



CITYnvest

Innovative financial mechanisms for the energy efficiency projects in Latvia

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Riga

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About CITYinvest

- Funded under the Framework Programme for Research and Innovation Horizon 2020
- 36 months
- Main goal: mainstreaming and replication of innovative financing models for energy efficiency in buildings



Climate Alliance





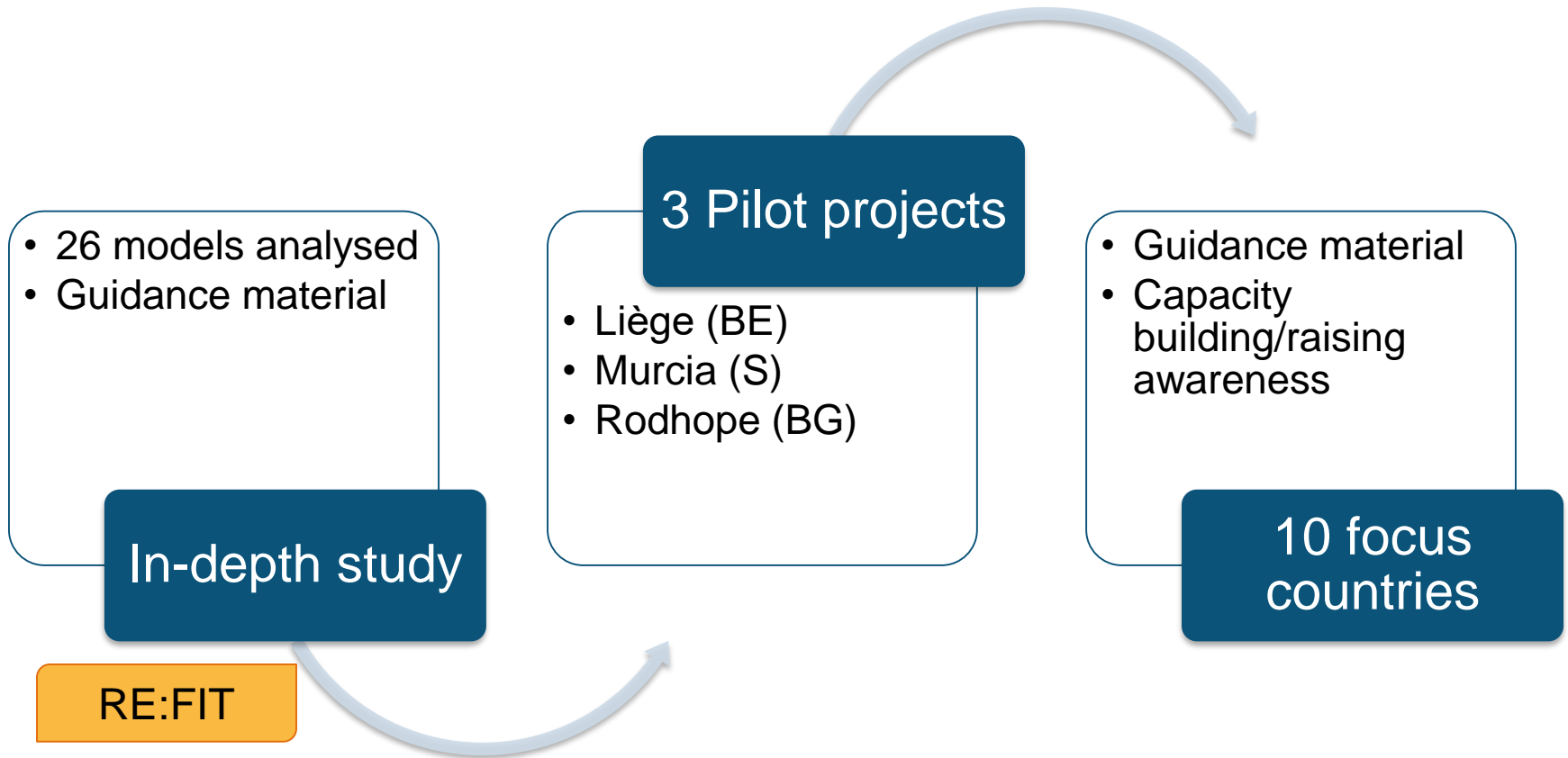
Innovative Financing Models

“Innovative financing model” - mechanisms and instruments that were developed to provide suitable financing for large-scale and in-depth energy efficiency renovations in buildings.

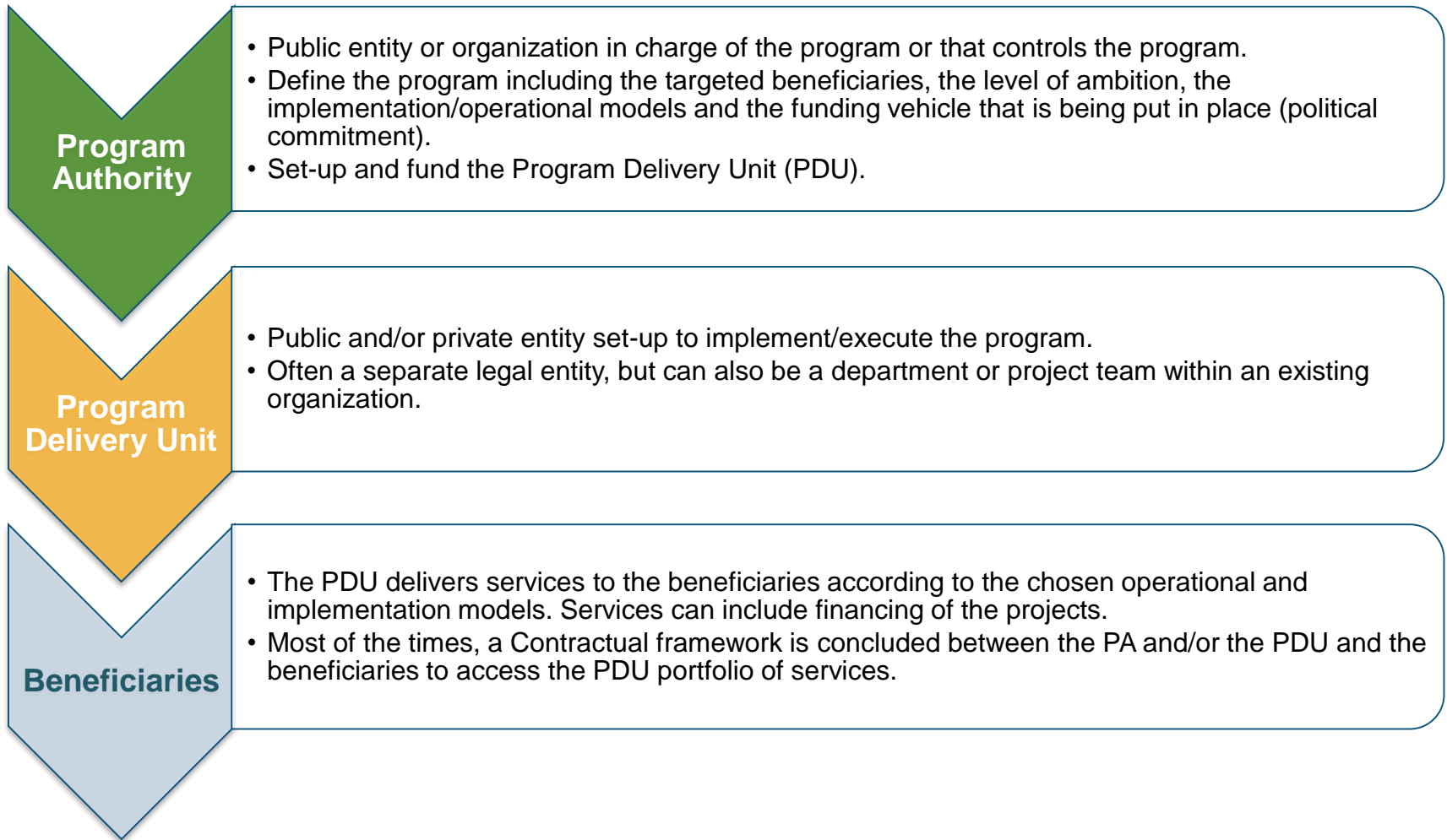
- Energy Performance Contracting (EPC)
- Third Party Financing (TPF)
- revolving funds
- cooperative models
- crowdfunding
- green bonds

Proven successful and applied in several contexts but not yet widely used across Europe. There are still some barriers that block replication and extensive application of those schemes.

Holistic solutions framework: what CITYinvest has to offer



Business models: Common practices



PDU Operational models: What are the 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 models is the contractual relationship with the ESCO or contractors and the resulting impact on the risks and public balance sheet of the PDU.

Capacity building Step-to-step guidance tools



Increasing capacities in Cities for innovating financing in energy efficiency
A review of local authority innovative large scale retrofit financing and operational models

December 2015


Programme Horizon2020
Grant Agreement No 646720 – CITYINVEST

Recommendations Matrix

This document is composed within Work Package 2, Task 1.4
'Contexts, transferability and framework for checking about scheme design'
Developed by Energimatt
09/05/2016
2021-2024

Deliverable	2.4	Start Date	30/05/2015
Recommendation	3	Start	01/04/2016
Project Start Date	1 February 2015	Duration	Public
Project Duration	3 years		

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Innovative Financing Models

Definitions

Implementation Model: - Any -

Operating Services: - Any -

Type of Project: - Any -

Ambition/Targets: - Any -

Who benefits from the project?: - Any -

Where does the money come from?: - Any -


Financial Instruments: - Any -

Scalability of the Model: - Any -

How mature is the model?: - Any -

Staff Requirements


Public	Public-Private	Private	Citizen
Vlaams Energiebeheer	Warm Up North	SUNSHINE	Community based renewables-Saarbeck
SPEE Picardie	PadouArt	Community based renewables-Saarbeck	Briton Energy Co-op
Rotterdam Green Buildings	Energy Fund Den Haag	Briton Energy Co-op	
REDIBA	Energies POSTIF		
RE-IT	EEPS		
Dufutures	Community based renewables-Saarbeck		
OSER	BERLIN		
IndEx			
Fedeco			
ESCOLIMBURG2020			
ENSAMB			
Energy Fund Den Haag			
Energy Efficiency Milan Covenant of Mayors			
EEPS			
EcoEnergies			




Scheme Decision Map Barriers Tool

This barriers guidance tool of the [CITYINVEST](#) project helps local authorities to overcome specific barriers when developing and implementing their energy efficiency renovation programmes. Common barriers range from low demand from building owners to limited staff resources in the local authority or a lack of Energy Service Companies on the market. Depending on the barrier a local authority faces, the tool below recommends specific actions and helps identifying reference models that have dealt with similar challenges.

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Strategic planning & action plan template

- Decision mapping
- Strategic analysis
 - Program Authority/Program Delivery Unit roles and functions
 - Beneficiaries, type of projects and level of "ambition"
 - Implementation model
 - Operating Services
 - Level of "aggregation"
 - Financing & Funding Vehicle
- Choice – What are you proposing to do
- Action plan for implementation



Step-By-Step Guidance

CITYINVEST step-by-step guidance for local authorities to implement innovative financing models for energy efficiency in buildings

- Overarching EU support
- European financial support: FAQ
 - European advisory services: FAQ


Step 1 – Get Inspired

- Learn from your peers: have a look at the 26 case studies (select your language) and read the Report 'Review of local authority innovative large scale retrofit financing and operational models'. A comparison tool is coming soon here!
- Convince stakeholders and get political decision-makers committed: coming soon.

Step 2 – Building blocks of the Action Plan



- Define roles and functions of Program Authority (PA), Program Delivery Unit (PDU)
- Decide the level of ambition, 'type' of projects and beneficiaries
- Estimate the impact
- Choose implementation methodology (Separate Based Contracting, Energy Performance/Supply Contracting)
- Specify operational services framework
- Develop financing framework (project financing, contractual and funding framework)
- Recommendations tool
- Mitigate potential risks and likely-to-encounter barriers when designing your action plan: CITYINVEST Barriers Tool
- Fill in the Action Plan Template

Step 3 – Operationalize a Dedicated Team



A guide for the launch of a One Stop Shop on energy retrofitting

Based on RenoWatt's experience in Liège

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Progress-Pilot Regions



National Capacity Building programme



Next steps

Visit [CITYinvest.eu](https://www.cityinvest.eu) to stay up-to-date



Collect feedback from focus countries LV

Finalise long term strategy of engagement for focus countries including LV

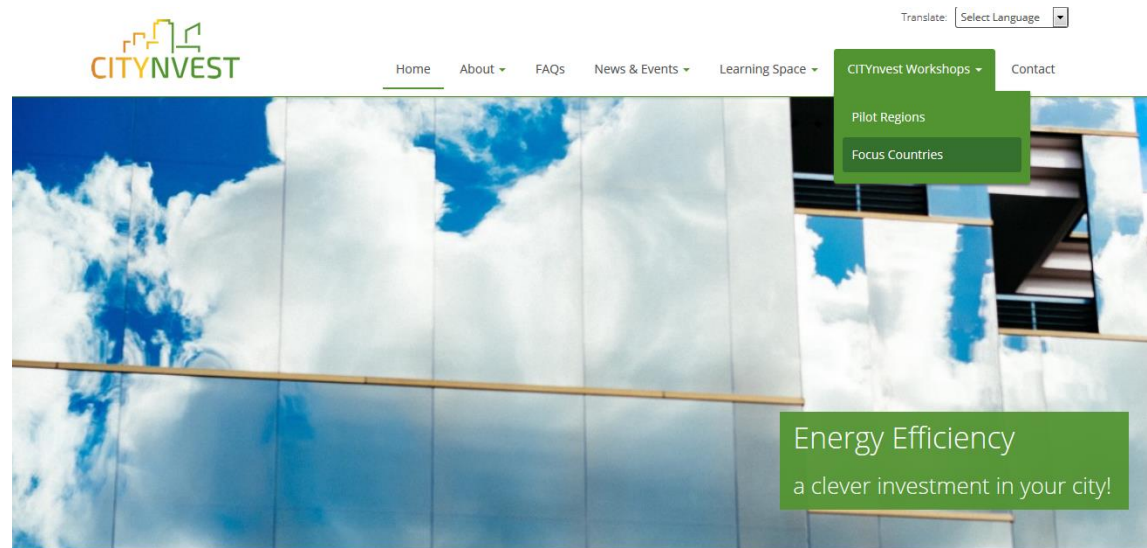
Showing evidence: implementation 3 action plans in the pilot regions

Monitoring of successes and failures of investments

Channelling recommendations to EU

www.CITYinvest.eu

- ✓ Good practices examples
- ✓ Resources library: toolkits and guides
- ✓ Events and workshops
- ✓ Follow-up of this workshop
- ✓ Links with like-minded projects
- ✓ Newsletter/ Interviews
- ✓ FAQs
- ✓ and more...






Questions?

Thank You


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CITYNVEST



BACK UP



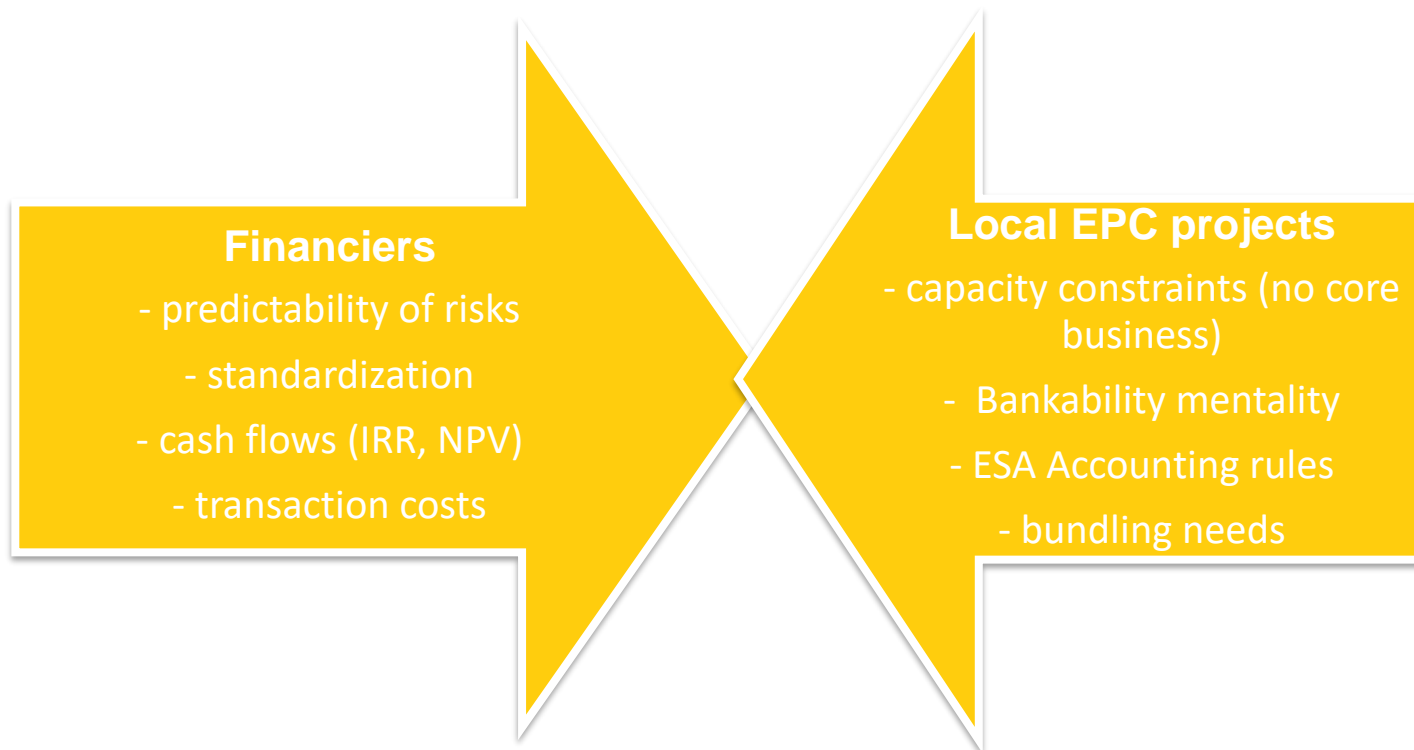
WHY CITYinvest?

- Buildings responsible for **40% of European primary energy consumption** and **36% of CO2** emissions, but renovation rate is only around 1% per year
- **Energy Efficiency (EE) priority for the EU**: EE ambitious 2030 targets + principle of EE at first
- **NEED** to increase rate of building renovation, reduce consumers' energy bills costs and create jobs via building renovation market
- Finance for buildings: limited public financial resources; investors **adverse to risks**; limited implementation of successful financial models

=> CITYnest is **filling the GAP** between political will and limited use of financial resources for public building renovation by promoting successful experience of innovative financing models for EE in building renovation

Rationale of CITYinvest

EE financing models and EPC market remains far away reality for local authorities because of perception gap:

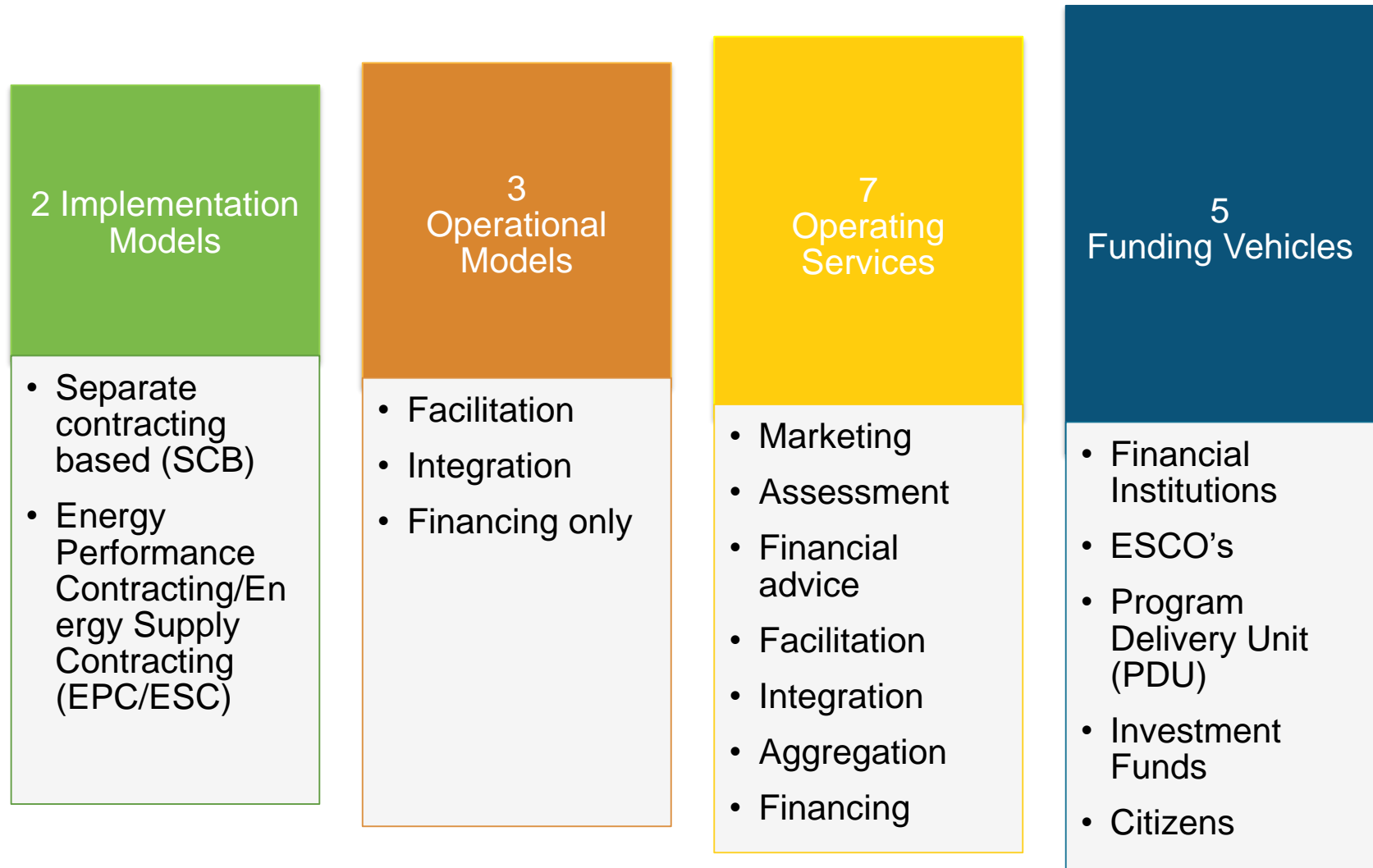




In-depth study: What have we done?

- Analysed **26 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 /Aggregation
 - 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: What are the main characteristics?

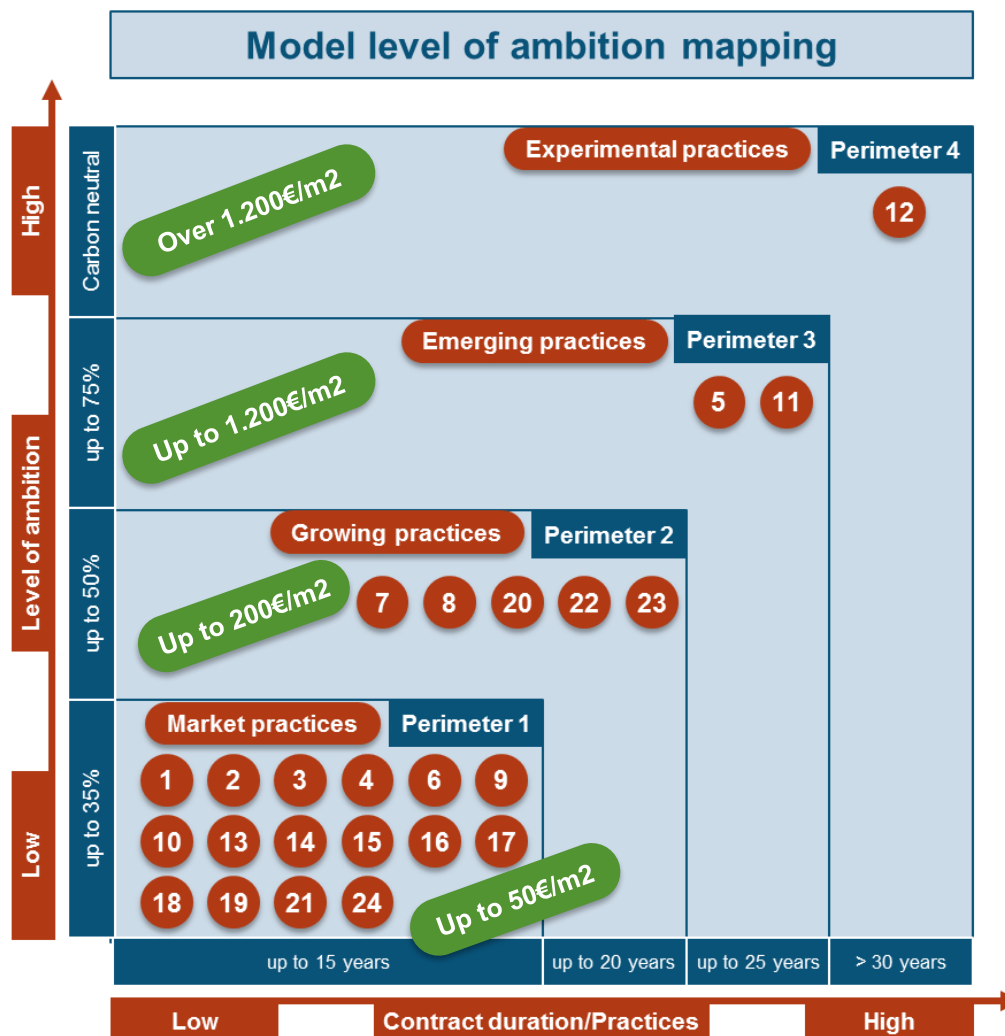


Models positioning: Models involving facilitation are mainly financed via Financial Institutions or ESCOs while models using integration are mainly financed through the Program Delivery Unit (PDU) or an investment fund.

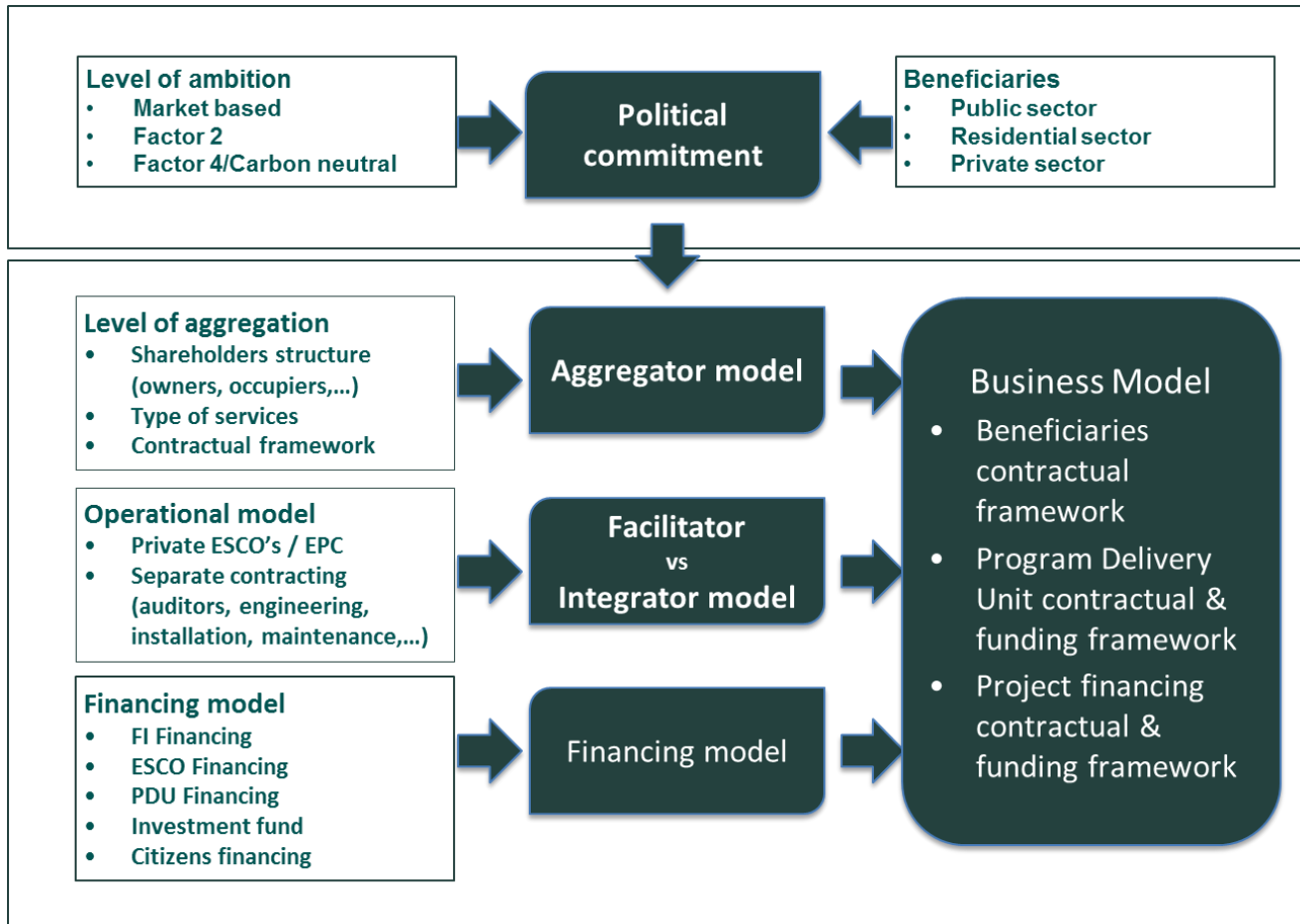
	Facilitator		Integrator		Financing only
	No aggregation	Aggregation	No aggregation	Aggregation	
Esco financing	REDIBA Eco'Energies EERFS	Berlin ESP RE:FIT VEB Rotterdam GB EE Milan PadovaFIT!	-	-	N/A
Financial institutions	REDIBA Eco'Energies EERFS	Berlin ESP RE:FIT VEB ENSAMB Energie POSIT'IF	Warm Up 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!

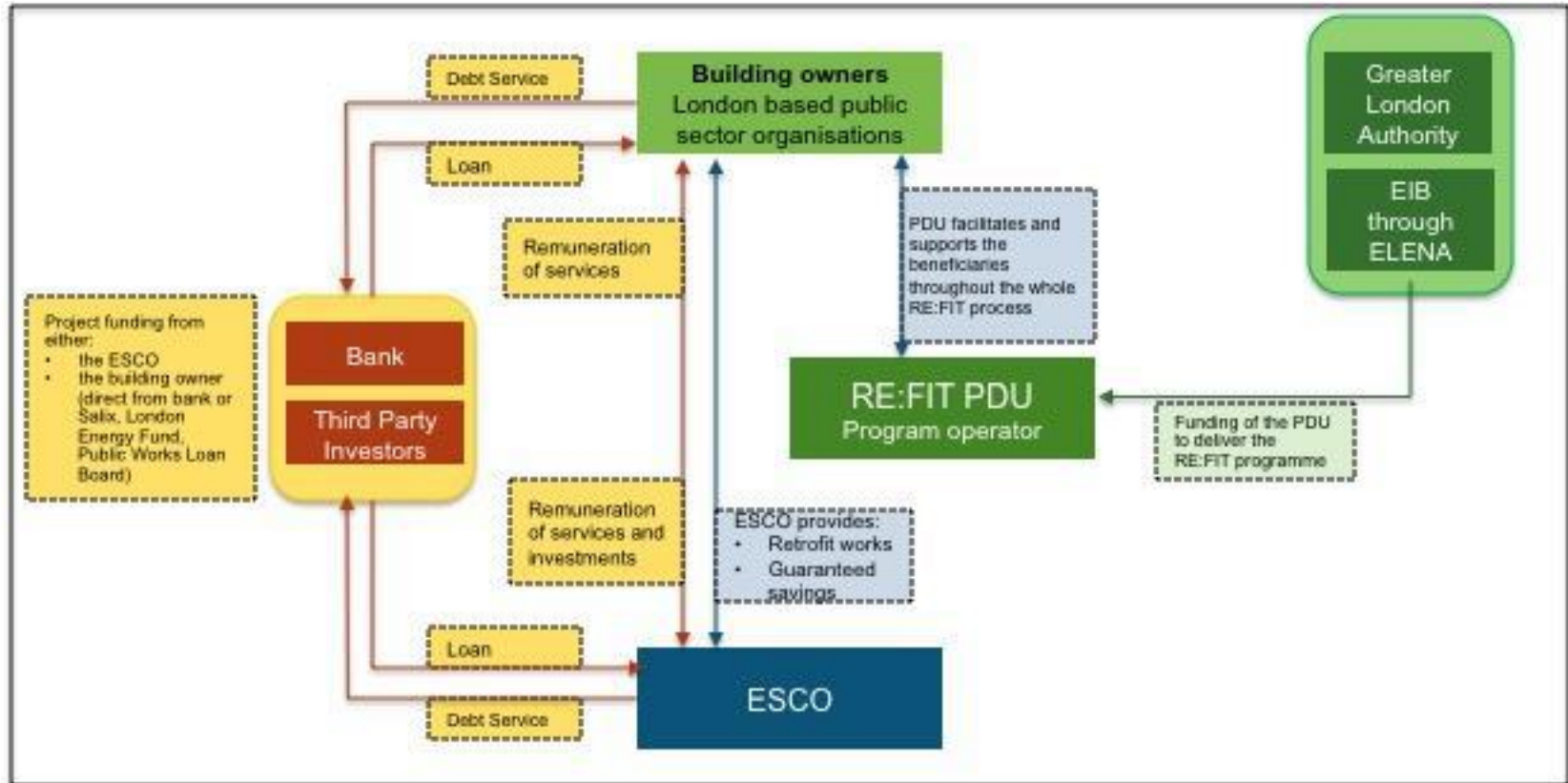


Decision mapping



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.

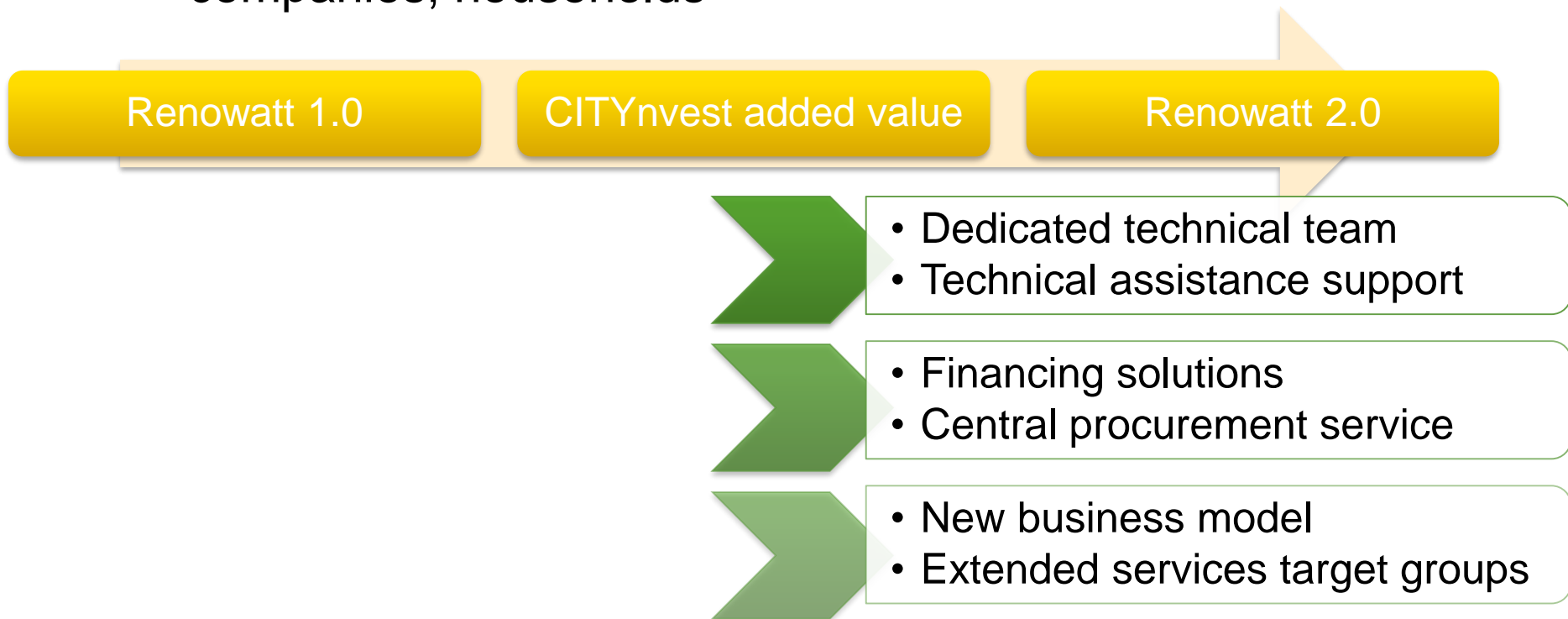
Case Study example: RE:FIT



Pilot Region Liège

Renowatt: One-Stop-Shop to launch EE urban Retrofitting

- Client support, project bundling and financing opportunities
- Clients: public authorities, hospitals/elderly care, private companies, households





Pilot Region Liège

- Challenges and lessons learned so far:
 - Convince public authorities
 - Expensive procedure to prepare tender, importance TA and neutral facilitator
 - Time dedication
 - Expertise ESCO field
 - Management of EPC contracts
 - EPC is not silver bullet
 - Political commitment = starting point (but check election timing!)
 - Communication, communication and communication, at all level of the municipalities



Pilot region Rhodope – Main challenges

Organizational:

- Lack of administrative capacity to tackle sustainable energy projects;
- Lack of collaboration among municipalities.

Financial:

- ESCO market underdeveloped;
- Projects too small to gain critical mass for favorable financing terms.

One-Stop-Shop Rhodoshop

Creation based on GRE-Liege Model

- **Central procurement agency** →
- **Project bundling in pipelines** →
- Search for suitable **financiers matching the specific project requirements** and negotiate on secured conditions →
- Ensure **launching tenders** for public procurement of building and street lighting refurbishment works →
- **Monitor** project results

ACTION PLAN

1. Collect data and identify potential projects;
2. Calculate potential savings and investment needed;
3. Investigate local TPF/ESCO market;
4. Assess different operation models and present to local policy makers - General Assembly of ARM;
5. Define operational model for the programme and get approval by local policy makers;
6. Write the application for funding.
7. ...



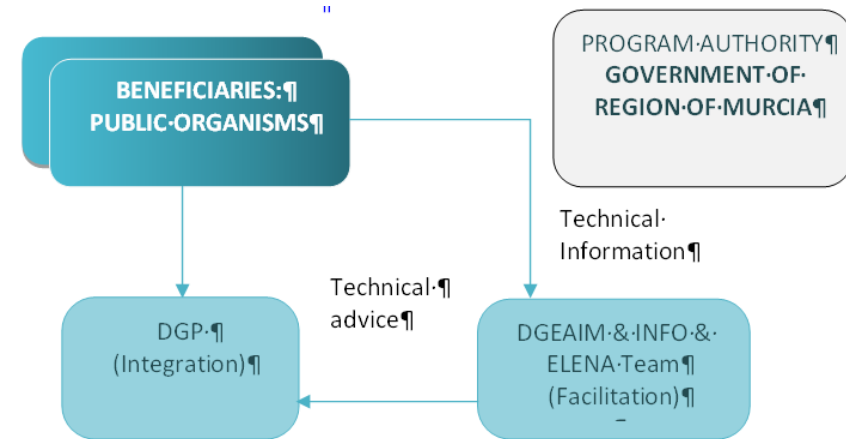
Pilot Region Murcia

- **Frame:** Regional Energy Plan 2016-2020 that contains the Plan of Energy Efficiency in public buildings.
- **Target:** energy efficiency plan for the renovation of the building stock owned by the regional government
- **Wide strategy:** renovate the public buildings owned by the Murcia Region (409 buildings – 107 GWh – 26,6 millions € energy base line) with a preliminary estimated investment of 44,39 millions € that should lead to 23% energy savings (24,66 GWh, 64,119 GWhep, 6,12 millions € savings) and 16,005 avoided tons of CO₂ per year.

Murcia CITYinvest Action Plan

Key players

- **Program Authority (PA):** Murcia regional government
- **Program Delivery Unit (PDU):** Directorate General for Energy DGEAIM
- **Supporting bodies:** DGP & INFO



Type of buildings

- 100 for large buildings, 79 projects for medium-size buildings and 230 projects for small buildings

Stages	Number of buildings in stages and sizes			Finish Date
	Big	Medium	Small	
I	47	8	7	2017/03
II	38	12	0	2017/03
III	15	35	0	2017/07
IV	0	24	30	2017/09
V	0	0	50	2017/11
VI	0	0	50	2018/01
VII	0	0	50	2018/03
VIII	0	0	43	2018/05
Subtotal	100	79	230	



Energy Conservation Measures (ECMs):

- Façade renovation (mix between windows replacement and opaque facades placement)
- Inside lighting renovation (relighting with leds)
- Boiler retrofitting (biomass boilers)
- Air conditioning retrofitting (technical equipment replacement)
- Energy management (commissioning and regulation of the equipment)

Key issues:

- Hybrid Integration/Facilitation model
- Financing model based on ESCOs

Current stage of progress

- For the first group of 24 buildings contracts will be signed with an ESCO (Energy Services Company) that will acts as a unique contractor and assure all the technical risks of every contract. If the experience is positive this model will be extended to other groups of buildings, although other financing options have not been ruled out.



Monitoring of investments and energy savings

- Complete **overview of the proceedings** of CITYinvest via defined objectives and KPIs (3 phases of development: quantitative and qualitative part)
- Translate the local examples to a **categorization and typology** in order to increase the knowledge on the innovative financing schemes and the appropriate business models (complementing Recommendations Matrix)
- Closing the loop of the **guidance and capacity-building materials**



Key lessons learned on the replication process

- ❑ **Time to market** remains very long: operationalizing PDU 3 to 5 years. **CITYinvest helps to speed up** the process for the pilot regions.
- ❑ **TA is key** to stimulate the development of PDU structures. The need **for long term equity** should be investigated.
- ❑ Building a program and a PDU requires a **strong commitment from PA**. Stimulating local public authorities at the EU level should be investigated.



Critical Factors for Success

- Knowledge of local situation: having **dedicated staff and local support** crucial (ARM and Smolyan Municipality);
- Presence of local **political commitment** to sustainability and stimulating local jobs
- Find the most active and influential municipality and get it on board (it will attract others): enhancing **collaboration between municipalities**
- Undertake the work for **One-Stop-Shop establishment** (which is huge!)
- Keep in constant touch, answer all questions, provide continuous support: **Build local capacity for sustainable energy project development and implementation**: technical and economic feasibility, financial planning



Project coordination key lessons learned (1)

- Management
 - No need of fancy software: good communication will do
 - Don't build WPs as isolated islands: strength is in synergies
 - Make sure those who carry out the work = beneficiaries
 - Progress reports are an absolute asset for activity reports
 - Participants portal will get rid of children diseases. Efficient helpdesk will hopefully remain
 - Network with coordinator peers
- Development of guidance materials
 - Think earlier on its dissemination
 - Build-in sufficient time for feedback loops
- Barriers in pilot regions
 - Financing and accounting rules
 - Dependency on local commitment (plan well in advance of elections)
 - Dependency on TA/PDA
 - Standardization and aggregation needs
 - Sensitivity of ownership



Project coordination key lessons learned (2)

- Capacity-building in 10 focus countries
 - Strong partnerships are a must if you want a lasting impact
 - The workshops = only starting point. Follow-up activities needed
- Monitoring timeline
 - Three pilot regions do not have same cycles and characteristics
- Communication and dissemination
 - Should be at the core – think from the start
 - Starts with C & D between partners



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