STIMULATING SUSTAINABLE URBAN DEVELOPMENTS:
INCENTIVES FOR SUSTAINABLE MIXED-USE URBAN AREAS

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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

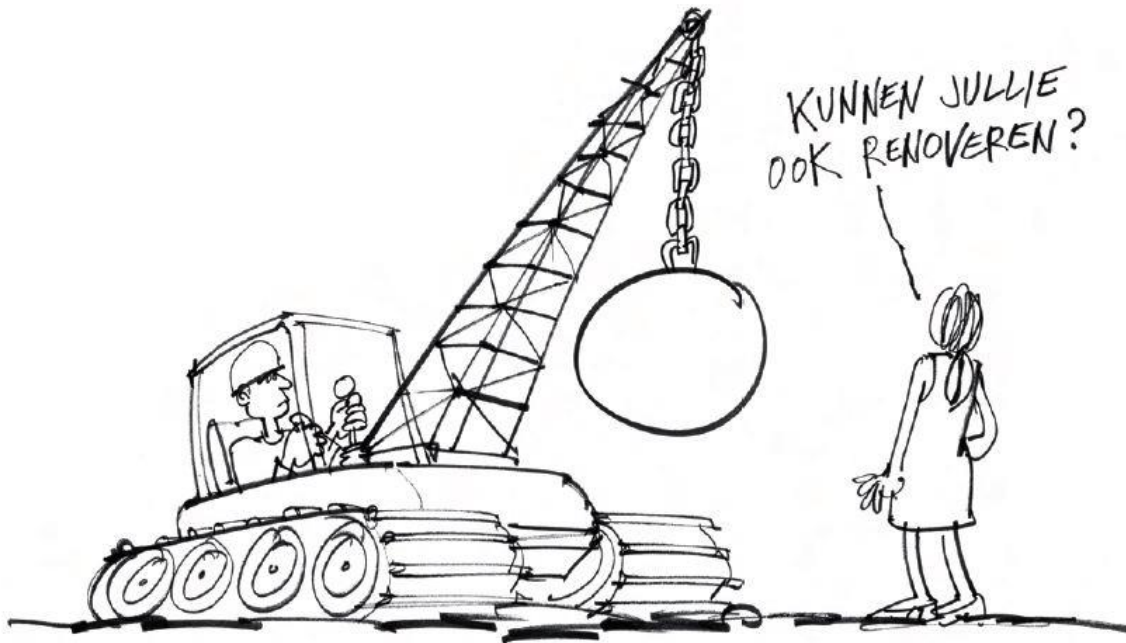# TABLE OF CONTENTS

Background

Background

- Rapid urbanization

- Climate change

- Built environment responsible for up to 40% energy and 30% greenhouse gas emissions

- Urban scale leaves larger social, economic and environmental impact

Problem analysis

Problem analysis

Interests public parties

"Can you also renovate?"

Problem analysis

Interests public parties

- Increasing interest in sustainable urban areas in order to reach sustainable ambitions and policies

- Shift to facilitating role

Problem analysis

Interests private developers

"I don't know...is it sure?" "And why do we have to invest? Why not someone else?"
"If we could manage it..." "The GREX is also not looking so well"

Problem analysis

Interests private developers

- Reputation

- Finance and risk

- Complexity and time in sustainable urban areas

- Unknowns about soft values, split-incentive and total cost of ownership

Problem analysis

Relevancy of incentives

*"Swimming pool The Sustainable Future"*

Problem analysis

Relevancy of incentives

- Developments occurring at too slow rate
  - Insight into drivers and barriers private developers

- Incentives to stimulate sustainable urban developments
  - How can municipalities steer for collective interest, not just box-ticking

- Different ways to stimulate; not just financial incentives

- Use of sustainable performance certificates like BREEAM to measure and demonstrate

Problem analysis

Relevancy of incentives

To fill the gap

Interests of public parties	Interests of private parties
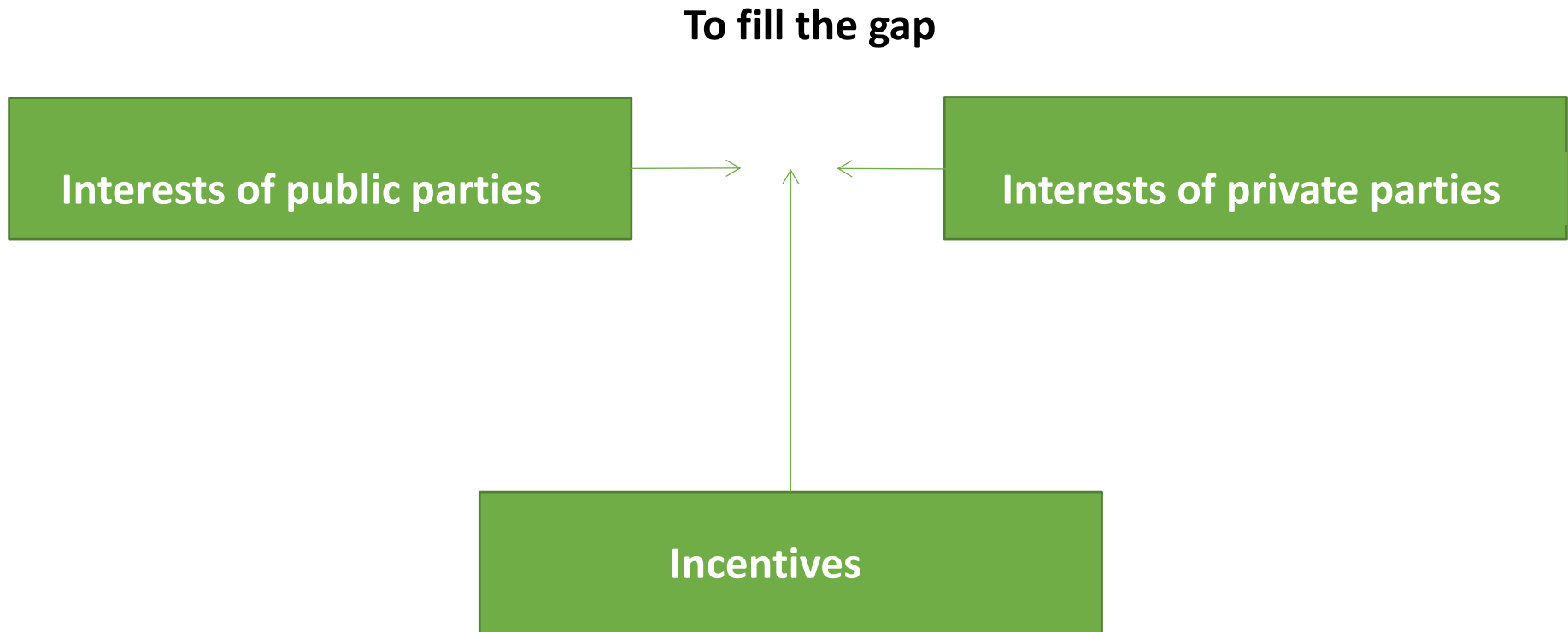
Incentives

Problem statement

There is a gap between sustainable ambitions from municipalities and the realization of these by private developers which can be bridged by acquiring knowledge about how incentives can be used to stimulate developers to sustainable urban developments.

Research goal

Exploring how to bridge the gap between sustainable ambitions and implementation by getting a better understanding of how incentives can stimulate developers to sustainable investments. This can lead to recommendations to get one step closer to bridging this gap in the field.

Research goal

Incentives as a bridge

DRIVERS

INCENTIVES TO BRIDGE THE GAP
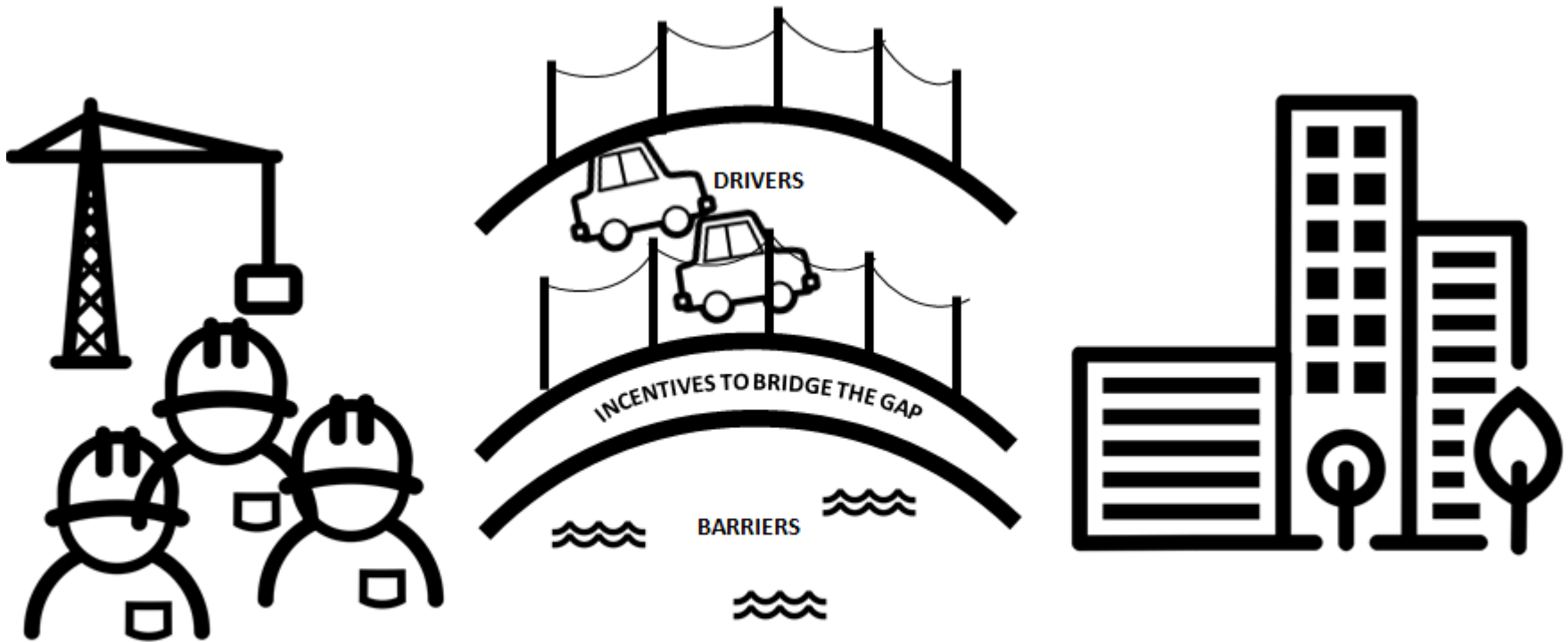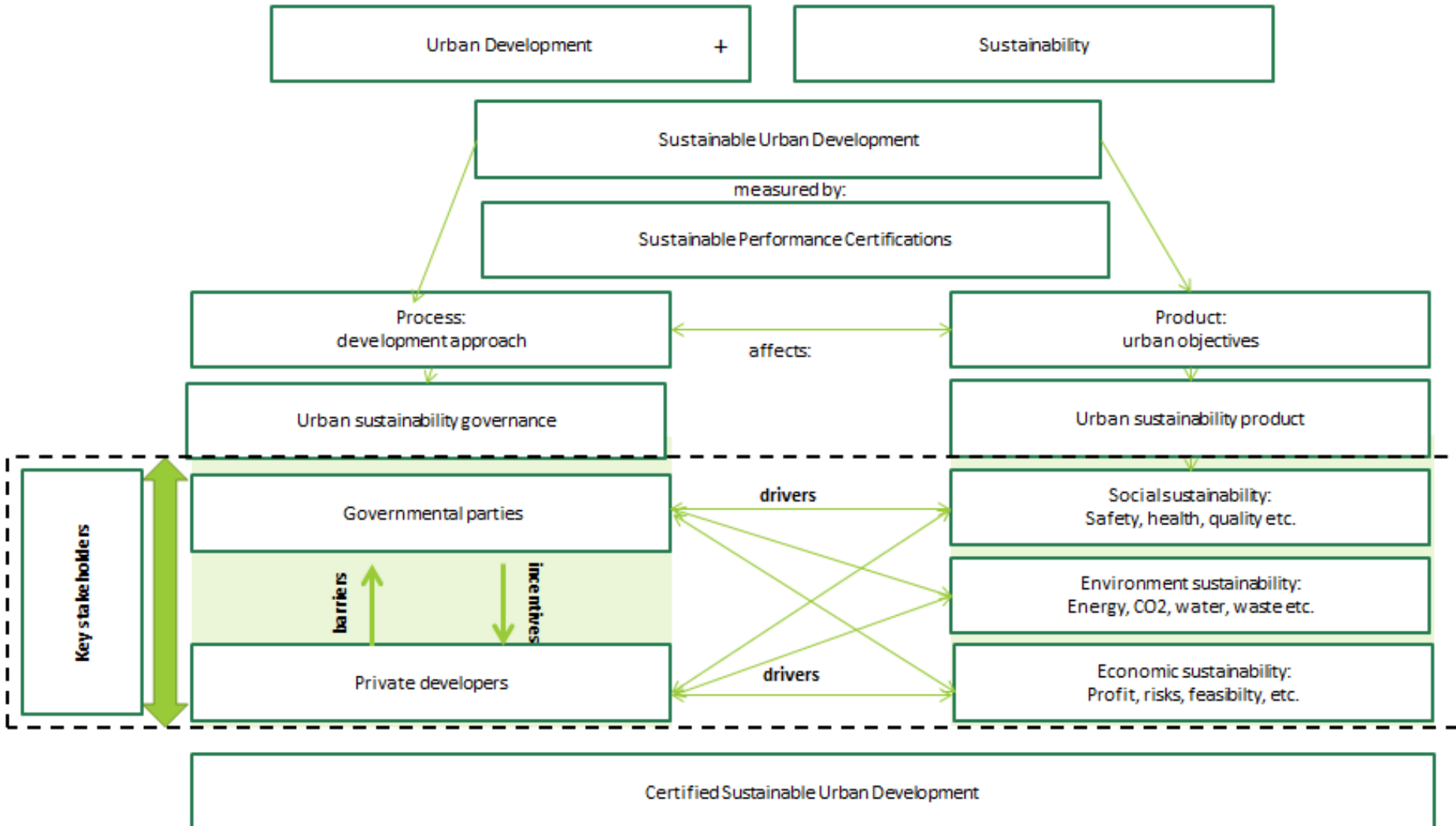
BARRIERS

DEVELOPERS

SUSTAINABLE URBAN DEVELOPMENT

Stakeholders

Drivers and barriers

Product

Conceptual framework

How can private developers be incentivized by governmental parties to invest in sustainable mixed-use urban development projects?

Research questions

How can private developers be incentivized by governmental parties to invest in sustainable mixed-use urban development projects?

1. How are the stakeholders' roles and partnerships structured within the development process?
    1. What are the drivers of the main actors involved?
    2. How is the partnership and collaboration in the development process?
    3. What is the role of BREEAM during the development process?

2. What barriers are encountered during the process of sustainable urban development?

3. What incentives are applied during the process of sustainable urban development?

RESEARCH DESIGN & METHODOLOGY

Research design and methodology

- Theory generating concept fits with qualitative character

- Explorative character: interpretations

- Actor's perception, role, behavior and process

- Cross-case comparison to gain deeper understanding

Research design steps

Step 1	Step 2	Step 3	Step 4

Theoretical framework

- Sustainable UD
- Stakeholders
- Drivers
- Barriers
- Incentives

Empirical findings

- Case-studies approach
- Ecomunitypark
- Masthusen
- MediaCityUK

Comparison findings

- Comparisons
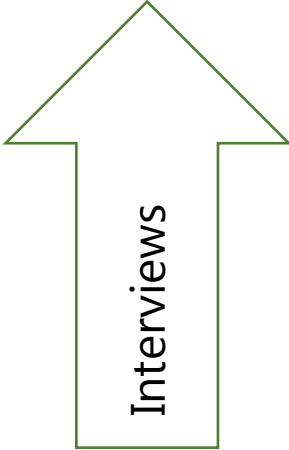
Conclusion

- Conclusions
- Recommendations

Literature study

Interviews

Theoretical framework

Sustainable urban developments

- **Economies of scale;** infrastructure, services and technology

- Combining **environmental, economic and social sustainability** in one area

Sustainable mixed-use developments

- **Broader social impact** on urban places

- More **efficient** use of the area; increase in economic activity, healthier lifestyle and social interaction

- Mixed-use is **in sync** with sustainability

BREEAM certifications

BREEAM is the most applied certificate to measure and demonstrate sustainability in the Netherlands.

BREEAM is useful for:

- 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: comparing performance metrics to industry bests and best practices

Stakeholders
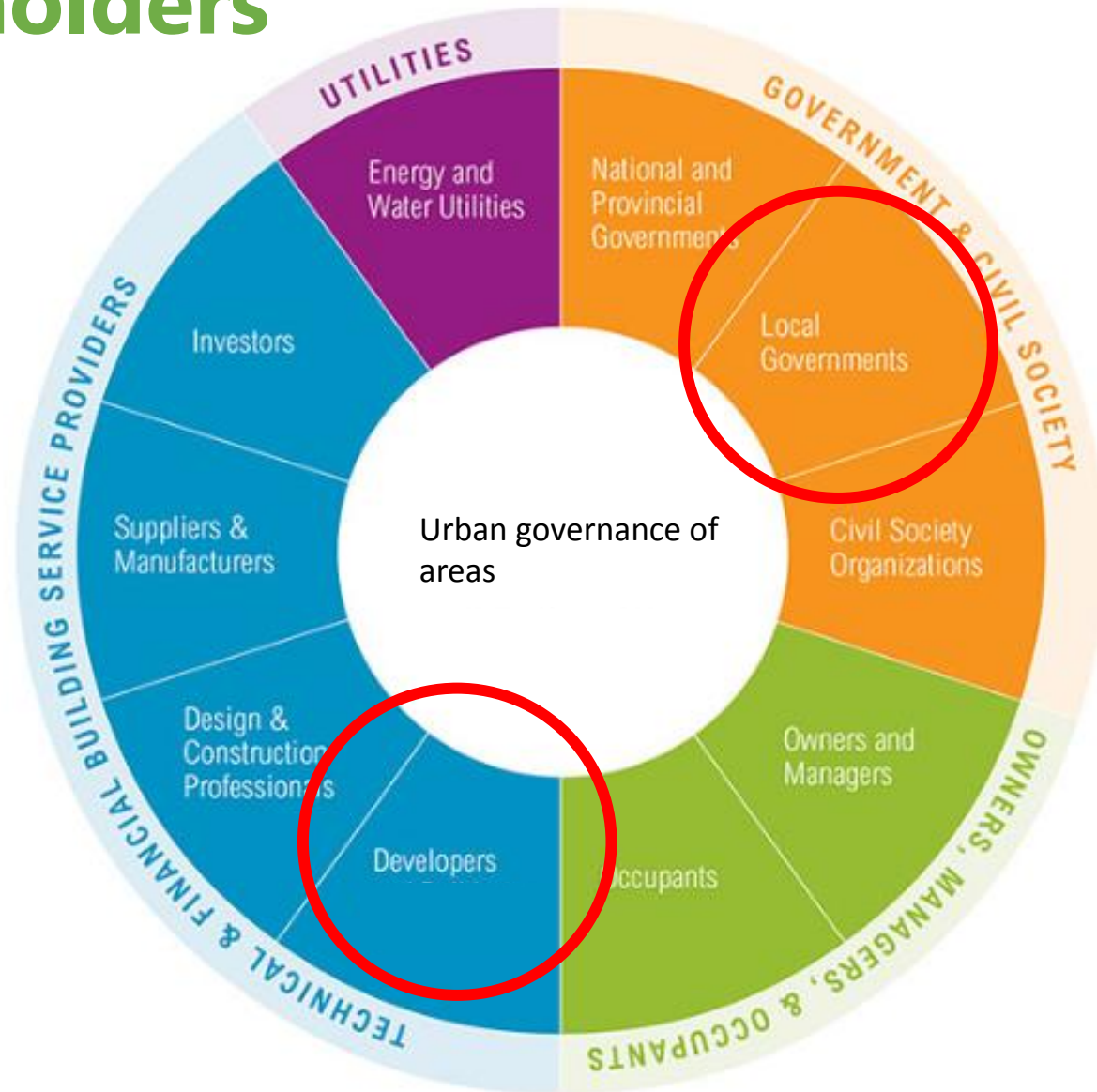
Stakeholders

- Key stakeholders with different interests and goals

- Local planning authorities and developers collaborate on the operational level of urban development projects

- Shift between roles

- Private-led urban development: "*An urban development project in which private actors take a leading role and public actors adopt a facilitating role to manage the development of an urban area.*" (Andersson & Moroni, 2014; Hackworth, 2007)

Stakeholders
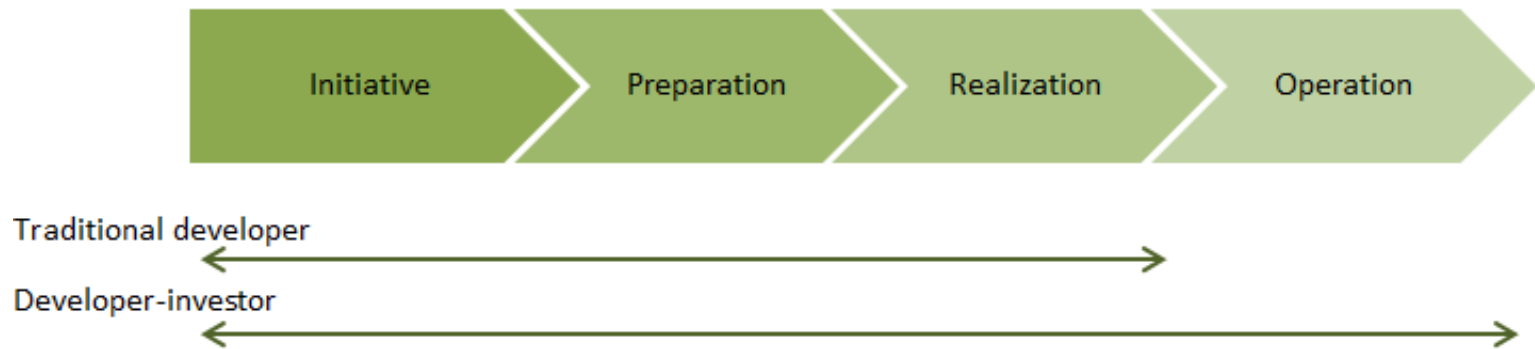
Different types of developers

Drivers

Stakeholders in each urban development process have different motivations for participation: the so-called *drivers*.

Driver: *a factor which causes a particular phenomenon to happen or develop*

Drivers

Type of drivers	Examples
Financial	• Increase market value • Attracting tenants • Marketing • Risk reduction • Cost reduction /cost-efficiency • Increase profit • Faster sale/lease
Reputational	• Company strategy • Corporate Social Responsibility • Competition • Innovation / front-runner • Pressure from society • Marketing
Legislative	• Planning requirements / permit • Ahead of legislation changes • Procurement • Taxes and levies • Administrative efficiency / planning efficiency
Intrinsic	• Intrinsic value • Company culture • Staff/organization

Barriers

Barriers: *phenomena which actively counteract and are in the way of a desirable change which results in the change progressing slowly in relation to challenges and targets* (Boverket, 2015)

Barriers

Type of barriers	Examples
Financial	• Sustainability measures are too costly • No access to financing • Lack of suitable business cases • Risks perception • Split-incentive • Short term view/involvement
Legislative	• Regulations • Lack of flexibility by law and regulations • Lack of ambition / vision for sustainability • Lack of coordination within and between different levels • Limited stimulating instruments
Knowledge	• Lack of knowledge, awareness or expertise • Insufficient support for research, learning and pilot projects • Insufficient transfer of knowledge
Organizational	• Lack of coordination within and between different levels • Sectoral responsibility versus collective interest • Lack of leadership capacity and know-how for complex, cross-sectoral process • Lack of courage • Lack of support / direction

Incentives

The value of incentives is their ability to affect the preference and perceptions of actors. Incentives should be seen as reasonable and effective tools for encouraging actors over the long term (Dorussen, 2001)

Incentives: additional measures tailored to the specific needs of someone in order to encourage or motivate them to do something.

Combination of carrots and tambourines to reduce box-ticking behavior

Incentives
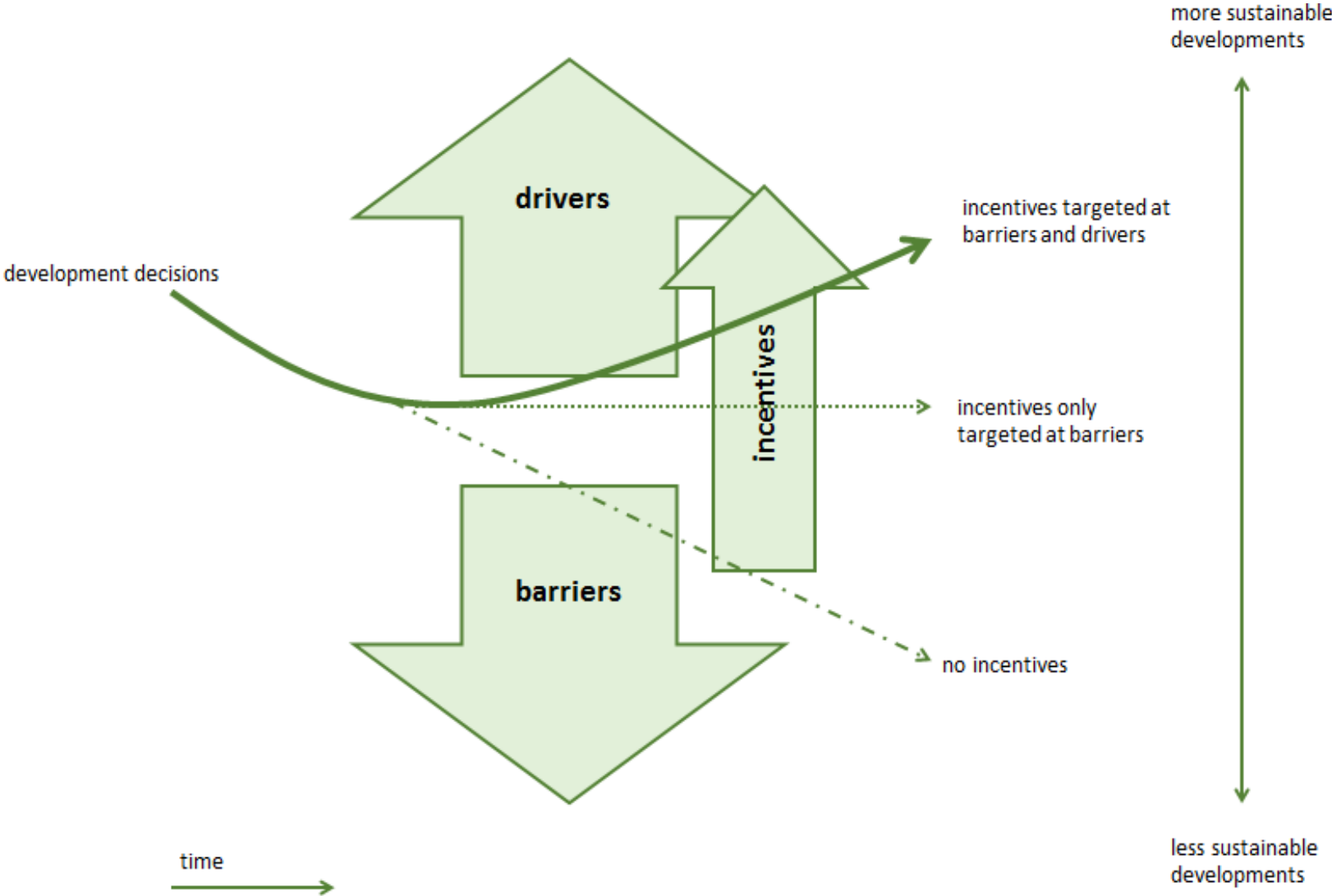
Incentives

In general, incentives empower drivers and reduce barriers. Their role is to change the weight of the drivers and barriers.

Incentives
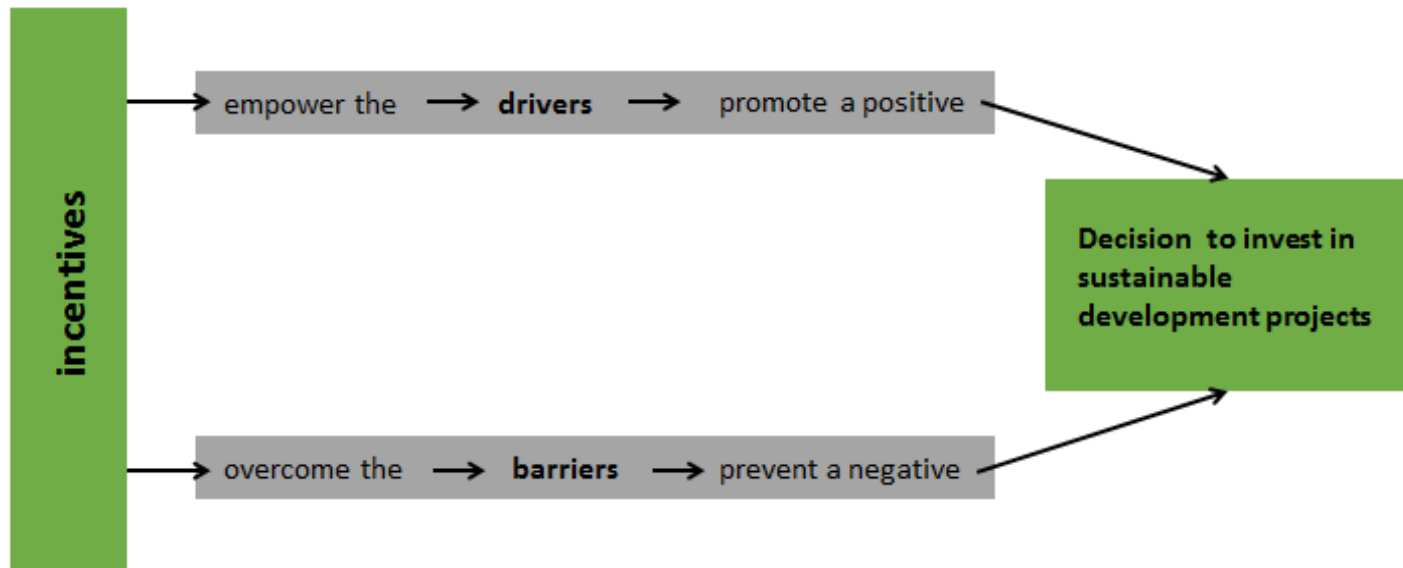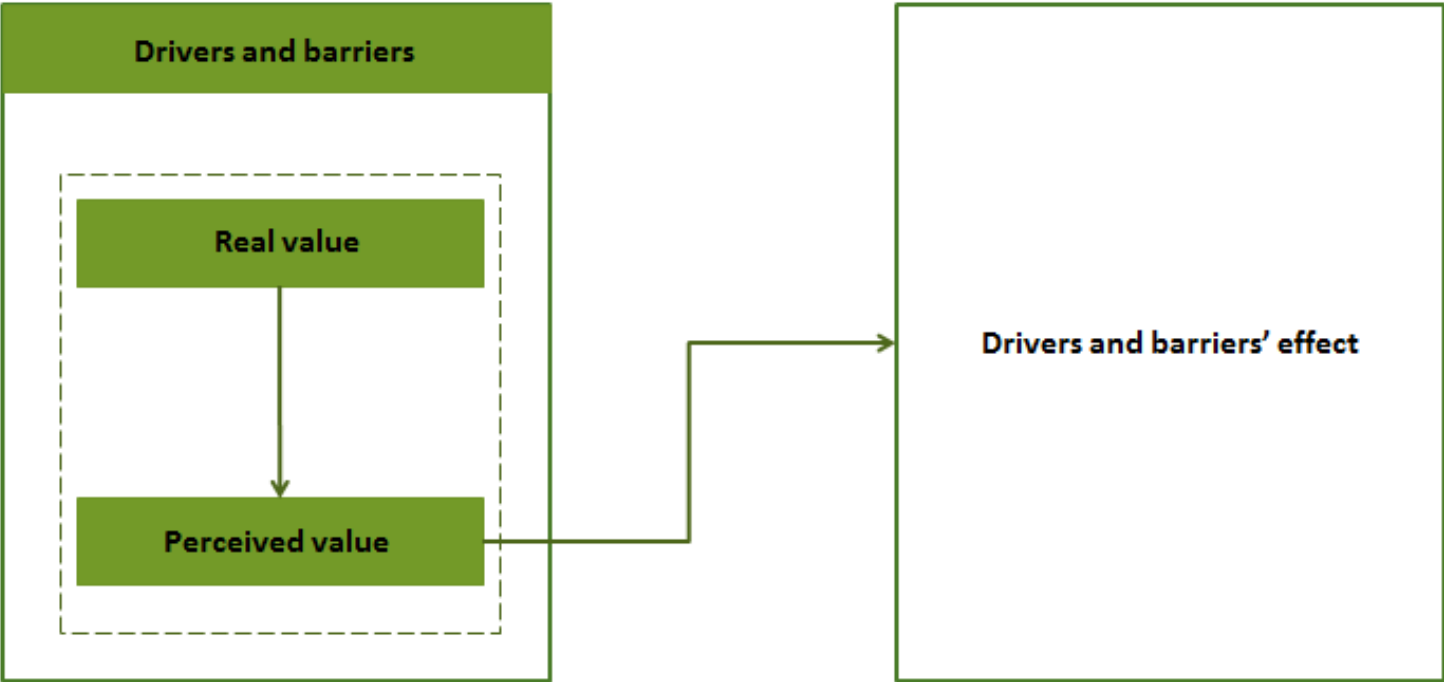
Incentives

Type of incentives	Examples
Financial	• Reduced costs • Taxes • Subsidies • Public funding • Access to private funds • Total life cycle involvement • Risk reduction • Public investment
Legislative	• Strong vision/policies on sustainability • Reduction in regulatory/administrative burden • Collaboration between public and private
Reputational	• Publicity • Awards and recognition • Marketing • Benchmarking • Improved profile / branding
Capacity-building	• Facilitate access to development finance Sectoral responsibility versus collective interest • Public support for new ideas / cultures • Knowledge sharing • Enhancing relationships with stakeholders • Having skills and expertise

EMPIRICAL FINDINGS

Case-studies

Approach

Documentation
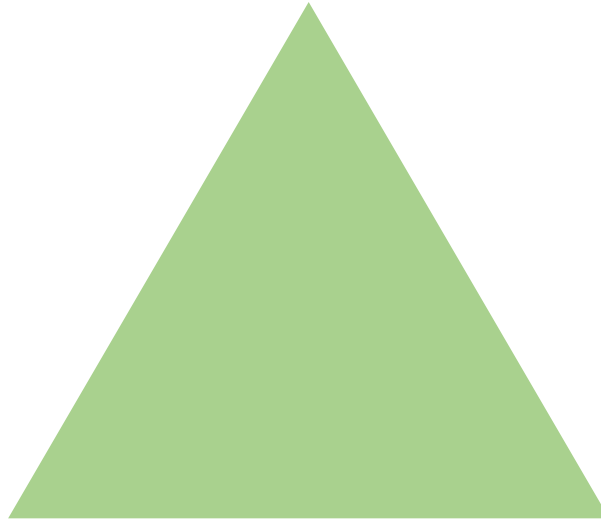
Interview with developers

Interview with local planning authorities

Case-studies

	Project	Developer	Location	Scale	Function	Space division
1	Ecomunitypark	Ecomunitypark B.V.	The Netherlands	17 ha	Business park*	45% green and water, 55% built
2	Masthusen	Skandia Fastigheter	Sweden	11 ha	Mixed-use	70,000 m² offices 20,000 m² retail/services 700 residential units
3	MediaCityUK	Peel Group	UK	81 ha	Mixed-use	65,000 m² 80,000 retail/leisure 2,300 parking units 200 beds hotel plaza for 4,0000 people

Ecomunitypark

Masthusen

MediaCityUK

Case-studies

Variables for cross-case comparison

DRIVERS	INCENTIVES	BARRIERS
financial	financial	financial
legislative	legislative	legislative
reputational	reputational	organizational
intrinsic	capacity-building	knowledge

Case-studies

Semi-structured interviews

	Project	Title	Interviewee	Date
1	Ecomunitypark	Project manager Ecomunitypark	Bert Krikke	September 26 2016
2	Ecomunitypark	Gemeente Ooststellingwerf	Bart Sieben	October 18 2016
3	Ecomunitypark	Project manager ECOStyle	Deborah Goeree	October 18 2016
5	Masthusen	Project manager Skandia Fastigheter	Anna Barosen	October 21 2016
6	Masthusen	City Council of Malmö	Tor Fossum	October 14 2016
7	MediaCityUK	Project manager MediaCityUK (Peel Media)	Mark Robinson	October 24 2016
8	MediaCityUK	Salford City Council	Chris Findley	November 1 2016

Ecomunitypark

Ecomunitypark

- Business park in Oosterwolde, the Netherlands focused on bio-based industry

- Owner ECOStyle sought new establishment: developer is end-user

- Non-traditional developer

- 45% building, 55% green and water division

- One-on-one contact with municipality

- Received public funding; infrastructure, subsidies and buildings

- BREEAM-NL Gebiedsontwikkeling to demonstrate sustainability performance

Masthusen

Masthusen

- Mixed-use urban area in Masthusen, Malmö, Sweden

- Traditional developer with large area to secure and market

- Challenges to adapt BREEAM Communities to Swedish context

- Progressive municipality; nearby projects also sustainable

- BREEAM Communities as strong tool in decision-making and sell to others

- Long processes to take all stakeholders' opinion in consideration

MediaCityUK

MediaCityUK

- Mixed-use urban area focused on media in Salford, Manchester, UK

- Developer/investor won bid set up by end-user BBC

- First to use BREEAM Communities- flexibility of early-adopter

- Strong anchor BBC to attract other corporate tenants

- Strategic partnerships with Salford City Council

- Focus on life cycle benefits; from construction to operational phase

- Public investment: infrastructure, public transportation, public realm and incubator

Comparison findings

Comparison

Stakeholders

Type of developer	Ecomunitypark	Masthusen	MediaCityUK
Name developer	Ecomunitypark B.V.	Diligentia	Peel Group
Single or multiple	Single developer	Single developer	Single developer
Type of developer	Developer/investor	Traditional developer	Developer/investor
Duration involvement	Long term: Involved in operational phase with park management and owner's association	Short term: Involved only in development phase	Long term: Involved throughout life cycle- asset management
Key stakeholders	ECOStyle, Ecomunitypark B.V. Municipality of Ooststellingwerf	Skandia Fastigheter and City of Malmö	BBC, Peel and Salford City Council
Public or private-led	Private-led	Private-led	Private-led
Role of municipality	Facilitating	Facilitating	Facilitating
Collaboration	Worked together on sustainable plans/vision	Worked together on sustainable plans/vision	Worked together on sustainable plans/vision
Use of BREEAM	BREEAM as guiding tool, suggested by municipality	BREEAM as guiding tool, suggested by developer	BREEAM as guiding tool, suggested by bid

- Type of developer (short vs long term)
- Facilitating yet active municipalities
- BREEAM as guiding tool during process

Comparison

Stakeholders' drivers

Type	Ecomunitypark	Masthusen	MediaCityUK
Financial	• Commercial drivers (D) • Job creation (L)	• Secure risks large-scale development (D)	• Costs and asset value (D) • Job creation (L)
Reputational	• Reputation of ECOStyle (D) • Setting an example (L) • Image improvement (L)	• Demonstrating sustainability (D) • Publicity (D) • Corporate Responsibility (D) • City profile (L)	• Image (D) • Front-runner (D) • Profiling (L)
Legislative	-	-	• Anticipation on legislative changes (D)
Intrinsic	• Initial drive (D)	• Interest to learn (L)	• Company values (D)

- Financial and reputational drivers most addressed
- Financial and reputational drivers create shared interests between public and private
- Legislative drivers least addressed
- Long term developers share intrinsic values

Comparison

Barriers

Type	Ecomunitypark	Masthusen	MediaCityUK
Financial	• Ratio buildings-land • Split-incentive • Costs and time BREEAM • Unwillingness to pay for residential	• Costs and time BREEAM • Time delays and do-overs • Unwillingness to pay for residential	• Budget decisions for total life cycle • Public realm is invaluable • Tight deadline
Legislative	• Flexibility of zoning plan • Protests of nearby residents (NIMBY) • Integrating BREEAM in planning • Ratio buildings-land	• Contextual barriers – BREEAM • Paper work BREEAM • Integrating BREEAM in planning • Democratic actors' participation • Unable to operate public realm	-
Knowledge	• Lack of knowledge/education • Incorporation soft values	• Adoption BREEAM (unprepared)	• Lack of knowledge/education • Incorporation soft values • Unable to transfer experience
Organizational	• Inefficient municipal organizational structure	• Internal resistance due to costs and time	-

- Financial barriers are most common- yet not a major barrier
- Legislative and knowledge barriers are important to address (by local planning authorities)
- High costs and time related to BREEAM also a main barrier

Comparison

Incentives

Type	Ecomunitypark	Masthusen	MediaCityUK
Financial	• Economies of scale (DE+BR) • Obtaining permits faster (DE) • Incorporating soft values (BR) • Subsidies (DE) • Costs land value (DE+BR) • Long term operator/ end-user (DE+BR) • Municipality also invests/contributes (DE)	• Risk reduction (DE+BR) • Economies of scale (DE+BR)	• Risk reduction due to end-user(DE) • Long term operator/ end-user (DE+BR) • Scale to keep growing (DE) • Willingness to pay/cooperate established corporates (DE+BR) • Municipality also invests/contributes (DE) • Maintaining public realm(DE+BR) • Subsidies (DE)
Reputational	• BREEAM to profile (DE) • BREEAM to make sustainability tangible (DE)	• Publicity (DE) • Demonstrate sustainability (DE) • Company with right mindset/skills (DE+BR)	• Company with right mindset/skills (DE+BR) • Anchor end-user to attract other tenants (DE) • Marketing of area BREEAM (DE) • Shared visions corporates(DE+BR)
Legislative	• Change of zoning plan (BR) • BREEAM to guide actors and process (DE) • Municipal contact person to assist (DE+BR)	• BREEAM to guide decision-making and negotiations with others (DE)	• Bid with clear requirements (DE) • BREEAM to guide decision-making and negotiations with others (DE) • Faster approval for permits (DE+BR)
Capacity-building	• Positive attitude and support municipality (DE)	• Exemplary projects nearby(DE) • Progressive/supportive municipality (DE)	• Supportive/ partner-like municipality (DE)

- Financial incentives are most common to both empower drivers and reduce barriers
- Reputational drivers also popular-mostly aimed to empower drivers
- Legislative and capacity-building incentives related to role municipality (and other actors)

Conclusion and recommendations

Research questions (recap)

How can private developers be incentivized by governmental parties to invest in sustainable mixed-use urban development projects?

1. How are the stakeholders' roles and partnerships structured within the development process?
    1. What are the drivers of the main actors involved?
    2. How is the partnership and collaboration in the development process?
    3. What is the role of BREEAM during the development process?

2. What barriers are encountered during the process of sustainable urban development?

3. What incentives are applied during the process of sustainable urban development?

Stakeholders

Partnerships:
- Private-led by single developer and facilitated by municipality.
- Municipalities must have a faciliating yet active role in collaboration and support

Role of BREEAM:
- BREEAM as strong tool to guide decision-making and negotiation process between actors- especially to make sure new developers/tenants follow requirements
- BREEAM used to demonstrate sustainability achievements

Drivers:
- Combination of finance and reputational drivers are regarded most important
- Reputational drive can be affected by function (business versus residential)
- Intrinsic driver can possibly be linked to long term commitment of developer

Barriers

- Financial barriers are most commonly addressed and continues to be important
    - BREEAM costs and time

- Yet, financial barrier did not pose as major risks to the developments

- Financial barriers are affected by the perceived market acceptance based on different types of end-users

- Knowledge barriers are not be underestimated- as they often lead to financial barriers

- Legislative barriers often included BREEAM and its integration in the planning framework
    - Can also be contextual

- Organizational barriers were not common, but could be due to the reputational drivers of these front-runner developments.

Incentives

- Incentives can be used to empower drivers and/or to reduce barriers

- Combinations of incentives are applied

- **Financial incentives:**
    - Most relevant and often targeted to both empower drivers and reduce barriers
    - More likely to empower drivers for long term developers
    - Secondary to other incentive types

- **Reputational incentives:**
    - Mostly to empower drivers- becoming more important (in particular for companies)
    - Use of BREEAM to achieve this
    - Can help create shared interests

- **Legislative incentives:**
    - Mostly associated with BREEAM and its integration in planning procedures, and more efficient permit procedures – to empower drivers
    - Contextual factors can also play a big role

- **Capacity-building incentives:**
    - Active role of municipality in supporting and contributing to the development (exemplary role)
    - Support in knowledge, partnerships and funding to empower drivers

Conclusion

- Private developers can be stimulated to with a **combination of financial, reputational, legislative and capacity-building incentives**

- Incentives targeted to **empower the drivers of developers** appear most stimulating

- The focus on **financial and reputational drivers and incentives** appear most interesting for developers

- By actively being involved, municipalities can **empower drivers with legislative and capacity-building incentives**

- The **type of developer-** short versus long term commitment- or front-runners versus followers can affect – including their **individual perceptions**

- **Internal/external factors** can also affect the outcome

Conclusion
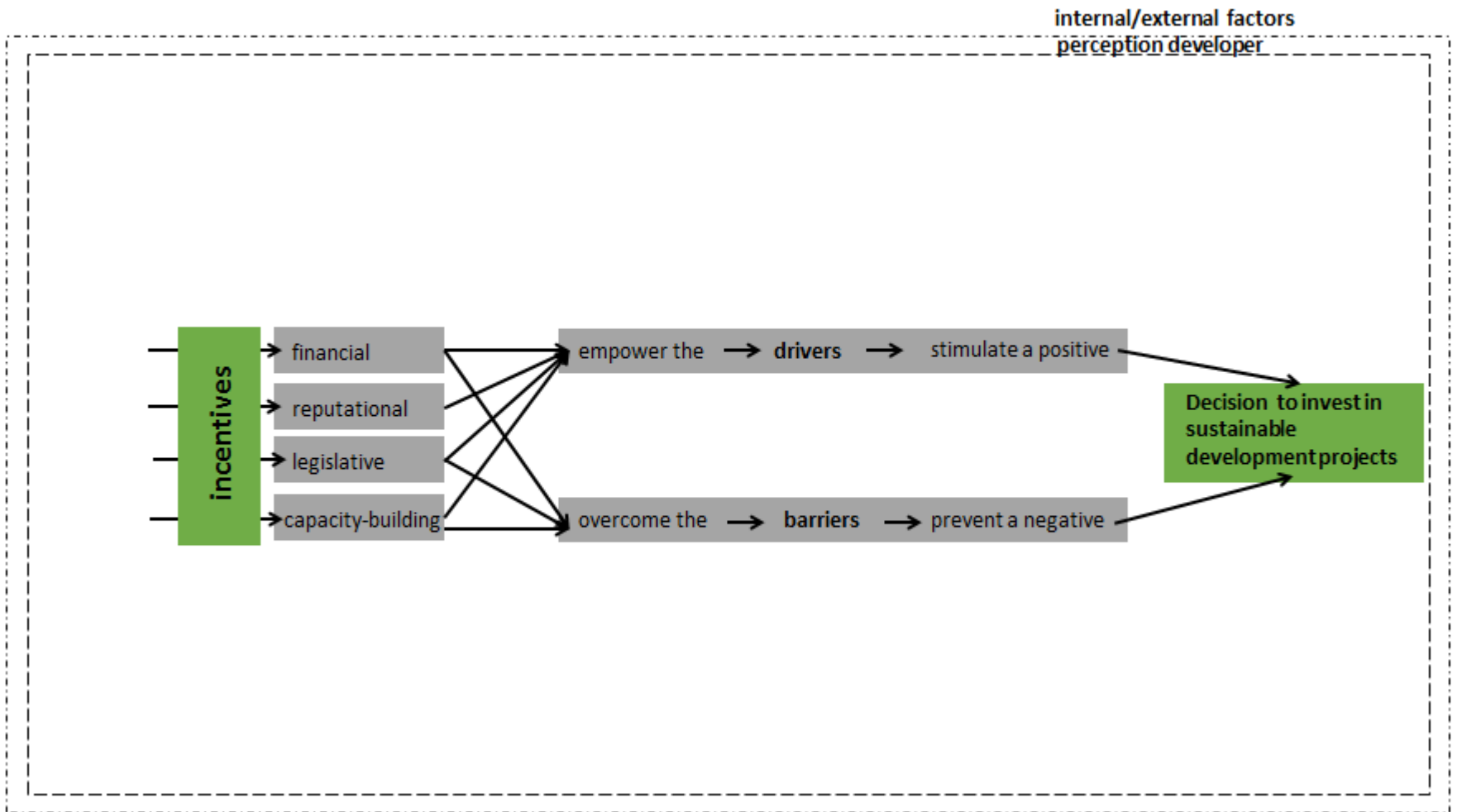
Recommendations
Stakeholders

"Municipalities can facilitate by creating demand or necessary scale for the certification to become interesting."- Barenbrug

"With financing the most important driver, banks can play a big role".
– Sieben

Recommendations
Barriers

"There is still much of an educational process to go through…You are trying to educate people that if you invest in a more efficient building, it will drive you year-on-year savings on energy bills. But it is not easily translating to values at the moment." – Robinson

"Soft values for the environment are hard to translate and explain." – Barenbrug

Recommendations
Incentives

"Incorporate the BREEAM-NL Gebiedsontwikkeling in the Dutch planning process to make approvals more efficient." – Marcelis

"It is a mix of a lot of things that need to be thrown in there to incentivize developers. You have to have a bit of different elements to help make it work." – Robinson

Recommendations
For further research

- Translating the added value of soft values into calculation models

- The ownership and maintenance of public areas by private parties

- Sustainable urban re-development

- Change management and decision-making process for sustainable urban developments

- Explore health and well-being in urban development projects

QUESTIONS?

FEEDBACK?

THANK YOU!