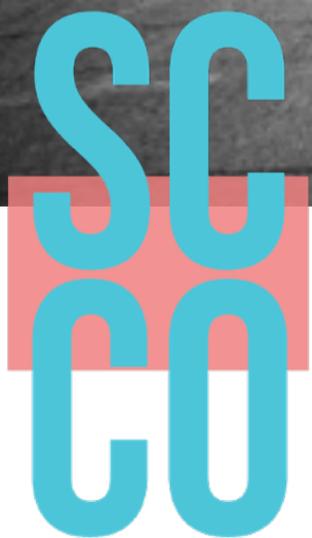


SMART CITIES

for city officials

A SOCIAL SCIENCES APPROACH



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MODULE 5

Participation and Democracy

Smart cities have added a new chapter to the half-a-century old question of participation and democracy in urban planning. This module discusses how, instead of reproducing existing patterns of exclusion, smart city technologies could empower citizens in decision making: “Citizens should not only have a say about how things are designed, but also what things are designed” (Germaine Haleboua).

Module 5

Participation and Democracy

GUY BAETEN- Participatory forms of smart city planning and the democratic nature of smart cities will be the topic of this module. Together with issues of data privacy and security, participatory and democratic questions in smart city projects belong to the most tricky and controversial topics to deal with. Quite a few social scientists, planning theorists and political scientists alike have raised substantial critiques about participation.

As such, the question of civic participation in urban planning and land use matters is not at all new. Planning in most countries became more democratic and participatory as a reaction to the large-scale urban renewal projects and urban motorway projects of the 1960s and 1970s that went hand in hand with large-scale demolition. Citizen protest in many countries resulted in reforms that made public consultation a legal requirement for urban planning projects.

The development of smart cities has added a new chapter to the half-a-century old question of participation and democracy in urban planning. On the one hand, new digital techniques can in theory have a very positive effect on participatory planning. Traditional community meetings with municipal planning officials render the planning process slow and cumbersome. With the arrival of neighbourhood email list servers, community-specific online platforms, neighbourhood websites and neighborhood blogs etc., the traditional in-person meeting seems to be almost something of the past. So, in principle, digital technologies can help out to greatly improve the communication and understanding between citizens and city officials.

CHIARA VALLI- But research is also putting question marks behind the nature and extent of participation in smart cities projects. To start with, Rob Kitchin analysed a range of smart city initiatives in Dublin and looked not only at if there was citizen participation, but also at the form and level of participation in those projects. As Rob Kitchin will explain soon, most smart city projects in Dublin actually lacked citizen participation, or they reduce citizens to consumers of smart technologies and products, in contrast with the rhetoric surrounding smart city projects.

Rob Kitchin, like most of his colleague researchers, discerns good intentions in most smart city projects when it comes to participation. He mentions for example Amsterdam as a place that has done a great effort to include citizens in including smart planning projects. But most researchers realise that genuine participation is very costly and time-consuming, and it therefore become complicated for cities to do exactly that.

Another smart city researcher, Germaine Haleboua who has written this wonderful book simply called 'Smart Cities', argues that existing social divides in the city are reproduced through existing participation practices in smart cities. Companies offering smart solutions are listened more than citizens and affluent communities contribute more to smart city plans than marginalised communities based on class, race, gender, digital literacy, income, etc. We asked her to elaborate on that theme from her book.

GERMAINE HALEGOUA- The trends that I've been seeing, especially in the US, is that tech industry professionals - technology industry professionals from let's say IBM or Cisco for example, and major actors in the smart cities realm, and other corporate sponsored organisations - have been listened to above the citizen or the resident. Compounded with that, is that more affluent communities have contributed to smart city plans, and smart city data and initiatives, more so than traditionally marginalised communities based on race, class, gender, citizenship, status, literacy, income, etc.

The short answer is that there hasn't really been a lot of emphasis on democratic participation in the actual process of designing these plans and designing these cities.

I think there has been a lot of consciousness that participatory models and democratic models should be in place when we're thinking about smart city development. And if you look at a lot of the roadmaps, and you look at a lot of the master plans, you'll see a lot of gestures of inclusion (even in the US, which I don't think this is really followed through), you'll see a lot of language that talks about inclusion, that talks about citizen participation, that talks about democratic processes, and maybe how certain elements of the smart city can enhance or enrich democracy.

What we end up seeing is either these things aren't followed through, because they are difficult or time consuming, and they're really not that efficient in terms of processes towards an end goal. Or because the people who are wanting efforts towards participation and democracy through smart city models have really good intentions, but they don't know how to implement these systems, or they don't know how to really foster them.



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And if we are relying heavily on dominant discourses [corporate perspectives] that are limiting in a lot of ways, these discourses and the solutions that are being sold in the marketplace of ideas, but actual marketplace when going to an expo and buying these vendor creative technologies that are supposed to be easy fixes, we are not prioritising any sort of dialogue, or discourse, or deliberation, or participatory models, they are prescribing a fix.

I think that there's a lot of issues or area for change in those dominant models which we could talk about. But the simple answer is that we haven't seen a lot of strong examples of participation and democracy in the average smart city plan.

GUY BAETEN- The observation that we have not seen many strong examples of participation and democracy in smart city projects is shared by Rob Kitchin as we mentioned earlier.

This is the very influential ladder of citizen participation originally designed by Sherry Arnstein back in 1969 and it was recently used by Rob Kitchin and his colleague Paolo Cardullo to classify a range of smart initiatives in Dublin. Rob Kitchin talks us through the ladder of smart citizen participation in Dublin:

ROB KITCHIN- So what we've done then is we have taken on Arnstein's ladder of citizen participation, that famous paper from 1969, where they set out to what extent are citizens involved in the planning system, and then map that onto the smart city. And what you get is: at the bottom level, you have *non-participation*, so people are the data points, they're the user, they're there to be steered, nudged and controlled. And above that, you might have *consumerism*, so as some level of choice, you're the consumer, you're the resident, you're the product, you browse, you consume, your act. Above that, there's *tokenism* where you might be the proposer, the participants, the recipient, and you might be able to give some suggestion or feedback, but it's quite limited. And then above that is *citizen power*, which is where you're the decision maker, the co-creator, the leader, you get to give ideas, give some leadership, negotiate, co-produce, negotiate what's going on.

And the vast majority of smart city projects are down at the bottom level, down at this non-participation and consumerism. And although they're branded as citizen centric, it is within the constraints of this civic paternalism, stewardship. It's within this technocracy, paternalism, neoliberal capitalism, really. It's pretty limited. And I think cities themselves find it difficult to actually do the stuff that's more citizen centric. They don't have the resources to really do it. And that's not how they're geared up, they are geared up around citizen paternalism and stewardship.

“The vast majority of smart city projects are down at the bottom level, down at this non-participation and consumerism. And although they're branded as citizen centric, it's within the constraints of this civic paternalism, stewardship.”

Table 2: Scaffold of Smart Citizen Participation

Form and Level of Participation		Role	Citizen Involvement	Political discourse/ framing	Modality	Dublin Examples
Citizen Power	Citizen Control	Leader/ Member	Ideas, Vision, Leadership, Ownership, Create	Rights, Social/Political Citizenship, Deliberative Democracy, Commons	Inclusive, Bottom-up, Collective, Autonomy, Experimental	Code for Ireland, Tog
	Delegated Power	Decision-maker, Maker				Civic Hacking, Hackathons, Living Labs, Dublin Beta
	Partnership	Co-creator	Negotiate, Produce			
Tokenism	Placation	Proposer	Suggest	Participation, Co-creation	Top-down, Civic Paternalism, Stewardship, Bound-to-succeed	Fix-Your-Street, Smart Dublin Advisory Network
	Consultation	Participant, Tester	Feedback	Civic Engagement		CIVIQ, Smart Stadium
	Information	Recipient				Dublinked, Dublin Dashboard, RTPI
Consumerism	Choice	Resident	Browse, Consume, Act	Capitalism, Market, Neoliberalism		Smart building/ Smart district
		Consumer				Smart meters
		Product				Personal data generated by tech
Non-Participation	Therapy	Patient, Learner, User, Data-point	Steered, Nudged, Controlled	Stewardship, Technocracy, Paternalism		Smart Dublin, Dublin Bikes
	Manipulation					Traffic control

From: Cardullo, P., & Kitchin, R. (2019). Being a 'citizen' in the smart city: Up and down the scaffold of smart citizen participation in Dublin, Ireland. *GeoJournal*, 84(1), 1-13.

There's a couple of places that do. In Amsterdam they actually have a department in the city municipality that is all about civic engagement, that employs lots of people, and it its part of what the local authority does. Barcelona does it through their [DECIDIM.BARCELONA](#) platform and all of their town-hall meetings, and you know, all of that kind of stuff. But most cities don't. Dublin doesn't. Dublin doesn't really have a platform to do proper civic engagement. It rolls out the smart city projects, and then talk to the citizens three years later about what it is that is going. It's after the fact.

It's the same kind of thing we had in [a paper in Environment and Planning C](#) around European projects. In European projects, so huge projects, you normally have to get stakeholders, you normally negotiate between universities, local authorities, companies, and so on. You're in a rush to write the proposal, you say in a proposal that you're going to work with citizens, but they're never involved in writing the proposal. They only get

involved once you've got the money, and then you bring them in. And then they can say "well, that's not actually what we wanted".

I've evaluated a couple of projects where they've notionally been citizen centric, but citizens had only been brought in afterwards, and the citizens were saying "but actually, we're not interested in that". There was one in Bristol, I think, and they had to actually bring in a third party to negotiate with the citizens to get them involved in the project, because they weren't talked to before that, even though it was a citizen-centric project.

The systems are set up in a way that you don't have the time and the space to really, meaningfully, make citizens co-creators. And that has to change. I think if cities really wanted to do this, then they really have to put the resources on the infrastructure and to find meaningful ways of co-creation. Otherwise, it will always just stay as kind of separate paternalism and stewardship and it will be fairly tokenistic.

CHIARA VALLI- As we pointed out in the beginning, participation in urban planning is certainly not a new question at all, it has been with us for about 50 years. But Jennifer Clark points at an important difference when it comes to participation in projects. Clark is a long-standing expert on economic innovation in cities. She points at the fact that smart technologies require constant upgrading, they will change constantly, these are not so-called discrete technologies that are implemented once and that's it. This means that the engagement with local communities when it comes to participation in smart cities will have to be more constant, more recurring than with 'traditional' urban development projects.

JENNIFER CLARK- I think it's really important to think about marginalised communities outside of the question of technology. To think about this in the broader context. One of the things that I look to is the disability rights movement and the idea of "nothing about us without us". And particularly when we talk about the data extraction component of what smart cities really does. We have to think about, what it means to actually plan *with* community?

And this is where the subtitle of the book comes: "The work of smart cities" is that. And I have bad news for everybody, this is going to be a lot of work. This is actually going to be more work. We are going to have to think about how we have sustained conversations with all our communities about what it is that we do with them, rather than this sort of episodic engagement, where with a discrete project we ask the community to engage for a moment about the three alternatives on the table, and then we stop talking to them. And then we come back three years later with another intervention, we might talk to them about selecting one of the interventions or advise us on the intervention, then we walk away.

This is more about a sustained engagement over time because these are not discrete technologies. And this is something we know about what happens with Information and

"I have bad news for everybody, this is going to be a lot of work. This is actually going to be more work. We are going to have to think about how we have sustained conversations with all our communities about what it is that we do with them, rather than this sort of episodic engagement."

Communication Technologies (ICTs). They are in a constant upgrading relationship. We are constantly upgrading. How many times you update your phone software at any given year, right? That is the case for how these interventions and cities are going to be. It is going to be persistent, not episodic. And the engagement with community about the choices, about the priorities, about the needs is going to have to be persistent as well.

GUY BAETEN- These were some examples of social scientists arguing that current levels of participation in smart cities leave considerable room for improvement. The obvious question then is: how do we go about with this? How can we make that happen? We asked some of the experts and we start with Andrew Karvonen.

Andrew Karvonen is actually more optimistic about how technology can help addressing the participation issue that has animated the planning debated in the past 50 years: there's strong trust in governments in the Nordic contexts, even if the processes are not always participatory. Karvonen argues that this trust can serve as a base for making planning more participatory through technology.

GUY BAETEN- And another thing that came out of the focus groups we did with Nordic cities, and where social sciences may be of great help, is the issue of participation and democracy. They expressed their fear for top-down autocratic management in the wake of smart city technology. And what keeps them awake is how to avoid them. How to do a bottom-up smart city. And it's easy to say, and we all agree on that. But how would that work? Do you have any wise recommendations to implement such a vision?

ANDREW KARVONEN- The worry over the last decade for smart cities, was that public authorities are handing over the keys of the city to Google, to IBM, and to these large tech companies and say, "Look, we can't afford to run our city anymore, we're going to give it to you, and you can optimise our functions with your digital technologies, please do that". And what we found is that the local authorities have not done that. They're not naïve. They recognise that they need to continue to steer cities. The public authorities are the authority of the city. So, they have gone to these tech companies and said, "We need help with this, but thank you very much, we're going to keep control of our city, we're going to keep control of the data that we generate out of this". So those worries about the technocracy and these large tech companies overtaking cities have not come to fruition. And I don't think it will anytime in the future.

But then when we think about Nordic cities, one of the interesting things about the democratic socialism in the Nordic countries, is that there is a real strong trust in government. And local authorities have a lot of ability to shape transportation, to shape public health, to shape environmental protection, and all kinds of different public services. There's a lot of autonomy for local authorities. But then there's also a lot of trust from the citizens that the local authority will do the right thing. And I'm from the United States, and we don't trust the government in the United States. We want the minimal amount of government.

There is a very special kind of condition here in the Nordic countries, where there's a trust in government, but it's not particularly participatory. I mean, beyond voting, there are some sort of participatory planning processes that happen, but they tend to be fairly 'tick-box' exercises. If we want to talk about more fundamental deep democracies where we really include citizens at the decision-making table, that very rarely happens. And there are

models that are out there for ways to make that happen, but they still haven't come to fruition. They still haven't been realised.

This is a debate we have had in urban planning for 50 years, of how to be participatory, how to be collaborative with respect to urban development. In many ways this is not something that came out of the smart city, this is something that has been coming out of urban development for five decades. And we're still trying to crack it.

But you can also turn it around and you can say, why can't we use these digital tools to improve participatory planning? And you certainly can. We can see all kinds of examples where we can do online meetings, where we can do questionnaires, where we can poll residents about different conditions, and where we can try to include them. There are all these opportunities, like participatory budgeting that they're doing now. And you can do that online rather than in a room or by mail. And, of course, there is still people that are left out of this, that are not online. We need to think about that. But I think there's a lot of cities now that are thinking about how we can use these digital tools to improve citizen engagement. There are a lot of opportunities to do that. So, it's kind of a negative and a positive at the same time.

“In many ways this is not something that came out of the Smart City, this is something that has been coming out of urban development for five decades. And we're still trying to crack it. But you can also turn it around and you can say, why can't we use these digital tools to improve participatory planning? And you certainly can.”

CHIARA VALLI- Another crucial difference between urban planning participation as we know it and participation in smart city planning is that we now can easily confuse participatory planning with participatory design. For Jennifer Clark participatory design, or co-creating smart interventions with citizens, is not participatory planning. Under participatory planning, citizens co-decide what will be designed according to their own needs. In participatory design, citizens can only co-decide about how things will be designed, not what will be developed. Clark also points at the fact that cities provide services universally. Waste collection or education for example are offered to everyone. Smart city providers do not necessarily follow that logic, they tend to provide services to those who can afford it and are able to use the technology. Cities therefore have to carefully guard the principle of universal service provision when it comes to smart city planning. That is another novelty that enters the picture when we look at smart city planning.

JENNIFER CLARK - If you do think about the ease with which some of the technologies allow us to have *persistent engagement*. If you think about things like immigrants and communities who maybe have language issues, we have so much more capabilities through these technologies to engage in translation. The costs of translation have come down substantially. So, the idea of being able to engage people in their language is now possible. Cities had a difficult time doing that in the past. We can do that now. But we are not asking the firms in the smart cities project to include that on their end. We're continually, on the municipal side, saying that is our responsibility, rather than saying that is a requirement of the contract for participating with us.

So, I do think there is an issue here, and I talked about this a little bit in the book. Is the issue of who bears the costs and the risks of the production of these goods and services. And then, what are the requirements to actually produce these for cities and for communities. If we say, "if you want to play, you're going to have to actually play with our communities, all of them, not just the ones that are part of your revenue model, not just the ones who have the ability to pay for the consumer products that you're going to graft on top of these civic services. You have to have the same vision of 100% service that the city has as its own priority". So, do I have a one solution to this? No, but I think that communities and cities have to start asking and saying "No, you have to do this, this is part of being our partner. It's not an add on. It is a requirement".

And I would argue too, that this is part of the design process. And we have these conversations, particularly in architecture but also in engineering, about universal design. I would like to see the idea of universal design, not just be a question about the physical, but also about the technological.

"I would like to see the idea of universal design, not just be a question about the physical, but also about the technological. It is a mind change."

It is a mind change; it is a mindset-reset. And I think that the conversation about whether or not one of the ways to do this reset is through ethics education. I think that is actually a really interesting component of it. We have an ethics course in our undergraduate planning curriculum. And we are constantly updating it to build in this question of how we think about the technology as we teach the students as well. I think that's a real interesting conversation to continue having.

CHIARA VALLI- We asked Germaine Halegoua a very similar question. How can cities foster genuine political empowerment, instead of performative gestures?

GERMAINE HALEGOUA - For every city this might look different. I think a lot of this is very context dependent and relies on public officials really knowing and listening to their constituencies. Really knowing and listening to the communities that live within their jurisdictions. But I think other than really working to understand the lived experiences of these marginalised social groups that you mentioned within your own city, and what would improve their lives and livelihoods, may involve a series of conversations and policy meetings with neighbourhood and community activists and leaders, but also experts within the field of knowing and understanding marginalised social groups, like anthropologists and sociologists.

If we look at some of these metropolitan city consortiums, where people are trying to foster stakeholders to come together, or foster collaboration between universities, and bringing the expertise of the university or the professor into the realm of smart city development. We see a lot of consultations between engineers and cities, between computer scientists and cities. But we should be thinking about how can we really know these marginalised social groups, and that might be conversations with anthropologists and sociologists, as well as neighbourhood activists and community activists.

But one idea is to provide the marginalised groups that you mentioned, with the array of technologies on offer, or that the city is considering implementing, and let these groups

decide how and if they would like to implement these technologies or the smart city initiative processes, within their own communities to serve their own communities.

So this idea of that bottom up, democratic or participatory co creation, is to give the “raw materials” to the populations that you're interested in serving, and then have them decide what's best for them, or what might be useful for them. What data do these communities need in order to address the most pressing issues and inequities in their daily lives? What sort of problems do they feel most affect them? And how do they think these problems can be solved? Either using technology or not. And how can the city work with these groups to provide those resources? And some of these resources might be technological, but some of these resources might also be educational. So, courses in digital literacy, courses in spatial education. And maybe these aren't courses, but at least resources to help community organisers, or to help community members better understand how cities work, or better understand what zoning laws are, or better understand, you know,” this is the problem I think I have, is there some technology available to me to help me solve this?”

“What data do these communities need in order to address the most pressing issues and inequities in their daily lives? What sort of problems do they feel most affect them? And how do they think these problems can be solved? Either using technology or not.”

And the same goes for data already gathered or intended to be gathered through smart city initiatives. How would the communities themselves find this data beneficial, if at all? And what problems could they identify or solve with this data at their disposal? And I'm thinking of these general big data initiatives run by municipalities. Maybe there is some way that communities can say, “well, it's not the information on traffic congestion that we're so interested in, but we have a lot of cases of childhood asthma, and we think it's caused by emissions from cars and trucks. Can we have some data gathered about public health around childhood asthma, as overlapped or layered with traffic congestion?”. And maybe that would be a more useful dynamic than whatever this top-down municipal officials are deciding would be something that they want to know about.

We should also always ask and assess harms and risks as well as benefits of all municipal interventions. And I know that for public officials is often their bread and butter thinking about who does this benefit? How does this benefit them? But also, maybe thinking a little bit more about the harms and the risks caused by some of these smart city initiatives. We should especially pay attention to the experiences of people who are the most vulnerable, and the most heavily surveilled already by the government or by private enterprises. And have these populations experiences of surveillance, of urbanism, of urban life, of city management and regulation, of city policies that shape urban development and design, especially within the smart city initiatives, which are very technology-driven.

CHIARA VALLI- Germaine Halegoua believes we should be careful with prioritising technological solutions for existing problems. In cooperation with communities, especially the most vulnerable ones, we should find out what the problem and what the solution can be, and that solution can be technological or not. And we should be careful with upscaling local solutions. What works in one place does not necessarily work in another place, or another place may prioritise different problems.



["LOOK LFET 'Glitch in the Matrix' Sydney pedestrian crossing sign mistake" by neeravbhatt is licensed under CC BY-NC-SA 2.0](#)

GERMAINE HALEGOUA - There is one model mostly implemented in Europe and Scandinavia, actually. One of the philosophies around Human-Centred Design, and cooperation and co-creation of urban spaces, and urban policies and regulation, is to create and foster a sense of ownership around decision making processes within cities. Some scholars have argued that what they are calling a "living lab" approach, which is far more common in Europe and Scandinavia, far less common in the US, East Asia, South Asia, especially around smart city initiatives, is a step in the right direction.

The living lab approach is about experimentation and innovation. But it also brings together a variety of expertise from diverse stakeholders within the citizenry, as well as within university systems, within private enterprise, within public government, within neighbourhoods activist circles, to create collaborative environments for collaborative problem solving and community participation, that can address and forefront issues of inclusion, belonging, equity, access, as well as innovation.

So this is a very iterative design process. But it also forefronts this idea of collaboration, co creation, and the value of very different lived experiences and knowledges of how the city works and what we would like the city to be. I think that this approach speaks to the need, especially in the US, for different models of participation and citizen engagement around smart cities, but also around participatory planning more generally.

So instead of creating limited spaces for citizen input downstream after decisions have already been made, like voting on prescribed urban development models, or encouraging people to leave comments via social media that are never actually read or thought about or incorporated into any decision making process in a reliable and

meaningful way- what we can see is maybe other models for public officials and urban planners to develop meaningful participation models that place civic and social justice, and maybe even digital literacy issues at the centre of campaigns. And genuinely intertwine from the beginning from the outset, the co-creation or co-innovation, of technology implementations to do design and governance.

In the book, I suggest that perhaps these types of initiatives could be an end goal. That instead of saying, "okay, we're going to have these iterative or collaborative design processes in order to then implement technologies in a way that we see as proper in this given moment", maybe that sort of effort towards creating these spaces and environments for co-creation, and collaboration, and democratic problem solving could be what makes the city smart. It could be the end goal, even if no technological enterprise, or entrepreneurship, or economic development comes out of these sessions. Where people are getting together to deliberate over the common good, or to deliberate over what might be profitable, or prosperous, or auspicious for a variety of different communities within smart city models.

Another thing that we could be thinking about to address the question that you posed, is that municipal officials could seriously consider that responsiveness and improved quality of life, and more equitable allocation and access to resources within cities, and social justice, may not be achieved through technology. It might be achieved through these other social and communicative processes. Even thinking differently about technological fixes or technological solutionism and moving away from those models towards other social models and community models of finding solutions and working together and building trust and ownership and stewardship might be beneficial in these plans as well.

And I think it should be emphasised that a lot of these smart city initiatives need to be more context specific and context dependent. That there is no one-size-fits-all model. And often, what is being sold to cities is sort of a plug and play or, you know, here's what worked in Rio de Janeiro, maybe this will work in Oslo as well. And there's not that one-size-fits-all model for technological implementation and innovation, or inclusivity. So there needs to be a way to listen to the populations that you, as municipal officials, intend to serve, or that you should be in service to.

City officials could start with figuring out what works at the neighbourhood level, and then scale up, or scale across the city. Or maybe is not about scaling at all, but about taking individual communities and working with them to help them decide for themselves what might be the best way to move forward with the initiatives that you would like to see implemented across the city as a whole.

I might have mentioned this already as well but, since democratic and inclusive participation and co-creation processes are often inefficient, they are in conflict with a lot of these dominant ideologies about efficiency and optimisation. Because these processes take time and effort. They don't always work well; they don't always achieve the goals that you set out to in a timely manner. But there could be some funding or incentive by regional or national governments, or even networks of cities, to develop and utilize co-design strategies, in order to then see what has worked within this specific neighbourhood, or what has worked with this specific context, and then have knowledge

sharing networks, where you see if something that worked in one neighbourhood would work in another. So this scaling across instead of kind of scaling up, so scaling between cities, and trying to find solutions.

Sharing failures is also very important as well, especially in the context of assisting marginalised communities and social groups. So, it's some of the things that I'm thinking about, and there's probably others, as well. But I think that's our job to find them and to sort of think more deliberately about these issues and to figure them out together.

GUY BAETEN- What we take home with us from this module are 5 things. First, civic participation actually has a long-standing tradition in urban planning and development, but we can see from Rob Kitchin's research that participation in smart city projects can be absent or that citizen influence is confined to making consumer choices. So taking participation to higher levels on the participation ladder is one of the tasks ahead.

CHIARA VALLI- Second, participation in smart city projects differs from participation in urban development projects as we know it. Since smart city tools need constant upgrading, participation by citizens will also have to be more continuous, more spread out in time, more regular.

GUY BAETEN- Third, smart cities projects may lend themselves very well to participatory design and there is nothing wrong with that, but we should not confuse participatory design with participatory planning. Citizens should not only have a say about how things are designed, but also what things are designed.

CHIARA VALLI- Another thing I will remember is that participation in smart city projects does not necessarily have to lead to technological solutions - engagement with communities should teach us what they prioritise as problems and as solutions. Solutions that may not be technological but something different.

GUY BAETEN- Finally, what the digital revolution certainly can bring to the table is that it can help to improve 'traditional' participation. Getting citizens together in one room for consultation is time-consuming and it can be difficult to engage local communities to show up. Digital consultation is a possible solution to that.

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