



EIP Smart Cities and Communities

Increasing capacities in Cities for
innovating financing in energy
efficiency

8th July 2016



Webinar: Rules of the game

The screenshot shows the GoToWebinar interface with several callouts:

- Expand & Collapse your panel:** Points to the expand/collapse icon (two arrows) in the top-left corner of the control panel.
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The interface includes a menu bar (File, View, Help), an Audio section with Telephone and Mic & Speakers (test) options, a Muted status indicator, a Questions section with a text input field and a Send button, and a Webinar Now section with a Webinar ID field.

- No voice interaction allowed during the presentations
- You can write your questions in the chat specifying the speaker you want to address
- We'll forward the questions in the Question & Answer session at the end
- This webinar will be recorded and published in the EIP SCC website



1. AC BM Background: The EIP Initiatives
2. AC Business Models: our aim
3. AC Business Models: Next steps



1. AC BM Background: The EIP Initiatives

Citizen Focus

Citizen City: tools for citizen engagement

Citizen Centric approach to data

**Business Models,
Finance and
Procurement**

Integrated Infrastructures

Humble Lamppost

Urban Platform

Cross-city transformation



Int. Planning, Policy & Regulation

Tools for decision making and benchmarking

Scaling up & replication of smart city plans

From Planning to Implementation

Governance for Cultural Heritage

Cross-Nations Exchange

Sustainable Districts

Small Giants

Positive Energy Blocks

Sustainable Urban Mobility

Electromobility

New mobility services



Under the initiative “Innovative Business Models”, the AC aims to achieve following strategic objectives:

Business Models, Finance & Procurement

Innovative Business models use cases

“Create pace, scale and impact by acting along three interconnected axes: Business Models, Finance & Funding; and Procurement.”

To support the work of Smart City initiatives in economic aspects by:

- Making available knowledge about innovative business models, financing and funding models and procurement models
- Engaging the financial community.

What?





As strategy for achieving these objectives, the AC has developed its **Roadmap for 2016:**

Existing business models, finance & funding instruments and procurement schemes do not fit today's challenges **within our cities and urban communities.**

There is a strong need for knowledge sharing, innovation and expertise on business models, finance & funding and procurement.

Why?

A Finance Expert Working Group will ensure that cities, financial institutions and industry players can work together in order to:

- Establish a dialogue between public and private sectors.
- Ease the access of cities to financial instruments.
- Agree on capacity building activities.

Who?

Engaging a Finance Expert Working Group, elaborating a funding guide for projects and initiatives, gathering business models case studies and elaborating a report on local innovation ecosystems.

How?



AC Business Models: Next steps





The [Report on Local Innovation Ecosystems](#) by Mikael Edelstam is available in our webpage. Feel free to send any comment/suggestion.

We are looking for case studies on successful **business model** in the area of energy, mobility, ICT, smart cities projects and commitments. **By 4th September 2016** to Anja De Cunto:
Anja.DeCunto@eurocities.eu.



If you are interested in **hosting** or contributing to a **webinar** relating to business models, finance and procurement, please contact Anja De Cunto with details of any potential topics.

The next meeting of the Action clusters on business models will take place in Brussels next 22 November. [Minutes and presentations](#) from our latest meeting in Eindhoven on 24 May.



Increasing capacities in Cities for innovating financing in energy efficiency

A review of local authority innovative large scale
retrofit financing and operational models

Miguel A. Casas

Energinvest – CITYinvest

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Content

- I. Introduction to the CITYinvest project
- II. Scope and structure of the study of 24 selected large scale retrofit programs
- III. Comparison of the models and major findings
- IV. Conclusions
- V. Guidance material



I. Introduction to the CITYnvest project

Miguel A. Casas

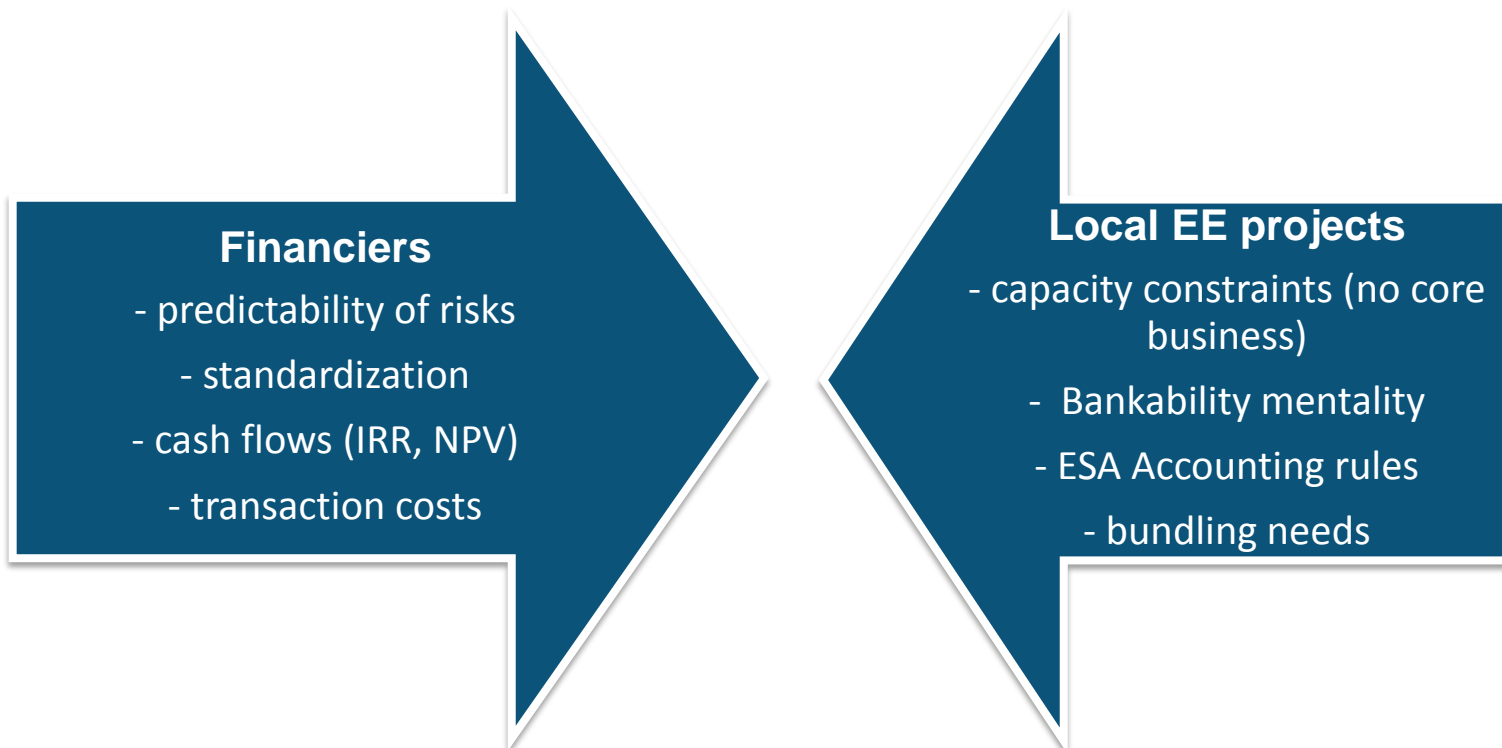
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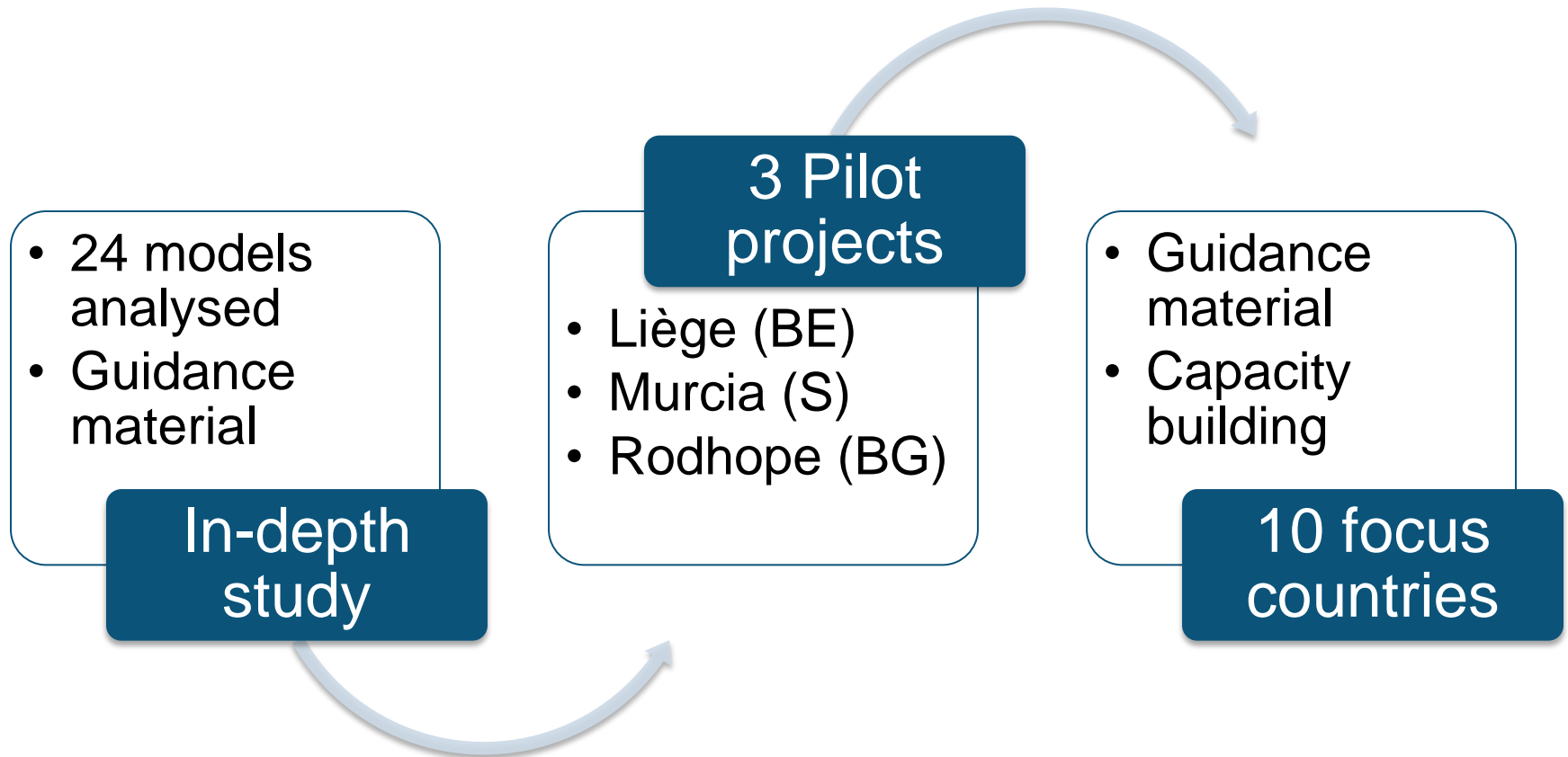
Introduction: The rationale for CITYinvest

How to accelerate investments?

- ❑ No need for reinventing the wheel
- ❑ Catalyst role for LRA – reflected in current EU directives, but some remaining challenges



CITYinvest scope: Wide scale capacity building





II. Scope and structure of the study of 24 selected large scale retrofit programs

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In-depth study: What have we done?

- ❑ Analysed **24 existing models** addressing large scale and deep energy efficiency retrofit programs (including RES) involving public authorities across Europe (11 countries)
 - Ambition, implementation technology, services to beneficiaries, financing schemes

- ❑ Provided **benchmark/comparison** along such themes as:
 - Operational schemes: Facilitation/Integration /Financing only
 - Implementation model: Separate Contractor Based (SCB) and EPC/ESC
 - Financial schemes and related attractiveness and risks

- ❑ Provided **guidance material** to support local authorities in their search for financing of their EE and RES programs

Business models: Common practices

Program Authority

- Public entity or organization **in charge of the program** or that controls the program.
- Define the program including the targeted beneficiaries, the level of ambition, the implementation/operational models and the funding vehicle that is being put in place (political commitment).
- Set-up and fund the Program Delivery Unit (PDU).

Program Delivery Unit

- Public and/or private entity set-up **to implement/execute the program**.
- Often a separate legal entity, but can also be a department or project team within an existing organization.

Beneficiaries

- **Receive services from the PDU** according to the chosen operational and implementation models. Services can include financing of the projects.
- Often a Contractual framework is concluded between the PA and/or the PDU and the beneficiaries in order to access the PDU portfolio of services.

Business models: Main features

2 Implementation Models	3 Operational Models	7 Operating Services	5 Funding Vehicles
<ul style="list-style-type: none">• Separate contracting based (SCB)• Energy Performance Contracting (EPC)/Energy Supply Contracting (ESC)	<ul style="list-style-type: none">• Facilitation• Integration• Financing only	<ul style="list-style-type: none">• Marketing• Assessment• Financial advice• Facilitation• Integration• Aggregation• Financing	<ul style="list-style-type: none">• Financial Institutions• ESCO's• Program Delivery Unit (PDU)• Investment Funds• Citizens

PDU Operational models: Main differences?

FACILIATION (16/24)

- Beneficiaries are the tendering and contracting authorities.
- Contracts are signed between beneficiaries and ESCO/Contractors (deliver the retrofit works to the beneficiaries).
- PDU facilitates the projects by assisting the beneficiaries during the preparation, the tendering process and the follow-up of the projects.
- PDU shares no risks.

INTEGRATION (8/24)

- PDU is the tendering and contracting authority.
- Contracts are signed between PDU and the ESCO/Contractors. PDU delivers the retrofit works to the beneficiaries.
- PDU takes on the preparation, the tendering process and the follow-up of the projects. PDU delivers the retrofit works to the beneficiaries.
- PDU takes on the technical risks.

FINANCING ONLY (3/24)

- Beneficiaries are the tendering and contracting authorities.
- Contracts are signed between beneficiaries the ESCO/Contractors (deliver the retrofit works to the beneficiaries).
- PDU assesses the bankability of the projects and provides financing.
- PDU takes on the financial risks.

The main difference between the two models is the contractual relationship with the ESCO or contractors and the resulting impact on the risks and public balance sheet of the PDU.

PDU Operating Services: From low to high integration

		Level of services →		
		Low		High
		Standard services	Aggregation	Financing
Level of services ↓	Low	<p>Marketing</p> <p>Covers the whole range of promotion, communication and commercial development services necessary to inform the beneficiaries of the types of offerings that are available to them.</p>	<p>The PDU bundles the projects of multiple beneficiaries by acting on behalf of them and by making them available to the market.</p> <p>This role can be associated to the integration or facilitation services. In both cases the PDU manages the cost allocation between the beneficiaries.</p> <p>Aggregation is done to create economies of scale both operationally and financially.</p>	<p>The PDU itself provides financing, either through an own fund or by packaging external financing solutions into an integrated financing service.</p> <p>In this case the PDU takes on the financial risk of the projects.</p> <p>This option is typically used where a dedicated fund is created as part of the energy efficiency program.</p>
	<p>Assessment</p> <p>PDU evaluates the technical and financial viability of the projects and decides whether or not they get implemented and/or financed.</p>			
	<p>Financial advice</p> <p>PDU provides guidance and consultancy to the beneficiary on available funding for his project.</p>			
	<p>Facilitation</p> <p>PDU does not sign the contracts with the beneficiaries, but coordinates or “facilitates” the whole process of projects delivery on behalf of the beneficiaries.</p>			
	<p>High</p> <p>Integration</p> <p>PDU acts as an intermediary between the beneficiaries on one hand and the ESCO/contractors on the other hand. In this case, the PDU is the tender and contracting authority.</p>			



IV. Comparison of the models and major findings

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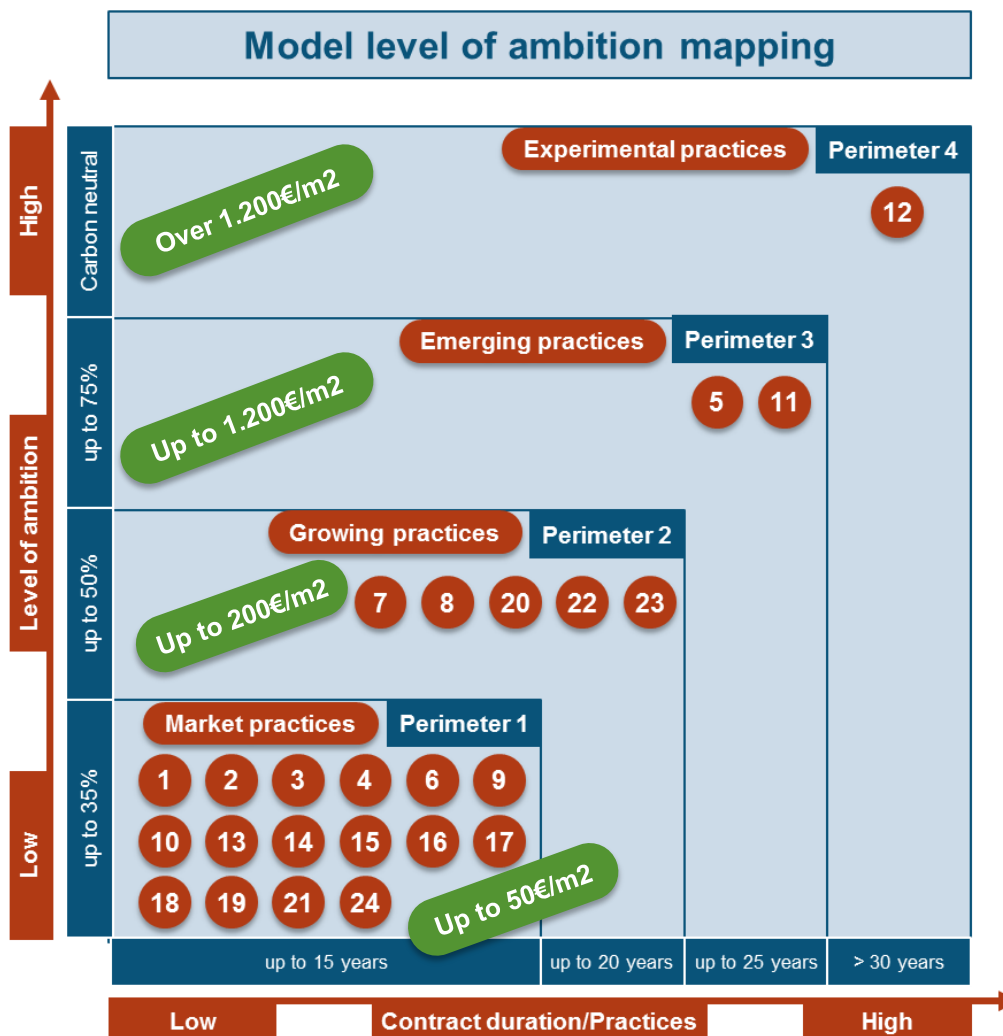
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Models positioning: Models involving facilitation are mainly financed via Financial Institutions or ESCOs while models using integration are mainly financed through the Program Delivery Unit (PDU) or an investment fund.

	Facilitator		Integrator		Financing only
	No aggregation	Aggregation	No aggregation	Aggregation	
Esco financing	REDIBA Eco'Energies EERFS	Berlin ESP RE:FIT VEB Rotterdam GB EE Milan PadovaFIT!	-	-	N/A
Financial institutions	REDIBA Eco'Energies EERFS	Berlin ESP RE:FIT VEB ENSAMB Energie POSIT'IF	Warm Up North	-	N/A
Program Delivery Unit financing	OSER	Fedesco Ox Futures	OSER	Fedesco Energie POSIT'IF Eandis EDLB EscoLimburg 2020 SPEE Picardie	N/A
Investment Fund	EERFS SUNShINE	-	-	EscoLimburg 2020 Cambridgeshire MLEI	Energy Fund Den Haag KredEx
Citizens financing	-	Ox Futures Brixton Energy Co-op	-	-	Climate Community Saerbeck

Level of Ambition: The great majority of the models target Perimeter 1 or “standard market practice”, though factor 2 (50% savings) models gain in attention, factor 4 (75% savings) remain marginal.

Models			
1	REDIBA	2	Berlin Energy Saving Partnership
3	RE:FIT	4	Vlaams Energiebedrijf
5	OSER	6	Fedesco
7	Eandis EDLB	8	ESCOLimburg 2020
9	Eco'Energies	10	Energy Fund Den Haag
11	Energies POSIT'IF	12	Climate Community Saerbeck
13	Cambridgeshire MLEI	14	Ox Futures
15	Rotterdam Green Building	16	Energy Efficiency Milan
17	ENSAMB	18	Brixton Energy Co-op
19	EERFS	20	SUNSHINE
21	Warm Up North	22	SPEE Picardie
23	KredEx	24	PadovaFIT!





V. Conclusions

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Some conclusions/remarks

- ❓ Success of models often correlated with the existence of
 - well-functioning Program Delivery Unit, and
 - clear leadership role of the public partner (ambition and willingness to invest)

- ❓ Lower ambition levels (<35% savings) mostly driven by:
 - facilitation models
 - EPC/ESC implementation
 - ESCO and/or Financial Institutions financing

- ❓ Factor 2 (50% savings) and factor 4 (75% savings) ambition levels are very often “integration” driven, both technically as financially.

- ❓ High energy efficiency ambition levels (factor 2 and factor 4) do not focus on short to medium term pay-back terms (need other financing vehicle than ESCO or FI). In other words, profitability is only one of the many investment criteria

- ❓ Absolute need for project developers to prepare high quality business cases to enable proper investment decisions and enhanced bankability



VI. Guidance material

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Next: Strategic planning and action plan template

➔ Follow the step-to-step guidance tools

1. Decision mapping

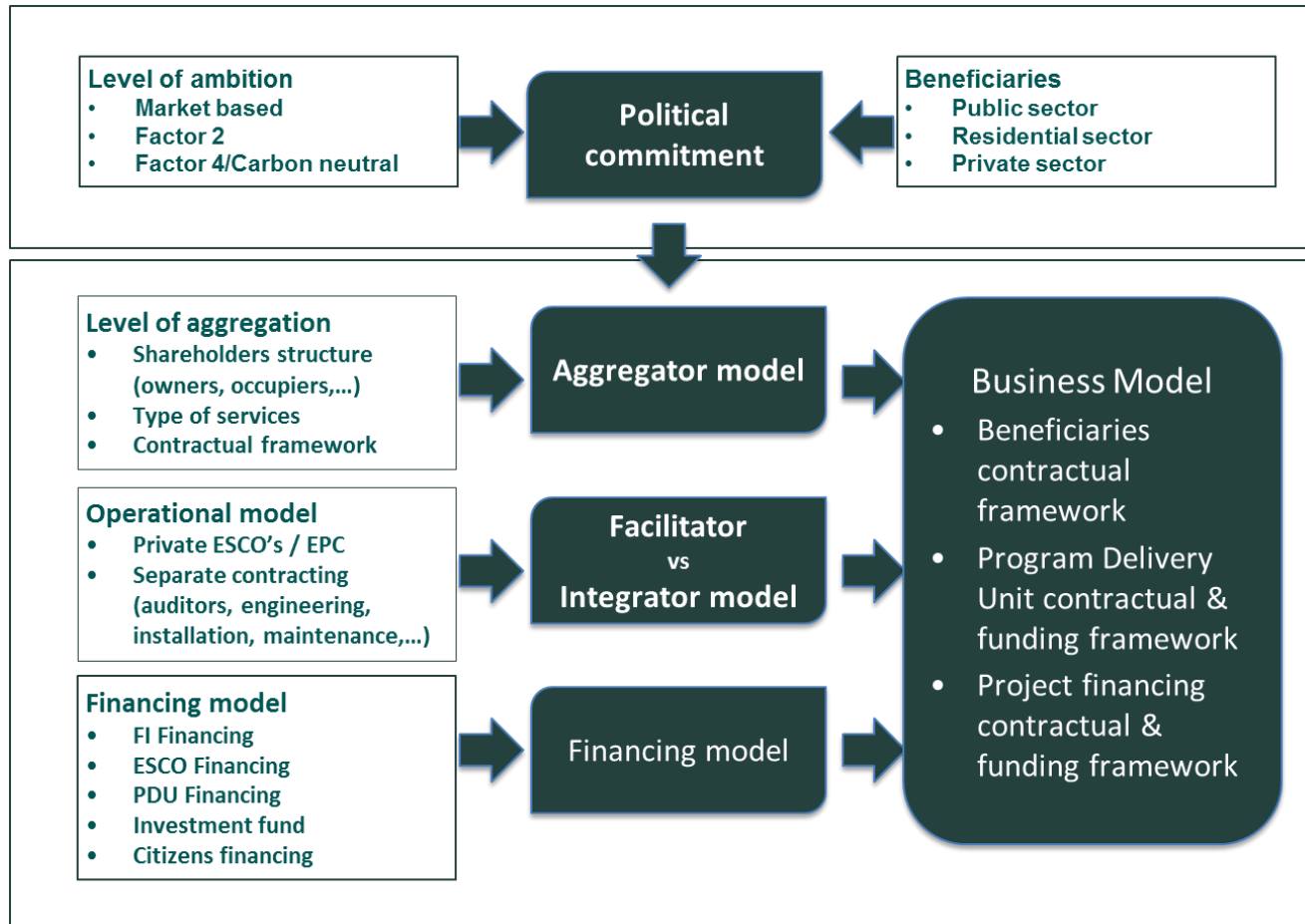
2. Strategic analysis

- a. Program Authority/Program Delivery Unit roles and functions*
- b. Beneficiaries, type of projects and level of “ambition”*
- c. Implementation model*
- d. Operating Services*
- e. Level of “aggregation”*
- f. Financing & Funding Vehicle*

3. Choice – What are you proposing to do?

4. Action plan for implementation

Decision mapping



1. Read the CITYinvest Comparison report
2. Make use of the tools at your disposal on our website:
 - Recommendation-decision matrix.
 - Strategic action plan template
 - Evaluation toolkit.

Thank You

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