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Entrepreneurship and planning in the digital age: activating community engagement

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Entrepreneurship and planning in the digital age: activating community engagement

A focus on TransformCity®, Amsterdam

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NOTICE ANALYTIQUE

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NOTE TO READERS

The current version of this work has been lightened, as the content of the second part is confidential to TransformCity®. Readers in possession of the addendum titled 'TransformCity®: Research and Development Proposals' are invited to switch their reading to said document once Part 2 is reached.

ABSTRACT

A new group of (urban) entrepreneurs have become highly fashionable in cities and popular culture. Their supposedly creative and disruptive ideas are more and more valued by local authorities, for their association with innovation, but also for their ideologies and their desire to 'do good' for the community. Beyond finding a technical and technological solution to issues that they witness in their direct environment, urban entrepreneurs are simultaneously leading and benefitting from economic models based on sharing and collaborating with their community, themselves building their business models on such principles. Inspired by entrepreneurs or original guiders of these practices, urban governance authorities have been pushing similar agendas, especially those of community engagement in city planning, allegedly in the search for a higher level of democracy within the city, and because collective intelligence is perceived as the only path to build structural resiliency and sustainability. Cities can have different definitions of community engagement, but Amsterdam, which discourse's is a crucial topic in this thesis, seems to describe it as neither bottom-up nor top-down, but rather as a partnership between all four types of stakeholders (public, private, professors, people).

The trivialisation of digital technologies use in everyday life brings forward the powerful medium that they can be in the case of community engagement. Indeed, the increasing number of participatory platforms appearing on the Internet can attest for the imaginable impact identified in having a virtual but common space with others to engage together. However, other decreasingly marginalised technologies have been receiving growing attention from entrepreneurs and the public sector, as both groups have started to perceive a crucial potential in leveraging them for making community engagement even more actionable and inclusive.

The Amsterdammer startup TransformCity®, which is used as a study case in this work, aims at building a platform for cities to embrace community self-organisation in a structural way, notably by making a large array of tools available for individuals (whatever their status) to collaborate over the urban design and management of their neighbourhood, hence increasing their sense of ownership, trust for others, and overall appreciation for their city. In order to do so, the startup has been expanding its research and development activities, focusing on emerging digital technologies and practices that could take community engagement to the next level. Even though the platform is still at its early stages in its technical and geographical development and success assessment, this thesis aims at bringing some perspective to potential future of the product as a highly efficient tool for collaborative planning. Simultaneously, the thesis contributes to current scholar research regarding topics such as community engagement, digital technologies, and the role of urban entrepreneurs, including in the context of Amsterdam.

Key words: community engagement, participation, collaboration, digital technologies, Information Age, smart cities, entrepreneurship, Amsterdam

RÉSUMÉ

Un nouveau groupe d'entrepreneurs (urbains) attire une attention grandissante dans les villes ainsi que dans la culture populaire. Leurs idées supposément créatrices et perturbatrices sont de plus en plus appréciées par les autorités locales, pour leur association à l'innovation, mais aussi pour leurs idéologies et désir de 'rendre un service' à leur communauté. Au-delà de solutions techniques et technologiques aux problèmes qu'ils observent dans leur environnement proche, les entrepreneurs urbains dirigent et bénéficient simultanément de modèles économiques basés sur le partage et la collaboration avec la communauté, eux-mêmes bâtissant leur modèle commercial sur ces principes. Inspirées par les entrepreneurs ou bien guides originelles de ces pratiques, les autorités de gouvernance urbaines poussent des agendas similaires, notamment ceux se concentrant sur l'engagement communautaire en urbanisme, prétendument dans la recherche d'un niveau supérieur de démocratie urbaine, et parce-que l'intelligence collective est perçue comme l'unique chemin vers la construction structurelle d'une certaine résilience et durabilité. Les villes peuvent avoir des définitions différentes quant à l'engagement communautaire, mais Amsterdam, dont le discours est une thématique cruciale dans ce mémoire, semble le décrire comme n'étant pas poussée par des politiques 'par le haut' ou 'par le bas', mais plutôt comme un partenariat entre les quatre types d'acteurs de la ville (public, privé, professeurs, personnes).

La banalisation de l'utilisation des technologies digitales dans la vie de tous les jours démontre leurs puissantes capacités en tant que medium d'engagement communautaire. En effet, le nombre croissant de plateformes participatives apparaissant sur Internet peut témoigner du potentiel impact identifié dans l'accès à un espace virtuel mais commun avec d'autres personnes et acteurs pour interagir ensemble. Cependant, d'autres technologies, anciennement marginalisées pour leur complexité, reçoivent une attention grandissante de la part des entrepreneurs et du secteur public, car ils y perçoivent un potentiel crucial dans leur utilisation afin de rendre l'engagement communautaire plus flexible, exploitable, et inclusif.

La startup amstellodamoise TransformCity®, qui constitue l'étude de cas de ce travail, vise à créer une plateforme pour que les villes puissent adopter l'auto-organisation des communautés de façon structurelle, notamment en rendant disponible une large variété d'outils pour que les individus (peu importe leur statut) puissent collaborer sur l'aménagement et la gestion de leur quartier, augmentant ainsi leur sens de propriété, de confiance envers les autres, et de façon plus large, leur appréciation pour la ville. Pour ce faire, la startup a étendu ses activités de recherche et de développement en se concentrant sur les technologies et pratiques digitales émergentes, afin de continuer à faire évoluer les processus d'engagement communautaire. Bien que la plateforme en est à un stade précoce au niveau de son développement technique et géographique, ainsi que dans l'évaluation de son succès, ce mémoire vise à apporter un peu de perspective sur le futur potentiel du produit en tant qu'outil hautement efficace dans l'urbanisme collaboratif. Simultanément, ce mémoire contribue à la recherche universitaire en se concentrant sur les thèmes de l'engagement communautaire, des technologies digitales, et du rôle des entrepreneurs urbains, y compris dans le contexte d'Amsterdam.

Mot-clefs: engagement communautaire, participation, collaboration, technologies digitales, ère digitale, villes intelligentes, entrepreneuriat, Amsterdam

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Introduction

Crossing trends from observation and experience

An interesting touch in the exercise brought by our school is the scope of making it both a theoretical and a practical study based on a professional experience. The current work leverages this opportunity, as it bases both data and aim of the research on TransformCity®'s future developments, being the structure in which the internship was realised. A few months into the field and its subsequent activities allowed to identified three realms of study, simultaneously very distinct, and deeply intertwined in their cause for appearing in current planning trends.

A starting point for the research was a simple observation that cities have increasingly been using technological solutions to manage their infrastructures, notably taking the form of smart cities. Many countries around the world now present their own version of it, some with the single scope of exposing highly technical processes (e.g. Songdo, South Korea; Masdar City, UAE), and some others with an increasing focus on what technologies can firstly bring to the citizens rather than the city itself. Amsterdam, the Netherlands, is one of the latter. This was a first crucial point in the orientation of the thesis, as it went from a seemingly shallow view of what the augmented city is (i.e. an open catalog for corporates to expose their latest 'smart' innovations), to a deeper understanding of what technology has brought to society, how it has impacted us in our social behaviours, and how we can leverage it to make cities, simply, a better place to live in, as every year cities around the world welcome more and more dwellers.

Another observation was after a few weeks after receiving the internship offer by TransformCity®, a 'smart city' startup. TransformCity®'s main goal is fostering community self-organisation in an area where the tool, an online platform, is implemented, notably by using what emerging digital technologies. But a major realisation was Beer¹'s challenges as an entrepreneur whom did not necessarily have the material to develop an intricate tool by herself, despite seeing a crucial value in advanced technology scouting for the company. Her position as being neither from the classically private, corporate sector, nor associated to the public sphere (as in either the government or the community, i.e. citizens), allowed to distinguish a peculiar seat in which she was sitting. Beer is not coming from a typically bottom-up initiative (because the platform is quite standardised in its philosophy, and hence could be used in any type of neighbourhood), nor top-down. And her presentation as an entrepreneur seemed to had given her legitimacy to operate with all of the network. Evolving in the Amsterdam Smart City community throughout the rest of the internship finally allowed to tie together three essential items (which we may have just implied) during the thesis's research (Fig. 1), especially because the community was indeed pushing for the activation of these topics together for the upcoming plans in Amsterdam.

¹ Saskia Beer is the founder and CEO of TransformCity®.

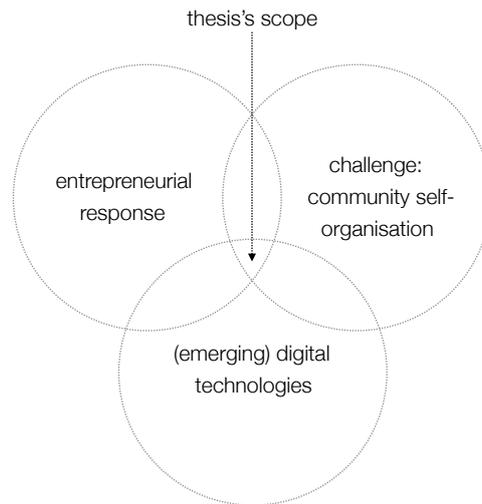


Fig. 1: Identifying a topic at the crossroad of three distinct realms
 Source: author

In clear, three assumptions were made, giving the basic material to the rest of the research:

1. Community engagement is increasingly understood as essential for city making, hence becoming more and more embedded in planning practices;
2. Digital technologies can deeply amplify the methodologies and outcomes of community engagement on several levels;
3. Entrepreneurs are highly innovative, and driven by the feeling of having a 'mission' to impact their environment. They can spot challenges, like community management, and offer such service to cities, notably by leveraging digital technologies.

Putting it into the perspective of TransformCity®'s attempts at becoming a digital and innovative platform to foster community engagement for the municipality of Amsterdam (for the moment), the main research question, driving both the internship and the thesis, centres around whether or not the upcoming plans of the startup to leverage digital technologies will make community engagement more actionable for city making, notably in Amsterdam. And in order to find out, the thesis was divided in three parts.

Hence, the first part of this thesis focuses on establishing a state of the art of each realm of study, and so from different perspectives. Indeed, as we will underline several times, these realms are much more trends - although quite considerable - than they are proven, universal processes in city making. Thus, the positions advanced are those of thought-leaders and scholars interested in the matter, but include as well a certain amount of personal reflexions that do not pretend to have any specific accuracy, as they put into question the potential future of planning according to what has been collected throughout the state of the art exercise. Obviously, the future cannot truly be predicted, and the belief in either one or another scenario is dependent on an individual's personal views on the matter.

The second part is deeply practical, in the sense that it focuses on TransformCity®'s potential plans in leveraging different sorts of digital technologies, in order to achieve the construction of a

product that would be unique and helpful enough to be implemented in an array of cities, in the Netherlands and internationally. Again, the product focuses on making community engagement a deeply actionable tool for structural development. The double duty of this chapter, as it equally stands as a research and development deliverable document to the company, undergoes a shift in the type of narrative used. Indeed, personal experience, observations, and critical opinions are considered to constitute a large base for the outcome of this research's part. The chapter is additionally confidential to the company and hence is not present in the official version of this thesis.

The third and final chapter centres around the exploration of the framework in which TransformCity® has been able to be created. Indeed, and as Beer has mentioned overtime, there is no certainty that the product could have been designed the way it has been if it were settled in a different legal and cultural context. Of course, the entrepreneurial mindset, the personal story, and the experience of the local area in which Beer has evolved provided a unique position to the matter; but did the general policy of Amsterdam in city making has influenced the way in which the product presents itself to be?

In short, this thesis bears a double duty: providing a theoretical understanding framing the context in which TransformCity®, a disruptive planning tool (Parts 1 and 3) has emerged; and a practical and technical research looking at which emerging technologies on the market can indeed foster community engagement, a desirable practice for cities.

While the thesis is framed around TransformCity® as a single entity in Amsterdam's environment, similar evolutionary patterns can be found elsewhere around the globe, notably in Barcelona, Spain (Ballestrini, 2016), or Medellin, Colombia (Cohen, 2016); in clear, mostly the 'Western' world. But one can assume that the ideologies embedded in TransformCity®'s work will be very likely be found in other initiatives, even though the startup is still believed to offer a unique proposal to urban management (see *Archipreneur*, 2017; *Cities Today*, 2017).

Acknowledging the 'filter bubble'

In 2011, Eli Pariser wrote *The Filter Bubble: What the Internet Is Hiding from You*. In concordance to the publication, Pariser led a TED Talk (2011) about the very same subject, during which he advanced that since the internet rose, the ways in which we have been receiving information have shifted. He explained that the internet was 'showing us what it thinks we want to see', through complex algorithms that filter the information we individually get according to whom we choose to follow on social media and how we interact with the hyperlinks in our newsfeed (assuming that we now get information from digital and social media). Pariser also observed that an individual does not know what information gets excluded, hence further dividing one person from another with a different online usage. However, as Flaxman et al. (2016) explain, the way in which we are influenced by our own digital media is still discussed; some scholars believe that with the rise of the Internet, we are benefitting from many point of views to increase our critical thinking; others suggests that we are increasing *political polarisation* (term used by Boxell et al., 2017). The reality is that we are still unsure about whether or not online engagement influences what happens offline (Mahan, for Dredge, 2015).

The point of this 'disclaimer' is to acknowledge that the notion of 'filter bubble', while intended to apply to the online political engagement experience, can very much apply to anything, including this

thesis. Have we presently succeeded to identify three topics that are reflecting a structural shift in city-making? Or is this work the result of the author's own 'filter bubble', her own preferred interests successfully tied together? Why should we believe that our own theoretical agendas are relevant to urban planning? How much have we been influenced by professors and people met throughout an internship?

At our own institute, we have been taught that community engagement and collaboration are the fairest way to make the city. They embody a trending phenomenon that has actually been visible in our individual projects presented this year (one of our professors pointed out how many of us were planning to write about the *Right to the City* and participatory processes). Outside our school in the meantime, startups and entrepreneurship seem to be becoming more and more popular, and are being pushed by many great cities as the new economic path for both growth and inclusion - a quick glance at Paris's Station F² or at any 'startup accelerator' programs can demonstrate this. On top of that, every day seems to be marking some kind of impressive progress in technology; we are increasingly impressed by what people like Elon Musk (the man behind Tesla, SpaceX, and the Hyperloop), or Mark Zuckerberg (Facebook) bring to the world.

But as individuals with our own critical thinking, we can choose to either look at all of this and assume that society is indeed deeply changing and leaping into a new era led by technology and collaboration; or on the other hand, one can also believe that technological progress, as it has always been supporting human history, will not really change anything.

In this thesis, we will try to look much further in advance, and we will rely on scholarly and thought-leading predictions to find out what urban planning in the digital and collaborative age should be like. It is equally important to acknowledge that what seemed true and relevant to the author of this work, will not necessarily convince others. Results and proposals could be biased. But they also could be contributing to current research about where cities are heading thanks to current technology progress, the rise of entrepreneurship as a social and urban phenomenon, and our rising taste for collaborative processes - as to this day, we have yet to bring definite and scientific proof about whether or not any of these are actually impactful.

About TransformCity®

TransformCity® emerged in 2016 as a necessity to digitise and simplify a database of stakeholders in the area of Amstel3, a business district located in the South East of Amsterdam. The neighbourhood, originally built in the 1960s as an office space, was deteriorating because of its urban design centred around cars, further suffering from its distance from the core of the city and consequently, being quite lifeless. Master plans were made in order to revive the area, but the late 2000s financial crisis finally made the municipality drop them altogether, leaving Amstel3 to deteriorate even more. Beer witnessed the slow death of the neighbourhood, and moved by it, decided to take into her own hands the revival of the area. But rather than decide by herself what was needed, she focused on local community engagement. Many networking and cultural events were organised in the neighbourhood, in order for all stakeholders to meet and collectively assess the worth of their direct environment. Ultimately, the community building resulted in a first organisation named Glamourmanifest, inspired by the opposition between the trivial, banal life of local office workers of

² stationf.co, the 'world's largest startup campus'.

Amstel3 and their appreciation for a little glamour to simply not despise the area in which they spent their working days. A few years later, and as Beer and her team were growing the network, the need to automate and digitally store information about the community and overall data about the area became urgent. TransformCity® was hence created as a digital tool, to power the transformation of Amstel3. TransformCity® is an online dashboard that aims at offering a framework and tools for a community, within which the platform is implemented, to self-organise and manage their urban environment. In association with devices such as crowdfunding for instance, local and national data can be displayed in an open form. The idea would be to give individuals the opportunity to look at data themselves in order to find solutions to issues they observe.

Being at its early stages of growth for now, TransformCity® has a wide horizon of decisions to take about the further development of the platform. Generally speaking, Beer wants to focus on making it a highly actionable space, with the scope of being multi-themes, multi-stakeholder, and multi-tools: 'a Swiss-Army Knife' for 'collaborative planning'.

Structure of the thesis

In order to give the reader an overview of the structure of the thesis and understand how each part responds to the previous one, as well as contributes to answering the main research question, the following table was elaborated, based on Metereau's design (2016, p10). It aims at restructuring the reader's train of thought if needed. It also shows the methodology combinations in each part.

Fig. 2: structure of the project. Source: author (inspired by Metereau, 2016)

Entrepreneurship and planning in the digital age: activating community engagement

Three assumptions:

- 1 - community engagement is increasingly understood as essential for city making, hence becoming more and more embedded in planning practices;
- 2 - digital technologies can deeply amplify the methodologies and outcomes of community engagement on several levels;
- 3 - entrepreneurs are highly innovative, and driven by the feeling of having a 'mission' to impact on their environment. They can spot challenges, such as community management, and offer such service to cities, notably by leveraging digital technologies.

Research question:

By leveraging new technologies, is the startup TransformCity® making community engagement more actionable for city making?

PT1: Trends or shifts in city making?

Community engagement has been an increasingly valued practice in planning, while digital technologies have been disrupting all sectors of our working society. In conjunction maybe, the entrepreneur has been elevated to a desirable figure, for his or her abilities in bringing creative but also durable and inclusive solutions to issues that 'matter', such as community engagement.

Methodology

Content analysis (scientific and popular literature).

Results

- 1 - community engagement can be defined in many ways and is seen as having an extremely positive impact for urban governance, but the 'good' intentions behind it overall have yet to be proven;
- 2 - digital technologies bring both extremely valuable opportunities and challenges to city making, especially in the case of community engagement;
- 3 - entrepreneurs are believed to bring crucial value to planning, but their universal image as 'trendy' stakeholders might be influencing their real potential in disrupting current practices.

Questions

- 1 - In practice, which are the technologies that can be leveraged by a company like TransformCity® to offer a community engagement service to cities?
- 2 - How can these technologies be used and what could be their positive impact on community engagement?

PT2: Digital technologies for community engagement

Methodologies inspired by the industrial and business sectors allow to give an overview, as well as a technical study, of which technologies can be truly supporting community engagement. A combination of different research patterns allow to give some creative ideas about how certain digital technologies can be leveraged, as well as in order to create a unique business position on the market.

Methodology

Technology scouting, business think-tank activities, content analysis (scientific and popular literature; workshops; discussions), personal observations.

Results

- 1 - some technologies have shown their community engagement support capacities;
- 2 - the most important aspect of these technologies is the ways in which they allow to make information more accessible and understandable, for inclusive planning;
- 3 - the non-use of certain of these technologies in similar platforms creates an interesting opportunity for TransformCity® in its goal of being a unique product.

Questions

- 1 - Would TransformCity® have emerged in a different legal and cultural context?
- 2 - Can TransformCity®, for its values, represent the future of planning?
- 3 - In general, could we say that city making is undergoing a paradigm shift?

PT3: A paradigm shift? Stories from Amsterdam

Amsterdam has been acclaimed as a model for city governance multiple times, often seen as one of these 'smarter cities' leading the progressist models for inclusive, co-creative and democratic planning. TransformCity® has emerged in Amsterdam, and has been recognised many times as an exemplary product for its values, even though supposedly similar initiatives exist throughout the world. Interviews with individuals part of the Amsterdam discourse give their opinions on the matter.

Methodology

Content analysis (scientific and popular literature; qualitative and semi-conducted interviews).

Results

- 1 - the interviewees have very homogenous views regarding what makes a city smart and successful;
- 2 - individuals see technology as a secondary necessity in urban governance, the priority being given to community engagement and citizen co-creation;
- 3 - the entrepreneur is not specifically highly regarded but certainly valued for his or her bottom-up, creative approaches to citizen engagement and planning.

Potential developments after the thesis

- 1 - long term assessment of the success of TransformCity®;
- 2 - further experiment in a different context and discourse (i.e. outside Amsterdam);
- 3 - is the Collaborative and/or Sharing city the new Smart City - just like the Smart City was the new Green City?

PART 1

State of the art: trends or shifts in city making?

Just like any other aspect of societal life, perceived trends by planning authorities can have a large influence on the way urban governance is lead. Current trends in many countries seem to point out towards an increasing digitisation of urban systems, but with a recent twist insisting on a citizen-centric approach, as we can see in the rise of models such as the ‘collaborative economy’, or ‘smart cities’. While these two do not necessarily come together, they can be simultaneously witnessed as associated topics in what we could consider ‘exemplary cities’ such as Barcelona, as well as Amsterdam (Ballestrini, 2016; Cohen, 2015, 2016). Another trend, which generally comes with either the digitisation of cities or bottom-up planning - or both at the same time - is entrepreneurship, and the strong interest for entrepreneurs and startups in urban agendas. This can be witnessed in many cities, for instance, in the form of a multiplication of startup incubators (and their impressively funded acceleration programs) focusing on either social or technological issues within the city - or again, both at the same time, in what one can believe is a perceived value in citizen empowerment and innovation within the urban society.

This chapter aims at giving an overview of each identified ‘trend’ in a distinctive way, in order to establish a certain state of the art about them. This chapter equally puts them into perspective, in order to question their value and relevancy in contemporary planning. However, while scholar and popular literature seems to advocate (at various degrees) for all three as planning practices that should be adopted, or at least comprehended, it should be underlined that there has not yet been any finite, critically acclaimed assessment of whether or not they profoundly impact city making, and if so, in a positive or negative way.

COMMUNITY ENGAGEMENT AS A PLANNING STAPLE

From citizen participation to community self-organisation

In 1969, Arnstein funnily argued that ‘the idea of citizen participation is a little like eating spinach: no one is against it in principle because it is good for you’ (p216). Through her article, she explained citizen participation by breaking it down into eight gradients of a ladder - without explicitly advocating for any specific degree. She initially defined citizen participation as ‘*citizen power*’ (p216), focusing on ‘have-nots’, i.e. minorities and socio-economically marginalised groups. She additionally opposed power-holders (the Government) to citizens, while also recognising that both parties were not homogenous blocs in many ways (interests, points of view, etc.; p217). But the ladder, with its accompanying definitions, seems like a good starting point in understanding community engagement and its values, as the matter has gained more and more interest over the decades, to the point of being extremely trendy in nowadays’ planning practices. In Arnstein’s case, and also ours,

participation is studied at two levels: stakeholder engagement decisions in structural planning (long-term vision), as well as during one-off projects.

In her paper, Arnstein explains that the first two levels of citizen participation are non-participation. Manipulation (p218) and therapy (pp218-219) are mere impressions of participation, and actually consist in establishing power relationships between the two blocs, and in which citizens are being either 'educated' (manipulation) or 'cured' (therapy). Information (p219) and consultation (pp219-220) are positions in which citizens are given a voice and heard, however without the perspective of actually being taken seriously. Placation (p220-221) constitutes a superior degree to the two previous ones in the sense that citizens are able to give advice, but without taking the final decisions. Partnership, delegated power, and citizen control are considered as actual citizen participation, and consequently, citizen power. In the case of partnership, participation from the citizens' side is institutionalised through acknowledged, multi-stakeholder structures that share an equal power in decision-making (p221). Delegated power means that citizens are in full control of the decision made over a one-off project (p222). Citizen control gives structural, long-term power to citizens over their neighbourhood, hence making them in total ownership of any single aspect of urban and social life (p223).

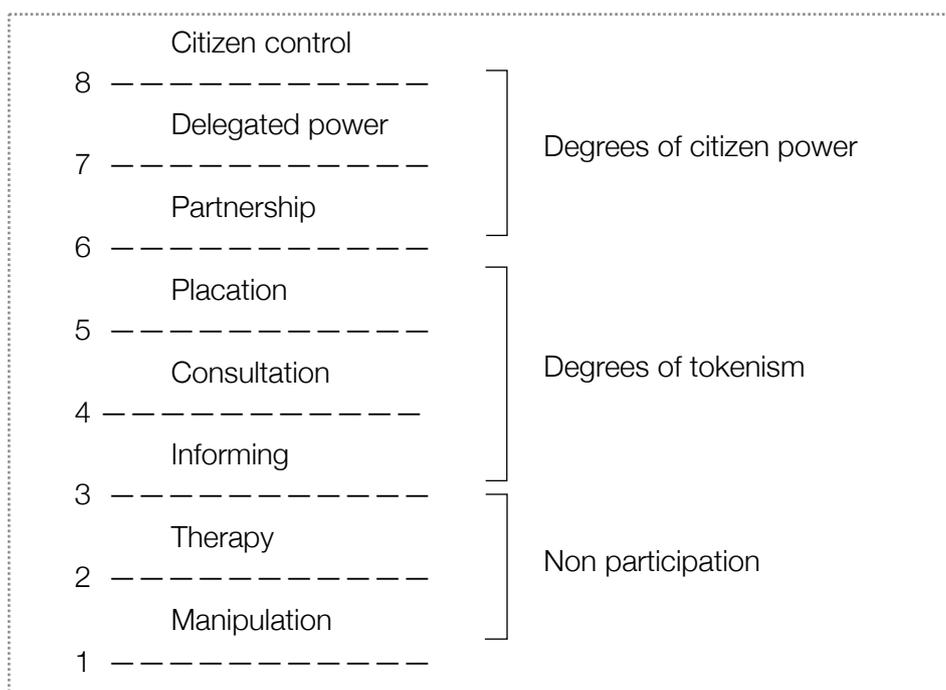


Fig. 3: Eight rungs on a ladder of citizen participation.
 Source: Arnstein, 1969, p217

One could argue that Arnstein's work still is completely relevant almost five decades later in planning practices. We should further note that nowadays, topics relating to citizen participation include, inter alia, expressions such as community engagement, participatory democracy, co-creation, consultation, collaboration, self-organisation - sometimes even, the Right to the City. And no matter the wording (and its scholar accuracy), the idea behind that consists in *giving power back to the citizens* (from whom?) is very present. But as Healy (2008) questions:

'Is the promotion of the idea of civic engagement just another piece of political rhetoric, which, after some adjustments to formal procedures, relapses into "business as usual"? Or is it something more? Is it a reflection of a wider movement in politics and society towards creating a different kind of polity, with a different way of going about the business of politics and policy making?' (p379).

Foucault et al. (2012) further underline that current practices in planning are contradictory in the sense that local authorities are pushing participatory agendas forward while also being afraid of opposition and criticism (p4), hence resulting in an unclear relationship and determination of who really has power in making a decision - position that we could consider involuntary manipulation, or maybe even placation on Arnstein's ladder of participation. On the theoretical level, De Waal (2014) observes three city idealisms acting as a base for the currently shifting views on urban development and governance. By doing so, De Waal further contributes to current questionings around an urban perspective re-centring on citizens and the value that they offer as a whole. These three idealistic views are:

- *the Libertarian City*: citizens are consumers of services, and have no obligatory relationships with each other;
- *the Republican City*: citizens share a common sense of responsibility, without however suppressing their individual lifestyles;
- *the Communitarian City*: citizens share a common identity, lifestyle, and responsibilities.

De Waal further underlines that there is no clear way to assign one model of governance to one ideology, and that most likely, ideologies tend to overlap within a specific framework. While citizen power specifically is not De Waal's main focus in his book, he does suggest that a democratic ideal would be the Republican city, i.e. an intermediary step between the Libertarian and the Communitarian models.

But in practical terms, why should citizen participation be desirable in the first place? Straightforwardly, Bassler et al. (2008) give a clear insight into what it brings to governments (p4):

- 'increase the likelihood that projects or solutions will be widely accepted;
- create more effective solutions;
- improve citizens knowledge and skills in problem solving;
- empower and integrate people from different backgrounds;
- create local networks of community members;
- create several opportunities for discussing concerns;
- increase trust in community organisations and local governance'

These assumptions could hence be transposed into wider notions, notably those of trust, inclusivity, empowerment, acceptability, and many more. However, and to conclude this part, it should be brought forward that literature to this day focuses on citizen engagement practices and at various degrees. But there has not been any thorough assessment of its actual outcomes (Healy, 2008; Gaventa et al., 2012), although experimentation around the world has recently been quite intense (again, Barcelona and Amsterdam). Many are working on identifying the positive and negative outcomes of practical *citizen power* models, currently taking for instance the form of the collaborative and sharing economy, where resources and skills are shared with everyone within the community. This lack of success assessment at a universal scale maybe translates the novel aspect of such practices in planning - and also perhaps further justifies the contradictory positions held by public authorities, as previously mentioned, in their lack of commitment towards this governance model.

Despite that, citizen engagement does attract an increased interest for city policing, starting from consultation and moving towards co-creation and co-ownership in goods, services, and projects.

Side note:

TransformCity®, in its claim of being a tool for collaboration, could benefit from a definition of what level of participation it aspires to achieve. Participation as explained in this part mainly centres around the relationship between the citizens and the Municipality. But as TransformCity®'s goal is an equal relationship between all types of stakeholders, i.e. including professionals, students, institutions, SMEs and large corporations, should Arnstein's ladder be redesigned to include these multi-ways connections?

The Right to the City?

The right to the city is a notion that many today use, whether it is with conceptual accuracy or not - and which we will not pretend to have either. Lefebvre, who first came up with this democratic idealism in 1967, argued that the right to the city is a necessity, embedded in the urgency to reconstruct our cities that were by then more and more losing their urbanity, or their capacities to include the contradictions that define humans as social animals. In a more straightforward manner, Lefebvre advanced urban governance should be disrupted by inverting strategist and functionalist masterplans led by governments into a high level of freedom to own space by the citizens, and very specifically, the working class. In 2008 Harvey gave some updated attention to Lefebvre's work, observing it in a more illustrated perspective through multiple examples of social fights and struggles over the past centuries. He defined the right to the city as

'far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanisation. The freedom to make and remake our cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights' (p23).

Costes (2010) further highlighted the social justice core of the right to the city, citing it as a right equal to Human and Citizen rights, and as a democratic project for civil society in order to thrive (p181).

The complex multi-disciplinary dimension of Lefebvre's notions have made them difficult to fully grasp, if we consider the various ideologies used to frame the right to the city; but on the other hand, the wordings and underlying concepts behind it have made appropriation and re-use over the decades very popular, proving that Lefebvre's work, even if twisted, truly had and still has impact in the social and scholar spheres (Costes, 2010). Again, the right to the city as a concept does resonate in universities today, as observable in our school where many students expose an increasing interest for participatory processes in planning, notably by linking them to the right to the city.

Indeed, taking it from here, the right to the city as a right to own urban development and space does echo what we have previously advanced about community engagement and citizen participation. If the right to the city means a highly democratic process in decision-making for urban development and management, and if democratic processes are considered citizen power - reflecting Arnstein's work - then yes, maybe community engagement represents a modern right to the city. If understood in a more traditionally marxist approach, as in the end of social struggles and hierarchies of power, then the right to the city still framed by government rules, plans and processes might be contradictory. As previously cited, Healy (2008) advances that participatory methodologies in contemporary planning have yet to prove their full democratic and disruptive intentions.

CITIES IN THE DIGITAL AGE: FROM TECH-DRIVEN TO USER-CENTRED

We have suggested in the previous part that roles in urban governance are undergoing a certain shift, where bottom-up, democratic approaches are especially being pushed for. The penetration of digital media into everyday life, giving birth to ‘smart’ governance for cities, has ultimately drifted towards more philosophical and societal questionings about where the individuals should stand in such a technology-driven society. Some initiatives advocating for citizen power in city making have grasped how technology can be used for people and not in the sole scope of optimising industrial production and infrastructure management. They generally take the form of engagement platforms, and are implemented by either independent organisations or governments themselves, mostly in order to take in suggestions and ideas, when there is room (and money) for bottom-up initiatives.

Assessing the role of digital media in the rise of community engagement as a planning staple is however trickier, as the general, societal impact of current media technologies has yet to show to what extent it exists. A possible way of thinking about it would be in the sense that digital media, and especially social media, has allowed to exacerbate individualism to the point that people feel more and more inclined to demand for their needs to be satisfied in an immediate fashion. Hence, power holders (governments and large corporations) become more accountable to individuals, in order to survive politically and financially, in a world where everything an organisation does will end up being exposed on the Internet. To what extent is this a plausible theory?

Understanding the Information Age: a debutant’s essay

Trying to understand the Information Age is a complex process, let alone the basic requirement of envisioning it as an acceptable concept. From there, grasping it as a whole demands viewing the matter from different fields of study (between many others, one can mention anthropology, sociology, economics, politics, business, ethics, or engineering), but also patience and will to accept that the notion cannot be fully explained, mastered nor accurately projected into the future, considering that we are standing at its premises (Kelly, 2016).

Drawing a definition

But what is the Information Age? Sometimes named the Digital Age or the Knowledge Society, and simultaneously associated with the ‘Platform Society’ (Van Dijck et al., 2016), ‘Society 3.0’ (Van den Hoff, 2013), or the ‘Fourth Industrial Revolution’ (Schwab, 2016), the Information Age is ‘a period in which human history is characterised by the shift from industrial production to one based on information and computerisation’ (Birkinshaw, 2017). Straightforwardly, it means that since the dawn of the personal computer in the 1970s, through the invention of the World Wide Web in the 1990s, and thanks to the Internet of Things today (Zandbergen, 2013), our ways of living as a society are deeply shifting; the Internet and social media have overpowered printing, the telephone, the television, the radio, as mass communication. In clear, we are living in an era in which digital data, or information, is massively produced by every single individual, corporation, institution, and increasingly, object. As Doria (2014) further suggests, ‘the age of information is that stage of human civilisation characterised by an explosion of opportunities to not only access but also create vast amounts of information. These opportunities are made available to and for the public via communications technology’. From

there, it is possible to understand that, while the almost infinite amount of data can seem overwhelming, unusable and useless, it has allowed ancient and emerging companies to find ways in which data becomes a powerful economical driver, to the point of developing new business models.

Within this mess, a highly criticised but also large recipient of curiosity has been the platform model. The usual examples of this (usually business) model that scholars, thought-leaders, and popular culture look up to are Google, Amazon, Facebook and Apple, or as the jargon masters say, *GAF*A. As Parker et al. (2016) explain, the 'platform is a simple-sounding yet transformative concept that is radically changing business, the economy, and society at large. Any industry in which information is an important ingredient is a candidate for the platform revolution'. Van Dijck (2016) further underlines that the platform model has penetrated every single aspect of society, and beyond being a new business model, it is deeply changing the way we experience life as social individuals, from work, to leisure, to the way we relate to one another (Schwab, 2016).

In short, the Information Age, i.e. being able to access vast amounts of information thanks to the Internet, is what we titled this deep societal shift that we have started to sense about everywhere. There are many expressions, books, articles, in both scholar and popular literature giving a go at breaking down what might be going on. But as society is more and more embedded in technological progress (that we ourselves drive), and as technological progress itself is following an exponential, extremely rapid pace (Sysiak, 2016), some ground-breaking suggestions from 2012 about how our society is changing, could be very much obsolete by the time this thesis will be submitted.

But still, where could we be supposedly heading? In practice the roots, and the forms that the Information Age can and will take, are difficult to define. Some thought-leaders such as Van den Hoff (2013) are truly excited the upcoming times; in *Society 3.0*, he projects that the way we will experience our working life will deeply change. In the *Society 3.0* spinoff named *the Serendipity Machine* (2012), Olma predicts the rise of free agents (or 'knowmads', i.e. independent professionals organised in small groups), the increased interest for sharing ('access is more important than ownership'), self-organisation (through the Internet), the multiplication of the use of the third space (a mix of real and virtual interactions), and the progression of economic value (by increasing the customer experience to its full potential, where the customer becomes itself the product).

While the notion of *Society 3.0* mainly focuses on the working environment, and hence the impact of the Information Age on it, one could assume that such changes are very much embedded in a larger societal shift. Indeed, it seems that it has brought us collaboration, self-organisation (implying societal resilience), and civic engagement; which, boiling it down to the subject of this thesis, could be equally relevant for planning practices. What could be wrong with that?

Issues brought by the Information Age

If we (individuals, corporations, governments - and objects) were to become increasingly connected and collaborative, what could be the issues brought by the Information Age? Amongst many other scholars and thinkers, Ross (2016) suggests that this new era is supporting the deepening of inequality, between those who have gathered the skills to keep up with technological progress, and those who have lost their workforce power in the processes of globalisation. This goes beyond a lower, more visible level of inequality within society, between those who have mastered the use of digital technologies to go on about their lives (digital literacy), and those who have not (Mervyn et al., 2014). To that, Schwab (2016) adds the issue of individuation, as the rise of social media (the

ability to connect with like-minded people) and the focus on customer/user experience from corporations and institutions enhance the 'me-centred' (p88) pattern. It contrasts with the potential sense of community equally brought by social media and engagement and sharing platforms. Can exacerbated individualism and sense of community enhancement co-exist within the same paradigm?

Additionally, the issue of ethics seems to increasingly stand out in what could be the most commonly addressed debate in popular and scholar culture. Maybe not so far from a *Big Brother* scenario, the challenge of data protection (whether personal and sensitive, or linked to corporate and government security) has yet to be solved. Indeed, most of contemporary large companies (as well as some governments, indisputably) are feeding on the data that we, as consumers and users, produce willingly and unwillingly. If we can agree with giving away some data to improve our user experience, should not we, in the first place, be able to decide what goes away and what stays within our property? Consequently, the European Union has taken a stand in advocating users' right to privacy and ownership by re-editing the rules around these matters. Indeed, the GDPR (General Data Protection Regulation), to start May 2018, will break down the way in which the private sector will harvest, handle and process data, making 'data generators' (i.e. us; Zwitter, 2014) able to control and access their own information that is currently being kept and used by corporations, and again supposedly, governments (Burgess, 2017).

Many scholars and thought-leaders (Ross, 2016; Schwab, 2016; Van Dijck, 2016, etc.) are suggesting that to counteract these issues would mean that every individual, whether alone or representing an institution, should take responsibility, by demanding transparency, ownership, and working towards collective intelligence rather than individuation. But from there rests a final, possibly unanswerable question: who should take responsibility for teaching such values, let alone the chance of ever convincing a whole societal system to accept them?

Smart Cities and 'Smarter' Cities

Digital technologies have penetrated every aspect of society, including urban design and governance. After about two decades of the smart city discourse leading urban regenerations around the globe, one main observation is that, despite many organisations, hubs, think-tanks and other consortiums working together on the matter, there is no finite definition of what a smart city truly is (Emmerich, 2014; Mora et al. 2017). But as Bered (2016) notes in her master's thesis, maybe it is better to accept such a blurry definition in order to comprehend how vast the array of senses given to smart cities is. The reason as to why smart cities really came to be can differ, but it seems to come down to the observation that cities in general are becoming increasingly populated, and hence are in need of a more efficient way to be governed. The answer large corporate players have found is infrastructure optimisation (European Parliament, 2014). Companies such as IBM or Cisco have made their way to the smart city arena by remodelling urban management products, making them more efficient in order to price them with the 'smart' attribute. Cities with fundings and competitive power have been naturally drawn to acquiring anything that makes them better; including becoming a 'smart' city with 'smart' urban engineering. And of course, why would cities develop their own technological solutions when companies have them already available on the market?

However, for the past two or three years, narratives seem to have shifted. The European Parliament in 2014 defined the smart city as 'a city seeking to address public issues via ICT-based solutions on the basis of a multi-stakeholder, municipally based partnership' (p17), hence introducing the notion of multi-stakeholders. The same year, Emmerich underlined that, besides being driven by

technology in resolving urban matters, smart cities are those giving space for entrepreneurs, citizens, students, researchers, and all other sorts of players, to collaborate, innovate and be more efficient and responsible together. To give an overview of how the Smart City discourse and its associated forms have evolved, Cohen broke down in 2015 on the three generations of smart cities:

- *Smart Cities 1.0*: driven by private sector technology companies, and focus on making the city as efficient as possible thanks to expensive solutions developed by either big corporates or trendy tech entrepreneurs.
- *Smart Cities 2.0*: led by a local government which values technology as an 'enabler' in improving the overall quality of life; there are many public-private cooperations but ultimately, the municipality is in charge and does have a profound knowledge about what technologies are necessary. Boyd suggests that most leading smart cities today are from this generation.
- *Smart Cities 3.0*: the ultimate version, the '*smarter* city', focused on citizen co-creation. They leverage new models such as the sharing, circular, and collaborative economies, and technology is barely a crucial component. Instead, technology takes the form of a community organisation tool.

While some cities still stand in the 1.0 generation of smart cities (e.g. Songdo, South Korea; Masdar, UAE), most have seemed to move towards the 2.0 version (Cohen 2015, 2016). Some cities are working their way towards the third and final generation, including Medellín in Colombia, or actually Amsterdam in the Netherlands. In the end, the conversation seems to have shifted: from a city-centric point of view, where the city needs to be optimised, towards a people-centric discourse where the value is put on individuals to collectively work towards better solutions.

Towards 'smarter' cities

Offenhuber boldly declares the smart city 'dead' (2015, p39). By suggesting so, he further highlights the many critics that one can address to a tech-driven governance, dividable into two lines: first, the general issue of security, privacy, and monetisation of the data massively produced in urban environment, coming from the dwellers but also the infrastructures. And second, what Offenhuber depicts as a 'lost opportunity' in not using the sensors that all citizens have always had: not smartphones and wired objects, but their sense of observation and the knowledge they have about their environment (p40). In clear, Offenhuber sums up what we can identify as collective intelligence, that has been more and more perceived as a crucial value in city making. This joins a very recent manifesto published by the European Commission, in an effort to redefine the smart city arena in the Union. Indeed, the creation of the EIP-SCC (European Innovation Partnership on Smart Cities and Communities) marks a new shift in the making of European smart cities, which now should vow to be inclusive before anything else. It defines the 'smart citizen' as the core centre of any city initiative looking to jump into the smart city area, further making citizen engagement a duty and priority in the elaboration of any project.

In short, the smart city discourse has strongly evolved, in the sense that techno-centric cities are now being frowned upon, and initiatives that emphasise on collective intelligence are more and more the way to go if a local government aspires to be labeled 'truly smart', or '*smarter*'. Additionally in this case, extremely innovative and disrupting technologies are not considered a necessity nor a competitive advantage anymore. By focusing on collaboration (Rouxel, 2017) rather than

technologies, have we entered a post-smart city era? Just as Emmerich (2014) advocates for a cautious adoption of the smart city narrative, by reminding the ‘green washing’ that occurred a few years before with ‘eco’ and ‘green’ cities, one can maybe predict an upcoming ‘collaborative washing’ or ‘sharing washing’ of governance models. In the end, this could make sense if we mention again Healy’s questionings: is there a deep shift in city making or is this just another political rhetoric? (2008, p379).

The Right to the City, a sequel: digital citizenship

One can perhaps understand digital citizenship in two ways. A first perception would be digital citizenship as the digitisation of civil life, taking the form of e-government initiatives, which consists in putting public and administrative services in a digital form, in order to simplify tasks within a government. This in the end, follows the general path of digitisation of services in all types of sectors, that we have mentioned in the first section of this part. Secondly, digital citizenship can be understood as the powerful scaling that digital technologies have been giving to civic action and participatory processes in civic life.

Initiatives around the globe show how digital media has given a new life to participatory processes in planning. From Facebook supporting civic engagement by promoting messages of local political figures in the US (Le Monde online, 2017), to publicly top-down led initiatives such as a *Tinder for city projects* app giving citizens a quick and fun way to vote for their favorite proposals (Wainwright, 2017), the Internet and its subsequent practices do give a new space for participatory and civic life to exist. Even more, digital media, as a way to publicly express oneself and rapidly forming collective coalitions against what is perceived as *wrong*, can bring considerable challenges to stakeholders usually perceived as power-holders (i.e. the Government, and large corporates). Current developments in popular culture have shown how for instance an American airline company was brought to international shame and overall financial loss after a video of a customer mistreatment surfaced on the Internet, hence quickly gathering global outrage and call for boycott against the company³. Lance (2008) does note the power of online platforms in materialising civic movements, especially in youth groups, notably by offering a seemingly more spontaneous way to engage with like-minded people but also the opposition, including in contrast to what a municipality could traditionally organise in the forms of public events and/or online communication. Ballantyne (2017) sheds light on how meme⁴ culture actually allows teenagers to argue about and discover political ideologies such as communism and marxism. In short, digital and social media are increasingly perceived as powerful mediums for citizen engagement (e.g. Hand et al., 2011; Ertiö, 2015; Hanzl, 2017), and sometimes even, deliberative democracy (Rishel, 2011), by their basic characteristic of spreadability, hence allowing to reach a large audience, ultimately meaning more inclusion and points of views in debating a public matter.

³ Bridges, Tyler. 09/04/2017. Twitter video, available at: <https://twitter.com/united/status/851217417569157121>

⁴ ‘An amusing or interesting item (such as a captioned picture or video) or genre of items that is spread widely online especially through social media’ - definition by Merriam-Webster.

But is civic power organisation thanks to online platforms a contemporary form of the right to the city, as Lefebvre advocated for in 1967 and 1969? Shaw et al. (2017) and Dean (2017) argue that indeed, if framed correctly in terms of protective legislation, pushing for civic life to happen in a digital city represents a form of right to urban life. Shaw et al. additionally underline Lefebvre's statement that a right to the city is equally a right to information, in the end making utter sense considering that we are now in the Information Age, where, again, data is simultaneously produced and consumed massively in urban environments. Shaw et al. also argue that the right to the city is especially relevant in an era of power relationships established between those who financially benefit from data and those who, willingly or unwillingly, let go of this same data in order to go about their everyday life. A right to information could hence be transcribed into both open data and individual data protection policies, implemented by traditional data power-holders (again, governments but mostly corporates). One can be hopeful in witnessing an inversion of the current power relationships, by observing the path in which the European Union is currently marching towards, notably by implementing the GDPR law mentioned earlier (Burgess, 2017), and by the rise of open data initiatives in cities around the globe.

THE ENTREPRENEURIAL RESPONSE

The entrepreneur is commonly understood as a 'risk-oriented, profit-seeking individual who identifies market opportunities and exploit them to earn profits' (Bhawe et al., 2007). However, recent literature has shown that, beyond the capitalistic understanding of what entrepreneurs do, entrepreneurs can also be driven by more than what Schumpeter described as *the dream of founding a kingdom and the will to conquer* (McFullen, 2017), and of course, the promise of high profits in a near future. McFullen (2017) further questions the 'heroism' usually associated with entrepreneurs, as they are portrayed as courageous enough to face sacrifices such as financial cost and uncertainty in order to bring novelty products and services to the world. This idea of being driven by a 'mission' (Meunier, 2017) to give innovative and sustainable solutions to society's problems, without primarily seeking 'self-serving considerations' (Bhawe et al., 2007), is what should capture our attention, both in this thesis and in general research. Indeed, Hurst for instance argues in *Purpose Economy* (2014) that having a purpose (i.e. a desire to impact the world) will drive the next economic era.

Accurate outline or not of what entrepreneurs stand for, there has been an increasing interest in what they are actually able to bring to society. The existence and scholar interest for entrepreneurial behaviour is obviously not new. But one can observe that governments and the business world (and as governments have a tendency to replicate the private sector - Harvey, 1989) have been more and more interested in what small initiatives with an innovative idea, expected to undergo an impressive growth, can bring. This can be easily illustrated by the general, strong push from cities and corporations to massively open new spaces such as startup incubators, *fab-labs* and other co-working / flex-spaces. Our fascination for success stories of disruptive businesses such as those portrayed by GAFAM, and following startups that made it to the Unicorn List⁵ such as Airbnb or Uber, simply add to the whole picture.

But what is urban entrepreneurialism? What does it bring to city making? Is community engagement an enviable and profitable business opportunity, let alone be it business?

An increased interest for the urban entrepreneur

Urban entrepreneurialism has been addressed multiple times over the past decades, and in various ways. Harvey wrote about entrepreneurial behaviour in urban governance back in 1989, observing it through a classic marxist lens. He suggests that governments shifting from managerialist to entrepreneurial behaviour in urban governance will further become subjects to 'urban corporatism' (p16), echoing multinational companies seeking capitalist accumulation. Harvey's work does strongly resonate with a current interest for *startup urbanism*, or how to think contemporarily about urban governance (i.e. with digital media and tech startups). Startup urbanism has yet to be consensually defined; while it could be seen as attracting a high number of startups, current thought-leaders advance that it is about governing the city following rules that startups and entrepreneurs use to develop their own businesses (this is where Harvey's urban entrepreneurialism can stand out) (Bischke, 2012; Hollis, 2014; Morris, 2016). And just as Harvey strongly critiques urban entrepreneurialism, Hollis advances that startup urbanism as a governance model will 'fail us'. He

⁵ fortune.com/unicorns: the most successful companies that leveraged emerging technologies

argues: 'the city is not a startup. It is not a market that needs to be disrupted in order to stimulate competition and growth. The city is not a platform that can be hacked' (shareable.com, 2014).

In 2007, Fleischer looked at urban entrepreneurialism as 'startup businesses in economically disadvantaged urban areas' that faced 'unusual barriers in raising capital' (p93). He argues that, while entrepreneurship is a 'universal spirit', potential entrepreneurs in urban areas are more prone to face a high amount of competition (since cities attract large populations, including 'innovators'), especially in getting investments for starting their venture. Consequently, Fleischer called for *for-profit philanthropy* to replace traditional investment patterns, explaining that such a behaviour meant that these types of investors believed in a cause and a societal impact rather than skyrocketing profits, hence allowing small-scaled businesses, with impact nonetheless, to keep existing independently from larger initiatives.

It is however Boyd Cohen's 2016 'urban entrepreneur' or 'urbanpreneur' that stands out the most for our research today, as the path followed by the founder of TransformCity®, and her business itself, fully resonates with what Cohen advances about a presumably new generation of entrepreneurs. In *The Rise of the Urban Entrepreneur* (2016), he identifies individuals gaining more and more influential power in urban areas, subsequently impacting urban governance. Cohen argues that there are three forces behind this increasing impact led by entrepreneurs, working in a 'spiral':

- *urbanisation of the economy*: companies perceive more benefits from being located close to or inside cities;
- *democratisation of innovation and technology*: open innovation through the opening of information, decrease in costs of technology, and decline of dependence on classic venture capitalism, all come together to give entrepreneurs a chance to build an impactful, tech-driven product or service;
- and the *emergence of collaboration* as an institutionalised process: many stakeholders are expressing a growing interest for collaborative models, in causal conjunction with the rise of the sharing economy.

From there, Cohen defines three types of urban entrepreneurs, all benefitting from the Internet, social media and (voluntarily or not) dedicated urban infrastructures to organise their professional life as urban entrepreneurs:

- *urban tech entrepreneurs*: entrepreneurs who find technological, technical solutions to what they observe as an urban infrastructural issue;
- *civic entrepreneurs*: 'entrepreneurs working in the civic space, seeking to improve the quality of life where they live, through entrepreneurial behaviour' (chapter 3, ebook);
- *indie entrepreneurs*: freelance specialists, who do not work for a specific company but rather by contracting projects (chapter 4, ebook).

While indie entrepreneurs can very much have an impact on society, the real interest is for civic entrepreneurs. Cohen declines them into three scales of impact (chapter 3, ebook):

- *neighbourhood-based* (civic hackers): what we could typically define as a grassroots, vernacular initiative - a 'community-led' innovation where residents co-create using their skills, in order to overcome a collectively identified issue in their direct environment;
- *city-based*: in collaboration with civil society and public institutions, they implement solutions on a larger scale and are generally funded by municipalities;
- *global/platform based*: they identify challenges that are common to many cities, and develop solutions that can be scaled with a platform model.

Side note:

TransformCity® is evolving through all three scales of civic urban entrepreneurship. When the platform started as ZO!City, Beer was undoubtedly a neighbourhood-based entrepreneur, as she was observing a lack of cohesion and communication between the different parties of the Amstel3 community. Now, as TransformCity® is gaining more attention and investments, it has become a city-based company, as it is funded by the Municipality. Indeed, the Municipality of Amsterdam sees potential in Beer's business, and hence is looking to implement it into other areas with similar issues. Finally, as TransformCity® is seeking to grow nationally and internationally, it would become platform-based, since the model would be scalable and replicable. In the end, TransformCity® can be considered the outcome of civic entrepreneurialism (and not merely entrepreneurialism), in its search for disrupting current city making models through deliberative democracy, collaboration, and technology leveraging.

Boyd argues that civic entrepreneurs, in their necessity to reach a wide audience for an increased impact, are able to leverage digital technologies, and specifically civic technologies (platforms that allow communication between governments and citizens), becoming tech entrepreneurs themselves. He explains that the civic tech market so far is largely dominated by profit-driven entrepreneurs and large corporations. But again, with technology democratisation and collaborative processes (e.g. with individuals who have the skills and the will to help developing a civic tech product), civic entrepreneurs are able to put their own solutions on the market and grasp the interest from municipalities aspiring to improve their community engagement processes.

In summary, urban entrepreneurs, and specifically civic urban entrepreneurs, are driven by their deep knowledge of their neighbourhoods or cities, and a desire to overcome by themselves issues that they have identified. They are especially impactful thanks to their ability to use digital technologies to lead their initiative. Mostly, civic urban entrepreneurs do not require any specific skills, but purpose and the capacity to lead a community.

The new « creative class » ?

It should not be surprising that Boyd Cohen and Richard Florida share closed connections in their work. Indeed, and picking from other instances, Florida did write the foreword of Cohen's 2016 book. Additionally, Cohen explained in a 2016 interview that the creative class (as invented by Florida) has been migrating to cities, away from what he called *nerdistans* such as the Silicon Valley, bringing (tech) entrepreneurial values with it. Hence it is relatively simple to find in Cohen's urban entrepreneur a new take on Florida's 2002 creative class. Back then, Florida defined it as a group of individuals whose talents were *creativity*; it included in its core people such as scientists, engineers, university professors, poets, novelists, artists, entertainers, actors, designers, architects, and some other thought-leaders such as think-tank researchers, editors, culture celebrities, and many others. In a larger way, the creative class was also supposed to include 'creative professionals', i.e. individuals involved in the information production sector such as high-tech, finance, law, health or management (pp38-39). Florida mostly advanced that the creative class was highly desirable for any city in search for growth and vibrancy as creative people had the skills and purpose of creating enormous amounts of value, be it financial, social or cultural.

Of course, this theory received a plethora of critics (for an overview, see Serre, 2016), mainly regarding the very plausible risk of gentrification in focusing urban development policies on creative workers (they are highly skilled, and seem to be located in middle, if not upper classes of society), besides the simple observation that Florida's work lacked statistical and scientific accuracy: what type of business gets to be titled creative and what does not?

Both Florida and Cohen address critics of gentrification and further polarisation of classes (high skilled versus lower skilled) by suggesting that all of us can be, somehow, creative or entrepreneurial. Indeed entrepreneurial behaviour can objectively be observed in all types of contexts (public or private, rural or urban, marginalised or elitist, see Fleischer, 2007 and Nettler, 2013); but does it mean that anybody, who 'wants it', can be an entrepreneur or a creative worker? Cohen takes it however a step further by placing the entrepreneur in the digital age where automation and the sharing economy (in the form of open data, open patents, skills and time sharing) brings opportunities for anyone who has identified a solution to an urban issue. This also fully resonates with Van den Hoff's *Society 3.0* (2013), in which he predicts the transformation of our working force into freelancing.

Cohen addresses potential criticism himself in the seventh chapter of his book (ebook), naming gentrification, the early stage of the sharing economy, and the on-demand economy as uncertain threats to cities using urban entrepreneurs as economical growth tools. On the other hand, being a little bit optimistic about the rise of the urban entrepreneur does sound promising for a future where anyone could be able to exchange time, skills and knowledge, while envisioning civic action as a common purpose for a neighbourhood. If those who predict the future of the Information Age as machines replacing labour are right, then yes, maybe we will all be creative entrepreneurs, makers, and freelancers. But most likely, the reality will be balanced between two plausible outcomes: empowerment of many through entrepreneurship (and its accompanying forces: digitisation and democratisation), and polarisation of the classes (and its accompanying consequences: displacement and marginalisation).

On a practical side, and whether Cohen's definition of the urban entrepreneur faces opposition or not from the scientific community, it should not be ignored that the current context in urban policy making of many cities is increasing its attention on creativity, entrepreneurship and startup business models. However the reliance on investment methods outside the traditional venture process should be taken with criticism, as methods such as 'for-profit philanthropy', crowdfunding or angel investments have yet to prove their disruptive capacities on our current capitalist paradigm.

TRENDS OR UPCOMING DEVELOPMENTS IN CITY MAKING?

In this part, we have exposed community engagement, digital technologies and entrepreneurship, as trending topics but with valuable, serious implications in city planning. Indeed, community engagement is increasingly perceived as a way to elevate inclusive democracy in a city, and digital technologies are more and more grasped as tools to support such principles. Based on Cohen's work, entrepreneurs are conjecturally gaining more and more terrain for action in cities where bottom-up, socially innovative approaches, and/or disruptive technological solutions are appreciated. Still following Cohen's logic (2015), a city in which all three come together can be considered a Smart City 3.0, i.e. an exemplary model for urban governance, thanks to its highly progressist, democratic but perhaps chaotic values, leveraged by digital technologies and entrepreneurial, collaborative behaviour.

In the end, this state of the art is both inspired by and focusing on TransformCity®, as its intermediary position in the planning stakeholders sphere, its active plans to leverage digital technologies, and its strong advocacy for community engagement, fully embody the trends that are currently driving planning agendas in many cities. But are these trends desirable features for city making? Are they embedded in an evolutionary shift in planning methodologies? As these practices are quite new, not in their ideology but in their implementation, one can argue that only constant documenting and study cases on a longer period of time will allow to assess whether or not planning practices have changed, including in evaluating the transformation of power relationships and the role of digital technologies in doing so. Just as we have no clue about where the Information Age is leading us in terms of societal and legislative challenges, entrepreneurs cannot yet be fully confirmed as both good samaritans and skilled problem solvers, and community engagement in its most chaotic form has yet to be justified as a key driver for urban democracy.

PART 2

Digital technologies and practices for community engagement: a focus on TransformCity®, Amsterdam

Note to readers:

The current version of this work has been lightened, as the content of the second part is confidential to TransformCity®. Readers in possession of the addendum titled 'TransformCity®: Research and Development Proposals' are invited to switch their reading to said document once Part 2 is reached.

INTRODUCTORY REMARKS

As for any other company out there, research and development activities are crucial. The internship giving the main matter to this thesis came from such activities, developed under the tutorship of Beer. TransformCity® being *'the most integral and actionable urban transformation platform; an online dashboard with a strong local identity'*⁶, it was suggested multiple times to keep an eye on what was going on in the startup and tech world, in addition to keeping in mind one main focus: community engagement on the platform. With Beer's suggestions, working processes and schedules were designed, in order to make sure that we were going to reach all of the objectives previously set, in preparation for the growth of the company.

TransformCity® being a startup with major developments coming ahead, the last months of the internship focused on proposals for the next growth phases. We agreed on exploiting our interest for emerging technologies and their impact on community engagement, so that the document submitted would be dedicated to suggesting what could be the future potential content of TransformCity® rather than its business plan. And as we considered ourselves a startup, we were equally very keen on staying updated with trending topics in planning using new technologies. We pinpointed several universal techniques in startup R&D that seemed interesting enough for us to also come up with ideas that would activate the potential of TransformCity®.

TransformCity® is ought to be a central tool taking the form of a platform, for communities to self-organise in their neighbourhood. The idea would be to allow citizens, but also individuals or representatives of other types of structures (e.g. companies, startups, universities, the municipality) to engage with anyone, at any level, and at any degree they could wish for, with a single common project: co-creating and owning the selected area.

While engagement platforms for cities are appearing everywhere around the globe, and in various ways, TransformCity® is believed to be structurally different in its approach to urban planning management. Its multi-stakeholder characteristic (i.e. not solely municipality and inhabitants) combines with its future capacities to integrate a vast array of tools that would prove to be useful for the community where the platform is implemented, in addition to the ability to address a large variety of themed issues.

⁶ transformcity.com

While this sounds very promising, the reality is that TransformCity® is at a very early stage of its development. The main platform does exist, but has not had the chance to evolve over the past months. However, recent developments within the company, and discussions with potential collaborators have opened the path to more creative ideas, and excitement over the general 'what-could-be' state that is starting to occur, hence justifying the work done so far during this internship.

The present part is an in-depth overview of the research, and complements the theoretical framework addressed in the rest of the thesis. The global goal is to focus on community engagement, and look out for inspiration in nowadays' trends in digital planning. A very thrilling part of that was to investigate two professional fields the author previously had no practical knowledge in, being emerging technologies and business. Additionally, the theme of emerging technologies has been a very popular topic of conversation, whether carried online, in the news, or by scientists of all fields. Marketing and business strategy are more secluded to those who evolve within that area, and their manipulation comes from experience rather than reading about them. One should however understand that this is merely the author's opinion, speaking from her own perspective, and having jumped in both arenas a few months ago only. Finally, the author's background in planning might have allowed to keep the focus on community engagement, and envision both technologies and business understanding as a means rather than an end.



Fig. 4 : the internship's professional scope
Source: author

In the end, this document piles together the information gathered overtime, as well as some ideas for the company, in the hope that the content will be useful for TransformCity®'s upcoming growth - which will happen very soon. Upon Beer's suggestions, several technologies and methodologies were scouted. They were further sorted out into four different themes with a theoretical scope, following the company's original perspective of community self-organisation. The themes consist in creative interfaces, trust, and data handling. A specific section is dedicated to artificial intelligence (AI), as it has upcoming and meaningful potential for our society in general, for TransformCity® in particular. Some of the features are however not, by nature, deeply technological, as they are more of digital practices. They are not supported by complex and technical processes, but rather rely on an already existing digital model of engagement (e.g. the platform). On the other

hand, other technologies presented here might suffer from a touch of awkwardness, as understanding their profoundly complex functioning would require, perhaps, some years of specific education.

Methodologies

As mentioned earlier, and largely based on Saskia’s suggestions, much of the inspiration was drawn from what was witnessed in the startup and tech world. Various tools were stumbled upon, and were adjusted to the author’s debuting business development skills. As one could expect, these were however not based on social study methodologies.

COPIS

The first activity during the internship consisted in making proposals for designing the 'customer journey' of the potential users. We had to think about what the customer would experience browsing the TransformCity® platform, and how we would make it a tool that people would actually use. In order to make sure no user would be forgotten, and that the platform would be designed in such scope, the SIPOC diagram was used. It is part of the SixSigma set of tools. SIPOC stands for 'Supplier, Input, Process, Output, Customers', and its goal is 'to identify all relevant elements of a process improvement project before work begins'⁷. While this tool was largely designed for manufacturing industries, the idea of breaking down each type of user and imagine what TransformCity® could represent and do for them was extremely interesting.

The content of the COPIS table presented hereafter is the result of some brainstorming done in April 2017. It starts by dividing the potential users of the platform by their type of status (inhabitant, area employee, investor, etc.), and matches them to their assumed expectations of TransformCity®. However, the platform having the same goal for everyone (self-organisation of the community), the process, input, and supplier rows are common to every profile. In other words, the experience should be similar for everyone, even if the expected use is not the same depending on the status of the stakeholder.

Fig. 5 : COPIS (Customer, Output, Process, Input, Supplier)- inspired sheet, 04.2017. Source: author

KEY CUSTOMERS 'WHO are your primary customers?'	OUTPUT 'WHAT does the customer receive?' = potential use for the platform	PROCESS 'What STEPS are included in the process?'	INPUT 'What is provided to START the process?'	SUPPLIER 'What PROVIDES the input?'
inhabitants				
area employees				
investors				
professional city makers				
municipality				
companies				
business owners				
startups				

⁷ Six Sigma, 'SIPOC Diagram', unknown date [accessed 08/07/2017], www.isixsigma.com

KEY CUSTOMERS 'WHO are your primary customers?'	OUTPUT 'WHAT does the customer receive?' = potential use for the platform	PROCESS 'What STEPS are included in the process?'	INPUT 'What is provided to START the process?'	SUPPLIER 'What PROVIDES the input?'
foreign interest				

Technology scouting ('scrum')

Maybe wrongfully titled 'scrum research' during the internship, the actual point of this activity was technology scouting, for development proposals. Scrum itself is a management method. As Denning sums it on forbes.com (cf. fig. 6), nothing about scrum practices is technically new nor innovative. However, the methodology is especially appropriate for smaller structures (e.g. startups) as the short cycles and the focus on less structural objectives allow to spend energy and money only after a thoughtful, iterative process. Scrum also allows to correct mistakes, that initially had little consequences anyway.

In the end, inspiration was drawn from it in order to divide the upcoming research missions into shorter cycles (also known as 'sprints'), lasting a few days at a time, and with a deep focus on a specific feature or technology. In retrospective, most of the scrum principles - as defined by Denning - were respected, except for when it came to interact with the client (steps 3 and 9), as the usage of the platform by the launching customer (Municipality of Amsterdam) was - and still is to this day - on standby, due to delayed upgrades. While technology is not an end to TransformCity® but rather a means, scouting is still very relevant the business, as the need to stay updated with trending methodologies in planning is very real.

PRACTICES OF SCRUM

1. Organise work in short cycles;
2. The management doesn't interrupt the team during a work cycle;
3. The team reports to the client, not the manager;
4. The team estimates how much time work will take;
5. The team decides how much work it can do in an iteration;
6. The team decides how to do the work in the iteration;
7. The team measures its own performance;
8. Define work goals before each cycle starts;
9. Define work goals through user stories;
10. Systematically remove impediments.

Suggestion: scrum and design thinking for TransformCity®

Another trend in entrepreneurial discourse is design thinking. Just like scrum, design thinking is an iterative process for project management. However, rather than focusing on differentiating and then sequencing steps in the development of a product or service, design thinking focuses on creativity in problem solving, i.e. coming up with a maximum of options for solving an issue, choosing one direction, testing it, and starting again. Depending on the authors, this method has a various number of steps. That said, a simple way to understand it is the way fastcompany.com explains it:

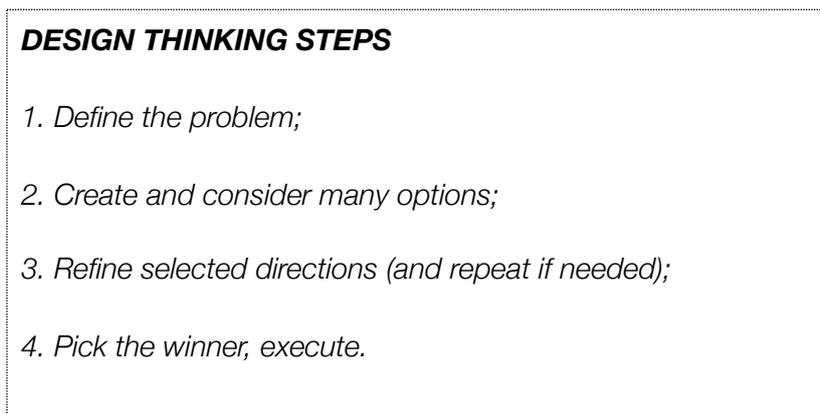


Fig. 7: Design thinking... what is that?
Source: fastcompany.com, 2006 [accessed 08/07/2017]

Cooper-Wright (2017) notes on medium.com⁸ that this process is associated with ‘Human Centred Design’, which consists in navigating between viability (as a business), feasibility (technical aspect), and desirability (as a human). Finding the balance between these three aspects opens room for innovation.

The main point of the methodologies used and suggested is that a product should always reflect the users’ needs and wants. For a successful implementation, the platform should be as user-friendly as possible, and the only path to follow would be to think of the customer’s experience in the first place, and then work our way down to the processes and the forms they would take. The following parts however rely on an inverted methodology, in which interesting technologies are spotted and studied, so as to show their potential for TransformCity®. As mentioned earlier, this document is more content-based than driven by business strategy.

Lessons from the economic crisis have pushed TransformCity® to enjoy a slower but more thoughtful path. This includes a focus on developing an MVP - minimum viable product - before anything else, to make sure that the pilot (ZOICity in Amstel3; cf. fig.8) is a successful and exemplary launching case for the platform. An MVP is of great importance for startups, as it requires little

⁸ Cooper-Wright, Matt. 'The blurring between Design Thinking and Agile', 24/11/2016 [accessed 08/07/2017], www.medium.com/front-line-interaction-design/the-blurring-between-design-thinking-and-agile-ae59d14f28e3

investment, but does have a large impact in showing the potential of the product, if it were to be successful (and receiving additional investments).

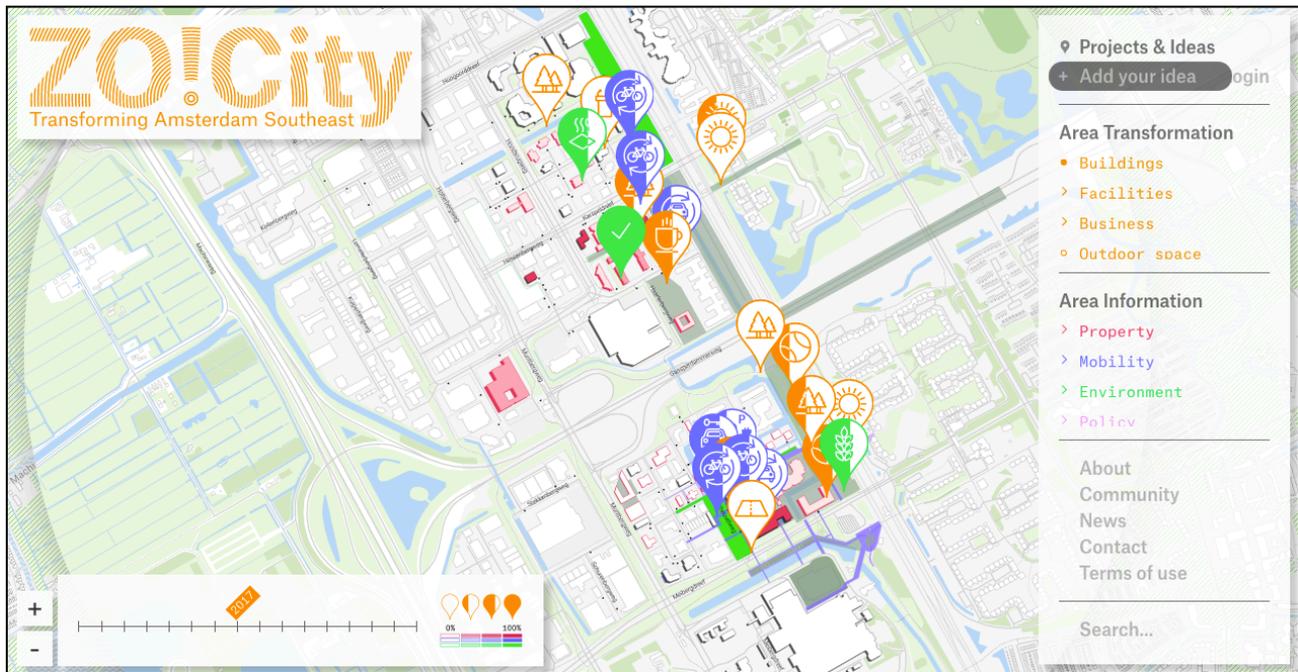


Fig. 8: current pilot's design and state
Source: zocity.nl [accessed 09/08/2017]

ENGAGING WITH CREATIVE PROCESSES

As suggested earlier, a major aspect of developing the platform should be about how user-friendly it becomes. One can assume that the first step in creating such a product should be about making it easy and fun to use. More largely, individuals aware that their creativity can be accepted as actual proposals for urban design (for instance) should be more keen to suggest ideas. As Burgess et al. (2006) suggest it:

*'Fostering human talent and digital creativity [...] will favourably nurture societal and cultural values – promoting not only an innovation culture and economy but an inclusive society.'*⁹

In general, creative problem solving should be a no-brainer as a desirable feature for any community self-organisation process. The focus of this first set of features is on technologies that aid such scope. Augmented reality (and by extension, virtual reality), and gamification processes have emerged in recent discussions as powerful mediums for community engagement, especially with citizens, as they are able to flatten down the hierarchy in knowledge capital, as individuals who are not expert in a certain vocabulary, such as urban law, can still envision and interact with project building. In parallel, their creative aspect adds a fun dimension to engagement. As any other 'app' or platform, having an interactive and liberating interface (in terms of creativity) would allow TransformCity® to develop a solid base of users in the area where it is deployed. Users could refer to it as a tool for expressing their opinions and views (without the necessity to be political), but also have a better understanding of their environment, leading to a more profound sense of ownership.

Augmented and virtual reality

AR is the superposition of digitally created content over real elements, through electronic mediums such as computers, mobile phones and tablets. AR/VR applications are commonly referred to as part of the gaming industry; however, recent developments have shown that AR/VR can be integrated and used in a vast array of fields (Gribetz, 2017; Aliide, 2016). Ideally, practices could be made simpler, more effective, and impactful. Furthermore, as Gribetz (2016) envisions it, it seems that the introduction of AR/VR brought a whole new spectrum of thoughts into our tech-driven society. As he advances, projecting holograms with tools such as VR glasses would change our relationship to our environment, hence 'extending our bodies with digital devices', and in the end, 'enhancing the human experience'.

Overall, AR/VR seem to be excellent tools that ease communication between parties, as for instance residents do not need to understand raw planning slang or plans anymore (Jefferies, 2017), thanks to the possibility to experience a project in real time. Besides that, such visualisation allows a higher sense of ownership in the project, as participants can be in a better knowledge position to debate about certain aspects of it. Several levels of engagement can be defined, whether or not AR/

⁹ Burgess, Jean; Foth, Marcus; Klaebe, Helen. **'Everyday Creativity as Civic Engagement: A Cultural Citizenship View of New Media'**, in *Proceedings Communications Policy & Research Forum*, 2006, 15p.

VR are used in the process; it can go from a simple visualisation aid, to a consultation tool with a voting system, or even design proposals.

The trivialisation of AR/VR has shown to what extent these technologies can impact our daily lives; from architects and planners (e.g. UrbanPlanAR), to artists, or surgeons (e.g. Metavision). Additionally, AR/VR are not solely existing for visualisation anymore; they can also have a creative component, in which the user can directly draw and build virtual elements with no real limitation (e.g. Krull, 2017). The closest applications to TransformCity®'s field are those of the real estate and architecture industries, although some gaming utilisation could also support engagement processes (cf. next part). Nonetheless, even though uses in our field seem repetitive and quite straightforward (i.e. building or object projection), these methods remain very interesting. Standing on the idea that AR/VR tools can greatly impact participation and engagement in planning processes, and in various manners, having a visualisation tool could largely help in transformational activities in an area.

Gamification processes

The launch of Pokemon Go back in 2016 brought in many questions for urban planners, including the impact of such a game onto public space (Poplin, 2014; Perry, 2016; Third Wave Urbanism, 2016). What was clear was that the game allowed users to redefine their relationship to public space - they investigated it in a deeper way, because there was something to play with behind it, while also collectively owning it by battling for digitally created territories (Abboud, 2016). While today's popularity of Pokemon Go is subject to more debate, many more initiatives have come to the light, and with a stronger base of community engagement (Duncan, 2017). In any case, the power of such games seems to be clear, in its role for empowering citizens (Sanchez Chillon, unknown date), but also bringing them together with other layers of stakeholders.

BUILDING TRUST

Several methodologies have shown capacities to foster the atmosphere of trust on a platform. In this part we will explore the power behind the philosophies of blockchain and participatory budgeting. While blockchain has been around for some years (i.e. ever since light was shed on bitcoin), its implementation seems to be taking a slower path, as it is complex and expensive. On the other hand, even though participatory budgeting applications are also fairly recent, the concept behind it is straight forward and does not require any complex technology to be powered (unlike blockchain). Additionally, crowdfunding could also belong to that trust building realm. But as the current version of TransformCity® already features this practice, it has been left out from researches.

Blockchain

Until recently, blockchain was systematically associated with bitcoin, as it was created to ledger transactions in this cryptocurrency. In short, every time bitcoin is used, the information about the purchase (date, amount, location, people involved, etc.) is stored with blockchain, hence making it impossible to falsify, and mostly, very easy to trace. The way blockchain functions is that every new information entering the system is stored as a 'block' added to a 'chain' of other informations related to an activity. The data is hence gathered in a linear and chronological order, and that chain is then stored indefinitely. The interesting bit is that data written with blockchain is not physically gathered in one single place, but scattered on a large amount of servers (computer networks). Hence the information is distributed (and not simply copied), which means that all records are verifiable, 'unhackable', and unmodifiable.

'By using Bitcoin [and blockchain], we can reduce costs, stamp out fraud, speed up transactions, democratise investing, increase financial privacy, internationalise markets, reemphasise equity, and make real estate a liquid asset.' (IBREA)

Blockchain, disassociated from bitcoin, is interesting in the way it handles data. In the information age, where data of all sorts is massively produced and difficult to verify, blockchain offers a crucial potential. In the constant debate about who should possess digital data, this technology solves the democracy matter by making information impossible to own by one single entity. As complex as it sounds, the technology does exist and is being used by some companies, startups and municipalities around the globe, but the responses can differ. Some people believe that blockchain is indisputable, and will be implemented absolutely everywhere and in all of our systems. Other people simply believe that it is too complex and expensive, on top of skepticism regarding how blockchain could possibly be welcomed by stakeholders such as large corporations or banks.

Participatory budgeting

Most of the knowledge collected here is based on a seminar organised by the EIP-SCC marketplace¹⁰ (European Innovation Partnership on Smart Cities and Communities). Participatory

¹⁰ ec.europa.eu/eip/smartcities

budgeting is a tool used by municipalities and local authorities to activate citizen engagement through common public budgeting. It involves the provision of a certain amount of public money specifically allocated to it, that has citizens meet and discuss about how it should be used. The way participatory budgeting is implemented depends on the municipality; some will choose to put citizens in smaller groups with a smaller amount of money, and ask them to come up with a project together. Others will have project proposals and voting systems on an online platform. Participatory budgeting initiatives have proven to be successful so far in engaging and communicating with citizens, and seem to be the most popular in Latin America. The method allows to build trust in two ways: from the citizens towards their government ('money well spent' for what they believe is important for them), and from the government to the citizens ('citizen wisdom', i.e. grassroots ideas). It is important to note that participatory budgeting should be led online and offline, as many interesting ideas can also be collected through vivid, face-to-face discussions.

LEVERAGING DATA

Below are four types of datasets that TransformCity® will be handling, with various illustrating examples. ‘Internal’ data is produced directly by and through the platform, i.e. by users. This type of data has a more confidential and individual aspect to ‘external’ data, which is made available by other infrastructures (e.g. municipality, corporations, objects). In both cases, TransformCity®, just like any other platform, will be facing a large amount of data that should be processed, stored, and become meaningful for its users so that self-organisation of the community can be supported by figures. Data leveraging for TransformCity® means that all types of open information should be easy to access and use by any individual, data mining expert or not, to make proposals for their neighbourhood.

Fig. 9 types of data handled by TransformCity® and examples. Source: author.

‘INTERNAL’ DATA	‘EXTERNAL’ DATA
Soft data - design proposals uploaded on the platform, comments and conversations about projects, ways in which individuals use the platform, etc.	Soft data - conversations about the area carried externally to the platform, attraction to the platform from other cities, hypertext about TransformCity®, etc.
Hard data - crowdfunding transactions, number of users, geolocation informations, etc.	Hard data - data produced by Internet of Things/sensors in the area, data sets made available by other infrastructures, open data sets from the municipality, etc.

Data visualisation

Data visualisation is a form of visual communication. It allows to translate data and numbers into information that is aesthetically pleasing (most of the time), but also mentally processable. As Kennedy (2015) points out, in the era of ubiquitous information, visualisation literacy is crucial. Mostly, data visualisations foster engagement from the community, as they allow people to read through information faster and with a better understanding (Krystian, 2015). One can assume that it has to do with balancing out the knowledge capital between all parties, when numbers are involved. The goal should be to make data present on the platform manipulable and reachable by any kind of stakeholder.

Internet of Things

The Internet of Things (IoT) refers to the connection of the physical world (i.e. material objects) to the Internet. IoT applications are theoretically absolutely infinite, and cover all fields (health, industrial production, marketing, etc.) (Burgess, 2017). The IoT is specifically interesting for cities, as the data generated by everything and anyone in the environment can be thoroughly analysed, in order to make infrastructures and services far more efficient, and that in many ways (energy wise, citizen satisfaction wise, etc.).

IoT in itself does not seem to have a clear link with fostering community engagement, but does help in constituting communities (Ballestrini, 2016). But as the IoT refers to material objects, it is likely for one to assume that the data generated solely represents the hard infrastructure of cities (e.g. logistics, energy, transportation).

About data

A quick research on TED Talk's official website shows that data is a preoccupying conversation, whether it is in a positive or a negative way. As defined by Zwitter (2014, p2), data in the information age is massive, organic and messy (in other words, absolutely anything that can be data will become part of datasets), global, and emphasises correlation over causation. Data mining is a real, professional field. Algorithms and softwares exist to cross-analyse big data instead of us. But the important bit is what meaning we give to it. The main difference between the way we do statistics today and mining Big Data is that the information analysed is not a *representation* of a group anymore; every single bit of information is part of the analysis. But as Etlinger (2014) suggests it, data still requires context that can only be created by people, so that it can have an actual impact.

As mentioned earlier, data (and specifically big data) is overwhelmingly huge, and there exists a crucial need to take a responsible control over it. Mostly, while we collect as much information about as many things as we can, the most important part is to draw meaning out of these numbers. Obviously, companies, but also governments are already leveraging data to solve issues, especially those related to city management, which makes sense. But two indisputable concerns are those of privacy and monetisation of our personal informations, falling under the field of data ethics. As Zwitter (2014) explains it, there is a need to rebalance the powers between data collectors, utilisers and generators (p3), the latter being the common individual. Some initiatives, such as the EU Decode project, bring light to such issue. Indeed, Decode aims at helping people take control over the privacy of the data they generate, making them the core decision-makers in whether their informations should remain private or released for 'the common good' (Snow, 2017).

While TransformCity® does not seek to mine data to find solutions for various urban issues, the platform does aim at hosting multiple datasets for others to leverage data, indeed in order for them to investigate numbers and build creative solutions for their neighbourhood. Undoubtedly, TransformCity® will also be generating data of all sorts. So how do we make TransformCity® an ethically responsible company in terms of the data collected and processed? Should TransformCity® aim at dealing with big data? In practical terms, the use of processes such as blockchain would already tilt the balance towards ethical data handling. However, blockchain still being a major question mark in our current context, it is crucial that data ethics, especially regarding big data, is discussed no matter what. There are major stakes in protecting massive data produced by individuals, as the Internet of Things, sensors, and other gadgets push the boundaries of data production consent further away from us (Couldry et al., 2014).

MAKING SENSE OF AI

AI is fascinating in many ways, more and more since it started occupying popular conversations because of its exponential evolution. However, we are still apparently quite far from reaching 'true AI', or AI that would actually fully mimic the human experience in a super-intelligent way (Sysiak, 2016). Technically, artificial intelligence as we know it today is the process of teaching machines to behave like humans, to complete tasks in a more effective way than we do. Natural language processing (interacting with human language) and machine learning (letting programs learn by themselves) add to the human-like experience - and fantasy - that AI seems to be feeding.

Sysiak (2016) explains that for now, AI is set on 'narrow tasks'; they are beating humans in one particular task but are not fully developed to complete others at the same time. We can hence see different types of AI applications for a very wide array of fields. Cities, through research and hire of private companies, are starting to leverage their own datasets by making sense of AI (Schwab, 2016: Feder, 2017). There are many debates surrounding the evolution and implication of improving our current AI applications. Indeed, as AI is nourished by data, and as we are teaching computers to think for themselves, the discussion around creating 'safe AI' is rising (OpenAI; Russel, 2017). However, I believe TransformCity® should be looking for basic applications of AI, the goal being supporting community engagement, and not further researching the potentials of machine intelligence.

CONCLUSIVE REMARKS

In the end, the main goal in developing these technologies for the platform should be about making it a communication and expression facilitator for all users and stakeholders. The tools that will ultimately be integrated to the dashboard should aim at balancing the knowledge capital of every single individual, regarding the area and its potentials, and in order for anyone to take ownership of their neighbourhood, whether they live, own a building, or work there. Additionally, and however defined, TransformCity® should not simply be a local social media platform. The provision of datasets and tools to express oneself should further foster entrepreneurial initiatives (echoing the principles of startup urbanism) so that the solutions and projects proposed and undertaken reflect the true potential of the area in improving itself.

PART 3

A paradigm shift in city making? Stories from Amsterdam

FRAMEWORK

The reasons why Amsterdam is often ranked as an example of the best practices in city planning, alongside Barcelona for instance, can be multiple. Objectively, identifying what makes a city particularly smart or exemplary in its governance, compared to others, relies on current trends and what the community portrays as desirable. But the interest for Amsterdam should remain high; after all, it is an internationally recognised governance model (Cohen, 2016; Masbounji, 2016; Van Winden et al., 2016).

In their 2016 book *Le Génie d'Amsterdam*, Masbounji et al. explain how Amsterdam has moved forward from the Smart City discourse towards the Smart Citizens and Smart Communities ones. Van Winden et al. (2016) sums up that indeed, there is a need for the city to find an alternative to the term 'smart city' and 'smart city projects', as the region seems to wish to clarify what being a 'smart city' means to them. While we do observe a certain amount of technology-driven projects (e.g. a new highly efficient data centre; Amsterdam Science Park, 2017), and hence a real desire to use technologies to optimise the city's general structure, the general discourse seems driven by alternative options such as the sharing and collaborative economy (Shetty, 2015; Starritt, 2017). Another crucial point is the strong advocacy for what the city identifies as 'impact' agents (IAMsterdam, online), which includes 'impact' investors (which we can link to angel investors) and social entrepreneurs. Hence the city tends to focus on the alleged purpose of each stakeholder, in doing good and for many, rather than relying on more capitalistic values. The general initiative seems in the end to be moving towards a *FabCity* model (Masbounji, 2016, p112), where all stakeholders come together to experiment and bring their own solutions to problems that they collectively observe. Hence, in its focus on the people rather than the technological solution, Amsterdam presents a different understanding of what technology brings to society, i.e. a tool for collaboration and collective ownership of projects. Similarly to other cities, an institution such as *Amsterdam Smart City* does exist, but in this case does not look to initiate any projects, let alone tech-driven projects. Actually, Amsterdam Smart City presents itself as a community management platform, inviting absolutely all sorts of stakeholders to meet and work together around common goals. It can show Amsterdam's vision of a smart city (i.e. the community, not the technology), hence bringing forward how much the city values collective intelligence rather than technocratic solutions.

Within the Amsterdam Smart City community, it is possible to observe an articulation of strong actors under different statuses, leading projects, and overall the making of the city. Despite the growing complexity of the network, all seem to have a highly estimated impact, reflecting the municipality's voluntary loss of power in project making. A shared characteristics of these structures is their public-private component. Institutions such as the *Institute for Advanced Metropolitan Solutions* (universities of Wageningen and Delft, MIT), the *Amsterdam Economic Board* (public and private

agents, universities), *De Waag* (Institute for Art, Science and Technology, an independent structure focused on civic empowerment) or even *Pakhuis de Zwijger* (entertainment centre focused on issues such as collective intelligence, and civic ownership of the city), are highly recognised by the remaining network as powerful players and excellent initiators of projects aiming at including all types of stakeholders, most notably the citizens of Amsterdam.

Studying Amsterdam in its current trends allows to bring forward the context in which TransformCity® has been created. While the causal relationship is not necessarily clear, one can however assume that Beer could have been triggered by what she was witnessing in her immediate environment, i.e. a need for self-organisation of communities and go beyond the classic top-down approach to urban governance. As we have demonstrated, Amsterdam, as a city with a large group of stakeholders working together, has been pushing an agenda strongly relying on collaborative and negotiating processes, while also identifying in technology a civic empowerment tool (rather than financial and competitive asset). The following study, which we will consider an ethnography as it should represent a general behaviour in Amsterdam, aims at bringing forward what the current city makers' opinions, leading the building of this European capital, are.

ETHNOGRAPHY

For the sake of illustrating in what type of discourse TransformCity® is currently evolving, five interviews have been led with crucial stakeholders in the making of Amsterdam, including its smart city discourse. The interviews aimed at picking up their personal experience in the field, but mostly understanding with what views they were leading the current transformation of Amsterdam. The sample consists in two engagement platform startup CEOs (including Saskia Beer); one individual from the Municipality of Amsterdam, currently leading the digital transformation and business department of the city; one individual from the Amsterdam Smart City initiative; and one professor-researcher focusing on digital media and its effects on society. However unfortunately, the content of this last interview has been compromised and put aside due to technical difficulties (corrupted audio footage). Nonetheless, these interviews, which all lasted between forty-five minutes to over two hours, have brought extremely meaningful insight into answering our research question. We will consider this an ethnography of the Amsterdam 'smart city' ecosystem (as the Amsterdam Smart City organisation has yet to rename their initiative).

Methodology & analysis

As the ethnography consists of four, hour-long, semi-structured interviews, the amount of crucial information for this thesis is undoubtedly high. Following Piercy's article (2004) breaking down McCracken's¹¹ 1988 methodology, four main results have been observable, allowing to further answer our main research question. This analytical methodology as explained by Piercy consists in five steps (pp3-6):

¹¹ McCracken, Grant. 1988. 'The Long Interview'. *Qualitative Research Methods*, #13, Newbury Park, CA: Sage Publication, 88p.

- 1) Reading the transcripts carefully, sorting out the important from the unimportant, and making annotations in the margins;
- 2) Coding the observations into categories;
- 3) Identifying connections and pattern codes;
- 4) Determining basic themes;
- 5) Defining the predominant themes, that can then serve as answers to the research question.

While well aware of Beaud's 1996 warning that social sciences methodologies cannot be overly simplified into a list of steps to follow (p227), this process has still proven to be extremely useful to sort out the amount of opinions observed into satisfying statements. After careful review and coding, four main themes of conversation have been identified (cf. fig.10), themselves divided into subcategories. An overview of the coding process and the associated quotes is available in addendum (fig. 11). Because the sample, as meaningful as it is, was relatively small, it was possible from step 2 to already make some assumptions about the outcomes. However, steps 3 and 4 have allowed to push further the conclusions, to the point of defining three main results from this analytical study, presented in the next part of this chapter.

Fig. 10 : themes and sub-categories observed during interview reviews. Source: author.

Digital technology	Impact of technology on society	
	Keeping grip on technology	
	Defining the Smart City	
Main players: values, roles	Entrepreneurs	Values & role
		TransformCity / ZO!City
	Municipality/government	Values & role
		Amsterdam Smart City
	European Union	
	Corporations	
	Universities	
Citizens / people		
Community engagement	Defining community engagement	
	Importance of community engagement	
	Advantages of technology for community engagement	Advantages
		Platforms for engagement
Paradigm shift	About our current system	
	Plausible developments	
	Belief and disbelief	
	Need for behavioural change	
	Role of the crisis	

Results

Technology is a means, but certainly not an end

All four interviewees were accustomed to the issue of technology in the city, although with technical knowledge varying in degrees. However, no matter their professional background, all four have underlined the importance of not confounding technology as a solution for everything. All interviewees highly valued the capacities existing in technology to leverage community coherence, which turned out to be the most important purpose that they have all given to themselves as professionals. While they acknowledged the competitive powers of implementing technology in a city, and have not refuted the necessity for more efficient systems, technology is largely envisioned as useful from the moment it helps the community, notably in its organisation. Most importantly, digital technologies were understood as tools for easing communication between the stakeholders, but also for stakeholders to be able to gather information, whether it is for transparency reasons or to be able to start a project.

The way technology has impacted our society is also recognised, partly for its economical disruption. It is underlined as becoming an integral part of business today, while also giving new opportunities for growth. On the other hand, technology was understood as disruptive enough to change our current capitalist paradigm, presumably still relying on business models such as mass industrial production, hence noting the need for governments and businesses to let go of such processes, and to move towards creative industries instead (helped by the rise of digital technologies). The current smart city discourse, held by the European Union (presumably techno-centric), was partly blamed for no real evolution in city making today; the smart city discourse was observed as an 'excuse' for corporations to sell products that have no real impact for communities, and for cities to be labelled 'smart' without going through the hassle of actually improving social life.

However overall, one could notice a relative awareness and concern about the risk for technocratic solutions to overpower the social components of contemporary project. This went further with the systematic expression of concern regarding the possibility of governments and citizens to not control the ownership of the data they produce, as it has become a new kind of monetary trade for large corporations (but also government themselves). This went hand in hand with the general discourse of understanding technology as a means, but not an end to planning; in other words, it should be our duty, as citizens and institutions, and facing predatory business models, to stay updated and be responsible enough to keep a grip on further technological developments, so that issues such as data ethics do not overwhelm our entry into the digital age.

Collective intelligence is the only path for better city making

There were several levels and definition regarding community engagement; two interviewees viewed it as part of the relationship between the Government and the citizens, while two others had a broader view, including other institutions and private corporations as part of what we would consider a community. A desirable future for Amsterdam, as a city but also as a 'smart city', was the use of collective intelligence for project building. This seemed to take different forms, the most advanced being co-creation. Collective intelligence, supposedly going beyond community engagement, was

observed as bringing better, more accurate and efficient solutions to problems, as well as making sure that projects undertaken reflect a collectively perceived necessity. Community engagement was also associated with 'evolution'.

A striking theme was the one of resilience, and a strong belief that the better a community is organised, the more resilient it is to shocks. One could draw a causal relationship with the effect of the 2007-2008 global financial crisis that equally struck the Netherlands, economically, but also in its narrative. As underlined in Part 2 of this work, many Dutch individuals include the crisis in their personal journey, making a link with their ability to adopt entrepreneurial behaviour in order to survive financially (personal observations from the author). Interviewees have underlined the very plausible outcome of our current system, being another financial crisis to come, hence justifying the need to 'get ready for it' by helping the community to not rely on the classic capitalist system anymore. This justified the strong advocacy for collaboration, sharing and co-creation, hence transcribing a flatter, multi-way, view of stakeholder relationships in the city. Each individual of society was considered qualified to bring ideas, but also collaborate with others in order to establish trusted relationships, as well as more efficient systems.

A common topic was the perception of the Municipality and the Government as agents that should 'let go' of their decision-making powers, one interviewee underlining their main role as the one of legal rule-making. Amsterdam Smart City was also considered to be a network agent rather than a project management institution, further echoing Van Winden et al.'s 2016 report in which it was concluded that the organisation should stand as a community management structure solely (p115). The responsibility of both public and private agents to render data public and open, as well as giving personal data ownership back to citizens, were extremely valued items for a successful future of collaboration and project-making, further increasing trust between parties.

The entrepreneur and entrepreneurship behaviour are desirable features in modern planning

Entrepreneurs were perceived as agents that were creative enough to disrupt current processes in various fields, in their methodology and in their scope of action. Lack of money and stability, sense of responsibility and accountability for society, creative but thorough understanding of issues (specific to an area or not), and good timing, were presented as key drivers for disrupting but sustainable entrepreneurial initiatives. Technology was not perceived as an initial cause for product development, but rather as a scaling and organisational tool. The entrepreneur was further portrayed as an agent that is small enough, and not driven by the scope of immediate exponential growth, to understand local issues and find solutions for them; beyond perceiving their actions as grassroots, or bottom-up, the main reason why the entrepreneur was seen as an acknowledgeable urban agent was for his or her desire to 'do good' for people in general, hence explaining why some entrepreneurial actions are not necessarily directly related to a specific area.

In the case of a professional activity relying on social idealisms, entrepreneurship was perceived as a business model necessary to thrive in our current capitalist system, in the sense that presenting one-self as a business person allowed to be taken more seriously by fellow stakeholders, hence gathering more power for impact. However, the initial thought behind a product developed by a 'socially-led' startup did not seem to be because of a market opportunity and the chance to 'make billions out of it', but rather as a necessity to complete the array of offers with a better tool that will

help people and cities. Additionally, entrepreneurs were associated with statuses such as 'urban agents', or 'urban curators', in the sense that while they did not have a direct attachment to the environment on which they were operating, they still had a sense of managerial or moderating responsibility on the area, notably in organising the communities (through a digital platform or offline).

Entrepreneurial methodology was perceived as desirable and sustainable in its association with items such as smaller steps, agility, learning loops, and collaboration. However, there were two distinct perception of entrepreneurship as an inspiration for cities; one interviewee strongly insisted that cities were currently replicating startup development models and marketing, while another highlighted the interest for smaller, iterative and collaborative processes as a general trend happening at the same time in all kinds of sectors. There was also a more cynical approach to the entrepreneurial behaviour, in its relation to 'trendiness'; one interviewee underlined the effort of municipalities in attracting startups, underlining the resonance with being young, vibrant, and innovative, which is supposedly desirable for cities. This embodies a collective imaginary of the current startup trend, echoing Cohen's new version of the creative class in the urban entrepreneur (2016), which we have criticised earlier for its possible negative impact if overly used as a tool for city policies.

While all interviewees strongly advocated for smaller, iterative and collaborative steps, and the need to distance innovation from large corporations (which are not perceived as innovative anymore), one person did note a tendency in his professional network to rely again on bigger, bolder master plans, associated with larger incomes from a post-crisis gain of economical growth. This interviewee's position against this kind of behaviour directly connected to the need of letting go such methods in order to build resilience of the community, as cited earlier.

DISCUSSION

After review, and a few steps back from the analysis, it is possible to notice how all four interviewees followed similar patterns in their reflexion, resulting in homogenous responses. Of course, the larger the panel, the less homogenous responses would have been; but the point was that they seemed to fully represent and further deepen the current discourse publicly held by Amsterdam, as an urban curation agent. The observations made were not that surprising as they seemed to further justify the trends identified at the very beginning of this paperwork.

The decrease in the Municipality's decisional power could be understood as a consequence (voluntary or not) of neoliberalism, where market forces overpower public institutions, and consequently regulate things such as urban design and social life. However, and following the interviewees' statements, the idea that every single stakeholder, and especially citizens, should have the same level of decisional power in project-making, could very much go against such paradigm, hence making society move towards what one interviewee titled a *paradigm shift*. As large corporations and governments are facing an increasing need to be held publicly accountable for their policies in order to thrive, and as they are turning their product and service development strategies towards the customers'/users' actual needs and wants, the whole system becomes centred around the individual. Individualism theories could also be brought forward in this case; but a counteracting argument is the rising interest from individuals themselves for collaborative processes such as sharing and co-creating.

Moving further in this research could all boil down to an old riddle: *which came first, the chicken or the egg?*

The same scenario could exist here. What caused what, let alone the existence of causal relationships between the rise of technologies, the interest for collaborative processes, the loss of public decisional power, and the sudden gain of interest for entrepreneurship? Without any proclaimed scientific accuracy, here are a few suggestions of what these relationships could look like:

- the crisis as a root cause for collaboration and entrepreneurship, because both came from 'financial survival' models;
- an increased value perceived in entrepreneurial behaviour for urban governance and corporate growth (e.g. collaboration, iterative and small steps, creative problem-solving, scarce spending and development of minimum viable products), i.e. entrepreneurship at the root of this type of development growth, later adopted by other agents;
- collaboration as a fruitful model, besides being sustainable and maintaining social relationships, hence explaining the interest for models such as the sharing or collaborative economy;
- the rise of social media/Web 2.0, allowing more chances to find like-minded people, access knowledge, and/or developing technologies, for entrepreneurial and civic behaviour to occur, including at a faster pace than in large corporations and governments;
- or, the social web emerging from a growing interest for collaborative and civic processes in society.

As we have underlined at the beginning, the main point of this ethnographic study, in conjunction with a literature framework research, was to determine what leading opinions existing within the 'Amsterdam as a smart city' arena (i.e. not to be confounded with the Amsterdam Smart City organisation) sound like. Whether one perceives these findings as desirable practices in city making or not, this narrative is nonetheless publicly used in order to justify the many initiatives going on in the metropole's area.

As observed by Beer, there is no certainty that an idea such as TransformCity®, could have happened in a framework and discourse different to those of Amsterdam. Indeed, the successful development of TransformCity® does rely on concepts such as collective intelligence, moving beyond the top-down AND bottom-up approaches, and a safe leverage of technologies, specifically data. These items are not necessarily the concerns of any urban region, but they are to the people existing within the transition of Amsterdam into the digital age.

Conclusion

In this thesis we have argued that the emerging planning trends of community engagement, digital technology leverage, and urban entrepreneurship are coming together to disrupt current governance practices in making the city. We used the startup TransformCity® as a framework to guide our thinking process, as it combines all three scopes of practices. Hence, by asking if TransformCity® were making community engagement more actionable for city making, we have intentionally projected a movement of entrepreneurs looking at how digital technologies can change current relationships between stakeholders, including in the case of urban management. And in order to study such thing, we have combined scientific and popular literature review, methodologies derived from the private sector, as well as a qualitative discourse study, hopefully painting a large overview over how these three trends have finally come together.

But in practical terms, is TransformCity® actually making community engagement more actionable for city making? One could argue that yes, indeed, TransformCity® is helping cities - particularly Amsterdam - by developing a tool allowing a stronger, more structural community engagement process, for the following reasons:

- TransformCity® does plan to leverage certain digital technologies and practices that have shown their potential in supporting community engagement. They have in common the ability to ease communication between parties, notably by making information understandable at any level of legislative literacy. From the moment a legal framework is defined, some of the same technologies and the process of opening data, especially if combined, give large room to expression and creativity from all stakeholders, no matter their perceived status in decision-making. Additionally a certain sense of trust is fostered, in two dimensions. First, increased communication and sense of ownership within the area give an equal position for all stakeholders to engage with each other, and hence overall, build relationship based on trust. Ultimately, self-organisation is strengthened. Second, the tools intended for development within the platform do have a strong focus on handling data in an ethical way. The interest for blockchain for instance, and the underlying idea of keeping data both open and protected at the same time, contributes to a wider movement in cities that aim to take ownership back on personal data;
- TransformCity®, as a startup that does not mean to survive through a 'predatory' business model but rather in the genuine intention of helping urban governance around the Netherlands and maybe more, brings a safe space where everyone is considered equal, and supposedly does not feel manipulated by either a large corporation or a public authority (which is regularly the case; Lance, 2008). Indeed, even if the tool is firstly implemented and managed by a team within the municipality, that does not mean that the municipality is in a dominant position in decision-making. Rather, the municipality becomes a community manager supported by a platform, and not a project leader, to echo the expression used by Van Winden et al. (2016, p115).
- TransformCity® as a startup using methodologies such as scrum or design thinking, and potentially benefitting from 'impact' or 'angel' investments on top of the funds received by

the city of Amsterdam as a launching customer, can focus on developing a minimum viable product for now that will enhance the current success story of Amstel3 in popular and urban governance culture. These techniques are more and more adopted within different professional sectors, as they have shown their capacities to develop products and services tailored to the user's needs. After developing a successful MVP, TransformCity® will be able to offer tools that further help community engagement. This coincides with the observation that on the one hand, large corporations that can easily invest in technologies do not innovate but rather acquire, especially in the citizen participation sector; and on the other hand, municipalities do not necessarily have the means nor desire to develop and own technological solutions themselves (Part 3, also check fig. 11/addendum).

- Consequently, TransformCity® is currently evolving in a favourable ecosystem, in which entrepreneurial response to urban challenges, especially social ones, is highly pushed for. The startup is benefitting from a community of stakeholders which do advocate for collaborative processes, and that do not have a competitive view on what TransformCity® does, but rather a highly supportive behaviour. Such a context does help in achieving the goal of improving community management.

However, some cautionary observations should also be highlighted:

- TransformCity® has yet to be deployed in other areas, and in the longer term, in order to assess of a genuine, structural change, as well as of the involvement and reception by the community of such a platform;
- While the startup is benefitting from Amsterdam's discourse in which it is evolving, the platform does ask for cities to let go of their masterplan ambitions in areas in which it could be implemented. The platform is indeed leading a new market of engagement tools (Cities Today, 2017), but are its scopes understood by the municipalities interested in acquiring it? In other words, are cities ready to retire from their tradition of long-term, top-down, large scale plans, and adopt a more chaotic process of urban management?

On a broader perspective, a crucial point exists in wondering how trends work and impact planning practices. As we have previously mentioned, Emmerich (2014) made cautious warnings about the danger of 'smart' washing cities. Smart cities in their technological response to urban issues are indeed all the rage now, but are also already considered old-fashion by a few leading cities such as Amsterdam. Instead, these cities are advocating for models relying on digital technologies and practices leveraging solely as mediums for a larger social movement alternatively named sharing or collaborative economy. If the potential benefits were clearly expressed throughout the thesis (e.g. resiliency, sustainability, innovative and collective intelligence, democracy), there has not been any large scale, universal evaluation of whether or not such model does bring good to a city. This is partly because it is such a new form of governance, not in its ideology but in the scale in which it is operated. Indeed, as cities are increasingly becoming larger but denser, what could be actual methodologies that manage to promote both inclusivity and broad-scale democracy? Again for the last time, as Healy (2008) questions, is this political rhetorics that instrumentalise current developments in the social and digital spheres? Or is this whole shift part of a radical paradigm change, in city making but also at a larger scale of governance? Mostly, is the collaborative city the new smart city, both in its positive and negative outcomes? What could possibly be the negative

outcomes of a fully democratic city, simultaneously leveraged by digital technologies and smaller-scaled plans? Could typically social urban issues such as gentrification and marginalisation be resolved? This is notably where current studies should bring us now.

And finally, just as we have identified the urban entrepreneur as a new valuable stakeholder in planning, yet another form of leading actor seems to emerge. Organisations such as Pakhuis de Zwijger or De Waag in Amsterdam, Ouishare in Paris, equally appear to bring a new space for classic stakeholder partnerships to exist. They physically embody the cooperation of the public, private, academic, entrepreneurial and civil sectors by offering a cultural arena for conversations about alternative societal models to be led and taken seriously by all parties. What is the role of such organisations and can they constitute a new category of influencers in city making?

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ADDENDUM

Fig. 11: overview of predominant themes in interviews. Source: author.

		Interview #2 - TransformCity@ startup CEO	Interview #3 - leader in municipality of Amsterdam (digital transformation, business)	Interview #4 - startup CEO, EU smart citizen initiative co-chairman	Interview #5 - Amsterdam Smart City
Digital technology	Impact of technology on society	<ul style="list-style-type: none"> - technology should be a means to an end, not the other way around - AI can be very interesting, it's full of risks but it can really help people get into the platform and dig through data and other users - data can really help map out scenarios, giving us a lot of information for planning 	<ul style="list-style-type: none"> - we look at how informational technology can help do the things we do for the city better - I implement the new law which includes digital transformation of all of our information and laws in planning, which gives all of the players an equal position in knowledge - two years ago, our IT was supporting business, it simply was an application; today, it is part of the business - technology has changed everybody's mind - everybody thinks it's going to solve everything - we've gone from 0 to 100 in just two years, but we have to get back now - we have an information overload, we don't know what's true and what's not - our environment is changing, the way we communicate, how we do business, it's different compared to ten years ago - everybody is getting scrum agile - we need to do things small, make small steps, instead of making big, long term plans, and you need a matching technology for that - AI, 3D and VR are very important, they're very helpful, it brings a completely different way to do business and it creates that equal understanding of information position - blockchain can fill in for a lot of trusted parties, it could change the whole discourse 	<ul style="list-style-type: none"> - 'people have more technology in their pockets than any sensors their mayors could buy' - technology only gives scaling and accessibility, not solutions - technology makes engagement more attractive - people react in different ways about the future (adopting it vs shutting away from it) - automation will reduce labour and labour costs ; technology will reduce efficiency costs - technology is wrongly perceived as the solution for everything - we need to focus on: what do we need it for? - tech allows to exhibit your entrepreneurship - anything augmented will be big; blockchain is already happening as we speak. It's safe and secured, not owned by anyone. Countries and corporations won't own data anymore. They will loose power; countries will loose power and the EU will grow stronger with this distributive model 	<ul style="list-style-type: none"> - it's not about technology but how can technology help us live better together - we're focused on social issues - yes, we're automating a lot of our systems, AI brings a lot of efficiency. But we don't really think about technology, which is strange since it plays a role in what we do.
	Keeping grip on technology	<ul style="list-style-type: none"> - there's a lot of control and power to be established with data, and that's very creepy - the business woman in me wants to stay on trend, staying relevant and on top of things, make sure we don't fall behind - I have a responsibility to keep an eye on technology; I should vow to stay updated - we have a responsibility to make sure we understand technology as much as we can, to make sure that if they're relevant to us, then we should use it for the good 	<ul style="list-style-type: none"> - everybody thinks it's going to solve everything - we've gone from 0 to 100 in just two years, but we have to get back now - we come from a system where all of the data is locked away - if you free data, and if you use tooling to use data, you get more flexibility and speed in your projects - you can be scared of it but it's coming anyway, it's better to embrace it; to know how it works - the government has to play a role, it has to make sure you are the owner of your data and that you are protected, that you make the choice of sharing your data or not - we need to get a lot of knowledge about what is happening - we have to think about what is the common good - blockchain will change the whole discourse 	<ul style="list-style-type: none"> - if we open technology and data, then any investment is worth it because people can get creative with it and leverage it 	
	Defining the Smart City	<ul style="list-style-type: none"> - back when I had this idea, smart cities were not really a thing, but that evolved overtime - a lot of cities got locked in the Smart City thing because of corporations, that had a predatory business model, the Smart City movement is not in the best interest of cities 	<ul style="list-style-type: none"> - we're trying to achieve a better, cleaner, safer city - I think Dutch people have always been tech-minded, it has nothing to do with the city of Amsterdam - people were already digital minded, so if you think about it this way, I guess that Amsterdam is a smart city - there are different definitions, but we're not a high tech city; we just have people who know how to use technology, or we're helping them to use technology on their own terms - from my perspective, it started after people got online; now objects are getting online too, that's a smart city 	<ul style="list-style-type: none"> - smart cities started when the UN said that more and more people were going to live in cities - initially, top-down initiative - 'excuse' to buy new technologies - smart cities is an arena - the previous smart city movement was too organised to welcome real innovation and disruption; we cannot expect results - Amsterdam, event 2012: 'social cities' > breaking point - a discourse shift in the EU > from smart solutions to smart citizens/communities - there is no evolution in smart cities, but at least when a mayor buys smart stuff, he thinks he's in charge of a smart city 	<ul style="list-style-type: none"> - we're not so focused on sensors, or having the best technology - if the people want it, then yes it's relevant; if not, then we don't need it - we focus on social issues, not technology - I think there is something wrong with our name, because when they hear ASC, they envision technology, and how we use it to improve the city. But we're not high-tech. Our name is misleading.

			Interview #2 - TransformCity® startup CEO	Interview #3 - leader in municipality of Amsterdam (digital transformation, business)	Interview #4 - startup CEO, EU smart citizen initiative co-chairman	Interview #5 - Amsterdam Smart City
Types of stakeholder	Entrepreneurs	Values & role	<ul style="list-style-type: none"> - sometimes you have these lightning ideas, you immediately know that it's a good one, that this is what you have to do - because I'm not an IT person, it took me a lot of time to structure and understand what I needed to do, and who I needed to work with - it will be a relief when I finally get the contracts signed and the investments - yeah, maybe I've invented the new way of planning - four years ago, I was for sure ten years in advance; now, all of the sudden, it gets attraction, people start to understand and believe my vision, actually within a year - it would've been great if I were further ahead with the technology - I was shocked that the area was deteriorating and nobody was doing anything about it, in a country where we have capital - there's a huge demand for this type of philanthropy, it's a business model; we just have to make sure the business doesn't win over the ideology - I see myself as an entrepreneur because I am proactive, I see things and I think about alternative ways to get things into action, but I'm not a business person - TC didn't start from a business opportunity, I just ended up bumping into its huge scaling potential - I had to learn to think as a business person because if I don't position myself as such, I will go bankrupt and won't end up helping cities - at the beginning, it was mostly a bottom-up, socially aware thing but I am an urban curator, and urban agent - I have a unique position in city making because I'm talking from experience and not from ideas, theories, pieces of technologies, solving hypothetical problems - if there was a scale from philanthropist to business woman, during GM I was towards the philanthropist that needed a business model to survive during the crisis - your only survival method is to become entrepreneurial - you can figure out who has the most stakes, who's the most vulnerable, and how you make the solutions worth for these people - I have to present myself as an entrepreneur to be taken seriously, it's the only way to get results, financial and real world results - I have the database and I never gave it away, that's my worth as a stakeholder - there could've been business there, but that would be too easy to slip away from idealism - the more money I make, the more cities I can help. I think that's fair, that's a win-win situation - many startups have a predatory business model too - startups are considered to be 'sexy' to have in your city but nobody's sure what they do - BUT the entrepreneur, and especially at the beginning when there's no investment, is autonomous, creative, and much more able to come up with something new - entrepreneurs can take risks, and are much more likely to have disruptive ideas - that's probably why you have entrepreneurs, by nature they want to do something about stuff happening - we need to keep an eye on each other, that we stay focused on bringing in stuff for people and the greater good - we're not protected from anything - everybody should be more entrepreneurial 	<ul style="list-style-type: none"> - everybody is getting scrum agile - we need to do things small, make small steps, instead of making big, long term plans, and you need a matching technology for that - everybody has come to the conclusion that making big plans, big projects, with big companies, doesn't work - we should start small and then go bigger, that's why we like smaller structures, because they're able to process feedbacks and learning loops - every area has its own special needs, we need small handwork that's crafted to the area; we're building a toolbox of solutions - the tooling needs to be flexible and modular, and big companies cannot create that 	<ul style="list-style-type: none"> - a startup isn't someone who has a crazy idea, or sees a problem, and finds a solution to put on the market to get millions - a startup is someone who sees a problem, meets other people with a similar problem, they look at how the problem affects society, and how we can handle it. It's people work together because they have the same interests and problems. - the entrepreneurial mindset is the only mindset we will have in the future; you'll work 4h per day and you'll be entrepreneurial the rest of the time - tech allows to exhibit your entrepreneurship - you have to believe you are making a change, that you're building something that's best for the world. Otherwise you give up on the first try. - startups live in ecosystems; people from different background, mindsets, etc. can give their feedback - you need diversification (countering gentrification) - cities are inspired by startups - I am a strong believer that I am building a product for change, that's my motivation. - I don't make business for cities, I do it for the people, not because there's a potential market - I have a very lean startup model, and I make small steps, I ask people what they want - you should always start with a bottom-up approach - I'm too optimistic, but I need to, that's how I help things to change 	<ul style="list-style-type: none"> - we witness more and more freelancers, entrepreneurs with great ideas, startups finding their way to ASC - we want to make sure they have more impact - the future is small - big organisations are not the ones that have the most interest in citizens - we need entrepreneurs to innovate now and with the people; they are more focused on actions that can be done now, and not long strategies with big plans - it's very important for ASC that we incorporate as many people as possible and that we do our projects together, and that's something that entrepreneurs do, not big companies - entrepreneurs have very little financial resource which pushes them to really innovate; and they always make sure that they develop something that is really needed - the municipality gives launching money but then you have to survive by yourself
		TransformCity / ZOICity	<ul style="list-style-type: none"> - I just really needed to do this, because there was nothing on the market that thought in this integral way, from the perspective of the area rather than the technology - TC is unique in its combination of this data-driven aspect, and the collaboration and social component - TC is a completely distributive network - a playing level, that's completely transparent, data-based, fact-based, but very actionable - it is not project-based but infrastructural, it builds a structural self-organising community of stakeholders - TC should be a place to go if you need help with understanding your surroundings and your network - TC is TC because it came from my mind and my position, I don't think something similar could've come up from another stakeholder; I was perceiving all these things and already in the middle of everybody - TC is about seeing and identifying trends, problems, bringing together stuff and seeing connections, maybe some between existing solutions - it happened in Amsterdam, I'm not even sure TC could've happened in another city in the Netherlands, or another country 	<ul style="list-style-type: none"> - TC is about creating that equal information position; it's creating a space where everybody can join in - it's not about how technology can make the city better, it's more about how we can use digital tools to make people engage. It's more of a people's perspective tool 	<ul style="list-style-type: none"> - TC and ZC are perfect ASC programs, they complement it, and are not in competition with our platform - it's more local, we're more high-level - we support each other in engaging citizens 	

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	Municipality/government	<ul style="list-style-type: none"> - there used to be many reasons why cities won't sign with TC; they're not sure how to work with it and how they want their community to use it - apart from the technology, there's a shift in the way cities are working and collaborating, and the kind of relationship, status, position they have regarding other stakeholders and the citizens - they have a huge responsibility in changing, notably by letting go and fully trust their other stakeholders - I need to work with all of my stakeholders, especially the municipality, to make sure I don't miss the things they really need - like with the creative class, startups are 'sexy' to have in your city, because cities like being associated with things such as young, dynamic, innovative 	<ul style="list-style-type: none"> - governments are trying to uphold the old model, but they're turning into Big Brother - but we're just producing more and more data so that's problematic - the city has to move forward too with the way things are changing now because of technology - we want a safer, healthier, better, cleaner city - we create an equal position for everyone from the moment we make things very transparent, and we make it clear what's possible and what's not - we create the rules, the lines of the field, and everybody can play within the lines - some things are non-negotiable, we need a minimal top-down - the new law is about making the information understandable and digital, including 3D - the new law is also about making smaller steps, and simultaneously, instead of big, linear plans. We can adjust accordingly. - it's very naive to think that the Government is always doing good - a lot of governments are still looking at technology and how to use it from the way the world was run in the years behind us, and they're not thinking about what this technology means for society, and how we should run it differently 	<ul style="list-style-type: none"> - not ready/no desire to open the government to 'more complaints' - mayors got fundings from the EU to buy from big companies - it's not about countries anymore but cities on the competitive landscape - cities protect and fight for the rights of their citizens - cities should develop like startup ecosystems (startup economy): important because people from different background, mindsets, etc. can give their feedback - the city as a platform, a fertile ground for startups to become impactful ventures - three generations of mayors: 1. decide for others, which leads to major financial investment mistakes; 2. consultation, which allows to focus on including marginalised groups; 3. co-creation (mayors don't pretend they have a sustainable, efficient solution) - some cities are more progressive than others; some cities have a stronger commitment to 'let go' their decisional power - cities are inspired by startups - cities that do not adopt co-creation won't be as successful - we should treat cities as living labs; everything in city planning should be considered an experiment with different stakeholders, with smaller steps, a lot of introspection, and ability to measure out results and rectify accordingly - anything that is not bottom-up is a waste of time, energy, and city resources - it is the mission of anyone with a platform product to convince people they need to change the way they interact with each other 	<ul style="list-style-type: none"> - the Amsterdam Economic Board (public-private partnership) focuses on long term projects - the Municipality is a partner of ASC - the city couldn't innovate on its own, innovation needs more flexibility in time, money and legislation - the city wants to be a facilitator - the role of the city is shifting; they're stimulating a lot but do not get involved - it's the biggest goal of the innovation department of the municipality to help other departments to learn how to let go their power - they give some money to start things up and launch the product, but you have to survive by yourself
	Amsterdam Smart City		<ul style="list-style-type: none"> - it's kind of like a big corporation, it's bigger than the city of Amsterdam; it's part of the metropolitan region of Amsterdam - ASC is not from the need of having a third party to deal with all things smart, it was more of a vehicle for the city and other corporations to work together - the idea is that the city of Amsterdam doesn't make the city, we just facilitate for others to make it, including to make it smarter - we don't want to own smart city projects, we want others to do so - for me, ASC is facilitating co-creation for many stakeholders; at the municipality, we make the rules, but that's it - for them it's more about corporations, energy companies, etc., it's kind of tech-driven - it's more about, how can we use the technology to make the city better - the government has to play a role, it has to make sure you are the owner of your data and that you are protected, that you make the choice of sharing your data or not 		<ul style="list-style-type: none"> - ASC is a community network that came from the Horizon 2020 project (EU) - initially, a public-private partnership between the Amsterdam Economic Board, the Municipality of Amsterdam, and Alliander - ASC to think about how to develop initiatives without replicating - how to do projects with citizens; we make sure that citizens can come up with their own ideas about the city - we connect players with good ideas instead of executing projects ourselves - we focus on short term projects, on small innovation, and how we can make sure it represents an opportunity for everyone - we have eleven partners including the city of Amsterdam, the Economic Board, the University of Applied Sciences, de Waag, Pakhuis de Zwijger. - we work with the entire ecosystem, we make the connections between everybody, startups, citizens, municipality, corporations, researchers - the most valuable for us is that anyone can join in - ASC is an independent structure because it comes from the Amsterdam Economic Board because the city couldn't innovate on its own
	European Union			<ul style="list-style-type: none"> - EU gave fundings to mayors to buy smart city products from big companies - a discourse shift in the EU > from smart solutions to smart citizens/communities - the reason why we made so many mistakes with cities is because of the EU, because of its discourse that allowed so many mistakes and misunderstandings - now the EU is becoming more constructive, shifting towards smart communities - the EU will grow stronger with distributive technologies 	<ul style="list-style-type: none"> - Horizon 2020 project behind ASC
	Corporations	<ul style="list-style-type: none"> - large companies have misjudged the long term vision at the beginning of this whole smart city thing - they're too data driven, they understood that they can make business out of data but that's very creepy - it's much more difficult for big companies to innovate and disrupt; if it gets too weird or too complex, and when it's not sure you can make billions out of it, you drop it - a lot of companies don't have a culture in which it's encouraged to make mistakes 	<ul style="list-style-type: none"> - we still need corporations - we used to have companies producing and making what we thought we needed - if you look at digital companies now like Airbnb, it's still not customer-central, it's platform-central 	<ul style="list-style-type: none"> - relabelling of products into 'smart' products - they copied my software and won - big brands do not innovate, but they're very good at acquiring potential disruptive competition - it's not about good marketing but about listening to your customers - now, they don't innovate anymore, they just focus on keeping their business model as efficient as possible to stay on top 	<ul style="list-style-type: none"> - partners of ASC - they're part of the old economy, we don't grow with them anymore - the future is small - big organisations are not the ones that have the most interest for citizens - they don't need us to exist
	Universities			<ul style="list-style-type: none"> - they make research and write papers, they publish their analysis and they think they know what's best, they don't know how to experiment - universities are not ready for citizen co-creation - universities criticise but don't offer concrete solutions 	<ul style="list-style-type: none"> - partner of ASC

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	Citizens/people		<ul style="list-style-type: none"> - people are very complicit, they say yes to everything with digital technologies - but also, more and more people see that it's problematic - the shift will come from us - it's my responsibility, but it's also everybody's responsibility, to make sure that we are aware of the changes and how we are handled as data producers 	<ul style="list-style-type: none"> - are our citizens ready? No. - but the power is now on the people - people get involved much faster than ever, while other stakeholders try to rewind back to the time when they had power 	<ul style="list-style-type: none"> - if the people want it, then yes it's relevant; if not, then we don't need it - it's very important for ASC that we incorporate as many people as possible and that we do our projects together - most projects we do start from the users
Community engagement	Defining community engagement	<ul style="list-style-type: none"> - all stakeholders on the same level (not just communication between municipality > citizens) - if the community is organised, then it's resilient - back then, bottom-up was very fashionable; now it's more about organisational skills 		<ul style="list-style-type: none"> - three generations of mayors: 1. decide for others, which leads to major financial investment mistakes; 2. consultation, which allows to focus on including marginalised groups; 3. co-creation 	<ul style="list-style-type: none"> - for us community engagement means that anybody can join in, partner up, and build projects, through our platform - we have more than 3.000 people on the online community - if you have the energy to setup something, that's great, we will help you - I don't think it started with startups, I think it's a trend - our practices have shifted - our platform always makes sure that different visions on subject can be expressed; collaboration strengthens projects
	Importance of community engagement	<ul style="list-style-type: none"> - needed a bottom-up transformational initiative, and the complex was growing increasingly complex - needed something that give the ownership of the area back to the actual stakeholders - the self-organisation of communities brings organisational resilience to cities - resilience is one of the main issues with our cities now - the whole area was fragmented, unorganised, not resilient to any change, and it was deteriorating - our cities are extremely rapidly changing and they should learn to be resilient to that - the more self-organised, the more it can cope with a new crisis, a catastrophe, or even technological change - the earlier you engage people, the more they are open and positive, and the less complaints you get, because people are taken seriously and are co-creating the ideas - empowerment should be about giving everybody the same amount of voice - should some people be shut down from civic engagement? Of course not. You have to engage them more structurally and make sure that they understand that you're taking them seriously 	<ul style="list-style-type: none"> - we still need the physical contact between people for conversations to happen - the different issues in a city are better tackled the more thinking power you organise - I believe in collective intelligence rather than a few people with a degree - collective intelligence should be part of anything that we do, it should be an integral part of the system 	<ul style="list-style-type: none"> - the city requires engagement, otherwise it doesn't evolve - anything that is not bottom-up is a waste of time, energy and resources 	<ul style="list-style-type: none"> - innovation comes from collaboration, not technology - the most important is that anybody can join in at any time, for any project - if you work with different stakeholders, then your initiative is way more sustainable
	Advantages of technology for community engagement	<ul style="list-style-type: none"> - it's relevant to stay updated with emerging technologies because a lot of them are facilitating participation, if done in a good way 	<ul style="list-style-type: none"> - digital technology gives the same amount of information for all the players in urban planning - technology can help support the conversation but it will never be the conversation - making information transparent creates an equal position to start a conversation within civic empowerment - people get more involved when they understand a project, they get the feeling that they're involved - technology helps with engagement, it gives people the idea about an area, they can see what's going on 	<ul style="list-style-type: none"> - technology makes engagement more attractive - technology has huge strength for community engagement 	<ul style="list-style-type: none"> - we used to say that any project should have a technology component but what we see now is that technology is not always necessary nor the solution - it's more about how we can cooperate
	Platforms for engagement	<ul style="list-style-type: none"> - 'you know, I need a platform for this. We need some kind of tool where we can organise all these things, bring everything together' - for now most platforms are mostly single-purpose, single themed, and has only two stakeholders, usually the municipality trying to reach to citizens 	<ul style="list-style-type: none"> - we need a space for conversation, like a platform, but we still need offline activities 	<ul style="list-style-type: none"> - platform as a civic social network + communication with local government - we don't want complaints but co-creation - the platform focuses on what we have in common (instead of our differences such as social class, skin colour, sexual orientation, etc.) - a FACT that co-creation platforms will be used everywhere; difference is how fast cities will adopt them 	<ul style="list-style-type: none"> - the platform is very important for ASC ; but we already knew each other, and grew together - other stakeholders know how to find us and what opportunities we can bring to them
Paradigm shift	About our current system	<ul style="list-style-type: none"> - apart from the technology, there's a shift in the way cities are working and collaborating, and the kind of relationship, status, position they have regarding other stakeholders and the citizens - there's huge things going on 	<ul style="list-style-type: none"> - technology has changed everybody's mind - we've gone from 0 to 100 in just two years, but we have to get back now - people think it will solve everything but it doesn't - if you look at digital companies now like Airbnb, they're not customer central, but platform central. We haven't evolved yet. 	<ul style="list-style-type: none"> - I was receiving a lot of attention and fundings until my startup was forced to go through public tender; a big company copied my software and won - the previous smart city movement was too organised to welcome real innovation and disruption; we cannot expect results - old economic model based on industries; 'dead' - still need factories and mass-production but too expensive and unnecessary in our countries since globalisation - it's not about countries anymore but cities on the competitive landscape - a vibrant city is a city with creative people - technology is wrongly perceived as the solution for everything 	<ul style="list-style-type: none"> - the old economy is big corporations, and we're not interested in that anymore - our bottom-up approach has always been key, that's a Dutch thing. We're always negotiating. I think it's also mostly Amsterdam, or cities. - our practices have shifted, we have to adjust all the time to what's happening, sometimes you don't even know what you're adapting to

		Interview #2 - TransformCity® startup CEO	Interview #3 - leader in municipality of Amsterdam (digital transformation, business)	Interview #4 - startup CEO, EU smart citizen initiative co-chairman	Interview #5 - Amsterdam Smart City
Plausible developments			<ul style="list-style-type: none"> - we will have a personal driven economy; what you want, what you need, it is going to be central - there's still an extent that we have to reach. You and I will be in a central position, and you and I are going to own our data, and you and I will be paid for our data, instead of the platforms - the shift will come from us - you can be scared of it but it's coming anyway, it's better to embrace it; to know how it works - the government has to play a role, it has to make sure you are the owner of your data and that you are protected, that you make the choice of sharing your data or not 	<ul style="list-style-type: none"> - startup economy: small steps, and in an ecosystem - "the 4th Industrial Revolution is bullshit" - factories and mass-production will only exist in developing countries, leaving creative industries to our countries - automation will decrease labor cost - our system in general is evolving towards co-creation; there's no other way around it. - we will have crowdfunding and crowdsourcing everywhere (big brands, startups, municipalities, etc.). I give it 5 years. - those who won't adopt co-creation won't be as successful - kids and teenagers already know how to leverage the technology that they have to find solutions for their everyday life - cities will go backwards and will become denser, since you will be able to work from home, you won't need to travel as much - the entrepreneurial mindset is the only mindset we will have in the future; you'll work 4h per day and you'll be creative the rest of the time - cities will be first in adopting the new paradigm, and smaller places will follow 	
Belief and disbelief		<ul style="list-style-type: none"> - there used to be many reasons why cities won't sign with TC; they're not sure how to work with it and how they want their community to use it 	<ul style="list-style-type: none"> - we've gone from 0 to 100 in just two years, but we have to get back now - people think it will solve everything but it doesn't - I am not a convincer, if they don't want to believe things are changing, that's fine with me. - it's very naive to think that the Government is always doing good 	<ul style="list-style-type: none"> - people are disbelievers because they'd rather stay in their comfort zone in the old economy, because it's something that they know, even if it doesn't work - it has nothing to do with smart cities; they choose not to believe that the world is changing - but it's okay, cities will be the first in adopting the new paradigm, and smaller places will follow - people who are criticising are simply experiencing the shock and don't understand it - I'm too optimistic, but I need to, that's how I help things to change 	
Need for behavioural change		<ul style="list-style-type: none"> - four years ago, I was for sure ten years in advance; now, all of the sudden, it gets attraction, people start to understand and believe my vision, actually within a year - large companies have misjudged the long term vision at the beginning of this whole smart city thing - we have a responsibility to make sure we understand technology as much as we can, to make sure that if they're relevant to us, then we should use it for the good - it's up to everybody to stick their neck out and to be informed, stay awake and be aware of what's going on - you have to be critical and open at the same time - I should not forget to stay in my lane - we need to keep an eye on each other, and make sure other entrepreneurs stay with their ideology, and put their energy and effort into something for the greater good - other types of structures should also welcome entrepreneurial behaviour 	<ul style="list-style-type: none"> - now that the economy is starting again, we tend to forget about consultation and collective intelligence - but a new crisis is coming and we need to be prepared for that - collective intelligence should be part of anything that we do, it should be an integral part of the system - it's very naive to think that the Government is always doing good - we need to think about what is the common good - a lot of governments are still looking at technology and how to use it from the way the world was run in the years behind us, and they're not thinking about what this technology means for society, and how we should run it differently 	<ul style="list-style-type: none"> - all these stakeholders need to start changing the way they interact with each other - people have the power now, while other stakeholders try to rewind back to the time when they had power 	<ul style="list-style-type: none"> - it is about building resiliency (working together) - we're getting prepared for something we don't know, not necessarily a crisis but maybe a paradigm shift, as everything will change
Role of the crisis			<ul style="list-style-type: none"> - when we had the crisis, there was more room for bottom-up because there was less money - but now the economy is starting again, and we tend to forget consultation and collective intelligence - a lot of people lost their jobs, and people are still loosing their jobs now because of the digital revolution - the crisis accelerated the need for people to reinvent themselves - another crisis is coming and we should be prepared for it 		<ul style="list-style-type: none"> - we didn't have money ourselves to start projects, we had to do them through a European initiative - the crisis changed everything