

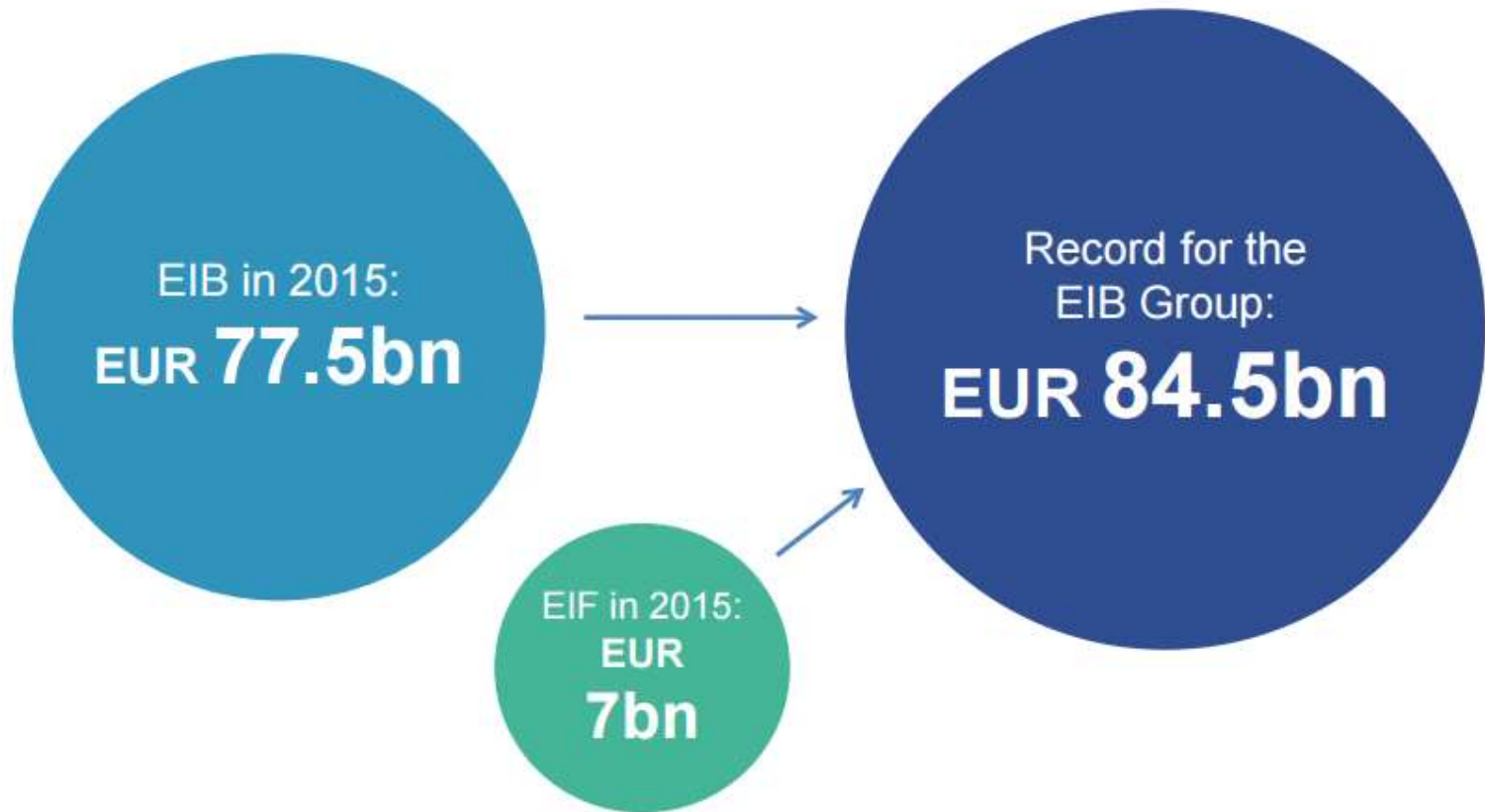
EIB financing of District Heating and Cooling

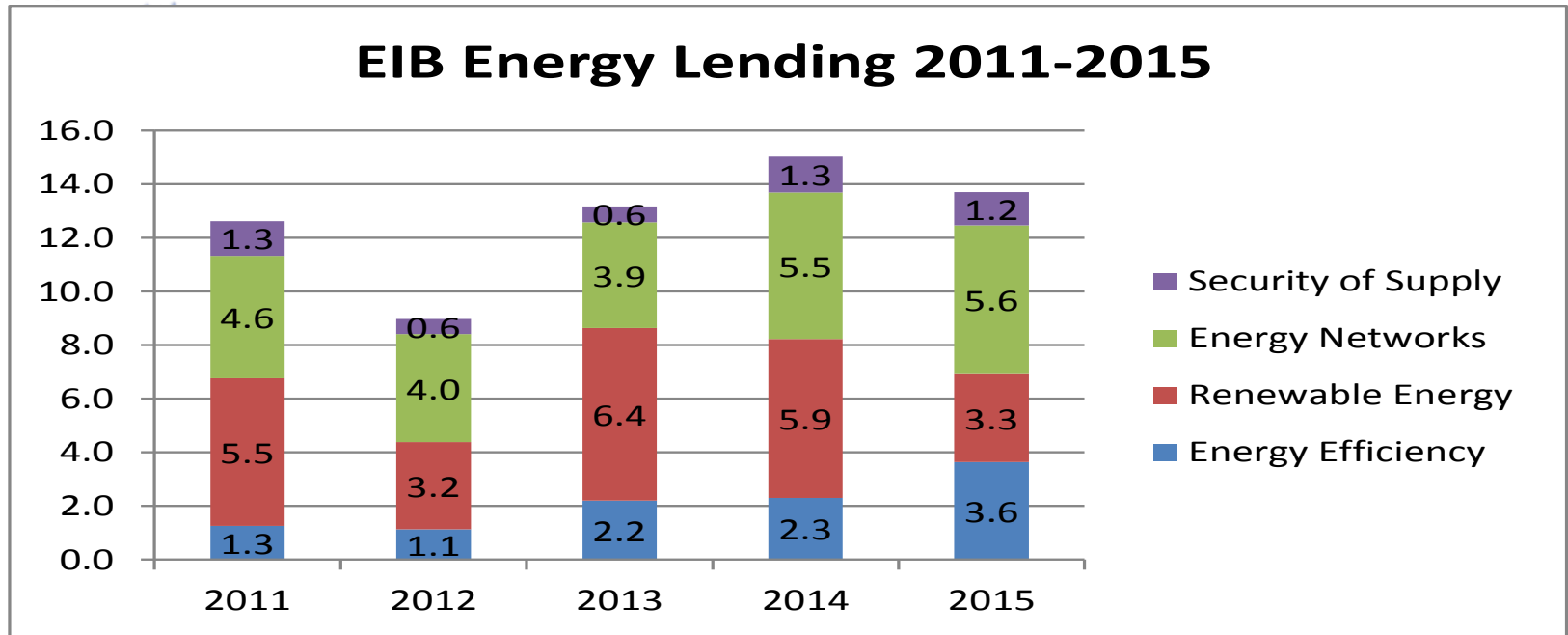
DHC+ brokerage event

Brussels, 12 October 2016

EIB – The EU Bank

WE ARE THE WORLD'S LARGEST **MULTILATERAL**
FINANCIER





- On average 15-18% of EIB total yearly lending
- In 2015 energy loans of EUR 13.7 bn
- The EIB Energy Lending Criteria prioritise 'no regrets' sectors: energy efficiency, renewable energy, networks and RDI in energy

- ❖ District heating networks:
 - ❖ Heat should be supplied predominantly through RE, high efficiency cogeneration or heat recuperation (industry or waste incineration)
 - ❖ Long term heat supply costs should be competitive (financial and economic approach)
 - ❖ Clear long term vision on heat demand (e.g. masterplan)
- ❖ Cogeneration:
 - ❖ Comply with high efficiency cogeneration criteria of EU EE directive
- ❖ Biomass sourcing:
 - ❖ Medium/long term supply contracts
 - ❖ Compliance with sustainability requirements

- **Direct lending:**
 - **Investment loans** – e.g. cogeneration, district heating, multi project investment programme
 - **Framework loans** – to promote aggregation of small projects, multi-project and multi-sector investment programme
- **Intermediated lending:** crowding in of commercial lending
- **Investment funds (equity)** – to catalyse private investors
- **Blended products** – Combining EIB finance with EU budget, e.g. InnovFin (higher risk projects for innovation)
- **Technical assistance** – typically upstream, with or without links to operations



Investment loans:

- ✓ Loans to public/private clients
- ✓ Cogeneration, district heating,
- ✓ Multi project investment programme

Framework loans:

- ✓ Loans to Regions/Municipalities
- ✓ Multi project, multi-sector investment programme
- ✓ Aggregation of small projects

CPCU EXTENSION CHAUFFAGE URBAIN PARIS (2010)

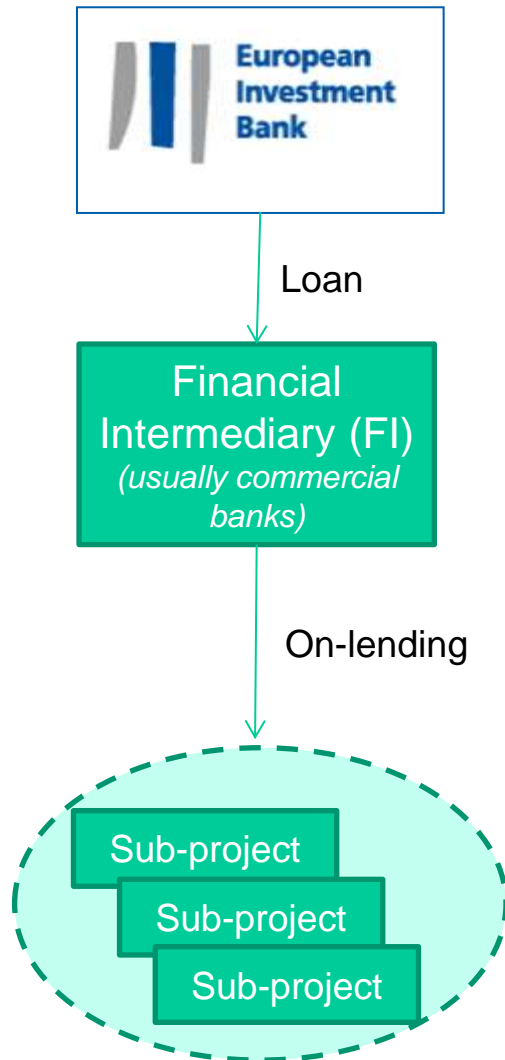
- Extension of district heating network and construction of two new geothermal plants
- Total project cost \cong EUR 295 m
- EIB loan \cong EUR 145 m

CPCU - CO-COMBUSTION BIOMASSE (2015)

- Modifications to an existing 495 MWth coal-fired heat plant and the construction of new infrastructure, including a biomass storage facility, to enable about half of the heat production to come from biomass pellets. The heat will be produced in the commune of Saint-Ouen and fed into the Paris district heating system.
- Total project cost \cong EUR 84 m
- EIB loan \cong EUR 38.4 m
- Project promoter: Compagnie Parisienne de Chauffage Urbain SA

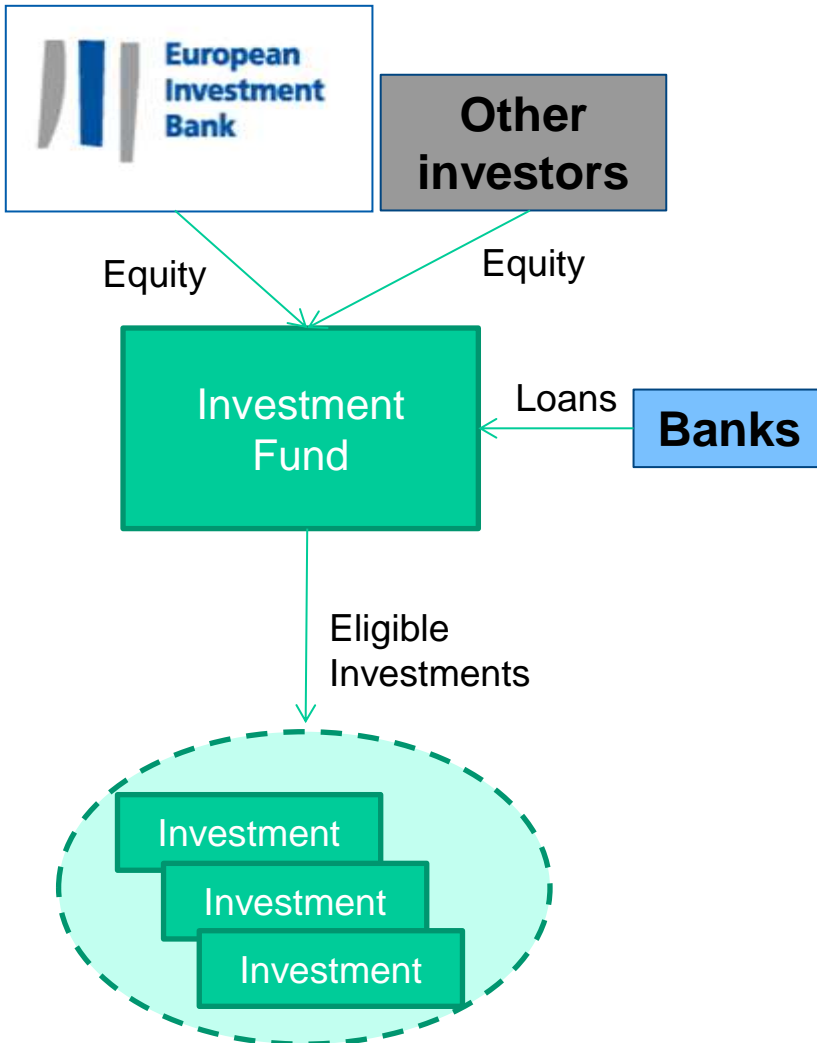
Project example: Ukraine Municipal Infrastructure programme

- Framework loan for the rehabilitation and upgrading of municipal infrastructure in Ukraine
- Total project cost \cong EUR 800 m
- EIB loan \cong EUR 400 m
- Support to some 25 to 40 projects fostering substantial improvements in energy efficiency - as district heating, energy efficiency in public buildings, municipal lighting, contributing to Ukraine's energy security, reduction of water losses, improvements of solid waste management services and of safety and quality of municipal services provided.
- Borrower: Ukraine
- Project promoter: Ministry of Regional Development, Construction, Housing and Communal Services of Ukraine.
- Final beneficiaries will be central, regional or local government agencies, public utilities and municipalities providing public services in Ukraine.



- ✓ **Sub-projects << 50 MEUR**
- ✓ **FI to perform the due diligence of projects**
- ✓ **Beneficiaries:**
 - Public bodies (municipalities)
 - Private promoters
 - Individuals
 - SMEs...
- ✓ **Advantages for beneficiaries:**
 - Allows the financing of **smaller projects**, not necessarily part of a scheme
 - Faster (delegated) approval process

FUND



- **Equity investment in funds investing in EE&RE**
- **Investments held to maturity by the investment fund**
- **EIB normally as passive investor**
- **Catalytic effect to mobilise private investors**

- **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 for DH:**
 - biomass cogeneration plant supplying DH network in Renne (EUR 7.3 m) and in Orléans (EUR 5.1 m), FR

EC-EIB cooperation to support local and regional authorities to prepare large scale investments

- Technical Assistance facility: managed by EIB; funded by EU budget
- Investment areas: energy efficiency; local renewables; clean urban transport; local infrastructure
- Beneficiaries: local/regional public authorities and public bodies
- 90% funding rate (grant) for additional staff and external expertise
- Investment leverage required (performance ratio min. 20), min. 30 mEUR
- More information: www.eib.org/elena
- Examples in cogeneration and DH sectors
 - Decentralised Energy in Greater London
 - Two DH projects in NL (Purmerend, Sittard-Geleen)

InnovFin Product Overview



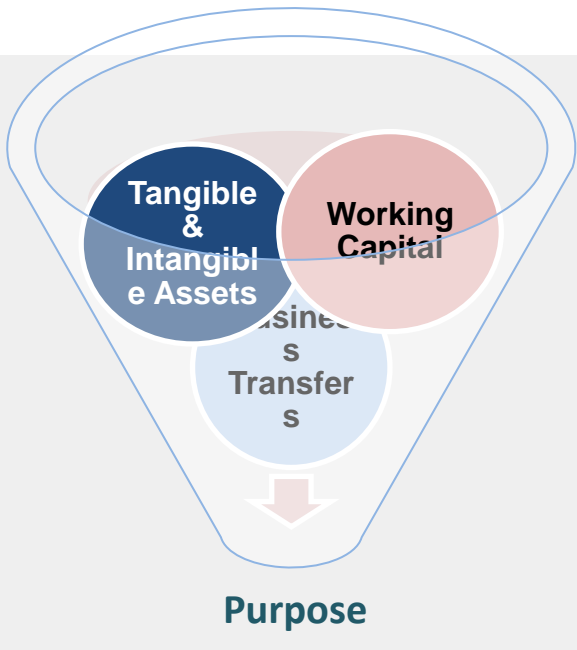
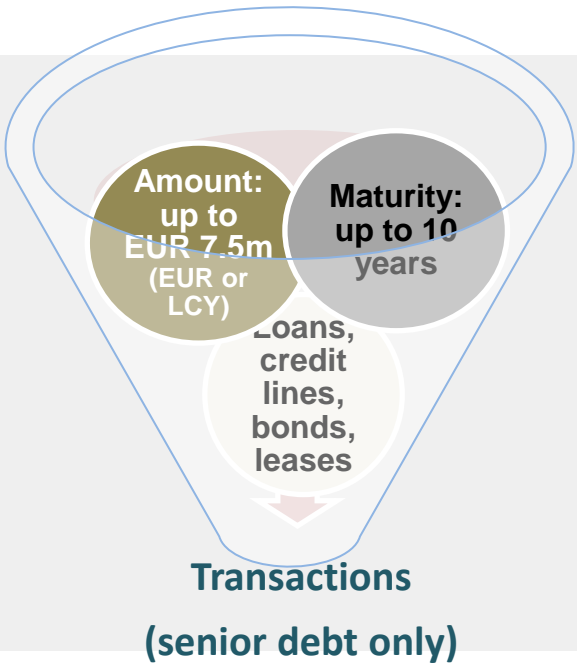
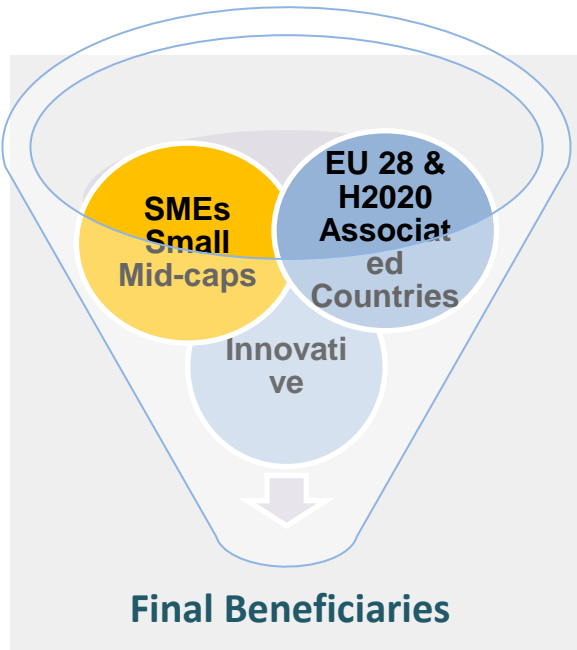
SMEs	Midcaps	Large Caps	Thematic Finance	Advisory
InnovFin SME Guarantee	InnovFin MidCap Guarantee	InnovFin Large Projects	InnovFin Energy Demo Projects	InnovFin Advisory
InnovFin SME Venture Capital	InnovFin MidCap Growth Finance		InnovFin Infectious Diseases	
SMEs and small Mid-Caps < 500 Employees	Mid-Caps < 3,000 Employees	Large Caps Typically > 3,000 Employees	SPV, Mid-Caps and Large Caps	Public and Private Sector Promoters
Intermediated SME/Mid-Cap Financing	Intermediated and/or direct Corporate lending	Direct Corporate Lending	Project Finance and/or Direct Corporate Lending	Financial Advisory

direct products indirect products



InnovFin SME Guarantee

This guarantee instrument covers the risk related to losses of a portfolio



InnovFin SME Venture Capital – key features

TT, VC and BA Funds and
co-investment Funds
focusing on companies in
Early Stage

Enterprises in pre-seed,
seed, start up phases (seed
& A rounds included)

Focus on Horizon 2020
objectives
(e.g. ICT, life sciences,
clean energy, technology)

Pari-passu, at least 30%*
investment from private
investors

First 4 transactions signed
as of February 2016.
Open Call for Expression
of Interest until
30/09/2020

* 10% in the case of BA Co-investment Funds

How does the MidCap Guarantee work?



- 50% loss coverage for new mid-cap loans of up to EUR 50m not covered under InnovFin SME Guarantee
- Can be complemented with EIB funding (global loan)
- Pari-passu sharing of risk and pricing
- Full delegation to financial intermediaries
- Favourable capital treatment



How does MidCap Growth Finance work?



- Direct long term debt and mezzanine finance: EUR 7.5m – EUR 25m
- Loans can be structured as economic equity (silent participation)
- For innovative Mid-Caps and SMEs (eligible counterparty concept)
- EIB can finance up to 50% of all investments over 3 years
- Streamlined EIB approval process

How does InnovFin Large Projects work?



- Senior debt (pari-passu with other senior lenders)
- Eligible project required. EIB finances up to 50% of R&D and innovation investments
- Comprehensive due diligence including project due diligence (technical, financial, economic)
- EIB standard documentation

Which projects can be supported?

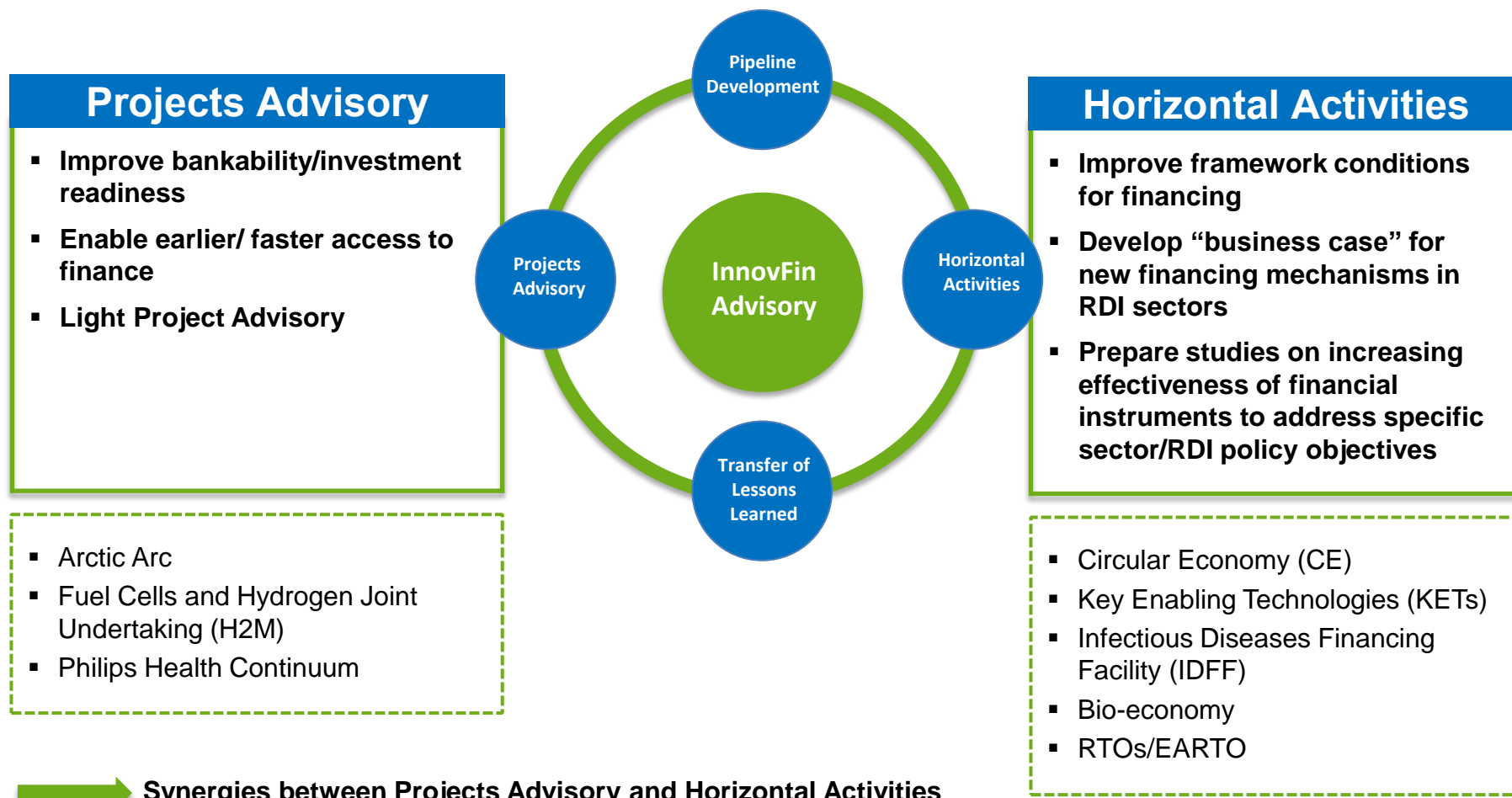
Renewable energy

Fuel Cells, Hydrogen

- Pre-commercial stage; technology needs to be scalable
- Loan: EUR 7.5m – EUR 75m; EUR and local currency; maturity of max 15 years; EIB finances up to 50% of project costs.
- Comprehensive due diligence including project due diligence (technical, financial, economic)
- EIB standard documentation

Innovation Finance Advisory- What do we do?

Enable maximum access to finance for innovative projects



Visit www.eib.org/innovfin

Helping you innovate

1 2 3 4 5 6

How many employees do you have? Please select one

0 - 49 employees

Between 50 - 499 employees

Between 500 - 999 employees

Over 1,000 employees

Next step

Helping you innovate

1 2 3 4 5 6

Loan amount needed Please select one

EUR 20,000 to EUR 7.5m

EUR 7.5m to EUR 12.5m

EUR 12.5m to EUR 25m

Next step

Helping you innovate

1 2 3 4 5 6

Are you an unlisted innovative SME or small Mid-Cap business? Please select all that apply

1) I am an SME and will invest for research or developing new or substantially improved products, processes or services that are innovative and create value as a result of technological or scientific know-how or intellectual property or intangible assets in innovation

2) I am a "fast growing enterprise". That is, I've been operating in a market for less than 12 years meeting the first commercial sale and turnover or staff size growth requirements on average at least 20% a year over a three-year period (with at least 10 employees at the beginning of the reference period)

3) I have been operating or planned for more than 7 years following the first commercial sale and R&D costs represent at least 2% of the total operating costs in at least one of past three years or in the current one, as certified by an external auditor in the case of a start-up enterprise

4) I am an "innovative enterprise" as demonstrated by at least one of the following

Next step



Helping you innovate

1 2 3 4 5 6

Please contact me

Thank you for requesting information about funding for innovation. You have a few questions and we have your details on file. We will contact you as soon as possible.

Entrepreneur: Telephone: Fax: E-mail: Address:

Name:

Street address:

City:

Send enquiry

Helping you innovate

1 2 3 4 5 6

Please select a country

Click on your country to locate banks that provide research & SME Innovation Support

Helping you innovate

1 2 3 4 5 6

What's available to me? Please select one

InnovFin
SME Guarantee
This guarantee covers up to 80% of the maximum amount of the loan. It is available to SMEs in the EU and EFTA countries. It is available to SMEs in the EU and EFTA countries. It is available to SMEs in the EU and EFTA countries.

Go

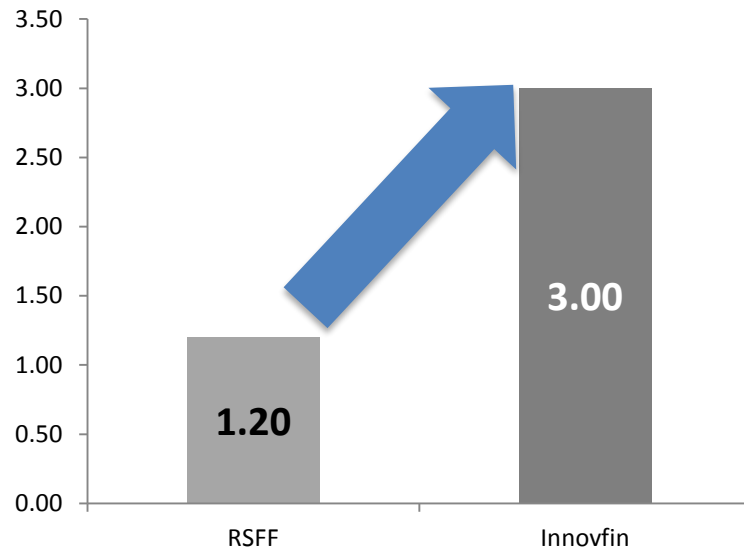
Thank you!

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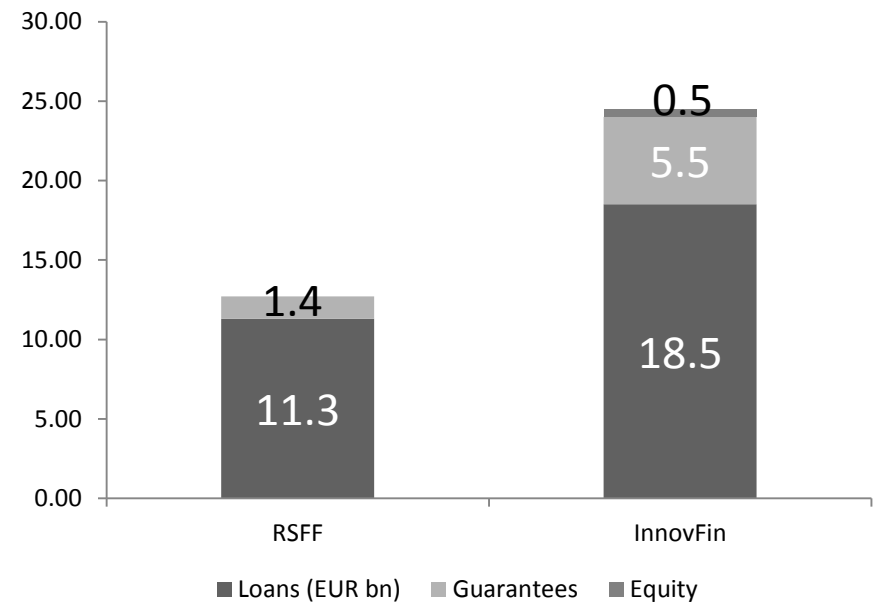
InnovFin: A Quantum Leap

InnovFin builds on the success of RSFF but will be much larger and broader

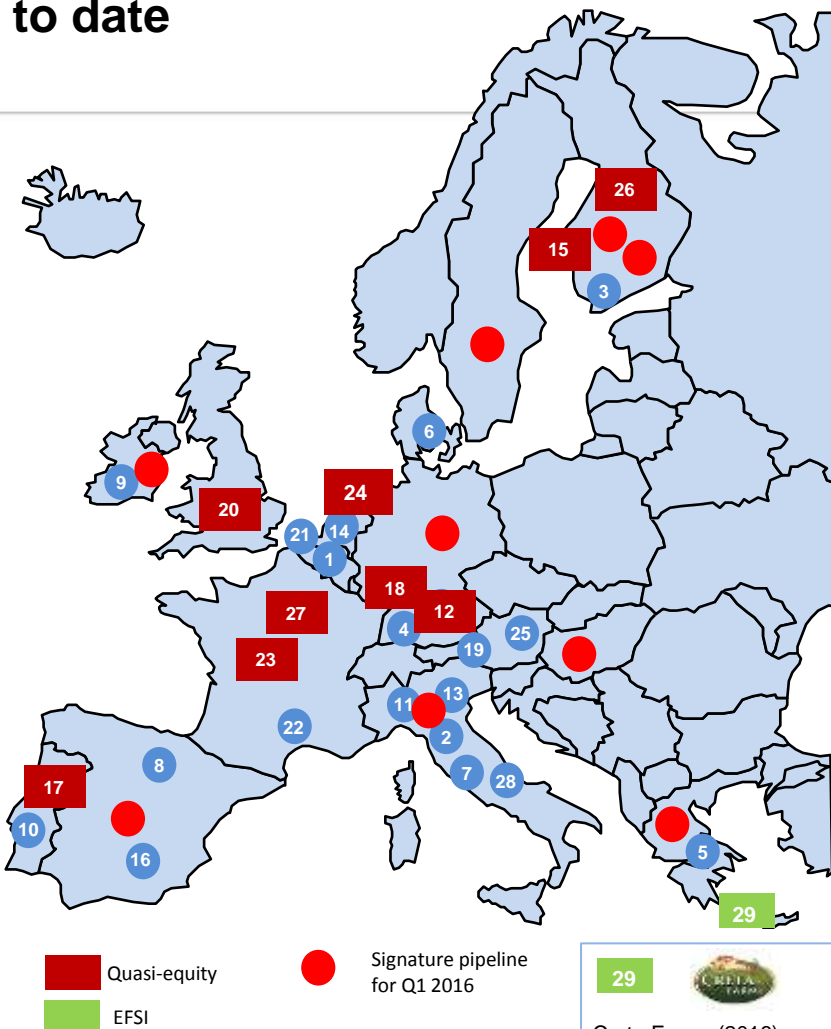
EU and EIB Group Contributions



Loans, Guarantees and Equity



MGF transactions signed to date



<p>1 </p> <p>EVS (2013) EUR 12m Senior term loan</p>	<p>8 </p> <p>Maier (2014) EUR 7.5m Senior term loan</p>	<p>15 </p> <p>Kiosked (2015) EUR 15m Quasi-Equity</p>	<p>22 </p> <p>Figeac (2015) EUR 25m Senior term loan</p>
<p>2 </p> <p>Marpos (2013) EUR 25m Senior term loan</p>	<p>9 </p> <p>E-Net (2014) EUR 12m Subordinated loan</p>	<p>16 </p> <p>Danobat (2015) EUR 10m Senior term loan</p>	<p>23 </p> <p>Qwant (2015) EUR 25m Quasi-Equity</p>
<p>3 </p> <p>Rovio (2014) EUR 25m Senior term loan</p>	<p>10 </p> <p>Novabase (2014) EUR 14m Senior term loan</p>	<p>17 </p> <p>Biosurfit (2015) EUR 12m Quasi-Equity</p>	<p>24 </p> <p>eVision (2016) EUR 13.5m Quasi-Equity</p>
<p>4 </p> <p>Manz (2014) EUR 20m Mezzanine loan</p>	<p>11 </p> <p>Marangoni (2014) EUR 10m Senior term loan</p>	<p>18 </p> <p>Jennewein (2015) EUR 10m Quasi-Equity</p>	<p>25 </p> <p>MAM (2016) EUR 25m Senior term loan</p>
<p>5 </p> <p>Pharmathen (2014) EUR 25m Senior term loan</p>	<p>12 </p> <p>Innocoll (2015) EUR 25m Quasi-Equity</p>	<p>19 </p> <p>Doppelmayr (2015) EUR 25m Senior term loan</p>	<p>26 </p> <p>NEWICON (2016) EUR 8m Quasi-Equity</p>
<p>6 </p> <p>Welltec (2014) EUR 25m Senior term loan</p>	<p>13 </p> <p>Saes (2015) EUR 10m Senior term loan</p>	<p>20 </p> <p>Gigaclear (2015) EUR 25m Quasi-Equity</p>	<p>27 </p> <p>Archos (2016) EUR 12m Quasi-Equity</p>
<p>7 </p> <p>Pramac (2014) EUR 8m Senior term loan</p>	<p>14 </p> <p>Planon (2015) EUR 12m Senior term loan</p>	<p>21 </p> <p>Punch (2015) EUR 25m Senior term loan</p>	<p>28 </p> <p>System Group (2016) EUR 15m Senior term loan</p>
<p>29 </p> <p>Creta Farms (2016) EUR 15m Quasi-Equity</p>			