proposed solutions, plans or policies and invited to respond and contribute to them, but generally they are not closely involved in the definition of 'problems,' nor in the design process. In the three cases studied within this research project, citizens were attributed a different role, namely as co-creators in an equal playing field in which all actors of the quadruple helix have an equal position and say. In such relational service models the needs, concerns, values and ambitions – together labelled as 'urgency' – of all the actors at the table form the basis and the motivation for required action, in which this urgency is informed by local circumstances and experiences and emotional states (see Elster, 2009), rather than on seemingly rational assessments of (data concerning) complex urban life. In relational service models, actors collectively develop scenarios and experiments, based on shared values and common ground, to eventually formulate strategies and deploy interventions as stepping stones towards collective imaginaries (see ao Vlachokyriakos et al., 2016), rather than 'solutions' to predefined urban issues.

We therefore recommend to adopt relational service models in 'wicked' urban challenges and work from local urgencies, and to iteratively learn via experiments and interventions, rather than from an institutionalised 'problem, planning, budget, solution' logic.

Design-Driven Action Research: co-creatively imagining and realising alternative urban futures

We consider (futures-driven) design processes as an effective means to support citizens to collectively and collaboratively develop their thoughts and to render their opinions and concerns regarding their 'Right to the City' tangible. According to Christopher Le Dantec (2016), long-term co-creative design processes help to bring together different stakeholders with different concerns, beliefs and interests to jointly explore and address social issues. These design processes should be organised in such a way that those who are affected the most by a development have the most prominent voices in the process. Ideally, this would support them in developing their own organisations or movements to bring about change (cf., Mulder & Kun, 2019).

According to Kurt Lewin, a pioneer in the field of action research, actively working on (designing) something and developing knowledge about it go hand in hand. Action researchers initiate, facilitate and actively participate in initiatives and experiments, while at the same time observing and analysing these activities (Wittmayer & Schäpke, 2014). Ideally, they are intensively involved in concrete projects/experiments for a longer period of time, through which they, together and on equal footing with those involved, explore problem and solution spaces, design and perform experiments, make iterations and adjustments, and learn by doing.

Living Lab Life Cycles: collaborating more sustainably with participatory communities

Shared Cities, Smart Citizens is based on different forms of action-driven research, including living labs and co-design. In this type of research, citizens and local actors collaboratively develop interventions to address needs and wishes in their own neighbourhoods (Voytenko, McCormick, Evans & Schliwa, 2016). Living labs are characterised by experimentation in real-world settings where citizens, grassroots organisations, government organisations and researchers interact, collaborate and co-create a desired outcome often over a longer period of time (Gasco, 2017). The living lab approach allows for an iterative approach of research and design with the aim to generate a positive impact on citizens' lives.

For example, in the living lab Utrecht Overvecht, citizens learned more about their neighbourhood based on open government data and used these insights to develop a vision for Overvecht in 2040. However, the living lab in Overvecht gained momentum around the time that the research funding ended. Based on the prototype, the citizens had experienced the insights that open government data can bring for their neighbourhood, but they had not yet been able to specifically apply those insights toward developing their vision. This would require more time and more design iterations. Additionally, the living lab participation was growing: more citizens became enthusiastic, and people who were new to participation wanted to be involved. Finally, the city of Utrecht found out about the grassroots initiative and indicated that this innovative participatory initiative would very much fit with their own plans to redevelop the neighbourhood. The citizens were invited to speak about their initiative at the City Council. They stressed the importance of keeping the living lab team intact and asked the researchers to stay involved. This allowed the researchers to dig deeper into the value of open data for local communities; at the same time, this also exposed some of the limitations of the time frame and methodology of the project. Because living labs concern a real life setting, there is no clear end point of the study, only a virtual one (Ruijer & Meijer,

2020). This can lead to a tension between the sustainability of the living lab and the aim and parameters of the research project.

Dekker, Contreras and Meijer (2020) have set up guidelines for action-driven design research such as living labs, which include ethical and legal guidelines, such as: informing stakeholders about the role of the researcher; informing about the effects of the living lab on the target group in the wider environment; and asking for informed consent. These guidelines do not explicitly address how the researcher should sensitively exit a project in vulnerable communities. As Iversen (2009) points out in research that relies on fieldwork, “getting in” or getting access to the field receives a lot of attention in terms of starting the research, forming relationships and building trust. However, scant attention is paid to “getting out” or to disengaging from a community. Patterns of short-term research funding (one year) are influencing the getting out process, which requires the researcher to be clear about the boundaries and end point of the research (Iversen, 2009). Hence, researchers should not only critically consider how to implement an inclusive action-based design process but also be reflexive on how to get out of the project in a way that minimises harm to the community.

Next Steps and Future Research

Future research ought to provide operational insight into how to ensure the sustainability of participatory citymaking processes. Indeed, the term 'sustainability' can hold many different meanings, many of which are relevant here:

- **Sustainability of findings and data collection** – Future research ought to ensure that relevant findings are appropriately shared and disseminated. Current modes of proprietary publishing and closed conferences can exclude everyday citymakers due to their inaccessibility. Particular attention ought to be paid to communicating findings in a way that is both findable and accessible to people in communities who serve to benefit the most from participatory research.
- **Sustainability of communities** – Too often, the communities involved in participatory projects are viewed as being 'disposable' – they are intended to be used for the sake of a temporary pilot, rather than being viewed as a community with needs that must be sustained. As mentioned above, there is a need to refocus and redefine how participatory citymaking processes can 'exit' their projects and towards self-continuation or completeness.
- **Sustainability of funding** – Funding models for participatory citymaking initiatives can have unintended consequences upon the research itself. For example, the roadmaps for how such projects develop are generally based on timelines for funding, which can exacerbate issues related to the 'sustainability of communities' mentioned above. Funding models could be better suited to the realities of participatory processes if they allow for long term processes and flexibility as to how to spend (while establishing certain conditions with regard to accountability, trust and transparency).

Ultimately, the Shared Cities, Smart Citizens approach is one focused on community wellbeing. This focus on wellbeing is what sets it apart from other approaches to technology in cities, particularly 'smart city' approaches. This change in perspective towards a 'commons' approach which values communities, people, and their wellbeing is the main asset of our research, and is the aspect which we most hope to see replicated elsewhere.

Our research is published with open access at https://shared-cities-smart-citizens.nl/. The processes and outcomes of each pilot project can also be accessed via the following links:

- Noord Holland, Governing an Air Quality Data Commons – https://shared-cities-smart-citizens.nl/project/governing-an-air-quality-data-commons
- Utrecht, Open Data Inclusion for Democracy – https://shared-cities-smart-citizens.nl/project/open-data-inclusion-for-democracy/
- Zuid Holland, Data Empowerment Design Studio – https://shared-cities-smart-citizens.nl/project/data-empowerment-design-studio/

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