

# ATTRACTING INVESTMENT TO SUSTAINABLE URBAN DEVELOPMENT: *STIMULATING INVESTORS THROUGH INCENTIVES*



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The word sustainability is used more than ever before, and the more it seems to be used, the more it seems to be directed at rationalizing unsustainable development. Almost everybody is talking about sustainability, but despite this subjective awareness, the world is becoming objectively less sustainable. So why are we not acting effectively to achieve this sustainability?  
– James Paul, 2015

## PREFACE

Sustainability has been a major buzz word the past few years, especially grabbing the attention of the younger generation. Yet, it wasn't until I saw the documentary 'Banking Nature' that my interest for this topic really started developing. To me the documentary introduced a perspective of sustainability which I hadn't seen before; the role of the major private corporations in facing climate change. The documentary shed a (dark) light on the fact that the execution of sustainability is mainly in hands of the powerful private parties and not- as we are mostly taught in class- in the hands of society individuals. Therefore, if the goal is sustainability, we have to learn to speak their language and participate in their game to get them on board. This became the starting point for this research about making sustainable urban developments attractive for developers and investors.

This research proposal forms the first half of the graduation track of the Master Management in the Built Environment at the Delft University of Technology. The proposal will form the basis for the further research which is expected to be carried out over the next six months.

## SUMMARY

With cities facing rapid urbanization and environmental challenges, political agendas are filled with ambitions to develop more sustainable urban areas. However, at the same time economic downturns made governments shift from their active role to a facilitating one, thus hereby creating room for private-led investments. But so far, sustainable urban area developments have not been taken by storm. Private parties see more disadvantages than advantages and are therefore not stimulated to participate in sustainable urban development. Concerns about the finance, risks, complexity and uneven distribution of costs and revenues form important factors. The bridge these concerns, stimulating tools can be implemented in order to make sustainable urban development more attractive. One of the most popular tools are the performance certificates like BREEAM and LEED, but these are not yet widely used for urban areas as opposed to buildings. These problems mentioned above have led to the following problem statement:

*Governmental parties are trying to increase the sustainability level in urban areas (Interview 1), however so far the slow rate of these projects have shown that developers and investors are not interested (Interview 2). Incentives, for example the performance certifications, which can be of added-value are needed to make sustainable urban developments attractive to private parties (Interview 3).*

To narrow down the scope of the research, the perspective will be from the private parties' side and focused on the use of performance certificates as the main stimulating tool. The purpose of the research is to present recommendations about how to make sustainable urban development attractive for developers and investors with instruments which can be best used to incentivize them. By getting a better understanding of how to stimulate sustainable investments, the research can lead to one step closer to stimulating investors and developers to realize sustainable urban areas. The main research question derived from the problem statement and research goal is as follow:

*How can governmental authorities stimulate developers and investors to invest in sustainable urban area development?*

The explorative character of the research goal and question fit best with a qualitative research design. Complementary methods to this research design is desk study, unstructured and semi-structured interviews and case-studies comparison.

*Key words: sustainability, incentives, urban development, certifications, governance, investors, developers*

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## CHAPTER 1: INTRODUCTION

This chapter will include a brief reflection on the scientific and societal relevance of the topic and the potential utilization of the research. Furthermore, the chapter introduces the main problem definition and how it led to the research goal and methodology.

### RELEVANCE OF THE RESEARCH

During the following sections the relevance of this research will be discussed. The relevance of the research will be divided in three subcategories in which the relevance will be looked into from different perspectives and for which audience it is intended.

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#### SOCIETAL RELEVANCE

Discussions about sustainability started in the seventies when the oil and energy crisis made society realize that overconsumption of energy and other resources cannot continue. Yet, it has been only in the past years that sustainability became worldwide a hot topic. People are becoming more aware that their actions have a big effect on the future of the planet (Van Der Horst, 2010). The past period many campaigns promoting the green movement, documentaries and sustainable products like recyclable products, LED-lighting and electric cars, have contributed to making society more conscious about the environmental challenges of today's world.

Combined with rapid urbanization, changing economic markets and power shifts between public and private actors, sustainability within urban area development is also entering the spotlight. Increasing sustainability in urban areas will not only help achieve the sustainability ambitions which have been set internationally, but also help create urban areas where people can continue living in a sustainable way.

The shift from focusing on sustainable buildings to focusing on sustainable areas is slowly gaining attention (Van Der Horst, 2010). There are few project initiatives, but interest in sustainable urban areas has not taken off yet. And this while different Dutch experts acknowledge the importance of sustainability on an urban scale. For example, De Zeeuw argues that the discussions are still too focused on buildings instead of areas (Van Ratingen, 2008). The importance of sustainability on an urban scale can be noticed by understanding that true sustainability on a building level is caused by the quality of its surroundings (Van Der Leij, 2009). As opposed on a building level, scaling sustainability to an urban size creates room to make an entire area more livable and pleasant for the society. So not only does it have a larger environmental impact because of its scale, but also its impact on social and economic levels is significant. Commercially, sustainable urban development can increase the value of an area- including the buildings in that area- and contribute to a positive and sustainable image of a city, region or country (BREEAM-NL, 2013).

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#### SCIENTIFIC RELEVANCE

Real estate and the built environment consume globally up to 40 per cent of energy and are responsible for 30 per cent of greenhouse gas emissions (UNEP, 2009). Thus consequently, the built environment and the real estate industry have an important role in climate change and in delivering sustainable places (Oude Aarninkhof, 2015). With the massive increase of new constructions taking place in emerging economies, and the inefficiencies of the existing built environment worldwide, if nothing is done, the greenhouse gas emissions from buildings can become double in the following 20 years (UNEP, 2009). For this reason, if there are sustainability goals to be met, actors within the building sector have to take on the challenge of making the built environment more sustainable.

Especially with the Dutch government shifting towards becoming more facilitating, private parties like investors and developers will have to take on a bigger responsibility regarding the sustainable built environment. Within the Dutch real estate market sustainable developments have also starting taking place. However, these are mostly on a building-level, while little is being done about sustainability on an urban scale (Van Der Horst, 2010). This is mainly due to the unattractiveness of finance and risks and the lack of incentives involved in sustainable urban areas. Therefore, in order to stimulate more sustainable urban area developments in the Netherlands, this research will explore how to make this type of development attractive for developers and investors to participate in by using incentives.

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## UTILIZATION POTENTIAL

Thus, by gaining insights about the interests of public and private parties and how to cater to these interests, this research aims to offer recommendations about how developers and investors can be stimulated to invest in sustainable urban area developments. From an academic perspective a lot of research has been carried out about governance strategies and stimulating tools to achieve certain goals. But these are not always translated to the market as they were intended. Firstly, the findings of the research can help private parties understand why sustainable urban development can be attractive and secondly it is intended to help public parties understand how to stimulate private parties in order to meet the sustainability ambitions in practice. Therefore, the recommendations which will be formulated with the findings can contribute to both academics and professionals seeking to further stimulate sustainable urban area developments.

## PROBLEM DEFINITION

Based on findings of the literature review and interviews with experts three main domains have been identified; interests of public parties, interests of private parties and relevance of incentives. An in-depth analysis of these aspects in regards to sustainable urban development have led to a variety of factors which are interlinked and have an effect on the attractiveness of sustainable urban development. The result of the analysis led to the main problem statement: Governmental parties are trying to increase the sustainability level in urban areas (Interview 1), however so far the slow rate of these projects have shown that developers and investors are not interested (Interview 2). Incentives, for example the performance certifications, which can be of added-value are needed to make sustainable urban developments attractive to private parties (Interview 3).

## RESEARCH DESIGN & METHODOLOGY

The main goal of the research is to make recommendations about how to make sustainable urban development attractive for developers and investors with instruments which can be best used to incentivize them. By getting a better understanding of how to stimulate sustainable investments, the research can lead to one step closer to stimulating investors and developers to realize sustainable urban areas.

The explorative and theory-generating character of the research leads to a qualitative research design, accompanied by explorative and semi-structured interviews, literature review and case-studies methods in order to carry out the research properly.

The following chapters will go more in-depth about the problem analysis, the research design and methodology and a start with the theoretical framework is presented.



## CHAPTER 2: LITERATURE REVIEW

The literature review in chapter two gives an in-depth analysis of the problem definition based on existing literature. Categorized in the following three groups; interests of public parties, interests of private parties and relevance of incentives, the following sections present how these different motives lead to the main research problem.

However, theory does not always reflect the practice field the same way. Also between theory and practice gaps can be developed. Therefore, before furthering the research, explorative interviews were done with professionals in the field in order to gain more insights into the problems identified from literature. At the end of each section, the findings from the literature will be reflected upon with additional insights from practice. The complete summaries of the explorative interviews can be found in the appendices.

### INTERESTS OF THE PUBLIC PARTIES

With the built environment alone contributing 40% to total global greenhouse gas emissions, policy-makers are increasingly considering buildings as the link to achieving more energy-efficient cities (Chegut, Eichholtz, & Kok, 2013; S. J. Wilkinson & H. Remoy, 2015). The current global climate change debate translates to political agendas of municipalities and provinces, which are filled with ambitions to realize climate neutral, CO<sub>2</sub>-neutral or energy neutral communities, neighborhoods and districts (Rijksdienst voor Ondernemend Nederland, 2014). But often these sustainability goals are lacking clear, specific descriptions on how they should be achieved.

The section above illustrated the energy-efficient goals governments have in order to make their cities more sustainable for the future. Interestingly though, at the same time, they are shifting their role as active market players towards a more facilitating role. This is partly due to the economic crisis; it made economic situations change drastically and recession, budget cuts, on-and-off investments and highly uncertain forecasts were all consequences (Puylaert & Werksma, 2011). For the government this meant that they had to rethink their role in the built environment. Over the past years many municipalities have been taking steps down and leaving room for the private sector to do the tasks that they would previously engage in (Huismans & Vaan, 2011). Which also makes it more challenging to ensure the sustainable city goals to be met.

To add another layer of complexity to reaching the ambitions for sustainable cities, is to achieve these goals within existing urban areas. The need to re-develop in existing areas arises from the physical, economic, social and environmental decline that has characterized many cities (Adair, Berry, & McGreal, 2002). The European Commission has set various targets within its energy policy and the most relevant ones for the built environment include a minimum reduction of 20% greenhouse gas (GHG), a minimum increase of 20% in renewable energy and improving energy efficiency by a minimum of 20% as well (European Commission, 2011). With 2020 approaching, many actors within the building industry state that the current rate of building refurbishment is too slow to meet these European Union climate targets.

For public parties to attract investment and finance into inner-city and other renewal areas they have to overcome some tough challenges. Experience has shown that private parties will not finance and take risks in these areas as they often are not profit-generating. The private sector therefore is heavily relying on a strong commitment from the public side through special incentives and/or other mechanisms in order to provide attractive conditions for the private sector to invest in sustainable urban projects (Adair et al., 2002). Policy-related research on this matter show that often within the strategy towards sustainable urban redevelopment of the European building stock, finance-related issues form the largest obstacle (Greco, 2016).

Thus realizing the political ambition goals of increasing sustainability in cities becomes even more complex when private parties need to be stimulated to invest in existing urban areas and not new locations. For the Netherlands, the challenge definitely lies within the existing building stock. In 2012 the existing real estate stock of the Netherlands represented a value of about two thousand billion euros (Peek & Remmen, 2012). Each year a maximum of 1% is added and now that the new built production is slowing, the focus will be on the existing stock. Addressing the existing stock issues also contributes to the sustainability goals as the existing buildings are causing 30-40% CO2 emissions and use about one third of the energy. Moreover, according to ING more than 90 per cent of the current building stock will likely still be in use by 2050, emphasizing the importance of transforming the existing building stock to a more sustainable one (Oude Aarninkhof, 2015).

Therefore, the governing authorities seek to stimulate sustainable re-developments to deliver emission reduction targets as it will not be sufficient to apply high-quality sustainable measures only in new buildings, but also the existing urban areas need to become more energy-efficient. Moreover, re-developing existing areas to high energy-efficient standards can also lead to reduced vacancy, reduced rent costs and better lease (Peek & Remmen, 2012).

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#### REFLECTION IN PRACTICE: INTERESTS OF THE PUBLIC PARTIES

One of the first main contrasts found in this area was that Jos Schild started off by saying that having sustainable ambitions which are translated into low EPC-norms and CO2-reduction, is not the solution to achieving these goals. The main reason here for is that there is still uncertainty about the correctness of EPC calculations (Interview 1, 2016).

Moreover, he adds that it is important for the municipalities to have the adequate people and budget available to invest and stimulate sustainability. The energy agreements are not going to be reached. The ambitions that were set up, were often done by people who have little understanding about sustainability and don't have good environmental backgrounds. This leads to the problem of unclear ambitions (Schild, 2016). For example, municipalities are saying they want the lowest EPC level possible. But what is it that they really want to reach with that? What is the purpose? They often don't have a clue themselves. It is the same with saying that we need more green, but what does that really mean? Municipalities need to first define the sustainability ambitions better in order to be able to translate them to a project. Furthermore, they need to have the time and budget for this; something smaller municipalities often lack (Dansen, 2016).

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Going more into extent on this topic, he mentions that with the social interest of municipalities, technology like EPC and CO2 levels do not have to be the starting point- the focus does not have to be on energy. Sustainability can mean more than just water and energy. Factors like happiness, high-quality, health, well-being and employment are becoming major factors which also contribute to sustainability (Schild, 2016). In addition, Bruijn (Interview 3) adds that the 'new city' is not one where sustainability is key, but one where all the social aspects are also included and one where all lifecycles are taken in consideration. Furthermore, Dansen (Interview 4) points out the need to address sustainability in urban areas as a building which is situated in an unsustainable environment, cannot be sustainable. In line with Schild and Bruijn, Dansen also mentions that sustainability is not just about energy, but also about the social factors; and these soft factors are present in urban areas whereas they are lacking on the building scale.

Both Schild and Dansen address that sustainable urban re-development in existing urban fabric is not really occurring. Even if it is on an existing field, everything will be demolished and the development will start from scratch again. With enough challenges still facing sustainable urban developments in new areas, the focus is not yet much on re-developments.

A new challenge which was introduced during an interview was that the sustainability ambitions of the public parties should be more in harmony with each other. On an international level the sustainability ambitions vary quite a lot and this forms a barrier for international developers and investors (Teijlingen, 2016). This is because dealing with different legislation and sustainability matters in different countries costs a lot of time in the value chain- a lot of time is wasted on governance- when an investor has to deal with making projects sustainable in different countries. Thus making the matter even more complex.

Adding on to the international side of sustainable urban developments, the roles of the governments can heavily influence the realization of these areas. Such is that because the Netherlands is a democratic country the government is usually active for a short term, but if you compare this with Asian countries like South-Korea and Singapore it is much different. There governments have a strong regime and because of this they are able to enforce sustainable urban developments (Interview 5, 2016). On the other hand, you have New York, which is also an interesting example. Pereboom mentions that it is a concrete jungle with bad infrastructure and low livability and this can be explained due to the fact that most urban developments there are private-led and clearly the interests of the private parties lie differently.

In summary, the literature addresses the interests of municipalities in increasing sustainable urban areas in order to meet the sustainable ambitions, but that their lack of clear ambition and shift to facilitating role are causing hindrances to the realization of these urban areas. The interviews with experts support this finding and add that the reason of unclear ambition could be found in lack of suitable expertise, budget, time and type of role. Moreover, three additional findings derived from the interviews are: (Interview 1) scope for sustainable re-development is too small and there are enough challenges still to be dealt with in new areas, (Interview 2) the added-values of social factors in sustainability urban developments should be more focused on and (Interview 3) the international challenges regarding variations in sustainable ambitions and role of governmental authorities. All together these factors make up the scope of the interests of the public parties.

## INTERESTS OF THE PRIVATE PARTIES

So the government has set up their ambitions to increase sustainability and shifted their active role to a more facilitating one to make room for more private-led developments. Yet, developers and investors are not jumping into sustainable urban redevelopment projects.

Still today, sustainability is often seen by private parties as an add-on attribute to their portfolio and is one of the first elements to be cut when times are getting difficult. For example, the company Ballast Nedam announced that it will stop with its participation in Stroomversnelling, a collaborative initiative to reach 111.000 affordable energy-neutral houses. Reasons mentioned for the leave are time, money and people (Vastgoedmarkt, 2016). Interestingly, the company will continue the development of energy neutral houses in England, where they see new opportunities in this field.

The economic crisis which caused the role of the governments to shift, also left behind an impact on the private parties with capital. These parties are still avoiding taking new risks. Trust is becoming an increasingly demanding factor for them and they feel that the government can and should offer more security. Decision-making about

development projects is for the private sector eventually one based on economics and actual insights in the shares of costs, revenues and risks (Puylaert & Werksma, 2011).

The perceived total return on investment is shown by research to be the primary factor influencing investment decisions and when it comes to redevelopment projects, investors are expecting to achieve high returns with security of the investment and risk diversification as the next-most-important factors (Adair et al., 2002). Private parties have different interests when it comes to urban planning than public parties- so therefore they are incentivized in different manners-, private investment parties are incentivized by yields, cost reduction and risk sharing (Heurkens, 2016).

Besides finance, risk estimations are a major part of investment criteria. These estimations are often based on long-existing trends and proven techniques, however with new sustainable urban challenges it becomes much more difficult to forecast the associated risks (Buiter & Verschoor, 2014). With lack of information to prove that sustainable buildings are more cost-efficient, effective, profitable and marketable, it is difficult for investors to take risks on these projects (Heurkens, 2016).

Moreover, traditional finance methods fail to capitalize the costs and revenues from sustainability in the built environment. The classic calculation models do not include the added value of 'soft' elements in sustainable urban area development as these are challenging to translate to the traditional models (Ministerie van Infrastructuur en Milieu, 2014).

For the model to be correct, all the non-economic values have to be taken into account and incorporated (Buiter & Verschoor, 2014). Thus, quantifying the so-called 'soft' values of an area can offer a more attractive perspective for investors as it becomes then more clear what they have to invest and what they will get back in return. The business case will gain more certainty.

So even though the environmental and societal benefits of sustainable developments in the recent years have been clear and technologically it is feasible, the financial benefits for the investor remain less visible (S. Wilkinson & H. Remoy, 2015). The investment decisions in sustainable projects are dependent on multiple factors; both internal and external (Oude Aarninkhof, 2015). Other researchers support the lack of information relating to the financial benefits and uneven distribution of costs and benefits between investors and occupiers form a barrier to investment in sustainable buildings (Falkenbach et al., 2010).

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Most findings show that private parties are going about their usual ways, changing relatively little except the language of development. This false promise causes more reason for municipalities to stimulate private parties to act differently when it comes to sustainability (James, 2015). Financial benefits and risks continue to be major factors in whether or not a private investor will decide to invest in sustainable urban area redevelopment. And if these interests of the private parties are not met, they are not stimulated to engage in sustainable projects.

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## REFLECTION IN PRACTICE: INTERESTS OF THE PRIVATE PARTIES

Literature mentioned profit and risks as the two main criteria in the decision-making process for private parties. All the interviewees confirm that it will remain important for the business case to be feasible and that profit can be made. In the end, that is the primary goal of private parties- regardless if it is a sustainable project or not. The challenge definitely still lies in the finance aspect as risks and profit are the deciding factors for developers and investors (Interview 3, 2016). A municipality can facilitate by offering trust, being reliable, having a proper plan and guarantee security.

Public parties want public space which will enhance the social and environmental quality, while the private parties are looking at ways to use the space in the most efficient manner. Here is one of the starting points of where the challenge lies; to bring these two parties with different interests to create a sustainable place which everyone will be content with (Interview 1, 2016).

Another issue which has not been previously mentioned, is that private companies can also have an internal driver to invest more in sustainability. Going green has benefits to them like risk-reduction, transparency and corporate social responsibility (Interview 2, 2016). But the challenge lies in having the right person with this ambition to be a managing seat in order to actually be able to change the company behavior (Interview 1, 2016). ING supports the importance of behavior and change management as well when it comes to sustainable investments by saying that you need the right employees and the needed knowledge (Interview 2, 2016).

Contributing to one of the problems mentioned earlier; the drive for sustainable buildings already exists but this drive is much less on the urban scale though. Challenges of developing a sustainable urban area is that the scale is more abstract, thus more complex (Interview 1, 2016; Interview 4, 2016). Additionally, it is hard to define the starting point of an existing urban area and to address split-incentive challenges in urban areas- both matters important for investors to take into their decision-making. Schild, Bruijn, (Interview 3) and Pereboom agree that split-incentive is a major challenge- especially the financial side of it; defining the Total Cost of Ownership needs to be clear. Dansen adds to this split-incentive challenge by mentioning that even though certificates can be used as a great management tool in urban development processes, it remains unclear which party benefits of this.

In addition to the social values discussed in the previous section of public parties' interests, practice indicates that it is difficult to measure softer elements like work productivity (Interview 5, 2016). And not because experts do not know how, but simply because measuring soft values is a relatively new concept and there are not enough historical data series to make the necessary statistical analyses.

To conclude, there are many negative factors making investment in sustainable urban development unattractive for private parties. Noteworthy was that the literature findings did not include the role of internal factors, but results from the interviews addressed that internal factors also play a role in the decision-making process. The following enumeration states the main factors making sustainable urban developments an unattractive investment for private parties:

- Finance and risk
- Behavior
- Complexity and time
- Split-incentive and cost of ownership
- Unclear incorporation of social values

## RELEVANCY OF INCENTIVES

In these new times, when governments are choosing to take on a more facilitating and stimulating role in urban area development by giving space and direction, they are becoming more reliant on their institutional, financial and juridical instruments (Buiter & Verschoor, 2014). However, it seems that these instruments do not always lead to the expected results. The policies and public agendas which include the goals of sustainable developments, CO2 reduction and energy neutral houses are not being efficiently implemented. Practice shows that the change towards energy-efficient urban area developments is taking place too slowly (Bogers, 2015). This can be seen as an indication of a crucial gap between policies and implementation.

So a following step in the process is to implement the goals on public agendas into practice and this might need a change in the current governance styles and instruments (Gaaff, 2015). It will become important that government stimulates with policy mechanisms which are directed at delivering a sustainable urban area redevelopment by attracting long-term investment (Adair et al., 2002) in order to speed up the process towards more green cities.

Naturally, with the current ambitions for sustainable cities, many policies and instruments have already been set in motion. Yet, developers/investors often adopt a 'tick-box thinking' and just build the minimum level of sustainability which is required from the governmental authorities (Holzinger, Laughlin, & Grayson, 2015), indicating yet again that they are not incentivized to build high standards of sustainable urban areas.

Public parties expect real estate developers/investors to take on a leading role in realizing these economic-viable, socially responsible, environmentally-friendly urban areas (Heurkens, 2016). This sustainable private-led urban development strategy is supposed to fit well into the trend of governments backing down and taking on a more planning authority role. Yet, governments must be careful with not becoming too facilitating either. The need for a framework-setting government with clear visions and goals will always be important in order to lead urban area development in a sustainable direction (Buiter & Verschoor, 2014).

With this move towards a more private-sector led involvement, the UK real estate market was the first to introduce a private third-party assessment tool to measure a building's environmental impact (BREEAM-NL) with the aim to reduce carbon emissions and to increase the level of sustainability within the city (Chegut et al., 2013). These types of certifications also appear in other countries and seem to work a way to incentivize developers/investors to make a building sustainable. However, there are two problems with these types of green certificates; the first one is that they are often only demanded for new buildings and not existing buildings, and the second is that these certificates are widely applied for buildings and much less for urban areas. The cause of the latter can be found in the municipalities not clearly steering towards larger scale implementations of sustainable measures and developers still experimenting with sustainability (Buskens, 2015).

With the new shift of roles between public and private parties, governing the developments in a city are increasingly becoming a matter of governance: a game in which different actors try to influence each other (Daamen, Franzen, & Van Der Vegt, 2012 2012). In today's practice that translates to a form of stimulating which is inviting: parties trying to win over each other by combining their own interests with collective interest. So-called soft governance instruments like trust, commitment and expertise are taking a leading role in this type of stimulation (Daamen et al., 2012).

To summarize, in order to make investors understand the importance of sustainable urban development, its values and risk implications need to be clear (Ramos, Keeping, & Haas, 2013). When this is clear, complementary legal and financial instruments can be introduced to support the interests of the private parties and incentivize them to invest in sustainable urban development.

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## REFLECTION IN PRACTICE: RELEVANCE OF INCENTIVES

With regards to the use of incentives and the role of the public parties here in; Schild confirms that with governmental authorities becoming more facilitating, the necessity to set clear requirements for their ambitions and how they want to steer the market parties is becoming more important in order to achieve their goals. They do possess the strong, influential tools to stimulate the market in a certain direction, however public parties need to better understand how they can best do this. Private parties need incentives- whether monetary, tax or else-in order to be stimulated to any investment (Interview 5, 2016).

Bruijn mentions that there is definitely enough Dutch capital to be invested in sustainable urban area, yet this is not happening, and definitely not at the rate it should in order for the ambitions to be met. For this to happen, municipalities need to take a more active role and not just set up policies, but also take actions and responsibilities. Governments need to take more action in order to achieve their green goals. According to Bruijn so far they only want to dip their toes in the water, but they don't want to swim.

Another new point Schild (2016) addresses is that stimulating sustainability is mainly about influencing behavioral change. Awareness has increased over the past years, but being aware and behaving to it are two different things. And finding out how to influence parties' behaviors regarding sustainable urban area is definitely a challenge. A second challenge of the urban scale is that the developments are much slower. The process is much more time-consuming and this makes the investment less attractive.

With regards to sustainability certificates like BREEAM Schild and Pereboom (2016) confirm that certificates of this type can be a strong tool to increase the value of real estate. Bruijn (2016) also agrees with the value of BREEAM. But Pereboom warns that the certificates are too stiff and inflexible and they can easily lead to a tick-the-box mentality.

Currently, it is working great on a building-scale, but on the urban-scale the demand is still too slow. The BREEAM for urban areas can be used as a tool to manage the complex process and to make the ambitions clearer (Interview 4, 2016). But at the rate of its demand, adaptation to the certificate might be needed to make it more attractive. The certificates need to become more approachable, simpler and clearer (Interview 4, 2016). Van Teijlingen (2016) adds that in Spain and Germany, markets which a couple of years ago did not really use certification labels like BREEAM and LEED, foreign investors were demanding assessment certificates prior to investing as this could be used by the private parties as an attractive tool to be transparent towards their clients. Furthermore, he mentions that ING felt that there was a need for a tool which could properly give a clear overview about the costs, revenues and time-period of a green project. Without being able to give this information clearly, the risks involved will be too high for developers and investors.

Moreover, performance certifications are being used as a great tool for benchmarking (Interview 2, 2016). Benchmarking is important for private parties and can also be a good way to stimulate them to sustainable investments. Pereboom adds on to this statement by verifying that these certifications are used as a marketing tool to deliver unique selling-points for their projects. However, he does warn that if and when sustainability becomes a standard, certifications will lose their added-value and will no longer deliver a competitive edge.

In a nutshell private parties will need to be steered towards sustainable urban developments. Using incentives can be a great way for the public parties to stimulate them to reach the sustainable ambitions. The results of the interviews also supported that there is need for stimulation to grab their attention. Noteworthy is that all experts addressed the important of performance certifications as a stimulating tool within sustainable urban developments. Moreover, the government should get a better insight in the interests of the private parties in order to know which tools to use best to steer towards green urban areas. Also here, findings from practice support the literature findings by indicating that government have the ability to and should be the party to steer.

## SUMMARY

The problem analysis consisting of the literature review and explorative interviews with experts developed the basis for the problem statement. The main three motives defining the problem analysis included the interests of the public parties, the interests of the private parties and the relevance of incentives. Within each of these domains the findings of the literature were reflected upon with the findings of practice. In summary, the following factors play a main role within the attractiveness of sustainable urban developments:

Interests of the public parties:

- Unclear ambition
- Lack of expertise
- Lack of time and budget
- Role of the government / governance

Interests of the private parties:

- Finance and risk
- Behavior
- Complexity and time
- Split-incentive and total cost of ownership
- Unclear incorporation of social values

Relevance of incentives:

- Bridge gap between interests of public and private parties
- The need for the proper incentives
- Performance certifications as stimulating tool

Based on these findings, the following chapter will continue on how the research is structured in order to formulate an answer to the research goal and questions. The problem statement derived from the problem analysis is presented in chapter three.



## CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

In this chapter different sections will describe the relation between the formulated problem definition and the research design and methodology which will be applied in order to answer the main research question. The following sections will include the research goals, the conceptual framework, a briefing on the key definitions, the research questions, the selection of the case-studies, the expected results, the provisional table of contents for P4/P5, the interviewees list and at last the time schedule.

### RESEARCH GOALS

The stimulating instruments are gaining more attention since the move away from traditional, active and state-led towards softer and facilitating governance in an increasing private-led market. With these instruments governmental authorities were planning to reach their goals of energy-efficient cities, but unfortunately, the current literature has found that these tools are not resulting in their expected outcomes (Van Der Heijden, Wilkinson, & Sayce, 2015 2015). Investment behaviors of private parties towards sustainable urban area developments has not changed much.

The main goal of this research is to make recommendations about how to make sustainable urban development attractive for developers and investors with instruments which can be best used to incentivize them. By getting a better understanding of how to stimulate sustainable investments, the research can lead to one step closer to stimulating investors and developers to realize sustainable urban areas.

In order to limit the research not all possible stimulating tools will be explored. By combining the outcome of both theoretical and practical research, the focus will be on the use of certificates like BREEAM on urban scale. So far the results have indicated that sustainability certificates can work as a great tool, and one which private parties are also interested in. And while on a building-level these certificates are widely used, recent developments of certificates for urban areas are trying to achieve another level of sustainability which cannot be reached by focusing on building-level solely. It is a relatively new type of certificate and so far has not gained much interest from private parties because of the challenges identified with certifications on an urban scale.

Therefore, to meet the research goal a better understanding about the interests of the developers and investors and public parties needs to be gained. The figure below illustrates the drivers and hurdles mentioned so far in regards to the interests of private parties in sustainable urban development. Performance certifications can be used as the right set of incentives to achieve the goals of sustainable cities. This is an international issue as well and different countries are trying to reach similar goals in their own ways. By for example ways of benchmarking, the Netherlands can be compared with case-studies from abroad to gain additional insights for the recommendations.

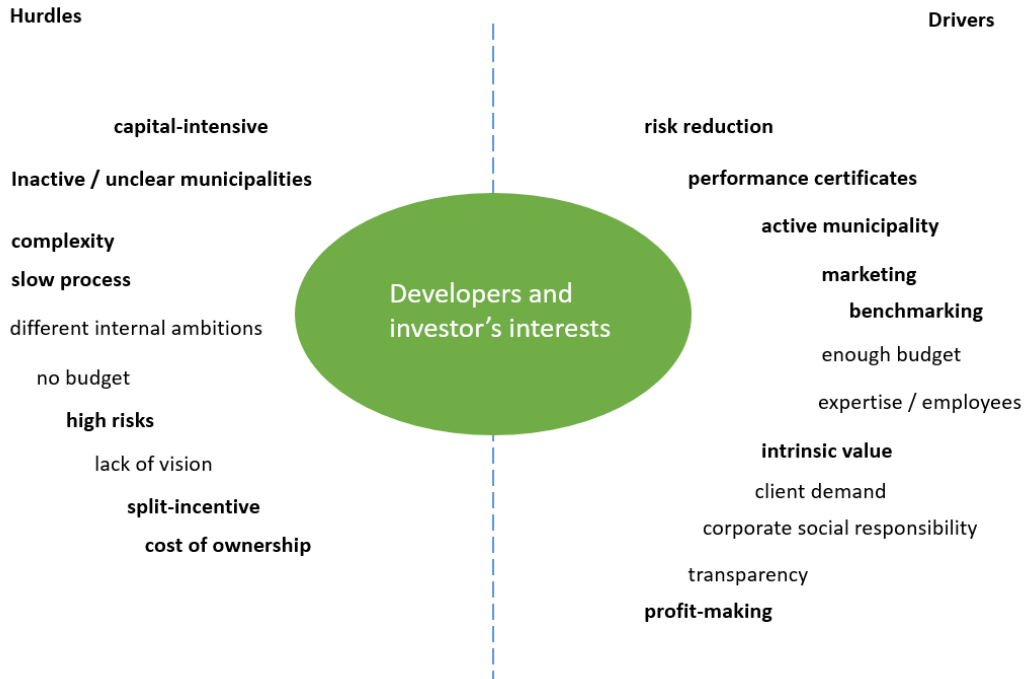


Figure 1- Factors relating to the interests of developers and investors (own ill.)

## CONCEPTUAL FRAMEWORK

The conceptual framework below illustrates how the problem areas are related to each other. The topics within the dotted line will be focused upon in order to achieve the research goals.

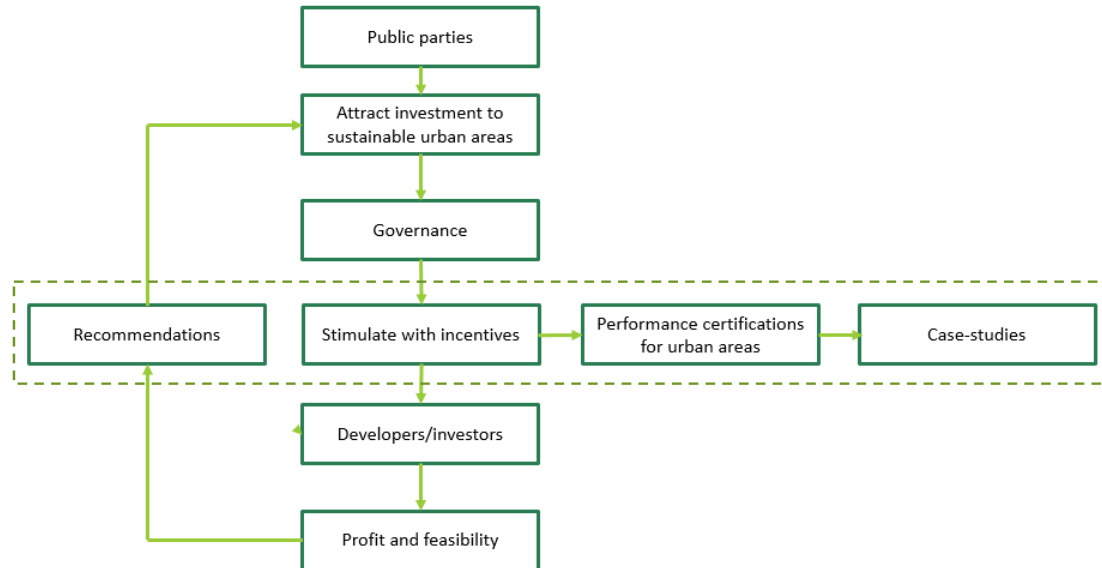


Figure 2- Conceptual framework (own ill.)

## KEY DEFINITIONS

In this section the context of the key definitions used throughout the research will be defined. With the term sustainability being widely used worldwide, it is important for the research to clarify its meaning.

- *Sustainability*: the popular definition of sustainability based on the three P's is also applied in the context of this research and is chosen because of national and international one of the most popular methods. People, Profit and Planet address the societal, economic and environmental factors concerning sustainability and to find a harmonious balance between these factors in which the earth can remain livable and functioning for the future generations. This last part reflects the Brundtland definition with regards to sustainable developments: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Dutch Green Building Council, 2012).

In order to talk about sustainability within the built environment, a fourth P has been added by Duijvestein (Van Der Horst, 2010). This fourth P stands for Projects, but to avoid confusion, the term Space will be used instead. Various themes can be attached to the 4 Ps. People can be for example: well-being, health, freedom/choice, social cohesion, employment and safety, Planet: energy, water, material and mobility, Profit: revenue, affordability and feasibility and Space: spatial quality, relation between scales and aesthetics.

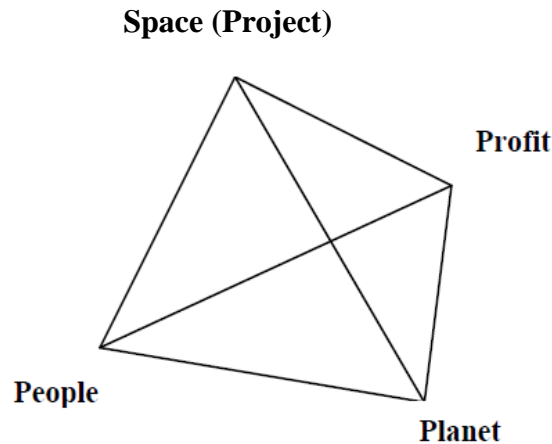


Figure 3 - The four Ps (adapted from: Duijvestein, 2009)

- *Urban area*: an urban area can be defined as an area with buildings, public space and infrastructure. Within projects, physical boundaries can be set by market parties in order to define the size of the area.
- *Sustainable urban area development*: the advice group Gebiedsontwikkeling (Dutch Green Building Council, 2012) gives the following definition of sustainable urban area developments: “Sustainable urban area development is a process-oriented urban development in the most favorable way for interested parties (social sustainability), the environment (ecological sustainability) and prosperity (economic sustainability), and in which the spatial and aesthetical qualities are an integral part of the process (Dutch Green Building Council, 2012).  
Combined with the definition of urban area, a sustainable area is as follow: a location, which is limited by physical boundaries, where a balance is sought between the economic, social and environmental aspects. During the sustainable development of this area, added-value is created by integrating functions with collaboration of different parties (Gorlee, 2014).
- *Incentive*: an incentive is something that motivates an individual to perform an action. These can be internal (intrinsic) or external incentives.
- *Benchmarking*: the process of comparing one's business processes and performance metrics to industry bests and best practices from other companies.
- *Added-value*: an element which includes functional and social benefits, as perceived by end-users, relative to the competition. These result in benefits for the private parties (De Chernatony, 2000)
- *Governance*: A system’s capacity to organize collective action toward specific goals (Hillier, 2002).

## PROBLEM STATEMENT

The previous sections have shown that the current governance instruments have been slow in achieving the targeted sustainability goals for cities, facing both regulatory and market barriers (Van Der Heijden et al., 2015). Both the public and private parties have their own interests when it comes to developing sustainable urban areas and this mismatch in interest is causing that investors are not attracted to sustainable urban development.

Divided between the three domains explored during the problem analysis the problem statement is as follow:

*Governmental parties are trying to increase the sustainability level in urban areas (Interview 1), however so far the slow rate of these projects have shown that developers and investors are not interested (Interview 2). Incentives which can be of added-value are needed to make sustainable urban developments attractive to private parties (Interview 3).*

Different types of barriers towards sustainable urban areas have been mentioned from the private parties' side. The social, environmental and technological aspects of the investment are clear and well-known, however it is largely the political and economic aspects which are causing the barrier. Governmental parties have to seek better understanding of the interests of developers/investors in order to identify how to steer towards more sustainable urban developments. With a better understanding of the interests can be explored in what ways private parties can be incentivized to invest in sustainable urban area redevelopments. Within this area, the role of certificates like BREEAM will be the main focus.

## RESEARCH QUESTIONS

Based on the problem statement and research goals, the following main research question has been formulated:

### **How can governmental authorities stimulate developers and investors to invest in sustainable urban area development?**

The following sub questions have been defined in order to answer the main question:

1. How is the current governance structure set up to achieve sustainable urban areas?
  - a. What role and tools are currently applied by public parties to stimulate investments in sustainable developments?
2. What are the main interests of developers and investors in regards to sustainable urban area development?
3. How can assessment tools incentivize sustainable urban developments?
  - a. How can these certificates meet the interests of developers and investors?
  - b. How can governmental authorities be facilitating in stimulating investments in sustainable urban re-developments?
4. Which insights can be gained by exploring case-studies abroad?

## EXPECTED RESULTS AND SCOPE

In this section an indication is given about possible outcomes of the research. The expected outcomes are so far based on the literature review and the explorative interviews. Note that this section does not discuss the expected findings and conclusion, but instead focuses on the scope and expected recommendations for further research which fall outside of the scope of this research. This will help to maintain focus on the main scope of the research and can also be guideline for the conclusion, reflection and further recommendations.

- With many existing stimulating tools, the research is constraint to focus on one main tool; in this case the performance certifications like BREEAM and LEED. By focusing on certifications as the main stimulating tool, the scope of the research becomes more narrow. However, literature and interviews about assessing the level of sustainability within a project have their critics. For one, sustainable certificates might not always mean that an area is sustainable. So questions and concerns can be brought up about how to truly assess if an area is sustainable and whether certificates are the best way to measure this. This leads to the second point which can result in a recommendation for further research; which is to optimize current assessment tools in order to make sustainable urban area developments more attractive based on the findings of this research. Other critics can also be related to the comparison between BREEAM and LEED (and others) and the relative new introduction of certificates for the urban scale- which means that findings are limited.
- Relating to assessing sustainability levels; a trend which arose mainly from the explorative interviews with some of the market leaders is a shift from sustainability towards health and well-being. With ambitions and demand to make sustainability a norm, it will lose its added-value to a project. Whereas before sustainability certifications for projects were used by these market leaders to distinguish themselves from competition and to give their project a unique selling-point, the increasing adoption of sustainability certificates forces them to start looking for the new competitive-edge; health and well-being. Some have even mentioned that a certain point will reach where sustainability becomes so integrated in all a projects and matter-of-fact, that the need to apply for certifications like BREEAM and LEED become unnecessary. And interestingly, assessment tools for well-being have already been developed in the USA and are entering the Dutch market as well. So is the International WELL Building Institute initiated with the goal to assess, certify and monitor the features of the built environment that impact human health and well-being- ranging from quality of food to quality of air (Grauerholz, 2016). Noteworthy is to mention that in Tampa, Florida the first WELL-certified city district has been announced.  
Thus with the introduction of this next theme, a further research recommendation could be explicitly focused on exploring whether certificates like BREEAM/LEED run the risk of becoming outdated or if they have to extend / collaborate with WELL Building Institute in order to remain relevant.
- Other criticism might be regarding the generalization of the findings as one of the hurdles highlighted is that urban areas vary greatly from size, shape and functions. So far, most sustainable urban developments are business parks and not mixed-use or residential. Thus it can be difficult to validate the findings and/or make comparisons.
- As real practice projects for sustainable redevelopments are still rare and certifications for specifically re-development are still in process, the focus on re-development cases will likely fall outside the scope of this research. Not to mention that attracting investment to new sustainable urban areas already face

enough challenges without the added layer of complexity of re-development. Yet, findings of this research might serve as a good starting point for further research about sustainable re-developments.

At this stage of the research these points are expected as further recommendations and help guide how to take criticism points into consideration during the collection of the findings.



Figure 4 - WELL certified city district in Tampa, Florida (source: WELL Building Institute, 2016)

## RESEARCH DESIGN & METHODOLOGY

With the main research goal and question of qualitative and explorative character, mainly a qualitative approach will be used to design the research. Qualitative research can be described by the following three aspects: an induction approach which is based on the generation of theories, explores ways in which individuals make interpretations and a view of social reality as a constantly shifting emergent aspect of individuals' creation (Bryman, 2012). Furthermore, this approach reflects an interpretive research paradigm, where the perception from actors in practice form the grounds for reality (De Lange, Schuman, & Montesano Montessori, 2011). Yet, distinguishing between quantitative and qualitative designs is highly criticized as a research is almost never completely the one or the other (Bryman, 2012). Therefore, even when the research is mainly carried out with qualitative methods, nonetheless it will also be influenced by quantitative elements. So as result, both quantitative and qualitative measures are necessary to formulate a proper answer to the main research question.

Research designs which are applicable in this category are qualitative interviews, both semi-structured or open, and collection of and qualitative analysis of texts and documents. With regards to the case-studies a cross-cultural multiple-case study fit well into the qualitative strategy and is suitable for gaining insights and making comparisons for theoretical reflections (Bryman, 2012). Of course proper case-study selection is important as well.

With the research strategy being qualitative, the actors' perception, role and process will receive an important role in the research, which fits well with the character of the research goal and question as it explores the relation and behavior of actors within the development.

In the following sections the methods for desk review, interviews and case-studies which are fitting to the qualitative strategy are discussed.

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## DESK RESEARCH

Studying and analyzing literature is an essential part of carrying out academic research. Reviewing literature is necessary in order to gain a better understanding of the theoretical background, concepts and scientific gaps relating to the research topic (Kumar, 2011). A proper literature review brings clarity and focus to the research problem, it enhances the use of research methods and enables contextualization of the findings (Bryman, 2012). So before the research goal and questions are defined, exploratory literature review is needed to help structure the problems and goals clearly. After these have been defined, a more extensive literature review will follow up to form a solid basis for the theoretical framework. Furthermore, the latter literature review is more specific and focused on the research goal in comparison to the exploratory one.

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## INTERVIEWS

The literature review can be a good starting point for defining the research problems. However, to obtain more in-depth and practical information about the problem, interviews with experts can be carried out. For this research unstructured and semi-structured interviews have been opted for. To support the literature findings for the research problem, unstructured interviews have been done. Unstructured interviews are to converse about a certain range of topics and barely include questions and are very similar to a conversation (Bryman, 2012). This type of interview fit will within the explorative and qualitative character of the research design, especially during the initial phase of the research in order to reflect the findings of the literature with information from experts. As the research goes on to become more definite, semi-structured interviews will be planned with experts and/or actors involved. The semi-structured interviews offer the possibility to keep the boundaries of the interview somewhat undefined and therefore allows rooms for theories to emerge out of the interview (Bryman, 2012). Suiting the theory-generating concept of this research, semi-structured are well-appropriate, because these interviews can offer in-depth analysis while maintaining a sense of flexibility.

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## CASE-STUDIES

As part of the research methodology case-studies will be used. A case-study can be described as the examination of an example of real practice phenomenon (Van Thiel, 2010). Case-studies are used as a method to gain a deeper understanding of a real practice project. The comparative nature of case-studies also fit within the qualitative research design. Comparing case-studies can be defined as: “studying two or more contrasting cases, using more or less identical methods” (Bryman, 2012). Within the framework of this research the findings of the case projects will be contrasted based on the different governmental role and stimulating tools used within sustainable urban developments. Comparing case-studies are appropriate for both quantitative and qualitative research designs.



In the following figure the complete research design and methodology are illustrated.

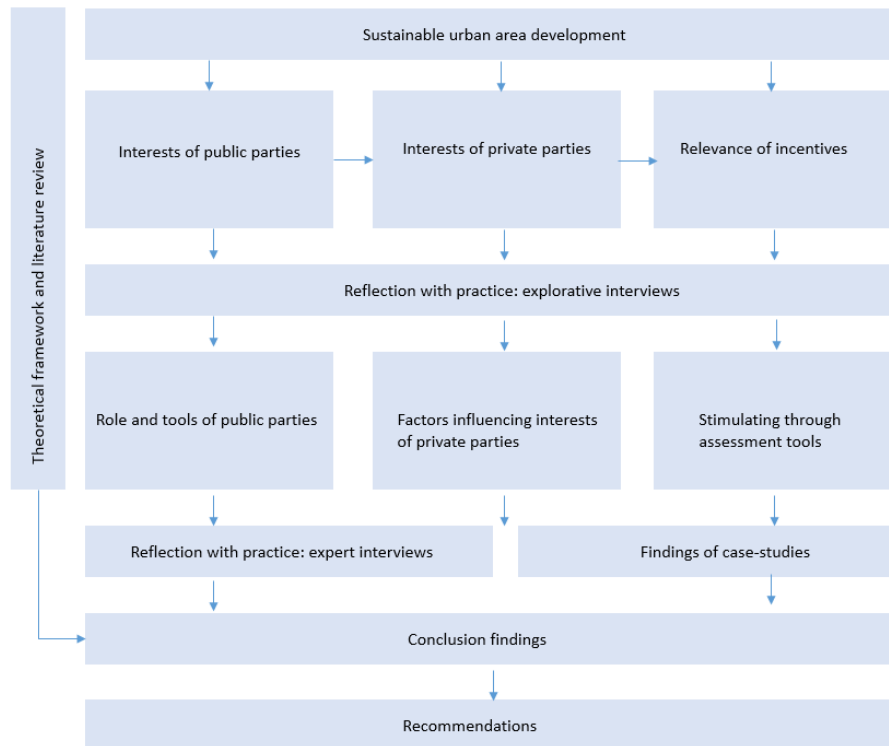


Figure 5- Research model (own ill.)

## CASE-STUDIES SELECTION

In this research, case-studies will be selected in order to gain more insights about urban area developments which have been certified by for example LEED or BREEAM as a sustainable urban area. By studying international cases, additional findings can be collected in about the role of the government, private parties and stimulating tools within sustainable urban developments abroad. Analyzing the case-studies can include documentation about the case projects, semi-structured interviews with experts and other actors involved and possibly a site visit.

With limited amount of existing certified sustainable urban area developments, the case-studies list include all the possible projects found so far. Further research into the case-studies projects on this list and perhaps additional ones which are added later, has to be done before finally selecting the definite case-studies. Furthermore, depending on the depth of the case-studies and the time constraint of the research, one, two or multiple case-studies will be selected.

In order to facilitate and validate the definite case-study selection, a set of pre-defined criteria is made. The goal of the case projects is to analyze the role and interests of the public parties, private parties and incentives within the project and how that differs from sustainable urban area developments in the Netherlands. In order to make comparisons it might be best to select one Dutch project and at least one international project.

The cases will be selected based on the following criteria:

- The project is defined as an urban development (scale of neighborhood, district or city)
  - All selected cases have to be of comparable scales
- The project is in-process or has already received a BREEAM or LEED (or other certificate types) certification for its sustainability.
- The project includes participation of public and private parties
- The project can be an existing area or on new land
  - All selected cases have to be from the similar starting points- so either existing or new
- The project is in a country where sustainability ambitions for urban areas are set up
- The project can be mixed-functions or focused on one type of functions- for example business
  - All selected cases will have to be from the same type of function
- The projects are incentivized whether by certifications or other tools

As research on this field is relatively new and urban area developments greatly vary in shape and size, perhaps the case-studies selected will not be completely comparable based on the criteria above.

The requirements mentioned above have led to the following list of possible case projects:

In the Netherlands:

- **Atlaspark (Afrikahaven):** A distribution and logistics centrum in Amsterdam which will obtain BREEAM 4 stars in August 2016.
- **Dordtse Kil IV:** A business park in Dordrecht focused on obtaining a BREEAM certificate for this area.
- **Ecommunitypark:** A business park in Oosterwolde aimed at increasing the work quality by developing a sustainable area.
- **Lelystad Airport Business Park:** A business park in Lelystad in the surroundings of the airport focused on creating a sustainable area.
- **Locatie Valkenburg:** A project consisting of residential, business and leisure functions which has started a BREEAM certification trajectory for sustainable urban development. It will be the first project in the Netherlands which includes residential functions for this type of certification.
- **Schiphol Trade Park:** This business park aims to become the most sustainable one within Europe. They have obtained the BREEAM certificate of four stars for urban development.

International:

- **Songdo International Business District, located in Incheon, South Korea:** Widely recognized as the world's first greenfield, sustainable "smart" city. Since construction began just over 10 years ago, it has become home to nearly 50,000 residents, more than 1,300 retail and hospitality businesses and numerous international corporations and NGOs, such as the Green Climate Fund, World Bank Korea and various United Nations agencies. Songdo IBD was designed to be a cutting-edge example of sustainable city-scale development, and by extension, a model for future deployments of LEED at scale.



- **Masthusen, Malmö, Sweden:** A mixed-use development located in the Western Harbor of Malmö, Sweden. The developer, Dilligentia, has achieved an interim BREEAM Communities certificate with an 'Excellent' rating for the initial stages of this masterplan. This is the first certified BREEAM project outside of the UK.



- **Castleward, Derby, UK:** Castleward is a 12.1 hectare brownfield regeneration site in Derby currently undergoing redevelopment to create a new community of sustainable homes and businesses. The development is a joint venture between Derby City Council and a private partner, Compendium Living, a company jointly owned by housing developer Lovell Partnerships and social housing provider The Riverside Group.



- **Sheffield Housing Company developments, Sheffield, UK:** Three developments were certified under BREEAM Communities at the request of the Sheffield Housing Company: Norfolk Park, Shirecliffe and Falstaff. The BREEAM Communities scheme was used as a specification of the quality requirements from the council through its delivery vehicle set up in 2011, the Sheffield Housing Company.

- **Urridaholt, Iceland:** The Urridaholt project is the first international project to achieve a final certification under BREEAM Communities 2012 and the first masterplan in Iceland to receive BREEAM Communities certification. It is a 100-hectare development that has achieved an interim certification. The local plan for the North side phase 2 is the first of the phases in Urridaholt to achieve a final certification, and did so with a "Very Good" rating.



- **Brooklyn Basin, USA:** Brooklyn Basin is the first certified LEED v4 for Neighborhood Development: Plan. This groundbreaking enterprise will consist of 3,100 homes, 200,000 square feet of retail, 32 acres of waterfront parks and two marinas. When complete, it will provide residents in the city of Oakland access to a significant part of its shoreline currently closed to the public. Brooklyn Basin will house up to 6,000 residents, and create more than 10,000 jobs.



- **MediaCityUK, Manchester in UK:** MediaCityUK is a long-term development situated on a huge waterfront site at Salford Quays, just a few minutes from central Manchester.
- **San Francisco's Shipyard District**
- **Twinbrook Station, Rockville, Maryland**



## LITERATURE REVIEW

The literature review will be mainly carried out by desk research. As the research consists of the three domains: interests of public parties, interests of private parties and the stimulating incentives, the key authors and domain scopes will also be divided within these three groups. Below the figure illustrates a model of the literature review. The findings of the literature review are discussed in chapter 4. Naturally, during the course of the research more authors will be added.

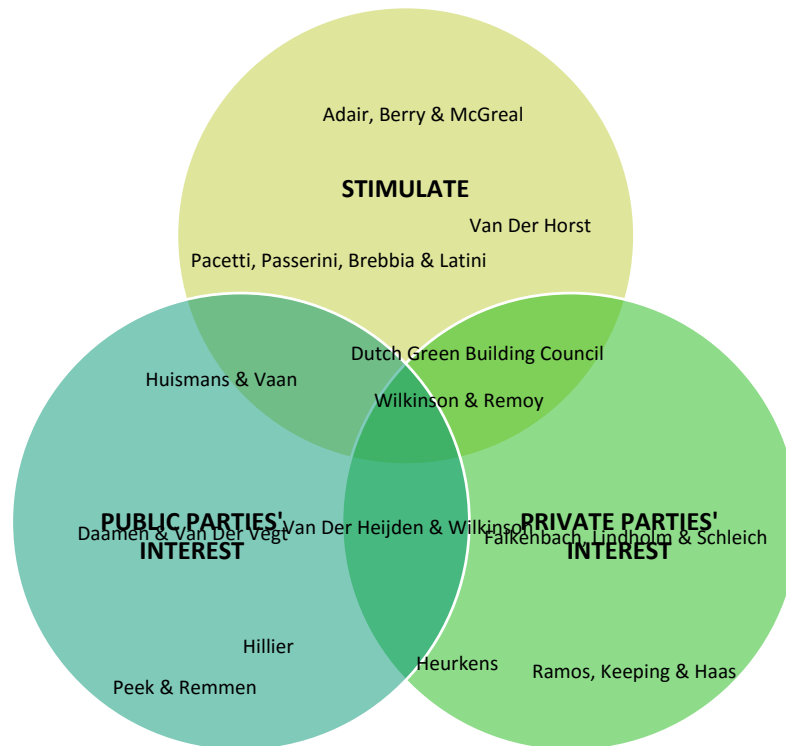


Figure 6 - Model of literature review (own ill.)

## PROVISIONAL TABLE OF CONTENTS P4/P5 REPORT

A provisional table of contents is set up for the final report at P4/P5. This table of contents is not yet definite, but it functions as a guidance for setting up the final report. Moreover, its purpose is also to be used as a tool to check if the research does not deviate too much from its original structure. The preliminary table of contents for P4/P5 can be found below.

<b>Cover page</b>	<b>5. Interests of the Private Parties</b>
<b>Colophon</b>	5.1 What advantages do private parties see in sustainable urban area development?
<b>Preface</b>	5.2 What disadvantages do private parties see in sustainable urban area development?
<b>Abstract</b>	<b>6. Stimulating Tools in Sustainable Urban Developments</b>
<b>Table of Contents</b>	6.1 How can assessment tools like certificates incentivize developers and investors?
<b>1. Introduction</b>	6.2 Which tools should governmental authorities use to stimulate investments in sustainable urban areas?
1.1 Motivation	<b>7. Case-studies Abroad</b>
1.2 Relevance	7.1 How do governance structure?
1.3 Problem Definition	7.2 What stimulating tools were implemented? By who?
1.4 Research Goal	7.3 Lessons from case-studies
<b>2. Research Design &amp; Methodology</b>	<b>8. Conclusion</b>
2.1 Problem Analysis	8.1 Conclusion about role of governmental authorities
2.2 Problem Statement	8.2 Conclusion about interests of private parties
2.3 Research Goals	8.3 Conclusion about how incentives can stimulate sustainable urban developments
2.4 Conceptual Framework	<b>9. Recommendations</b>
2.5 Key Definitions	9.1 Recommendations for role of governmental authorities
2.6 Research Questions	9.2 Recommendations for interests of private parties
2.7 Scope and Expected Results	9.3 Recommendations for how to use incentives to make sustainable urban area development attractive
2.8 Research Design and Methods	9.4 Recommendations for further research
2.9 Literature Review	<b>10. Reflection</b>
2.10 Case-studies	10.1 Validity and generalization
2.11 Planning	<b>11. Reference List</b>
<b>3. Literature Review</b>	<b>12. Appendices</b>
3.1 Sustainable Urban Developments	
3.2 Interests in Sustainable Urban Developments	
3.3 Assessment Tools for Sustainable Urban Areas	
<b>4. Current Governance Structure</b>	
4.1 What role do the Dutch governmental authorities take within sustainable urban areas?	
4.2 What tools are currently used to stimulate private parties?	

## PLANNING

The following two sections about time schedule and list of interviewees will give a global outline about the framework for the following months of the research. Due to the tight schedule, it is important to stay on track.

### LIST OF INTERVIEWEES

The following table gives an overview of the explorative interviews and which interviews could potentially also be interested for the research proposal. A follow-up list of potential in-depth interviews for during the research will be made once the research proposal is (almost) complete.

<b>Organization</b>	<b>Person</b>	<b>Function</b>	<b>Location</b>	<b>Date</b>
Royal Haskoning DHV	Jos Schild	Advisor Sustainable Development Expert and assessor BREEAM-nl Urban Area Development	Rotterdam, Arnhem	10-05-2016
SWECO	Fred Bruijn	Senior advisor sustainable energy projects	Utrecht, Rotterdam	23-05-2016
CBRE	Pieter Diederik and Tim Habraken	Real Estate Consultants (different backgrounds)	Amsterdam	24-06-2016
ING Commercial Bank	Mario van Teijlingen	Global ING coordinator Sustainable Real Estate Finance,	Amsterdam	20-05-2016
OVG Real Estate	Just Pereboom	Head of Capital Markets	Amsterdam	07-06-2016
Dutch Green Building Council	Maarten Dansen	Senior Project Manager BREEAM	Rotterdam	01-06-2016
Delta Development	Coert Zachariasse	Interviews previous students		

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## TIME SCHEDULE

The research was initiated in February 2016 and is planned to be carried out until January 2017. During the first five months the focus was on defining the topic and problem and translating these into a research proposal. In the following months the research will be carried out and findings will be collected in order to answer the main research goal. The figure below illustrates the time schedule.

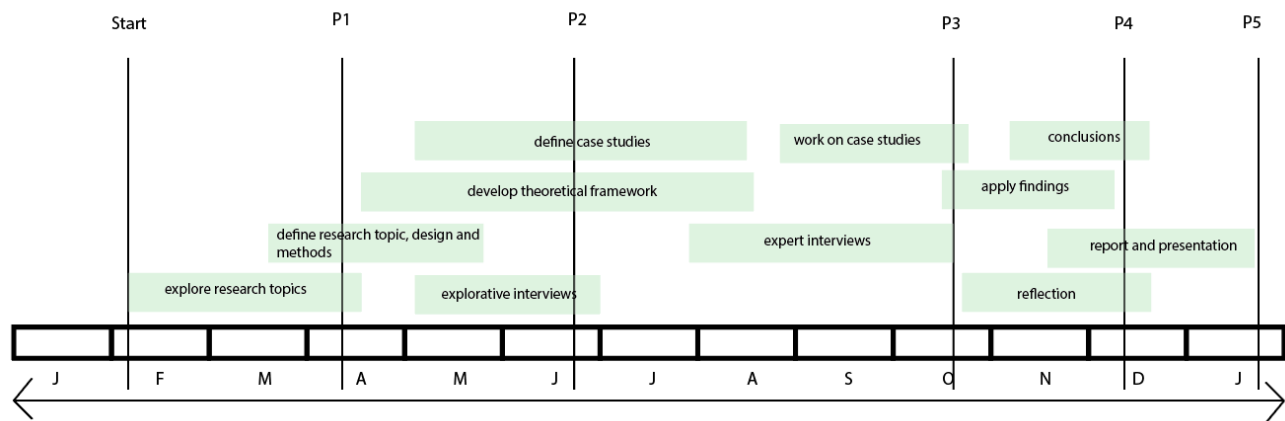


Figure 7- global research scheme (own ill.)

## CHAPTER 4: THEORETICAL FRAMEWORK

### THE NEED FOR SUSTAINABLE URBAN DEVELOPMENTS

One of the first questions which can be asked is why there is specifically a need for sustainable urban areas. One of the first arguments which can be given is that more than half of the world's population now lives in urban areas and with the continuation of urbanization and climate-change, urban re-development can be significantly shaped in the decades ahead. These problems can be effectively addressed if communities and cities become more sustainable (Council, 2016). Thus green areas are an integral part of solving the environmental challenges facing the planet.

Also in regards to value, the urban area plays a significant role. Function, public space and quality buildings will lead to overall benefits for the surroundings. Solely focusing to green buildings is insufficient to guarantee the sustainability of the built environment (Venou, 2014).

So with cities growing to become bigger than ever, sustainable urban development is considered one of the critical issues for the 21st century (United Nations, 2002). By the year 2030 it is expected that 60% of the population will live in cities. This means that cities and their residents will get an increasing role to play in the transition to a more sustainable world. Cities only occupy 3% of the total earth's land, but they also consume 75% of the global energy and they are responsible for 80% of global greenhouse gases. Still, cities can be sustainable and by pursuing more sustainable urban developments, cities have a good potential to affect the global level of sustainability (Taylor, 2012).

Now put in the perspective of sustainable urban areas; sustainable urban developments can have direct and indirect effects on the value of the buildings. Unlike with the building scale, it is not just solely about the hardware, but also about the software; the facilities and services in the surroundings, the long-term perspective, the mix of different functions, the aesthetic quality, social security and many more (Zachariasse, 2015). Because of this holistic approach on the urban level and the integration of the entire surroundings, many benefits can be found in sustainable urban development.

Contributing to the benefits of scale is that even though cities are largely responsible for the energy consumption and gas emissions, they also have the potential benefits in ensuring that infrastructure, services and technology to reduce environmental impact could benefit from increased concentration and economies of scale (Dixon, 2011). So cities are both the cause and victims of the environmental impact they make and dealing with this challenge together with socio-economic pressures, a solution can be found in the urban scale itself. Sustainable development not only applies to buildings, but also neighborhood, city, regional, national and global scale. Too frequently society's thinking has failed to treat the built environment as spatially connected and complex (Pinnegar, Marceau, & Randolph, 2008). Here the complexity of infrastructure, spaces, places and communities are combined with the urban form and function in order to be connected. Based on this perspective, a focus solely on buildings lead to the strategic focus (Pinnegar et al., 2008). Despite the challenges, urban areas can and should address the sustainability issues because of the collective benefits this generates for the residents and area as whole through direct economic impacts (Bai, 2007).



The Dutch Green Building Council has set up how sustainable development can be of added-value to both public and private parties:

Public parties:

- Contributes to achieving the sustainability ambitions
- Sustainable urban development increases the life span of the built environment
- Attention is paid to creating a livable and pleasant work and living area
- The livability level increases
- Improvement of the business climate

Private parties:

- Qualitative improvement of the area; which further leads to higher productivity, less illness and increase livability
- Increase in the economic value
- Contributing to the sustainable image
- Opportunities for new markets
- Reduction of energy and material costs

At last Dutch Green Building Council states 'green' as business climate factor. Countries and regions are competing with each other to attract foreign investment and companies as these can increase production, job employment and new knowledge. A green area can distinguish areas from each other and appear attractive for business.

Now that a case has been made for the importance and benefits of sustainable development, the following section will look into why there is a need to certify the sustainability performance of these urban developments.

## THE NEED FOR SUSTAINABLE URBAN AREAS CERTIFICATIONS

From the importance of sustainable urban area developments arises the need for how to assess the sustainability levels of an urban area. Tools for certification and assessment of buildings have increased over the last years, but assessment of individual buildings is not enough. A combination of assessments including all the elements of urban area like neighborhood, public transportation, services, built environment and public space must be done using just one tool (Venou, 2014). So a growing awareness of this demand has led to the development of assessment tools for sustainable urban areas (Kouloumpi, 2012). The purpose is to look beyond the scale of buildings and to consider entire communities or cities. Assessment tools and certifications address the problems cities face in regards to climate change.

Certifications for sustainable urban areas have been developed in response to demand from the market. Municipalities, developers, investors, designers, advisors, utility companies and others had a clear need for a uniform definition of sustainable urban area (Dutch Green Building Council, 2012). By using one tool during the development process, the parties can speak the same language, thus reducing the risks of miscommunication and thereby increasing the success rate of the project. Moreover, the certification itself can be used as an instrument to generate publicity and to stimulate benchmarking by asking who is the most sustainable. The certification allows the parties involved to get a better insight into the sustainability performance of an area.

The added-value of such a certificate for urban areas can vary. For governmental authorities like municipalities, provinces and government it can serve as a confirmation for having realized the set green ambitions, or it can serve

as a social responsibility towards the community. For private parties on the other hand, such a certification can be a nudge to investors, end-users and clients- or it can contribute to an intrinsic need to develop more sustainable (Dutch Green Building Council, 2012). Moreover, these certifications can put a face on sustainability, because it is about people and places and building better places to live (Dalzell, 2016).

The main target groups which can benefit of these certifications are municipalities, developers and investors and ultimately the end-users (Dutch Green Building Council, 2012). Moreover, before certifications of urban areas it was difficult for all parties involved to understand the benefits of a sustainable community, but with the tool it become clearer (Dalzell, 2016). Now it can be measured and evaluated. Thus, certifications serve as a quantitative tool to measure the concept of sustainable urban area developments. And what makes the certificates differ from buildings codes, is that the building codes show minimum achievements for sustainability whereas the certificates rate the developments according the maximum level of quality achieved (Pacetti, Passerini, Brebbia, & Latini, 2012 & Latini, 2012).

Another reason to certify sustainable urban development is marketing (Zachariasse, 2015). It is a great instrument to stand out from the competition and increase the market value of the project. However, Zachariasse (2015) mentions that it needs to be used properly and not just like a recipe book where parties are trying to get a maximum amount of points for as little costs as possible, reducing the room for innovation. Naturally, there are parties like institutional investors which want to dedicate minimum time and effort in getting their project certified for their clients, in that case such an objective checklist for sustainability facilitates the process for the investor.

On the social side, Zachariasse mentions that you get more recognition from the social and institutional landscape. With a certified project, the value increases to added-value and that truly works. This added-value makes not only your clients enthusiastic, but also support from the government can be gained. Especially for investors certification is becoming a standard; the project will not be taken seriously anymore if it is not assessed to be sustainable.

Thus, certificates like BREEAM can add value by:

- Creating international recognition
- Communicating in one universal language
- Making the sustainable performance tangible and objective
- Analyzing and improving the sustainability level in an area
- Marketing and competitive edge
- Enhancing sustainable image
- Increase support from society and governmental authorities
- Benchmarking

With sustainability already being a complex term, assessment tools can clarify what it means for a project and how to translate it to measurable elements in order to create added-value for the area. Another noteworthy benefit of certifications is that the ambitions for a project can be set clear when the aimed degree of sustainability is known (Baarda, 2006).

Moreover, also for the involved actors certifications can be a good way to make clear to others that the ambitions for the development are high and that thought will be put into the quality of the urban area (Gorlee, 2014).

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### EXPLORATIVE INTERVIEW 1

Explorative interview with Jos Schild - Advisor Sustainable Development -Expert and assessor BREEAM-nl Urban Area Development from RoyalHaskoningDHV

Duration: 2 hours

Date: May 10, 2016

Place: RoyalHaskoningDHV Rotterdam

#### Summary

Interesting first remark: the view outside here at our office in Rotterdam is not nice- you look out on the high way. Our office in Arnhem however is beautiful. It's surrounded by green and I just feel much more at ease there.

When defining the 'urban area scale' and/or which party is responsible for what:

Public and commercial space involve two parties with such different interests. The public party wants a public space to be developed which will enhance the social and environmental quality of the area, while the private developer/owner wants to use the space most efficiently as possible.

Currently this is where one gap/challenge lies: how to bring these two parties about these two types of spaces together to create a sustainable area which everyone is happy with.

The demand for sustainable dwellings is already present. Developers/investors are well aware that they will get out their investments and that there is enough demand in this sector.

The role of the public authorities is changing to becoming more facilitating indeed. Yet, they have all these ambitions they would like to achieve. But they should set some clear requirements about how they want to steer market parties. Because they do possess strong, influential tools to steer the market in a certain direction, if they really want to...

First of all, I think all these EPC ambitions and CO2 goals are not appropriate. Setting an EPC-norm or having tenders where lowest EPC-norm is reached, is not the solution. One reason is because we don't even know whether the EPC calculations are certain. There's a lot of uncertainty about these calculations. Sometimes you would find in practice that a building which supposedly has less EPC is using up more energy than another building which is not even certified with an EPC or has a higher one. Also, to just build a low EPC house/office is not easy as you have to consider if people for example really want to live/work in a house/office where the windows can't open (or only a few) because that will save energy. If you look at the market, most owners are just happy contributing to sustainability by having double-glazed windows. They would not like an energy-efficient house/office to change the level of comfort they feel.

Which brings me to a crucial matter regarding sustainability: it is mainly about influencing behavioral change. Sure, our awareness regarding sustainability has increased a lot over the past years, but being aware and behaving a certain way are two different things. Finding out how to influence parties' behavior regarding sustainability is definitely a challenge. Not just talk, but act.

Now the governments can enforce certain laws in order to reach their ambitions, but just setting stricter rules will not lead to the wanted results. You cannot just enforce these types of rules. Especially not to market parties. You need to have support.

What the governments should do- whether they are setting these ambitions or not- is to behave themselves as role-models. They need to be the example in order for market parties to follow. The municipality of Haarlem does a tremendous job at this. They take the initiative when it comes to building a sustainable city; they have sustainable specialist in their teams, they have budget for sustainability and they go out and actively search how to work best with private parties.

This is definitely necessary as there is a field of tension between the one with the wallet and the power of the governmental authorities (one strong tool is land ownership).

Governments should seek how they can fill in the positions of missing links between the different levels of parties and interests. That is how they can best act as a facilitating government.

The wish to develop sustainability or to increase sustainability within an existing portfolio is something that mainly comes from within the company. It is an internal driver, often coming from someone in the company, who really wants to change or increase the face/image of the company by contributing to the society. Or someone who just has personal interest in sustainability and happens to be in a managing position. These are more likely also the younger ones.

This general drive for increasing sustainability is there to a certain extent. It's happening on the level of buildings for sure. Especially the major real estate companies are realizing that the demand of sustainability is becoming more and they will need this to be part of their portfolio in order to keep growing in the future.

This drive is much less on the urban scale level though. Urban areas are more abstract and thus more complex. The definite starting point of an existing urban area is for one, very difficult to decide. Making it hard to use the appropriate set of tools. Moreover, with urban areas (also with different owners), makes it hard to set the boundaries of responsibility or who benefits from the investments in the sustainable urban area.

Long-term commitment thus can be a great way to incentivize parties. This can reduce the challenge of incentive-split and allows private parties to invest and earn back yields themselves. At this moment that is still unclear, because investors are less incentivized to invest in a high-quality space when they are not the ones being able to benefit from it later on. This forms one of the biggest barrier in investing in sustainable urban areas.

Questions like who is responsible for what and who is benefitting from a type of investment become more important.

Maintenance and management are getting an increasing role as a way to reduce the incentive-split. We might be leading more towards park management.

Park management (mostly commercial though) is a great tool to get investors/owners together to achieve a goal, but what is more interesting about park management is that quality norms and marketing tools seem to be

more attractive ways to incentivize parties to these types of investment. Sustainability will follow from that. The location of the community will generate most interest and make it attractive.

A great idea would be to have like a VvE (owners' association) on an urban level. Why not? The private parties can collectively steer an area with their shared interests. We have it on building level, why not urban?

Location is primarily more important. If you can make the location attractive, then on a building level you will easily achieve attractiveness as well. But again here you could be dealing with split-incentives.

Another barrier of the urban scale is that the developments are much slower. The process is much more time-consuming. And private parties want to steer, including the maintenance and control, after having invested much time into a project. They would like to have more influence on the overall quality of their portfolio.

BREEAM certificates are used as a strong tool to increase the value of their real estate. It works great on building scale.

On urban level however BREEAM for urban areas is too slow. It is challenging to work as an integrated team.

As said before, defining the starting point of an existing urban project is difficult. Because these masterplans were likely made 20-30 years ago.

BREEAM for (existing) urban areas is often used as an incentive to monitor the process. In contrast with the BREEAM for buildings, BREEAM for urban areas is much more focused on the process instead of the end-result since the projects stretches out over a longer period of time. Plus, the process is more abstract.

An example where it is happening though is the Amsterdam Havenbedrijf. Partially also from an internal drive to change to a more sustainable company.

Important is for municipalities to have the right people and budget available to invest and stimulate sustainability. The energy agreement is not being reached. The ambitions have just been made, often by people who know very little about sustainability and don't have appropriate environmental backgrounds. The ambitions themselves are unclear. For example, we want low EPC, but what do you want to reach with that? They don't know themselves. We want more green. But what is that. They need to define these ambitions better to be able to translate them on a project level.

To stimulate different tools and rewards can be used. It doesn't always necessarily have to be financial tools. A reward or tool can also be a successful collaboration between public-private achieving a certain sustainable goal. This does good for the faces of both public and private sides, so there will be interest.

The organizational structure might also have to be revised. The ambitions often come from a higher, more abstract level (province/regional governments). But a municipality needs to be able to translate these on a project level and then even on a personal level (the actor's you are workingwith).

On a personal level the intrinsic value is one major driver. Secondly, but weaker driver, is the profile or image of the person or company.

Important as well is that the ambitions which are set from public side are well within time and budget constraints. The business case needs to be sound. For example, private parties are interested if they earn their investments rapidly (within 5 years). The government can seek ways to facilitate this.



Governments can also give discount on water / purification charges within an area. This way private parties will be incentivized to maintain quality and reduce their costs. MC Erasmus is good example. By focusing on reducing the use of water, they noticed that other types of operational costs were also reduced. But it is not clear if this was already calculated initially or if it was just a happy coincidence.

We come back to commitment. For private parties major revenues can be scored. But it is a difficult puzzle and there is definitely not just one solution. How to make maintenance interesting if they are being used by other parties and if consumers don't want to pay higher rent. Thinking about how to adopt leasing possibilities within real estate can be one potential solution.

Other interesting comments:

The technology like EPC and CO2 levels are not the starting point. Also the focus doesn't have to be energy. Sustainability is much more than energy and water. Happiness, quality, health and well-being and rate of employment are becoming major factors as well contributing to sustainability. Also have a technical sustainable building meeting the standards, does not necessarily mean the building is attractive to be in. Simple attributes like green, water and open and clean environment have major impacts on the behavior of people as well.

Sustainability itself is definitely a trending topic. But it actually has been discussed since the oil crisis. It's not as new as people think it is. And I think it will not be long before the word gets replaced by upcoming buzzwords such as healthy cities and environments. I think for the next 10-20 years that will be the main focus. And healthy places will need social and physical elements to intertwine.

Sustainability psychology is an interesting study; people need to become more aware about what they truly want to achieve when they set sustainable goals. Isn't the use and effect of sustainability, much more important than the product itself?

Municipality of Houten is addressing an interesting issue; they are focusing much more on end-users. Including the elderly.

Sustainability needs to be addressed on all scales: city, neighborhood-user.

There is a generation gap. Especially in municipalities this is important as they need people who are passionate about these topics to actively pursue them. But the same counts for private organizations.

Furthermore, always understand the need. Parties or users don't always have the need for BREEAM or to be sustainable. This is not necessarily a bad thing.

Also decide on the commitment. Companies back out when a crisis hits or when there is no more time to focus on sustainability. There is short term vs long term sustainability.

The one who has the wallet will remain the one who has most to say. Especially interesting when the market is becoming more private-led and governments have to steer. TRIOS Bank is an example.

## EXPLORATIVE INTERVIEW 2

Summary explorative interview with Mario van Teijlingen - Director International Business ING- from ING.

Duration: 1 hour

Date: May 20, 2016

Place: ING Commercial Banking Headquarters, Bijlmerplein 888 Amsterdam

“I want to start off by explaining the two types of professional investors we work with here at ING. The first kind is the institutional investor. They have a very long time horizon and are looking for stable, low-risk investments. Over the past years, institutional investors have taken a bigger interest in investing in real estate. The second type are the non-institutional investors. These are private, sometimes family-owned, independent investors. In the Netherlands there are a lot of these type of investors which hold a lot of capital.

The Sustainable Real Estate Finance finances. About 1-2 years ago they already started promoting sustainability by stimulating green buildings. In total they have financed about 50.000 buildings in the Netherlands, which means 50.000 building in their portfolio that they can possibly influence the level of sustainability. But they are not the only bank joining the green movement. The Nederlandse Bank has also been actively working on this issue and tries to inform private parties how dependent their economies and profits are of carbon.

I believe sustainability is the future. You cannot do nothing about it. I think within maybe 5, 10 or 15 years it will not be possible anymore to finance a non-green building.

For a company to join the sustainability movement it is important to assess first where you stand and then where you want to go. You have to be realistic and for us, our clients need to have a feasible business case they can invest in.

Our institutional clients are in general already aware of sustainability and are also taking measures internally. The bigger challenge is to convince the non-institutional investors to become more sustainable. Here at ING, together with a third party, we have developed a tool to help stimulate these parties. This tool performs a thorough scan of the investment and except just showing how much CO2 reduction is possible with a sustainable project, it also gives a detailed overview about the actual costs, revenues and time. By making this information clearer, the risks involved become lower for the investors.

From the 50.000 buildings which ING participated as a financier, 12.000 of these received an initial scan. After such an initial scan, a more detailed one is performed to give more accurate information regarding the investment. The initial scan can be used to give a quick overview of whether the costs of a sustainable project might be too high for a party. You have to be realistic that some investors will have the budget for sustainable budgets, but that others don't.

ING wants to bring more movement in this market by getting more of the non-institutional parties to invest in sustainable projects. The institutional parties need less stimulation; they have been active on this field and it comes from an internal drive to be more transparent and because they have a corporate social responsibility

towards the society. We see that assessment tools like GRESB are a great way to stimulate investors and to benchmark companies.

As for our tool that we try to introduce to the non-institutional clients; we have been trying to make it useful for our institutional clients as well. The last year or two we have financed many opportunistic foreign investment parties in Spain. Interestingly, energy certificates like BREEAM and LEED were not even used in Spain. Investors would only build up to the minimum sustainability requirements and not above that. What we saw was that the foreign investment parties really demanded these energy certificates as they are seen as a tool of transparency towards their clients. A similar situation occurred in Germany, where prior to the wave of foreign investment energy certificates rarely demanded. After demanded increased from these foreign parties, energy certificate labels became more widely adopted.

Except the sustainability labels, governments can also help to stimulate by taking on a more active role. Italy is a good example. Because of its rich portfolio of cultural sites, governments have to be more participatory and take on a more active role in the city's sustainability compared to other European countries.

Now of course, England is a front-runner on sustainable urban area developments. They have some great examples. But also some catastrophic ones, so it isn't always good in England.

More clients are becoming aware of the topic sustainability and ING wants to play an active role in this. This is because it will also benefit ING as they can offer the proper knowledge to their clients and hereby they can reduce the risk of the portfolio they finance. So being active in promoting sustainable investments is in their own interest as well. In order for clients to realize this, they have to go all-in to becoming sustainable. As said, it is done largely because of it's in their interest. Generally, they earn 1-2% profit of the projects they finance and sustainable investments can help secure or increase the value and reduce the risks of vacancy. Both factors which can affect their profit.

Internally, ING is aware that behavior and change management are important aspects as well to consider when going green. This is also a challenge as you have to have the right employees and knowledge about the topic. Sustainability trainings are now being given to the entire department.

So ING wants to actively stimulate their clients to invest in sustainable projects as well. But not all clients are open for this. They can resist. Especially, the non-institutional parties are difficult to bring on board. First of all, they are much less transparent and secondly they have less interest to be corporate socially responsible because they don't have to respond to anyone. Yet, ING is working on tools to more actively keep motivating the sustainable markets. These will be revealed during the PROVADA on June 7th. Events like this also helps shape the profile of ING as they are then able to market themselves as a green party. With things like green bonds, they are also able to monitor and publish how much they finance green activities. Representing themselves as a green party is largely because of the corporate social responsibility towards society.

At the moment ING is trying to prioritize which clients are best in position to start investing in sustainable buildings. Hereby it is important to know which clients have the budget here for. Naturally, the clients also have to have a drive to become more green. Often this means for them that the business case can be feasible.

A reason why energy labels are much more applied to new buildings instead of existing buildings is because of the costs of the label. If you put the costs of BREEAM label in relation to the total overall cost of a new project, it is relatively small so therefor attractive and more feasible. But the total costs of transformation project are in general

lower, so the costs of adding an energy label are then in relation much higher, making the investment less attractive.

One of the tools ING will present at the PROVADA is the 'carrot as stick' transformation tool. This measure acknowledges that by transforming you should receive more rights and/or lower price- making the sustainable transformation more appealing. ING also wants to introduce a hard rule by saying that if you don't invest in sustainable projects, the loan-to-value ratio will be lowered.

Naturally, ING only has a limited amount of tools they can implement as a bank to help stimulate green investments. The government could give more space to private banks by offering more fiscal benefits, but this is complicated of course. Other ways, better than giving out subsidies, is to let banks take over the financing in projects instead of governments.

Furthermore, a lot can also be improved by harmonizing the sustainability ambitions. Also outside of the Netherlands. The sustainable goals differ so much internationally; how can it be that EPC and CO2 reduction goals are so different. With a set of international investors as clients, this also forms a barrier. Because it costs a lot of time in the value chain- a lot of governance- when an investor has to deal with making projects sustainable in different countries. Each country has different requirements and goals and if we are all chasing the same goals this should be much less complex. I think a lot of improvement can be done in this area too. Ideally, on a global level. But for now, at least EU should have less differences between the countries.

Since a few years, ING does not participate anymore as a developer. Between 2008 and 2011 immense losses were made and the ING development department was closed. The participation of ING in urban area developments is also rare. There are just too many risks involved on this scale; especially when it comes to buying land."

### EXPLORATIVE INTERVIEW 3

Summary of explorative interview with Fred Bruijn– Senior advisor on the area of sustainable energy developments at SWECO

Duration: 30 minutes

Date: May 23, 2016

Place: SWECO

Rotterdam

"We offer our clients services on technical, organizational and financial levels. The challenge with sustainable projects definitely lies in the finance aspect; risks and profit are important decision-makers for the client.

Sustainability needs to be better supported with the help of subsidies. These can create profitability and thus become more attractive. Saving options are less interesting, because often they are less integrated to the primary functions of the business.

Many studies are being done on the 'new city'; where sustainability is key and not only because of energy, but because all lifecycles are being included too. The social aspects of sustainability are also more present here.

The municipality of Breda is a good example of a municipality which is trying to actively stimulate sustainable projects. They do their parts in bringing the necessary parties together to facilitate the process and they also make sure they generate enough publicity for the project. Sometimes external third parties are still needed; Energy Service Companies (ESCO's) are lately taking on this tertiary party role.

The municipality also made her own roof tops available for solar energy. This active behavior can also be found in how they are taking initiative and are also offering guarantee to investors. For investors this can mean a significant reduction of risks.

Other ways municipalities can help facilitate the process towards sustainable investments for investors is to shorten the time frame of adapting zoning plans. This is also seen as a hurdle.

For investors though, profit and trust remain two big factors in the decision-making process. A municipality can offer trust by being reliable, having a proper plan and guarantee. Another way is to offer subsidies; recently the SDE+ (Stimulerend Duurzame Energieproductie). The first round of application for this subsidy was so successful that the government is organizing a second round later this year. For the second round more budget will be set available too.

Another hurdle is the split-incentives. ESCO's can be one of the solutions within the energy efficiency area. We are noticing that nowadays there is a higher demand for a commodity instead of the actual product. To reduce these hurdles of split-incentives you should find creative ways of financing. Within the financing, the Total Cost of Ownership plays a large role. This needs to be attractive. So far, ESCO's are the most widely applied 'creative' financing way we offer our clients.

There is a vast amount of Dutch capital available here in the Netherlands to be invested in sustainable projects. Yet this is not happening. And definitely not on the speed that it should be if the sustainability goals were to be met. I definitely don't see us reaching any of those goals any time soon. The municipalities can take more active roles. I hear there are talks about the possibilities of introducing 'revolving funds' here, but so far they are only talks. No real actions. At least not I am aware of.

In regards to sustainable urban area developments, so far a lot is happening with leisure or business parks. Less with residential. We see a pattern developing, especially on old waste terrains. These new areas will be developed into self-provisional areas.

We see that investors often choose to just meet the minimal required level of sustainability in their projects. To go above and beyond the minimum it is important for the business case to have the different interested of the parties clearly outlined, define the total cost of ownership and make sure profit can be made. In the end, private parties need to survive in this market. That is their primary goal.

Tools like BREEAM and energias trias can also help to attract investors.

When it comes to sustainable technology, it can be too expensive or have too much impact on the end-users' behavior. We have been in situations where the government enforced the law and we got fined because of being unsustainable. That's also a way of doing things.

Investors themselves don't always have the adequate information about the costs and revenues of investing in a sustainable project. That's where we can come in and reduce that lack of knowledge of our clients. We act as the intermediaries.

Governments can also try harder to reduce the return-on-investment time frame. It depends on the type of investors which ROI they are interested in, but usually equity investors want a very short time frame; less than 5 years. An example to this solution is to bring the ROI within the subsidy time frame.

In summary, governments need to take more action if they really want to achieve these green ambitions. So far they only want to dip their toes in the water, but they don't want to swim."

#### EXPLORATIVE INTERVIEW 4

Summary explorative interview with Maarten Dansen – Senior Project manager at Dutch Green Building

Council Duration: 1 hours

Date: May 31, 2016

Place: Dutch Green Building Council Rotterdam

"We are currently working on a newer version for the BREEAM-urban area; one which is better suited for urban re- developments. The need to develop such a certificate is a choice of principal, because you want to promote more livable urban areas. Moreover, sustainable building cannot truly be sustainable if its surroundings are not sustainable. Hence, the need to develop an assessment tool for urban areas.

Municipalities are not really developing with this certificate. I think if they start doing the preparation work and say in advance that an area is going to be certified, developers will more easily join along in the development. Because then the preparatory work is partially done by the municipality.

Havenbedrijf Amsterdam is one of the few and recent examples of BREEAM-urban area. About 80% of the land is yet to be developed. We notice that in this case the BREEAM certificate is used as a marketing tool to make the area more attractive. By putting a label of high-quality and sustainability, the project becomes more special than others and will become attractive for buyers/tenants. Furthermore, developers and investors can promote themselves as being green.

The sustainability certificate for urban areas is much softer than BREEAM new-built or in-use. This is because it is much more difficult to compare urban areas. They are more difficult to measure on an absolute scale.

Sustainability in an urban area is not just about the usage performance of energy, but it is also about health, comfort, employment and other social aspects. These soft factors are difficult to quantify and to compare between urban areas. Especially since urban areas come in different size and shape. By certifying though, you can check if the involved parties have thought thoroughly about these factors of sustainability and they want to incorporate these in the plan.

As far as I am aware there is one project with BREEAM-urban which was initialized by the public parties Rijksvastgoedbedrijf and municipality of Katwijk. Most other projects for BREEAM-urban area in the Netherlands are a public-private partnership.

Most of the BREEAM-urban area projects are focused on business and not mixed-use. I think the main

reason for this is because most developments are happening now within the business industry. Around the tunnel at A2 in Maastricht there are plans to develop a certified mixed-use area.

I also know a project in which the client individually certified the buildings instead of the entire area. I don't understand why.

Dutch Green Building Council is not closely involved within the sustainable urban developments. We don't give advice as we have to maintain an independent party. You need in total three parties to assess an urban area; the inspector, DGBC and the client. However, we do often sit at tables with private parties in order to reflect on the certification criteria and which challenges posed during the development.

Yet, certificating an urban area will remain complex. On average it takes about 16 years to develop an entire area. So it's hard to decide 16 years prior to that, that you will certify an area. So the question is when will you do the assessment? Moreover, that is if the area is developed in one time. Nowadays, we see that most urban developments are phased; making it even harder to decide when is good time to perform the assessment. At last, an urban area is always in development, it is never truly finished. So that is also an aspect you will have to deal with. It's just much more complicated than on a building level.

We try to make it a bit more flexible with the point accreditation. For example, the assessment criteria points in the Definitive phase can be awarded points in a later stage. We also don't have a completion certificate. The certificate for urban areas needs to be checked every 5 years. Today, in the Netherlands, we didn't have to re-assess a project yet.

As said before, the social factors of sustainability make the process of urban area development more complicated. Again, because areas differ in size and functions. We try to make it a bit easier by for example not saying that a certain material use can be good or bad, but instead by checking if the consortium has thought well about the material use by analyzing a minimum of three options. DGBC and the inspector can validate the quality of this research.

Most importantly is to stimulate the thinking; make sure that the parties involved have thought well about the decisions they made and if they evaluated the different options. With all the social factors within urban areas, you are limited in the possibility to measure. On a building level we assess performance, solutions and process. On the urban area we focus only on the process.

It is DGBC and the inspector's responsibility to validate the process. If we think the process is not sustainable, we will not give the certification. For us it is important to maintain the high-quality level which the certification stands for, otherwise it will lose its meaning.

Usually, it is one consortium which applies for the BREEAM-urban area. They make all the decisions together.

When it comes to the costs of the BREEAM-urban area and BREEAM-re-developments-which is still in the making- the level of costs shouldn't be much different. In general, re-developments are costlier, because again the process is just more complex than a new-built development. Also here we will try to make the assessment criteria more flexible and approachable for re-developments.

One of the benefits of BREEAM-urban area is that it can help make the ambitions for an urban area clearer; it will not just be about saying we will be the greenest urban area but about developing specific ambitions. The BREEAM-urban area can be used as a great process management tool in the development, because it can help make the overall ambitions clear. In the end this saves money as the management of the process can be done

better and conflicts can be reduced.

Even more money can be saved by working smart with consultancy firms. Often these firms ask high payments and because one is not informed well, they will not know better than to pay for it; increasing the total overall cost of getting such a certificate. We try to keep the costs as low as possible where we can- but often you hear that clients were misused by consultancy firms after the project is completed.

Our goal is to make the Netherlands as sustainable as possible. There is also a lot which is sustainable but not certified or which is certified but actually not sustainable.

At the moment the BREEAM-urban areas are too limited, too few. We have introduced them about 4-5 years ago and the costs of maintaining the 5 projects running are in relation too high. Therefore, we have been busy with setting up a new scheme; one which will be more approachable, simpler and clearer. It takes a few big parties to start adopting the certificate for others to follow.

At the moment, our general list of participants are mostly private companies. And I think we need to actually try to get more municipalities involved as well. The bigger municipalities like Amsterdam, Almere and Haarlem have more time and budget for sustainability and they are active. But the smaller municipalities are much more limited. I think they are the ones who will benefit even more from certificates. Furthermore, the consultancy firms which are guiding their clients throughout the process of sustainable investments have a good position in promoting sustainability to their clients.

BREEAM-urban area came from the demand of the market. There was enough excitement to set up a uniform way of assessing the sustainability in urban areas. There was enough collective support. In 2012 it was announced that the BREEAM-urban area was not well equipped for re-developments. So that is why we are developing a new certificate for that. Andy van Dobbelen was also involved in this process.

As far as I know there are a few good international examples.

BREEAM-urban area can be a good management tool throughout the process. But it will remain challenging to answer which party benefits the most of this?"

## EXPLORATIVE INTERVIEW 5

Summary explorative interview with Just Pereboom – Head of Capital Markets at OVG Real Estate

Duration: 1 hour

Date: June 7, 2016

Place: The Edge, Amsterdam

"First of all, here at OVG Real Estate we do not do urban area development. At my previous job, at PROLOGIS, we did develop industrial and/or logistics terrains. These kind of developments naturally include infrastructure and public space since you need the industry terrain to be accessible. So as a developer you want to invest in the roads for example. With office buildings I think it is different. Accessibility of office buildings should be a task of the government.

We are known to be a sustainable office developer and so far we have no intentions of entering the urban area development field. Reason therefore is that we would solely want to focus on our core business; which is to develop sustainable office buildings. Moreover, we are also looking to expand geographically and that is a



challenge itself, so we wouldn't want to also develop a product which is far from our core business. In 2007 we actually applied for the tender of the urban area in Maastricht near the A2, but we quit. And I think that was good, because we do not have the knowledge about urban area development.

Within the office sector, we are popular for our BREEAM certificates. But these certificates are too stiff, too inflexible, and because of this it often leads to just a 'tick-the-boxes' mentality. We are already looking at the next step; wellness. I think at some point sustainability and BREEAM will become the standard and it will not make your project or company stand out. So to distinguish ourselves from the competition we will need to make a step towards increasing well-being in office buildings. When certificates like BREEAM become the norm for everyone, then they might not even be necessary anymore because they don't distinguish the project from others.

The office sector is quite conservative. The Edge office building here is the most sustainable office building in the world; we were able to make that statement. There is still so much to do within this field; lots of new-built or transformation offices can still be developed in a sustainable way.

BREEAM has been a marketing tool all along. Such a certificate can give you a unique selling point- a competitive edge. Marketing was also one of the reasons we used it, but as it is becoming the standard we are looking already for other ways to make our developments stand out; technology and well-being. Furthermore, I'd like to say that what made BREEAM certified projects successful for us, was that we didn't just tick the boxes, we also looked at other ways to make the working environment more unique.

I think we already passed the tipping point of BREEAM certificates becoming the standard. This tipping point presented itself when on the investor-side there was demand for BREEAM certified buildings, otherwise they would not invest. But as we already passed this tipping point, sustainability will no longer make you stand out. Like previously mentioned, instead we are shifting the focus on technology and well-being, and of course with still sustainable elements.

There are benefits to building sustainably; it reduces the costs and it increases efficiency. But it also has its challenges. For example, it is hard to measure soft elements like work productivity. And not because we don't know how, but because it is relatively new there is not enough historical data series to make the necessary statistical analyses. This is a matter of time though, by documenting and measuring now we will have more data in the future. This also leads to another challenge in regards to the social values; privacy and ethics. One of the big questions now is deciding where to draw the line between collecting data and privacy violation. For example, how much should a company know about its employees' health in order to lower absenteeism.

People want an office which is in an attractive environment, because that's good for attracting talented employees or because they want to profile themselves with companies of the same type or level.

There is an increasing demand for flexible office operators; companies want to be able to grow while staying flexible. Elements like contract term, square meters and contract type will have to be adapted to meet these flexibility demands. On average about 35% of the total costs of a company is the rent. By offering a different, more flexible total package, another rent price calculation can be done. The better value proposition will need to be set.

The municipality of Amsterdam had quite role to play in the development of the Zuidas. Zuidas used to be a monofunctional area, but not anymore. More residential units are being built. The land policy of the municipality became different; more flexible so it allowed other types of developments.

Parkmanagement is happening, but it is very capital-intensive, so who will take that responsibility. It's happening in UK, but less in the Netherlands. In comparison with England, the Netherlands is densely-populated and is a small country.

The role of the government is important to develop urban areas. Here in the Netherlands the government is usually active for a short term, since we are a democratic country. If you compare that with Asian countries like South-Korea and Singapore it is much different. Singapore and South-Korea are also acting sustainably and they are able to be successful because of the autocracy. Especially, in emerging cities (like we see in China, Indonesia and India), there is a need to develop entire urban areas-or cities- in a sustainable way. But the government has an important role to play in this and needs to be active. New York in USA is another example of how the role of the government can influence developments. Personally, I think New York is just a concrete jungle and the infrastructure and livability of the city is bad. There are almost no green spaces. This can be largely explained due to the fact that most developments are private-led; private parties' interests are different.

The carrot and stick principle is very applicable when it comes to reaching these sustainable targets. You need incentives- whether monetary, tax or something else- for private parties to be stimulated to act out on the policies.

When it comes to transformations and re-developments location is very important. That's why we look at old buildings in strategic places; so close to stations and other public transit hubs. One of the biggest challenges with transforming buildings is the purchase price of the building. The price cannot be too high, actually it should be more or less similar to the value of the plot because of its value. So far we have been able to score good deals and get old buildings for relatively low price, but it's not always easy. Re-development is often only possible if the buying price is good, otherwise it will not be economically feasible.

Moreover, another challenge awaits in the existing structure and year of construction of the building. New-built can always be made sustainable, but existing buildings not. Physical and technologically this is just not always feasible. Furthermore, there are also risks involved if you buy the building and it is not yet completely vacant. Because, when will you then start developing- do you wait for the tenant to leave or do you kick them out? And the longer you wait, the more risks increase. These decisions and processes can be time-consuming, thus making it riskier and more complex.

Another challenge in sustainable built environment is the financing. Mostly, private parties will need financing in order to make the business case feasible. Thus, banks are important for this. However, banks are not so excited about re-development projects and the amount of finances for these types of projects are quite limited. Banks in the Netherlands are consolidated, as opposed to in Germany, where the banking world is much more competitive. The government can also contribute to this solving this challenge by allowing easier accession from foreign financiers in ways of fiscal incentives for example.

Other challenges in which the government can offer solutions is the zoning plan/permits and land leasehold (erfpacht). All these plans and permits are separate counters within the municipality. This division of the necessary departments consumes times and the departments are not on the same line.

An incentive which could work can be a more flexible zoning plan. In Amsterdam quite a lot of transformation projects take place, but here that is also a priority of the municipality. So it depends where the priorities of the municipalities lie in order to steer well.

The challenge or sustainable urban development is tough, yet important. The cities are growing more and more and the built environment needs to be able to meet this demand in a sustainable manner”.