

EIB's technical and financial services for local energy efficiency projects

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*Energy Transition and Climate Adaptation –
Local Strategies and Support Policies in Romania
Bucharest
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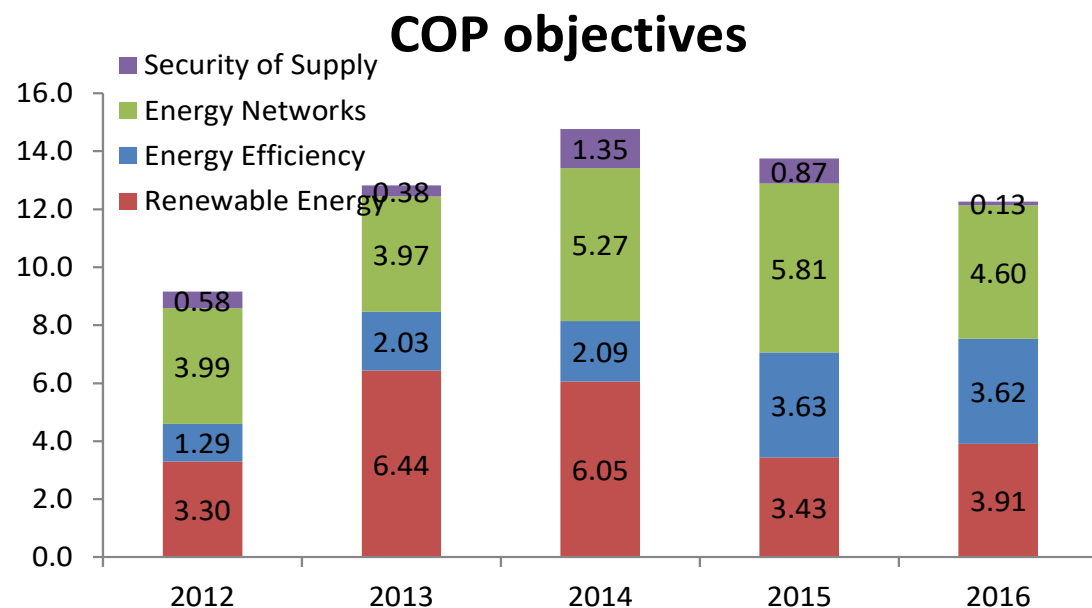
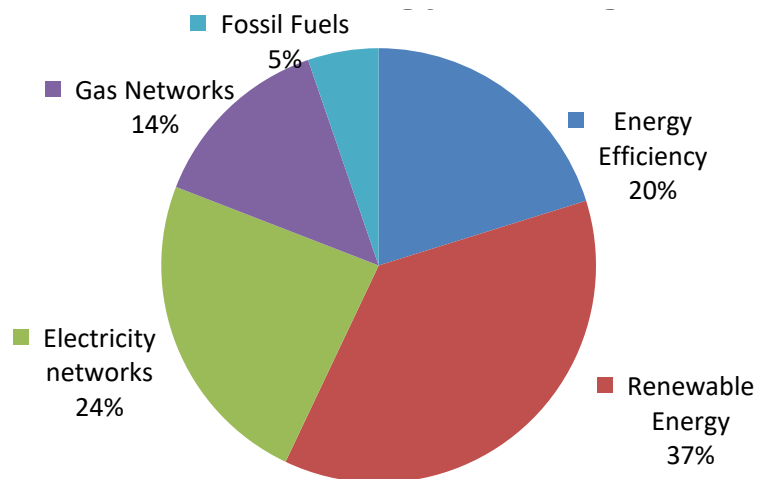
The EIB - the EU bank



- Natural financing partner for the EU institutions since 1958
- Around 90% of lending is within the EU
- Shareholders: 28 EU Member States
- Lending volume 2016: signed EUR 74.5 bn

Investing in Europe's growth

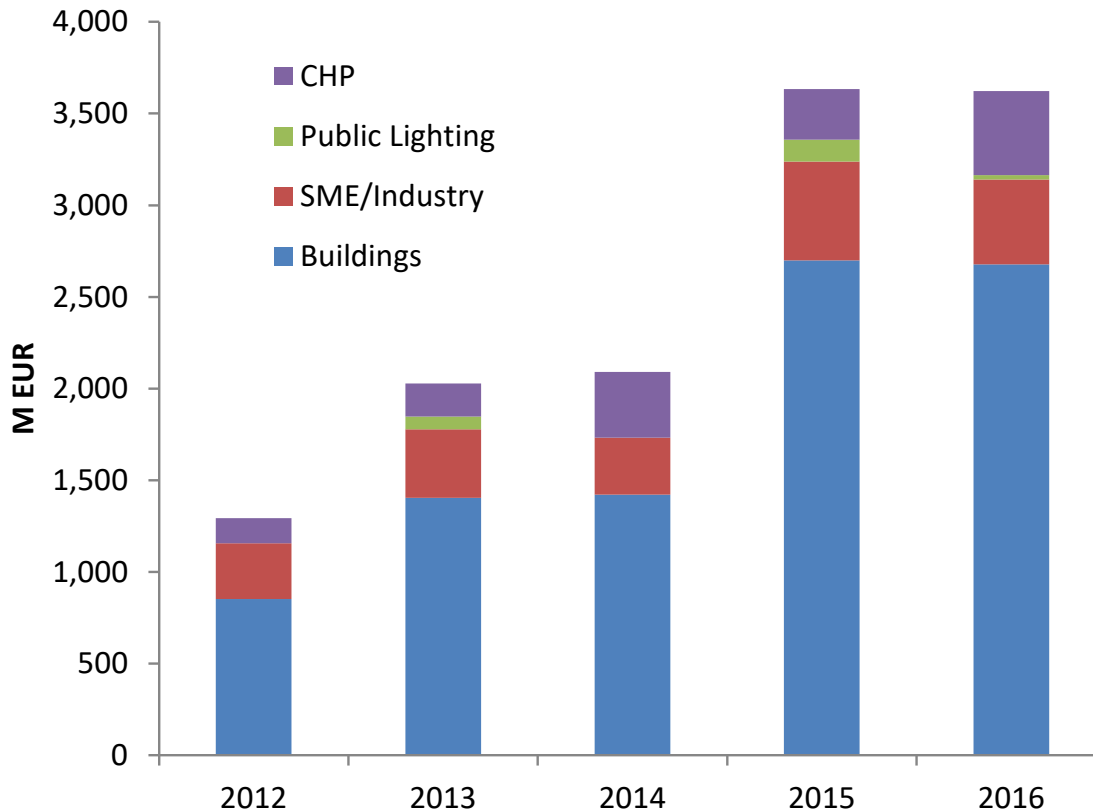
EIB Energy Lending 2012-2016



- Signatures 2012-2016: EUR 62.7 bn
- In Renewable Energy, Energy Networks, Security of Supply and Energy Efficiency

EIB EE Lending 2012-2016

EE Lending Breakdown per year



- Overall EE-lending increased by 3x since 2012
- 75% of EE-lending volume to Buildings

Needs and challenges of EE investments

- Poor **information**
- High transaction costs: **fragmentation** EE projects are combinations of multiple small size sub-projects
- **Split incentives** (e.g. tenants gain from lower bills while landlords pay for investment)
- **Subsidised** tariffs, reducing incentives to invest.
- Poor incentives for local banks to expand into a relatively new area of lending (**capital constraints**)
- Public authorities lack of **technical capacity**, incentives and frequently balance sheet to implement EE programmes

EIB products available

LENDING	BLENDING	ADVISING
<ul style="list-style-type: none"> ▪ Long term debt ▪ Subordinated loans ▪ Project finance ▪ Equity type ▪ Guarantee ▪ Securitisation ▪ Venture capital ▪ Growth finance <p>Specific tools:</p> <ul style="list-style-type: none"> ▪ PF4EE ▪ EFSI 	<ul style="list-style-type: none"> ➤ Combining EIB finance with EU budget ➤ (Project Bond Initiative) ➤ Higher risk projects for innovation (InnovFin) 	<ul style="list-style-type: none"> ✓ EIAH (European Investment Advisory Hub) ✓ ELENA (European Local Energy Assistance) ✓ EIB Smart Cities Initiative ✓ JASPERS (Structural Funds assistance)

Attracting FUNDING for long-term growth

Example of Investment Loan

Energy Efficiency in Bucharest Residential Buildings (Romania)

Sector	Number of buildings	Total cost (MEUR)	EIB loan (MEUR)	Status
Sector 1	399	190	125	Completed
Sector 1 II	376	182	136.5	On-going
Sector 2	246	80	60	On-going
Sector 2 II	95	29.5	22	On-going
Sector 4	116	36	27	Completed
Sector 4 II	140	56	42	On-going
Sector 6	256	147	70	Completed
Sector 6 II	112	54.5	40	On-going
	1740	775	522.5	

Future Potential EE Projects in Bucharest

BUCHAREST S5 ENERGY EFFICIENCY

EE in residential buildings

Under Programme Authorization:

BUCHAREST S1 ENERGY EFFICIENCY

Various EE investments including public buildings, street lighting etc.

BUCHAREST S2 ENERGY EFFICIENCY

Various EE investments including public buildings, street lighting etc.

BUCHAREST S4 ENERGY EFFICIENCY

Municipality's plan – inter alia- includes improvement of EE of Public buildings

BUCHAREST S6 ENERGY EFFICIENCY

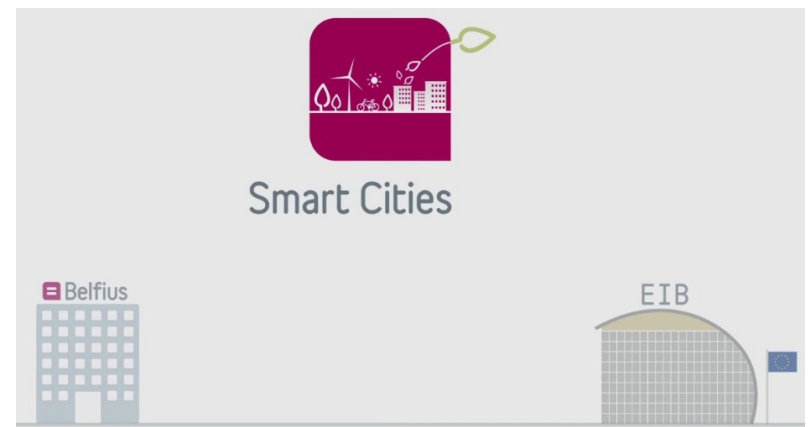
Energy retrofit of 11 existing schools and kindergartens + construction of 8 NZEB education facilities + EE residential

Potential TA through ELENA

Example Loan Intermediation

Smart Cities financing through BELFIUS Bank (Belgium)

- Intermediated framework loan with Belfius Bank.
- Covers wide range of SMART investments and promoters in Belgium: Smart is not only for large cities!
- Support to investments in urban renewal, urban infrastructure, social and affordable housing, energy efficiency, renewable energy, sustainable transport, water, solid waste and ICT.
- Stimulates best practice: integrated approach, use of tested smart technology
- Relies on an intermediary bank with technical capacity and market reach in the municipal market.



Example Investment Fund



European Energy Efficiency Fund

- ❖ Investment areas: e.g. EE in public and private buildings, efficient cogeneration + district heating, decentralised RE, clean urban transport, modernisation of infra-structure like street lighting or smart grids;
- ❖ Project CAPEX: ~ 5 till 25 mEUR
- ❖ Beneficiaries: local/regional public authorities and public bodies, PPP, ESCO or SPV are possible
- ❖ Financing in form of: i.a. loans, guarantees, forfeiting schemes (to finance ESCO projects), equity shares
- ❖ Fund manager: Deutsche Bank; (www.eeef.eu)
- ❖ Project examples:
 - ❖ Biomass cogeneration plant supplying a DH network in Renne FR,
 - ❖ Public building refurbishment in Rhône-Alpes, FR
 - ❖ Street lighting in Venlo, NL

EIB's technical and financial support for project development

Investment Plan for Europe

Investment Plan for Europe

Mobilise EUR 315bn of additional financing

...through the European Fund for Strategic Investments (EFSI)

Support investment in the real economy

...through the **European Investment Advisory Hub** and the European Investment Project Portal

Create an investment friendly environment

...through improvements of the European regulatory environment

What is the Advisory Hub (EIAH)?



A joint initiative

A tool to strengthen Europe's investment environment and improve the **quality** of investment projects



A **single access point** to a comprehensive offer of advisory and technical assistance services



An instrument to assess and **address** unmet **needs** for advisory support



A **cooperation platform** to leverage and exchange expertise (National Points of Information, Managing Authorities for structural funds)

Purpose of Advisory Hub

**Support for projects
and investments**

Advisory and technical
support in
identification,
prioritisation,
preparation,
structuring and
implementation of
investment projects

**Enhance use of EU
funds**

Advisory and capacity
building support in the
implementation of ESIF
financial instruments

**Improve access to
finance**

Enhancing financing
conditions and creating
bankable propositions

Advisory Hub support available for (e.g.):

- Upstream project identification
 - Providing guidance in technical feasibility and bankability of future investments, business plans etc.
- Project preparation
 - Support to promoter on structuring and preparing bankable projects and designing investment platforms for aggregating projects
- Project implementation
 - Support Project Implementation Units through consultants etc.

ELENA in short

European Local Energy Assistance

- EC-EIB cooperation to support public authorities and private entities to reach 20-20-20 targets
- Technical Assistance facility: managed by EIB; funded by EU budget (H2020 Programme)
- Project development support for energy efficiency; building integrated renewables; clean urban transport
- Market replication focus (min. investment EUR 30 m)
- Investment leverage required (ratio 20 for sustainable energy; 10 for clean urban transport; claw back possibility)
- 90% funding rate (grant)
- Budget allocation: still available; average EUR 15m per year
- First come, first served rule

European Local Energy Assistance - ELENA

ELENA

Technical Assistance

Support for
Local, regional or national
entities for :

- **Additional personnel**
- **Technical studies**
- **Preparation of calls for tender**
- **Financial structuring**

INVESTMENT PROGRAMME EE and RE

in public and private buildings;
public lighting and traffic light network;
photovoltaics,
heating/cooling systems;

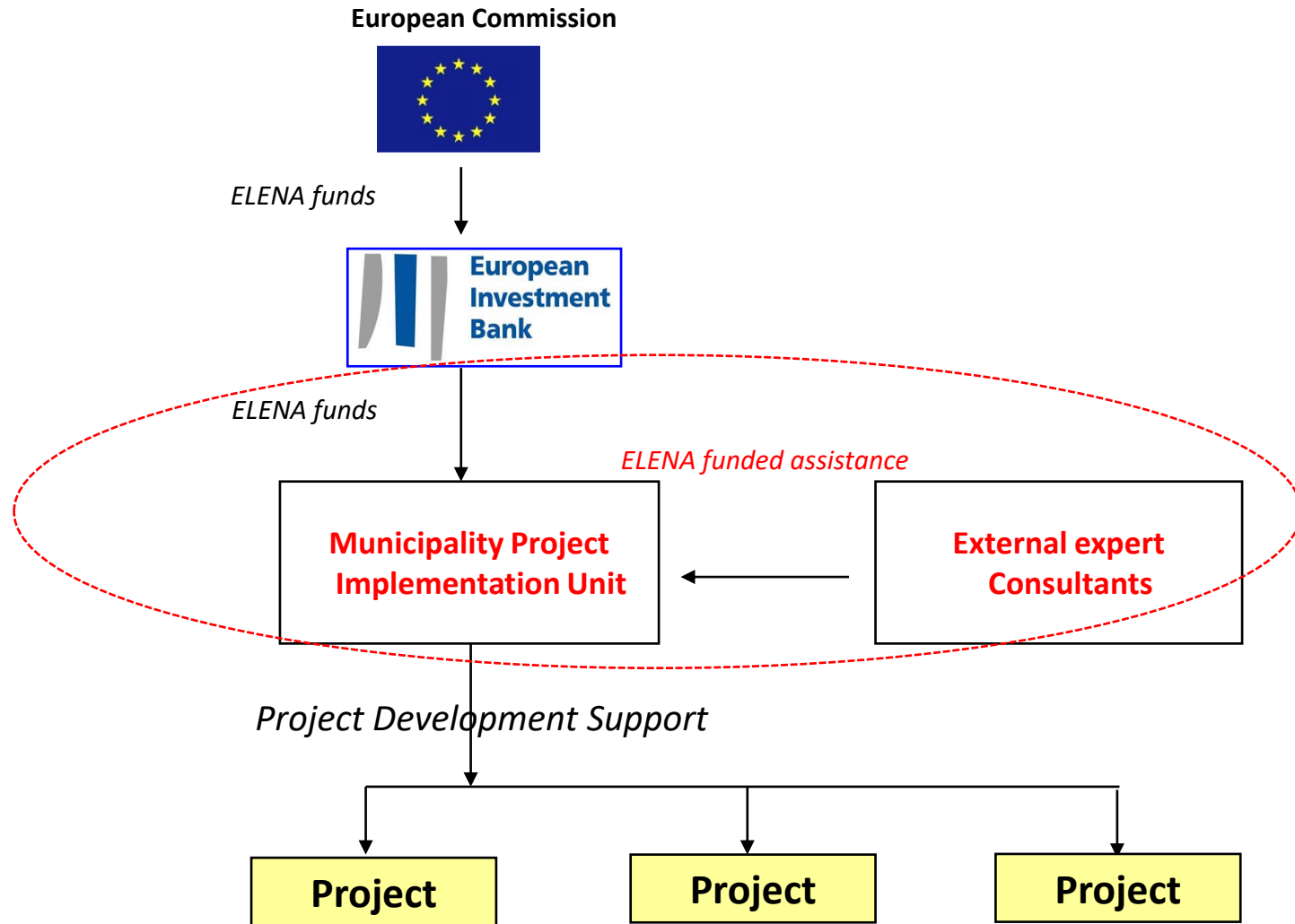
Efficient urban transport

clean and energy-efficient road transport vehicles,
trams, trolleybuses, metros, and trains;
investments to improve public transport;

Local energy facilities that support EE/RE smart grids;

infrastructure for recharging electrically
powered vehicles;
information and communications technologies.

ELENA Project Example



EE and PV in public buildings, EE in public lighting

ELENA case study : City of Ljubljana

- Beneficiary: City of Ljubljana, Slovenia
- Objective: implement a large investment programme improving energy performance of numerous public buildings through Energy Performance Contracting and Third Party Financing using ESCOs. Several tenders have been prepared and contracts signed for EE improvements in similar buildings and buildings with same EE technologies (e.g. lighting, PV or CHP)
- ELENA grant budget: EUR 1.35m
- Investment amount prepared : EUR 49.2m

ELENA support requested:

- ✓ Set up of an internal Project Implementation Unit
- ✓ Preparation of simplified energy audits and checking of the energy baseline for the selected buildings, tender documentation preparation, design of the EPC contracts, tender evaluation
- ✓ External assistance for legal and financial advice

Case study: Picardie Pass Renovation

EFSI plus ELENA

- ▶ Beneficiary: Regional Public Service Company for Energy Efficiency in Picardie, France
- ▶ Objective: energy efficiency renovations of private houses (as of December 2016, 290 ongoing building sites provide work to more than 400 local craftsmen and companies, at a cost of EUR 26.3m)
- ▶ Estimated investment programme cost: EUR 52m
- ▶ ELENA grant budget: EUR 1.8m
- ▶ EIB loan: EUR 23.5m

ELENA support requested:

- ✓ Development of a public service company for EE implementing an investment programme with private home owners
- ✓ External assistance to support each homeowner in the works implementation phase
- ✓ Cooperation with partners in view of promoting the service, identifying potential homeowners and preparing contracts

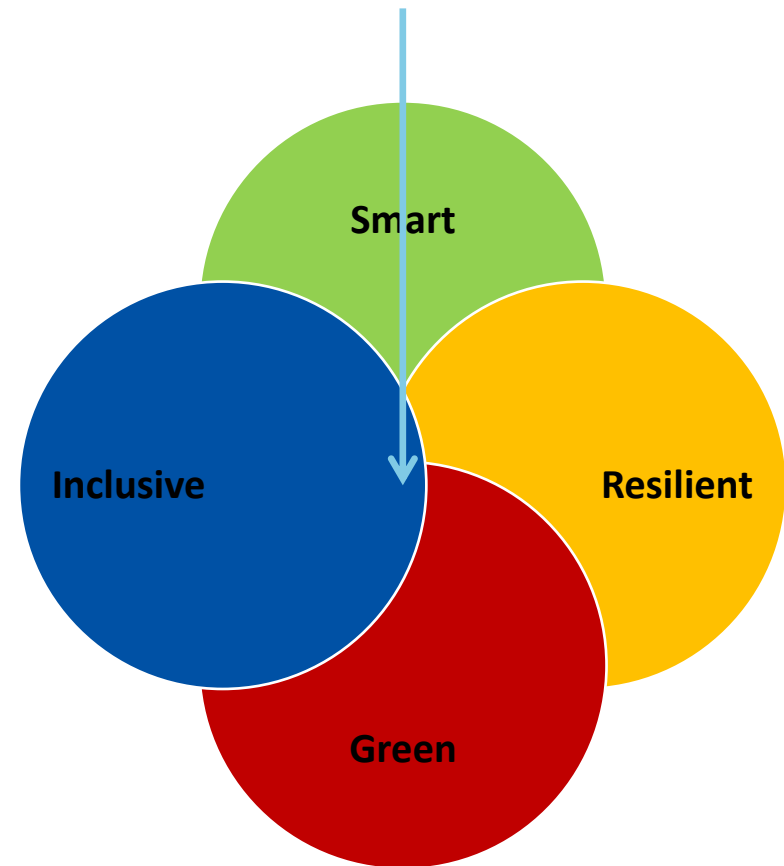
EIB Smart Cities Concept Brief

Investing for smarter city development

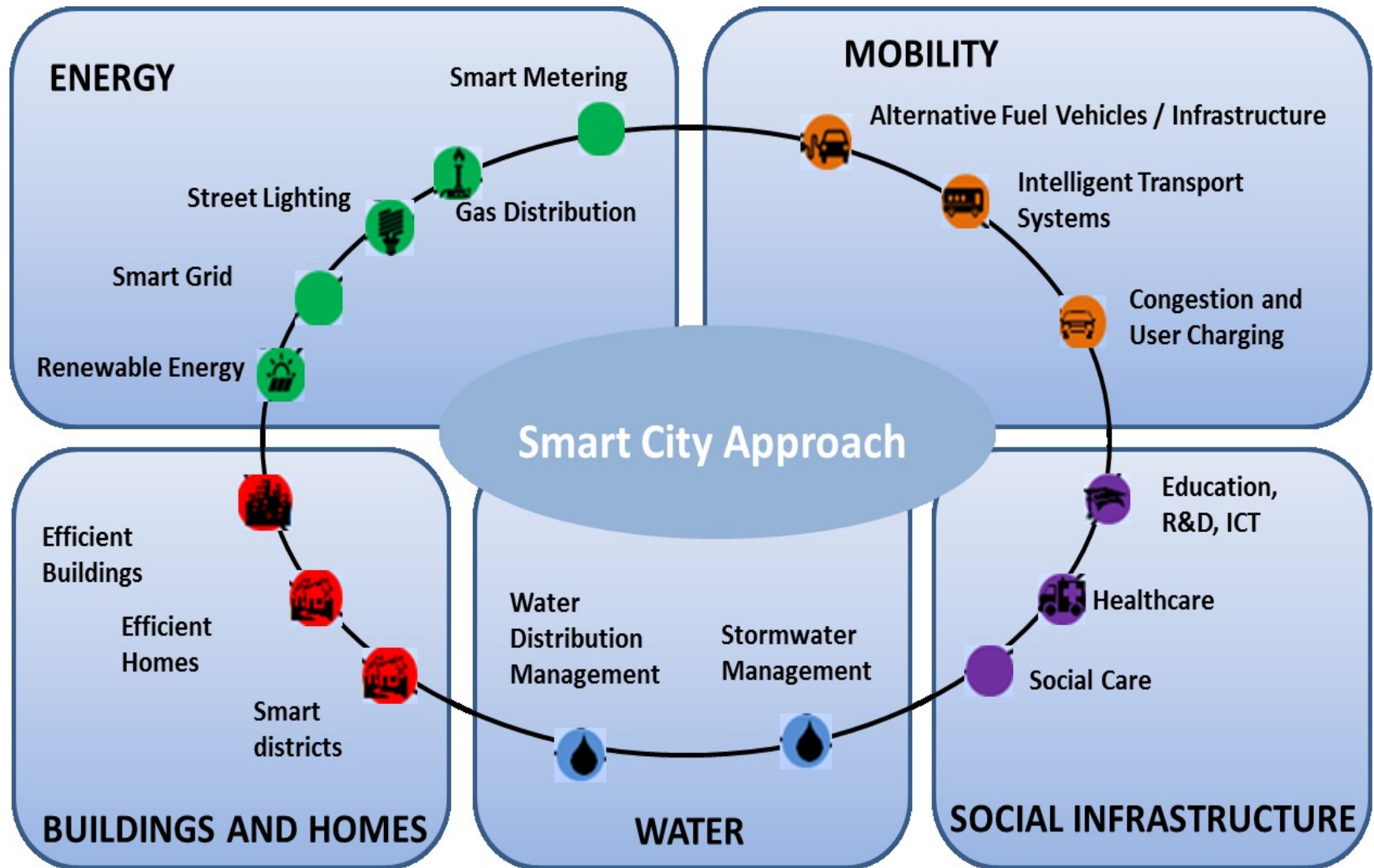
- EU Strategic Objectives
- EU Urban Agenda

Smart development of a city to achieve more sustainable cities and communities

Sustainable City



EIB Smart Cities Approach – project examples



Strategic Advisory Support for Cities - JASPERS

Advisory support to define Smart City strategies

- ▶ Free consultancy for up to 8 cities/regions within the Visegrad countries (Czech Republic, Hungary, Poland and Slovakia).
- ▶ Support proposed include, but are not limited to, needs assessment, SWOT analysis, gap analysis, and project/programme identification.

Summary

- Energy efficiency investments are a priority for EIB
- Technical Assistance is still available to develop large scale EE programmes (e.g. ELENA and European Investment Advisory Hub)
- EIB financing is available for larger and smaller projects
- Further targeted financial products are under development (see EFSI and investment platforms)
- Significant non-technical barriers still exist
 - Standardisation including “deep refurbishment”
 - Financial performance of EE investments
 - Recognising “negative money flows” = cost savings
 - Investment decision path paved with “obstacles”

Thank you for your attention

Further information

EIB www.eib.org

Advisory Hub www.eib.org/eiah

ELENA facility www.eib.org/elena

Thermal rehabilitation of residential

BUCHAREST – Completed Projects



Sector 1 (2011 -2015)

Nr of buildings renovated	399
Nr of apartments renovated	22,771
Total final cost (MEUR)	190
Area (m2)	2,000,000
Total energy savings (%)	36
Employment (person-years)	3,300

Sector 4 (2012 -2013)

Nr of buildings renovated	116
Nr of apartments renovated	7,917
Total final cost (MEUR)	36
Area (m2)	650,000
Total energy savings (%)	30
Employment (person-years)	180

Thermal rehabilitation of residential BUCHAREST – Completed Projects



Sector 6 (2011 -2015)

Nr of buildings renovated	256
Nr of apartments renovated	18,924
Total final cost (MEUR)	147
Area (m2)	1,700,000
Total energy savings (%)	40
Employment (person-years)	2,700

Thermal rehabilitation of residential

BUCHAREST – On-going Projects

Project	Sector	Number of buildings estimated	Total cost (MEUR)
Thermal rehabilitation of residential buildings Bucharest II	Sector 1 II	376	182
Thermal rehabilitation of residential buildings Bucharest	Sector 2	246	80
Thermal rehabilitation of residential buildings Bucharest II	Sector 2 II	95	29.5
Thermal rehabilitation of residential buildings Bucharest II	Sector 4 II	140	56
Thermal rehabilitation of residential buildings Bucharest II	Sector 6 II	112	54.5
TOTAL		969	402

Thermal rehabilitation of residential

BUCHAREST – SUMMARY TABLE

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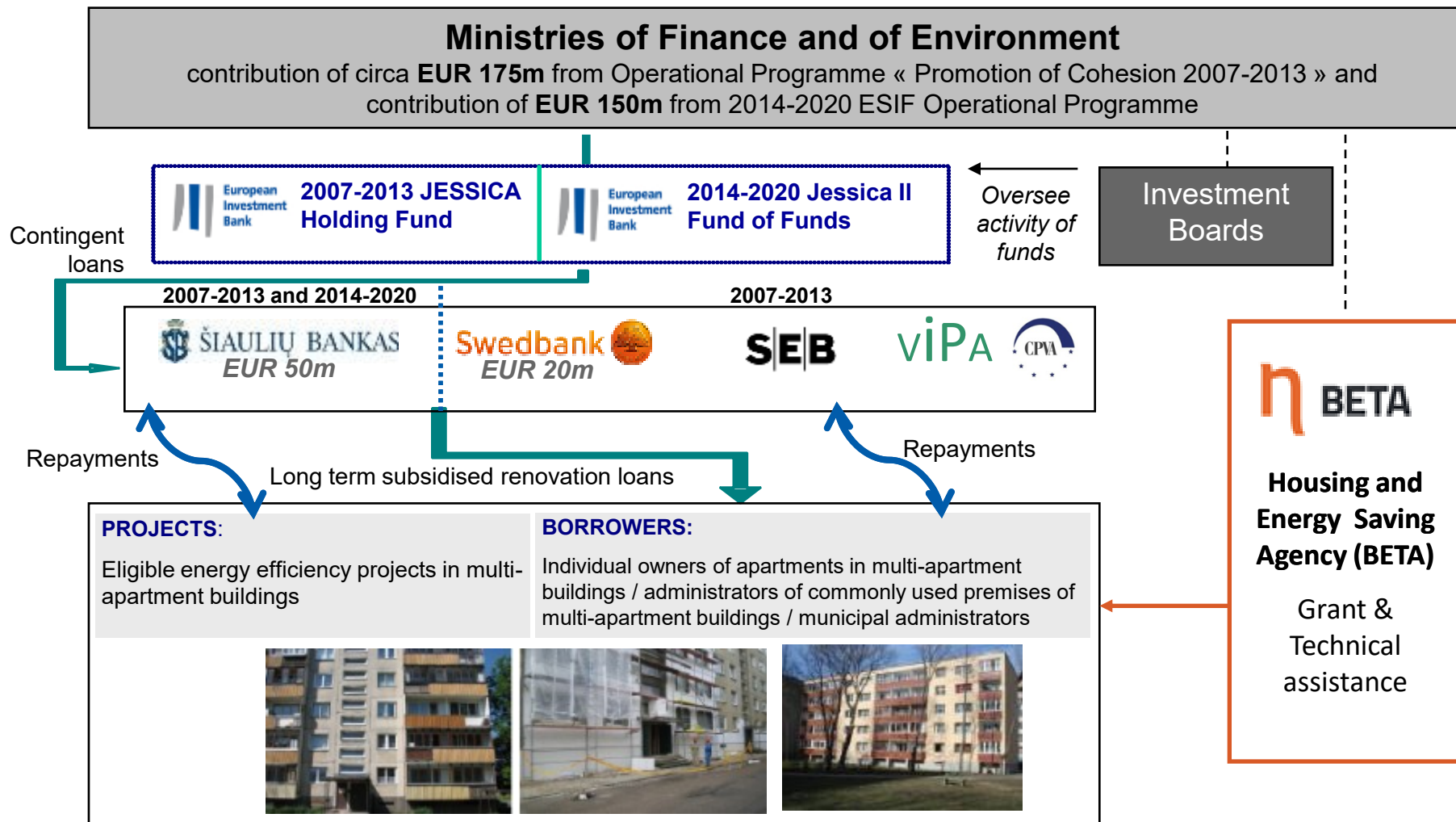
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What is fi – compass?

- fi-compass unique platform for advisory services:
 - financial instruments under the European Structural and Investment funds (ESIF) and
 - microfinance under the Programme for Employment and Social Innovation (EaSI)
- fi-compass is designed to support
 - ESIF managing authorities,
 - EaSI microfinance providers and other interested parties
- fi-compass provides
 - practical know-how
 - learning tools on financial instruments
 - “how-to” manuals, factsheets for quick reference, e-learning modules, face-to-face training seminars and networking events
- fi-compass is provided by the European Commission in partnership with the European Investment Bank
- <https://www.fi-compass.eu/>

ESIF – EFSI project: Lithuanian case study



Energy Efficiency Investment Loan



Navarra – NZEB social housing (Spain)

Challenge: Promote new building standards



Solution: Support to NZEBs

- 524 units with consumption of 20 kWh/m², (EPC : class A (~ passivhaus))
- Expected energy savings of 2,300 MWh/y (75% reduction versus the baseline), corresponding to 748.8 ton/y CO₂ savings

Example of Investment Loan

Energy Efficiency Private Housing (France)



Barrier: Fragmentation



Solution: Aggregation

- Refurbishment of residential buildings to reduce energy consumption by up to 75%
- One-stop shop, technical assistance, implementation and monitoring. Financial assistance provided directly by the promoters (tiers-financement) or through financial intermediaries
- Total project cost of EUR 800m. Average investment of EUR 20,000