

The future of urban living - new forms of work, planning for the unknown in Amsterdam

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While economic growth has not (yet) regained its pre-crisis size and austerity measures are strong and stringent, housing markets in consumption cities such as Amsterdam are booming again. The need to build large numbers of homes is great and hard to resist. Amsterdam is popular and grows with an average of 11.000 inhabitants each year. The council would like to relieve the pressure on the housing market and thus guides and enables the construction of 50.000 houses within the city borders up until 2025. However, the focus on housing quantities and quick hand-over of the new housing stock needs to be complemented with other activities, aims, and values. High-density housing is not the only thing we need in the cities of the future. Besides a home, what kind of urban living will the citizens of the future be looking for? And how will the evolution of work influence the contemporary city and its metropolitan region? The Future of Urban Living is a research-by-design project with a focus on Amsterdam's Metropolitan Region. Currently in the preparatory phase, the article will give an insight into the issues that are currently being considered by the project team of the Spontaneous City International. Furthermore, this paper will elaborate on the principles underlying the research and the methodology to be used, providing an introduction to the use of scenario's in spatial planning, with references to publications of leading institutes on the subject.

1. INTRODUCTION: RESEARCHING 'THE FUTURE OF URBAN LIVING'

Do we know how we will live in the city in the future? Is there insight into the changing relationship between dwelling - working - and spare time? And what does this potential transition mean for the organization of areas, investment in buildings and the nature of the planning process? In urban planning, there are signs of awareness we should not be building

houses and develop urban areas that only address short-term needs and promptly become obsolete and dysfunctional. A focus on housing, quantity and speed is insufficient. Urban areas need to be sustainable, resilient and attractive, creating value for the city in the long term. Urban life is continually subject to change and develops at an increasing pace, as a result of technological innovation, social developments and insights, as well as through all sorts of coincidences. This applies to both major cities in the Netherlands as well as centres in other European countries and beyond. The great themes of today, such as migration, climate change, changing perceptions of economy, digital technology and robotics have had and will continue to have a profound effect on daily life, politics, and urban planning. Professor Klaus Schwab, founder and executive chairman of the World Economic Forum, announce the dawn of a new (technological) Fourth Industrial Revolution (Schwab, K., 2016) - the first three being the transport and mechanical production revolution of the late 18th century; the mass production revolution of the late 19th century; and the computer revolution of the 1960s. Dutch Professor Jan Rotmans (Erasmus University in Rotterdam the Netherlands, focusing on sustainable transitions and system innovations) states on his website 'We do not live in an era of change, but a change of era', a view he elaborates on in the book 'Change of era - Netherlands tilts' (Rotman, J., 2014).

'The future of urban living' is a research-by-design project, which is currently in the preparatory phase. While writing this article in June 2016, a scoping document has already been distributed. This document is a short, well-designed note which gives an overview of the first ideas about the project. It proposes the themes and goals of the study, the use of scenarios and research methods. The scoping document is used as a starting point to initiate an open dialogue with stakeholders: Preliminary discussions on collaborations between different governmental and research partners have

been held, including the municipality of Amsterdam, The Netherlands Environmental Assessment Agency, the Amsterdam School of Real Estate, the RUA Foundation and the research initiator: The Spontaneous City International. This article is based on the scoping document prepared by the research team. In the context of this research, what we define as 'urban living' goes beyond dwelling and providing housing. It includes all forms of activity, ranging from work to leisure, and hence education, health, and everything else that contributes to creating a society in a city and its region. The aim of this study is to gain a better understanding of the spatial principles, frameworks and development strategies which in the future will contribute to shaping the living environment in the city. The focus will be on the way we will work in the future, with work as a basic human activity, raising questions such as;

- What does this mean for the daily life of the users in their city? Does the daily rhythm change, how will people spend their time in the future, and what impact does this have on mobility and other spatial patterns?
- What are the implications for the organization of space and use, in buildings, areas, cities and regions?
- What does this mean for investing parties and the role of the government?
- What are potential consequences for planning strategies and tools? What type and degree of management will planning processes require? What is uncontrolled, what should be facilitated, what should be monitored? What effect will this have on the process that underlies spatial planning?

To gain insight into this subject, 'research by design' is used, exploring how the transformation of (mono-functional) business parks and areas of work into attractive living environments can be accomplished, with flexible mixed-use development which can absorb the transition to new work. Subsequently the outcomes are applied to test cases in the Amsterdam Metropolitan Area.

2. DEVELOPMENT IN THE AMSTERDAM METROPOLITAN AREA – VISION FOR 2025

In the Metropolitan Area of Amsterdam, a huge acceleration is set in motion, expressed in the ambition to build approximately 50,000 new homes within the city limits until 2025 (Gemeente Amsterdam, 2016). One important keyword is flexibility, i.e. the degree to which the development strategy provides for change and accommodates adaptability. The other keyword is high quality of life, where high density dwelling is combined with developments such as new forms of work, changes in care, the pursuit of circular processes etc. The strategy is created to ensure that development leads to attractive and sustainable urban areas, that complement the characteristics of their specific environments. After consultation with the City of Amsterdam, in response to the policy document, it was stated that they recognize the issues outlined by the research team in the proposal 'the future of urban living', and are mainly interested in the transformation of mono-functional areas to mixed urban environments. The focus is currently on high density combined with a high pace. But how do you deal with the dilemma of large numbers on the one hand and the many uncertainties on the other?

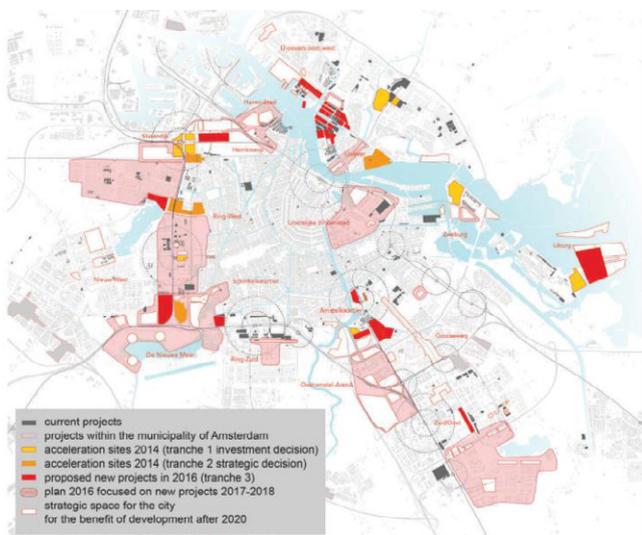


Figure 1. Map 'Space for the city' showing potential housing locations in and around Amsterdam. Source: Gemeente Amsterdam (2016) Koers 2025 Ruimte voor de stad [online] Available at: <https://www.amsterdam.nl/gemeente/volg-beleid/koers-2025-amsterdam/> [Accessed 17 06 2016]. Page 57.

3. CENTRAL QUESTION

How can existing (mono-functional) areas and business parks be transformed into flexible and attractive mixed urban areas, which can absorb the transition to new work? In other words: At present, which urban/morphological/functional principles, and what institutional preconditions/ frameworks and strategies can be used, to in the future create an interesting mixed urban environment?

4. METHODOLOGY

The methodology for the research 'the Future of Urban Living' includes the elements represented in the scheme below.

4.1 Analysis lines

The format for the process encompasses the following research techniques:

1) Literature review: Sources such as primary publications including journal articles, dissertations and reports, websites and grey literature.

2) International references: The extensive network of the research team will provide the basis for a pool of experts in the field of spatial development, which may suggest different trends, concepts and projects in their local area. The purpose of this part of the research is the collection and comparison of recent best practices in cities experiencing similar pressures

3) Interviews: Individual in-depth interviews with experts (both public and private parties as well as knowledge institutes)

During the initial phase of this study, a preliminary meeting was already held with a variety of experts in different fields, ranging from architecture, the transformation of existing buildings and areas, and city and place making, to urban agriculture. The municipality and province were also part of this meeting.

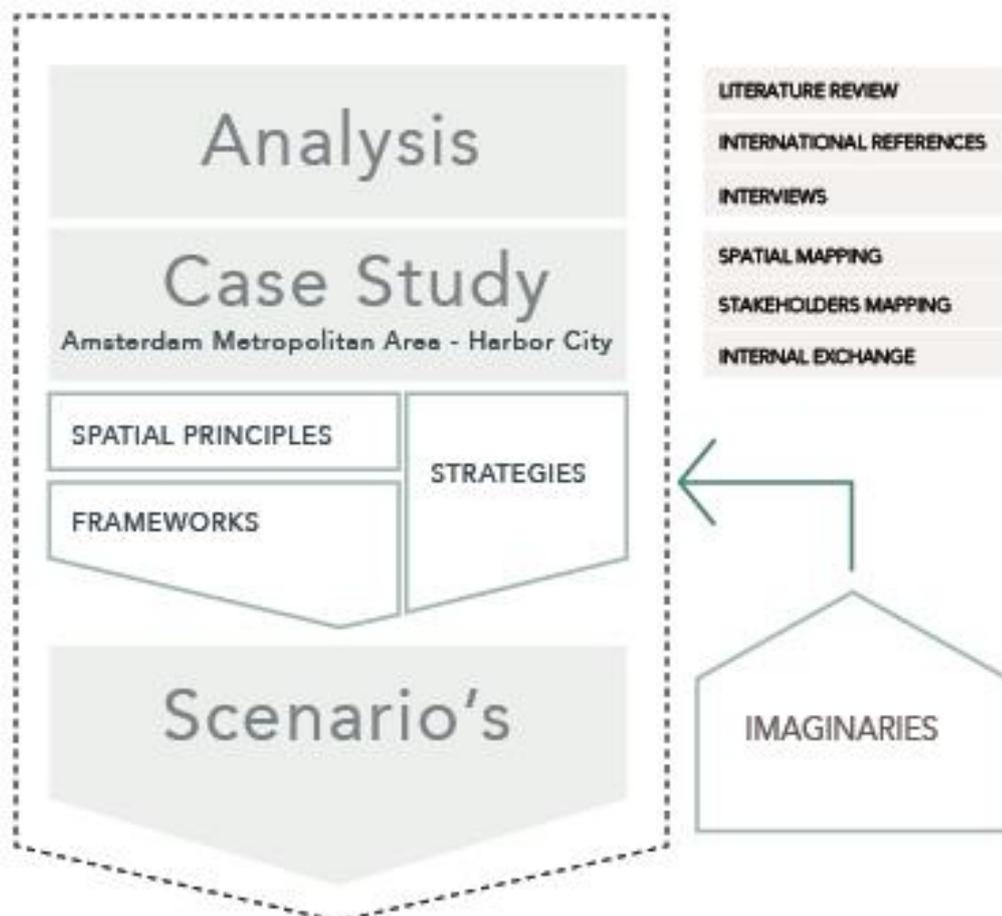


Figure 2: Scheme representing the research methodology. Source: the Spontaneous City International (2016) Concept voorstel 'the Future of urban living'. Unpublished.

5. STAKEHOLDER MAPPING: COLLECTIVE FORMULATION OF AMBITIONS AND OBSTACLES

It is important that all stakeholders in an area actively participate, by formulating ambitions and obstacles, to be able to understand what their specific goals and dilemmas are. Recent years have shown that the municipality, and other authorities such as the province, do not have the only say when it comes to a vision for the development of the city. Instead of slipping back into pre-crisis business-as-usual practises, we should harvest the innovations that were generated during the economic crisis: Current and future residents, entrepreneurs and investors have conquered their place on the stage. Ambitions are the main objectives, collectively formulated by all stakeholders involved in the transformation of the area. This may include one or several main ambitions, and their content should indicate the scope and direction for the longer term. Obstacles are the blockages that impede the realization of the ambitions, such as outdated planning tools, too much control by government, the quality of accessibility, environmental pollution etc. These stakeholders also have specific interests in the transition and development of the city and its metropolitan region and face specific dilemmas:

- Developers and investors: In terms of real estate, in what type of qualities should be invested to create a sustainable long-term investment? The Urban Land Institute (ULI) in the Netherlands carefully keeps track of the emerging trends in high density developments, urban living and attractive environments and what these means for investment.
- Housing Corporations: The current focus is on the core stock and high density. What is needed, to ensure that the property development becomes part of building an attractive urban area?
- New types of investors: Many new investors are emerging, all eager to join; ranging from individual clients, and small groups of clients to various forms of cooperatives and collectives of clients (in the Netherlands known as CPO's, collective private developments). They want space to develop their own initiative. A great current example is Living LAB Buiksloterham in Amsterdam North (Circulair Buiksloterham, 2016), who is experimenting with circular principles.

- Citizens: What is needed to make a city in which an entrepreneurial spirit can be combined with urban citizenship? In this year's Internationale Architecture Biennale in Rotterdam, new forms of civic economy are being explored (IABR, 2016).

6. SPATIAL MAPPING: CASE IN AMSTERDAM METROPOLITAN AREA

An area in Amsterdam has been selected to serve as a tangible local case study. The City of Amsterdam has proposed an area West of the city centre, called 'Port-City area', reaching from the area surrounding the train station Amsterdam-Sloterdijk to the waterfront at the 'Houthavens'. The area is large: it covers a similar amount of space as the historical city centre of Amsterdam, and to walk from east to west will take about 45 minutes, covering 3,5 kilometres.

The municipality proposes this zone, as it has been reviewed as 1 of the four areas within the city exploring the spatial possibilities for area development, as part of the strategy 'Koers 2025'.

Currently the area has the following characteristics:

- Functioning, growing port, near the city centre
- Relatively mono-functional work area, comprising several sub-functions: station area, business park, urban work area, port and industrial area.
- Key sectors: manufacturing, trade and transport
- The area is fragmented by major infrastructure: highway, rail, large green spaces
- Crucial to the transformation into an attractive, mixed urban area is the reduction of environmental nuisance and overcoming barriers.
- Relatively unknown to current residents of Amsterdam
- Variety of spatial characteristics related to: building typologies (height, volume and footprint of buildings); size of plots, density and mix; availability of amenities, facilities and public/green space, etc.

In 'Koers 2025' the analysis of housing stock shows that currently, 700 units are being built in the Port-



Figure 3: Aerial photograph of a part of the Port-City Area, looking North-West. In the center the train station surrounded by offices, with in the back Westpoort harbour area. Source: General aerial photography (2014) Luchtfoto Amsterdam-Sloterdijk [image] Available at <http://www.nieuwwest-express.nl/nl/page/4579/luchtfoto-amsterdam-sloterdijk> [Accessed 17 06 2016]

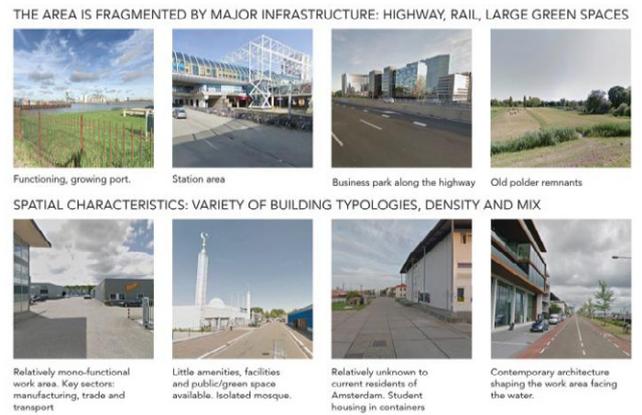


Figure 4: Matrix showing spatial typologies in the Port-City Area. Source individual images: Google Streetview (2014) Amsterdam [online] Available at: www.google.com [Accessed 17 06 2016]

City area, with a possible acceleration to an additional 3600 units, which could help the city of Amsterdam to reach the target of adding 45.000 units to the housing stock before 2025. This means the area will be providing nearly 10% till 2025, with the potential to accommodate an additional 6700 units (Gemeente Amsterdam, 2016, p.44). The policy document states that 'Central task in the Port-City area is the gradual transformation of a mono-functional work area around the Sloterdijk node to a mixed urban living - working environment taking into consideration the incumbent business' (Gemeente Amsterdam, 2016, p.41). A gradual transformation entails a step-by-step approach: 'Looking at the size, diversity and quality of the Port-City area a fixed scenario has not been chosen, (...) rather a gradual transformation process has been decided upon'. The final decision on the development of the area will be taken in 2025. However, the municipality recognizes that there is currently need for action: "To initiate the gradual transformation, to ensure quality and to gain public support, it is necessary to take a number of first steps in the coming years in both planning as well as execution' (City of Amsterdam, 2013 p.7). The research 'The future of urban living - New forms of work, planning for the unknown' will contribute to this.

7. WHAT-IF..? SCENARIO'S

What will be the impact of technological change, social trends, and major issues such as migration, climate change, and a new industrial revolution? It is obvious that we cannot know what the future will bring. At this moment we only have (weak) 'signals' of what the future might hold. Scenario's, instead of more common, short-term trend analysis and

forecast of the latest developments, can help us to think and anticipate the unknown. They can be employed as a tool to explore this possible impact, and used by policy makers to better deal with complexity and uncertainty in decision making, improving strategic policymaking and its outcomes (Dammers et al. 2013). Scenarios are characterised as follows (Dammers, 2013):

- Stories about the future
- Regarding a strategic policy-issue
- For the long-term: 10 to 40 years
- In words, images and numbers
- In plural: alternative directions
- Combining imagination with realism

Although some researchers claim that there are scarce examples of the application of scenario planning techniques in the field of urban planning (Stojanovic, M, ea. 2013), it is a frequently used a well documented (albeit in Dutch) method in the Netherlands, on different governmental levels. A large player in this field is the Netherlands Environmental Assessment Agency (PBL - Planbureau for the Leefomgeving). They have eloquently described the use of the scenario method in 'Making scenarios for environment, nature and space: a guideline' (Dammers, E., ea. 2013). An international publication in English is created by the European Environment Agency (EEA, Alcamo, J., 2001). However, there is not one correct way to use

scenarios ‘the way in which scenarios are created, is dependent on the goals the scenarios serve, the types of scenarios that are made, the resources that are available, etcetera. There is no single best way to do it’ (Dammers, E., ea. 2013, p.8).

7.1 About scenarios, and the use of qualitative, exploratory, normative scenarios in this study

Scenarios make statements, based on knowledge and information about the past, about the different directions in which a combination of developments could occur in the future. This may be a future which is deemed possible, but could also consider futures that are desirable, or a combination of both. In addition, scenarios could focus on social and physical developments that occur more or less autonomous, but also on policy developments that are largely controlled by policymakers themselves. For the purpose of this study, the emphasis is more on expectations, wishes and creative ideas; It will consider possible or desirable futures and autonomous or policy developments. Two types of scenarios can be distinguished: qualitative and quantitative (EEA, 2001). In this study, qualitative scenarios will be used. The future will be depicted or described in the form of words and visual symbols: mainly narrative texts (story lines), representations of the future (maps, artist impressions, photomontages) or a combination of the two. Then the degree of exploration: ranging from dominant scenarios, via restricted exploratory scenarios, to highly exploratory scenarios. This study will be using highly exploratory scenarios: current developments will be taken to the extreme, new developments will be detected and developed, and radically different directions in which developments can proceed will be explored. This approach will clarify the limits of developments, and encourage out-of-the-box thinking, as well as expand the understanding of emerging issues and policy alternatives, facilitate open discussion about the future and contribute to vision development. Finally, descriptive and normative scenarios can be distinguished. We will

be looking at normative scenarios, that are focused on exploring normative uncertainty, for example several policy goals that could be pursued, as well as changing values and norms in society.

7.2 Extreme ‘What-if?-scenario’s: starting point for the scenario’s in this research

Uncertainties about the future on a national level are central in a study called the ‘horizon scan’ published by PBL in 2013. In this research, PBL acknowledges that in scenario studies uncertainties often ‘lose out’. ‘But some of these uncertainties occur later as the dominant uncertainty in new scenario studies’ (p.61). Therefore, PBL has included four ‘what-if’ scenarios in their publication that, to date, have not yet been published. These are trend breaches or discontinuities in developments of which it is conceivable that they happen. However, these ‘What-if’s’ are more surprising and extreme than the uncertainties on which consensus has more or less been established. The research team is interested in these scenarios, as we consider those requirements that could develop in the long term, but at this moment are still considered to be unlikely, of particular relevance for this research. The four extreme scenarios presented are (PBL, 2013, p.61):

- 1)What if our life expectancy increases to 120 years in 2050?
- 2)What if efficient cities are controlled by big data?
- 3)What if a breakthrough in the storage of electricity is achieved?
- 4)What if weather and climate extremes greatly increase over the next 20 years?

7.3 Investigating future changes in work in the form of scenario’s

During the preparatory phase of the study, we will be looking at the potential and relevance of extreme scenarios that focus on the question ‘What if, in

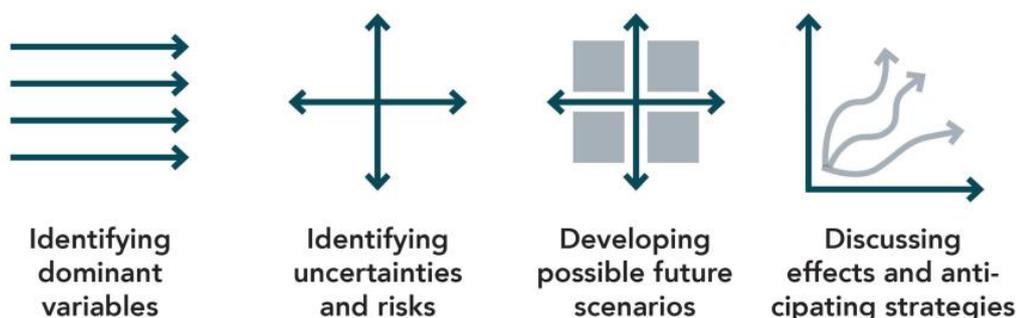


Figure 5: The municipality of Amsterdam works with 4 steps when using scenario planning. Source: City of Amsterdam (2016) Developing Zaatari. City of Amsterdam and VNG International. Page 26.

a few decades, we are no longer able or willing to work in the traditional way?' In their research PBL suggests that technological innovations will significantly change the world, but 'how is difficult to predict over such a long period. In the field of digital media, biotechnology, nanotechnology and robotics anticipated innovations seem to be most radical' (PBL, 2013, p.23-24). The research team wonders:

- What if robotics replaces many more jobs in certain parts of the labour market? What will be the impact of robotics and the automation of for example, office work? What impact does this have on the size and location of businesses?
- What if the labour market becomes even more flexible? What impact does this have on the workplace and the use of space per worker? Will this lead to (further) office vacancy?
- When new media further enters the work environment, will the workplace change accordingly?
- What if workplace activities are (even) less tied to location, timing and duration? Organizations with a network character may operate in a way that is less bound to a single location. That can transform living and commuter behaviour; more freedom in the choice of location of residence, and changing commuting patterns (the end of congestion?). What will be decisive in the choice of a dwelling; attractiveness of the living environment, the quality of the facilities, or ..?
- What if the lines between leisure and work, work and home, public and private, blur even further?

Let us assume that these changes in our daily lives and our activities, become reality - what would that mean for the design of our cities? These types of relatively extreme 'What-if' scenarios serve to stretch the mind: It does not mean we must literally 'plan' for such activities, but we must ensure that such developments are not made impossible when they actually occur, by the way we plan our cities. Urban areas should be developed in such a way that they are sufficiently flexible and accommodate the unknown.

7.4 Methods to develop scenarios

As a first step, the research team will prepare outline scenario's. These will serve as a starting point for roundtable discussions, testing the limits. During these discussions, the experts will reflect together

on the presented scenario's. Potentially, use can be made of infographics to depict the scenarios and stimulate the discussion. Then, the direction and number of scenarios will be established, after which they will be elaborated in three ways:

- 1) Storylines; written based on literature review, with different source such as previous scenario studies, recent studies, policy advice, newspaper articles, etc. In addition, the team will rely on their own expertise and logical reasoning.
- 2) Stakeholder Participation; by actively involving various experts and groups in the development of the scenarios. A panel has already been formed, which will continue to evolve, and which will be called upon several times during the project. These people are both representative of the various governments, as well as creative outsiders.
- 3) Design; visualized in maps, location plans, photo montages, etc. The analysis that will be carried out (research by design) will provide important insights, for example on the future geographical or spatial patterns

The research team has chosen these three types, as they do not only best suit our goals, it is also where our expertise lays. This means we will not be undertaking any data analysis. This is something the city of Amsterdam does quite frequently themselves, usually focusing on a particular project and strongly related to feasibility (either programmatic or financial-economic, or both).

8. RESEARCH OUTPUT AND PRODUCTS

The results of the study will be translated into three types of outcome:

- a) Spatial and functional principles: Urban, morphological and functional principles, linked to different typologies for buildings and public spaces (relating to density, mixed use, flexibility, and adaptability for many different types of initiatives).
- b) Frameworks and public values: Both public as well as institutional preconditions and frameworks. What are the conditions to make projects feasible? These frameworks can be spatial (landscape, street patterns, circular principles) as well as more conceptual (heritage, community, resilience etc.)

c) Development Strategies. Which strategies are suitable to achieve development in the desired form? These three outcomes are more than site-specific. They will generate general outcomes that can be applied to a range of locations in various cities to prepare them for future changes.

These outcomes will be shared in three ways:

- 1) The principles, frameworks and development strategies will be summarized in the form of a book.
- 2) One or more events held in 'Pakhuis de Zwijger' - an independent platform for creation and innovation in the city, with daily inspirational programs on creative industry, the city and global trends (de Zwijger, 2016).
- 3) A website / user-fed platform for various stakeholders to actively participate in the process, sharing articles, essays, official documents, photos, video interviews, videos, etc.

We intend to start the second and third products during the research process, so that they can actively contribute to the content of the research, and enrich the dialogue.

9. CONCLUSION: WORKING TOWARDS A PARADIGM SHIFT

The long-term goal of this research is to generate new insights for urban planning, spatial design, policy makers and politicians, such as:

- The evolution of land use and associated business models, replacing the traditional master planning approach by strategic planning with flexibility, diversity of production activities and a mix of functions as core principles.
- New models for policy makers to facilitate a better interaction in the relations between the city and the surrounding area, creating advantages in the use of space and the changing dynamics of living and working.
- Develop planning techniques that are currently used limited, by putting them into practice, and by doing so creating an additional base for the implementation of these methods, such as a multi-stakeholder approach and

extreme scenarios, more specifically a design approach to generate scenarios (in the scenario studies of PBL thus far the design approach has been rarely used - PBL 2013, p.8)

- A guideline for adjustments of policy frameworks to facilitate new flows, nodes and networks.

Eventually, a paradigm shift with a real impact on the way both citizens as well as professionals in the spatial field shape the cities we live in, will contribute to the creation of a resilient future for the city.

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