Observatory of
Public Sector Innovation

Transformation of Public Value: Cities as the playground for the future

ALPHA VERSION: FOR DISCUSSION AND COMMENT

The Observatory of Public Sector Innovation collects and analyses examples and shared experiences of public sector innovation to provide practical advice to countries on how to make innovation work.

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Executive Summary

Governments and society are going through a fundamental shift: the rise of platform economies, new consumptions patterns and technologies transform both service delivery and people's lives in general. With these changes, also the compositions of public values – transparency, privacy, accountability etc. – are altering not only connected to individual's self-interest, but the aspirations of the society as a whole. Public sector is hard-pressed to keep up with the fast-based change and the changing expectations of citizens. This requires governments to think about the future in a different way, because with daily changes long-term planning becomes increasingly difficult. Governments around the world are experimenting with various ways to make future-oriented and value-driven decisions and it is most visible on the city level.

Cities are one of the most dynamic and important administrative units today. They have a significant role to play in most of the complex challenges the world is facing from democratic crisis to climate change, aging, migration, digital transformation and peer-to-peer production. Cities and their surrounding regions are close to the citizen and thus have been the first to realise the fundamental shifts citizens' needs are going through and they have also been the first to respond. The amount of 'smart' and 'collaborative innovation' solutions that have spun up from cities is staggering. Cities have excelled in fact-based, tactical and technology-led responses to emerging challenges, but have they made a difference in the long-term understanding of what public values are upheld throughout this transformation?

To answer this question, this report looks into three crucial domains of governance that have so far been either under-examined or not looked at together. These are engaging citizens in decision making (collective understanding of what kind of future citizens aspire to); envisioning and acting on a specific future (making the future actionable); and leading the change process with a public value-based approach (both in directing change, but also analysing the effects of innovative change from a value perspective). Simply put, public value is changing and public organisations need to engage with systemic change in new ways. Talking about what this new future might look like cannot happen without the input of citizens and collective understanding of what is valued.

Consequently, civic engagement, future and public value seem to be crucial at this stage of transformation not only in cities, but also other public governance institutions. Faced with high levels of uncertainty around complex problems and city government's role in solving them, means that cities need to start also thinking and using the future better in collaborative way. This means creating more nuanced ways to frame problems better, develop alternative futures for the former and start discussing the elusive nature of public value and how it is changing. As such, this report tries to push the discussion on public sector transformation from tactical responses towards a more systemic, value-based approach

The report follows the OECD's prior work on systems thinking and the report "Systems approaches to Public Sector Challenges: Working with Change" launched in 2017 in

Slovenia. Where the previous report was about the tactics for systems change, the current work looks at the substantive issues where systems approaches are most needed. How to start analysing the public value (purpose) of systems change and how to do that in the context of deep uncertainty? Thus, through the case studies and the proceeding discussions the report argues that (city) governments are not in the position to define goals from top down anymore. Sometimes the uncertainty of the future allows us to only agree upon the boundaries of public values we are interested in achieving and then adapting with emerging situations. To make these responses coherent in complex situations values connected to change have to be defined collectively and as such, new methods and ways to allow for meaningful citizens participation is key. To discuss public values and connected trade-offs in systems change, governments have to become better at defining problems, so, that the productive capacity of citizens can emerge.

The report is organised as follows. Chapter 1 gives an overview of engaging citizens in this new era. Different key components of the process such as risk and uncertainty, participation, deliberation and sortation are outlined. Chapter 2 discussed how to think about the future in a changing urban context and how the recent fashion around 'smart cities' fits the narrative. Chapter 3 moves onto the public value domain outlining the need to frame problems differently and framing problems themselves in the language of value. Chapter 4 presents an analysis of seven in-depth case studies from around the world that exemplify the nexus of civic action-future-public value in an empirical perspective. The cases cover deliberative democracy practises in various local communities and cities such as Toronto and Vancouver in Canada; user-driven tactical strategies to innovation in Boston, the US; co-producing welfare in Namyangju in Korea; collaborative innovation across administrative boundaries in the Region of Gothenburg, Sweden; comprehensive responses to new needs of the aging population in Seoul, Korea; technology-led transformation processes in Antwerp, Belgium on Internet of Things; and circular economy in Amsterdam, the Netherlands.

The examined cases exemplify that there are various strategies cities are deploying to deal with the future and to have the connected public value debates with citizens. As such, in some cases, cities have invested in developing processes to examine exceedingly complex problems by deepening the conversations with citizens (citizens' reference panels and citizens' assemblies in Canada), created design-driven, fast-based iterative processes to respond to the changing demand from citizens (New Urban Mechanics in Boston) or built coalitions with the private sector to explore transformative change (City of Things project in Antwerp). In some cases cities and regions have started to discuss the right scale and scope of change – the need to go beyond their own administrative boundaries with changing citizen needs (collaborative innovation at the level of the Region of Gothenburg), create new responses to new and contextual needs (Seoul 50+ policy) or change the purpose of public bodies entirely with transformative technological change (Amsterdam's Waternet's role in the circular economy). Furthermore, cities are exploring peer-to-peer production and local resilience to complex issues (Hope Care System in Namyangju) going beyond their traditional remits to solve welfare blind spots and deal with long unresolved complex problems. In all cases, complex public value transformations emerge. The empirical analysis gives an insight into the opportunities and challenges cities and the public sector are faced with when dealing with uncertain futures.

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1. Innovation in cities: putting citizens' needs and values at the centre of change

> *Cities happen to be problems in organized complexity, like the life sciences. They present "situations in which a half-dozen or even several dozen quantities are all varying simultaneously and in subtly interconnected ways." Cities, again like the life sciences, do not exhibit one problem in organized complexity, which if understood explains all. They can be analysed into many such problems or segments which, as in the case of the life sciences, are also related with one another. The variables are many, but they are not helter-skelter; they are "interrelated into an organic whole." -Jane Jacobs, The Death and Life of Great American Cities*

> *City leadership must shift "from seeing parts to seeing wholes, from seeing people as helpless reactors to seeing them as active participants in shaping their reality, from reacting to the present to creating the future." Peter Senge, The Fifth Discipline*

Cities are humanity's greatest invention, perhaps its most pervasive and consequential technology. It may be cities that save humanity from climate catastrophe. But it may also be cities that finally strip us of any meaningful connection to nature or individual identity, or amplify inequality to crisis levels. How cities evolve in the coming decades will be the story of how humanity adapts to changing planet that is under pressure on many fronts. However, the outcome of urban evolution will depend on how public governance at the city level evolves to navigate increasing complexity.

Currently, many cities are unprepared for their role in the future. For decades, there has been an obsession with efficiency and accountability of public sector organisations. But little attention has been paid to the "civic purpose" of these organisations. Accountability and efficiency are both important for public sector organisations, but they should be grounded within the collective accountability towards the purpose of the system. Yet, public organisations are losing relevance in this day and age: either they do not respond to the needs of citizens increasing their dissatisfaction with the public sector or it is possible to surpass government all together to create more suitable ways to respond to very contextual problems (local resilience). Thus, governments and cities in particular need to re-think their civic purpose. The only way to understand what is truly motivating the change processes happening today, is to start engaging with citizens in a deeper, more meaningful way and re-introduce deliberation into the normal practise of governing.

Urban governance evolution will play out according to how cities manage three interdependent domains of governance: engaging citizens in decision making; envisioning and acting on a specific future; and creating public value. As public sector innovation has usually been viewed through a public service lens (e.g., Osborne et al. 2013), less attention has been afforded to how problems are framed and how value conflicts and priorities in innovation processes and outcomes are debated. Public policy in general is inherently contested (Fuglsang and Rønning, 2014; Oldenhof, Ostma & Putters, 2013),

which makes the role of political engagement extremely important when starting innovation processes. But how should different values be articulated and amplified, muted or addressed in urban innovation processes (Sørensen, 2016)?

Engaging citizens in futures

Innovation in the public realm is increasingly dependent on the ability to engage and productively interact with citizens and other stakeholders, and to coproduce solutions with a wide range of societal actors such as firms, citizens, non-governmental organisations (Bommert, 2010; Eggers and Singh, 2009). Increasing complexity in public sector problems requires the emergence of variety of democratic practices and civic participation (Fung 2006).

The interest in citizen involvement has risen with the external environmental pressure for change in public service delivery. Government is not expected to "know best" which makes co-creating with citizens crucial for positive outcomes (Bornis 2008). Thus, engaging with citizens can help include 'real life evidence' into the decision-making process (Eyal 2013, Rabeharisoa, Moreira et al. 2014, Smith-Merry 2012). Nevertheless, prior studies have shown that citizens are invited to engaged based on their experience-based knowledge (Lehoux, Daudelin et al. 2012), but are asked to go beyond their personal views during the process (Lehoux, Daudelin et al. 2012, Richard-Ferroudji 2012). To help define futures that they do not even know. Engagement does not take away from the uncertainty, but it may introduce a common understanding of what kind of futures a community would like to see.

This introduces the question of what makes a 'citizen expert' and how should citizens act in these engagement processes (Meriluoto 2017)? With positives outline above, public engagement can also have a negative side. Poly-centricity and actor diversity can make the process also less flexible and adaptable as it introduces rigidity in the process (Capano and Woo 2017). Furthermore, in many cases it can lack representation and be regressive in nature (Tõnurist et al. 2015). Many do not have the resources to participate – language, skills or time, the scarcest resource of all. Thus, more deliberative processes (involving sortation and more representative practises)

1.1.1. Expertise versus dialogic public processes

Participatory processes in public decision making have become fashionable over the last decade or more. For instance, participatory budgeting (PB) is now almost commonplace (PB's history stretches back to 1980s Brazil) in many cities in the US and Europe. PB gives citizens authority to make specific allocation decisions in municipal budgets by allowing them to identify local problems that usually fall outside official priorities, and, working with public officials and other experts, develop a solution that is then subject to a popular vote alongside other competing proposals.

While participatory processes such as PB are increasingly visible and (rightly) celebrated, by and large they remain at the margins of public sector decision making. Participatory efforts do seem to increase government transparency and motivate citizens to take greater ownership in political processes, they have not supplanted the principal form of decision making in democratic societies: decision making by experts.

The primacy of decision making by experts likely has its origins in the Enlightenment and the empirical search for truth. Certainty was an objective for which expertise was the solution. The full history of experts and political decision making is explored elsewhere, but suffice to say that a legacy of 20th Century democracies is the interknit edifices of science and politics. But as one senior Finnish civil servant recently said when reflecting on the complexity of today's challenges, "Perhaps the Enlightenment project of certainty is over". This does not mean that science and other forms of expertise have no role to

play in informing public decisions about complex challenges such as climate change or aging societies. But what it does suggest is that expertise alone is not enough; that the public must be engaged in a dialogic public process. A post-certainty future of democracy will not be a binary of either democratic decision making or expert-lead decision making, but a complication of the two approaches as is suggested by participatory budgeting.

Alan Greenspan's 2008 testimony before the US Congress in the wake of the Global Financial Crisis provides compelling evidence for the need of a blended approach to decision making. Greenspan was called before a committee investigating whether regulators had contributed to the crisis by not fully understanding the nature of the markets they were tasked with regulating. Committee chair Henry Waxman pressed Greenspan to explain further after admitting he had "found a flaw" in his economic philosophy. Waxman asked, "In other words, you found that your view of the world, your ideology, was not right, it was not working..." Greenspan quickly returned, "Absolutely, precisely. You know, that's precisely the reason I was shocked, because I have been going for 40 years or more with very considerable evidence that it was working exceptionally well." Greenspan's deep economic expertise had worked well throughout his professional career, but was exposed as insufficient at the critical moment. In the exchange, Waxman labels Greenspan's authority on the subject, not as expertise, but as an ideology; a stunning rebuke of the empiricism and absolutism of expertise as it was practiced at the highest level. Certainty had failed in the face of a complex, adaptive systems challenge, even while there were indicators from other domains that a crisis was emerging.

But how could have new information shaped a different outcome? It is difficult to say for such a large scale, global phenomenon such as the 2008 financial crisis—the system in question was highly diverse, fractal in nature and not easily understood by any single or group of actors. A more tightly bounded challenge might provide better purchase for an alternative decision making approach.

Cities may be the best environments in which to experiment with how to construct dialogic processes that balance expert knowledge with public knowledge. Scale and shared circumstance are two operative factors in developing this approach as states seem increasingly too large and ungovernable and therefore unable to form coalitions around complex issues due to polarization of populations. The challenge is not a philosophical question—whether or not a post-certainty future is here and should democracies adapt—but it is technical: how to facilitate a new working relationship between the public, experts and political leaders.

1.1.2. Participatory Process

What constitutes a participatory process? There are many elements that are technical in nature, such as whether or not sortition, or a lottery should be used to select participants such as was case in ancient Athens. How and when participants interact with subject matter experts and specific kinds of materials such as budgets or forecasts is another important consideration. Also significant is how outcomes are prioritized, vetted and acted upon by the relevant authorities and how the results of such a process are communicated to the public, especially those who have a direct stake in what is decided. The mechanisms by which the equality of all voices to be recognized, especially those that are disenfranchised, marginalized or otherwise not conditioned to participating in a public forum must be established and carefully followed. Trust is a key factor in ensuring equal participation.

However, in our view, the key element of a participatory process is deliberation. Deliberation begins when participants have some baseline of shared understanding about what the nature of the challenge is and what is at stake by working to solve it. Deliberation becomes a distinct activity from conversation when all participants are deeply invested in the outcome of the process and actively working to ensure its integrity. Deliberation is not merely the accumulation of expressed opinions (such as what is commonly the outcome of an "ideation" process of voting or idea clustering), but an exploratory exercise that challenges preconceived notions with new information and alternate points of view. Deliberation is not free from the distortive effects of power, wealth or expertise. And, as is often derided in a fast-paced world, deliberating can be a slow, pondering affair and unclear as to how near or far it is from conclusion.

Deliberative process

Two academics from Stanford and the University of Texas, James Fishkin and Robert Luskin (2005, 285) provide an instructive framework for identifying a deliberative process:

The root of deliberation is 'weighing,' which could be collective, individual, or both — involving discussion, rumination, or both. For present purposes, we take deliberation to be a weighing of competing considerations through discussion that is:

- Informed (and thus informative). Arguments should be supported by appropriate and reasonably accurate factual claims.
- Balanced. Arguments should be met by contrary arguments.
- Conscientious. The participants should be willing to talk and listen, with civility and respect.
- Substantive. Arguments should be considered sincerely on their merits, not how they are made or who is making them.
- Comprehensive. All points of view held by significant portions of the population should receive attention.

This framework well describes how an exchange of information should happen in a deliberative process, but not what that process should look like. The design of a deliberative process must be contextual; it must respond to the peculiarities of the stakeholders involved and be "sized" appropriately for the task at hand. For instance, it is probably not necessary to have a deliberative body of hundreds from across a metropolitan region to discern whether or not a public swimming pool should be shuttered or renovated.

No matter how the process is designed, high quality, effective facilitation is critical to ensuring that Fishkin and Luskin's criteria are met and that the participants engage with mediating information from external sources in meaningful and useful ways. Facilitation may come in the form of an individual or team, but facilitators must be empowered by the sponsoring authorities to drive the process and make changes as situations arise.

A truly deliberative process provides the foundation of legitimacy that empowers a participatory process to rise above other kinds of decision making in terms of it reflecting the will and insight of the people. Deliberation is the one tool participatory processes have to inoculate themselves from charges of favouritism, elitism or insufficient knowledge. Effective deliberation embedded in a larger participatory process gives

decision makers confidence to move forward—and thereby take risks—on contentious policy decisions.

Furthermore, there is also a behavioural facet to truly participatory processes. Stakeholder involvement in the decision-making process influences positive policy perceptions which contributed to resilience in policy change (Marshall 2007). Involving a variety of stakeholders can produce shared, socially constructed perceptions about policy alternatives.

From engaging citizens to citizen self-organisation

New initiatives also aim to deepen community engagement and co create solutions with citizens. For example, in Italy, Laboratori di Quartiere (Neighbourhood Labs) aim to shift away from the paradigm of a "smart city" towards a collaborative "Augmented City", requiring citizens not just to collaborate on the use of urban spaces, but to also become part of the ongoing transformation. In Canada, reference panels, citizens' assemblies and commissions (see Case Study 1) have been used to address complex problems, where different values can be in conflict or the self-interest of decision makers may undermine the legitimacy of their decisions. This is an in-depth, time-intensive format of engagement that can unearth new perspectives to policy problems and make clear what communities actually value.

Furthermore, citizens frequently take control of service development as part of a community-based initiative, self-organisation (Boonstra and Boelens, 2011; van Meerkerk, Boonstra, and Edelenbos, 2013) or because of retreating government (Tõnurist and De Tavernier 2017). This is a form of local resilience and can be seen in a variety of community-based initiatives, social enterprises, citizen initiatives, cooperative movements, etc. (Edelenbos, van Meerkerk, and Schenk, 2016). To a degree, we can see self-organisation emerging 'that is not imposed or determined by one single actor, but is rather the result of a multitude of complex and non-linear interactions between various elements' (Van Meerkerk et al. 2013, 1632).

Policy making results from the exercise of power. If doors are open to citizens input within a reflexive setting there has to be room for free exchange – deliberative dialogue –, making the distribution of power polyarchic (Dunlop 2015).

As suggested above, citizen engagement at the level of shared decision making requires a new profile of citizen. No longer would citizens be considered to only act rationally in their own self-interest. Each citizen would, in some way, represent the interests of all other citizens in the city. No longer would voting and paying taxes constitute citizenship. Citizens would engage with public concerns as part of their normal activities. In an employment world increasingly shifting to short term gigs, contract work and reduced working hours, participatory activities could help fill the gap while providing some of the satisfaction found in work.

Citizens might begin to think of a portfolio of activities in which they take part outside of the home. One would be work, the other would be policy making and others could include more traditional forms of engagement such as volunteerism. Seen this way, cities might begin to think about how they support citizen engagement. For instance, the provision of childcare or elderly care, mobility support are obvious needs. Borrowing from the academic world, honoraria, or small monetary considerations could be offered, not as a form of payment for services rendered, but as a way to demonstrate the value of active and productive engagement.

Governments are harnessing the power of citizen curiosity. For example, the National Archives in the US has launched its Citizen Archivist project asking citizens to transcribe and digitise handwritten documents; or get more information about lakes from citizens in Finland (Järviwiki). A variety of apps allow citizens to report their problems to the public sector (FixMyStreet allows you to report problems in your neighbourhood or Paris-based Madame Mayor app allows citizens to pitch ideas to directly to the city government) enabling a new citizen-government relationship characterized by "our digital rights to the city" (Shaw and Graham 2017).

Citizen-policy-maker is a blended identity that stands in contrast to today's largely binary system of government and the governed. While it was practiced to a degree by the ancient Greeks, the knowledge and systems that support this kind of participation are largely forgotten. But the nature of today's challenges, marked by uncertainty and ambiguity challenge the dominant systems of decision making in place today. Phenomena such as fake news, climate change, diversifying and aging populations, declining public budgets and digitalization of everything are pressuring old governance models. And the fractures are showing. Citizen engagement in a deliberate, well-structured, government-wide manner is a promising approach to improving engendering progress.

Toward shared facts

Policy making is not only a technical exercise of attaining evidence and expertise, but an exercise of 'practical rationality' – 'a communicative or deliberative process within which ethical and moral concerns' (Sanderson 2009) are surfaced.

Today, many democracies in the West are struggling under the weight of a lack of consensus about what is true and what is fake. "Fake news" has become a mantra for some political leaders who find consensus around some difficult policy challenges such as climate change or immigration, inconvenient. While it can be amusing to witness the intellectual contortions necessary to support a charge of fake news, it cannot be doubted that this political expediency has a deleterious effect on the state of public discourse. It undermines the edifices that enable establishing shared facts such as the media and scientific communities. It also damages the authority of experts to provide information that can help shape a public debate.

Many who are concerned about how to stem the erosion of shared facts are at a loss for how to confront a phenomenon that is as diffuse as the claim of fake news. Civic engagement, specifically through robust participatory processes may be one restorative pathway. This is because participation in a deliberative process disrupts the echo chamber that is enabled by social media and partisan news sources. It personalizes contrary or contradicting points of view and forces reflection on how perspectives can become so divergent. It also situates contentious issues within a broader framework of understanding about causes, not just symptoms, of challenges facing society. A participatory process makes transparent decision making that has traditionally happened out of public view so that everyone can see the factors that have lead to decisions that impact their lives.

It would be easy to discredit a participatory process as being too slow or too small to have an effect on public discourse. But if it were practiced at scale, and to some degree in a broader set of issues, it is not impossible to see how populations, especially within shared constructs such as cities could begin to see "fake news" as an expediency rather than as a true reflection of the state of affairs. For this reason, participatory processes should be

carefully communicated to the public; not just providing a statement of outcome, but a description of processes that illustrates who was involved, how issues were deliberated and what compromises were reached in order to take a decision.

Furthermore, knowledge can be substantive, experimental, value-based, even innuendo or myth – thus making reflexive learning unavoidable in public engagement.

Along with a lack of shared facts, suspicion and presumption work to undermine democratic systems. They both stem from considering and treating important issues at arm's length. In other words, suspicion and presumption arise from a commentator's perspective on shared challenges. For those who actively engage in a deliberative process, it is hard to maintain a suspicion about the motives of others or presume that their intent is in some way malicious.

Again, the role of citizen engagement is to collapse the distance between the individual citizen and the broader challenges facing society. Participation asks them to take a position based on shared understanding, not just individual opinion. Deliberation alongside experts with shared evidence balances the authority of those who traditionally enjoy power and those who are commonly marginalized.

Thus, when confronted with complexity in political terms policy design has to become (1) flexible enough to respond to varying interests; (2) understood by all those involved; (3) defined in terms of specific processes for overcoming stalemate and disagreement (Peters 2005).

Embracing Process Uncertainty in Collectively Framing Policy Problems

Michael Mauboussin, a Managing Director at Credit Suisse and Chairman of the Board of Trustees at the Sante Fe Institute once said on Bloomberg TV that risk is not knowing what will happen next, but understanding what the probability distribution looks like. Uncertainty on the other hand is not knowing what will happen next and not knowing what the probability distribution looks like. In today's increasingly complex world, uncertainty is increasingly the dominant condition.

While uncertainty was long-held to stem from only the lack of scientific knowledge, scholars now acknowledge the permanent nature of uncertainty in some policy fields and also the uncertainty inherent in the framing of policy issues by different actors (Raadgever 2011, 64).

Frames are in essence 'sense-making devices' (Brugnach et al. 2008), but they also make problems context and cognitive comprehension-dependent (there can be several deductive or inductive paths to the same problem, multiple moral reasoning, multiple realization of models etc. (Boschetti 2011, 149)). Thus, the wickedness of problems is further exacerbated when the (scientific) uncertainty about the problems and/or solutions increases, but also when there are several points of conflict between multitudes of stakeholders. Thus, the variety of actors bringing different perspectives to the policy making process can be a source of uncertainty in of itself. Thus, uncertainty can result from an inherent unknown in the system, lack of contextual or specific knowledge or the

difference in the perception or knowledge of various actors – the lack of shared facts (Brugnach et al 2008).[1]

As a result, the challenge for decision makers becomes two-fold: first, how to proceed on a course of action is especially unclear and second, they must communicate to constituents in a way that still inspires confidence even when they do not know what will happen next and what the probability of success will be.

When decision making happens out of sight, decision makers bear the uncertainty burden alone and are individually held accountable for failures even though it was impossible to know the probability of success or the potential for unintended consequences.

Citizen engagement in decision making, to a degree, distributes the burden of uncertainty back into the population. If a broad network of citizens agree, not just through voting, but through active engagement in problem solving that a course of action must be taken, then they too share responsibility for an outcome. Empowered citizens cannot simply say, "politics is broken" and remove themselves from having agency in the future or direction of society. This helps decision makers weigh scenarios where there is perhaps no clear good outcome or no clear beneficiary to a political process. Other than political equality, this shared burden is perhaps one of the most important effects of sortation and citizens' panels: uncertainty is a condition to which everyone is subject and of which everyone must be cognizant.

It also stands to reason that by engaging more actors in a deliberative process, a probability distribution may become clearer. The effects of decisions will be considered by a greater number of individuals in real terms (not just in the abstract of a yes/no vote) and thereby transform uncertainties into risks. Therefore uncertainty can be good because it makes processes more robust.

[1] Consequently, it is important for policymakers to know which type(s) of uncertainty they are dealing with, before deciding on a course of action. As such, betting on the most likely future scenario or a limited range of plausible futures may result in failure – 'policy misfit' (Bunce et al. 2010) – when the right degree and type of uncertainty (among other factors) are not accounted for (Walker et al. 2013; Hallegatte et al. 2012; Nair and Howlett 2014).

Participatory everything?

Should every political decision necessitate a collective, participatory process? Clearly not. The security and intelligence domains, diplomacy, industrial and other sensitive policy questions are obvious areas where decision-making must reside within government.

But what about governance at the level of the city? Should citizen engagement be present in every municipal decision? This is less clear. Security, for instance might seem to be the sole domain of the executive as might immigration-related policymaking. Even transportation planning could be conceived of as an engineering challenge which would not benefit from citizen insight. However, positive examples continue to increase in number in each instance. Community policing benefits from citizen engagement and collective shaping of police procedures. Immigration is a domain where policymaking may be set at the state or federal level, but its impacts are realized at the municipal level; immigrants will arrive in cities looking for opportunity whether or not the state wants them to be there. And transportation (or better mobility) planning affects everyone in multiple areas of their lives, not just how they move in the city. Housing and urban development is another area that could appear to be the concern of only those with advanced degrees in the area. But history is littered with examples of how housing and transportation policy were effectively weaponized against marginalized populations.

So, it may be that in fact cities are the ideal location to bridge citizen and decision maker through effective participatory processes. But this suggests a very different approach to governance and structure of government. It also demands of citizens to be educated about not only their duty to participate, but how to be a productive, engaged citizen and the kinds of opportunities it affords. This suggests an urban vocational training that is more than one class in high school on civics; training that might be more akin to ongoing professional development as citizens expand the areas in which they have shared decision making authority. Here, however the sharing of power often prompts suspicion among policy makers which alters the dynamic.

Citizen participation at scale in cities also suggests a different role of the executive. Rather than seeing citizens in the most extreme case as just a source of votes, the executive will need to think of them as partners and foster ways of working that marries various departments under their control with citizens that want to shape outcomes in that policy area.

This would also affect the structure of municipal departments. Rather than occasionally hiring an outside facilitator to tick the citizen engagement box, they would need to bring in, as staff members effective facilitators. Their decision making timelines would need to account for a deliberative process. They might need to go to where the citizens are, rather than asking the citizens to come to municipal buildings to engage them on their terms. Communications would need to be thought of not as a transmissive activity (moving information from the inside to the outside), but as a strategic capacity—as much shaping the work as it is telling about it. It is vital that public sector generated the possibility to experiment and take risks in the innovation agenda (Fernandez and Pitts, 2011; Borins, 2014). However, these risks are not only technical, but also connected to engagement, competing visions of how problems get defined. As such, experimentation among several competing policy options may need to be explored as a means to ultimately make an informed choice about how to proceed.

Within a city, all of this is possible and is already being done in isolation. The question for cities is, to what degree do they engage citizen engagement. How does the city begin a transition toward a more blended urban governance model? What are the risks and benefits? And what will it mean over the long term for how the city's government structure evolves.

Given what has already been done through citizen engagement in cities across the globe, what is known about how it affects the relationship between citizens and their government, and most importantly does it alter the relationship between citizens? The answers are not yet clear. No longitudinal study has been found on the effects of participatory processes on the overall health of a population. Anecdotal evidence suggests that participants reshape their political relationships and "contribute" more. But that is a too generic of a finding to prompt greater investment in participatory processes.

It is the position of this report that strong participatory citizenship is a hedge against the disintegrative forces of declining involvement in social and cultural institutions and the starkly finite nature of employment in the future as technology sweeps away the need for human labour. Democracy is a muscle and participation is one way to exercise it.

Nevertheless, research should be done to uncover whether participation, or more broadly a participatory democracy can influence the many competing challenges to effective public discourse and public governance. The case studies in this report provide an outline of how that research might be structured, what questions it should ask and what findings may be attained. But much more work is still to be done

.

2. Envisioning the future: is it only about being 'smart'?

What is the future and can it be codified?

For the most part, we tend to think of the future as a condition that we will be subject to at some point, usually somehow exceeding the bounds of the present. Its force as an idea stems from its inevitability and is manifest in our economic system's fundamental organization around credit. Its power also emanates from the certainty or uncertainty about what realities will be experienced once the future arrives. Prediction is one way in which we access the future. Forecasting is a more deliberative approach to thinking about the future, but because of the nature of the future, it is no less subject to distortion by preference and bias. Whatever the case, people tend to lodge their hopes and fears in the future, making it a highly contentious and subjective space. The future purportedly drives decision making, but more often than not, these decision have more to do with the present than what might be over the horizon.

More rarely is the future treated as a critical tool for driving progress and rigorously appropriating it as such. Futures, when agreed upon by a deliberative body are typically a product of consensus building. For instance, the future of the education system in the US context is to prepare students for "career and college readiness". But for some, these objectives are not compatible. If college readiness is to be the future of education, then it must be designed accordingly with logics that operate at cross purposes to preparing students to enter into careers after high school. So in order to work toward a shared outcome, a consensus-building process is characterized as the future. But here, the future is not an idea that charts pathways forward, as much as it is indicative of an agreement about priorities for dealing with present challenges.

A variant of this kind of future-use by collections of stakeholders is the vision for the future set at a specific point in time, such as the millennium, 2030 or 2050. By time-bounding the future, shared priorities become more action-oriented, but it still is a vehicle for communicating the outcome of a consensus building process.

In the worst case, these future articulation processes become co-opted by special interests such as a company wanting their product to enable their preferred future or a political interest group that wants to see their narrowly drawn issue drive public decision making. The advent of the processed food industry in the United States is an apt example. The future, according to the food industry was lack of hunger and better health, the way to get there was through the application of science and industry to food systems. While industrial food systems may have helped address hunger, it certainly has not led to better health by almost any measure.

Futures, when articulated by an individual (a futurist or forecaster) tend to contain elements that align well with the agenda of the individual. For instance, that technology will converge toward singularity, or that technology and automation will lead to a future without work. Both of these future scenarios are ideological in some sense and obscure what will likely be a much more diverse and complicated situation once the future finally

"arrives". In this case, the stories told about the future are used to suggest actions that should be taken now according to the underlying agenda, such as constraining, or widening the use of artificial intelligence. But these futures are no more objectively likely than any other future.

However, in both cases of group and individual future forecasts, the articulation of a future does enable a debate about what should be, and what actions might be taken to move stepwise toward that future. But that debate must be taken up and somehow acted upon by a broad coalition in order to be meaningful.

More often, futures result from translating the present of one, more advanced context onto the present of another. This is a form of adoption more than it is rigorously thinking through and defining what kind of future scenarios are possible for a given context. For instance, many governments in middle income and lower middle income countries in Asia identify Singapore as the model of their futures. But Singapore arose out of unique circumstances that cannot be replicated. And even if they were, a Singaporean model realized in Sri Lanka for instance, it may result in a model of urbanization that is destructive to Sri Lanka culture and society. The future of Sri Lanka arguably is more likely to be found in Sri Lanka than it is in Singapore.

As Riel Miller, head of foresight for UNESCO has described it, most future thinking suffers from a "poverty of imagination" which can be interpreted in a number of ways. One, as suggested above is that there are ultimately interests other than ideas about the future driving future thinking. Another interpretation is the recognition that the convergence of factors that will ultimately decide the future are exceedingly complex are beyond the imagination of most forecasters. And yet another interpretation is that it is fear or hope about the future that overrides an ability to think about what the future might be objectively.

So how can the future be used in a more effective way? What would it mean to describe the future according to a discipline or practice, rather than using it as a way to talk about the present? And how should a "better" future inform decision making?

One clue again comes from Riel Miller who titles a future-based approach to sense-making the Discipline of Anticipation. For him, this discipline must have three core components: Anticipatory systems perspective that encompasses both animate and inanimate anticipation, allowing one to distinguish between different models that work within the anticipatory systems. Three distinct dimensions for anticipating the future with different methods that are appropriate for each: contingent (bad or good), optimized (goals, rules and resources) and novelty (the challenge of reframing). Miller argues for futures literacy knowledge labs: a learning by doing process that uses collective intelligence to discover and invent specific knowledge.

The purpose of this discipline according to Miller is to find a way to make the future explicit. This is perhaps the most salient point for this discussion: in order to imagine the future that is free from confirmation bias and other distortions, a rigorous process must be undertaken. Miller argues for the emergence of specific discipline, but in the meantime, describing the future would benefit from greater understanding of the problems inherent in thinking about the future and a process or set of processes that treat the future as an explicit target of inquiry.

No matter how the future is imagined, one of the most difficult challenges in realizing the future is identifying what kind of vehicle will make a specific future more likely to happen. At the scale of the individual, or even the family, a pathway toward a future is

fairly easy to define. For instance, an individual can attain an advanced degree to improve their job prospects or a family can institute a savings plan in order to buy a home. At the other end of the spectrum, supranational organizations and federations struggle to articulate a specific future. Large, encompassing concepts such as human rights or the right to pursue happiness describe a future perfect state, but leave out the specific means and methods of achieving it

As is the case in participatory processes, cities may exist at the ideal nexus of scale and decision making authority for both envisioning and working toward a specified future. One source of evidence for this is the proliferation of "Vision 2030" documents produced by cities across the globe. It seems cities have identified 2030 as an important horizon for transformative ambitions and have invested time and resources in developing vision documents. Collectively, they appear to have realized that critical transformations are needed to adapt the city to a future that is increasingly uncertain due to rising sea levels, diversifying or aging populations and declining public budgets. Rather than make policy prescriptions the first step toward that transformation, cities have sought the insight of their constituents to imagine what the future could be.

Why are cities pioneering a public discussion about the future while, with few exceptions, states are not? Scale, collective fate and therefore shared priorities, response to challenges and the infrastructure to both convene constituents and take action on priorities are some reasons cities better manage the future. Given some of the advantages cities have over other governance structures in anticipating and acting on the future, how should an urban future be specified? The answer will be as varied as cities themselves, but some common principles apply.

First, the ideas that underpin a political vision traditionally have revolved around a solution that is already available or at least known. If street violence is the problem and greater safety is the vision, better policing and more opportunities for communities experiencing violence are the policy prescriptions. But in an ambiguous and uncertain world, a solution that is predetermined without a higher resolution understanding of the challenge is unlikely to affect change. This is because today's challenges, even for the tightly bounded city, are systemic in nature. They defy easy solutions and are resistant to any singular effort at change.

Second, a future vision should not only outline what an alternate future will look like, but also describe in detail the principles that will govern how that future unfolds (the values that bind it and will be re-examined throughout the process). By describing the governing principles, stakeholders from across the spectrum of interests that will work toward that future can determine how they must act. Developing a response around governing principles as opposed to an overarching vision improves the chances that efforts will synchronously, creating a total effect that is greater than the sum of the parts. Governing principles tied a future give the future specificity and dimension. Without this, a future vision is just that: another idea about the future that is untethered from context and unsanctionable.

Third, future visions should anticipate a transitional strategy that spurs the shift from the status quo to a new desired state. For instance, carbon neutrality is a strong and ultimately achievable future vision for cities. But for democratic, capitalistic systems the transformative change cannot be achieved by fiat. The city will need to transition toward carbon neutrality. Once the need for transition is identified, the challenge becomes tactical in nature. Should the city grow its renewable energy portfolio, establish or expand a district heating and cooling system, change building codes to allow for only high

performance construction; should it begin working at the scale of a single building, a city block or a district; should it prioritize behaviour change such as incentivizing people to work close to where they live, making energy choices that result in a lower carbon footprint, etc.? Transitional strategies tied to future visions are necessary because a complex system such as a city cannot simply be turned off, redesign and turned back on. They must be intervened in from multiple entry points, not unlike acupuncture, to inflect how the system evolves.

Finally, a future vision should be immune to the influence of any single actor. If climate change is driving an urban future, this should happen by default as the city will need to change across every domain in order to adapt. So called winners and loser will be found in every strata of society. For much of the rapid urbanization of the 20th Century, it was not citizens but private interests that were driving the development of cities. Automobile manufacturers wanted single owner cars to dominate the city and therefore worked to characterize street trolleys as old fashioned to build constituencies around their removal, or pushed for suburbanization to necessitate greater car ownership. Companies, once headquartered in cities moved out to the suburbs once the corporate campus became popularized, leaving downtown cores to pick up the pieces of a fractured economy without the resources to invest in fostering a better future. The recent urban renaissance has brought citizens back into the city and the companies have followed, but now new private interests are working to realize their interests in an urban future they hope will consist of luxury housing. Now that cities are on the front lines of climate change and in a global competition for talent, perhaps future visions can be better balanced between all interests public and private. But cities will need to embrace an ownership role in how they think about and articulate a specific future. Creating the future of a city can no longer be outsourced to those with power and influence. Many of the vision 2030 documents offered by cities suggests that this transition is underway.

The limits of a 'smart' future

> *The idea that cities might be computerised – that computers might enter the fabric of the city and that their software would enable an intelligence function to be established on the basis of essentially public functions, goes back a long way. It is of course part of science fiction but in a more considered sense, Alan Turing himself envisaged this in his idea of the universal machine. But it was Vannevar Bush in his prescient article "As We May Think" published in The Atlantic in July 1945 who implied that computers would eventually enter all our routine practices. In fact it was not until 1962 that the book A Communications Theory of Urban Growth by Richard Meier explicitly addressed questions about information and the city (Meier, 1964), and about the same time, the notion of networks everywhere passing information socially and economically was intrinsic to Mel Webber's ideas about the non-place urban realm, which was becoming intrinsic to global society (Webber, Dyckman, Foley et al., 1964).*
>
> Michael Batty (2016)

One of the future visions that has recently taken centre stage is the one of smartness and particularly of smart cities.The smart city narrative tends towards a technology-driven approach and dominated by data (open data, big data) – datafication – and digital entrepreneurship. Technology supersedes the human. This is not bad, it creates many opportunities for cities to explore the problems they are facing and create solutions that users will benefit from in this digital age (see Box 1 below). IoT or urban control rooms are becoming an everyday reality (Townsend, 2013; Cardullo and Kitchin, 2016) – there is talk of even real-time 'digital twins' of cities where the real city is mirrored by a virtual construct that allow to test and simulate various situations that may happen in real-life.

At the same time, at least currently, smart city literature is still overflown with success stories and best practises. The concept itself got its start from urban labelling, rather than scientific research into a phenomenon. Thus it is not surprising, that it is rarely addressed or evidenced how smart cities really are or what long-term effects it produces to citizens (is it empowering or not – see for example, Lember et al. 2017). Hence, it is difficult to separate the fact from fiction, hype from reality.

Box 1. Urban Data Centres (the Netherlands)

In 2016, CBS (Statistics Netherlands) started to develop Urban Data Centres (UDC) by combining national data and data expertise with smart, data-driven city needs. The Dutch city of Eindhoven jointly developed an UDC with CBS. The centres are built around the city's interests and needs – smaller towns and big metropolises variably have different interests – by combining national survey, administrative and big data with city data. After launching the first CBS Urban Data Centre, seven additional centres were established in just one year. The concept can also be adapted to and implemented in developing countries, and can contribute to the realisation of the SDGs.

Figure 1. Value proposition of Urban Data Centres

Source: Statistics Netherlands.

As such, CBS combines its considerable data expertise with real-life urban problems and city policy knowledge. As a federal body, CBS works to support cities through the provision of expertise that cities often lack. The resulting jointly developed Urban Data Centres help to better understanding the current situation and problem dynamics in a city. The centres create location and problem-specific data-driven input for local policy making that can lead to transformative change. They are not only applicable in bigger cities, but can be applied also in smaller localities:

"In the beginning we thought that the urban data centres would only work in only big cities, because they have the research budget. So, we heard from smaller cities that it was a nice idea, but we cannot reallocate money. Yet through practical cases we have learnt to look at the wider range of the city budget, e.g., the smarter use of social welfare to create better data for that."

Thus, this is not only about getting data onto the digital platform, but defining issues and problems together and finding ways to make them visible and actionable for local governments. This is challenging work as municipalities and statistics offices have not previously worked in this way. Consequently, practical challenges have emerged around bringing together staff from cities (who are often not data experts) with CBS employees

(who do not have experience in reading city programs and budgets). Furthermore, most municipalities (big and small) have only small amounts of internal research funds and staff connected to them. This means bringing together people across city departments to work together on problems. Thus, developing data platforms that correspond with city's needs requires quite a lot of leadership to overcome the first resistance of working in a new way. This is not only dependent on the buy-in from senior leaders, but the broader organisational culture and the occasional personal misfit of people who work together. CBS together with its partners needs to be aware and balance all of these factors to make the initiative work in practise.

Source: OECD interviews; CBS presentation.

It does not help that there is no common understanding or agreement of what a 'smart city' really is (Box 2). There are many frameworks that propose typologies of the smart city and depending on the field of analysis it can be either intelligent buildings (architects), sensing and data analytics tools (computer scientists) or about smart grids and zero energy buildings (energy engineers) etc. When it comes to public sector innovation and smart cities built environment and infrastructure sectors (transport, water and waste management) – hard domains – are more talked about than more human-centred sectors – soft domains – as health, education or social welfare.

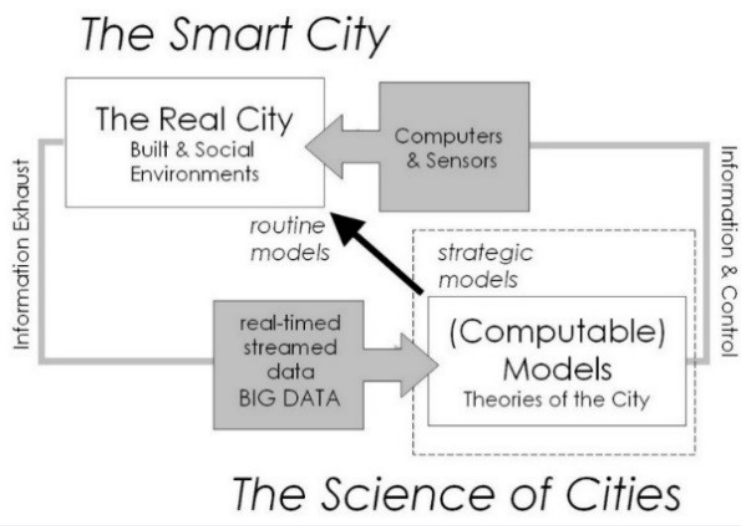
Box 2. Smart city definition

The European Commission's smart city definition is fairly simple: "A smart city is a place where the traditional networks and services are made more efficient with the use of digital and telecommunication technologies, for the benefit of its inhabitants and businesses." Yet many other definitions exist:

- Similar broad-based definitions concentrating on the effects of ICT exist: "The application of information and communications technology (ICT) with their effects on human capital/education, social and relational capital, and environmental issues is often indicated by the notion of smart city" (Lombardi et al. 2012).
- It is popular to define smart cities through domains of activity: Smart economy, smart mobility, smart governance, smart environment, smart living, and smart people (Giffinger et al. 2007). These domains can be both 'soft' (education, culture, policy innovations, social inclusion and government (Albino et al. 2015)) or 'hard'"hard" (buildings, energy grids, natural resources, water management, waste management, mobility and logistics (Neirotti et al., 2014).
- It can be framed around sustainability: "A city is smart when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance"(Caragliu 2011) or community: "Smart community – a community which makes a conscious decision to aggressively deploy technology as a catalyst to solving its social and business needs – will undoubtedly focus on building its high-speed broadband infrastructures, but the real opportunity is in rebuilding and renewing a sense of place, and in the process a sense of civic pride" (Eger 2009)).
- Etc. – see a fuller review in Albino et al. 2015.

What it in the end denotes is an integration of computational models with the data of the city and physical environment (see Figure 2).

Figure 2. Batty's combined model for science of cities and smart city



Source: Batty through Soe, 2018.
Source: https://ec.europa.eu/digital-single-market/en/smart-cities

Smart city discourse seems to take complex effects – e.g., democratic processes, empowerment, value, inclusiveness, accessibility, accountability, transparency and openness – as self-explanatory and something inherently part of smart city initiatives. In practise through mobile phones, each urbanite can indeed be a mobile sensor available to report on their experience of the city (Ratti 2010). Yet, is that acceptable to us or do we value privacy more? These questions are beyond technology by now – the future is already here, yet, it is largely unexplored in practise. Thus, the contradictory meanings and values connected to these concepts on the city level remain largely unexplored. Thus, a new way of looking at the future is needed that both harnesses values as the core source of debate and also evaluates already ongoing changes from the value-perspective.

3. Creating value-led futures

Defining problems

The first step towards a value-led approach to both collectively defining the future is to start defining problems from a value perspective. Policy systems are, however, notoriously ill-equipped with dealing with complex problems not to mention the public values connected to them (OECD 2017). Therefore, before tackling the issue of public value, some elaboration on the nature of defining problems is needed. Before problems are productively defined, it is difficult – if not possible – to systematically talk about values that might come in conflict in reaching public purpose.

Defining policy problems is usually seen as a two-stage process (Peters 2005): first, defining what the problem is about and second, define the dimensions of the problem. The first, can be a very difficult question to answer both politically and empirically as most important problems are becoming more complex, and thus, less clearly defined (e.g., poverty). There is a lot of research done on the social construction of policy problems and policy framing in general. Head (2014) outlines different levels – cognitive, communicative, organisational, political dimensions – in which the problem framing debates take place. The cognitive dimension is about knowledge and ideas; communicative dimension about how key messages are distributed, challenged and reinforced; organisational or institutional dimension refers to embedded views and practises within organisations and the political dimension refers to political action, power and crisis management. The more complex the issue, the more these diverging dimensions come into play. This can influence how people interpret facts, because they apply diverging problem frames with variety of dimensions for the former.

Before problems are defined and labelled, it is difficult to discuss them contructively in a political process – think of an issue of child or spousal abuse (Nelson 1984). In another stream, agenda-setting literature argues that how an issue is defined influences the type of policymaking, the potential to reach the agenda of a particular policy, and the potential outcome – problem definition sets the stage of the final determination of policy (see overview in Peters 2005). Clear labels and stories around policy problems are important to attract attention to issues and create urgency around issues (e.g., Mosse 2005).

Problem definitions shape the actions taken afterwards; how problems reach political agendas, which stakeholders are involved and which type of action is taken. Labelling problems is not that useful in the complex stage of finding solutions for an issue, because numerable, interlinked factors need to be considered. Thus, one of the most important moments in the policy-making process is when an issue is “framed” or “re-framed” (Schon and Rein 1994; Hisschemoller and Hoppe 1995). This needs to be done in a way that takes into account the whole ecosystem of the problems (for example, see in Box 3 on the Wicked Labs approach applied to the issue of food security).

Box 3. Wicked Lab's FEMLAS Process: South West Food Community Lab

Systemic Innovation Labs are a lab model that has been purposefully designed to address wicked problems. They support systemic design, solution ecosystem and systemic innovation approaches for addressing wicked problems and incorporate features widely recognised as required for addressing such problems: focus on addressing complex problems, take a place-based transition approach, enable coherent action by diverse actors, involve users as co-creators, support a networked governance approach and recognise government as an enabler of change (Zivkovic, in press).

Wicked Lab has developed a systemic innovation lab methodology called FEMLAS. FEMLAS is an acronym for the six-stage process of the methodology: Form, Explore, Map, Learn, Address and Share. At the Share stage of the process there is an iterative loop: after completing the Share stage, the four stages from Map to Share are repeated periodically. The South West Food Community systemic innovation lab in Western Australia has recently commenced using the FEMLAS process to improve food security in their community.

The key tasks at the Form stage of the FEMLAS process include: form the core team, define the solution ecosystem boundary, frame the solution ecosystem and undertaking an initial mapping of the initiatives and organisations in the solution ecosystem. The core team of the South West Food Community Lab includes stakeholders working in nutrition, Aboriginal health, environmental health, food production, education, social work and town planning. These stakeholders include state government, local government, university, non-profit, business and community representatives. The boundary of the solution ecosystem for the South West Food Community Lab consists of the South West region of Western Australia and the wicked problem of food security. The pillars of food security have been used to frame this boundary. The core team has used Wicked Lab's Tool for Systemic Change to undertake an initial mapping of the initiatives and organisations in their solution ecosystem that are addressing any of the causal factors underpinning food security in their community. The online tool is used to map each of the initiatives in the solution ecosystem to 36 initiative characteristics that aid transitions and strengthen the interface between the solution ecosystem and government.

The focus at the Explore stage of the FEMLAS process is for the core team to engage with users: the initiatives in the solution ecosystem and the organisations that are collaborating on these initiatives. During this stage a thorough mapping of the solution ecosystem is undertaken by conducting key informant interviews and facilitating focus groups. A crosswalk survey instrument that describes the 36 initiative characteristics is used to aid this process. The South West Food Community Lab is currently developing their survey instrument.

At the Map stage of the FEMLAS process, the main tasks are to enter into the online tool the mapping data that was collected during the Explore stage, and to use the tool to create a transition card for the solution ecosystem. The transition card displays each of the identified initiatives in the solution ecosystem and highlights how each initiative is contributing towards systemic change: how each of the initiatives maps to the 36 initiative characteristics for system transition and strengthening the interface between the solution ecosystem and government. For the South West Food Community Lab, the transition card will showcase the initiatives in the South West region of Western Australia

focusing on food security, all of the organisations working on these initiatives, and how these collectively contribute towards systemic change.

The Learn Stage focuses on analysing the transition card to determine where in the solution ecosystem there are gaps in effort for achieving systems change. This is easily undertaken by using the online tool's show gaps in effort feature. A discussion document highlighting the gaps is then prepared. These identified gaps are used to guide future action for addressing the wicked problem.

During the Address stage users and other stakeholders are invited to participate in a large group intervention process to co-create initiatives that address the identified gaps. During the large group intervention process, users identify if their organisations and initiatives can address the identified gaps in effort by amending their existing initiatives or creating new initiatives. Users are encouraged to co-create new initiatives with other users and to take a safe-fail experimentation approach.

At the commencement of the Share stage the transition card is updated to incorporate any amended and new initiatives from the Address Stage. The transition card is then embedded on the Lab's website so that it can be viewed, discussed and shared by all of the initiatives and organisations that are participating in the solution ecosystem. The South West Food Community Lab is embedding its transition care into a purpose-built food security platform that includes a website and app.

Source: Zivkovic (in press), 'Systemic Innovation Labs: A Lab for Wicked Problems', Social Enterprise Journal.

Appropriateness of policy choices relies on the instrumental framing of policy problems: if they address underlying causes or just symptoms of issues; if they address the organisational capabilities in an adequate manner; if they communicate adequately to stakeholders and if they are able to mobilize supportive coalitions. For example, when environmental problems were redefined as behavioural and ecological balance issues compared to predominantly technological problems (Peters and Hoornbeek 2005), it enabled the inclusion of civic, third party actors in the debate.

Is the policy problem incremental, cumulative in nature or dependent on substantial levels of input? Some problems are large-scale and thus need an "all or nothing" approach (Schulman 1980). There is no good in getting halfway to Mars or in the third generation of global warming reducing greenhouse gas emissions incrementally. In other areas, cumulative efforts, the slow increase of scientific evidence, trial and error, and trials may be the better way forward, so as not to choke on resources by short burst of high-level investments (Peters 2005). Hence, the problem scale should not be misconstrued, because it may lead to disproportionate responses. Thus, not all policy making should be large-scale in nature, especially in areas where contextual issues are paramount.

The conventional policy design frame seems to favour evidence-based policy making led by experts, but in conditions when uncertainty is very high and value choices have to be made a pluralist approach may be more prudent (Verweij and Thompson, 2006; Verweij et al, 2006). In this decision making stream, preferences and different perspectives in policy-making are inevitable which means that different strategies have to be applied. Especially in the context of wicked problems, when experimental schemes may be more prudent as "tackling complex problems requires flexible combinations of these various approaches to problem solving" (Head 2014). Rational planning and implementation

schemes or extensive multiparty agreements decrease the chance of more radical experiments, and may increase the likelihood of failure.

From problems to public value

Once policy problems are defined and labelled they can be connected to values and specifically, changes in public value. Public value is a concept that was originated by a professor at the Harvard Kennedy School of Government, Mark Moore, in the mid-1990s from the book "Creating Public Value." Moore described public value as an alternative logic to private value that come to dominate public sector reform debates since the Reagan and Thatcher eras and was seen to be commoditizing every corner of the public sector. Thus, public value can be defined as something that is valued by the public or is good for the public as assessed against various public value criteria – transparency, fairness etc. (Bryson et al. 2014). It goes beyond the understanding of public good defined by economists. It is not only the individual's self-interest, but the aspirations of the society as a whole, collective purpose (Moore1995, Ch2).

Public value tries to capture the notion that the government provides services to the community as a beneficiary and that the beneficiaries are not just the direct recipients of services, but a broader community that benefits from the collective goods provided by the government. Thus, public value can be defined by both the values the public sector aspires to, but also value that is added to the public sphere (Benington and Moore, 2011; Benington, 2015; Moore, 2013). These collateral benefits would accrue from public investments in parks and other civic spaces, education, healthcare transportation infrastructure and affordable housing (Seddon 2008, 162). Moore felt that in order to understand public value, it was necessary to observe how value accrued to all citizens from services provided directly to individual constituents.

As he stated it in 1995, Moore's aim was "to lay out a structure of practical reasoning to guide managers of public enterprises". His conception of public value then has two parts: first it defines the purpose of actions taken by public managers when they are deploying public assets; and second define public value as an end goal that would guide public managers as they make decisions in course of executing their responsibilities. Moore ties the concept closely to a broader definition of individuals not just as consumers or customers, but as citizens with a right to claim public goods and services. As such, public value represents a normative consensus of prerogatives, principles, benefits and rights that can be attributed to both governments and citizens (Bozeman 2007) and can be linked to more values of good governance in general like transparency, participation, integrity and lawfulness. Thus, public value can pertain to both the content pf the service itself and how it is delivered. The heterogeneity of what public value can mean is at the heart to public sector work (Meynhardt 2009).

In a comprehensive overview Jorgensen and Bozeman (2007) outlined 72 different values which they categorised into 7 different constellations: (1) values associated with public sector contribution to society; (2) transformation of interests to decisions; (3) relations between public administration and politicians; (4) relations between public administration and its environment; (5) intra-organisational aspects of public administration; (6) behaviour of public sector employees; and (7) relationship between public administration and citizens. The value sets are outlined in Table 1. This is not a conclusive list and especially in terms of citizen involvement the value perspective has diversified considerably in recent years. Furthermore, there are many neighbouring values (e.g., parsimony and productivity) and the causality between issues – i.e. hierarchy of values –

is very difficult to draw out (ibid.). For example, compromise is directly connected to balancing interests and reasonableness, fairness, dialogue, adaptability and robustness of the practise. As such, some values can be pursued for their own right (prime value) and others are instrumental to achieving other values (instrumental or prime). Yet, it would be wrong to ignore instrumental values, especially, as the fundamental problem with the value triangle is that it treats some of the practises, procedural values (e.g., democratic process) as an instrumental outcome or an output measures, yet, they are ends in themselves (Dahl and Soss 2014), while often they cannot be distinguished on that basis alone. Consequently, analysing public value is both a causal and moral/philosophical inquiry.

Table 1. Value sets and categories

VALUE CATEGORY	PUBLIC SECTOR CONTRIBUTION TO SOCIETY	TRANSFORMATION OF INTERESTS TO DECISIONS	RELATIONS BETWEEN PA AND POLITICIANS	RELATIONS BETWEEN PA AND ITS ENVIRONMENT	INTER-ORGANISATIONAL ASPECTS OF PA	BEHAVIOUR OF PUBLIC SECTOR EMPLOYEES	RELATIONSHIP BETWEEN PA AND CITIZENS
VALUE SET	*Common good* *- public interest* *- social cohesion* *Altruism* *- human dignity* *Sustainability* *- voice of the future* *Regime dignity* *- regime stability*	*Majority rule* *- democracy* *- will of the people* *- collective choice* *User democracy* *- local governance* *- citizen involvement* *Protection of minorities* *- protection of individuals rights*	*Political loyalty* *- accountability* *- responsiveness*	*Openness-secrecy* *- responsiveness* *- listening to the public opinion* *Advocacy-neutrality* *- compromise* *- balance of interests* *Competitiveness-cooperativeness* *- stakeholder or shareholder value*	*Robustness* *- adaptability* *- stability* *- reliability* *- timeliness* *Innovation* *- enthusiasm* *- risk readiness* *Productivity* *- effectiveness* *- parsimony* *- business-like approach* *Self-development of employees* *- good working environment*	*Accountability* *- professionalism* *- honesty* *- moral standards* *- ethical consciousness* *- integrity*	*Legality* *- protection of rights of the individual* *- equal treatment* *- rule of law* *- justice* *Equity* *- reasonableness* *- fairness* *- professionalism* *Dialogue* *- responsiveness* *- user democracy* *- citizen involvement* *- citizen's self-development* *User orientation* *- timeliness* *- fairness*

Source: Based on Jorgensen and Bozeman 2007, 360-361.

The core idea of public value management relies on three ideas: the substantive value the public sector should be producing, legitimacy and support to that proposition and the operational capacity to carry it out (Moore 2013). First, in Moore's understanding public sector agencies should develop their own 'public value propositions,' to a degree akin to tasks-specific mission statements, the bottom line of public aspirations the agencies should achieve. Second, public managers need to actively pursue legitimacy for the idea of public value. They need to both get vertical backing for their value propositions – managing up – and get the legitimacy from the larger public – managing out. This requires engaging with a broader 'authorising environment' (Moore and Fung 2012). The idea of engaging with public value presupposes that public managers extend their influence beyond their normal authority, connect with other actors whose support can help fulfil their public missions (Leonard and Moore 2012, 86). Public managers become 'explorers commissioned by society to search for public value' (Moore 1995, 299). Third, public managers need to be able and willing to pursue the value proposition in practise – deliver on it. This requires both managing down within the specific organisation and managing out to the broader value chain – coordinating and collaborating with a broad range of organizations and groups – that make it possible to actually reach the public value (Alford et al. 2017).

As such, Moore also argued for the "integration of policy and administration" (Seddon 2008, 163) as a way to avoid the potential inertness of the bureaucracy and better connect it to political decision making since it was likely public managers in the bureaucracy that had a better sense of the issues at play than political leaders. In the pragmatic world perspective Moore has introduced to public management, framing and analysing issues from the perspective of public value allows civil servants to become agents of change or helps give power to the public at large to tackle its problems. By articulating what constitutes public value, public managers, politicians or the public itself would be better situated to determine what is a good outcome of decision making as well as the stakes of policy changes; and by extension, what the purpose of public management should be.

In John Seddon's (2008, 164) analysis of Moore's work:

> *"Moore argues convincingly that public managers should be 'explorers'. They should propose ways forward and then be judged on their results. Much as private-sector managers aim to create private value for their company by maximizing long term shareholder wealth, the judgement of value created should be made by the public. Moore argues for the construction of an equivalent method of measuring the success or otherwise of public sector managers that would liberate them to act entrepreneurially without have to wait for the slow, painful process of political authorisation."*

Thus, public value is not only a way to understand the value of services and investments made by government, but is also a way to unleash the public sector to attack future challenges with confidence when they understand that their actions are demonstrably in the interest of the public.

This, of course, has raised many discussions on the politics-administration relationship (e.g., Rhodes and Wanna 2008), but it has been nonetheless picked up in public administration scholarship (Alford 2008; 2014; Alford and and O'Flynn 2009; Benington and Moore 2011; Alford and Yates 2014; Bryson et al. 2015; Alford et al. 2017). The dichotomy between political and public manager domains has been long debated. In the public value context this can be seen in terms of how far outside of their initial scope of

activities public managers are willing to go to achieve a net value benefit for citizens or to learn what the public actually wants (Alford et al. 2017). This implies a move away from narrow intra-organizational focus and a dispersed leadership focus of multi-actor collaboration (Quick 2015). In theory, public servants can sponsor deliberative processes in defining public value, without getting involved with the political content themselves. In today's world many outcomes and innovations are collaboratively co-produced and co-created which means that the operational capacities to pursue public value propositions have to also exist in a network setting (Page et al. 2015). This has been seen to go hand in hand with the advent of New Public Governance (e.g., Osborne 2006; Torfing and Triantafillou 2013) that builds its thesis around interdependency, networks and collaboration rather than government control; and pursues innovation and public value creation instead of procedural or political rationality. At the same time, with an increasing theoretical debate, the public value discussion has only inspired a limited number of empirical research (Alford et al. 2017).

How is public value created?

> *"And finally, uncritical use of the triangle treats public value essentially as an output or outcome when in fact many important public values and practices – and perhaps especially democracy and democratic practices – are not just instrumental means, but are ends in and of themselves (Pateman 1976; Dahl and Soss 2014). Beck, Jorgensen and Bozeman's (2007) inventory of public values, for example, indicates that many public values are procedural. More generally, Dewey (1937) argues that democracy is best viewed as a way of life. In a similar vein, Pateman (1976) asserts that civic engagement is as much about building citizenship as it is about producing better decisions."*
>
> (Bryson et al. 2017)

More specifically than the accrual of benefits to a broader population, how is public value created? How can it be measured? And how is it maintained and how it erodes?

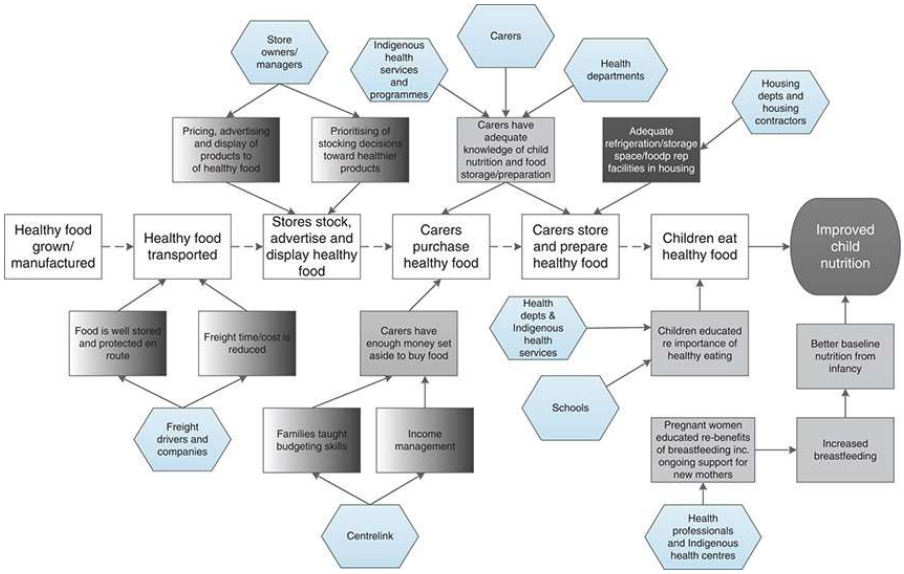
How to assess or evaluate public value is another important question which Moore tackled in his 2013 book "Recognizing Public Value." Mark Moore's approach hinges on what he calls the "public value account." Moore proposes the construction of a 'public value account' where both the idea of a utilitarian welfare for an individual and deontological or principled idea of societal right (e.g., justice, fairness, economy) are juxtaposed against each other. 'Value' within the framework denotes something like worth or utility which is created through actions, objects or situations and should be measured as an aggregate, net-result of a wide range of competing utility or worth (Alford et al. 2017). Illustrated as a financial ledger, the public value account puts the use of public assets such as financial costs on the left. Two additional factors appear on the left, unintended negative consequences and the social cost of using authority. Unintended negative consequences would include an erosion of trust in government. The social cost of using authority attempts to capture the limitations on freedom that stem from using government's regulatory authority.

On the right side of the public value account ledger would be achievements of collectively valued social outcomes. This would include mission achievement, unintended positive outcomes, citizen satisfaction and justice and fairness respectively. In the spirit of managing what you measure, Moore encourages public managers to complete the

public value account according to their own logics to determine what public value means in their context. This is the first step in determining how it can be created, or lost.

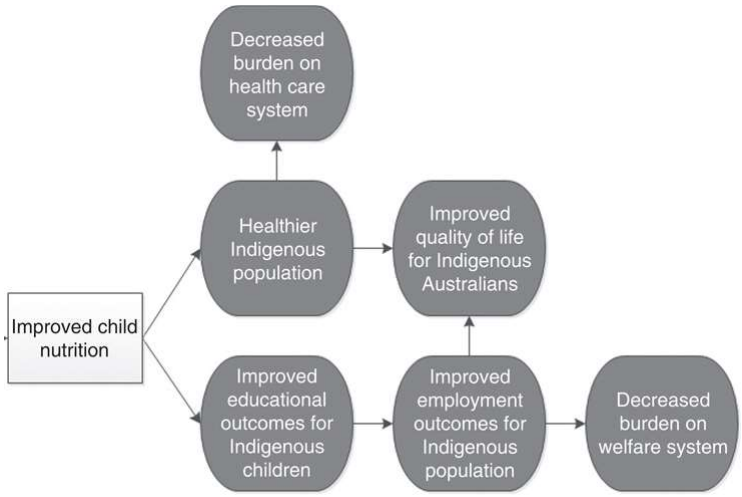
Some also use public value process mapping to deconstruct public sector work into elements and identifying relationships (e.g., Alford and Yates, 2014). Figures 3 and 4 below illustrate these maps in the case of improved child nutrition. However, it presupposes a level of assumption (regarding causality, range of analysis etc.) that may not hold up in practise.

Figure 3. Public Value Process Map for Indigenous Child Nutrition



Source: Alford and Yates 2014, 345.

Figure 4. Expanded Outcomes for Indigenous Child Nutrition Public Value Process Map



Source: Alford and Yates 2014, 347.

In Moore's framework, much of the responsibility for problem-solving and creating public value falls to the public managers. The approach is very actor-focused: given the challenge, context, asking what public managers should do (see box 4). They have to work proactively demonstrating leadership skills that create interaction (Crosby and Bryson 2010) and more intense public engagement – these skillsets are detailed more precisely in OECD (2017a). However, the details of how to design specific cross-sectoral forums (their structure, management etc.) that go beyond transactional engagement and move towards creative problem (re)formation and productive discussions around public value is less detailed.

Box 4. Tools for Public Value

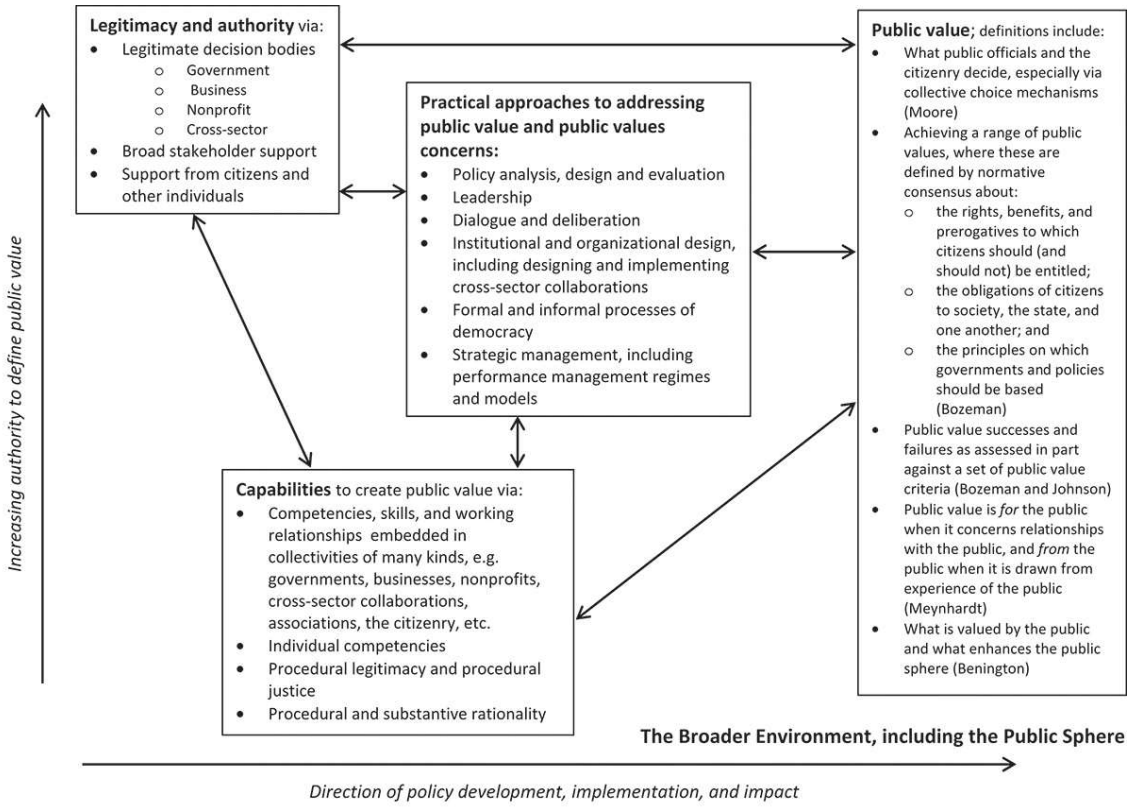
De Jong et al. (2017) examine the tools for public value management. The aim of tools is that there are principles of application in place that should assure the continued process of value-seeking in public organisations. They identify four dimensions for practitioner to use that should help define how public value management can be conducted:

- Ambition: What is at stake for clients, stakeholders and the public at large? How is value defined, and by whom? What more can be done to satisfy clients or improve social conditions? Are we underperforming and missing out on creating more value?
- Strategic space: What are the external circumstances that put pressure to retain or move from the status quo? What room to manoeuver exists for the organization as a whole or the individual public manager to adapt to these circumstances?
- Conflicts and constraints: What value trade-offs, conflicting interests, political power struggles or disputes over budgetary control and governance manifest themselves as a source or result of the situation that requires strategic adjustment?
- Personal role: What can you, as an individual politician, policymaker, policy advisor, executive, manager or professional do to help align value, capacity and support at a more optimal equilibrium. Referring back to the first three points above, how can you shape the value ambition, explore the strategic space and mediate and resolve conflicts and constraints in service of the creation of public value?

Source: De Jong, J., Douglas, S., Sicilia, M., Radnor, Z., Noordegraaf, M. and Debus, P., 2017. Instruments of value: using the analytic tools of public value theory in teaching and practice. Public Management Review, 19(5), pp.605-620.

Bryson et al. (2015) expand on the three dimensions of public value management by placing practises in the centre including policy analysis, design and evaluation; leadership; dialogue and deliberation; institutional and organizational design, including designing and implementing cross-sector collaborations; formal and informal processes of democracy; and strategic management, including performance management regimes and models. Figure 5 describes the practise-oriented approach. The list of practises is non-exhaustive and not entirely public manager centric, highlighting the role of the broader authority environment. Nevertheless, it is difficult to accommodate multiplicity of actors (on different levels, arenas, spheres and logics of action) into the public value management framework: who takes the lead; how are competing value propositions accommodated and how to take a taking a whole-systems approach to public value. Furthermore, involving citizens and other stakeholders to the authorizing environment also means the re-definition of roles, power and identity of societal actors within the engagement process (Bryson et al. 2016).

Figure 5. The Public Value Governance Triangle



Source: Bryson et al. 2015, 15.

Others have started to look into the governance processes connected to public value (Mouton 2009; Williams and Shearer 2011) linking it in more detail to traditional public management tools and systems (Spaneo 2009; Vandenbeele et al. 2013). Invariably the formal governance structures, institutional routines and power games within public organisations will have a role to play in public value management (Bryson et al. 2017). This approach to complexity of many policy problems is more suited to the systemic approach than seeing public value as something that does not emerge from discrete task environments, but it is also multi-dimensional in nature and collectively defined. But this can also help to deconstruct issues in a new way. For example, by using public value perspective it is possible to explore global wicked problems and establish which kind of institutional innovations are needed in the authorizing environment at the transnational level (Geuijen et al. 2017). Geuijen et al. (ibid.) show that in the case of forced migration complex values from well-being of refugees to their rights and duties and costs to society come into play. Furthermore, an effective solution can be dependent on local and national governments, commercial enterprises and grassroots organizations where responsibility needs to be appointed and shared for effective social action. As such, using a public value perspective creates alignment around what kind of future to work toward, which is a key first step in tackling wicked problems.

Public managers can, thus, be subject to value conflicts: e.g., a corrections officer may be aware that the rehabilitative justice will be more effective in the long term, but must deal with politically supported punitive approaches or a solution supported by cost-benefit analysis puts marginalised groups in worse situation (see Alford et al. 2017; De Graaf et al. 2014 Page et al. 2015). Public managers should be attuned to these trades-offs and discuss the long-term effects of different choices from the perspective of value outcomes. Next to compromise (Oldenhof et al. 2014), there are a multitude of different ways public managers can approach such value conflicts (Box 5). However, inside the public sector, different agencies and public managers within organisations can pursue diverging public value propositions at the same time. Hence, public value management becomes a complex, strategic issue in multi-actor, shared-power environments.

This makes problem framing and facilitation so important: how this is done, may either help people sharpen and revise their viewpoints and practises into new and better solutions, or otherwise reduces to a zero-sum game. Dunlop (2015) argues that "as participation increases, different types of knowledge come to the fore and perceived wisdom is challenged and recreated." To be successful in collaborative forums, it is important to design processes that facilitate relationship building and mutual respect early on in the process where conflictual issues may come up (Keast et al. 2004). In situations where serious deliberation has taken place and all group members have had a say, even if some disagree with the dominant view, they are able to accept the majority view - 'rough consensus' – if this reflects the intensions of the group and is formed by an adept leader as such (see discussion in Crosby et al. 2017). In such situations, it is helpful to identify similarities among different arguments and form a storyline to support the decision made. Skilled facilitators can use a variety of strategies to deal with value conflicts in dilative settings. See more in Box 5.

Box 5. Possible strategies to deal with public value conflicts

- Cycling: alternately emphasizing different values that conflict at different points in time.
- Firewalls: distributing responsibility for pursuing distinct competing values to different institutions or administrative units.
- Casuistry: consulting past decisions about similar value conflicts and crafting a customized response based on those examples.
- Hybridization: sustaining distinct policies and practices that pursue competing values.
- Incrementalism: softening or ameliorating value conflicts through a series of small adjustments to policy or practice.
- Trade-offs: safeguarding one value at the expense of another.
- Bias: a specific type of trade-off that gives preference to values that are consistent with a dominant discourse or larger value set at the expense of other conflicting values – in keeping with the notion of a values hierarchy.
- Escalation: elevating questions about competing values to a higher administrative or legislative authority.
- Compromise.

Source: Bryson et al. 2017.

Effective collaboration is not inherently depended on existing consensus. In the field of innovation, different actors may choose to collaborate especially because their diverging ideas and viewpoints will help foster innovative solutions. Innovation thrives on constructive conflicts (Crosby et al. 2017). Making use of innovation coming out of these iterative processes becomes an issue of not only communication, but also mutual persuasion and invention (Dunlop and Radaelli, 2013).

As such, authors have recently started to connect public value with innovation (Crosby et al. 2017). Public value does not eradicate uncertainty; however, based on what is desirable, justifiable and possible it becomes possible to structure ongoing learning and value-seeking within public sector organisations (de Jong et al. 2017). As innovation puts emphasis on reframing existing problem definitions, it is well-suited to the public value narrative. Nevertheless, after a new value proposition is agreed upon and innovative solutions are discussed the attention shifts to barriers in institutionalized arenas – legislative, executive, and administrative settings (Crosby et al. 2017). Collaborative innovation research (e.g., Hartley et al. 2013), informed by network governance literature, points to variety of dangers of both strong and weak ties among actors, powerful actors hijacking collaborative arenas, regressive nature representation, the need for 'democratic anchorage' in such governance forms (e.g., Sørensen and Torfing 2005) – see for example of solving homelessness in Box 6. As such, the strength of ties and the amount of red tape can be a real barrier to collaborative innovation (Klijn and Koppenjan,2010; Brewer and Walker 2010).

What is clear is the high demand for different types of leadership, roles and capabilities in the connected processes (Crosby et al. 2017) – be they boundary spanners (Williams

2012), catalysts, sponsors, champions, stewards or implementers (Ansell and Gash 2012; Crosby et al. 2017).

Box 6. Addressing homelessness in Hennepin, Minneapolis

In 2006 a variety of stakeholders came together in a taskforce to think about ways to eradicate homelessness rather than continue operating overburdened shelters and relying on police and emergency services in crisis situations. All key stakeholders – law enforcement agencies, people experiencing homelessness, elected city and county officials, non-profit and business representatives, philanthropists, and clergy – we included in the taskforce. The elected officials including the Mayor of Minneapolis became crucial sponsors to the process lending visibility and legitimacy. The clergy members were able to activate large networks of volunteers. Various other central actors, advocates to the cause, within the taskforce became the champions of the project convincing the county commissioner of the importance of the agenda. This required reframing of the problem in an inclusive way that looked at housing first and other ills later, made visible the various groups that were affected (not singularly younger, single men) and created understanding of roles of various actors in the conditions of a re-defined public value.

The task force developed into a concrete initiative 'Heading Home Hennepin', a 10-year plan for ending homelessness in Minneapolis and Hennepin County which was formally adopted by the city council and the county board. The plan encompassed a variety of new ideas, combing public resources, diverse sets of organizations and networks. The plan found a champion and implementer from the initial taskforce who was able to assist various groups at risk of experiencing homelessness.

Source: Crosby, B. C. 2016. "Heading Home Hennepin, an e-Case." http://www.hubertproject.org/hubert-material/201/

Policy makers tend to create their own discourse coalitions and authorizing environments prior to making them open to broader public engagement and vice versa, civic entrepreneurs can also discuss policy changes without involving policymakers from the get go. Sometimes, bottom-up', civil society-driven initiatives take over the policy domain after the retreat of the government (Tõnurist and De Tavernier 2017).

There are different authors that have outlined the variety of public participation methods in the 21st Century and discussed the importance of hosting discussions of public value (Nabatchi and Leighninger 2015; Sandfort and Quick 2015). In traditional public participation processes, participants are presented with pre-defined problems and solutions (Quick 2015, 22), whilst newer forms of deliberation allow for multi-directional dialogue, opportunities to take up new problems, redefine work and coproduce the process. This does not mean that these new forums have to be open to everybody, but the variety of perspectives is deemed important (ibid.).

However, the existence of task-focused, public-service minded, politically astute civil servants who can communicate, analyse, build coalitions, innovate – all conditions for a working public value based approach – should not be taken for granted. Public value-based approaches tend to glance over more base characteristics of public managers or their high-mindedness or expert-bias, but the interest of actors and their power bases are core to the approach. Will the approach work in conditions where there is not an existing

consensus about the value proposition, more adversarial political conditions, and difficult policy trade-offs? Even when stakeholders might agree upon the value connected to a complex problem (e.g., getting disadvantaged people to work), it does not mean that running a program based on the former will be easy in a setting where the outcomes have to be socially co-produced. Hence, how realistic is a public value management approach in practise?

In a prior report (OECD 2017), the case-based analysis shows that it is possible, echoing Moore's (2013) own work on child protection or when the US Coast Guard forged its own security strategy post 9/11 (Donahue and Moore 2012). The public value model should be tested more rigorously in a 'wicked problems' setting (see Geuijen et al. 2016).

What does public value mean for cities?

The public sector in general has to deal with the conflicting responsibilities inherent in democracy, rule of law, welfare, taxation etc. (Goldkuhl and Lagsten, 2014). Thus, local governments need to employ professionals from a wide array of realms. This, invariably, creates conflicts of interest that local governments need to manage. The role of the local level is especially complex as they need to steer, regulate and manage the development of the built environment, supply welfare and enact as the most proximate arena of democratic engagement.

Local governments and cities exemplify "citizen-close" innovations that are often more practical, problem-oriented in nature than national level public sector innovation programs. In some cases the local level leads the way on complex societal challenges, where national agreements are slow to emerge – e.g., Covenant of Mayors for Climate and Energy within the European Union.

Does public value have specific meaning when seen through the lens of cities? Likely it does due to the immediacy of services rendered and obligations met in urban settings. Looking at public value creation in cities is unlikely to significantly challenge the definition of public value, but it will change how public value is understood relative to other competing priorities, namely administration and innovation and will alter how it is measured as indicators can be more precisely defined. MaRS Solutions Lab, a policy think tank in Toronto described the balancing of public sector agendas as the Trilemma of Effective Regulation:

> *Designing effective regulation involves solving a trilemma: public value, administration and innovation. You need to balance all three of these elements simultaneously to achieve the best possible outcome.*
>
> (MaRS, 21)

However, we cannot say that the concept of public value has been used widely in practise. Yet there are some emerging participatory practises that find value in the former. Either in helping to work on scale on projects connected to the future (Fusion Point – Box 7), redefining values connected to welfare (Asker Welfare Lab – Box 8) or in organising peer-to-peer networks where public value is created that may not have to follow city boundaries (Regional Innovation Networks in North Rhine-Westphalia – Box 9). This domain will be further analysed in the following case studies.

Box 7. Fusion Point (Sweden)

The Fusion Point practice-based research programme brings together cutting-edge research and urban planning practice to inform the largest urban development project in northern Europe – RiverCity Gothenburg. Fusion Point is a collaboration between Älvstranden Utveckling AB (a municipal development company owned by the City of Gothenburg and put in charge of the land of the RiverCity development), the Chalmers University of Technology, the Department of Architecture and Civil Engineering and the Yale School of Architecture (an external collaboration partner).

For the public company Älvstranden Utveckling AB the RiverCity project was of an unprecedented scale and scope – namely with the developments, twenty years from now, central Gothenburg will be twice its current size. In 2012 the City Council adopted a vision for Gothenburg, by which a lot of land central land, next to the city previously used as shipyard would be converted into living areas, a RiverCity over the next decades. In its vision the city gave the direction to the public company that the city should develop in an inclusive and sustainable way – be a "City for Everyone." What that entailed in terms of practical choices for how public value would be realised – would this mean guaranteeing a fair number of social housing within the future RiverCity developments or a general openness of facilities and common spaces near the river – was not identified and left to the urban planning process.

Älvstranden Utveckling AB owned most of the land in RiverCity and needed to develop it for 50,000 future inhabitants together with other developers over 10-15 years. It was "quite a formidable task." The public company started a widespread dialogue to discuss what implementing the city's vision really meant – "not about building, but the meaning of the vision itself." They decided that the development should become a test area for "top notch sustainability, that every project would push the limits." Thus, they needed to find best practises and have a transparent process of considering their utility and value for the City of Gothenburg. Thus, the public company was looking for means to have discussion partners to talk about "what does it mean to work in different scales, and what does it mean down to the apartments in developments." For instance, while collaborating with the Department of Architecture and Civil Engineering at Chalmers University of Technology in 2015 to develop a smaller detailed plan, they discovered that they could benefit from a deeper, continued conversation around the overall project. As a result, they established the Fusion Point together in 2016.

The aim of the programme was to strengthen the exchange between research and practice in architecture and urban design, and to create meeting spaces where different theoretical and practical perspectives fuse in productive ways. Specifically, around the issue of managing urban planning problems on a much broader scale. The focus is on developing a design methodology for urban development, in which academic knowledge is more efficiently integrated into various decision-making processes of public institutions. Thus, Fusion Point tries to use academic theories to push ideas of collaboration by making it more precise and rationally underpinned.

The aim is to establish a "real vocabulary and an idea of what works" and make participants "aware of conflicts that broad notions of participatory planning are not going to solve." For example, the fact that "you can make it possible to rent an apartment for cheap in neighborhood, but are you welcome on the street?" Thus, the initiative tries to

position itself more directly on participatory challenges of urban planning, and to supply research about subject matter (e.g., transportation, street design, public facilities etc.) to insert this understanding at the right stage of participatory processes. The FP also aims to bridge values between groups to solve contradictions that would become institutional conflicts, which degenerates over time into personal conflicts.

Thus, the FP works in facilitated workshops bringing together practitioners with different experts for a slightly different conversation around urban planning problems – a conversation that is still based around concrete projects and information for planning practice. "In one seminar we had five different offices to look at the same problem at the same time." The discussions have turned out to be very informative, yet, the question is how to keep the dialogue relevant to the decision-making process on a continued bases. Some developments are very fast, they are needed to become proof-of-concept cases for the whole RiverCity. Thus, the pace of change and also the political context of the work (detailed plans are made and approved in the City) are challenges for Fusion Point.

"People have built innovation teams/platforms to help build up this kind of practice. The struggle is to remain relevant to strategic decisions. This is the ultimate sustainability hurdle. It is hard to avoid the tendency to get gradually downgraded to PR projects." (FP Participant)

For the initiative to be successful here is a need for a deep understanding of "strategic angst" of decision makers. This approach requires the ability to reformulate problems decision makers have to allow them to have better ability to understand it. In practice this means "listening to them and bounce back a version of what you heard in a way that adds to their self-understanding" (FP project consultant). This means that the project is not only about the planning process, but also about the "analysis of how the city and other actors work together."

Source: OECD interviews. City of Gothenburg, Sweden; http://alvstranden.com/stadsutveckling/fusion-point-gothenburg.

Box 8. Asker Welfare Lab – Norway

Asker Welfare Lab is a new concept for service delivery centred solely on the citizen, in which all relevant municipal services, together with external partners – the Investment Team – invest together in a person's welfare. This is a de facto redefinition of the 'value' of a person's welfare as a stake in their future outcomes. Thus, the lab takes an investment mind-set and treats citizens as co investors. The aim is to raise the living standards of vulnerable individuals, thereby bettering the quality of life of each person and family in the programme. Most importantly, experts have to partner with the citizens whose lives they want to change, and the programme uses the motto, "No decision about me shall be taken without me". Public sector investment is closely monitored through a new form of reporting, focusing on the realisation of outcomes.

In 2013, the Asker municipality participated in a project with the Norwegian Centre of Design and Architecture (DOGA) and LiveWork Studio on service design as a method to reshape social housing. The purpose of the project was to create a new direction for social housing services under the heading of the "Housing Office of the Future". It quickly became clear that citizens' needs in complex housing and living situations were not adequately met and that the problem was too narrowly defined by focusing on just housing. Municipal workers found that they could not achieve their objective within the traditional service model in an adequate manner. The partners reframed the project and agreed that future services should have a singularly citizen-centric focus and that the public sector should adopt an investor-like mind-set. Before launching the lab, the investment thinking was tested and piloted in 2014 by a new department established within the municipality: the "Citizen Square". With the new principles in place, the municipality developed the model for the service concept of the Asker Welfare Lab.

The lab empowers frontline civil servants, as investors, to work across silos to map and identify citizens' comprehensive needs. To this end, a new planning matrix was designed to allow for structured conversations between the citizen and the investment team. This approach helps to uncover the real nature of the problem. For example, in one case civil servants were working on a more stable housing situation, while the citizen's need stemmed from the immediate threat of losing a driving licence. While this was not a "municipal responsibility", it was clear that the person's overall situation would greatly profit from more targeted help. Investors therefore need an overview of the issues citizens face and must sometimes take risks and go beyond their usual remits, in the hope of attaining greater rewards. For this, the lab uses innovative tools.

Source: OECD 2018.

Box 9. Regional Innovation Networks in North Rhine-Westphalia, Germany

The Ministry of Culture and Science of North Rhine-Westphalia has supported interdisciplinary networks for innovation – regional innovation networks (RIN) – around specific societal challenges. The ministry was interested in new sources for innovation and especially creating ways to work together with citizens. In accordance with policy makers, the aim of RIN is to "step into dialogue with citizens to understand what the problems really are and frame them accordingly" (policy maker). Thus, RIN's aim is to provide a constructive and propositional interaction between intermediaries, practitioners and citizens. The program started in 2014 and has since supported more than 10 networks.

The Ministry puts out open calls to support RIN. They select the most viable ideas and support the network developments iteratively: they give the network coordinator one year to develop the concept and three years to develop the network and grow independent of public support. "We allow the baby to grow up and become independent." RINs should become real laboratories where through collaboration new solutions can be tested. Thus, in RIN it is important to have regions and cities part of the network as most of the interventions connected to problems usually happen on that level. RINs can look into different types of innovation from task-oriented and process-oriented innovation and finally innovation concerning strategic integration of different spheres of activity.

The approach has been applied in various contexts from diabetes to migration and the fields of interest and action for innovation are very diverse. One of the earliest networks, RIN for Diabetes has been working since 2014. They started the network with a survey of people and their primary needs and came up with five important topics that required innovation for the network: prevention for children and youth, lifestyle notification processes, patient initiated research, prevention programs in companies and knowledge transfer/online guides. The network coordinator, the Diabetes Information Centre thought that they would struggle to find partners to build the network and take these goals further, but it proved to be easier than expected, for example: "Surprisingly it was really easy. We had collaborated with the City of Düsseldorf before and the city was looking for health partners." In partnership with the city through different projects connected to prevention and health campaigns the RIN got to the "proof of concept" of its value. Currently, the RIN is working on prevention campaigns in companies.

In the field of migration the newly developing RIN is looking into "filling the gaps in the system" from government policy to citizen action. The support to refugees lies in different administrative levels and local governments tend to build closed groups around the integration of refugees. The RIN hopes to surpass these barriers, collect already established practises and facilitate learning. Thus, the aim of the RIN is to build more inclusive neighbourhoods on the local level that are able to also respond to migrants needs. For example in a recent European Academy of Integration organised by the RIN the possibility of integrating migrant-specific criteria into services was discussed.

Source: OECD interviews.

4. Case Studies on Systems Change and Value Dilemmas in Cities

This chapter presents a selection of in-depth exploratory case studies. The framework of the report comes from the previously completed report "Systems Approaches to Public Sector Challenges: Working with Change" that was launched in September 2017. The previously conducted study showed that dealing with complex problems and changing environments, public sector organisations struggle most with having public value discussions. Specifically,: what is the role of government; what are the trade-offs between diverging solutions and who will in the end benefit. This is especially evident in cities which are closer to citizens and see are facing the effects of increasing urbanization, new technological possibilities, environmental challenges and increasing privatisation first. As a result, governance structures in cities are changing as they are more and more characterised by self-organization, collaborative innovations and social governance models or at least attempts to experiment with the latter. In the current study the OECD is trying to cover three domains: pubic value, public deliberation processes and how cities develop and work toward visions for their future. The report also outlines how cities address specific policy challenges that cannot be resolved through conventional policy processes. OECD has selected 7 in-depth case studies from around the world to exemplify the work.

The cases were selected from a pool of 232 cases that were unearthed selected through a call of city level innovation on the OPSI platform in November, 2016. Some case studies were captured from the call of innovations for the Global Innovation Review of 2017 and some cases were nominated by the national country delegates of the Observatory. The list was narrowed down to 32 cases and then on to 12 cases. The research team conducted 1-2 pre-review interviews with all case owners either by telephone or in a written form. As a result, seven case studies were selected for in-depth analysis, three cases (Regional Innovation Networks in North Rhine-Westphalia; Fusion Point and Urban Data Centres) were captured by telephone interviews and highlighted elsewhere in the report. For the seven in-depth cases, OECD organised missions and met with all the involved teams and organisation in person at least once between June-December 2017 for semi-structured interviews.

The previous sections of the report have not gone into depth into systems approaches, but the systems lens was applied to the analysis of case studies. Systems approaches emphasise the involvement of all affected actors inside and outside government, as well as the importance of leaving room for iterative processes to account for the uncertainty associated with wicked problems (OECD 2017). Thus, the list of interviews was left open and snowballed when necessary. Numerous follow-up interviews were organised after the missions with relevant stakeholders. In total OECD interviewed more than 80 individuals in connection with this study inside and outside the local governments.

The interviews where taped and transcribed when one person conducted the interview or noted developed based on research notes. Based on additional desktop analysis of relevant material connected to the cases, case narratives were developed. Based on the

emerged practises. Then on, the cases were grouped into three domains: bottom up systems change and new forms of citizen engagement, changing landscape of urban challenges and tech-led transformation of urban environments.

Solving Complex Problems through Deliberative Democracy: Citizen Assemblies and Citizen Reference Panels in Canada

4.1.1. Summary

Sortition, or the drawing of lots, is not a new practise. It is one of the oldest forms of democracy. During the current democratic crisis, where trust in government is at a historic low, new ways of involving people in decision-making are being tried.. One of the most long-standing practises of sortition can be found in Canada where the public engagement firm, MASS LBP has been reinventing consultation processes by organising long-form deliberative processes such as citizens' reference panels and citizens' assemblies at various government levels since 2008.[2] These processes, involving groups of randomly selected citizens meeting over numerous months to provide advice or recommendations to government, have helped to tackle some of the toughest and most divisive issues in public policy, in which complex value conflicts or ingrained political self-interest are involved (e.g. amalgamating municipalities, infrastructure projects, housing legislation). The case informs us about the key elements of how to design forums in which a broad range of citizens with a variety of perspectives and interests can come together, discover and propose shared public value propositions in a consensual manner. Integrating deliberative democracy approaches into the day-to-day working of city government can elevate issues, move participants beyond self-interest and incremental conversations.

The case is the most complex in the current report's portfolio: 26 interviews (including focus group interviews) were conducted by the OECD with MASS LBP representatives, city officials and citizens assembly/panel members across five different reference panels and citizens' assemblies. Some of these cases are presented in detail below, while others were used for broader analysis.

4.1.2. Context

"*It is a big problem in cities – how do you hear everybody's voices*?" (City planner)

In 2006 the government of the province of Ontario, Canada established an Ontario's Citizens' Assembly on Electoral Reform which worked on political representation reform. The Assembly came out with the final report a year later recommending a mixed member proportional system which was rejected at a following referendum. Peter MacLeod, one of the founders of MASS LBP worked on the assembly. After the process concluded, there was a general fear that it would be seen as a "*populist gimmick*" and the learning from the experience would be lost. This instigated the creation of the new public engagement firm, MASS LBP in 2008 to build on the lessons of the Citizens' Assembly and work to demonstrate the potential and value of similar processes to governments

[2] See www.masslbp.com/work-panels.

across Canada.[3] While the term "citizens' assembly" seems to add more political weight to the role of the process than panels, here the difference in terms is more connected to the area where the approach is applied rather than a significant difference in the role or mandate of the assemblies/panels.[4]

The overall rationale behind developing the practise was the perceived democratic deficit within political processes and the possibility to bring in a wide cross-section of society together to deliberate and bring in new voices into public decisions. Traditional engagement tools such as town hall meetings and surveys are bad at handling trade-offs which is at the core of most public value choices. The engagement usually is cursory and not deep enough to take in a lot of information. Moreover, public engagement in general tends to be regressive in nature (Tõnurist et al. 2015): those who tend to participate have the time, resources or skills (ability to "*use the language of government*") to do so. However, these voices are likely not representative of the whole community. This adds to the appeal of citizens' assemblies to government – "*we wanted to have a mix of people, otherwise you always have the same kind of conversations*" (city planner).

> "*We had a number of open houses, community member's show up, middle-class home owners. It was very hard to hear from the business owners, renters, younger people, different ethnic groups*…" (City official)

While privilege and inequality cannot be fully removed, the random selection process – civic lottery – helps to mitigate the boundaries of class, age, ethnic backgrounds to be more representative of communities at large. Furthermore, the citizens' reference panels build on a more long-term strategy, enabling the facilitation of "*more thoughtful conversations*" by meeting numerous times over a few months. For governments this means going beyond the single axis idea of decision-making authority and devolving out the policy choices by seeking advice from residents and stakeholders.[5] One of the interviewees described moving towards deliberative democracy as a "*need to shift our sensibility from regarding the public as anonymous survey-takers and instead look to members of the public as barn raisers — individuals who collectively can help to solve complex tasks.*."

Yet there are many questions about what citizens' reference panels and citizen assemblies can do and what their role in local, provincial and national governance should be. There are some risks connected to public engagement as governments can be afraid to lose control the debate, even more so in situations where decision making power to some degree is shared with a group of randomly selected individuals. As such, the team at MASS LBP wanted to "*upend the assumptions about the 'public' – that they are volatile, ill-informed, or emotional*;" and show that "*they are curious, capable and fairly generous*" – in essence, show the productive and constructive capacity of citizens.

While deliberative democracy has a long history, MASS LBP did not, in the beginning, have a lot of current relevant practise to analyse or peers in the world to confer with.

[3] When specific panels or assemblies are discussed their preferred term is used as the term 'Reference Panel' was created because 'Citizens' Assembly' sounded too grandiose and thus, was off-putting to policy-makers.

[4] For example, in British Columbia the term „citizens' assembly" is used, while in Ontario the "citizens' reference panel is preferred.

[5] See further: https://www.masslbp.com/work/

Citizens' panels have been previously used in the United States, Germany in deliberative juries; there are some groups supporting deliberative democracy in Australia (NewDemocracy)[6] and the UK; yet there was no common "how to" on carrying out the panels on different scales in practise. Thus, MASS LBP had to develop its own approach and critically adapt the prior experiences from British Columbia and Ontario Citizens' Assemblies from a $5 million exercise lasting a year, to a $100,000 exercise that could be completed in four-six months..

4.1.3. Getting the mechanics right: the civic lottery

At the core, the citizens' reference panels rely on a process of civic lottery which tries to create a randomised stratified sample of participants.[7] It took MASS LBP a couple of years to get the sophisticated architecture in place and develop more advanced lotteries. They introduced the civic lottery process in with the help of Canada Post. As such, MASS LBP mails tens of thousands of Canadian households each year inviting residents to volunteer to participate in a particular reference panel or assembly. From those who volunteer, a randomised sample is selected with clearly negotiated key community characteristics in mind. In the end the goal is to end up with a stratified sample balanced by some key variables within the community – e.g., gender, age, geography – that will make it to a higher degree, representative.

"*I thought it was some kind of junk mail, it didn't look serious, but still I sent the form back. I thought odds were so low to get selected from such a big population*." (Reference panel participant)

Assemblies or panels usually have 36 to 48 members giving real diversity to the groups. While one might assume that bigger is better, there has to be cap to the size of the panels: if the group becomes too big it is very difficult to work together and have constructive deliberation. Furthermore, in MASS LBP's experience larger groups do not yield a wider array of perspectives and they become more costly and unwieldy. In general, volunteers are not offered payment to participate, but any cost incurred (such as childcare, eldercare, food and travel) are covered by the principal organiser, i.e. the government. As people are volunteering their time to do this work, MASS LBP sees it as their responsibility to provide a kind of a "*citizens' concierge service to make their Saturdays incredible*" and thus, supporting the members in their role as public representatives.

Scope and scale of problems

Citizens' assemblies and reference panels are not solutions for all problems of democracy, but they are a "*niche tool that works exceptionally well in specific circumstances*." In MASS LBP's perspective, deliberative processes are useful when there is (1) a conflict of interests and the rules of the game need to be changed; e.g., redistricting; (2) the public sector know that they have to do something that is not going to benefit everyone (taxation, regional transit etc.); (3) when there is a broader public trade-off (e.g., developing an international airport and NIMBY (not in my backyard) is

[6] https://www.newdemocracy.com.au/

[7] https://static1.squarespace.com/static/55af0533e4b04fd6bca65bc8/t/5aafb4b66d2a7312c182b69d/1521464506233/Lotto_Paper_v1.1.2.pdf

prevalent). According to MASS LBP, "*It is a big ask and a big task. We ask people to work on tangible, well-defined problems, low enough that they will be able to contribute, but high enough to be meaningful*." Many interviewed assembly/panel members echoed the observation that, "*the reference panels exist to help elected officials to make complicated choices*."

The panels seem to work best if there is a concrete question the assembly or panel can answer – i.e. to amalgamate different municipalities or not. As such, it is all too easy to ask questions that a panel will struggle to answer. For example, Duncan-North Cowichan Citizens' Assembly (Box 10) had a more typical reference point: a clear question for which the municipalities wanted an answer. Yet, for some assembly members it was a too "*binary question*" with no overwhelming factor against it, nor clear arguments for a decisive yes. As such, the starting question for the assembly was relatively clear, yet the answer turned out to be infinitely complicated as there is a lot of room for public discussion in terms of which value (efficiency versus collaboration, sense of community etc.) to prioritise.

Box 10. The Duncan-North Cowichan Citizens' Assembly

The Duncan-North Cowichan Citizens' Assembly was convened to discuss the case for municipal amalgamation of the City of Duncan and the Municipality of North Cowichan on Vancouver Island.

The two municipalities had been one at the turn of the 20th Century, but they separated in 1912. Amalgamation was considered in the 1970s, but was never realized. In 2014 citizens from both communities endorsed studying the possibility of amalgamation at a referendum.

The assembly was in the beginning proposed by the larger municipality, North Cowichan where the question had become a matter of politics. As was described by one of the interviewees: "Certain councillors ran on the issue of amalgamation. That it would have significant financial benefits to water, sewage… Just bigger is better." Duncan supported the initiative holding that the solutions should be driven by citizens. Following this, the assembly was commissioned by both municipalities to look into the needs and interests of local residents in the context of a broad, amalgamated municipal structure.

Overall, the topic was perceived as "tricky" for politicians and administrative staff alike as it was really about the rules of the game, city representatives regulating themselves in conditions either choice would mean trade-offs that would affect them directly. Consequently, the "municipal staff was reluctant to do anything extra apart from the financial element and public engagement." As such, in the perspective of one of the interviewees a disconnect between the politicians and administration had emerged: the Council "felt the push," but the senior staff "were not willing" to explore the topic of amalgamation. Most of all the councillors wanted a clear mandate from the citizens themselves.

In this context, the assembly was called to advise the municipalities on the conditions under which the elected bodies should proceed with amalgamation. The ask for the assembly was to develop:

- a set of values which describe their aspirations for good local governance;
- a list of issues which they believed needed to be satisfactorily resolved for municipal amalgamation to merit consideration; and
- a detailed recommendation concerning municipal amalgamation, including any conditions which would need to be satisfied if a merger was to proceed.

The assembly consisted of 36 individuals drawn from a civic lottery randomly distributed to 10,000 area households. 144 people responded to the invitation from which the final members were randomly selected to represent the two communities and roughly match their demographic profile. Some members of the assembly had lived in their respective communities their whole life, others had recently migrated to the region. 12 members were from Duncan and 24 from North Cowichan. The first supports a population of approximately 5,000 people, the other is a broader land area with 40,000 residents. Consequently, proportionally Duncan had a greater representation in the assembly compared to North Cowichan – this was explained by the interviewees as "they see themselves as the ones with the most to lose in the amalgamation." The assembly met six times between January and April 2017, and members of the Assembly hosted a public meeting to hear voices from the community.

The assembly was also able to use a technical consultant to analyse what financial costs or benefits amalgamation would bring. The technical report was put together based on the needs of the assembly and the direct involvement of government staff was eliminated. Objectivity of the latter was key for the assembly. To advise the technical consultant and conclude the financial picture, a technical committee was put together with experts in the field composed of ex-politicians, retired city managers that no longer had political influence, but still had some inside knowledge.

Figure 6. General characteristics of the Duncan-North Cowichan Citizens' Assembly

Source: Final Report of the Duncan-North Cowichan Citizens' Assembly. 2017. Available at:

https://www.dnc-cama.ca/

The assembly started with defining its shared values which included efficiency and cost-effectiveness , quality services and infrastructure, public engagement, environmental stewardship, collaboration, accessibility, approachability and accountability, and respect for local differences. The values where later used to help guide the discussions and weigh different scenarios.

The assembly considered eight different issues:

1. Consistency of services
2. Governance and leadership
3. Economic development
4. Environment
5. Culture and identity
6. Land use and planning
7. Taxes
8. Efficiencies and savings

Many of the assembly members assumed that amalgamation would save money and hoped it would lead to lower taxes. Others feared that amalgamation would only drive up costs. The process however allowed the examination of ingrained biases: "I had some preconceived ideas about amalgamation, that it was the only way forward" (assembly participant).

The technical report that came in halfway through the assembly process showed that combining the structures would produce no meaningful savings. This made the assembly's job more complicated as described by one of the interviewed: "The technical report played into the indecisiveness." One of the assembly participants outlined: "The technical report said that financially it doesn't matter. But do you want to be a joint community or not? It is about public value rather than an issue of technical analysis." The discussion moved from financial concerns towards more "substantive topics" such as the issue of identity, future developments around economic development and business. There was already a history of sharing services between Duncan and North Cowichan including water and sewage to some homes and recreation for many residents throughout the regional district. At the end of the process, based on these considerations the assembly recommended amalgamation. At the end of the process 4 minority reports/comments were submitted. The difference in opinion with the general assembly findings was mostly associated with the lack of savings from amalgamation.

The report was represented to both councils and as the next step the questions had to be added to a referendum. As such, the assembly is not the end of the process, but the start: "we need to consult with other parts of the community. This is just one step in a very long process. There are all kinds of ways this could go differently" (member of the local municipality).

In practise, in some cases the scale of problems citizens' reference panels have faced are too broad to solve all issues (e.g., see the case of Grandview-Woodland Citizen Assembly in Box 11 below; where rather than reach a specific conclusion, the panel must identify

its preferences and priorities) or too developed and limited in scope to provide a challenge (see the Planning Review Panel experience in Toronto in Box 3). The balance is hard to reach, thus, framing the problem correctly as the first step is an important success factor for citizens' reference panels. With the problem and mandate explicit, the panels allow citizens to learn about a complex issue from leading experts and deliberate the value trade-offs involved with the help of trained facilitators.

Learning to deliberate

Constructive debates do not happen by themselves. MASS LBP has developed the Reference Panel Playbook[8] (Figure 7) covering eight key questions connected to planning citizens' reference panels. The Playbook emphasises the need to not only plan the problem for the panel to solve but think about how the work will be used – what the response to the outcome of the panel will be. To benefit fully from the work of the panel it needs to be independent from direct interference, hence, the involvement of public officials, their role and place needs to be considered. Furthermore, the panel should not be isolated from the public, but try to connect and represent the broader community.

Figure 7. MASS LBP Reference Panel Playbook

Source: Image based on MASS LBP.

In general neither city officials nor the citizens rarely know what to expect of the process up front. The process itself is divided into phases: orientation and learning, identifying issues and establishing priorities, reaching consensus and drafting recommendations.. As such, for panellists the works starts with examination of the scope of the tasks and gaining subject matter expertise:

> "*On day one, we heard about this is what we are going to look at, this is our scope, this is what we are trying to represent. There was a learning course that gave content about subject matter, a range of speakers (academic, neutral, high*

[8] See www.masslbp.com/the-references-panel-playbook.

> *level) who came in and talked to us – the kind of lay of the land. Some high level discussions, what are our values and principles. First stab at what is important to all if we don't get into trade-offs yet*." (Panel participant)

Thus, among other tasks the playbook also calls to develop a curriculum for the reference panels. Most panels start with an orientation session and have many learning elements connected to them. Under limited time constraints, the aim is to give people "*just enough*" to make informed decisions, but also give them varied enough perspective from dozens of different speakers who represent a wide range of views. As such, developing curricula for the reference panels is seen as an important step to make the citizen participants understand how the government does things and what the boundaries of action are. The randomly assembled panels can have both expert members – lawyers, architects, even planners who have come in contact with the city government in numerous occasions – and other participants who "*give a layman's point of view – what I would want if this was my neighbourhood*." Both are important and representative of the community themselves, but some levelling up is needed. As one participant outlined:

> "*First orientation day was very helpful. Experts came and talked about variety of areas. They really tried to break it down for us. It was good that we all had the same knowledge*."

Yet, under time constraints it is impossible to remove all knowledge differences or cognitive biases:

> "*Maybe it is the question of time, but the educational side should be improved. The panel really doesn't know much about civics. How to question themselves: for example, how valuable their views are; conflicts in society… It would help to get to better results to have a deeper understanding of what goes on in society*." (Reference panel member)

The curricula development also helps "*the government to make what it knows or think it knows understandable*" (city official). Presentation of material is really important, so, that government stops "*hiding behind*" administrative language. One city official described: "*MASS helped us flesh out what we wanted to get out of it. They helped us to decide what to bring to the panel; and how to frame open-ended questions*." As one of the MASS LBP team put it: "*We often joke that you buy consultation and get the strategy for free. Talking to people will get you half the way there*." The benefit is also seen from the side of panel participants:

> "*For me, the most value comes from up front. Around messaging and communication. They usually don't speak the language that average citizens can fully comprehend. The panel helps to understand that*."

The panel helps to understand people's experience with the city, their relationship with the government and their specific perspectives, which can be very informative to the city on how it more broadly interacts with its constituents or what their real needs are. Consequently, learning does not stop at the beginning of the panel's work neither for local government or citizens.

> "*I would say that 60-70% of the process was really about learning. In the last meetings we started producing." (Panel participant)*

Panellists are asked not only to inform government decision-making, but also write their recommendations collaboratively. Collective writing is a skill that needs to be honed as part of the process as the assemblies work and write their own reports.

Guided deliberation

> "*The first day of the assembly I remember being impressed with the range of the people. They were a bunch of people that I wouldn't normally meet. It was intriguing from minute one. How on earth was this going to work*?" (Panel participant)

The core premise of citizens' reference panels is that the there is a panel chair or moderator who leads the process and the participating civil servants have to act in good faith and allow for a genuine debate and airing of various views. Yet, it should not become a directionless debate. Thus, different ways to avoid falling into the trap 'endless talk' were envisioned by MASS LBP, because panels are convened with explicit mandate. Furthermore, (rough) consensus cannot be always be achieved especially when there are people who have different values and considerable trade-offs have to be made. How then to make everybody feel that they are making a valuable contribution to the process? To describe the process the example of couple's therapy was used. The facilitators' role was to keep the group on topic and steer them into a constructive path:

> "*There were some pivotal moments in the discussion. These Eureka moments, a valid comment that everybody seemed to share and the facilitators were able to steer us to act on them and do something.*" (Panel participant)

The quality of facilitation came out throughout all the interviews and across different assemblies and panels. The facilitators try to keep one person in the group from dominating, keep the groups on track and "*don't let us stray*." However, the boundaries also create frustration in some panel participants:

> "*The orientation felt like the first day of school. Everyone were wearing name tags. They gave us an overview of what the process looks like – the agenda was very much set. My impression was that this was a guided process*."

> "*They are not really conversations. It is presentation by experts, then the panel is divided into 4-5 groups, whose discussion is facilitated. It is directed discussion guided by specific questions and facilitation. Then those opinions are summarised. MASS does a fantastic job and I am truly amazed by the skills of facilitators, they summarize things so beautifully, but again we are working within the boundaries of the system, under directed questions*."

Even under guidance, not all individual effects can be attended to and some, regardless of the efforts made by facilitators remain. Hence, in small groups people with strong opinions may derail some of the discussion or the approach itself (based on group deliberations) may benefit extroverts more than introverts, as was described by some panel participants:

> "*Through facilitation people get good at communicating with each other, yet, one cannot fully minimise the effect of strong personalities.*"

> "*For me the most challenging was to be forced into group discussions. I am not extroverted. I need to think out things myself. Groups take a really long time to get somewhere. I lost a lot, didn't have time to take notes*."

Managing conflict and value trade-offs

In the context of complex problems and value debates conflicts are bound to come up. Many of the interviewed panel participants were surprised how "*effective*" the methodology was especially in conflict situations. The role of the facilitators here was praised – "*in the highest conflict they can disarm people without embarrassing them*". The participants learned and internalised the rules of constructive deliberation over time so that the "*decisions and consensus emerges evolutionarily."* This was for many a very different experience of public engagement:

> "*I really think that the emotional scaffolding allowed us to get beyond opinion. It was more about informed opinion maybe… That is why there was no anger. A traditional community meeting can be really ugly*." (Panel participant)

> "*The word that stands out as a point of pain was "change". People didn't want things to change. But change is inevitable, but the local city residents had a difficult time with that. A lot of people came into the room with that kind of an attitude. But opinions change with increased awareness, you see a switch in their ballot really*." (Assembly member)

The panellists and assembly members can either have strong, sometimes even vested interests connected to the topic or no particular opinion at all – all of which is part of representing perspectives within a community. Yet, through deliberation, sometimes tough calls can be made for the better of the community. This is by far not easy:

> "*Consensus on values seemed rather easy to reach. Maybe it is always like that in a public forum – we want to be, seem inclusive, creative. The difficult part of the consensus was what it means on the ground. It is easy to state your values, but what does it mean in terms of what kind of housing to build."* (Assembly member)

Consequently, it is important to include minority perspectives was also acknowledged by all interviewed participants:

> "*The facilitators also stopped conversation to allow for dissenting opinion. They made it clear that it is not easy if the majority is going with a different direction. It made us more emphatic*."

> "*I am the voice of dissent. Yet most of the time the debate was not really angry which was fantastic. I didn't agree but the debate was still super interesting*."

Consequently, the approach enables addressing very difficult and heated topics. For example, MASS has worked on public consultation addressing supervised injection services (SIS) in Toronto (these services will provide hygienic environments for people who inject drugs to do so under the supervision of a trained nurse), a topic that usually produces very strong reactions from communities involved. Through the approach the community members were able to examine the issue more deeply and analyse "*the lived experience with family members, police, so, they could challenge and question directly, not filter through research*." As such a more balanced understanding emerged and through the broad consultation process, the Toronto Public Health and the Toronto Central Local Health Integration Network were able to create three proposed SIS sites.[9]

[9] Results of the Independently Facilitated Public Consultations Regarding the Addition of Supervised Injection Services in Toronto. 2016.

https://static1.squarespace.com/static/55af0533e4b04fd6bca65bc8/t/58790669ff7c50cc9e27de99/1484326513874/SIS+Final+Report.pdf

The value of objectivity

Governments tend to initiate citizens' reference panels when conventional approaches have failed and they are looking to build a mandate for a contentious decision. From the government's perspective transparency, balanced representation and objectivity are some of the key motivations to start organising citizens' reference panels, while they of course benefit from new insights and also from building up an involved constituency over time. As one of the public sector interviewees put it: "*We all do engagement. All staff does. It is easier to map in the public sector who do not. But there is an implementation gap when it comes to visioning, long-term planning.*" There are sometimes risks involved with public engagement for the public sector as sometimes the processes can be unpredictable, influenced by strong, yet not representative voices in the community. The legitimacy of the process – not just the outcomes – seemed to be something that mattered a lot.

> "*The BC assembly on electoral reform was quite some time ago. But we started to learn more about it. That it legitimises the recommendation, it is a good process, you find community sponsors regardless of outcomes*." (Public official)

While the government could organise the panels themselves there is value in involving a third party, which is not just the city or regional government. One of the government officials involved with commissioning a citizens' assembly described the process as, "*MASS brought legitimacy, objectivity and transparency. We wanted to avoid the process being coloured by staff or politicians*." It validates the process and the panellists seem to pick up on it as well: "*There is a heightened sense of neutrality connected to the panel*" (panel participant).

Yet, in highly contested contexts, not even the Assembly nor an outside process facilitator cannot build back trust if it has eroded over time as was the case with the Grandview-Woodland Citizen Assembly (see Box 10). In general, all interviewed connected with the particular Assembly agreed that the political context was negative to the process - "*on the first day people showed up hostile. It was a real challenge*." So, there was a great deal of scepticism around the planning exercise in general and the city in particular and some remained sceptical to the end: "*There was a bit of apple polishing. Cosmetics*" (Assembly member). Yet, the process was favourably reviewed by the local press and appreciated by councillors who voted unanimously to endorse the panel's report. The assembly itself was a signalling device that the local government was willing to change its approach and start building trust again:

> "*It was a high profile exercise, the city was going to invest money in it; they were going to invest in the process. They were not offering any guarantees, but I got the sense that our recommendations were important to them. They needed us*." (Assembly member)

Box 10. Grandview-Woodland Citizen Assembly[10]

"*Planning is not as explicitly a political as elections, it is a technical activity, but*

[10] http://www.grandview-woodland.ca/

there are also a lot of political aspects." (City official)

"*This is about power. The city has become a kind of a battle ground for resources*." (Assembly member)

In September 2013, the Vancouver City Council voted to form a citizens' assembly on the Grandview-Woodland Community Plan. Community plans are official city documents that provide guidance on issues such as land use, urban design, housing, transportation, and community facilities. Originally, the area was an mono-cultural neighbourhood, but the demographics were changing introducing issues around affordable housing and the interest of renters/home owners. The Assembly's task was to examine different directions for neighbourhood development over the next 30 years and proposed recommendations to City Council to shape the community plan. As such, the scope of the task was really big compared to other citizens' assemblies or reference panels.

To further complicate matters, this was not the city's first attempt to pass the community plan: in 2012-2013, a lot of community work and consultation took place and the Emerging Directions report was put together, yet, some of the recommendations of the city were heavily contested within the community. The main points of friction concerned building density, a rapid transit station and train connections. One assembly member explained: "*After two, three community consultations tons of new high-rise buildings appeared. It didn't accord with the community*." The local government saw the reference panel as a way to build trust back into the planning process.

In June 2014, letters containing a special invitation to volunteer for the Assembly were mailed to more than 19,000 local households, and were also made available at various locations throughout the community. 504 people volunteered. In August, 48 people were randomly selected by civic lottery to the Assembly. Census data was used to ensure there was a proportional number of owners, renters and co-op members, a proportional number of residents from each area in the Assembly. In addition, proportional representation of those identifying as aboriginal and gender balance was assured. The Assembly came together on 11 Saturdays over 9 months in addition to public roundtable meetings, walking tours, and additional research and community outreach. Nine months later, 43 members of the original 48 remained.

During its first phase of work, the Assembly heard from guest speakers who were selected to give an overview of both planning principles and technical considerations, as well as a nuanced appreciation for the issues facing the community. Most of the Assembly's learning sessions were open to the public. Special walking tours were organised to get acquainted with the Grandview-Woodland's seven sub-areas, and to explore how density has been dealt with in other Vancouver neighbourhoods. The Assembly also held public roundtable meetings to discuss their proposed values and areas of interest to local residents. While seeing lot of value from public outreach, the Assembly was somewhat surprised how little the broader community knew about the activity of the assembly and its role.

In the beginning, the members were deeply suspicious of the process: "*A lot of scepticism, here are we knowing little and the city can tell us what is what*." As such, during its first meetings, the Assembly discussed the values that they believed should guide their deliberations and the development of their community. With the sizable task, the panel was a lot more "overwhelmed" and the learning process was long. As one participant described:

"It was really a complex task for 40+ people to do. Frame the challenge and come up with guidelines for the evolution of the community for the next 30 years. Topics as broad as inclusion, housing, climate change..."

Therefore, the process had to be iterative:

> "*We started with questions like what our values are, what is important to you? We broke into tables, 6-8 people, did various exercises and had smaller group discussions. Through discussions we ended up with the same values. The neighbourhood has a lot of students, ethnic backgrounds, cultures, diversity of income levels, homeowners, renters – seemed appropriate to talk about the "weirdness" of it and how to keep it weird*." (Assembly member)

The exercise for the city and also some of the Assembly members was a bit repetitive, echoing the discussions from prior consultations - "I know that there were people who thought that it should not be so open. That we were reinventing the wheel" (Assembly member). Yet, it was important as it established the ground for further discussions and repaired some sense of trust. Within the context it was difficult to quickly move beyond generic questions and the facilitators tried to reach consensus on easier questions first before going towards the deep divisions.

In the second phase, the Assembly discussed potential directions and polices and proposing new recommendations. The task of the Assembly was to draft recommendations to inform neighbourhood-wide policies and to draft recommendations and create guidance maps for each neighbourhood sub-area. The Assembly examined the city's prior policy directions from its June 2013 Emerging Directions report, and in parallel they also launched a series of workshops concerning each of the seven sub-areas in Grandview-Woodland. Some members of the assembly took on individual research projects (on sharing economy, sustainability etc.), reached out to various community groups and exchanged materials.

City planning staff attended each of the Assembly meetings and especially the city's lead community planner for Grandview-Woodland was highlighted as a positive influence providing additional context and sharing the results of prior consultations with local residents. Yet some of the Assembly members perceived that a number of higher level civil servants did not understand what the "citizen assembly was prepared to do" which created some frustration: "*We are here on our own time. We are helping you to clear up your mess*."

The topics around land use and housing proved to be exceptionally difficult and no real consensus emerged. One participant described how demanding the process was: "There wasn't enough time, but I was also tapped out to get another gathering in there." Assembly members disagreed between the well-established home owners and the young people who were struggling to set up: "I don't want higher towers, but that is where I need to live." Hence, the Assembly "reached a consensus on larger issues, but not really on specific sites."

> "*Land use was hard. Way harder than anything else. It is directly about resources and power. There was not enough time to drill down the topic. A lot of the questions are really expert question and you need to go deep into them. It took some personal cost, extra unpaid hours to research this, probably from some other people too*." (Assembly member)
>
> "*Housing was the biggest issue. I feel like maybe with another 9-10 months we*

> *would have gotten there. None of us were experts in city planning, yet, we were told to make proposals. It felt really rushed*." (Assembly member)
>
> During phase three the recommendations were drafted. The assembly members worked in both sub-area groups, but also collectively to discuss how their recommendations would fit together. As mentioned above, it was difficult for the group to wrestle with specific trade-offs and a number of minority reports were presented. The Assembly prepared a final report for presentation to Vancouver City Council in June 2015. In 2016 a new community plan was drafted and most of the Assemblies recommendations were in cooperated. "Based on the Assembly's recommendations we built another document for the council where we integrated 93-95% of the recommendations. Some were out of scope, some we weren't able to do" (City official). In general the Assembly members were happy with the process, albeit they wished for more feedback from the city after the deliberation was concluded. Furthermore, the baggage of the previous debate wore down the participants:
>
> "*If to do it all over again then start with a totally new plan. Take the same route. Put down the pig picture first and then discuss details*." (Assembly member)
>
> *Source*: OECD conducted interviews; Citizens' Assembly on the Grandview-Woodland Community Plan. Final Report. 2015. Available at: http://www.grandview-woodland.ca/

Time as a critical resource

"*I felt a little bit burnt out. I would have continued, if it would have been longer, but I need a bit of a reprieve*." (Panel participant)

Answers to complicated issues can take a while, yet, the assemblies and citizens' reference panels are resource intensive processes and they need to be bound at some point to be respectful of both citizens' time, but also to keep a clear target in mind. Consequently, it is not surprising that time emerged as one of the most critical issues connected to the process.

> "*The limitation was the time constraint. Would have liked to have more time to explore. Very black and white question as well, yes or no. I guess politicians don't know what the answer really is. They try to simplify the question at the end of the day*." (Panel participant)

In practise city officials see that "there is a lot of 'scope creep' among the traditional advisory bodies: if they don't have a lot to talk about then they start to talk about something else," so a more concentrated approach can have its benefits.[11] At the same time, in some cases the engagement is longer as is the case with Toronto's Planning Review Panel (Box 11) which runs over two years (this process is different to other panels as it is designed as a standing advisory body that is made up of randomly selected residents).

[11] Previously the city relied heavily on advisory bodies mandated for a longer periods of time. "Three mayors ago there were 175 different advisory bodies which now have been reduced by half and then on even further cut down" (city official). They became over time isolated and internally oriented.

Box 11. A Planning Review Panel for the City of Toronto

Toronto is a rapidly expanding city with 20,000 net new residents annually. Furthermore, it is one of the most multicultural and multiracial cities in the world: the 2016 Canadian Census showed that more than half of the people living in Toronto identified themselves as visible minorities. The city consists of various regions that the citizens still associate themselves with as one of the interviewees explained: "*Toronto amalgamated in 1997. 92% of the citizens said 'no' at the referendum, but region went ahead with the reform anyway. Different city regions in people´s minds remained and there is a continued affinity to their former municipality areas*." In this context of vast diversity, in mid-2010s there was a growing conversation around engagement in the City of Toronto (especially around the New York-style planning boards, local advisory planning bodies) and in May 2015 the city put out a procurement call to run a new planning advisory committee. MASS LBP won the tender, but it was slightly outside of their normal remit.

> "*Our request was a bit outside of MASS's normal practice. They engaged with discrete topics, but we wanted a longer engagement with different issues. This presented new challenges for them: logistics, how the panel was to be trained*." (City official)

As such, MASS LBP was commissioned by the Toronto City Planning Division to randomly select the 28 volunteer members of the Panel in a manner that represents the diversity of Toronto's population. From the thousands of randomly distributed invitation letters, 503 people volunteered from which the final members were randomly selected balancing six criteria: age, gender, Community Council Districts' representation, visible minority status, renter/owner status and at least one member from the First Nations. Proportions for the latter criteria to represent the composition of Toronto were established based on the most recent available census profile. (In the second iteration of the civic lottery, the city is also looking to represent the disabled community as well as people living in subsidized housing).

Following this, the Toronto Planning Review Panel was established. In essence, the panel is formed of a group of Toronto residents brought together to learn about, discuss, and provide input to City Planning staff on important city planning issues and major planning initiatives. The Planning Review Panel was designed to bring a balance of new voices into the planning process, to offer members access to city planners, independent experts, and stakeholders connected to different planning issues. The City of Toronto's Planning Division and other connected city agencies use the inputs from the panel to complement other forms of community consultation and help to ensure that growth occurs in ways that reflect the values and priorities of Toronto's residents. For the civil servants it was "*part of the move away from the traditional town hall meeting. It is a more effective way of getting there*."

After four training sessions in October and November 2015, designed and hosted by MASS, the Panel met six times per year over its two-year term. The city's Planning Division requested input from the Planning Review Panel on issues such as transportation planning, the optimal density and character of different neighbourhoods, the importance of historic buildings and public art, and the location of new community amenities like parks, libraries, and community centres. The panel does not review individual development applications. The Toronto City Planning Division created a term of reference to advocate their colleagues to come to the panel with the work highlighting the

types of projects they wanted to see at the panel (strategic importance to the entire city, high profile etc.). As such, the first panel reviewed among others plans connected to city density (e.g., the Townhouse & Low-Rise Apartment Guidelines); its recreation areas (Parks & Recreation Facilities Master Plan); transportation (e.g., Scarborough Centre Transportation Master Plan, Don Mills Crossing, Rail Corridor Planning Framework) and panning visual communication (Development Review Signage). Some planning documents (e.g., the Parks & Recreation Facilities Master Plan) were taken to the panel several times.

On average the panel examines two projects per session. The sessions usually started with an update of what is happening. The city planners involved with the particular initiative identify 1-2 external stakeholders to speak on the issue to the Reference Panel and participate in the discussions. The panel has a general discussion and then breaks into smaller groups to dig deeper into topics.

> "*There are a series of pre-prepared questions based on what staff has put forward with MASS. There are usually 2-3 questions per project. Sometimes we take part of the conversation, sometimes act in an educational capacity*." (Representative of the city)

The panel as a rule does not vote, but relies on education and consensus building. MASS LBP's role in facilitating the process was to concentrate on the questions and "tease out the panels experiences around different things." Planners in general saw value in the process: "*It was definitely worthwhile: it brought out the citizens' values versus how planners would look at things. It made me think about what is good for the city*." The reference panel had to deal with many value conflicts most obvious being the need to balance the interests of developers with community benefits.

The panel's perspectives, insights, and priorities connected to the different planning documents are given as reports to Council and published on the City of Toronto's website. The sessions themselves moved around the city building, libraries, community centres etc., and were designed and organised in bright and enjoyable locations.

The first Panel concluded its two-year mandate on November 18th, 2017. The review panel is on its second iteration with a =32-member advisory body consisting of residents selected through a randomized civic lottery process underway. The OECD engaged and interviewed members of the first review panel and stakeholders connected to the latter.

Source: OECD interviews.

The particular case of Toronto's Planning Review Panel does not address a single issue, but a multitude of initiatives connected to the planning process. Hence, the group has to adapt to a variety of different topics. As such, the specific model compresses down the deliberation raising questions about how long people need to engage with a same set of issues. In practise it gives both an opportunity to harness the citizens' input over a longer period of time as they become 'expert' over time on a broad range of planning related problems, but also introduces some problems to the overall deliberative democracy process (not enough time to examine issues over a longer period of time; influence). So, the model for some is successful: "*I think it is the strength of the panel that they are not called together around a single issue. They see other areas of the city, understand the system*." While other saw it differently: "*We do focus on individual projects. We don't*

take the wider plans and transformation into consideration. We don't really connect it to a more holistic view." The panel is designed to look at a broad range of planning policy issues, while focussed consultation activities continue to inform specific site decisions.

In more constrained engagements, the ability to shift perspectives is relatively small. While civil servants who had taken plans to the Planning Review Panel concurred that projects were improved by the suggestions from the panel (as an enhanced for of public accountability), there is little room to change things substantially.

> "*Participants themselves… I guess the level of impact they perceive is not that large. It is not about changing direction. Maybe they expected to have more significant impact. MASS is updating them where the process is, where the project is."* (City official)

As such, in this model projects work better for the panel that are in the process of development, where the panel can provide feedback.

> "*When the documentation is already written and completed then it is overwhelming. It is always a must to send the materials in advance, but even then it is quite challenging to react to a document*."

Role of reference panels in public engagement

> "*I am not sure that it was really clear from the get go what the limits where. How the product of what we would do, the recommendations would affect the process. There were big question marks*." (Panel participant)

The case of democratic accountability is of course difficult as it is not clear in many cases to what degree the responsibilities have actually devolved to the assemblies in practise. Panels do not have binding decision-making powera, but usually there is a two-way contract with the government that latter does not necessarily need to accept all the panel's recommendations, but it does need to respond publicly to all of them and explain why/why not it accepts/rejects them. By design, citizens' assemblies and reference panels complement, but do not replace, other methods of public consultation. They become the "*informed community voice*" among other forms of engagement. For example, the Parks & Recreation Facilities Master Plan that went through the Toronto's Planning Review Panel twice had several rounds of public engagements (based on stakeholder roles and geographic representation) involving broad surveys, focus groups, interviews with targeted stakeholder groups, stakeholder advisory committees, school boards, town hall meetings, web-based feedback. However, many things became less effective over time:

> "*The review panel next to all that was a different opportunity, there was more time to spend with them. They were also fore-armed with a certain level of understanding of the system. It allowed us to not talk about services or programs, but really about facilities. /…/ It some ways reinforced what we had learned before, confirmed it. In some areas it gave more specific feedback, it allowed us to dig deeper, talk about funding and sponsorship, different public-private thresholds. It didn't change the course, but added to it.*" (City planner)

Some organisations, like Metrolinx (a Greater Toronto Area agency that manages and integrates road and public transport) have used the reference panels on several occasions. For example, in 2015 the organisation was thinking about launching a panel around the Davenport Community Rail Overpass – *"a contentious project in the community, very political and wanted understanding what would be comfortable for people*." It was an

opportunity to establish validation and it was instrumental that the senior management team believed in transparency. "*We helped to draft the curricula and then let it go*," said the planner involved. The experience was successful and the planners ended up with some recommendations were surprising to the Metrolinx team, i.e. things "*experts in their silos*" could not think of.

4.1.4. Impact and beyond

"As an immigrant to Toronto, it allowed me to expose myself to the city, get to know what the city councillors are actually doing. It gives you knowledge of the overall operation, new perspective of the city and the direction the city should take." (Panel participant)

MASS LBP's portfolio represents a diverse set of conditions under which the model has been applied. During the time of the interviews, 32 different panels were conducted over 10 years (2008-2018). Thus, as described in the cases above, the concrete results and asks of the reference panels and assemblies have been varied. Hence, it is yet to be seen how successful the reference panel in their substantive effects across the board have been.

Nevertheless, the positive experiences with spreading the model by word-of-mouth ("*hey this is something that seems to work*") specifically in Ontario, enabled the model to become a go-to way of working for some organisations.

For governments in general it has been a very different process compared to traditional engagement. For interviewed civil servants the panels and citizens' assemblies produce a "*very different class of meetings*." When people tend to come to traditional town hall meetings with specific issues, there is more pushback to change and the meetings themselves are poorly attended, as opposed to "*in the panel it was a more balanced conversation, more strategic in nature*" (city planner). The long-form deliberative format seemed for some to limit self-interest and produce more constructive feedback. The process gave a positive feeling to city officials – something that doesn't often go hand in hand with public engagement. Said one official, "*I was very pleased with the level of intense curiosity, people were curious to understand*" and "I *was amazed how quickly they grasped the magnitude of the challenges they faced*." As such, the deeper form of public engagement influences also civil servants, "*the potential value staff see in public engagement*." In general the experience of MASS shows that "*clients come off these days very giddy*." The process was described by many as "*fun*."

As participation is of course voluntary, there are some selection effects in play (you have to volunteer to be part of the pool to be considered) and the issue of representation should be addressed. The commitment it takes to participate can select out certain groups of people: "Time commitment for sure, it was hard. If I were a parent I am sure it wouldn't have worked" (Panel participant). Another interviewed panellist explained: "*Most disadvantaged people don't have so much time to "waste," but it was a step in the right direction*." Furthermore, in most cases, the city officials noted that they had "*a group of quite progressive people*." In some cases, it is just reflective of the sensibilities of the communities the citizens represent.

> "*My concern was that people self-select, that people who already engage with us will join and their ideas and thoughts are already on record. How to reach those other populations is key*?" (City official)
>
> "*It might be a bit of self-selection. That more progressive views come forth and nobody covertly expresses very conservative beliefs. Toronto in general is more progressive. Politically I have no idea how other panellist vote, but if you strip all*

> *that away then you end up with 28 people who have the same values and want the same things for their city."* (Toronto Planning Review Panellist)

From the citizens side there was an overall satisfaction with how the process was organised. It was a large commitment for most people, but they felt that their time and effort was valued:

> "*Initially I thought: how are we going to fill all those Saturdays? This was going to be a quite a lesson. I felt that my time was valued, didn't feel left out or overwhelmed*."
>
> (Panel participant)

And the work MASS LBP together with the people commissioning the panels put into the work has not been left unnoticed by the participants:

> "*I think the success of these assemblies are driven by the forcefulness of leadership of the process, the facilitation skills, the location that was really helpful that puts you in a relating mode*."

When it comes to hard results, MASS LBP tries to only invest in work where the potential is high that the assembly's work is going to be used, otherwise, there is a danger that it will evolve into a public relations exercise. Yet, there is not a lot of time for the team itself to step back and evaluate the work. Sometimes public processes take a long time to complete. Thus, citizens' are left to wait for feedback and effects:

> "*Impact? We haven't seen any really yet. Townhouse development process in cooperated our suggestions. We don't get feedback very quickly or often. Need a bit more feedback that this is the process."*
>
> (Assembly member)

At the same time, there are many soft impacts. The panel participants appreciated the educational element of the approach: "*we educated ourselves in civics, talked with each other*" and "*in hindsight it is really different from ticking a box at the ballot – yes, no. In the end it is writing a paragraph or two about something that I have considered*." As people are highly engaged, the drop off rates across the examined panels and assemblies were very small, on average 1-2 people per panel and mostly due to changes with work schedules. Yet some panellist noticed that "*a couple of people who were representing the lower economic strata have dropped out, because they didn't feel they belonged there. They needed more confidence to speak in front of a group. They need to be encouraged to talk more, that their views have vale, esp. in the context of time limits*."

However, the panel's citizens seem to appreciate their community and city more and have more "*empathy with the city*" – both in terms of how they experience the physical city and its government. One panellist describes: "from time to time I experience the city differently. Notice, this must be why this is happening – that things don't happen randomly." Awareness about the general governance of local municipalities increased considerably:

> "*So much work, skill, experience goes into the day-to-day running of the city. I am quite amazed. All the housing guidelines, regulations*."
>
> "*It was informative to know what the city can and cannot do in urban planning. To think about the fact that doing things costs money. That other things needed to be available for funding. Yes, the process made much more aware*."

While others become more informed, sometimes there is more critical outlining that the process itself should become more critical about the interest of the local government:

> "*My view has not changed about politics in the city over the last year. City caters to the interests of developers, large businesses. It tries to adjust society to the business model not the other way around*."

Due to the overall positive experience with the panels it is difficult for people to let go at the end of the process. Yet the process itself is highly perishable. "*There are always questions about can we keep this going – but they (editor: citizens' review panels) must die."* It is an important consequence as it is important that others have an opportunity to participate and serve their community as well.

> "*All panels must die from a political perspective. Otherwise people get a feeling of entitlement. It is part of the democratic process. Everyone has a potential to get a day to partake*."

The city officials involved did not observe a saturation of ideas within their respective panels, yet in the overall practise of advisory boards noted that:

> "*Advisory bodies become over time isolated, internally oriented. Also externally oriented engagements has to be renewable over time so they don't become complaisant. Yet it is very difficult to eliminate a body once it is established."*

Over time there is also a small danger of group think forming:

> *"Group think – yes and no. I guess the format that makes if efficient might endorse that, but I cannot predict other people's opinions, I cannot speak for everybody in the room. I miss socializing with the group a bit, but it is actually important that they are strangers. There is an element of distance, respect. If you know someone very well, you feel comfortable assuming that you know their opinion."*

From the participants' perspective it is different: *"When the assembly is over, they still want to do something. There are broader ways of being engaged*." As such, a need for much more structured follow-up with panellist was observed, because through the process they had become invested, motivated, community champions. But even without the latter, many panellist continued to be more engaged in community groups or other public activities after the conclusion of the panels.

User-Driven City Transformation: The Mayor's Office of New Urban Mechanics, Boston

4.2.1. Summary

The Mayor's Office of New Urban Mechanics (MONUM) is Boston's civic research and development team which aims to improve the quality of life of the city's residents by piloting experiments and working across the city government with design-led approaches. The approach relies on the idea of 'civic innovation' that is about more than just increasing government efficiency. Thus, MONUM has a singular focus on user-driven, peer-led innovation: service improvement that citizens can feel today. The MONUM team see that civic governments are systematically losing ground in their traditional domains to outside "competitors" and big changes in revenue bases and city operations

are on the horizon or already operative. Yet, few cities have a "systemic" change plan. The MONUM model assumes that working on better value for citizens today will lead to the best kind of adaptation; that change can be influenced and realized by a tactical rather than a strategic approach. Employing a mix of policy entrepreneurs or 'hustlers,' MONUM is very effective in producing positive cases in the city that everybody can see and experience, but is the approach sustainable in the long term?

4.2.2. Context

> *"At City Hall, we'll forge ahead with new kind of urban mechanics. The generation that gave us Facebook wants to engage in public service more than ever before. I say to them that Boston can be your proving ground and home to a wave of municipal innovation not seen since cities first brought water into people's homes."*
>
> (Mayor Thomas Menino, campaign announcement, April 2009)

The Mayor's Office of New Urban Mechanics (MONUM) was established in 2010 as one of the first municipal innovation offices in the world on the city level. MONUM got its name after the then Mayor Thomas Menino's nickname, The Urban Mechanic which denoted the extreme results-orientation that characterised his over 20 years as mayor of Boston. For Menino, "it was not about how things happened, but that they happened."

In 2009, as he campaigned for another term in office, Menino had accumulated political capital and popularity that allowed him to try new things and assert a modest vision for the city. He strongly believed the city should serve the people that live there. Saying that, the Mayor had very personal touch to city leadership – a poll taken in 2013 showed that almost half of all Bostonians had shaken the mayor's hand (Boston Globe through Crawford and Walters 2013). Mayor Menino was known to be "constantly connecting the dots, connecting to people," rather than big vanity projects. As such, there was also not a long-term, grandiose vision for the city: "The vision was in the functioning of the city, to keep things going" (city official). This mentality influenced greatly the strategy and approach of MONUM.

Due to the Mayor's singular focus on high-quality, personally delivered municipal services, also MONUM's aim became to positively impact citizens' lives through a user-driven, civic innovation focus. Consequently, MONUM counteracts the culture in the city that perpetuates low expectations from public services in- and outside of government. The attitude of civil servants that "hard things should be hard" or a "Spinach Model" of public services ("the service is good for you but it will taste like hell") was common in Boston as it was in other cities. As such, a very specific mentality of change developed inside MONUM that worked to address the culture of government itself.

> *"Local government is a service agency picking up trash, etc. If citizens understand you to be a service agency, then government will need to innovate to make better services. This is the simple rationale for MONUM, innovation in city government."*
>
> (City official)

4.2.3. Development of the approach

The story of MONUM is not static: it has developed over the years with various narratives that have given operating coverage to the team and in essence, justified its

existence in the city (the unit survived Mayor Menino's retirement, a rare accomplishment given that mayoral changes have proven fatal to many other innovation units (Tõnurist et al. 2017)).

MONUM was not started around a large-scale new initiative. It started small and it is arguable that not having a big project to finance the team also meant that MONUM had to take a very "lean" to working within the city government of Boston. And they had to prove their worth to a very pragmatic Mayor. As such, for a long time MONUM had neither budget nor staff. In fact, it did not show up in the budget until four years after starting up. All the founders had other roles in the city. MONUM went from five team members in 2012-2013 to seven in 2014-2015 and to the current 13 people in 2017. MONUM also employs a plethora of fellows during the summer, an initiative that was originally started in 2007 under the Director of Emerging Technologies and senior adviser to the mayor on innovation.

Resources come from both inside the City Government but also from outside grants. The expansion in recent years has mostly come through the inclusion of grant funding from private foundations, such as Bloomberg Philanthropies and the MacArthur Foundation, while the City Hall covers the salaries of core staff and a small amount of risk capital. Currently, MONUM's budget is around one million USD per year spent mostly on salaries. With the inclusion of a larger grant from Bloomberg Philanthropies the model of operating has slightly changed, because it allowed the team to concentrate more on core issues – "unlocking more time in cities also requires money." They can now think about diffusing their working methods into the city more systematically, building up a broader capacity for change, rather than only chasing after "quick wins" and demonstration effects. As such, it is not surprising that over the years, the storyline has moved from "a start-up in government" to MONUM as a "design school." Here, internal narratives become instructive to analysis: "Pitch, narrative, importance of storytelling in the way we work. You need elements of truth, but also need to be inspiring" (MONUM fellow).

At the same time, their early reputation as a technology entrepreneur has stayed with them – they are best known for being an i-team (e.g., Carrera et al. 2013; Crawford and Walters 2013; Puttnick et al. 2014; Agawu 2017). As MONUM was not given funds of its own, they focused on how citizens could more productively interact with the city. There were several visible wins with apps early on in the lifespan of MONUM, principal of which was Citizens Connect (equivalent to New York City's 311 that allows community members to report issues directly to government and track responses) and the Where's My School Bus app. The wide-spread use of the latter earned MONUM a lot of credibility. As described by one of the team members: "We don't need a lot of money to do a lot of damage." These cases have stayed with MONUM, as they were instrumental in legitimising the unit within in the city. However, tech is not something that the people at MONUM want to promote: "tech stuff – that is not actually what we primarily do" (team member).

> *"MONUM is a widely recognized name. Municipal tech shop doesn't not have the necessary sex appeal." (MONUM member)*

This does not mean that MONUM does not do technology projects, they have many in their active portfolio from a platform for city-owned property, apps tracking rough patches on roadways (StreetBump) to IoT and sensor use (Barkham et al. 2018). Here, MONUM partners closely with the Boston Department of Innovation and Technology (DoIT) which is responsible for mainly data and the collection and organisation of Big Data in particular (Nguyen and Boundy 2017). While DoIT is more connected to the

datafication side of the city, MONUM has the freedom to concentrate more on launching innovative, and sometimes risky programs that if successful, will be scaled up within a city department or city-wide. It has moved from only increasing access to relevant content, improving city-citizen interactions and digitalizing services to expanding and creating new services and government functions (Agawu 2017). By now they are moving also towards policy innovation, a domain that is not exclusive to MONUM in the City. As such, over time, with experience and growth, the MONUM team's narrative, purpose and the way it works (and looks at technology) has to some degree changed.

City as a "just-in-time agency"

While MONUM has started to talk about technology as "instrumental" to its aims and is – slowly, but surely – letting go of the start-up image, the lean and hungry mentality has remained. The group works with a quick, iterative, rapid prototyping approach. It can be bared down to four design-led concepts: explore, experiment, evaluate and expand. As described by one of the team members: "Our methodology is problem-led, sometimes technological, but mostly just good design. A lot of ethnography. Longitudinal studies are good, but they don't solve problems now – we are dealing with a sped-up process." The teams has to prioritise the "now" compared to more transformative systemic issues. MONUM does "not define innovation purposefully; we are allowing it to happen – we concentrate on human centred design, how to make people's lives better." The aim is to bring problems down to the individual level, share experiences and have normal conversation with city residents. "It is surprising how much people were willing to open up to civil servants" (team member at MONUM).

Thus, MONUM at its core works very incrementally: "We don't have the luxury for built-in products, we work more superficially." The approach starts from the quality of the service, through which intelligent ways to reach the broader system can be found. And while the instrumental methodology could be interpreted as a way MONUM has had to survive in a volatile situation (minimum funds, needing to justify its existence during the change of political leadership etc.), the team sees a deeper philosophy behind it. Simply put, the challenges for government are not going to get simpler. Income revenues for cities are broadly fixed and in this setting new resources can be freed up only with finding operational efficiencies. Cities will face even bigger financial constraints when the transport systems switch to autonomous vehicles – it will mean in practice that parking fees for cities will evaporate.

> *"Cities have to find new ways to create revenue. 70% of city budget is workforce; the way to create efficiencies is by creating solutions "to" people in the system, otherwise, government could become the self-checkout line at the grocery store…"*
>
> (MONUM member)

Consequently, in MONOM's core philosophy people are the core unit of cities and they are the ones that cities must be designed for. It is in broad strokes the same strategy that Mayor Menino followed without defining the logic behind it. When the people and the service quality perspective becomes clear, other barriers fall away as unimportant. Consequently, processes that seemed as barriers to innovation become less important when the purpose of government action (not the role of documents it produces) becomes clear.

> *"Harvard has a procurement obsession. This is absolutely not true. Just write better procurement documents. It is how you think about the role of government. It is not about writing better documents."*
>
> (MONUM member)

If the strategy for a city becomes adaptation to user needs, then long-term visioning does not make sense. Nor do the traditional ways government has addressed mid- and long-term planning: "Government is not going to white paper its way out of this future. Government needs action research teams." Thus, MONUM team leads have been resistant to Blue Sky thinking that does not fit within existing operations (Puttick et al. 2014).

What does this mean in practise? For example, in an education lab, MONUM would hear from parents about what they did not like about the education system. They would then try to fix those tactical problems, not the whole system. It was hoped that the success of the tactical improvement would spill over into other areas, providing positive feedback and enforce the iterative change practise to emerge over time with cumulative effects within the system. Thus, success for MONUM is to not precisely define actions, but "do what makes the most sense;" and the expectation is that "you do whatever it takes" to get it done. As one of the team members explained "the world is littered with pilots that do not do anything" and thus MONUM tries to avoid the trap. The work is therefore fast-paced and action oriented: "I was surprised how fast things moved here, a kind of hit-the-ground-running mentality" (MONUM fellow). Thus, the culture to innovate should not be distinct from the culture to execute. After all, it is the core activities that make line departments successful. However, MONUM has not cracked the challenge of diffusion and scale entirely and is challenged by the culture and language of the public sector.

> *"In government innovation, there is a language problem. Pilots are often vanity projects for local governments. Prototype or experiment are better titles because government must be learning something from the project."*
>
> (MONUM member)

As such, MONUM tries to quickly experiment, pilot things and then leverage line departments in the city to take it into practise (a practise that sometimes requires quite a lot of persuasion). For example, as a bid to make the city streets safer for cyclists MONUM worked on developing Municipal Truck Side Guards by building a prototype that could be put on public works trucks. The Sanitation Department then only bought trucks with side guards which then led to side guards then became a city ordinance. Now Mayor Walsh is advocating for the adoption of side guards at a national level. By experimenting, learning and showcasing the usefulness of solutions in practise, MONUM helps build momentum towards a bigger change.

Consequently, the approach calls for policy entrepreneurs or "policy hustlers" that go above and beyond to achieve results: "We are interested in hiring 'hustlers' – it is very vague… People who get our work style." MONUM is not interested in writing skills per se or other traditional public sector skillsets: "There are too many public policy people in government; they are good at memos, but that is where good ideas go to die." MONUM sees its role as redefining problems; interpreting what services really mean to citizens or what they could mean to them:

"Interpretation is what we do. For example, Boston transportation wants to create a parking meter, but we need to analyse what we mean by 'parking.' A lot of the associated

documents, programs are cultural baggage that we need to overcome. Roadway usage, for one, is a visual thing – that is something that a lawyer would never do."

Furthermore, cities do not have the capacity to be forward looking or create demand by funding transformative thinking even on the service level. Many city departments govern large budgets, but it is heavily tied to service delivery, so, that little resource can be allocated to thinking about what the service really needs to be for citizens, what its purpose should be (see example in Box 12).

Box 12. Getting to the 'salad equilibrium'

In 2017, MONUM was working together with Boston Public Schools (BPS) Food and Nutrition Services (FNS) on the compositions of school meals. The Department served more than 11.1 million meals in a schoolyear from 21,000 breakfasts, 31,000 lunches, 5,000 afterschool and 9,600 summer meals per day. These are incredible volumes of service to Boston's school children each day.

The department puts a lot of effort into maintaining the highest possible nutritional standards and quality for school meals. Yet, it used to be a daily occurrence that schools would run out of salads leaving children with less healthy choices. Talking to children directly, it was clear that they actually wanted healthier options and more salad on their school menu. So, why were they not offered more options or even more salad in general if there was clearly demand for it?

MONUM's analysis of the problem showed that school workers in charge of meal services were suffering a severe lack of agency to make decisions, even when the solution was obvious and in line with the school district's goals. School workers were neither asked nor empowered to look for signals of changing or differing demand than what was currently offered by the district. Hence, workers did not feel safe to challenge current norms, assumptions and conditions.

"Workers would see that they run out of salad every day, but this observation was not instrumentalized. This was due in part to the immediacy of their other tasks and the scale of the system."

(MONUM fellow)

After gaining this understanding, MONUM together with the staff tried to find the 'salad equilibrium' to meet demand and work toward healthy eating objectives. Fairly obvious, however as it was described by the innovators involved:

"In order to ask kids what they want to eat, you need agency to make decisions. Just performing the tasks in front of me [as a public servant] is a massive undertaking. It seems impossible to go on and think about what is the right kind of 'salad equilibrium.' /…/ It is the same in other areas [of the city], for example, parking sign clutter in the streets, maybe there is a 'sign equilibrium,' maybe there is already too much information."

Source: OECD interviews; https://www.bostonpublicschools.org/fns

Compared to other city employees, the MONUM team has the flexibility and freedom to experiment – characteristics that other city departments usually do not have (see also some examples in Barkham et al. 2018). This ability to manoeuvre beyond the existing

norms and think outside of the box is also recognised by the city departments as an advantage for them when they work together with MONUM:

> *"I need someone who is not constrained by the day-to-day to work. Sometimes we need to stop doing things; need rethinking about how the city works, moving away from what we have done."*
>
> (MONUM partner in the city government)

For example, while MONUM worked on the public engagement for the Go Boston 2030 Plan, they asked citizens what transport should be in Boston. The fourth highest ranking value for citizens was experimentation (behind access, cost, etc.). It was something that the city's Transportation Department did not know that residents cared about. MONUM was able to assist with this experiential dimension. Hence, they are currently working with the Boston Transportation Department to determine what the role of the city is in the future of autonomous vehicles. In this project MONUM is a "thought partner" as well as project manager to a traditional city department. They can also help socialize ideas at City Hall.

In another project connected to demand-based parking costs (performance parking) MONUM helped to "get traction on the issue and reduce interference from the bureaucracy to almost zero." The Transportation Department was curious about this approach to parking for a long time, but did not have time or capacity to investigate it. MONUM, however, has the time and scope in the city to take these kinds of new problems on adding a new element to the work of the line departments. Another example of this approach is the Smart City Playbook project (Box 13).

Box 13. Boston's Smart City Playbook

MONUM together with the Boston Department of Innovation and Technology (DoIT) created the Smart City Playbook in 2016. The Playbook documents what the City believes its principles are for the digital right of way and set digital priorities for what was quickly becoming a vendor-driven space. The creation of the playbook was prompted by companies selling products to the local government on a continuous bases and the lack of a coherent position on digital priorities on the city side. Currently, the Playbook has six smart city plays:

1. Stop sending sales people
2. Solve real problems for real people
3. Don't worship efficiency
4. Better decisions, not (just) better data
5. Platforms make us go ¯_(ツ)_/¯
6. Towards a "public" privacy policy

The Smart City Playbook is a living document and provides a public guide for considering different aspects when commissioning smart city services; it set up a request for information for 100 ideas about future of smart Boston.

As with the rest of MONUM's work, the Playbook was created very quickly and iteratively; however, it also meant that there was not a lot of awareness about the product or buy-in from all corners of the city, making its adoption more arduous.

Source: OECD interviews.

Hence, in concrete innovation projects, MONUM staff and fellows play a significant role. The team works with departments across City Hall to help scale and implement solutions. While MONUM is responsible for instigating change and quickly prototyping solutions, it cannot – in the current model – shepherd these initiatives indefinitely. Thus, MONUM tries to guarantee that their partners in different city departments have the ability, time and resources to integrate change into existing operations. As such MONUM has a great deal of independence and the ability to be innovative while not being encumbered by maintaining and supporting the innovation. All in all, the added value that MONUM offers to city departments is mostly non-financial: not because they lack the financial resources to motivate city departments in that way, but their model itself involves rethinking problems, making connections beyond city silos, creating networks beyond the city government with researchers, developers and others who can help advance a particular idea.

Collaboration

MONUM's model builds on networks in and outside of the city; a collaboration driven innovation approach. For MONUM good projects come with good people, leveraging resources beyond their own team – "we talk about network." As such, MONUM's work is inherently relational: the model relies on access to line departments and services; and the sustainability of its projects and programs relies on the ability to build innovation capacity in line departments themselves. This requires building trust. Yet, city

government's working culture is built on low expectations which are a constant challenge for MONUM. Especially, in problems areas where different government silos have to be involved, as described by one of the fellows: "the hardest problems are those that cross departments." Thus, in many cases it is easier to say collaboration, then actually work together collaboratively. Yet, it is also easy to become arrogant when you have the time, skills and other resources to think about change because a "smart hustler [automatically] sees the benefit in these cross-disciplinary projects."

Consequently, MONUM has to be able to ask both challenging questions, but also develop a deep empathy for the lived experience in the city bureaucracy itself not to alienate the departments they rely upon. This comes in part by staying true to insisting on a high quality human experience for citizens and city workforce. It is a purpose that is very difficult to challenge or critique. Furthermore, MONUM operated with a motto of "What do you need? We will get that done for you!" As such, MONUM builds relationships by getting work done, even the trivial stuff – it is a "soft power play" where "being available is an innovation in of itself." The fact that MONUM's name does not entail innovation (making people immediately think about change or technology) provides additional cover. The key as described by MONUM is to be "surprising and delightful" and see them as outcomes in themselves, because these "move mountains." This has been noticed by the line departments: "They came to me with cups of coffee."

Building networks and partnerships is not only an inside of government strategy. To create a new type of value to citizens, ideas, skills and talent have to be drawn in from the outside as well (e.g., Weiss 2015). Thus, MONUM has cultivated a lab-approach to working on specific thematic problems (Burstein and Black 2014). Currently MONUM is engaged with among others a Housing Innovation Lab, Engagement Lab, Education Lab, Third Space Lab and Civic Research lab. The Education Lab was one of the earliest in the MONUM practise and led to a spin-off in housing (Box 14). Among other tasks, the Education Lab helped schools to think about time outside of academic hours, where the housing Innovation Lab works with middle income residents where subsidies fall off. The Engagement Lab tries to find new ways for democratic action in both analogue as well as digital format. This also involves the idea of "play" and integrating gamification and emersion platforms into public engagement (as such solutions such as Participatory Pokémon GO, Adopt-A-Hydrant and Hub2 have emerged).

Box 14. Housing Innovation Lab

Boston's population is expected to grow above 700,000 residents by 2030 (Housing A Changing City: Boston 2030. This growth creates many challenges to the city from the need for increased facilities, open spaces to urban density, growing housing needs and its affordability. Thus in 2014, Mayor Martin J. Walsh called for the creation of a Housing Innovation Lab. In 2015, with start-up funding from a Bloomberg Philanthropies Innovation Team Grant, MONUM established the lab. In 2017, the city continued its committed by taking over the funding of the program itself.

The lab is built to test innovative housing models and accelerating the pace of innovation in the housing sector. Similar to other MONUM initiatives it prioritizes people, tries to engage both internal and external partners to move the work forward and aims to experiment early and often. A number of projects have already emerged from the lab including the Housing Innovation Competition looking for proposals on innovative compact living designs; Density Bonus Pilot which gives developers incentives in exchange for more affordable units; the Additional Dwelling Unit Pilot to simplify the process for homeowners looking to create a rental unit; and an Intergenerational Homeshare Pilot. MONUM's role in each of the pilots is varying, in some cases a social entrepreneur outside of the city takes the lead, in others MONUM is more directly involved. As such, the specific projects advanced in labs are very diverse, in scale and scope, yet still based on identified user values.

Source: OECD interviews; https://www.boston.gov/departments/new-urban-mechanics/housing-innovation-lab

Third Spaces are the newest focus area for MONUM and include spaces in between home and work that city residents can use to connect and create with others. This includes everything from city facilities, parks to barbershops and coffee shops. The aim of the particular lab is to spark community driven enhancements of these spaces. This again requires "interpretation" – showing not only the economic benefit of investments in third spaces from the city and community perspective, but their influence on the quality of life of city residents.

In each lab, the MONUM team builds partnerships across a variety of stakeholders: with relevant city departments and staff, residents, academics, entrepreneurs, and non-profits to design, develop and evaluate pilots. There is no method or methodology the labs are subservient to – approaches and partners are selected by problems at hand or are identified by the partners themselves; this is representative of a kind of professional opportunism rare in the public sector. Thus, the main function of MONUM is to act as a network broker and facilitator. Here, MONUM benefits strongly from the closeness of Harvard University, MIT, and Boston University; there are lot of opportunities for collaboration, open innovation and also great talent to hire. MONUM created the Boston Area Research Initiative (BARI) to strengthen the ties between local universities and the City. They have also created the Urban Mechanics Fellowship which recruits top graduates and appoints them as direct advisors to the mayor. This can be done under a summer program (involving a small innovation project over eight weeks) or a year-long fellowship for those with prior experience in the public and private sector. The majority of fellows end up staying in City Government. Thus MONUM becomes a pipeline for talent to enter city government (e.g., DoIT Boston has hired 6-7 people from MONUM).

At the same time, the flexibility of fellows and talent in general is a challenge for the organisation. It is difficult to hire people beyond the fellowship as described by one of the MONUM lead figures: "if I want to hire 3-4 people from them, then that does not happen, because creating new positions is difficult." At the same time, the hiring issue may be a blessing in disguise as the team with the current model of iterative development is at its maximum size: "If we grew even further, then something probably needs to change in how we operate."

Influence of position within hierarchy

One of the key factors to the cross-departmental working model of MONUM is their location within City Hall. Specifically, placement within the Mayor's Office and the role of a "utility player" are fundamental to MONUM's relevance and success. It is a slightly different model and role from traditional chief innovation offices in the USA (as it is possible to see also different models emerge in strong mayor versus city manager systems).

The Mayor's Office provides political top cover and support. This is not only important due to the clout and "hard power" it gives to MONUM, but it is important to the nature of the work itself:

> *"A group focused on innovation must be separate from the line departments because execution is the imperative in line departments and any extra capacity would quickly be subsumed. An innovation group must be isolated/protected from daily demands to deliver services."*
>
> (MONUM member)

Within the Mayor's suite MONUM has been able to nudge, encourage, and facilitate collaborations inside City Hall and across academic institutions, technologists, and other city governments (see also Crawford and Walters 2013). While the MONUM brand carries its own weight in the city government "there is always the unspoken Mayor Card that we are representing the mayor, but if you plan to work here for longer [than a political cycle], then you need credibility outside of that." You need strong informal power and a strong reputation to make the model work.

In their position within the city hierarchy, MONUM can also act as a buffer for city innovators:

> *"We have been around for a while: understand risk taking, failure tolerance. Fear of failure boils down to communication; a nasty phone call from the mayor, bad press – all communication things. What can MONUM do? Intercept the phone call."*

The unit takes ownership of the innovation projects and carries the risks: "we will take the phone call from the mayor; explain that things are fine, not a catastrophic failure." And in their experience, city innovators – more often than not – do not want their names to be mentioned.

Being close to a strong mayor, delivering results that also the city leadership can engage becomes very important. Within the portfolio approach MONUM is always "thinking what we are getting out of it in 2-3 months." "There needs to be a healthy number of projects that the mayor can instantly get, talk about and get some press on," but this has to be balanced with other activities. It is a traditional mistake in local governments. As such, there is also critique to the city leadership centred model in regards to the

tendencies to go for the low-hanging fruits, cherry picking: "city level units, CIOs and i-teams tend to concentrate on things that they can get done, not politically difficult topics" (city official). Some interviewees put it even more strongly: "MONUM was a foil to Mayor Menino's priorities. They could operationalize his priorities quickly. "

Being so close to the political leadership of the city also puts MONUM's longevity in danger. Becoming too closely identified with a political leader's agenda can become fatal during the exchange in power. As MONUM was closely linked to the vision and operating mentality of Mayor Menino, it was not surprising that during the exchange in mayors in 2015, it was touch and go if the team would remain. MONUM had a good reputation by that time, results to show for its work, but had to still defend its existence and prove in the first months after the exchange their value. The team, used to delivering demonstrable results fast, did not fail in the task. Bloomberg Philanthropy's grant that came in the same year did not hurt either. The New Urban Mechanics operating model has been tried in other cities under the same name as well: Mayor Michael Nutter of Philadelphia established a Mayor's Office of New Urban Mechanics office in his city in 2012. Utah Valley University launched an affiliate of the New Urban Mechanics in 2014 to serve towns and cities in its region. The Philadelphia MONUM, for one, closed its doors in 2016 after the exchange in city leadership (Wood 2016).

4.2.4. Impact: from tactical to strategic

"What does success look like? It is not only how much money we saved, but have we brought joy, delight into someone's day." (MONUM member)

MONUM is an incremental, user-driven model to city government transformation. Not governed by grand challenges, but everyday civic innovation and delivering value to citizens on the ground. As such, the model relies on leading with citizens' value. MONUM uses 'quick and dirty' methodologies to get things done. They try to align tactical responses into a coherent portfolio that over time will start to accumulate and lead systems change within the city. Only over time is it possible to evaluate if this is actually working as intended or not. As MONUM indeed moves very quickly, prioritising tactics over strategic planning, it is important to periodically review its actions, examine its portfolio to be sure that 'quick wins' will not dominate over projects with the most potential value to citizens. The aim is to be consistent across the portfolio, so, that it might one day result in systemic change. As such, MONUM looks over its portfolio annually:

"We do a deep dive into what we have done, analyse what we think we are doing, how long our projects are taking; that during the election season we get a healthy dose of things."

(MONUM team member)

Figure 6. MONUM growth and reach

Source: MONUM year in review 2017.

In everyday practise, MONUM tends to track interactional metrics (network size and interaction; documentation of projects and how many of them have scaled; see Figure 8) as a general form of evaluation, while integrating information from administrative data, user feedback surveys, focus groups, participant observations, qualitative interviews etc. to show their impact on the ground with specific projects. It is important to "tell a good story" – as such MONUM tries to provide a "qualitative, quantitative mix with the focus on storytelling

> *"A lot of people have a cognitive bias to process numbers, others prefer qualitative information. We need to demonstrate that we have done the work of both. Decisions are based on it."*

Here non-conventional tools that allow for good storytelling are very important. For example, MONUM's videography work has been very influential. It marries both quantitative and qualitative information. Here the team believes that "humans are wired for qualitative information, joy and delight." One does not hear often word like "joy" and "delights as government metrics for success. Yet, for the user-driven innovation team the talking provide an opening for a new kind of conversation about emotionally intelligent public services.

"Public servants never talk about why they are doing the work. Joy and delight gives them space to discuss/engage conversations of purpose. For the upper middle class, experience with government is very narrow. If a family is at risk, marginalized, government services are a VERY big deal. They are critical to wellbeing. Joy and delight changes the discussion around these critical services."

(MONUM member)

As such, MONUM credits its record of success and the resulting reputation on a high emotional quotient (EQ); their role as utility players with a delivery orientation; and their position at the right level of government to make a difference. As outlined above, the operating model itself depends on extremely dedicated staff, individuals – "policy hustlers" – that go above and beyond to get things done and are able to build partnerships in- and outside city government. MONUM builds internal capacity to experiment, so, they can take over some risks from their partners who are doing the main fieldwork, while their position at the Mayor's Office gives the ear of the senior leadership if something unexpected comes up.

Box 15. Main self-identified lessons from the MONUM model

The MONUM operating model (based on user-driven innovation, interaction and collaboration) has taught the team that:

1. how you build is as important as what you build;
2. you need to build things that people want to have or need, not what makes your job easier;
3. technology should be used to build compassion and trust, not make things faster – people need to be engage in dialogue using ethnography;
4. interventions are strongest when they are on the sociological, community level;
5. it is important to be delightful – "we don't have to be ugly, scary, and difficult to be with."

Source: OECD interviews.

Working in this way over the years, MONUM has learned to prioritise process in its various aspects (see Box 15). In many ways MONUM and its ilk will be a critical part of city governments in the future as the pace of change will accelerate and the need for innovation culture and capacity in local governments will only grow. At the same time, other types of innovation (e.g. systems transformation) should also be prioritized in city governments. Regardless of the cumulative effect of the portfolio approach, other structures beyond MONUM are surely needed.

Hope Care System: Citizen-led Response to Welfare Blind Spots in Namyangju

4.3.1. Summary

The Hope Care System is systemic response to welfare blind spots in the City of Namyangju. With a mutual-assistance based citizen action system it tries to solve the complex problems of people in poverty or near poverty so that their situation would not become worse and that a state of self-reliance can be reached. The system is built around

a number of Hope Care Centers distributed across a multi-core city domain. The Hope Care Center acts as a study and training place for private and public sector stakeholders to cooperate together in the process of co-producing new types of welfare services. While the initiative started partially due to concern about increasing demand on welfare spending, the public value of extending the welfare system coverage for long-term effects was quickly realized together with the emergence of a sharing culture within the community at large.

4.3.2. Context

Over the years Korea has enjoyed rapid economic growth, even while the improvement of welfare systems within the country are still an unresolved issue. As the social welfare demand – connected to world's fastest ageing society, lowest birth rate, and expanding poor strata – is largely increasing, Korea is introducing new welfare services and increasing welfare budgets for both the central government and local governments. Nevertheless, the perception of welfare in the eyes of the people is still generally negative.

The National Basic Living Security System, the representative cash grant offered via the central government, strictly classifies service recipients based on the minimum cost of living. This system is not available for lower-income families that exceed the benefit criteria even by minute differences, i.e. live just above the poverty line. Even if they are included as beneficiaries, efficient measures to ameliorate urgent expenditure such as medical expenses or for educational expenses that can help prevent passing down poverty are not provided. Overall the system provides limited coverage across citizens' life-course; meaning, for example, significant loss of welfare in later stages of life for many.

Koreans who are eligible for the National Basic Living Security System get help from both national and regional services. Sometimes the various institutions involved double efforts for citizens with more access to public service providers; while those who live farther afield or whose need has not been identified, will have had limited access to welfare services. In many cases, potential service users have to identify their needs themselves and connect with the public organisations. This can be a barrier for many. Therefore, the improvement of public delivery systems to efficiently execute various welfare policies in Korea is standing out as an urgent policy issue.

These problems are especially acute in municipalities such as Namyangju City with a sprawling, less-densely populated area where people in need do not live in concentrated hubs, and are therefore more difficult to identify and reach. Namyangju City is 458.535 square kilometres, which is 75% of the area of Seoul, the capital of Korea, while its population is 662,582 persons, which is just 6.5% that of Seoul. Furthermore, there are not many alternative private sector service providers in Namyangju compared to larger cities. The city is, however, growing due to large-scale land development projects and inflow of low-income groups and younger families escaping high property prices in the capital. The living zone, decentralized into multi-core zones, makes it difficult for the city to be governed by a single service institution. With the steady increase of those needing welfare services and limited funding, a new approach to welfare was needed.

4.3.3. The establishment of a volunteer-led system

The Hope Care System was established by a long-time mayor of Namyanju. Under his leadership a task force was put together and plans were made to open a Hope Care Centre in October 2006. The connections the leadership of the city had across public, private and

other local networks were essential to the establishment of the new welfare initiative. The aim was to establish a system to synergize previously dispersed expertise from both the private and public sector and integrate welfare resources into one service delivery point. By doing so, the city aimed to not only increase the effectiveness of services but also minimize the increase of welfare budget and leverage other resources from the private, non-profit sectors.

A task force to implement the plan was established and instructed to create a master plan for the installation and operation of the Hope Care System. In parallel, an 'advisory group' for the Hope Care Centre was assembled composed of social welfare facility workers, social welfare experts, health and medical experts, and related civil servants. Initially, there were negative opinions about the effect, validity and sustainability of the project. This was because of the uncertainty about the direction of the reform, but also because the civic and private partners distrusted the working method (e.g. will the city authorities use it used to just closely scrutinize and monitor private and non-profit partners?). To overcome these issues, private and public sector stakeholders in the advisory group jointly discussed the project operation method which also laid the ground for working through other conflicts with variety of parties. Also, briefing sessions to the city council, private institutions and civic groups were used to overcome the mistrust in the planning stage. This was essential as over the years, the development of the system became a process of trial and error. Learning from this was only assured, due to the fact that city officials in charge of welfare services were able and required to participate in research, pilot implementation, etc. of citizen led initiatives under the Hope Care System.

In 2007 the project team started to investigate the living conditions and needs of welfare recipients. This information was juxtaposed with potential resources, both established designated services and community welfare resources. The community welfare consultation groups were established to create a network of different stakeholders. As such the city conducted a systemic review of all welfare resources in use in the region. Based on the aforementioned work the first outline of services Hope Care Center was going to provide was put together. In addition, the decision was made to establish centers in four zones due to the multi-core nature of Namyangju.

Box 16. Management of the Hope Care Centre

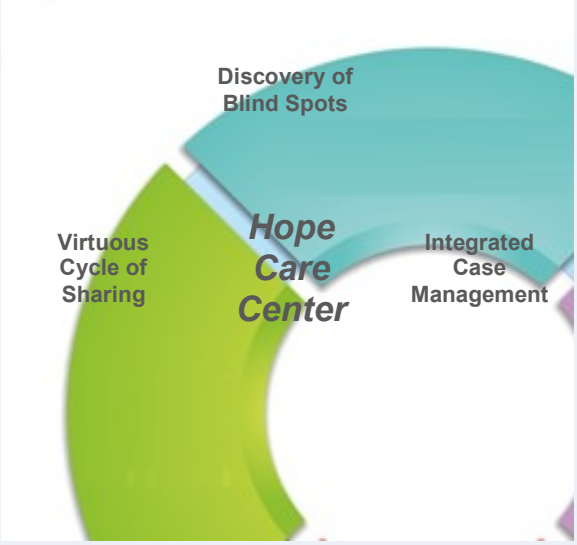
Namyangju City, which has a wide area, is divided into four zones (East, West, South, North), each of which has a Hope Care Center operated by a private non-profit foundation. Thus, the regional centres are entrusted to private social welfare foundations, while, the central care centre is run by the Namyangju City Hall.

New projects are undertaken in partnership under the lead of the municipal government and the private welfare trust in charge of the management of the Hope Care System. The city government only supports the required manpower and operating expenses for regional centres, while the expenses and workers required for the project are supported by citizens' voluntary donations and services.

The distributed system gives easier access to welfare recipients. To prevent dead zones in a wide area and to provide a visiting service for residents who cannot move freely, such as the elderly and the disabled, a mobile Hope Care Center was created. The mobile unit visits at-risk areas by automobile and provides consultation and services, is operated via the central Hope Care Center. Furthermore, centres cannot refuse services to remote welfare recipients – thus, avoiding to some degree "creaming" (service provider behaviour that prioritises easy cases), often a characteristic to quasi-market welfare service systems.

The system operates under the principle of an integrated case management system which allows sharing of information with private welfare service providers. Working across sectoral boundaries proved troublesome as public and private sectors could not share information due to the separated computer systems. To have a systemic overview of the citizens reached and benefits provided, the city built a database to register personal service details being provided by Namyangju City that has a plug-in to the Hope Care Computer system – this prevents services from being overlapped or omitted. Furthermore, within the system welfare information is recoded in line with the recipient's life cycle. In addition, there is an online donation system which enables citizens to support welfare recipients directly (this also allows matching specific welfare recipients to donators making it possible to direct funds personally to those in need).

Figure 7. Pillars of Hope Care System



Source: Namyangju City Hope Care Center. Presentation to the OECD.

The Hope Care Centre develops services based on need surveys of Namyanju citizens and operates those service using volunteers in various areas such as assistance for going out, improvement of residential environments, and educational, medical and living support. Citizens have a possibility to also help discover welfare blind spots by reporting them through an app called "Knocking Talk".

The Hope Care Centre finances are composed partly of local government welfare budget, private financial resources of profit-making/non-profit groups, and various donations and support payments. The costs expended through the Namyangju City budget include personal expenses of regional workers (a total of 44 including centre heads, social workers, and nurses) who engage in commissioned institutions, Hope Care Centre project costs, and operating expenses. Substantial business for low-income groups is implemented by using civil support payments and private resources. Subsidies for regional Hope Care Centers are supported by the Namyangju City budget were approximately KRW 1,140 million on annual average from 2007 to 2011. However, the support payments collected during the same period were KRW 1,110 million. The support payments amount to about 98% of the subsidies. This exceeds by three times the rate (32%) of support payments of average subsidies for community welfare centres in Korea

Source: Namyangju Hope Care System case description.

The city passed an ordinance to install the first Hope Care Centre in April 2007 and the project team reached a co-signed operations plan by November 2007. The ordinance leveraged institutional support to the initiative and helped the civic-led system garner trust which later helped with getting more donations and funding. The team saw this as an early insurance of the continuity of the organization and operation of the system from an institutional aspect.

In 2008 the system created its own website allowing access to more citizens to participate. Furthermore, the team started consultations with academia to find more specialized workers and volunteers for the Centre. In 2010 the Hope Care System was expanded to include one-on-one "hope managers" who could help people living alone or personalize their help to specific family's/individual's needs be it companionship, joint outings, house cleaning or other housekeeping tasks. Hope managers are professional volunteers who have completed a specialized training course. They regularly visit target families and help them in daily life or provide other necessary services. Thus, the system is increasingly reliant on volunteers and seeks their help in addition to other specialized "talent donations". For example, 189 volunteers for the Hope House project (primarily from the Architects Association, Korea Electrical Safety Corporation, Korea Boiler Engineering Association etc.) have repaired around 1,400 houses since 2007. As such, a corporate voluntary service centre was also established and activated along with the creation of the Hope Care Centre. 944 businesses including restaurants, private learning institutions, beauty salons, and movie theatres participate in the campaign to donate their resources, "talents" to the poor: e.g., restaurants provide elderly singles with food once a month. Participating in the system is a positive endorsement for companies as well, due to high public interest.

As of now, a lot of effort is put into expanding the volunteer base, including volunteer development, specialized management, and the introduction of an incentive system. The Hope Care Centre also puts effort into matching the right volunteers with the right people. The number of volunteers registered in the voluntary service centre was approximately 62,000 persons as of 2012. It is steadily increasing every year. The number of voluntary services being conducted via the Hope Care Centre amounts to about 8,000 instances in various sectors such as housework support, education, bathing, and house repair, etc. By the end of 2016 the number of talent donators and volunteers was up to 124,297.

Box 17. Roles within the Hope Care System

The aim of the system is to provide user-centred one-stop services in the areas of employment, welfare, financing and culture together in one place. These include:

- Administrative organization (city officials): Integrated investigation and management, discovery of welfare blind spots, case management, visiting consultation service, etc.
- •Private Organization: visiting care, provision of linked services, resource management, sponsor management, etc.
- Private Institutions: Independent operation assured by institution, necessary social services provided in cooperation with the city.
- Miso (Smile) Finance: Start-up loans for the disadvantaged people with less than 7 credit grade. Results: 1,160 cases consulted; loan amount KRW 16,250 million.
- Credit Recovery: Credit recovery counseling for the low-income bad credit class such as defaulters. 8,318 cases consulted; 3,398 credit recovery cases.
- Food Market: Providing the low-income class in need with donated food. Six operational locations and 57,383 users.

Source: Namyangju Hope Care System case description.

In successive rounds the co-production between public, private and non-profit providers has become more extensive. The service scope provided by the Hope Care System has continuously expanded. In 2011 a small financial group was established to lend initial expenses to people with low credit ratings. Now the centres also integrate psychotherapy centres, community health centres, and food banks – enabling citizens to get these services in one place.

As the offered services became more varied and the needs addressed more complex, the system became crippled by a lack of expertise. While there was a variety of services available, the response to complex issues was insufficient as there was lack of manpower and expertise for case management. From 2009 onward, the Case Management Teams were established and additionally a job counselor position was created. From 2012 onward, mixed, private-public welfare cooperation teams have been dispatched to all four regional Hope Care Centers. This allows officials in charge of public services, private social workers and volunteers in the Hope Care Centre to work in one place and discuss how they jointly intervene in cases in which help is required. Consequently the system integrates welfare resources and sets up partnership networks for at-risk groups. The aim is to not only provide welfare, but to help families in crisis to emerge from poverty. Thus, many interventions concentrate on self-support to prevent those living just above the poverty line from becoming basic welfare recipients. All of these components add to a mutual-assistance citizen action system centered on users and the welfare services they need.

Box 18. Six stages the Hope Care System development

1. Establishment of the Hope Care Centers in four regions (2007) with private social welfare workers and home care nurses.
2. Strengthening the links with other social services (2009-2011): the establishment of the credit recovery committee, food market Miso (Smile) financing.
3. Start of a co-productive work with private partners (2012): establishment of a welfare cooperation team, welfare support team, doctor services at home and legal affairs.
4. Integration of employment and welfare (2013): placement of job counselors, self-support projects.
5. Pilot to re-organize the welfare delivery system (2014-2015): strengthening local community (village) welfare functions and additional pilots
6. Establishment of a Welfare Hub and Administrative center (2016-2017): installation of a customized welfare team in administration center and placement of experts (case managers in Hope Care Centers).

Source: Namyangju Hope Care System case description.

By now, the system has developed into a customized service based on welfare recipients complex needs. This is based on a life-cycle based approach and both the families or individuals needs are evaluated all together. The varying welfare components that case experts evaluate are presented in Figure 9: the system now provides a variety of services over 8 categories with a mixture of public services, private providers, professional volunteers, habitual and occasional volunteers. Cases can address one or two of the outlined components, but can also span all eight categories in extreme cases. Based on the needs, customized welfare teams are put together with specialized volunteers from specific areas – these experts work together to find systemic, cross-cutting solutions for recipients welfare needs. For example life support can include housekeeping support, laundry service etc.; emotional support anything from cultural outings, watching movies to granting wishes; house support home repair, providing a Hope House.

Figure 9. Welfare platform of Hope Care System

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As entitlement for help from the Hope Care System is not set in any regulation, the system developed an 'Electronic Display of Welfare' to make clear to citizens what potential services they could receive. The online displays allow people to view from a glance what services are provided and run a simulation to determine whether they are a potential beneficiary. This was a first of its kind in Korea.

Sustainable funding of the system

Funding was a topic of concern for the system from the start. The city as most other public organizations had budget restrictions and no input from government funds for the reform. Thus, only part of municipal welfare resources were deployed to develop the system. The city also saved resources by remodelling older, disused public offices for the care centres. Nevertheless, it was difficult for the city of Namyangju to find the resources to man the initiative in the long-term. The sustainability concern was that if the systems started to work in earnest, donations from existing private facilities or social welfare institutions might over time be reduced, existing service providers might be interfered with meaning a welfare loss to existing welfare recipients. Indeed, the experts involved foresaw that the initial commitment of the private sector and also social welfare institutions was likely to dwindle over time. As the government had insufficient sources of funding, an alternative solution had to be found.

The Hope Care System was, thus, built on civic donations. Initially, various plans to enable a donation culture to emerge were drawn up. In the end, the city launched a pan-citizen campaign – "One Person One Account" – which amounts to KRW 5,000 (19,681 accounts of 4,975 people). Care centers and the involved nonprofit/for-profit organizations are encouraged to participate in large-scale (nation-wide) donation campaigns. They have used these to collect funding for special causes and for people with specific, more substantial needs. Overall finances have been collected through online fund-raising campaigns.

During its establishment, the Hope Care Centre collected donations of KRW 400 million, and about KRW 2 billion on average annually since 2014. Various support methods through which all citizens, including adolescents and young adults, can participate in fund-raising are provided. For example, Hope Care System made agreements with 20 schools for online donations and launched a parallel campaign "1004 Money Box." At present 4,065 money boxes are donated so far. Approximately KRW 6,800 million has been collected at present from the initial foundation in 2007. The funds are used to cover solely living and medical expenses (operating costs of services are covered by the city hall) for those in welfare blind spots in addition to providing additional access to training and education to children to avoid the perpetuation of poverty across generations. This legitimizes the donation system and gives more transparency to where the money is going.

4.3.4. Impact and the vision of the future

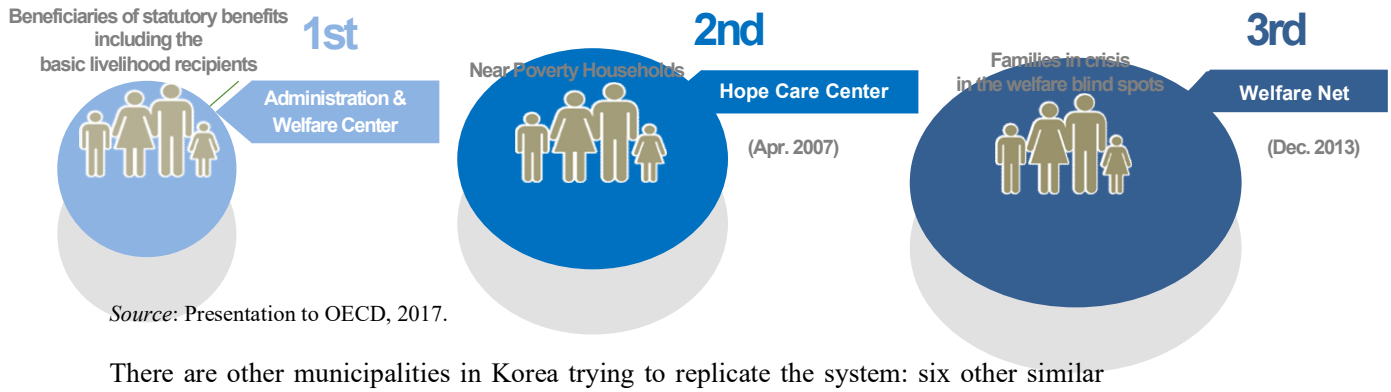
While the Hope Care System was initially put in place in part with fiscal savings in mind, it has become an exemplary case of systematic co-production based on a community welfare provision which is integrated to the city's long-term social welfare development plan. While redundant welfare services and fraudulent benefit have been cut down through the implementation of the system, this has not been the main impact of the initiative. Through trial and error and continuous discussions around the "values" connected to the system, the City of Namyangju was able to rise above a "budget-oriented" welfare policy.

The city takes pride in transforming one of its major disadvantages – an inadequate social welfare infrastructure – into something that has also helped built up strong community ties. Through the development of the system the community's consciousness about welfare issues has increased substantially (asking people to discover those in need of help) and so has the resolve to address neighbourhood welfare issues locally by extending everyday support with the help of experts. Thus, accessibility of welfare services has substantially improved also in remote locations. The interventions are customized to the needs of the recipient and try to go beyond half-measures, thus, giving specialized help – sometimes beyond specific local communities – to address welfare needs systematically.

As the project has continued, a more sharing oriented culture has started to emerge with an increase in donations and volunteers. Also diverse support methods have been put in place to support volunteering of any kind – for example, gas stations and restaurants might donate parts of sales at a fixed rate, restaurant owners host birthday parties and support food expenses for the day, or citizens collect and donate points from commercial advertisement on the Internet, etc. –, but also many specialized volunteers who have a national health personnel license offer care for elderly singles. Furthermore, smaller, local welfare service facilities were integrated within a wider network.

In 2007, at the beginning of the system, the care system recorded 16,000 service cases; in 2011 it had grown to 180,000 service cases provided directly or through volunteers. The amount of cases has increased more than 20 times over the last ten years (from 13,220 cases in 2007 to 274,484 cases in 2016). As a result the overall satisfaction rate with health and welfare services of the city has grown substantially over the years. The Hope Care System has, thus, created a second social safety net for near poverty households (Figure 10) who have previously fallen into welfare blind spots. However, the system does not shut out basic welfare recipients. There are by now over 83,000 identified care targets of which 11,124 are basic welfare recipients, 48,631 are near poverty and 23,668 belong to a low income group. While initially there was concern about the system undercutting existing welfare services, this has not materialized, and the system has been recognised nationally. Thus, a system has been created where citizens help to cope with the limitations of public welfare system not only by the financial services it provides, but also by the complex challenges addressed extending beyond traditional interventions.

Figure 10. Expansion of welfare system coverage



Source: Presentation to OECD, 2017.

There are other municipalities in Korea trying to replicate the system: six other similar welfare models have been created with a Support Team at the Ministry of Health and Welfare. However, the system relies heavily on networks between different sectors to be operational. Strong political support with extensive networks outside the public sector was essential to the success of the initiative. However, beyond that, it was crucial that institutions (advisory committee and community welfare consultation groups) where conflicts between different partners could be discussed were established before the Hope Care System was institutionally enforced by the local government. Thus, the gradual expansion, development and building of trust between different partners proved to be crucial to building the system. Would it be possible to copy-paste a similar system to another location, it is highly doubtful; but building processes and partnerships to mimic such network emergence is more probable. In the case of Namyanju, the changed system has been allowed to emerge over ten years' time with political stability in the background. Would a similar trial and error system prevail in other conditions?

There are of course multiple challenges building a system change like this entails: first of all, the reliance on citizen participation. While the numbers are impressive – around 19% of the local community volunteers or have done so in the past – volunteers are difficult to rely on as they have other engagements and demands outside of the system. This is especially crucial when professional, specialised skills are needed. Also there are many in this pool that volunteer occasionally. Hence, while the system spreads the value of

coexistence, of sharing, it also puts increased responsibility on the shoulders of citizens. The system in Namyangju is kept in check by the central steering from the city, but it is heavily reliant on working networks of people, resources and supporting technological solutions. Furthermore, reliance on donations and national collection drives becomes questionable if more, competing welfare models spring up in variety of locations. Who will capture the attention and charity drive of the population then?

Namyangju currently plans is to spread the systemic model towards an intelligent welfare city to develop even more customized policies through analysing welfare needs by regions, by preventing dying alone of elderly living alone and resolving inequality of access of local resources. The city has plans to establish a foundation of a preventive welfare system using IoT and mobile technologies and to realize an intelligent welfare city. It is also going to develop tailored welfare policies by region and by individuals to provide premium services. Combining peer-to-peer production of welfare with new technological developments, a new welfare method for citizens to mutually assist one another is expected.

Collaborative Innovation in Gothenburg Region: Working across Outdated Administrative Boundaries

4.4.1. Summary

Governments on all levels are facing increasingly complex problems that cannot be solved in one jurisdiction alone be it local, regional or the state. What should local municipalities do when citizens' needs do not follow their administrative boundaries anymore? The region of Gothenburg in Sweden has been over time developing new ways to push collaboration across traditional municipal boundaries. The Gothenburg Region Association of Local Authorities (GR) has been working to compensate for restrictions imposed by administrative boundaries between the city and the surrounding municipalities since its establishment in 1995. The inhabitants of the Gothenburg region want their needs to be met seamlessly, regardless of these imposed boundaries which play no role in their everyday lives. Over time, new forms of collaboration have emerged in sustainable urban planning, education, environment among others and recently also in response to the refugee crisis. As such, the case shows that new types of complexity also require different structural solutions to address new types of problems.

4.4.2. Context

Sweden is divided into 290 municipalities, some bigger, some quite small. The Gothenburg Region Association of Local Authorities (GR) is a co-operative organisation uniting 13 municipalities in Western Sweden. These include: Ale, Alingsås, Göteborg (Gothenburg), Härryda, Kungsbacka, Kungälv, Lerum, Lilla Edet, Mölndal, Partille, Stenungsund, Tjörn, and Öckerö. The region serves a population of close to 1 million. The City of Gothenburg with a population of more the 570,000 people is by far the largest municipality within the Association. The region on the whole is growing over 1% per year mostly due to immigration. The region is highly integrated: people live in one municipality and go to work or school in another (usually in the City of Gothenburg).

While regional collaboration has been developing in the area since the late 1940s (esp. in the field of education), regional associations are not part of the legal structure of public governance in Sweden. By law no authority is given to the associations; participation for municipalities is voluntary as well as devolving power or delegating service delivery in

any form to the bodies. Yet, quite complicated governance structures have evolved around the regional bodies (Box 19) and they are – especially GR – taking up increasingly complex tasks.

Box 19. GR governance and main areas of action

The GR delegation has 97 members and it has a political board of directors composed of 22 representatives and 11 deputies. The chairman and three vice chairmen make up the presidium of the board of directors. The board appoints management groups for different areas of activity within GR. Politicians are not elected to the GR board, but political parties elect people to serve on it themselves – as such the representatives are "selected not elected." To assure fair representation, the political representation is balanced for the overall region and board positions assigned to parties accordingly. The City of Gothenburg has even given up a seat to give more voice to the surrounding regions, which was seen as a turning point in the relationship between the city and the surrounding municipalities:

> *"Gothenburg does pay attention to the smaller municipalities. It's a good relationship between the different representatives of collaborating municipalities in general – we-need-the-others-attitude. Even though we (smaller municipality – Editor) cannot give so much back."*
>
> (Municipal representative)

The regionally balanced governance structure creates situations where the party in power in a particular municipality will have directly their own representative in the Association. "This makes it possible to have a Chairman of GR from a conservative party, while Gothenburg is more social democrat" (GR board member). This is both an opportunity and a challenge: on the one hand, it forces GR to look for consensus past party politics; on the other hand, it is quite challenging as the chain back to the municipal government is either strong or weak, and sometimes GR has to "work hard to make sure it is strong."

The different GR focus areas – education, social welfare, regional planning and environment issues – are directed by political steering groups that are supported by the GR departments. The departments have their own staff, most of them working full time but there is also temporarily hired staff for special assignments or for projects running for a shorter periods of time. Added to this there are a huge number of networks consisting of representatives from the municipalities. These meet regularly and exchange ideas and experiences in order to develop quality. As such, very specific type of people join the organization as was described by one GR employee: "You tend to get the most energetic people who are interesting in doing more."

The Association is financed through membership fees (10-15% of the total revenue) and partly through income from conference and trainings, special investigations, research projects, EU funding, initiatives at national level (that can be targeted to regional and local levels) and other joint endeavours with municipalities.

Source: OECD interviews, Gothenburg Region Association of Local Authorities (n.d.) webpage.

The task of the Association is to promote cooperation across municipal borders in the region, because, simply put: "people living in these areas don't care about municipal boundaries. We have to work together to give each person the same possibilities and same

potential" (GR employee). GR enables local governments to explore ideas and experiences within the region by creating a platform that stimulates a cross-municipality innovation processes. As part of the latter, GR's role is to pilot and experiment with new ways of securing social welfare within the region. Thus, the Association has become a de facto intermediary for discussing future scenarios for the region. GR does this by running development projects, creating and leading networks and stimulating constructive dialogue and debate within the latter.

4.4.3. Development of the collaborative approach

GR is a relatively small organization with a long history. Yet, there are "no issues too big or small for GR, but it is not possible for GR to take over municipal work" (association member). The organization and initiatives are very political and their ability to act is based on "tradition and trust." The model is a viable form of collaboration only if GR is able to demonstrate value added to its members and garner solid backing to act in a specific area. GR itself sees its greatest value in areas where there is a high demand for cooperation, yet, where there are competing values and goals between individual municipalities (Figure 11).

Figure 11. When and how is collaboration through GR useful?

Source: GR presentation to the OECD, 2017.

While "almost every topic could be discussed regionally" (GR employee), GR concentrates on issues such as regional planning, sustainability, infrastructure and transportation strategies, education etc. Currently there are eight challenges that GR is dealing with:

- good conditions and future for young people
- inclusive region with good living conditionals throughout life

- lifelong learning
- housing and living (physical housing)
- balanced the labour market
- sustainable environment
- infrastructure
- digital development and technology

Yet, GR can only proceed with new topics if the participating municipalities agree to do so. There is no hard power or incentives to use. The strongest thing the GR Board can do is make a recommendation to municipalities. The two exceptions are in the field of education (school admissions) and regional spatial planning where municipalities have placed some of the responsibility with GR. Outside of these areas: ”We do things we agree upon, other things we leave out” (GR employee). Hence, GR’s strategy could be described as ”cooperation on the lowest common denominator” with the possibility that over time mandates and areas of collaboration can be stretched.

> *” What we cannot agree upon – let’s avoid it, let’s put it aside. We are gradually building the picture, build trust. And then you can stress and stretch how far you can go.”*
>
> (GR employee)

This is pragmatic strategy in the domain where no hard power exists to expand on the issues. The region can only go as far as the members are willing. As such, collaboration is ”organic” in many ways, varying levels of co-operation and collaboration have emerged in different fields and are “backed in history.” As GR relies heavily on outside funding also dependence on project funding has had an effect. Some areas good at bringing in funds (from the EU or elsewhere) can experiment more and expand their portfolios, while other focus areas have remained smaller. “Sometimes these (projects funded by outside bodies – Editor) will lead a municipality to becoming a shared service provider, especially with education programs.” As such, in some domains like education (Box 20), collaboration has become more institutionalised and GR has taken over some of the functions from its members.

Box 20. Education cooperation in GR

The earliest form of formal collaboration in region took place in 1947, when the municipalities surrounding Gothenburg found out that pencils were cheaper in the city. In 1950 13 Directors of Education created an organisation procure resources (starting with pencils) together. In the 1980s several professional networks were founded bringing together Directors of Education, upper secondary schools' principles, Heads of Adult Education etc. In 1995, GR founded, merging the other municipalities' network from 1947 with the City of Gothenburg.

With the prior history of collaboration, joint actions in the field of education increased rapidly. One of the earliest piloted initiatives was the internet-based central admission for upper secondary schools in the region. In 2000, a joint international school was founded, needed because of large multi-national companies (e.g., Volvo). In the late 2000s, several large-scale projects followed, often funded by the EU. This allowed the education unit to grow from 15 to 90 people within GR.

In early 2010, municipalities put money together for a wider selection of vocational education and training for adults in GR. This had been proceeded by a longer term collaboration buying all teaching material for all schools in the 13 municipalities.

By now GR has 25 domain-based professional networks in the field of education. The meetings are fairly informal, in many ways facilitated by informal connections and friendships; though the decisions to recommend collaboration can be more formal. In the context of smaller municipalities "representatives often feel very lonely when on their own in municipality." Not all recommendations are appreciated by all – there are many value trade-offs and directors all negotiate among themselves or with their networks to get recommendations on a more agreeable ground. One of the Chairman's explicit roles in the professional networks is to keep discussions at regional level. Every network has a secretary belonging to a department, but political networks/committees at GR normally do not have mixed network meetings with senior officers from the municipalities. They see value in not mixing roles (e.g., political and administrative), and want delineation between regional and local thinking. The network secretaries serve as links to GR. These professional networks are important because they allow GR to reach into communities of practise and ask questions (form the "blood systems") or attend meetings to see what is on the horizon.

In the field of education cooperation agreements (usually for four years) are applied where municipalities voluntarily agree with the recommendations. With a cooperation agreement, admissions to upper secondary schools were ceded to GR in 1995. This means that students in the 13 municipalities can choose their own program and school no matter where. This first region in Sweden to achieve this (albeit many have followed in GR's footsteps) and it took a lot of trust to roll out the innovation.

> *"This worries smaller municipalities because they thought too many would go to Gothenburg. This happened, but many people also went from Gothenburg to other municipalities. Logical next step would be to do the same with preschool."*
>
> (Political representative to GR)

That did not mean that hard choices did not follow. Through the central IT system that was developed to carry out the system, GR had also great statistics on school admissions

and retention. The organisation is very transparent with the former and publishes this information without obstacles from local governments. Municipalities chose to use this system voluntarily because it made things easier and more efficient and gave them better visibility for planning. Furthermore, privately run upper secondary schools (42% of the offer) have chosen to pay for the same service even though they do not have to. This has also meant that two large, but less attractive public schools for students have by now closed and from an individual municipality perspective this has not been easy:

> *"We closed our upper-secondary school. It was too expensive, too few people. It damaged the prestige of the municipality and was raised as an issue during the election. We paid the price for it in elections – it hurt us politically."*
>
> (Local politician)

Currently, the education unit at GR sees the need for more regional collaboration with industry. National steering documents only say that schools should cooperate with schools locally, but GR moves with the identified regional demand and is building more strategic partnerships with industry.

Source: OECD interviews.

Yet through dialogue over time common ground can be built also in areas where GR does not have a historic remit: "we will still discuss things that aren't on front burner so that maybe two years later become our key focus areas" (GR platform lead). Thus, it is important to get topics on the table, allow the municipal representatives to "take the municipality hat off and think about the regional level." For this, platforms are established where municipalities can come together and exchange experiences; where decisions are usually not made, and questions are relayed to other groups or to municipalities. The common discussions contribute to what was described as the "shame factor:"

> *"If we discuss something then some municipality cannot go against the group if all others say they will do it. You want to be part of the gang."*

Even so, representatives can forget their promises when they go home. The GR employees see that their key factor is "how to make them keep their promises when they go home?" For example, in the very important area for municipal development of urban planning, the regional plan is made in agreement with municipalities, and then development and decisions are made within municipalities that are in accordance with the plan. For example in the field of transportation a clear direction was taken (K2020, Public transport development program for the Göteborg Region):

> *"We decided on 5 directions for train, bus and car traffic. Decided that everything we build should be within these 5 fingers (the main planned transportation lines are in 5 lines similar to a hand – Editor) for sustainable infrastructure so our efforts are complementary. Not possible without trust-based relationships we have in GR, or else can't trust everyone will stick to the main plan."*

Hence, the collaborative innovation model depends on the motivation of municipalities to adhere to the common vision, creating a feedback loop to the performance at home on GR issues. At the same time, "there are many research teams and centres who are all competing for the attention of politicians. Collaboration is not that sexy for journalists"

(GR employee). So, representatives have to internalise the issues discussed so that the trade-off between keeping to the regional promises and going their own way is more balanced and clear.

> *"Intellectually, we could solve the problems in a day, but when it comes to practice it won't work because we depend on people. People are different. We can only get them to the same point by talking together. Unless people understand the problems in their own stomach and their ear, they won't know how to solve it."*

(Political representative at GR)

In some cases the benefits and the impact to users are so clear, that it becomes possible to quickly find a consensus, act and change conditions for the better:

> *"When the Chair of Social Steering Group, looked into the issue of special transport for the disabled in the 13 municipalities and was amazed that none had the same regulations or pricing. It was so obvious that people who designed the systems did not think disabled people would cross municipal boundaries. If this were the same for broader public transportation, there would be an uproar. So, he brought people together to make new policy to make all GR one 'voyage area' with the same pricing model. It doesn't affect a lot of people, but big for the people affected."*

(GR employee)

Getting beyond the low hanging fruit

Of course GR's collaborative innovation model (based on lowest common denominator cooperation) also affects the type of work GR is able to do. Invariably, the low handing fruit get picked first. Those wanting to see progress faster get frustrated: "GR networks don't work, and I don't know why" (GR collaborator). Thus, more difficult questions are ahead:

> *" I see the problem of low hanging fruit emerging. Lot of fruits have been already picked. Politicians haven't asked themselves tough questions – what is GR really for."*

(GR political representative)

At the same time, politicians are very wary of 'scope creep' and the expansion of GR mandate over time, because it invariably threatens their role and decision-making power in their local municipality context. Consequently, some cautious voices emerged warning against GR becoming self-directive and the possibility that the 'organic' development model may not be the most efficient or effective in the end:

> *"The risk is that the organization itself starts to invent missions on their own – to*
>
> *keep them occupied. They should be dependent on missions that politicians give them. That is a risk with any political organization."*

(GR political leadership)

> *"Sometimes public organisations start to invent things to do, shop it to politicians, which then make it part of their mandate. Maybe things could be better allocated to more pressing issues perhaps in other areas."*

(Representative of the national government)

It is clear that politically, some things would likely never be done at GR level under the current local governance model in Sweden. In time things of course may change as public policy problems become more and more complex. Then again, there are some political disparities between the regions that make some topics almost impossible to discuss on a consensual basis. As described by one of the municipal leaders:

> *"The Green Party is very influential in Gothenburg, but nearly non-existent in the other municipalities. It is their interest to keep decisions at local level. Example here is that we want a bridge to a neighbouring municipality (currently a ferry route), and it would require roads in some other municipalities. Green Party doesn't want the development, so, can obstruct issue from going to GR."*

At the same time, GR has been able to invest in future oriented activities in various forms (e.g., Box 21). They try to build partnerships with research communities for future thinking as this is an area where municipal capacities are lacking. As was described by one stakeholder: "If forecasting exists, it is not permeating the cities and their organizations." It is very hard to get people to think about the future and not only be reactionary.

Box 21. Exploring the Future: Mistra Urban Futures

"Public organisations tend to think about collective wellbeing of people. Universities tend to be more about single careers. These cultures tend to not speak well with each other. There is different vocabulary for common things, even different logic of understanding things. Mistra challenge is to be an interpreter and translator."

(Gothenburg project coordinator)

Mistra Urban Futures (MUF) is an international research and knowledge centre addressing the issue of sustainable urbanization. Since 2010 MUF has funded the Gothenburg Platform involving the consortia of seven different organisations (City of Gothenburg, VGR, University of Gothenburg, Technical School of Chalmers, Research Institute of Sweden, Swedish Environmental Institute, Transportation Authority and GR). The aim of the platform is to create a meeting place between research and practice. GR uses Mistra Urban Futures network to surface and explore future areas of interest connected to sustainable cities.

The Platform co-funds collaborative projects in the domain, if they meet the criteria of the Centre. The four basic principles for the projects are that they should be transdisciplinary, based on co-creation, have broad funding and involve international cooperation or anchoring. The initiatives for projects may come from partners or other stakeholders, but they have to be supported by at least two platform partners. In concrete projects, they try to pair an academic with a practical project employee. The program has changed over time and shifted towards seed financing, smaller projects and building networks with both practitioners and academics. Currently it has a number of scientific projects (E.g., Knowledge Agenda) where important questions for future city development are identified.

Mistra Urban Futures Gothenburg Platform has also launched an open research school based on transdisciplinarity and co-creation. The research school aims at working closely with researchers from different disciplines and is based on the Mistra Urban Futures research agenda: to realize fair, green and accessible cities. The Gothenburg platform is part of an international network of platforms, exchanges of knowledge and experience are also taking place through this.

Starting from 2019, Mistra will no longer give economic support and is currently discussion the road forward.

Source: OECD interviews; https://www.mistraurbanfutures.org/en/lip/gothenburg

Advancing regional collaboration is, thus, possible as it is another area that is not threatening to the day-to-day politics of local governments. Planning for the future in areas more closely connected to concrete value trade-offs (e.g., the coastal, marital special plans where the interest of exploitation and protection have to be balanced) are much more difficult especially if they are too concrete or force municipalities to move faster than they are willing. Thus, GR starts with long-term directions that allow for space and time to think about long-term goals.

"GR wanted to have a hand in coastal area, funding was available from us for coastal work, so it made sense to join forces. A few municipalities didn't initially see value of doing it this way at first, but they didn't put up a lot of resistance with outside funding available. The process won't end up in regional plan, but it will be a knowledge platform with a directive component. It raises awareness that these issues need to be taken into consideration with comprehensive plans; it illuminates the gaps that should be reflected in the plans. This signals that there is political will to support these activities."

(Representative from the Swedish Agency for Marine and Water Management)

Putting these topics into knowledge platforms where only soft power is used and no direct decisions are made allows them to concentrate on information sharing, enabling conversations that usually do not happen in municipalities:

"It is the most important thing: if you are working on a specific topic in a municipality, you are likely the only one. It is important to have a place to convene with others working on similar issues to discuss and exchange ideas. Then everyone gets the same picture. Otherwise, it's too easy to blame other people because it's hard to see others' challenges and actions."

(Public official)

Nevertheless, outcomes of these knowledge platforms vary greatly based on participants. "People will gain knowledge, but it doesn't tend to relay upwards. More horizontal than vertical. Some pieces certainly work upwards, but not generally" (GR collaborator). Funding these kinds of collaboration methods is also problematic. GR does not have discretionary funds for these kind of activities for the most part. Platforms are mostly financed by outside bodies, e.g., the County.

Crisis as the source of collaborative innovation

While previous sections outlined the 'organic' model of collaborative innovation in GR, things can also happen much faster through exogenous forces disrupting the system. A good example of the latter is the GR's role in the response to the recent refugee crisis, where in the context of divided responsibilities (Box 22) between national and municipal level the refugees' needs had to be collectively met.

Box 22. The changing responsibility over integration of migrants

The acceptance of refugees has changed over time in Sweden which is reflected in the governance narrative of integration policies. Since the mid-1980s Swedish municipalities have had broad responsibilities for refugee reception. Sweden also used to have a National Integration Agency, but it was abolished mid-2000s. Until 2010 most of the integration related tasks lied with municipalities, but in the beginning of the decade the main responsibility went to the Employment Agency. This fragmented the accountability for integration outcomes:

> *"Previous government thought integration was a by-product of work, so no agency needed. When this happened "everyone turned to us" even though we don't really have an official integration role."*

(Representative from the Employment Agency)

> *"I think that the government had vision that labour market was the most important question. Thought it was better that the original agency work with the refugees, but municipalities had a role to play in housing, social care, etc., so responsibility got broken up into two different organisation."*

(Local government official)

The Employment agency is a fairly large organisation, but is under strain from its variety of tasks. During the crisis, it became clear that work and thus the agency's specialisation was not enough to respond to migrants needs especially when the refugee volumes increased substantially.

> *"The change away from municipalities to national in 2010 did not really improve things. A lot of variables played a role mostly of course the migration level, so, it's hard to know if it would have been better without the big influx in migrants. The track record was better before."*

(GR employee)

The state got most of the blame for a lack of a well-coordinated response: "Right now people blame the state and Public Employment Agency because they have the responsibility. Before, people would blame the municipalities because they had the responsibility" (GR collaborator on migration). In practice, where the immigrant lives (municipality, county), became the focal point. Municipalities started to step up more and take the main responsibility. As was described by one of the stakeholders:

> *"By now politicians speaking openly about how employment board is not living top to expectations. Partially also because immigration is becoming a fact of life and municipalities get more used to dealing with migrants."*

In 2015, the government (with some lobbying from municipalities that previously had the highest numbers of migrants (generally cities)) changed its regulations on the distribution the migrants. From 2016 onward, the Migration Agency distributes adult migrants to all of the municipalities based on county quota. Before it was voluntary and the County Administration Board negotiated with municipalities to accept refugees. Challenges in labour, housing, education and transportation are significant in the rural areas because they take many more refugees per capita. In addition, in accordance with the new act, municipalities in addition to other social welfare services need to arrange housing for

refugees who have a residence permit to stay. There is also a two-year special program for adult refugees in which municipalities became responsible for civic orientation and Swedish language courses. The County's administrative boards have the responsibility to report to government on the progress of how integration is going. No one has responsibility for overall integration, which led to one of the interviewed subject matter exerts to ask:

> *"Who is ultimately responsible? The issue is a national responsibility, but the national government is dependent on the municipalities because that is where people live. There will always be a discussion about money (municipalities think they don't get enough money related to impact and the level responsibility. Pendulum keeps swinging: municipality to the Employment Agency and now moving back to the municipality."*

Source: OECD interviews.

During the refugee crisis municipalities needed to adapt quickly to new rules and learn about changing needs. Furthermore, they needed to learn how to deal with acute problems. It quickly became clear that even the biggest municipalities in the region could not do it alone and thus, collaborative innovation on the regional level was needed (Box 23).

> *"Learning together in complex, difficult, and ever changing situation was key. Wouldn't have worked if everyone else assumed it was someone else's problem."*

Box 23. Regional collaboration during the refugee crisis

The inflow of refugees was acute in the autumn of 2015 – in that year close to 163,000 people sought asylum in Sweden with over 35,000 children without a guardian among the numbers. This for a country with a population of 9.9 million was a great challenge. Within the Gothenburg Region, the biggest strain was on arrival municipalities Mölndal and the City of Gothenburg. While migration is not a new issue for Swedish municipalities, the volumes were unprecedented. Furthermore, their countries of origin were slightly different than before (Afghanistan and Syria being at the forefront in the region). This introduced new challenges to municipalities as they needed to evaluate the needs of the refugees.

Municipalities were faced with new and growing needs that they were not prepared for. Both strengths and weaknesses in different municipalities became magnified: e.g., if the housing shortage was high before, then the problem escalated further. The education system was tested, especially due to language skills needed and the need to validate professional skills and grades of migrants. Not only municipal agencies but also national agencies were under strain (Migraton Board etc.) which added to the processing times of migrants. Overall, social services, the education system and primary care were all areas that had to adapt quickly. This was not only an issue for the smaller municipalities in the region, but also for the bigger ones as well:

> *"Gothenburg had been dealing with refugees before, while the others had not so had some experience with it. But now they (Gothenburg – Editor) were being flooded and didn't know how to respond. So it made sense to roll up things at a GR level."*

(GR collaborator)

In October 2015, the Federal Board of the GR approved 30 different measures from tactical to strategic (housing, education, community development etc.) to intensify efforts to strengthen refugee reception. This gave them the mandate to do new things and started the "creative process" to find solutions.

> *"Board did this because GR had earned trust in their ability to successfully do big things. And the regional level was here of special importance: e.g., it is not possible to arrange 500 beds in one night for children at a municipal level. This requires a regional approach. If not regional, would just fall on Gothenburg, but even the biggest city can't absorb it all."*

(GR platform coordinator)

Not being at the centre of immediate demand directly from refugees, GR took on the coordination and new roles within the process. They established a small consultative group to rapidly respond to demand which was especially useful during the emergency phase. GR used their established education networks to help cope with the huge influx in 2015. They identified what was needed and was going on in each municipality to help decide what to do in short and long term. After the crisis GR turned to more regular structures and working methods.

After responding to acute demand, collaborating with civil society in integrating migrants with the general population became very important:

"GR doesn't work directly with inhabitants. Works with municipalities and officials. Their work generally doesn't involve absorption of migrants into general society, though they do help to convene relevant players who do work in this space. Mostly left to civil society."

(GR platform participant)

GR created two platforms one for unaccompanied minors and the other for adult refugees. While connected topics, it was seen as helpful to keep them separate as different municipal workers were involved and sometimes extremely specialised issues had to be tackled with. Different laws applied depending on different people (depending on age, whether an unaccompanied minor or with a parent/guardian). For unaccompanied minors, the discussion started already 2014 when it became a bigger issue. Thus, the push to start platforms came from municipalities themselves. This was very helpful because it allowed them to scale up quickly due to already existing relationships. All municipalities wanted to join a platform. One created in September 2015 together with the County Administration Board, Migration Agency and municipal employees worked with unaccompanied minors. The platforms meet 2-3 times every half-year (about 4-6 times a year). By now the frequency is similar with other networks in GR. However, lot of work is done in between meetings in subgroups.

Through the platforms, various issues are explored connected to both unaccompanied minors and adult refugees' topics. For the first, housing is major discussion: GR facilitated different statistics and demographics, analysed rules connected to guardians and their payment structures. It was a difficult topic to tackle because legislation changes all the time (e.g., new law resulted in providing less money to municipalities, which makes it more difficult to municipalities to adapt).

Collaborating on the Civic Orientation courses (now compulsory, provided by all local governments to refugees) has been the platforms' biggest tangible successes. All other municipalities in the region now use the Gothenburg course infrastructure and provide funding directly to the city. Most other municipalities are too small to provide courses or it simply becomes too expensive with small numbers of participants, especially when it comes to right to follow the course in one's mother tongue.

Awareness of services is something that platform participants was identified as something could be strengthened. Communication channels are also not transparent in this flexible format of collaboration, so, it is not clear if messages make their way to all municipalities. Hence, the overall sentiment is that "migration issue has not "moved" to GR level. GR is where the discussions take place, but does not have formal decision making power. Provides recommendations to municipalities" (GR platform member).

Source: OECD interviews.

While previously the belief was the ordinary structure would also accompany refugees, special arrangements for the latter were created during the crisis, so, arrangements on the regional level. "It's moved a bit towards having a separate service ecosystem for the refugees." And yet, most of the work has been reactive and not future-oriented, connected to managing the problem not preparing long-term solution for it. As was described by one of the GR platform participants:

> *"There is a tendency to treat this as "problem solving" rather than planning ahead. It's about reactive, backlog, with negative spin that immigration is a problem to deal with rather than a potential positive that can be worked with."*

Hence many systematic problems remain in housing (people get stuck in temporary housing as not all municipalities hold up to the law as no sanctions exist), labour market participation and language skills all contribute to negative integration outcomes:

> *" As it's arranged now, immigrants are funded by the state for two years, then expected to be self-sufficient. If they aren't, municipalities are responsible for social welfare. This period should be a bit longer. Adjusting to the Swedish labour market may take longer."*

> *"The Employment Office says not to come until you speak better Swedish. So people give up and take money from social care. Then after two years, so many doors close, and then you have to take social money but then can't participate in education because they only can take money from the 2-year funding."*

> *" There are very few who have been able to enter the labour market in that period of time."*

Furthermore, there are significant challenges connected to unaccompanied minors when they turn 18 – the transition services are lacking.

> *"When children turn 18 they lose eligibility for a lot of benefits. For example, may be forced to move because no longer entitle to the same housing. People sometimes will choose to be on the streets than relocate to housing further away they may quality for."*

(GR platform participant)

Even in the regional setting, municipalities are not organised to deal with complexity: "People want quick response, but the way we are organized does not allow for quick response – that is our main focus for the moment" (local politician). There could be many opportunities for GR to compare practises in the field with other cities where they are doing more work with private sector and civil society. GR could be a platform for this type of collaboration, which would hopefully also allow them to look into more systemic solutions for integration. Thus, GR itself self-identifies the need to, "be flexible, but try to fit our flexibility within a strategic structure."

Collaboration beyond the region

Citizens needs to not end with regional boundaries. As such, state agencies are interested in using GR more as outreach, rather than discussing with each city and municipality individually. The county works with GR to help shape relevant parts of its agenda. For example, the county wants employment agencies and municipalities to enter into agreements to help refugees find work. For them, GR is not just vehicle to get the message out, but a service developer in its own right as "municipalities they are too small to have their own successful programs (e.g., language courses)." The county also provides some of the funding, because GR allows for a "more sophisticated cooperation among municipalities" from the counties perspective. Here it is easy to flare its members' concerns: "GR must be careful to be working for the 13 members and not the counties.

Their ambitions and plans are the grounds for GR's work" (municipal representative at GR).

At the same time, the Association has been known to try to use its weight to change national laws and regulation clarifying grey areas for its action through national legislation. The pressure to speak on behalf of all members for all questions is difficult for GR and they cannot do that even if smaller municipalities would want them to as City of Gothenburg certainly wants to hold onto its decision-making power. Currently, as mentioned above, GR's responsibility areas are backed in history. The only exception is healthcare, where GR asked for a mandate from members to be the negotiating party against the county for healthcare decisions. Members approved as long as someone from Gothenburg was part of negotiating team.

While there are things certainly happening on the county and national level, there is a distinct lack of planning models beyond national boundaries especially in the Western Scandinavia area (OECD 2018). For example, one GR employee argued: "right now Norway is a white space that is not considered even though it needed to collaborate. Planning should not stop at the notional boundary."

4.4.4. Impact and main challenges for the future

As outlined above, the collaborative innovation model described above starts with the smallest common denominator and builds and extends consensus by collaborating across municipalities. To some extent it allows to bring down silos for information sharing and collaboration in the region.

> *"Since GR has full-time workers who can find information from national and municipal governments, and support the municipalities, the GR services and collaboration are very helpful. It is impactful — allows people to find a "common denominator" to work together on."*
>
> (Public officer from a smaller municipality)

It allows to explore the right "administrative infrastructure," the "variable geographic logic" that makes regions more functional. This means that different questions (such as allowing young people to choose a school in any municipality) can be explored at different levels.

> *"Sometimes hear some people call for merging the 13 municipalities all into one city, but disagrees because geographic logic. Key is to decide which questions are best for GR-level and which are best for municipality level."*
>
> (GR leadership)

The local level is where people live and hands-on interventions are needed. Yet, the regional level seems to serve as a strategic platform, where different organisations and municipalities can come together. It assists in connecting the smaller pieces, experts across municipalities and avoiding duplication. It helps to "know who to call and get in touch with when you have idea or something you want to do." Within GR, politicians can dare to be more bold and less risk averse than they can be in their regular political work within the confines of bureaucracy.

Yet, GR probably needs to become better at playing a more sophisticated multi-level governance game; it is part of the evolution of the model.

> *"GR is at a point where all low hanging fruit has been picked. Need to sit down and decide what is the purpose of GR? What do we need to do now? Don't think they have asked themselves that questions, but if they did, it would be very fruitful. They don't dare ask themselves that question."*
>
> (GR collaborator)

This might entail more explicitly defining the field of interests and take initiative in a new way. Already during the last big consultation (2014) on the continued economic growth in GR area, the Association visited all 13 councils starting with informal discussions. It was clear that people were more comfortable talking mainly on physical infrastructure, than more softer services and values. "We learned that it's much easier to talk about physical infrastructure than things you can't touch (e.g., education)" (GR employee). Yet it has importance and thus, GR had to create ways to bring it to the fore: so, to force people to reflect on other topics GR came up with discussion document, a talking guideline. What the next steps in the evolution of the collaborative innovation model will be remain to be seen.

Seoul 50+ Policy – Redefining the Meaning of Work in an Aging Society

4.5.1. Summary

The 50+ policy is one of the Seoul Metropolitan Government's social innovation models created to help Koreans in their 50s and 60s to create new life and work models appropriate for them in their later life. The initiative originates from the civic society and is geared towards a new demographic of well-educated retirees entering their "second life." 50+ campuses, centres and connected initiatives provide comprehensive support to the 50+ generation from life-training, emotional support, cultural experiences and also retraining for continued employment. As jobs are scarce (and will be scarce in times of automatization) the initiative also aims to redefine what havening a "job" actually means.

4.5.2. Context

Korean society is rapidly proceeding towards the "Homo-Hundred Era", centennial society, with the super-elderly part of the population soaring. In 2000, Korea became an aging society with 7.2% of the population 65+. In 2017, the country entered an aged society (14.2%) and should be super aged society by 2026 (20.8%).[12] The nation's speed of aging is three times faster than other countries which have entered into an aging society phase before Korea. As the working-age population is continuously decreasing, intergenerational conflicts emerge due to growing fiscal burden on healthcare, social welfare and pensions. The 100-year life after a period of 25-30 years of economic activity is not feasible in the current socio-economic setting.

Concurrently, a large Post War demographic group, the main labour force behind Korean economic growth – the "Miracle of the Han River" – is reaching retirement age. The large-scale wave of baby boomers moving to retirement is creating a serious social problem. The demographic move will span 30 years and three generations: those born from 1955 to 1963, from 1968-1974 and from 1979 to 1985. Currently the 50+ population

[12] http://english.chosun.com/site/data/html_dir/2017/09/04/2017090401307.html

(aged 50-64) constitutes 11.5 million people which is 22.4% of the entire population in Korea.

Figure 12. South Korea Population

Source: Seoul 50+ Foundation of the Seoul Metropolitan Government, Seoul, 2017.

In Seoul alone there are 2.19 million people in the age group. These population groups are highly educated professionals with differing values from previous generations – they have been the main force behind the economic development and democratization of Korea. Thus, they have been known to dedicate their life to work which was required from a generation dedicated to rebuilding the country's economy. This means that many in this group derived their identity from their profession or company they worked for (job-for-life) and spent exorbitant hours at work. Retirement for them means an "identity crisis;" high levels of insecurity about what life will look like afterwards and fear about financial sustainability over retirement years prevail: "I am insecure", "I have nowhere to go," "I want to work" (Needs assessment of 50+ generation 2015). They are looking for a variety of things from their retirement age: a "second job," leisure and communication and have strong self-development needs.

> *"In the existing model, everything becomes worse after retirement: your identity disappears, your family relations get worse and you have much less money."*
>
> (A member of the 50+ community)

Thus, they are a distinct in many ways (Figure 13) and the current welfare system does not address their complex needs. At the same time, the group's experiences, capabilities and participation in the labour market are seen as a solution for an aging society.

In this new life phase, many people felt that they did not fit anywhere: "There is a lot of concern about the future. People are too old for young people, too young for the community senior centre."

Figure 13. Characteristics of the Seoul 50+ Generation

Source: Seoul 50+ Foundation, Presentation to the OECD.

In Europe and elsewhere in the world in countries with aging societies the policy reaction has been to increase retirement age to keep the able elderly in the labour market longer. Korea, has also recently amended its existing legislation on retirement, raising the minimum normal retirement age to 60 in 2013. Yet it is common practise in Korea to set a mandatory age of retirement well below the age of 60, often as low as 55. The official retirement age is, in reality, only followed in the public sectors – i.e., public officials, government/local authorities affiliated organizations. In private sectors, despite the legal retirement age, the contract terms, especially for those in the senior positions who are mostly in their late 40s or 50s, changes to short term contract or are assigned to trivial positions, which are a silent pressure to leave the company. At the same time, older workers continue to work well beyond their retirement: the effectively labour force exit is on average around 72 for both men and women (OECD, Older workers scoreboard, 2016), which is higher than in many other OECD countries. Consequently, the average age of actual retirement, particularly in the private sector, stands at 53. In other countries with similar issues, the trend to ensure "continuous employment" makes older workers accept lower wages – often significantly lower (Ujikane, Kuwako and Schneider, 2016). Those retiring in their 50s and early 60s – the 50+ generation (an age group between 50 and 64) – are also excluded from various welfare policies. Moreover, the retirement benefits for many do not allow retaining the same living standard as before or worse, put people at the risk of falling into the low-income strata.

To complicate matters further, the nature and availability of jobs due to automatization is increasingly changing. The unemployment rate is rising in Korea, standing at more than 1 million for 6 months in 2017. In particular, the youth unemployment rate reached a record high, and some statistics indicate that one out of every three young people is de facto unemployed. This situation is probably not going to improve in the immediate future as different industries worldwide are facing deindustrialization and the movement of jobs to the service sector is on the way. Thus, both older and younger workers are competing in the labour market for jobs.

4.5.3. Setting up the 50+ policy

The 50+ initiative was first set up by the Mayor of Seoul Park Won-soon, who had a long history in social justice and human rights activism. He established the Hope Institute in 2006, as a think tank designed to promote grass roots solutions for social, educational, environmental, and political issues. When he was elected as Mayor of Seoul in 2011, collaboration with civil society became the forefront of policy development. With the change in city leadership, the civic initiative outlining the limitations of welfare resources, sustainability and participation for the 50+ generation was brought into the public realm and the city started working on the problem. As was described by one of the city officials:

> *"It was fortunate that the mayor supported the program and was personally interested in it. Mayor Park has a background in civic engagement and worked with a different NGO, the Hope Institute that began educating the elderly (editor: here meant as the generation of Baby-boomers) in 2006, so, more than 10 years ago. He had a lot of ideas about how to prepare the elderly for their later life."*

As the 50+ generation has markedly different needs compared to the elderly before, the work started with problem definition and needs assessment. First the city analysed the civil society-led 50+ initiative from 2006. Based on the aforementioned Comprehensive Plan for the Baby Boomer Support was created in April 2014 with 5 areas and 25 detailed tasks. For broader buy-in the Policy Forum for Seoul's 50+ Generation was held during the development of the Comprehensive Plan.

Box 24. 50+ policy

The 50+ policy is a convergence of social welfare, employment and life-long learning policies geared towards the needs and characteristics of people in-between 50-64 who have retired, but wish to remain active and participate in community life. This group has specific characteristics which are beyond traditional welfare programs traditionally concentrating on socially marginalized groups or elderly (65+). However, the policy goes beyond traditional policy interventions, provides more comprehensive support and also deals with practical and emotional side of life transitions (e.g., offering cooking classes for primarily retired men or overall life-transitions courses for newly joined individuals). It represents a one-stop-shop, tailor-made service of counselling, education and jobs models for the 50+ generation with the aim to also promote intergenerational exchange. Thus, the mission is to improve the life quality of the generation, produce a shift in perception of the image of the elderly and enhance social participation and sharing in society.

The 50+ policy is run by the Seoul 50+ Foundation, its "policy control tower" and managed by the special division in the Seoul Metropolitan Government (SMG), the Post-Retirement Support Division. The Comprehensive plan is managed by the SMG and the Foundation is the main implementing body. The SMG plans to populate the 50+ policy with six 50+ campuses (three of which will be running by the end of 2017) and nineteen 50+ centres across Seoul by 2020 (the latter are contracted out and co-funded by the SMG and autonomous regional districts). 50+ Campuses are a post-school support centres for the preparation for life transitions offering systematic interventions including education, employment opportunities and cultural opportunities. The 50+ Centres are activity spaces to provide guidance for 50+ at their local communities – the operation of these centres is outsourced by the Seoul city.

Source: Seoul 50+ Foundation case description; presentation to the OECD.

At the end of 2014, a more comprehensive needs assessment on post-retirement support for 50+ generation was carried out (Box 24). It was clear that 50+ generation was not only a policy subject, but also an active social agent with considerable power in society, in a position to possibly drive positive social change. However, due to the position the generation had in society, the initiative was critiqued – "Why direct resources to them? They are not the poorest segment of society." The Mayor had to defend the idea in political debates: the policy was designed to create a possibility for the 50+ generation to contribute to society with their experience and skills rather than becoming a welfare recipient themselves.

> *"In the beginning also the mayor had a hard time. A lot of people didn't understand the initiative. The City Council didn't understand: there are so many poor people in our society, why target the 50+ middle class. There are so many poor people who need this money more. But Mayor Park really convinced them: we need to prepare the 50+ for later life, otherwise they will in 10-15 years become poor too."*
>
> (Member of the 50+ Foundation)

To debate the conflicting values and engage stakeholders into the process, a series of public hearings and meetings (e.g., with welfare institutes, life-long learning institutes, universities and companies) were organised during the summer of 2015 in addition to expert advisory meetings on the 50+ policy of the Seoul Metropolitan Government.

While there was a general consensus that the needs of the middle-aged group differentiated from the more senior population, there was no accord on the means and strategies to work on the issue effectively.

> *"The preparation of the program was hard – to make the vision, philosophy behind the approach. There is no similar organisation elsewhere in the world to get information from. So we talked and talked."*
>
> (Member of the 50+ Foundation)

To find the right form for enacting the plan, in August 2014 the city conducted execution research into the establishment of 50+ Foundation and 50+ Campus and a feasibility study followed the next year (Box 25). There was already a Seoul Welfare Foundation in place, specialised in elder care. The city considered various factors – public nature of the problem, publicness, sustainability and other policy features (importance of networks, cooperation across sectors, attribution) – and chose to create an independent public organisation, the Seoul 50+ Foundation to take charge of the problem. A clear division of roles and functions was made with the previously existing organisation which continued to focus on older aged (over the age of 65) retirees with different needs. Inside the city administration, the needs of the 50+ generation would have competed for attention with traditional client groups. The Seoul Metropolitan Government established a new Post-Retirement Support Division to also support the work and focus more on 50+ policy problems, issues and solutions.

Box 25. Methods and techniques applied to define a demand-based 50+ policy

As the 50+ generation could be seen as a group with specific needs different from prior generations, it was crucial for policy makers to understand the needs of the group. Thus, the policy process was designed deliberately to include the 50+ generation into the policy formulation as much as possible. For this, a variety of methods and problem solving techniques were applied:

- Demand analysis. Qualitative information about the 50+ needs were collected through policy conferences, public forums, public hearings and outreach activities; but also more formal survey research and needs assessment (including information from focus group interviews categorised by income, residential area etc.; 50+ group meetings etc.).
- Stakeholder coordination and mediation. The Seoul Metropolitan Government organised various meetings with 50+ related public, non-profit agencies and organisations to discuss diverging opinions and issues related to the policy.
- Expert meetings. Expert Advisory Group was put together to conduct in-depth research and provide professional input, guidelines and insights into the Foundation plan, 50+ campus activities and their design.
- Data analysis. Statistics were compiled to identify the characteristics, status and needs of the 50+ population on the national level and compare it with other countries.
- Institutional and policy analysis. Overlapping or similar support measures to 50+ interventions were identified (services available for different entities, income levels, jobs, health and social participation) to derive an effective implementation system for 50+ that would work conjointly with the city's policies and also national policy landscape.

However, as the 50+centres (apart from 50+ campuses) were planned at the autonomous regional level in Seoul, this governance level had to be consulted as well. The level of understanding of the need for such a policy intervention was not high on the regional level, so, only a few autonomous regions with strong political leadership signed up to participate in the initiative (the interest since then have increased and three more 50+ centres are planned to be opened; and by September 2018 five in total were functioning). In establishing the 50+ campuses, regional needs are also taken into account. As such the Foundation follows a "Different, but Together" strategy: there are specialised approaches for each campus (e.g., start-ups and job creation; community and university, ventures and enterprises; culture industry and intergenerational programs and public jobs) based on local conditions and environments. The 50+ Foundation operates and coordinates the activities and the campuses are open to all Seoul residents all over the city.

Figure 14. Different, but together – established 50+ campuses

Source: Seoul 50+ Foundation, Presentation to the OECD.

Also a Post-Retirement Support Implementation Team, as a Seoul-affiliated body, was created including 50+ program experts and experienced personnel to differentiate and coordinate the roles and responsibilities between public officials and 50+ experts. This structure helped to coordinate research, content development and solutions between different bodies. Coordination was especially needed with elder welfare institutes to avoid doubling efforts of welfare services – for this a consultative group was set up to build through it a long-term cooperation system.

To make things more complicated the SMG had to get approval from the national government to establish a city-affiliated agency, which meant additional consultations and deliberation with the national government. Given the newness of the policy, it was not easy to gain full support by the government in the initial stage. However, with Seoul's forefront initiative, the national government has also announced a cross-ministry initiative 'A Plan to support the 3rd Act of Life for the New-Middle Aged' in 2017 which provided a basis for national replication. (Consequently, after change in administration in May 2017 on the national level, 50-60 Generation Policies are actively being promoted, especially in connection to creating jobs and establishing a social safety net programs for 50+ generation).

Nevertheless, with other, city-level supportive structures in place, in mid-2015 special regulation for Post-Retirement Support for the Middle-Aged was passed in the city council and in October the same year the Seoul 50+ Foundation was established with the legislative status and financial support of the city. The 50+ policy platform will be developed in three phases: in the current introductory phase (2016-2017) the Foundation is being built up and three 50+ campuses have been opened and various pilot programs have been launched. In the growth stage (2018-2019) the programs will be scaled out and in the mature stage (2020 onward) the policy program should enter into more stable development stage.

The distinctive nature of the 50+ policy

The nature of the dilemma is that while 50+ generation is subject to policy support, they also want to and are capable of contributing to society. Thus, the city has to change its

perspective of how it interacts with the group: they are not only passive welfare recipients, but part of their welfare is to become active in social and economic life. Nevertheless, they need help with their role change in society that for many can be quite traumatic. This requires a distinctive welfare policy that addresses both the short- and long-term needs of life transitions. Here the 50+ policy takes note from Peter Laslett's (1987) book "The Emergence of the Third Age. Aging and Society."50+ policy is a preventive in nature: it tries to avoid the emergence of social problems in the retiring individuals living longer in retirement than ever before.

The nucleus of the innovation is a comprehensive 50+ infrastructure planned across Seoul. This includes the establishment of the Seoul 50+ Foundation (the co ordinating body), and several 50+ campuses and centres built on multi-sectoral collaboration. Nineteen 50+ centres are planned for city districts by 2020 and five centres are currently in operation. As each city district has different characteristics – ranging from densely populated neighbourhoods to university or office areas – the centres will reflect specific, local features and needs. The campuses are bigger one-stop-shops offering tailor-made services including counselling, education and new job models, and promoting intergenerational exchange. Six 50+ campuses are planned by 2020 and three are currently in operation.

This infrastructure provides support and cultural spaces for the 50+ generation to interact among peers, drive change and generate needs-based services for one other. It goes beyond traditional policy interventions, providing more comprehensive support and dealing with the practical and emotional side of life transitions (e.g. offering cooking classes for retired men or overall life-transitions courses for the newly joined). Half of the courses offered at the campuses are initiated and designed by the 50+ generation and the target group also provides peer-to-peer counselling. As the older generation becomes a large market segment for services, Seoul's 50+ policy helps the demographic group locate demand and generate self-initiated projects and work opportunities. In essence, the social capital of the target group is used to cope with aging issues in society.

The 50+ programs start with comprehensive counselling which can be followed by other customized services from capacity building and education programs to volunteering to job opportunities and community activities (Figure 15). The road usually starts with an introductory course on redesigning life (in 50+ Life School) leading to community activities (small group activities, research groups, local action groups, talent volunteering), new employment opportunities (new job, jobs for social enterprises) of starting an altogether new business, cooperative association or social enterprise. These activities are mutually exclusive. The aim is to set a new life vision, reflect on the changes in work, money, relationships, health etc. after the age of 50.

Figure 15. The 50+ policy service model

Source: Seoul 50+ Foundation of the Seoul Metropolitan Government, Paris, 2017.

Furthermore, Seoul 50+ policy tries to redefine what work in Korean society means for an entire generation that has dedicated itself to rebuilding the country. The initiative tries to connect the population's broader interests and social aspirations with job opportunities and new types of employment in the form of an "encore career". This implies continued work opportunities across projects, not just "belonging" to a single employer. This approach also enables the 50+ demographic to build social connections and find new ways to serve their communities. It allows them to make the most of this time of life, while also continuing to earn an income, acquire new personal meaning and have a social impact. Thus, as described by one of the 50+ community members: "The second career is not just about income, it is about personal interests and social meaning. It is about changing our work-life paradigm."

Furthermore, these new types of employment and networking opportunities take the community out of life-long hierarchies they have experienced: "Before joining the 50+ life school my life was in a hierarchy – career and family. I did not connect with people on the same level. This is a new type of networking and interacting."

The Seoul 50+ policy creates and promotes new 50+ job models for the public and private sectors, by expanding socially meaningful job models through paid volunteer jobs ("Boram jobs") and operating 50+ start-up venture competition, incubation and encore out-placement programmes. 50+ consultants are one of the Boram jobs. The aim is to provide solutions to second life with friendly, relatable counselling services to the 50+ campus visitors. In 2017, eight such job models were developed. Since their establishment, over 800 people have participated in social contribution job positions and over 220 people in Encore education courses for job switching.

50+ policy could be seen as an employment policy the offer of "encore career"[13] opportunities. This, however, is subject to conflicting values. On the one hand, there is high level of pressure in Korea for immediate employment: the issue of jobs has been a high-priority item on the national agenda for some time and there are those that say that there should be an immediate link with 50+ employment – in essence, livelihood job type. On the other side, there are those who would like to see jobs opening up for younger generations which are struggling with high numbers of youth unemployment. As such, there is little understanding about the newly designed "Encore Career Transition Model" which emphasises work opportunities not just "being hired to an employer." The 50+ struggles with communicating the policy purpose effectively to the broader public to lessen the pressure for training for immediate employment.

Encore Career is continued work in later life that is personally and socially meaningful. As such, encore job is a paid or non-paid employment in the second half of life that fulfils diverse range of personal needs from personal meaning, achievements, social impact and value. The aim of Boram[14] jobs, paid volunteer jobs is to meet the new demand in social welfare and address societal challenges with the knowledge and experience of the 50+ generation. Beyond Boram jobs the Foundation aims to create 50+ jobs in synergy with the city of Seoul and the private sector (in tourism, urban-rural farming and SMEs). The aim is to create 12,000 Boram jobs in five years including welfare services (e.g., elderly center coordinators, elderly job coordinators), mentors for younger generations (e.g., career and employment instructors) and jobs addressing community problems (e.g., "Village MacGyver").

The change in attitudes towards older generations and the broader cultural shift are more difficult to bring forth. To build a 50+ supportive culture various measures are used such as public campaigns, integrated marketing and 50+ group support programs etc.

4.5.4. Impact and vision for the future

Before the establishment of the 50+ Foundation, projects supporting the target population were mostly led by the civil society and not universally accessible. With the process surrounding the 50+ policy in Seoul (creation of the Foundation, campuses, centres) the policy intervention is becoming more systematic, comprehensive and demand-driven. The city has also started to cooperate with a variety of stakeholders connected to the services. Together with the Seoul Metropolitan Government, the 50+ Foundation has become the leader of a new narrative connected to aging and the nature of work.

The initial interest in 50+ services has been higher than expected. As of July 2018, 50+programmes have registered more than 20,000 people, the 50+generation has organized more than 300 communities, more than 1,800 people have participated in 19 different Boram Job streams and each campus provides more than 300 courses every year. In some areas the interviewed 50+ consultants who do peer-to-peer counselling saw the possibility for expansion of services: "First, it is difficult to advise those in imminent

[13] An encore career is work in the second half of life that combines continued income, greater personal meaning, and social impact. These jobs are paid positions often in public interest fields, such as education, the environment, health, the government sector, social services, and other non-profits. The phrase "encore career" was made popular by Marc Freedman, in his book "Encore: Finding Work That Matters in the Second Half of Life."

[14] Boram" literally means "purposeful, meaningful" in Korean.

need, can refer network and inform them about possibilities, but there are not enough direct solutions. Second, family relations and mental health would need more support and especially services for mental health."

While service numbers are not large compared to the size of the target group, years remain before the full institutionalisation of the programme. However, the initiative is already scaling. Other local municipalities are benchmarking 50+ campuses and centres of the Seoul Metropolitan Government, and the national government has announced a cross-ministry plan to establish social infrastructure for the third act of life (3rd Act Life Planning for the New Mid-Lifers). Change in national leadership in May 2017 has meant a turning point for the initiative: it is sure now that 50+ policies will go beyond Seoul and will be in some configuration also implemented on the national level. As such, Seoul's 50+ policy and connected programs are becoming a benchmark for other cities across the country. Success will depend on the ability of national ministries to operate across fragmented interventions in an effective manner.

However, no substantive research on the effectiveness of the programs exists yet. In between 2016-2017 the city and Foundation have been concentrating on setting up 50+ infrastructure and piloting programs. However, traditional satisfaction surveys for educational programs and performance management systems for moderators and councillors already exist. The Foundation has also already published several 50+ Policy Trends Reports and organised multiple 50+ Forums.From 2018, part of the focus will shift to conducting research (e.g., development of performance evaluation indicators for the consulting system, campus programs; evaluate the socio-economic effects of Boram jobs; establishment of 50+ researcher network etc.) on policy effectiveness of ongoing programs. Furthermore, the Foundation plans to develop the Seoul 50+ information system to provide an integrated service to Seoul citizens and collect data and statistics on the success of its programs.

City of Things: IoT Living Lab in Antwerp

4.6.1. Summary

City of Things is an Internet of Things (IoT) initiative in the city of Antwerp, Belgium, built as a partnership between the City of Antwerp, Flanders, IMEC and others. The initiative got its start from a series of IoT projects which the local technology hub, IMEC, wanted to test out in a real-life setting. The clear technology push from outside pressed the city also to develop a more cohesive picture of its smart city interests. The project has developed together with the city into a more structured approach, tying together different data sources to test new technologies for better mobility, safety and quality of life in the city. It consists of a spread of smart devices and sensors distributed across the 'smart zone' in the city. The technology infrastructure development is connected with a living lab approach, where the city residents participate in both creating data and testing out new smart city solutions. The collected data from both users, sensors and other sources is used by researchers, developers and technology entrepreneurs to develop and test smart city solutions. Over time, the City of Things is supposed to develop into one of the biggest living labs for technology, networks and real-time big data experiments in existence today.

4.6.2. Context

In previous decades cities have been attracting technology companies, start-ups to their environments for high-skilled labour and increased revenue, which allowed local governments to provide better services to their constituents. Now cities themselves are becoming test-beds of new services and products that have the potential of improving the quality of life of people directly living in urban environments. This means that cities are becoming "smart." Smart governments in general are those that "use sophisticated information technologies to interconnect and integrate information, processes, institutions, and physical infrastructure to better serve citizens and communities" (Gil-Garcia 2012).

As such, smart city solutions are more often than not strongly technology-led, and in practise, the advancements are pushed by technology entrepreneurs and big IT companies. In addition, there is no commonly shared understanding of what a smart city is or what its effects should be. Hence, there is a level of uncertainty connected to smart cities in general: who will it benefit in the end; will the vendor's interest dominate over real community problems; is the potential value for the public large enough to justify investment; will cities be locked-in with certain providers if they enter into these partnerships? Thus, while research in smart cities is abundant, mass-scale has not been reached. Nevertheless, running controlled smart city experiments has become more and more popular for academia and industry alike. However, controlled lab conditions are not enough to develop operational products and services as solutions need to work in real-life conditions. Thus, real-life smart city testbeds have become the norm. However, the effectiveness of smart city testbeds has been previously limited due to small-scale (limited number of devices or locations etc.), bounded technology protocols (e.g., wireless protocols) and experiments only concentrating on users as data creators, not their needs or interests. Thus, there are not many cases where hard and soft ICT infrastructure come together in smart city developments.

The City of Things (CoT) initiative in Antwerp aims to go beyond the aforementioned and become a realistic, city-wide Internet of Things (IoT) testbed that includes both hard infrastructural eco-system development and also living lab research. IoT denotes a process in which the physical world can be controlled from a distance by connecting physical things to the internet and accessing their sensor data remotely (Kopetz 2011). In essence, things "talk to each other" by using internet protocols. In theory, the CoT wants, "the whole city to talk to each other." The premise being that controlling complex processes at a distance, and with little cost, is becoming a reality and is core to future automatization. For this, the City of Antwerp is considered big enough (512,000 inhabitants as of 1 January 2013) to allow scale for experimentation, but small enough to keep costs under control when city-wide solutions need to be tested.

The city leadership is very supporting of technological development and pushes for new technological solutions (esp., in the field of blockchain), wanting to become the "international reference city for technology." As was described by a city official: "in terms of digital innovation four years ago there was almost nothing; we have a new mayor, with new interests and with that also the city's policies have changed a lot." The cities management team sees the need to keep up with technological development:

> *"If you see what is happening in the digital world, then people do not need the government, they are not waiting for the government. If you don't do technologies like blockchain you will be left out. It is about redefining what government is doing."*

Specifically, the attention in smart city technologies rose considerably when the biggest start-up incubator – @kbc – in Flanders opened its doors in 2013 in Antwerp (during the financial crisis KBC Bank was consolidating its activities and rooms became free in the Antwerp landmark building – the Boerentoren – and the bank started to collect ideas what to do with the space). While a private initiative, it started a large start-up community in the city leading to other similar initiatives (imec.iStart, StartupVillage, BlueHealth Innovation Centre etc.) supported by the city. The city government who came to power at the same time formed a small team within the public service administration called Antwerp Startup City (De Wever and Bulcke 2016). The group was put in charge of stimulating and nurturing entrepreneurial activity within the city (Figure 16), not particularly smart city solutions, yet, it spurred on more partnerships with local companies and technology developers.

> *"The idea was that we would build an ecosystem, have as much collaboration as possible. It was a very broad idea, stated with different things, but over time we put more focus on areas such as e-health and internet of things… Areas of potential Antwerp growth clusters."*

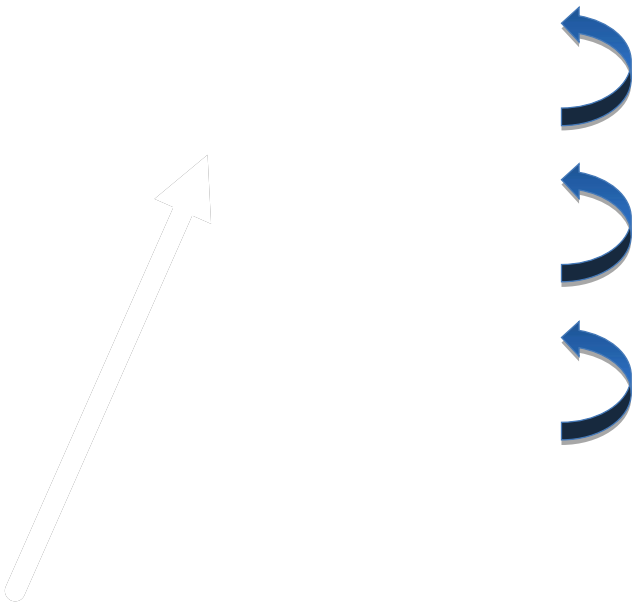
(City official)

With the change in city leadership's interests, Antwerp had developed a strong focus on business innovation, attracting companies, entrepreneurial in nature. The business and innovation team of the city developed the focus and the latter are supported by the EU desk as part of the Strategic Coordination department, which supports the city's participation in European projects. The business and innovation team also had a more of an ecosystem approach (Figure 16) and have tried to be more collaborative.

> *"We don't lead with the policy that we are developing, we cease the opportunities that present themselves. It is kind of evolutionary emergence. This makes us very flexible. Nowadays you have to be as flexible as possible and act quickly."*

(Public official)

Figure 16. Tracks of Antwerp's innovation ecosystem



Source: Muelenaer, G. (2017) Digital Innovation in Antwerp. Presentation to OECD.

As such, the city also has for a long time had a "no plan" plan or a self-governing approach to the smart city development – it defines strategic objectives, but allows private enterprises to propose solutions. Thus, the city plays more the role of a facilitator, matchmaker to private interest in smart city developments. Consequently, it was a ripe environment for IMEC, a Flanders-based R&D hub which over time became a close structural partner to the city and the instigator of IoT projects. IMEC was interested in testing and valorisation of IoT technologies in real-life context. While IMEC operated in all of Belgium (and also globally), they chose to develop its many IoT projects in Antwerp due to its strong industrial base and the city's willingness to engage with such projects. Observing synergies in different projects, it led to a more systemic experimentation program under the label of "City of Things." As such, CoT has the ambition to become the reference IoT living lab and technology lab in Europe.

4.6.3. Building the City of Things

As described above, the CoT initiative is partially coincidental: it got its start through coinciding, yet initially unconnected grants and projects, connected to testing and developing IoT solutions in Antwerp. The City of Things program itself "happened on the project level with a strategic bundling of project working packages. It was really bottom-up. There was no program view in the beginning on applying to EU's H2020 funding" (representative from IMEC). By chance and logistical closeness different developers in IMEC (Box 26) started to write project proposals for research funding in the field of IoT with the City of Antwerp or its harbour as its partner. When a high number of these turned out to be successful, it became clear to IMEC that the projects were sometimes overlapping and synergies between the projects could be found. IMEC decided to bring

them under the same umbrella and started to pursue a more strategic partnership with the city. “Branding the City of Things gained us interest from both the city and the regional government.” This highlights both the central role of IMEC’s technological capacity, but also its “strong salesmanship and marketing.” In September 2016, CoT grabbed the Flemish government’s attention: “you are doing some investment here; we want you to become a showcase.” From January 2017 onward the Flemish government is giving specific structural funding to develop solutions that should be deployable globally.

Box 26. IMEC

IMEC is an international R&D and innovation hub originating from Flanders, Belgium. It employs 3,500 researchers in different international locations. The organisation is specialised in nano-electronics and digital technologies (including smart cities, mobility and health, logistics and manufacturing, and energy). Among these IMEC develops IoT sensor network solutions, 5G and wireless IoT communications.

IMEC has a long history in Belgium and its long-term excellence gives the hub quite a lot of credibility. Its origins go back to 1982 when the Flemish Government set up a program in the field of microelectronics in Flanders which included a laboratory for advanced research in microelectronics (IMEC). IMEC was founded as a separate, non-profit organization supervised by a Board of Directors, which includes delegates from industry, Flemish universities and the Flemish Government.

Source: IMEC homepage (n.d.) https://www.imec-int.com/en/about-us

There is political support from the high level from the city government to the project which also includes financial resources: “there is a commitment that the budget for 6 years goes by the principle that with every euro IMEC puts into the project the city will match it“ (city officer). This is very different from the time five years ago, when technology development was not on the city’s agenda: “In 2013 we were not thinking about money for smart city.”

Currently the project is funded though EU investment ranging to €2.15 million (through IMEC’s 3 different projects: SELECT city, Syncronicity and AGILE – see box 27), Flemish Government with €40 million over next 5 years and the City of Antwerp which will also finance the living lab component of the project. Antwerp has been cautious not to concentrate its efforts on the testbed: “If we put a clear focus on one sector we can focus on things, play internationally, maybe also on a subsector level.“ Nevertheless, the project compliments the city’s strategic goals in smart mobility, security, sustainability, government and citizens.

Box 27. The role of EU funds in developing the CoT

European Union funding played an instrumental role in the emergence of City of Things. Three projects have been especially highlighted – SELECT for cities, SynchroniCity and AGILE with an EU investment of €2.15 million – that capture the city's and IMEC partnership.

- In SELECT For Cities (Horizon 2020) Antwerp partners with Helsinki and Copenhagen to build an IoT governance platform. SELECT For Cities Focus concentrates on joint pre-commercial procurement for the development of cities as Internet of Everything (IoE) labs (procurement of digital solutions for urban challenges). City of Things will play a crucial part in the Living Lab validation phases of SELECT for Cities.
- In the SynchroniCity project (2017-2019) cities serve as reference zones for experimentation with new IoT-services (Antwerp's use-case is 'Mobility as a service').
- In AGILE the city uses existing IoT research for specific value delivery for the city: e.g., by providing security with Danish drones flying in the Port of Antwerp. The project is carried out in partnership with organisations from Germany, Spain, UK, Denmark, Greece, Austria, and France.

Source: OECD interviews; https://ec.europa.eu/digital-single-market/en/news/digital-single-market-practice-antwerp-city-things

City of Things as a service layer

City of Things is conceived as a service layer on top of existing and emerging start-up incubation and acceleration initiatives in Antwerp such as Start-up Village, iMinds iStart, Start-it KBC, and FI-WARE. At the core of City of Things is the merging of collective intelligence and peer production on one the hand, and Big Data and sensor infrastructures on the other, with the goal of supporting bottom-up mobile service innovation processes in urban environments (Box 28). As a multi-technology testbed which allows for the testing of novel smart city experiments (e.g. evaluation of network protocols, data gathering mechanisms) with a real large-scale deployment (Latre et al. 2016). What distinguishes it from other IoT testbeds is the fact that it allows a wide range of wireless technologies. "You don't need APIs for every city. You need maximum interoperability wherever you operate, e.g., Barcelona, Copenhagen, etc." City of Things allows smart city sensor producers to evaluate their products' performance in real-life settings; data analyst and researchers to exploit real-life datasets and network experimenters to test their research, products and services in more realistic settings.

From the city's perspective CoT needs the sensors to serve multiple purposes. As such, different types of sensors have been installed including traffic monitoring sensors (to measure congestion in the main bottlenecks of the city), parking sensors (parking occupancy), GPS and accelerometers in smart parking signs (to disallow parking in certain areas temporarily), and mobile air quality sensors (deployed mostly in vehicles from the Belgian Postal Company).

Box 28. Main technical characteristics of City of Things

The City of Things is managed by a partnership between IMEC, the City of Antwerp and Mobile Vikings. The City of Things testbed is focused on 4 main pillars:

1. City-wide deployment: it covers the full city centre and the harbour.
2. Cross-technology: supporting several radio technologies, including Bluetooth LE, IEEE 802.15.4, WiFi, LoRa and Sigfox.
3. Multi-purpose: experiments can cover any number of devices, supporting small and large scale experiments.
4. Multi-level openness to support maximum level of experimentation.

The network configuration of the City of Things testbed also considers two completely separate network technologies for each purpose: service provision and protocol experimentation. In the devices deployed in the City of Things testbed two different technologies are deployed: one supporting LoRaWAN, for the service provision, and another one that depends on each device. Therefore, the network configuration of the City of Things testbed can be divided in two groups, depending on the underlying technologies (Santana et al. 2018):

1. Multi-technology gateways: these devices compose the core of the City of Things capacity for protocol experimentation as they support a wide range of different wireless technologies. These have been distributed throughout the city and connected to the city's fibre network.
2. LoRaWAN technology. The main goal of the network is to ensure the data sensor provision with full-city coverage, keeping the network isolated from the protocol experimentation infrastructure.

As such, the City of Things projects tries to go beyond previously bounded data operability experiments by increasing the area of deployment (harbour and inner city); by supporting all major wireless technologies; by allowing variety of experiments and differentiation of areas and scales deployed in them; by insuring openness of the system – open data to experiments from information city collects through its sensors; by allowing researchers to build their own network protocols on top of the existing nodes and by using a living lab approach to engage with users and citizens.

Source: OECD interviews; Santana et al. 2018 University of Antwerp. https://www.uantwerpen.be/en/rg/mosaic/city-of-things/

In addition, CoT combines technology tests with the living lab approach, so, that it can become a real-life, large scale testbed. In 2016 IMEC merged with a digital research centre iMinds. iMinds is managing the creation and development of City of Things urban living lab. As such, IMEC itself is a two-sided enterprise consisting of hard tech developers (IMEC) and softer service, living lab solutions (iMinds). The initial collaboration in EU projects (Synchronicity, Citadel), just as well as iStart emerged between the city and iMinds. Hence, the focus was in the beginning was on the 'softer services' of what merged into IMEC. Recently joined two parts are not yet fully integrated, which also became apparent in the City of Things case. While the engineering side, developing the technology test-bed infrastructure, had a very clear idea where their

processes were going, the living lab methodology was not put in place from the onset and had to be puzzled out during the development of the project with the city.

> *"Since the merger of IMEC and i-Minds also for us the technology came together with the softer side, impact on users. We were looking for good causes to demonstrate the power of the merger. Showcase how hardware, software and user-perspectives can work in a unified format in real life."*

(Representative of IMEC)

IMEC interest is to push for state-of-the-art of smart cities technologies, but it is not entirely clear if all of those solutions proposed will be also in direct community interest in Antwerp. Hence, the hardware level of the initiative is quite well conceptualised (making smart devises secure, hack-proof); on the data level issues surrounding data ownership and data privacy are still up in the air. In the meantime the city and IMEC put in place a 'data charter' agreement. It was a process that took more time than initially envisaged and presented new (legal) challenges to the city. However, no pilot case was launched before this agreement was finalised. The intention is to insure data anonymization or by clustering data into user groups instead of individuals – in all cases there is some trade-offs between data accuracy (its effectiveness) and privacy that need to be made, yet the city has vowed to uphold the minimal legal requirements in the pilots it engages. Due to the issue of privacy, city has been very careful in communicating about the project outwardly to citizens. The city tried to conceptualise the project more in detail, especially in terms of the living lab component, before involving citizens. Nevertheless, each of the pilot cases launched in the smart zone by now is the outcome of a participatory process with the community. For all other projects we do together with IMEC the policy objectives of the multiannual planning provide a clear touchstone.

City as a 'beta' for experimentation

> *"City is actually very much open to experimentation, very welcoming to opening their door to us."*

(Private sector partner)

As described above, the city and its harbour will be equipped with numerous gateways supporting different wireless IoT protocols to connect thousands of wireless sensors which will measure traffic flows, noise, energy consumption and air pollutions, etc. As all of the city cannot be covered yet by sensors, a test area – the 'smart zone' (Box 29) – was selected for the first phase of the longer term project. The interconnectedness of the systems in the particular area should allow testing a variety of solutions and their effects across different fields: "Measuring and putting together a lot of data in the smart zone, we can look for correlations between different things we are investigating – logistics, cultural life, housing, weather etc." (city official). In practise, the Smart ZoneCoT testbed supports three level of experimentation, including: communication-level, where network researcher can deploy novel network protocols in a real urban scenario; data-level, providing open-data about the measurements gathered by the sensors; and user-level, engaging the citizens to provide feedback about Smart City applications (see Santana et al. 2018). With the variety of uses the city sees the possibility to also update its working methods and start to become more citizen-centric: "We want to connect two ways of working: bottom up approach, working with citizens and also a top down approach. Usually the way we collect data, the way we optimize services decided more from the top." (City official)

Box 29. The 'Smart Zone'

In one area of the city – 'Smart Zone' – a network of wireless gateways and smart sensors across buildings, streets and other city objects will be installed. The sensors should make it possible to monitor traffic and pedestrian flows, energy consumptions, ait quality among other parameter. Smart applications built on the information should be made accessible for citizens through smart devices (smartphones, tablets etc.). By concentrating the data collection in one part of the city, data can be made interoperable.

The smart zone was selected together with the city with a specific criteria in mind – "We gave our wish list, what the area should cover" (IMEC representative). City official described: "We had a brainstorming. Need a common space that is large enough. One street won't work, it is not large enough. After discussion we agreed that we need a neighbourhood." In the end a central zone (Figure 17) in the city from the Royal Museum of Fine Arts until the Groenplaats covering several streets (Volkstraat, Nationalestraat, Kloosterstraat, Graaf van Egmontstraat and the streets in between, in particular Sint Andries) was selected for the zone. The area sees a lot of traffic, is a mixture of commercial and living quarters and is socio-economically diverse allowing to test various hypothesis.

Figure 17. Map of the Smart Zone

Source: OECD interviews; Smart City Strategy. Presentation to the OECD (2017).

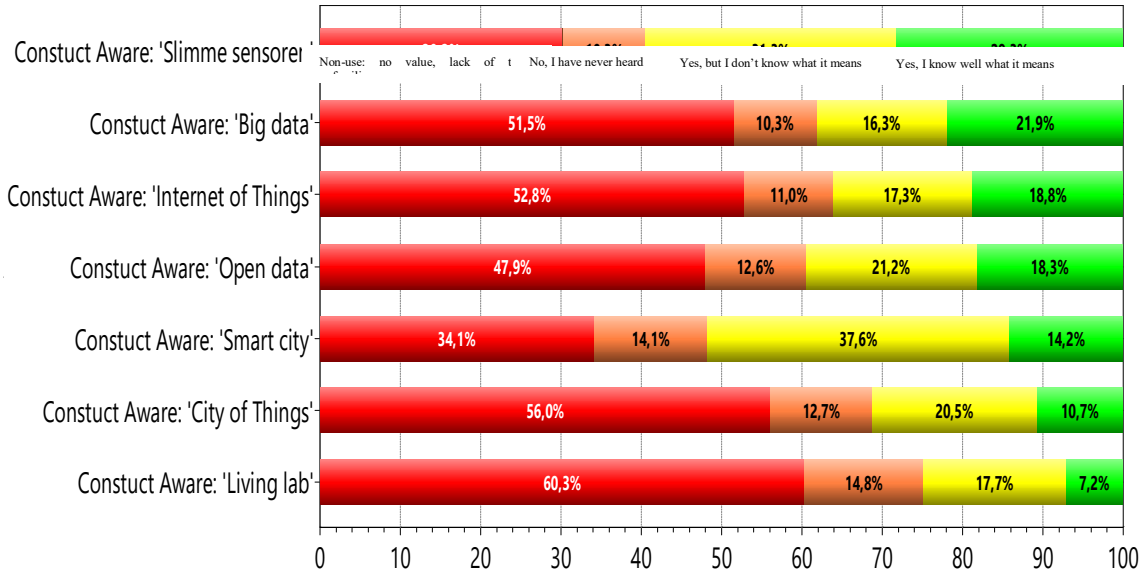
It was essential to get a commitment from the City Government for using the region fast. Firstly, some city regulations and procedures especially connected to the smart zone needed to be streamlined.

> *"Many city civil servants want to experiment, but it is difficult the way the city is structured. Many problems cross departments. Smart zone helps to go beyond that. The mayor put his weight behind it which makes internal collaboration possible in a geographical bundling of services."*

(City official)

Secondly, the living lab approach required a lot of communications with the local residents, companies and civic actors. This in a political environment is not always risk free. It was a plus that another city innovation lab orientated towards sustainability, Stadslab had already done some interaction in the neighbourhood. An extensive communication plan with actor analysis was drawn up. The pre-study, the Smart City Meter (Figure 18) showed that the awareness of smarty city solutions was not that high, while concerns connected to key issues like privacy where very important to people. While 63% of citizens were willing to share their data in return for smart city services, not all people actually knew what a smart city was (78% of the people had heard of the concept, only 55% know what it was). At the same time, privacy concerns were high: 88% of the people were concerned about their privacy. One involved stakeholder described: "It is one of the main pitfalls: doing a lot of smart solutions, but not communicating it out. It won't work if people don't adopt the solutions." Consequently, the plan is to make the Smart Zone very interactive. Citizens will have the possibility to give their options.

Figure 18. Have you heard about the term?



Source: CoT consultation plan.

To communicate the results of the initiative better, the city expects some clear use-cases from the smart zone; at least four will have to have concrete end results (Figure 18).

Based on a user-driven methodology a list of 10-12 use-cases have been developed (in areas such as smart retail; smart parking and logistics; mart traffic lights and lightning; social cohesion; smart energy consumption; smart waste; air quality; smart cameras) and through a living lab method the list will we reduced to three to five that will be tested in practise. The final goal should be implementation which for also IMEC a novel experience: "City of Things is an experiment for us with the city to actually implement things." In the latter phase, there are still many unresolved operational issues connected to the project. The stakeholders expect especially issues with scalability, interoperability, because all the real-life competitors need to work together to assure the latter. Furthermore, what will happen with the day-to-day maintenance, with whatever databases are create, is still to be resolved. This is a typical issue for cities as described by a representative from Digipolis, the city's IT unit: "we don't need only beautiful dashboards from vendors, but sensors and actual data; not only easy discussions. Yet, it is a difficult to separate the dashboard from the data ownership."

Emerging smart city governance model

> *"A lot has changed, nobody is waiting for government – we cannot take one year on a policy note anymore."*
>
> (City official)

Invariably, there are a variety of ways cities can and have chosen to govern smart city solutions from a self-governance model where the city has left the governance of smart city networks to private companies, to models where the city government takes the role of a highly centralized lead organisation (Bolivar 2015). Consequently, city government can be the either "owner" and lead the smart projects; "coalition partner" with other key stakeholders; "manager" who standardises and supervises projects or "contractor" who assigns the development of the smart city completely to private developers (Anthopoulos 2017: 216). Step by step, Antwerp has moved from a contractor to coalition to a co-manager role in the last years. Yet the approach in the city to the concept is still fairly fragmented.

Due to the origins of the CoT initiative (funding playing the role of the key catalyst), the European Union desk first held the coordination. When the flagship project, the City of Things became more formalised into a unified program the Business and Innovation Team took over the technical implementation (see Figure 19). Yet, they are challenged by balancing their role as stewards and their everyday tasks and involvement from ad hoc opportunities. The complexities presented by smart city developments (technology, legal aspects) are challenging the expertise of a city. The operational resources are low and they have very few people in office. Thus, developing the ecosystem was in the beginning more important than the concrete developments it inspired. As one of the desks employees described: "we ourselves do not have an agenda. IMEC has a clear vision of what they want to do. Not only for Flanders, but also for the city." Thus, the city followed – at least in the beginning – suit:

> *"With IoT we have a twin strategy. Get things outside in. Traditionally you start with a government problem in the city, but smart city solutions don't work like that. Your problems are not the problems of the citizens. When you find those out, then you solve a problem."*
>
> (Public Official)

When things became more concrete in the smart zone developments the city took a clear citizen-centric and problem-oriented approach.

Figure 19. Governance structure of the 'smart zone'

Source: Presentation to the OECD.

True to their position, IMEC sees the emergence of the smart city as an evolutionary process that comes from the quadruple helix (Government, University, Enterprise and Society) itself. As such "smart cities are not the goals, they are the means. Goals are defined by the quadruple helix itself. How do you become the smart city? You don't, it is a process." However, should the city leave its role in the quadruple helix unattended when its outside technology partners are clearly on an advanced position?

Next to the latter two partners there is the main IT partner of the city, Digipolis which has been quite successful in with the entrepreneurial focus of the city by spurring on start-ups in the region by using pre-commercial procurement and other ways. Digipolis is a governmental, but strictly non-commercial ICT organisation founded in 2003 to drive ICT solutions for the City of Antwerp, its Public Centre of Social Welfare, the local police, and other subsidiaries. Digipolis manages the complete IT-platform of the city of Antwerp and thus, as tried to standardize practises, make city portal user-centric within a city while still leaving room for agile development. Yet, some perceive the actions quite top down and prescriptive very different from the approach taken to smart solutions: "Digital strategy is very top down. Not everybody is able to go along with that strategy nor do all situations fit."

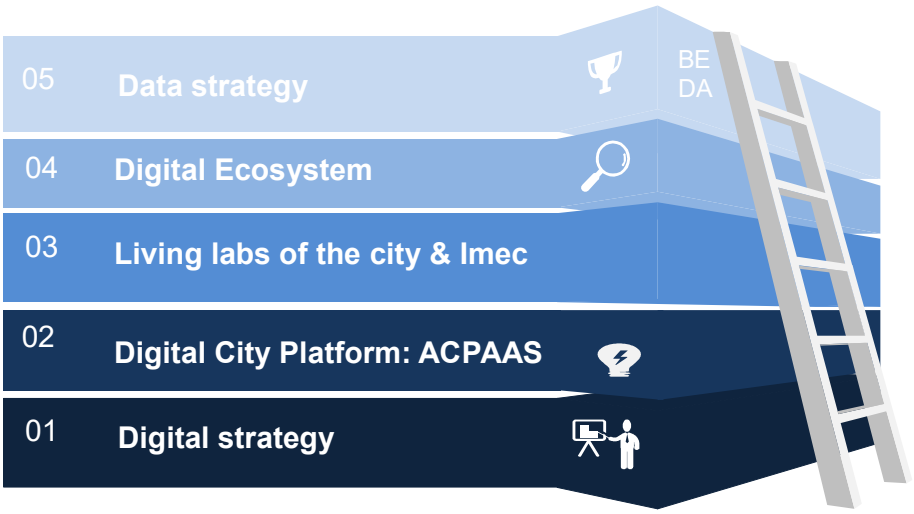
In parallel, the city has tried to clarify its position on the smart city, define itself a smart city strategy and appointed a coordinator for the project. The role was filled as part of a leadership program exercise: "I joined the process to climb the ladder. Needed to make a case optimization – show which things we have and how to improve the process. Chose the smart city concept to analyse." It soon became clear that smart city projects were

disconnected and dispersed in many silos and fairly little learning was happening across departments:

> *"Smart city was within a silo and mistakes were done over and over again. For example data ownership, vendor lock-in. Experiences were not shared. I made a strong plea to develop a smart city coordinator that we would have a holistic approach to smart city and to develop a smart city vision for Antwerp."*

After the coordinator role was established, they worked on defining the smart city strategy for the city and coordinating the different stakeholders involved. In essence, the existing situation and actions were put into a more coherent format (Figure 20). This is not unusual when smart city strategies are concerned as practise (and outside funding) has gone before strategic discussions in cities themselves. Thus, not only in Antwerp, the creation of a smart city has been done through articulating already existing initiatives are converted into coordinated, strategic and branded narrative (Coletta et al. 2017). In Antwerp's case their narrative and following action would be successful if the city would work across all six categories and each initiative would further define different smart city functionalities.

Figure 20. Antwerp smart city building blocks



Source: Antwerp Smart City Strategy.

Subsequently the city political leadership identified five thematic priority areas for the smart city strategy (Figure 21). They were deemed limited scope, but this was due to limited resources – the city leadership did not address the open innovation, evolutionary model of working and thus, city departments still have the right to pursue their varying interests. Thus, the coordinators role became to facilitate conversations in the start-up phase of the City of Things project: "All of my daily work foes to smoother communication between IMEC, Digipolis and the political level." Currently, the success of the city's smart city strategy and its role as a coordinator of projects depends on single individual's efforts.

Figure 21. Five priority areas for the smart city

Source: Smart City Strategy. Presentation to the OECD.

At the same time there are many challenging issues connected to smart city project among them also the City of Things. There is a question on reliance on EU funding and its impact on the strategic action of the city. Thankfully, the city has been able to diversify the funding for the Smart Zone program to ensure its sustainability. Nevertheless, the question remains: should Antwerp follow ad hoc opportunities when they arise or follow strategic priorities? In some cases outside vendors have taken the lead in partnering with the city (as was the case with City of Things); in other occasions (e.g., the 6 Mio Urban Innovative Actions project, Circular South), the city was and still is in the lead from the beginning, involving among others IMEC as the partner. As such, in the beginning there were questions about the city's data strategy that the city later solved by creating the data charter.

4.6.4. Impact and challenges on the way

> *"Smart city is kind of everywhere and nowhere. In Antwerp it was a recent development, one person coordinates it inside the city. There is not enough coordination between different initiatives and IoT with the City of Things is part of it."*
>
> (City official)

In the shadow of the City of Things – technology led smart city development – a deeper case of smart city evolution emerges. The impact, potential and concerns surrounding the CoT initiative echo broader issues within the city. The City of Antwerp has exuberantly gone into technology development, followed options that have presented themselves to it by funding or partners not wanting to clearly define a strategic direction. Yet, now further along the path of the chosen tracks, when the initiatives are maturing and ready to be experimented on and then on implemented, the city is asking itself how much in control of the developments they are. One city official explained: "Now as the focus on impact is becoming more important; it is not just about getting more funding." The city has to start to explain to its constituents the choices it has made, deal with difficult public value

trade-offs such as privacy and effectiveness. Try to avoid lock-in while building long-term strategic partnerships. All of this is more difficult, when many of the choices have been left to outside partners catering to "outside interest first and then inside" and when the city itself does not control the narrative anymore. Consequently, the city officials are fearful of 'digital capture:' "Main problem is that currently there is no feedback loop from IMEC and living lab in place to the city itself." And yet, at the same time the city's open and collaborative innovation model has produced some – potentially fundamentally transformative – initiatives amount them the City of Things. Clearly flexibility comes with both great potential for change and great potential cost. What is clear is that as the pilots develop, the city has to enter more difficult debates on value trade-offs connected to these new developments.

Since the beginning of City of Things (and the time of the conducted interviews in 2017) the city of Antwerp has started to formalise its smart city processes. The coordination of smart city and the smart zone was reorganised and brought under a new team 'Funding, Innovation and Technology' (FIT) within Strategic Coordination unit. The singular role of the Smart City Coordinator was re-evaluated and the strategic coordination was shifted to the team leader of the FIT team. The operational follow up is in the hands of a smart zone project manager. The EU desk is also part of the FIT-team to assure better coordination. The various aspects of smart cities business (business and innovation team), data (data team), and technical integration (Digipolis) much more clear ownership. The organisational reshuffle contributed to this, adding a project manager for the smart zone while centralising the strategic smart city coordination at the 'Manager Innovation' person), who is in charge of leading the department 'Funding, Innovation and Technology'. The city also made a strategy on open data and is now working on a strategy on shared data and setting up a data broker network. Antwerp is learning by doing and laying out its smart city plan on the way. There is a clear path laid down for the participatory process, the selection of the use cases, etc. as part of the smart zone project.

Would the City of Things, an experimental test-bed with possible global significance, have come about if the Antwerp would have planned for it? Probably not. Does the city have to be even more adaptive and also reactive to outside influences in developing its smart policies? Assuredly yes.

Circular Economy – Knowledge Action Programme on Water Governance in Amsterdam

4.7.1. Summary

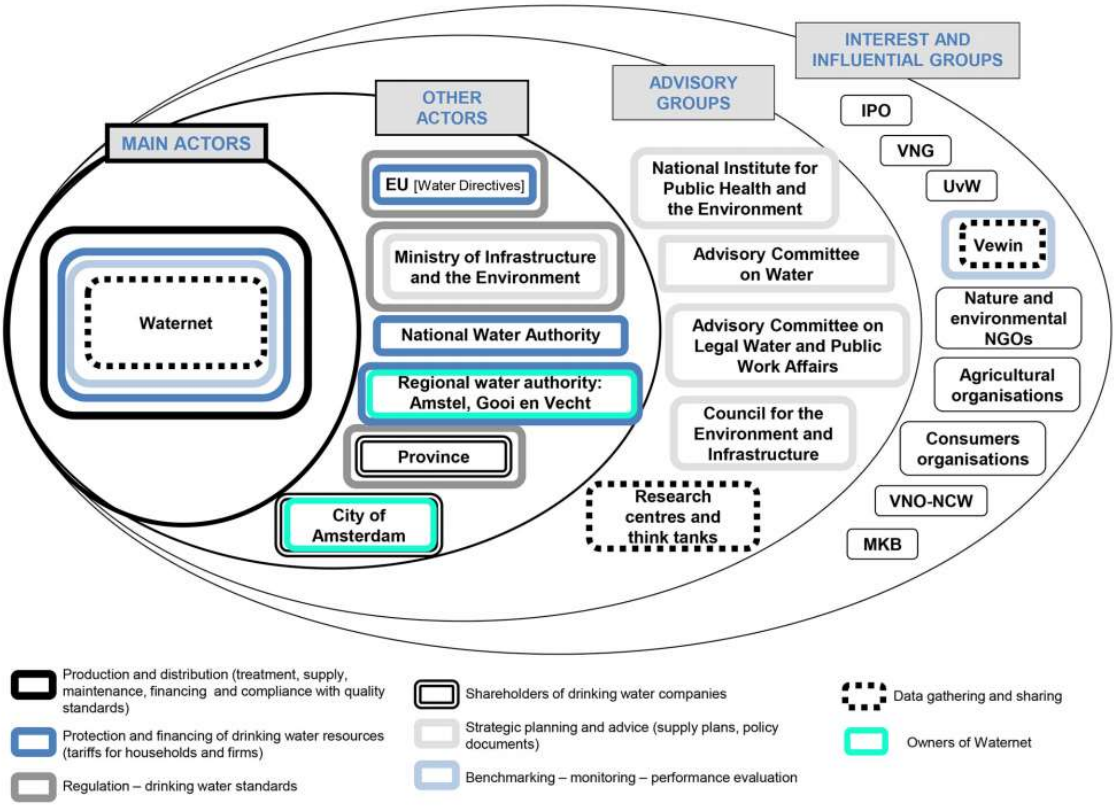
In the field of water management, new distributed, off-the-grid, emerging circular solutions are challenging public authorities, utilities and stakeholders at large to adapt to evolving contexts. The whole water governance system needs to prepare for alternative futures, in an efficient and inclusive manner. As such, beyond being providers of water services, water companies are also promoters of new sustainability models, and facilitators of innovations in water resources management. The Knowledge Action Programme (KAP), promoted by AGV/Waternet in Amsterdam, the Netherlands, aims to support the transition towards a more sustainable and resilient city by integrating knowledge development into co-creation projects in a multi-stakeholder fashion. The programme stimulates dialogues between policy and science so to modernise water governance.

4.7.2. Context

In a country where more than half of the territory is below the sea level, developing technical and non-technical capacities for water management is key for the national security. As a matter of fact, the Netherlands is acknowledged as a global reference for water management in terms of ensuring protection from floods and freshwater supply (OECD, 2014). Traditionally, water management has been highly decentralised across provinces and municipalities, as well as regional water authorities (RWAs), functional administrative elected bodies with taxation powers. The RWAs are responsible for defining regional plans and drawing regulations, amongst others. Changes in the water governance system of the last 50 years consisted in the consolidation of RWAs (from 2 650 to 24) and public drinking water companies (from more than 200 to 10); the modernisation of the National Water Authority in 2006; and the creation of the Ministry of Infrastructure and the Environment in 2010 (OECD, 2014).

The water governance system in the city of Amsterdam is unique compared to rest of the country (Figure 22). It is characterised by a model of integrated water management, whereby since 2006 the water utility Waternet has been performing on behalf of the municipality of Amsterdam and the Regional Public Water Authority Amstel, Gooi en Vecht (AGV). Waternet is the executive arm of the municipality, by keeping the canals clean, dredging waterways, and maintaining bridges; and of the AGV, by implementing plans for maintenance and improvements of dykes, cleaning wastewater and ensuring that the surface water level is correct. In practice, Waternet holds responsibilities for drinking water, sewage, wastewater treatment, surface and groundwater quantity and quality, and for closing the whole water management cycle. According to Waternet (2017, interview) this integrated system allowed 20% tariff decrease, thanks to costs cutting.

Figure 22. Institutional mapping for water management in Amsterdam

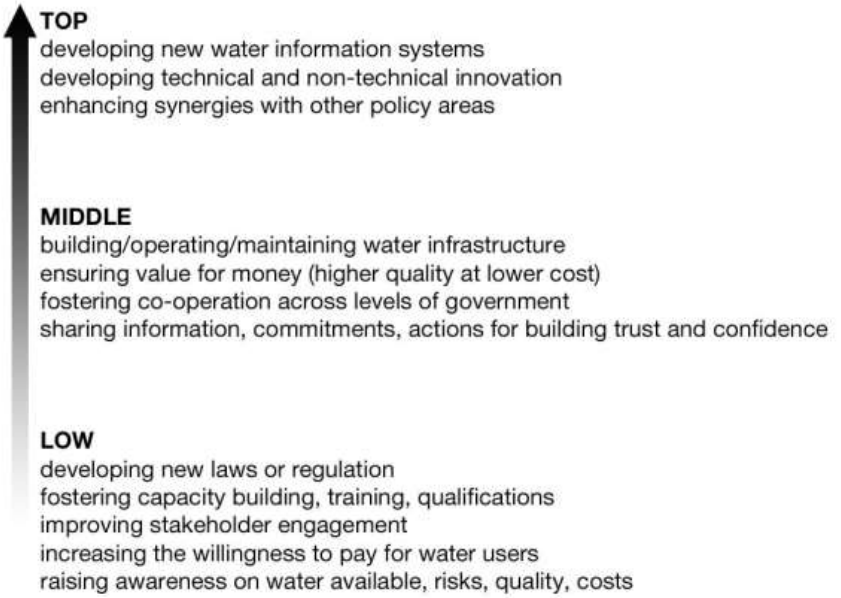


Source: Amsterdam City profile, as a result of the OECD Survey on "Water Governance in cities"(2016), http://www.oecd.org/cfe/regional-policy/water-governance-in-cities-amsterdam.pdf

Environmental sustainability and citizens' engagement are amongst the core values guiding Waternet's activities. In 10 years' time, Waternet plans to achieve a more efficient water system, improved customer satisfaction and environmental sustainability also through a circular economy approach that would make the most of wastewater reuse. Forward-looking strategies consist in developing knowledge and information, technical and non-technical innovation and enhancing synergies with other policy areas, such as waste, energy and urban planning (Figure 23).

Figure 23. Forward looking strategies in urban water governance

Priorities in the city of Amsterdam.



Source: Amsterdam City profile, as a result of the OECD Survey on "Water Governance in cities" (2016), http://www.oecd.org/cfe/regional-policy/water-governance-in-cities-amsterdam.pdf

Towards a new model of governance

In recent years, the role of the key water actors in Amsterdam has evolved, due to technological changes and political decisions. In addition to its role as water services provider, Waternet become promoter and facilitator of a series of initiatives and pilot projects to cope with the risk of "too much water", while fostering innovation and engaging stakeholders. A prominent example is the "Amsterdam Rainproof", a successful multi-stakeholders platform, whereby technical solutions for making Amsterdam rainproof by 2050 are accompanied by awareness raising, information sharing and stakeholder engagement (Box 30). According to Waternet "in 20 years people will not pay for the wastewater, but they should get money from it" (Waternet senior management). The management of the innovation programme in Waternet is carried out by a steering committee, thanks to which decisions are taken collectively.

After the low voter turnout in 2015, the AGV started working towards enhancing proximity and trust with citizens. The elections represented an occasion for questioning its modus operandi and looking at ways to be more innovative. Citizens see the AGV mainly as an old fashion institution and in some cases are scarcely aware of its activities.[15] The challenge consists in re-articulating the AGV's public role, without re-shaping completely an institution, which was created in the 13th century.

[15] More in general, the role and existence of RWAs was also questioned at national level, following a proposal in Parliament to merge them with the (12) provinces into 5 "national areas" by 2025, which was not eventually taken over (OECD, 2014).

"Water management is the oldest way of governance in the Netherlands. It is not a good start when one needs to reinvent ourselves. /…/ There needs to be a new story, not just the oldest democracy story. /…/ Because we are the oldest democracy, but maybe we can be the first modern democracy as well."

(Waternet employee)

Following the conclusions of the OECD (2014) report "Water Governance in the Netherlands: fit for future?" on the need to increase awareness, water awareness was one of the core objective in the AGV mandate for 2015-2019 and part of the new communication strategy. Moreover, the AGV's board argues that it is important to make sure that public resources are used to mobilise the private ones.

Box 30. Amsterdam Rainproof

Amsterdam Rainproof is a platform raising awareness on rainwater management and seeking practical solutions for rainwater storage in smart urban spaces. It is a network gathering citizens, public servants and entrepreneurs, under the motto "Every drop counts". The "aim is to make Amsterdam a rainproof city by 2050, limiting the damage following a cloudburst and increasing the beneficial use of rainwater for greening and rainwater harvesting".[16]

Started by an initiative of Waternet in 2014, in three years' time 100+ partners have joined the platform and numerous projects have been implemented, such as: water retardant green strips at the Zuidas, rainproof parking spaces at the De Mirandabad pool, underground water storage at Mahlerplein and the climate-proof street.

This project has its own identity, distinguished from Waternet. It also has also its own logo. Yet, it has been instrumental in teaching Waternet to work across traditional boundaries and empower communities:

> *"Rainproof is not about a plan, it is about working together in the city. How what you do impacts the change needed. /…/ It is about redefining roles. For example community managers have a totally different role to think about response to initiatives. It is not about government trying to get others to do what they want. It is about connecting initiatives that work for systems change."*
>
> (Project coordinator)

Rainproof has been a strong example for subsequent programs in Waternet. It also stimulated circular economy thinking, on wastewater cycles and water in the circular economy.

Sources : OECD interviews and https://amsterdamsmartcity.com/projects/amsterdam-rainproof; https://urbanland.uli.org/industry-sectors/infrastructure-transit/every-drop-counts-making-amsterdam-rainproof/; https://www.netherlandsandyou.nl/latest-news/news/2017/06/13/preparing-before-the-flood-making-cities-rainproof-is-crucial; https://www.waternet.nl/contentassets/1b27dec45fd3426c899bc068d0ffa0d8/annual-report-2017-waternet-innovation.pdf

The future of water governance in Amsterdam is also shaped by two major factors: a strong commitment of the City of Amsterdam towards a sustainable agenda and the flourishing of bottom-up initiatives, through which citizens play a more active role in public services management.

The water sector has a fundamental role to play in making Amsterdam cleaner, smarter, greener and more circular. The Sustainability Agenda, adopted in 2015 aims to increase the use of renewable energy, reduce air emission, increase waste separation and achieve circular economy by 2020. The city has committed to the circular economy as an important pillar of its sustainability policy (March

[16] https://www.netherlandsandyou.nl/latest-news/news/2017/06/13/preparing-before-the-flood-making-cities-rainproof-is-crucial; https://www.rainproof.nl/sites/default/files/rainproof-magazine-engels.pdf

2015).[17] Several projects are taking place underneath the umbrella of Amsterdam Smart city, to make Amsterdam carbon and gas free by 2030, amongst other goals. The use and re-use of water, combined with other sectors, such as energy and waste can contribute to this agenda. However, it is not only a technical matter: what is important is the enabling environment to put them in place, which should adapt to emerging needs.

> *"Our biggest challenges for our future vision is to actually overcome our nature as a technical authority or technocratic mandate. That we have a lot to say, but little to ask. If we don't think about innovation as a social process then meetings will actually get in the way."*

(Waternet employee)

In Amsterdam, more than 90 pilots, demonstration projects have been counted to support to bottom up initiatives, consisting in city labs, pilots and experimentations, through which citizens, professionals, communities show their willingness to take concrete actions according to the concept of "owning the city". Collective action in general is an institutional challenge to traditional public sector organisations.

> *"Not only are city hackers disruptive to the existing system, but they start to connect to citizen to citizen, you see the solutions emerging from the streets. This is a new playing field that the government has to adapt to. We are waiting for when the slap comes. When do the citizens go too far. It is also a bit dangerous. In public domain, government should also protect the citizen."*

(City maker)

The challenges of some of these initiatives consist in their continuity and in their inclusion in a wide picture for the city. Lack of continuity can be due to decreasing interest from citizens themselves:

> "*In late mid-2000s it became fashionable to be part of maker-spaces. Active citizens said they wanted to be a living lab, with a local manifesto, but after the signatures were signed a lot of the enthusiasm seemed to fade. Box was ticked and also the economy improved, normal business took over*."

(Civic activist)

Collective action in general is an institutional challenge to traditional public sector organisations: "When a lot of niche projects emerge, how do they fit into the wider regime?" (Waternet employee) These solutions can react with a lot of other systems, so, how democratic can a (new) system to be.

> *"Not only are city hackers disruptive to the existing system, but they start to connect to citizen to citizen, you see the solutions emerging from the streets. This is a new playing field that the government has to adapt to. We are waiting for when the slap comes. When do the citizens go too far. It is also a bit dangerous. In public domain, government should also protect the citizen."*

(City maker)

[17] 25% of Waternet customers are interested in circular economy (Waternet interview 2017).

On the other hand, it is legitimate to ask "When a lot of niche projects emerge, how do they fit into the wider regime?" (Waternet employee). For example, the decentralised sanitation system in Buiksloterham (Box 31) raised a number of questions, in terms of use of public resources, scaling up the practice and on the role of institutions. "We need to talk about who participates. There is always an idea that citizen involvement is good, but we should acknowledge that they also represent their individual interests." (Political representative). At the same time there is a "risk of a small elite using tax revenues for their vision… it is not acceptable or understandable to the larger city" (Waternet employee). Moreover, the more people invest in decentralised systems, the more the cost of central systems will raise for those who remain connected to the central system and do not have the option to switch, while there are also high investment sunk cost to take into account. As one of the stakeholders involved stated: "The value of this debate is fundamental, so, that we won't drift off."

For example, the decentralised sanitation system in Buiksloterham (Box 31) raised several questions, in terms of use of public resources, scaling up and role of institutions. "We need to talk about who participates. There is always an idea that citizen involvement is good, but we should acknowledge that they also represent their individual interests." (Political representative). At the same time there is a "risk of a small elite using tax revenues for their vision… it is not acceptable or understandable to the larger city" (Waternet employee). Moreover, the more people invest in decentralised systems, the more the cost of central systems will raise for those who remain connected to the central system and do not have the option to switch, while there are also high investment sunk cost to take into account. As was put by one of the stakeholders involved: "The value of this debate is fundamental, so, that we won't drift off."

> *"Some people would like to do develop the distributed circular economy solutions themselves. Others would say that we are not interested in that. How do you manage that as a water authority? How do you manage these hybrid situations?"*
>
> (Waternet employee)

Box 31. Decentralised sanitation system in Buiksloterham

The city of Amsterdam urbanises and grows by 10 thousand inhabitants per year.[18] From 2000 to 2014, the city's population increased by 1% annually on average, about twice that of the national average. This has raised the need to build 70 000 new homes by 2040 (OECD, 2017). The economic crisis of 2008 on the one hand delayed or stopped the realisation of some projects, on the other hand generated bottom up solutions, as in the case of Buiksloterham, Amsterdam North.

In Buiksloterham, the municipality started a project for transforming the industrial site of De Ceuvel into residential one. Being a former ship construction site, the area was heavily polluted.

In 2010, given financial constraints to concretise this project, the city of Amsterdam, owner of the land, set up a tender for a ten-year lease of the De Ceuvel land, claiming as one of the criteria the compatibility with the sustainable urbanisms concept. Meanwhile individuals were given the opportunity to buy for a convenient price a small number of houses in a non-polluted area of Buiksloterham. This differed from the usual model involving rather than individuals, housing corporations or developers. Buyers built houses using environmental-friendly and sustainable practices. In 2012, a team of architects won the tender developing an innovative concept to re-shaping De Ceuvel, which officially opened in 2014. In 2017, it has been named most sustainable initiative of The Netherlands.

In 2015, citizens, de Alliantie and AGV/Waternet, in addition to Municipality of Amsterdam, several real-estate developers and organisations signed a "Manifesto for a Circular Buiksloterham".[19] To implement it, a living lab for circular and urban development was created. It is the precursor of De Ceuvel as a Cleantech Playground, a platform for people for innovation and creativity.

Nowadays De Ceuvel is a unique space were 17 old houseboats have been transformed in offices and creative spaces. Each boat is equipped with dry toilet, which saves water and produces compost. The quality of the compost has been analysed to make sure the fertiliser can be used without incurring in health risks. Implementing this system was due to the difficulty in digging in order to lay a sewage system, due to the pollution of the ground.

Source: https://www.waternet.nl/globalassets/annual-report-innovation-2015-online.pdf; http://citiscope.org/story/2016/how-amsterdam-turned-polluted-industrial-site-its-most-

[18] https://www.amsterdam.nl/bestuur-organisatie/organisatie/ruimte-economie/ruimte-duurzaamheid/making-amsterdam/circular-economy/report-circular/

[19] On 5 March 2015, the manifesto was signed by: Waternet, Alliander Duurzame Gebiedsontwikkeling, De Alliantie, Eigen Haard, Metabolic, DELVA Landscape Architects, Studioninedots, Amsterdam Institute for Advanced Metropolitan Solutions (AMS Institute), Stichting Schoonschip, Vereniging de Ceuvel, Beleef Buiksloterham, Afval Energie Bedrijf Amsterdam, Amsterdam Economic Board, Westpoort Warmte, Zelfbouwers Buiksloterham, Waterschap Amstel, Gooi en Vecht, Pakhuis de Zwijger, the municipality of Amsterdam, NUON and New Energy Docks Source: https://www.amsterdam.nl/projecten/buiksloterham/circulair/; http://www.amsterdam-water-science.nl

interesting-neighborhood; http://deceuvel.nl/en/about/general-information/; https://amsterdamsmartcity.com/projects/the-ceuvel; http://www.smart-magazine.com/fr/de-ceuvel-projet-urbain-amsterdam/; OECD (2017), The Governance of Land Use in the Netherlands. The Case of Amsterdam, OECD Publishing, Paris.

4.7.3. Initiating and implementing a process of systems change: the KAP

The concept

In a context in evolution, where roles and responsibilities of public authorities, utility and stakeholders at large are changing, the whole water governance system needs to keep up with these changes. Improving urban water governance embracing a multi-stakeholder and multi-sector perspective is one of the goals of the Knowledge Action Programme (KAP), promoted by the AGV/Waternet. The programme aims to stimulate a dialogue between policy and science so to modernise water governance, within a systemic approach vis a vis the highly localised and temporary experience of experiments and pilots.

The KAP supports the transition to a more sustainable and resilient city by building and improving knowledge and integrating into concrete actions and projects. The KAP has shown that knowledge can feed the co-creation processes that lead to innovation in the city, improving the quality of the solutions generated. A healthy knowledge-action system supports the socio-metabolism of the city, helping to make it more sustainable, circular and resilient. At the same time, this approach places new demands on the researchers, policy makers, and other stakeholders, such as: how to combine the top down and the bottom up approach in the provision of water services? What are the enabling conditions for innovation to spur? How to carry out tasks connected to different institutions at the same time? How to develop a research agenda towards water governance change?

The KAP overcomes the silo approach of the pilots, cause of the lack of an overall systemic view. Indeed, the "Amsterdam Rainproof" Programme and other similar projects have prepared the Waternet for experimentation and collaboration with stakeholders (e.g. Living lab governance system). Already in 2010-2014, a program called 'Leefbare toekomstbestendige WATERgraafsmeer' ('Liveable future-oriented water governance') and 'CleanTech Playground' experimented new forms of community roles and paved the way towards the KAP – "because we had been kind of doing it already." However, demonstration projects, pilots, tests going on in the field of water management, do not impact sufficiently on the systems level. "Co-creation doesn't find its place there," said one of the interviewed stakeholders at Waternet. Only having an understanding on the lessons learnt from the use of technology across numerous initiatives and by investigating and discussing the (potential) consequences in terms of water governance, it is possible to trigger changes. Pilots might succeed at their own scale, but they lack the qualities needed to deal with institutional lock-in (Andrew Segrave, KWR). "Only integrated pilots can be successful, otherwise they are organised to let them fail" (adviser to Waternet). "We had pilots for 15 years. But it doesn't change the system. Not enough. We need to change the system. We need to start a platform for a common legitimacy" (employee of Waternet). As such, pilots were drivers for further investigating governance dimensions related to them and creating the conditions for a timely response by the institutions.

The KAP stimulated a debate on the future of water management beyond technical aspects. Nowadays, while technologies are developing faster – sensors, digitalization, IoT solutions etc., roles and regulations struggle to keep the pace. It is not only a technological question, but a socio-technical one: "the old regulations and institutions are not accustomed to new possibilities; they are blocking scaling" (water entrepreneur).

"When you talk about innovation and resilience there is a tendency to focus on technology and finance but not on governance" (AGV representative).

> *"Technology is not so complicated that government agencies can keep on saying "we know best". It is how we are going to use technology that is important. And the agreements on the policy level that follow. Waternet can agree to cooperate on the project with housing cooperation to minimize risks, but it doesn't mean that the rest will follow or able to adapt to the solution, that other public offices are able to adapt to doing things differently."*
>
> (City maker)

From the initial idea to action

The programme initiated in 2015 , following a project proposal drafted by Maarten Claassen (Waternet) and Andrew Segrave (KWR) and submitted to Wiegert Dulfer (AGV), with the idea of creating active knowledge on water governance scientifically sounded and broadly supported by stakeholders. The idea was to create a platform for science-policy exchanges: "to help local governments and stakeholders have a more strategic view and scientists to help the city in orientating the challenges" (Advisor at Waternet) and produce "knowledge where it is used" (UvA representative). For this to happen there was the need to go beyond desk research and isolated academic research, in order to put in place an approach able to intervene at system level. The creation of collective knowledge, in fact, differs from information shared through scientific publications: "knowledge stands in the head of individuals and not on paper."

The programme concretised thanks to the synergies between Waternet, Universities, and knowledge institutes and to the political support of the AGV. They mirrored the types of knowledge to be developed amongst scientists, practitioners and politicians: strategic knowledge for the academic sector; institutional learning for the utilities and related to policy innovation for the local government. Yet the program was not an easy sell: "We needed to convince the organization that we needed to put the money in this scientific knowledge-action program because it was not used to it. We justified it with the idea of keeping the scientific quality in the probe to new models." A KAP stakeholder described: "The top of the Waternet is quite old school. When push comes to shove they revert back to traditional resources, proven methods. I don't really see how to change that. /…/ How do you get the top level moving?". Some AGV's political leaders stepped in: "I have been a willing victim, Maarten had the vision, a lot of this is his idea. It was his idea to develop a research agenda that changes the governance of circular economy, not just a specific paper on a specific problem."

The collaboration between the utility and universities developed during a conference organised by the Amsterdam Water Science (AWS, composed by Vrije University and University of Amsterdam)[20] in 2016. This was also a fertile momentum for getting the support from the AGV, which sought to investigate its role in relation to water chain solutions at different scale, based on new techniques and greater stakeholders involvement. The AGV meant to re-start a

[20] http://www.amsterdam-water-science.nl/

dialogue on endemic and emerging issues (e.g. climate change, water quality), as a way to keep the dialogue on between the elections and promote innovative thinking. At the same time, KWR was working together with Dutch and Belgian water companies on programming a new collective research agenda on Water in the Circular Economy (BTO WiCE) and with the strategic division of the AGV in Amsterdam on setting up a more adaptive system for planning and learning. The ideas developed in these initiatives came together in the KAP.

The "zero phase" of the KAP was a pilot project called "Living lab governance system". It was funded by the Waternet and the AWS and was undertaken upon request of the AGV. It had three objectives:

1. to prepare a research agenda "Innovating Water governance in the Amsterdam Metropolitan Region", validated and supported by relevant stakeholders, as well as peer-reviewed by experts;
2. to develop a first outline of a "knowledge action system" to support water innovation in the Circular Economy in Amsterdam;
3. to position water governance expertise of the AWS in the local knowledge arena, and enable student participation in this arena.[21]

The work was carried out by the AWS, KWR and Kennisland. It concluded in 2016 with the publication of a report, containing 23 in depth interviews with institutional representatives, scientists, and innovators to identify problems and define solutions. The Waternet, together with innovative Amsterdam institutions and organizations including Metabolic, Buiksloterham Circular, and Pakhuis de Zwijger provided relevant inputs.

> *"To approach change the problem has to be productively discovered. Through KAP the system started to understand itself. How business has been done in water has been changing, how different infrastructures are emerging and the discursive change that comes with it - something that the water industry has to adapt to."*
>
> (Academic lead in KAP)

The zero phase concluded with the identification of four Work Packages (WPs) and corresponding programmes for the years to come:

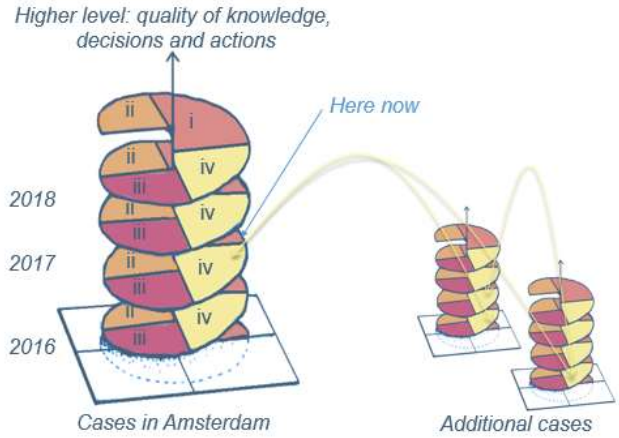
1. Post-hoc review of governance strategies in various cases throughout the Netherlands;
2. Action research on systemic changes in co-creation processes,
3. A priori analysis of alternatives for the division of risks and responsibilities in new governance systems, including citizen involvement, business cases, and the legislative context;
4. Learning and adjusting to strengthen the knowledge-action system and facilitate the reflexive and responsive approach.

[21] http://www.amsterdam-water-science.nl/research/aws-pilot-projects/results-living-lab-governance-system/results-governance.html

A 5th WP was devoted to the overall co-ordination. Leaders of the WPs were chosen according to the expertise of the various institutions involved. However, they belonged to the "scientist" category, in order to ensure the rigour of the academic research and quality of WPs content.

The spiral image (Figure 24) underlines the approach for identifying issues and solution in an inclusive manner, designed for an urban setting to overcome silos and work together. It is based on: 1) defining and analysing views, roles, relationships and positions of the current knowledge action system through network analysis, document analysis, observations and interviews; 2) identifying obstacles; 3) evaluating ways forward; 4) testing them in a fictional decision-making process (simulation) and sharing findings at workshops. The KAP focuses on three strategies: strategies for responding to changes; governance of new technologies in the water system; and new ways of sharing out responsibilities and risk.

Figure 24. Spiral approach to identity issues and solutions



Source: Segrave, A (2018). Kennisactieprogramma Water: Jaarverslag 2017 en jaarplan 2018..

As follow up of the zero phase, the AGV financed a new programme called "Innovating Water Governance". Up to the end of 2018, the KWR, UvA, VU and AMS will implement a research agenda, on the basis of the four identified WPs. Within this programme, aiming at building a knowledge-action network, the WP4 organised two public meetings. The first meeting was held in April 2017. It aimed to gather stakeholders to let them know each other and share ideas on the implementation of the knowledge-action programme. Issues at stake were water awareness, public private collaboration, decentralised vs centralised system (Box 32), silos/ broad collaboration. The second meeting was held in June 2017, combined with a public event at Pakhuis de Zwijger in Amsterdam. It was more structured than the first one. It saw the participation of about 50 people, including elected board members of the AGV and city makers. Still, a KAP stakeholder from the energy sector stated that "There needs to be real questions about what is the public value. For example, rolling out smart meters in energy we found resistance and concerns about privacy and control. We didn't have good means to communicate with normal people."

Box 32. The debate on decentralised systems within KAP

Technological innovation and bottom–up initiatives concerning decentralised sanitation in Buiksloterham brought about relevant water governance challenges: Is this knowledge useful in other places? Who is responsible for this? Are these developments compatible with the existing legislation? What does this imply for decision makers from a system perspective? If people are not going to use the system anymore, what is going to happen to the infrastructure that has been built to serve a large population on a long lifetime? What if people do not want to be represented anymore? What if people want to manage water independently?. Specifically for the Waternet, challenges concern the use of biogas from the waste and sanitation process and the possible emerging competition from other (rather small) sanitation companies.

The role of the KAP is to promote discussion on sensitive themes, such as that on decentralised systems, with the scientific support of experts that act 'reflexive participants' in the co-creation processes and as 'honest brokers' of policy options. Researchers show how alternative technologies and/or governance systems may change the distribution of risks, costs, and responsibilities across public organisations, private companies, and individuals.

Different stakeholders had different reactions:

- Promoters of circular development reacted to this initiative with enthusiasm, by seeing it as a good opportunity to gather new ideas, new business models;
- The municipality was open to the idea but reluctant in scaling up the model. Pilots on sanitation should be limited in number and scale. Only when results and impacts are clearly understood then they could be ruled out in the city.
- Stakeholders, such as housing corporations, property owners wondered about the consequences in case of failure of the system.

The challenge of decentralised sanitation is not so much about implementing it or not, but how to frame a debate on possible structural changes: what would be of these systems level if individuals choose to decentralise? How democratic the system should be? What about the debate between individualisms vs public interest?. Decentralised technologies can be analysed from the perspective of their distributive functions, the multi-level perspective of transition regimes, which works with niches innovation and the way they fit into wider regimes and from and institutional and regulatory perspective. All these aspects have been taken into account in the KAP, which will provide different scenarios together with an analysis of what transition paths these features require. The expected result is to have a long-term strategic debate in an open way.

Source: interviews

4.7.4. Impacts and vision for the future

The programme is currently running, hence it is premature to draw conclusion on results and impacts. This initiative should make the Amsterdam knowledge infrastructure stronger, by enhancing collaboration to maintain this infrastructure for the future and

support social innovation and adaptation of governance systems. However, from an organisational point of view the successful implementation of KAP could be threatened by:

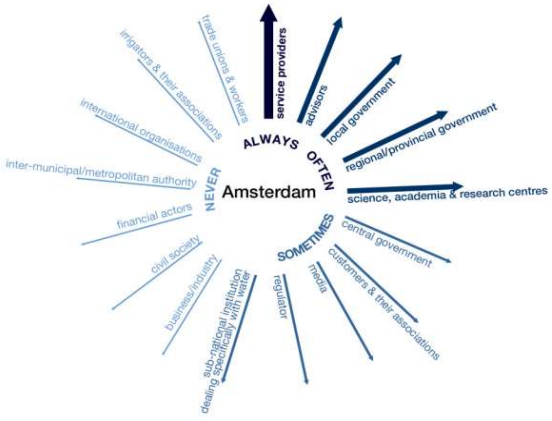
- Limited available budget to implement the project;
- Lack of continuity of partners involved in all the phases (including future ones);
- Acceptance by the AGV management of the reflexive and responsive approach, which requires gradually learning and adjusting;
- Availability of scientists in co-creation processes vis a vis priorities set by their home institutions (e.g. peer-reviewed publications)
- Possible overlaps of some themes across WPs.

Some ways forward can be identified for the governance system to benefit the most from the KAP:

Learn from bottom-up approach, while making the most of the top-down one. While the local government is very much committed in its mission to preserve the collective interests and not individual ones, "The government should trust citizens in the triangular relationship" (city maker). City makers believe that Amsterdam is moving towards a cooperative society (we hack the city! We own the city!): there is a concrete opportunity for innovation, whereby top down and bottom up meets in the middle (Dutch are polders. We like to talk, to compromise).

Move beyond the usual suspects when debating on the future water governance. There are several stimuli to open dialogues with stakeholders less involved in water governance matters. OECD (2016) show that in the city of Amsterdam intense interactions occur amongst the main players (utility, local government and academia), but not or less frequently with others, including the civil society (Figure 25). Typically, the WP2 is at the front of the system change analysis focusing on how the relationship between water and society is going to change. However challenges remain, including: different expectations of people and business on water management; cultural barriers and market within which to operate.

Figure 25. Frequency of interaction amongst stakeholders



Source: Amsterdam City profile, as a result of the OECD Survey on "Water Governance in cities"(2016), http://www.oecd.org/cfe/regional-policy/water-governance-in-cities-amsterdam.pdf

Practice what you preach. Undoubtedly, Waternet and the AGV showed their willingness to learn from innovation and question themselves to keep up with them. However, there are challenges in learning from these processes in a context in which the utility is very much still a technical organisation, whose staff is predominantly composed by engineers. Hence, governance matters but until what level is internalised in the dynamics of the company is yet to be clearly understood. On the other hand the AGV is a political body in which several interests are represented. Two main problems arise: one is related to the risk of putting forward personal agendas, which might hinder policy continuity: the next elections will take place in 2019 and it might be the case that the programme would be over by then. A sign of success for the AGV would be to bring more people to vote. The other is related to the resistance to change vis a vis the context of social innovation. However, in the case of decentralised systems discussed above, resistance is due to a careful consideration of the risks. According to many, experiments cannot be scaled up without taking the risk on public health. It is estimated that in the future decentralised systems could be used by 2% of the city population. At the moment there are 500 000 connections (Interviews, 2017).

Explore future synergies across water and energy. “To analyze urban metabolism, not to look at different streams, but try to connect all these streams together.” (KAP participant). During the interviews carried out for this case studies, several interviewed highlighted the fact that the energy sector made possible transformation through decentralisation of technology and that in the future the water sector may follow this path. “We are at the beginning of the circular transition. It’s about reinventing the thinking. It’s where the energy sector was 10 years ago” (CTO Amsterdam). Energy and water share the same values: clean, affordable, available. “Integration with energy, resources recovery, etc. is nee ded: only this interaction can make system change” (representative from UvA).”

5. Conclusions

> *"A complexity science perspective on cities invites planners to develop an alternative way of guiding urban transformations. From this perspective, enhancing the capacity of cities to maintain an optimal 'fit' with their dynamic environment should be the focus of planning, rather than trying to establish a particular urban configuration."*
>
> Rauws and De Roo (2016)

The aim of this report has been to exemplify through the emerging practise of cities how public value is changing and how different cities are engaging with value-led transformation. It also has also allowed pushing the discussion forward around where city transformation is really going. Not concentrating on the intricacies of the complex world of city governance and the different models of the latter, the work has tried to explore the nexus between democratic participation, urban futures and public value. Why look at these three topics together?

The changing landscape of civic purpose on the city level requires us to start to thinking about uncertainty and change in a more systematic way. There is a lot of uncertainty ahead that forces us to think about planning and visions for our living environments in a different way. If we cannot delineate long-term visions for our living environments, because they will be invariably proven obsolete, how to act strategically in a tactical setting? The current report argues that this could be done in the format of public values – discussing what kind of value cities are interested in delivering, what kind of alternative futures might exist and what trade-offs are acceptable to make and thus, adapting action tactically when problems call us to act quickly. As the roles of cities are changing and citizens are more and more engaging with peer-to-peer productions, local resilience – creating local, contextual solutions for problems –, change needs to be collective and actions cumulative. The report shows that strong participatory citizenship is needed not only to hedge against the disintegrative forces of declining involvement, but start engaging with what kind of public value cities should be producing for its residents or how to produce it collectively together.

As a result, the challenge for decision makers becomes three-fold:

- first, how to proceed on a course of action is especially unclear and start defining new types of values that are still emerging;
- second, how to involve the citizens in a productive participatory process to deal with the uncertainty together and align potential action;
- and third, how to keep the adaption continuously going even in fast-changing environments.

The case studies covered in this report have a lot to teach about the emerging practises on the city level in regards to the issues outlined above:

- ***Citizen Assemblies and Citizen Reference Panels in Canada***

The case outlines in detail how participatory, deliberative processes can be put in practice to examine complex problems. It is not only informative in terms of the sortation process by which semi-representative panels are assembled guaranteeing legitimacy to the discussions and diversity in the groups, but also the overall process of facilitating discussions in these panels. How to make people talk about values, their trade-offs, while elevating their understanding about what the government does and what are its limits. The process becomes outcome.

- ***The Mayor's Office of New Urban Mechanics in Boston***

The case makes clear that there is another way to deal with uncertainty of the future than writing long-term plans, vision documents or posing grand challenges. MONUM unearth and reacts to citizens needs as they arise in a 'quick and dirty' way, managing uncertainty by real-time implementation. The approach relies on the idea that citizens what they value is the king and court all at once, thus, once that is made clear the unit can act fast. Tactical rather than strategic becomes the focus – managing the city in a just-in-time form. Systems change emerges through iterative choices – does it guarantee the best solutions for the city or its residents in the long-term remains to be seen. Yet, it is another way to embrace uncertainty, because it allows continuously re-imagining the value perspective and not get locked into time-bound agreements.

- ***Hope Care System in Namyangju***

The case shows that complex problems in government blind-spots (where issues fall in between local-regional-state remits or just in-between silos) positive change is possible through in-cooperating citizen action into the system and co-producing outcomes beyond what government alone is capable of. Thus, the residents of Namyangju are producing welfare to people in complex financial and personal situations that leave them outside of the bounds of state intervention. The case exemplified the new form of local resilience – contextual and personalized services to people by peers in a local environment. Peer-to-peer production is vital to the process of systems change. Especially in this new environment where people face increasing complex problems, but they cannot rely on traditional service providers (i.e., in the context of welfare – family, state), because their issues do not fit traditional bounds of intervention. New solutions have to emerge and the quickest way to test them is close to the users with and by citizens themselves.

- ***Collaborative Innovation in Gothenburg Region***

The case exemplifies that cities are not islands. While it is important to focus on them, they exist in contexts, conditions and as part of a network of resource and information flows that includes the regions, nations and larger geographies that surround them. To focus on the city without concern for its milieu is perilous; akin to thinking that the head tells us all we need to know about the body. How to cross the existing administrative bounds with citizens' needs? The Gothenburg Region experience shows that it is possible to transfer some authority to a higher level and address problems at their right scale collectively. Yet, this requires a lot of trust from partners still living their day-to-day in legacy systems. As such, the collaborative model is bound by "lowest common denominator" agreements first and then expanding out if and when the case is proven. Of course exceptional circumstances can arise – e.g., refugee crisis – in which a window of opportunity opens further to explore more flexibly different opportunities. For cities to reap the benefits of collaboration, they should start thinking about what scale their problems belong to and what kind of structures need to be put up to work on that scale.

- ***Seoul 50+ Policy.***

Cities will more and more encounter new types of demand and new citizens need (e.g., think about the automatization of jobs that will start to soon impact the socio-economic fabric of cities). Seoul 50+ Policy shows how a systematic perspective can be taken to new types of demand. What it takes to build lasting and comprehensive solutions for a whole demographic group. That these types of changes are always treated with suspicion and critique in the beginning of the change process and it takes leadership and political clout to move past that. Success relies in understanding how to orchestrate multiple points of intervention that are contextually aware, but cumulative in nature. On the side of substance, the case also shows that experimentation and thinking needs to emerge around what the future of work will be, what are the different types of new models that could be tested. So, that after automatization work will not be only about sustenance and security, but social value and fulfillment.

- ***City of Things in Antwerp.***

This case is illustrative of the reality many cities' face every day: confronted with high uncertainty and lack of capacity to explore quickly changing field of technology, they explore options from the outside. They do not define the agenda themselves, but explore issues in partnership with outside technology entrepreneurs. However, one cannot get away from developing expertise in house; otherwise, it is difficult to ascertaining the real public value or its trade-offs connected to projects. Otherwise, outside interests and perspective can starts to domineer the agenda. This might be the story in many cases in the field of smart city solutions, the field has become big business and sometimes 'smart' is preferred over 'substance.' At the same time, technological experimentation is crucial to cities to stay relevant in the future and in most cases they cannot do it alone. It is the matter of building up working feedback loops and defining value sandboxes (data ownership, privacy, efficiency etc.) that could complement technological change. The case also shows the power of narratives and story-telling ('Çity of Things') and their role in emphasizing and reaching consensus when confronted with complex value questions.

- ***Knowledge Action Programme on Water Governance in Amsterdam.***

Fundamental challenges are ahead to network bound sectors – technology today makes it possible to disintegrate oneself from the system and build local, decentralized systems. This to some extent has already happened in the field of energy and some predict that water and waste management is just 7-10 years behind. Within these decentralized and circular systems the role of governing bodies changes – they are not only providers, but producers and resource creators. Furthermore, anybody in the system can become a producer/resource provider themselves. Thus, traditional bodies have to contend with new civic solutions, city hacks that challenge their traditional authority and role. To think about what this means to city governance in the long term and which value trade-offs are ahead, public organizations need to invest in research and dialogue to explore the future in a productive way. Yet, currently cities and their affiliates have little time to react, let alone research, which means that emerging evidence, does not inform processes in time. Hence, tracks to explore the future and use the information in everyday practice have to be created and created in ways that take into account the distributed nature of all the potential actors involved. Furthermore, the case shows the importance of experimentation in exploring an uncertain future, but also its limits: when the whole system is affected then the only experiments that can be truly informative are those adopting the whole systems approach.

Overall the case studies show that not all cities have the same needs or strategies when dealing with complex futures. Yet, in variety of ways systemic value debates connected to innovation and change are going on. These can both top-down and bottom-up, but when things become serious then some level of political buy-in is necessary. What seems to be common across the board is that when dealing with transformative change fragmented agendas pose a challenge to cities and silos and agencies dealing with specialized issues need to be convinced and overcome. The capacity to plan for innovation in local governments may be low, but there are ways to work more experimentally to increase the likelihood of desired effects. Yet overall, experimentation, testing and upscaling of innovation receives relatively less attention then the final outcomes in local level innovations. The same is true for national level public sector innovation.

In all cases citizen participation was crucial if not easy. New methods and approaches were tested to deepen the conversations and unearth new needs. While very informative, the role of these approaches in traditional governance structures is not clear. New deliberation approaches require sharing of power with citizens and stakeholders, which is difficult for (city) governments. Sharing of power is much easier in areas of government blind spots or new emerging policy fields, while it is much difficult in more traditional fields. Yet, user perspective and civic action can also be a strong legitimizing factor for change.

The report also highlights the need for more research around some core issues: for example, how in practise public value could be used to frame challenges on the city level. How to make public value a productive rather than abstract concept? The more smart solutions become pervasive, the more this type of debate, analysis and evaluation is needed. Furthermore, the nexus between deliberative process and the future of cities should be explored in more detail. This is very important in the context when the rate of change is increasing, tactics start to dominate strategy and many things lie outside of the control of government. Last, but not least, as core city systems are at the brink of change, the report asks what scale experimentation should be on to address uncertainty correctly and test problems at their right level.

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