



European
Investment
Bank

The EU bank



2015

Annual Report

on EIB operations inside the EU
With the three pillar assessment methodology

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Executive Summary

Results and impact

Executive Summary

The EIB finances investment projects across the EU to support EU policy objectives. In 2015, the Bank signed contracts for 373 projects inside the EU worth EUR 69.6bn. The 3 Pillar Assessment Framework (3PA) is the results management tool the Bank uses to assess the impact of these projects.

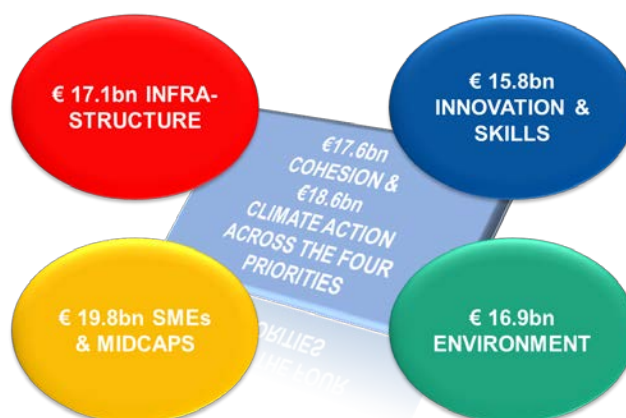
Implementing EU priorities

EIB's operational activity inside the EU, guided by the objectives set out in the Bank's Corporate Operational Plan (COP), consists of financing projects that make a significant contribution to growth and employment and foster European integration. EIB's COP objectives are translated into four key public policy goals: Innovation & skills, SMEs and Midcaps finance, Infrastructure, and Environment. These are complemented by two cross-cutting objectives: Climate Action (to address climate mitigation and adaptation in all sectors) and Cohesion (to address regional integration in all sectors).

Operations signed in 2015

In 2015, the EIB signed 373 operations inside the EU providing financing in amount of EUR 69.6bn, leading to a total of new investments of EUR 263.9bn. The contribution of the year's signatures to EIB's public policy objectives is illustrated in the figure below.

Figure 1. EIB finance signed in 2015 inside the EU



Of the 373 projects signed in 2015, 322 were projects that received their first signature in 2015, for a total EIB financing amount of EUR 64.4bn.

How we assess results

2015 was the third year in which the EIB applied its 3PA Framework, updated to align the methodology with the requirements of the European Fund for Strategic Investments. The framework is used for operations inside the EU to assess expected results, monitor actual results and measure impact. The methodology relies on three pillars accompanied by a set of complementary indicators:

Pillar 1	Contribution to EU policy
Pillar 2	Quality and soundness of the project
Pillar 3	EIB's technical and financial contribution to the project
Complementary indicators	

Innovation and skills

Innovation, R&D and the digital economy are key drivers of long term economic growth. In 2015 for projects whose first signature occurred in 2015, the EIB signed EUR 15.4bn Innovation and Skills operations, representing 23.9% of overall EIB signatures in the year. These Innovation and R&D, Skills and Education operations are expected to employ 766,000 people directly during construction and 63,000 people during operations.

Table 1. Selection of expected results from Innovation and Skills new operations signed in 2015

INNOVATION, RESEARCH AND DEVELOPMENT	
EU collaboration agreements with universities and research institutions	over 10,000
Additional upgraded high speed broadband lines	4,400,000
National or international patent applications	11,400
EDUCATION AND SKILLS	
Students directly benefitting from EIB projects	1,450,000
New or rehabilitated educational facilities (m ²)	over 1,300,000
Additional students enrolled	127,000
EMPLOYMENT	
Jobs during operation (full-time equivalent)	63,000
Jobs during construction (person-years)	766,000

SMEs and Midcaps finance

Lack of access to finance and high lending costs are two key constraints to growth and SME development across the EU. EIB channels SMEs and Midcaps finance through financial intermediaries, aiming to improve access to finance, and thus contributing to growth and employment in the EU. The EIB signed EUR 18.3bn new SMEs and Midcaps operations in 2015, representing 28.4% of new signatures in 2015 in the EU, and expected to mobilise at least EUR 39.7bn through complementary lending by financial intermediaries and to sustain 5 million jobs.

Table 2. Expected results from SMEs and Midcaps new operations signed in 2015

	(EUR bn)	(#)
Volume of loans to SMEs and Midcaps supported	18.3	242,000
Additional SME finance leveraged through intermediaries	39.7	
EMPLOYMENT		
Jobs sustained		5,000,000

Infrastructure

The development of strategic social and economic infrastructure provides a foundation for economic growth, job creation, economic integration and social cohesion. New EIB Infrastructure operations in 2015 amounted to EUR 15.8bn or 24.5% of total new signatures. These operations are expected to employ 635,000 people directly during construction and 61,000 people during operations.

Table 3. Selection of expected results from Infrastructure new operations signed in 2015

STRATEGIC TRANSPORT (including TEN-T)	
Railway tracks built or upgraded (km)	4,900
Highway lanes built or upgraded (km)	2,000
Additional airport capacity (passengers / year)	2,500,000
Time savings (million hours / year)	34
COMPETITIVE AND SECURE ENERGY	
New power and heat generated from conventional energy sources (GWh / year)	1,396
New electricity and heat connections to the network	474,000
Number of gas or oil pipelines built or upgraded (km)	3,600
Gas and electricity smart meters installed	14,400,000
URBAN RENEWAL	
Households in new or refurbished social and affordable housing units	220,000
Urban open space created or restored (m ²)	2,400,000
New health facilities built (m ²)	920,000
EU citizens benefitting from improved healthcare facilities	9,300,000
EMPLOYMENT	
Jobs during operation (full-time equivalent)	61,000
Jobs during construction (person-years)	635,000

Environment

Sustainable development underpins EIB lending strategy, particularly in the preservation of environmental and social capital for future generations. The EIB's new Environment operations in 2015 amounted to EUR 14.9bn or 23.1% of total new signatures. These projects are expected to employ 612,000 people during construction and 162,000 people during operations.

Table 4. Selection of expected results from Environment new operations in 2015

SUSTAINABLE TRANSPORT	
Urban rail or bus lanes built or upgraded (km)	over 200
New public transport demand generated (million passengers / year)	338
Time savings (million hours / year)	over 30
PROTECTION OF THE ENVIRONMENT	
Water savings from modernised irrigation systems (m ³ /year)	29,000,000
Population benefitting from improved sanitation services	21,200,000
Population served by new waste treatment facilities	1,700,000
RENEWABLE ENERGY AND ENERGY EFFICIENCY	
Power and heat generated from new renewable energy sources (GWh / year)	11,682
Households supplied by new renewable energy sources	up to 2,250,000
Energy savings from efficiency measures realised (GWh / year)	428
EMPLOYMENT	
Jobs during operation (full-time equivalent)	162,000
Jobs during construction (person-years)	612,000

European Fund for Strategic Investments (EFSI)

EFSI is a EUR 21bn risk capital initiative backed by a guarantee from the EU and the EIB's own funds. Part of the Investment Plan for Europe, EFSI aims to trigger EUR 315bn of investment within the EU.

EFSI projects are assessed under the same methodological framework, to ensure that financing reaches projects representing the highest value-added.

In 2015, the EIB approved 42 projects for EFSI support, representing EUR 5.7bn of financing to support projects representing EUR 23bn of additional investment.



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Introduction

Investment in 28 States

1 Introduction

As the EU bank, the EIB finances sound investment projects that support employment, economic growth, environmental improvement and the social well-being of European citizens in all 28 EU Member States. Using the Bank's 3 Pillar Assessment Framework, this report describes:

- operations signed in 2015
- their alignment with EU public policy objectives
- the difference EIB support will make
- the results the Bank expects to achieve.

1.1 EIB's public policy objectives inside the EU

The EIB's strategic objectives for its operations inside the EU can be grouped into four sector-related, primary public policy goals (see [Table 5](#)) and two cross-cutting policy areas (see [Table 6](#)).

Table 5. EIB public policy objectives

Sector	Scope and objectives
Innovation and skills	Innovation and R&D – Help reach the EU's 3% of GDP target for Research & Development spending with significant investments, particularly in: (i) Information and Communications Technology, life sciences, food, sustainable agriculture, forestry and low carbon technologies; (ii) completing the digital network and creating a single digital market that includes digital services; (iii) supporting innovative firms in their development and deployment of new products, processes and services.
	Education and training – Ensure that Europe has leading research and teaching institutions, constructing and modernising educational facilities. Support the training and development of young people's skills, enhancing their employment opportunities.
SMEs and Midcaps finance	Support SMEs and Midcaps across EU Member States through products for complementary financing and initiatives for specific financing gaps, namely through: <ul style="list-style-type: none"> - intermediated lending providing complementary access to finance at improved terms for final beneficiaries; - collaboration with national and regional promotional banks in support of SME priorities and programmes; - specific outreach to smaller companies, particular sectors, regions or higher risk products; - new and innovative financing solutions to address specific EU and Member States' policy priorities (e.g. youth unemployment, innovation, trade facilitation, microfinance and re-launching the European SME securitisation market).

Infrastructure

Strategic transport (including TEN-T) – Support internal and international markets with strategic transport and TEN-T investments, completing and renewing the core structural networks, improving links to ports, airports, and urban centres, and multi-modal platforms to support more efficient trade and logistics. Facilitating efficient mobility for passengers to enable trade and support competitiveness and economic activity in all sectors of the EU economy by increasing connectivity, improving safety and environmental performance, and reducing congestion.

Competitive and secure energy – Ensure the security of supply by (i) supporting Projects of Common Interest and related energy infrastructure, covering gas and electricity infrastructure; (ii) developing electricity networks to integrate renewable energy sources into power markets; (iii) increase energy storage capacities, and modernise and smarten electricity distribution grids.

Urban renewal – Support smart and sustainable cities and urban infrastructure by: (i) encouraging more mixed-use development, to accommodate higher densities and reduce the need for motorised travel; (ii) improving individual building performance, to reduce energy consumption and carbon emissions; (iii) investing in more equitable cities, funding social and affordable housing to mitigate urban poverty.

Sustainable transport – Support investment in public transport and water-based transport infrastructure (when not covered under TEN-T), and safety investments in all modes. Support the development and roll out of new transport technologies and innovative transport solutions, including engine technologies and alternative fuels, retro-fitting to comply with new EU legislation and alternative fuel infrastructure.

Environment

Protection of the environment – Accelerate lending for investment in water and wastewater management infrastructure to address the challenges of (i) water quality and supply, sustainable water resource management and flood management, and related impacts on transport, energy, agriculture, and human settlements; and (ii) ageing and climate-vulnerable infrastructure for drinking water/wastewater services and irrigation, which could disrupt key services.

Improve solid waste management, particularly in the form of recycling, and energy recovery, to support a resource efficient, green, and competitive low-carbon economy and generate environmental benefits, helping to create jobs, reduce dependence on imported raw materials and develop new markets.

Support sustainable land-use investments, including sustainable rural development, afforestation, reforestation, biodiversity protection and improvement; support depollution and projects improving air and water quality; support cross-sectoral climate action.

Renewable energy and energy efficiency – Promote substantial investments towards (i) reaching binding 2020 renewable energy targets across Europe in the context of an evolving regulatory structure; (ii) reducing demand through energy efficiency, including in buildings and industry.

Table 6. EIB's cross-cutting policy objectives

Policy area	Scope and objectives
Cohesion	Economic and social cohesion – EIB supports the EU objective of economic and social cohesion. By financing projects in less developed regions, the EIB contributes to reducing the disparities between the levels of development of various regions.
Climate	Climate action - Provide finance for climate mitigation and adaptation projects and activities within other projects, including climate mitigation and climate resilience investments in all sectors. This includes afforestation or reforestation as effective means of sequestering CO2 from the atmosphere through natural fixation.

Climate Action mainstreaming: The EIB integrates climate action into the assessment and monitoring methods of its investment projects. These include using an economic price of carbon in project appraisal, the use of an emissions performance standard for power generation projects, providing technical assistance to promote energy efficiency, assessing climate risks and impacts, and estimating and reporting on greenhouse gas (GHG) emissions in its investment projects in all sectors. The carbon footprint methodologies the EIB has developed are publicly available on the Bank's website. More information on the carbon footprint data of projects signed in 2015 inside the EU is available in Annex 1.

1.2 Operations signed in 2015

In 2015, the EIB signed 373 operations inside the EU with a total value of EUR 69.6bn. Of these, 322 were new operations totalling EUR 64.4bn (associated with EIB Board approvals totalling EUR 79.2bn), leading to a total new investment of EUR 263.9bn.

Table 7. Volume and project cost of operations in 2015 by policy objective¹

Policy objective	EUR m signed (all projects)	EUR m signed (first signatures)	EUR m approved (first signatures)	EUR m project cost (first signatures)
Innovation & skills	15,784	15,403	16,902	56,812
Innovation	2,833	2,809	3,116	13,265
Research and Development	7,667	7,358	7,714	21,772
Education and Training	5,284	5,236	6,072	21,775
SMEs and Midcaps finance	19,821	18,289	22,730	57,999
Infrastructure	17,056	15,805	20,964	71,549
Strategic Transport (including TEN-T)	6,009	5,794	8,559	26,617
Competitive and Secure Energy (including TEN-E)	5,579	5,028	5,666	13,720
Urban Renewal and Regeneration (including health)	5,467	4,983	6,740	31,212
Environment	16,947	14,900	18,591	77,575
Sustainable Transport	6,935	5,849	6,950	24,562
Protection of Environment	5,368	4,964	6,219	32,769
Renewable Energy and Energy Efficiency	4,645	4,087	5,422	20,244
Total	69,609	64,397	79,187	263,935

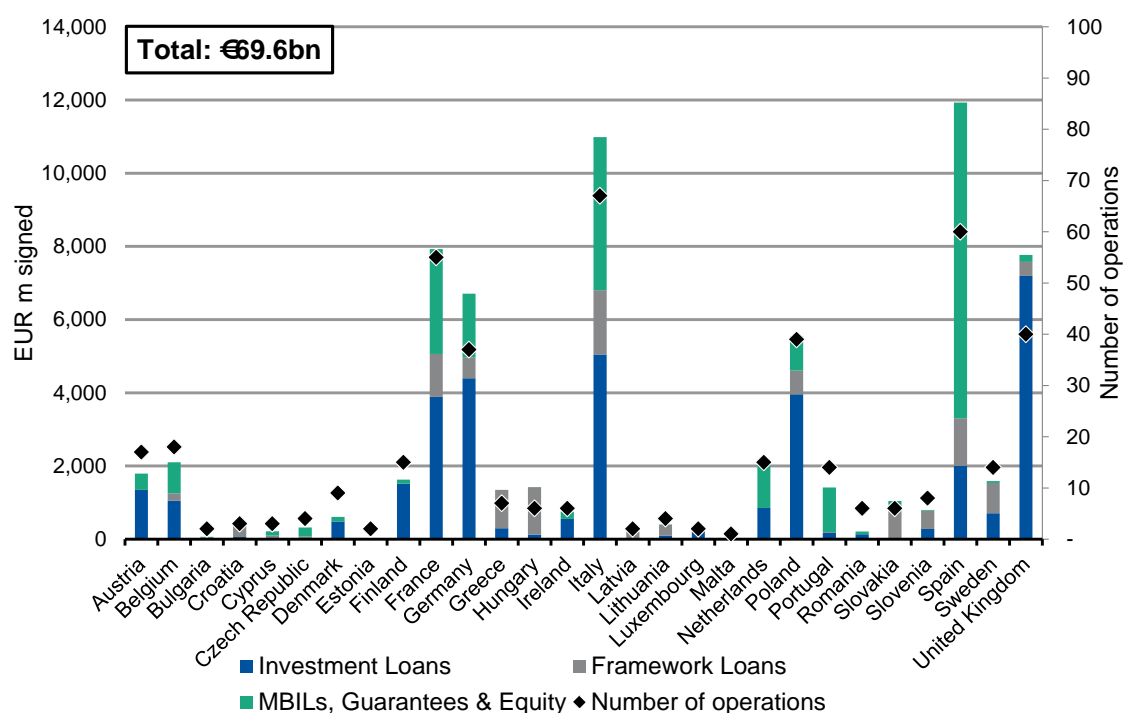
1) Data in the 3rd, 4th and 5th columns is based on projects with first signature in 2015; EIB financing has been allocated proportionately across policy objectives where a project contributed to multiple objectives.

The EIB mainly uses the following three types of loan products: investment loans, framework loans and multi-beneficiary intermediated loans (MBILs). Framework loans correspond to multi-sector/multi-component operations. MBILs are credit lines channelled through financial intermediaries and targeting final beneficiaries, which are usually SMEs (employing less than 250 people), Midcaps (medium sized corporates employing between 250 and 3,000 people¹) or companies active in predetermined sectors targeted by the Bank (e.g. energy, transport, agriculture,

¹ The number of employees is calculated following the European Commission Recommendation 2003/361/EC concerning the definition of micro, small and medium-size enterprises.

tourism, etc.). The EIB also uses guarantees and equity instruments. These accounted for 3.9% of total lending volume in 2015 and included in MBILs in [Figure 2](#).

Figure 2. EIB signed operations by EU country and loan type – 2015



EIB operations signed in 2015 are spread across all EU countries; with six of the most populated countries (France, Germany, Italy, Poland, Spain, and UK) accounting for EUR 51bn or 73% of total lending (see [Figure 3](#)).

Figure 3. Country distribution of EIB finance – 2015 signed operations

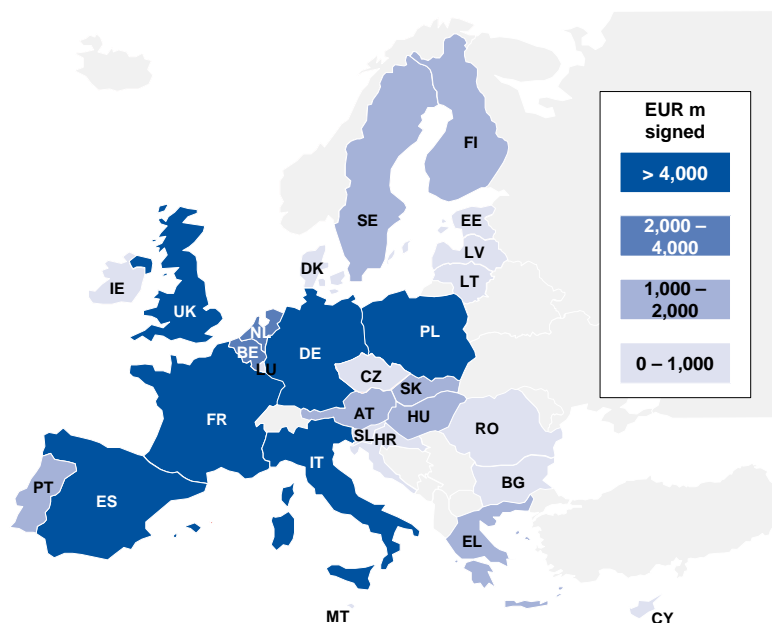
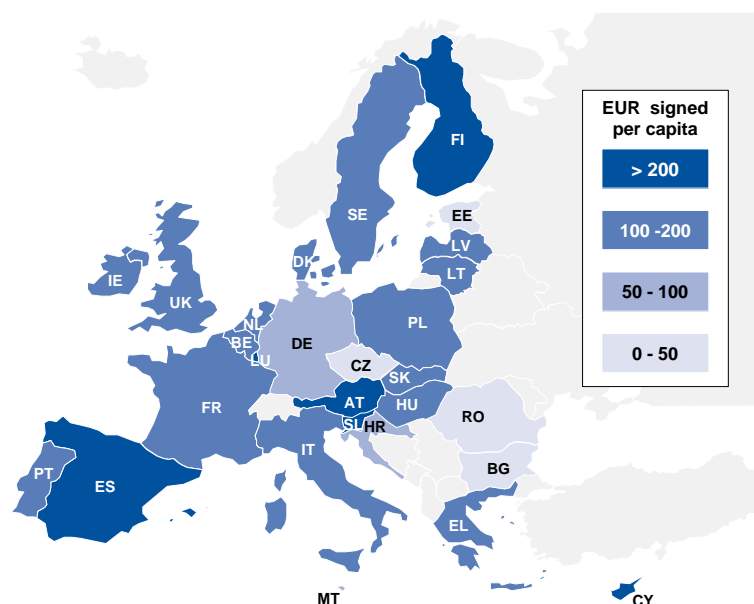


Figure 4. Country distribution of EIB finance per capita – 2015 signed operations



1.3 Expected impact on employment

Temporary employment – Given the complexity of estimating employment effects, the Bank uses a temporary employment monitoring indicator at project appraisal stage to estimate “person-years of employment”. This indicator is equal to the number of employed people in a project multiplied by the expected duration in years of the project’s construction or implementation phase. In 2015, new operations are

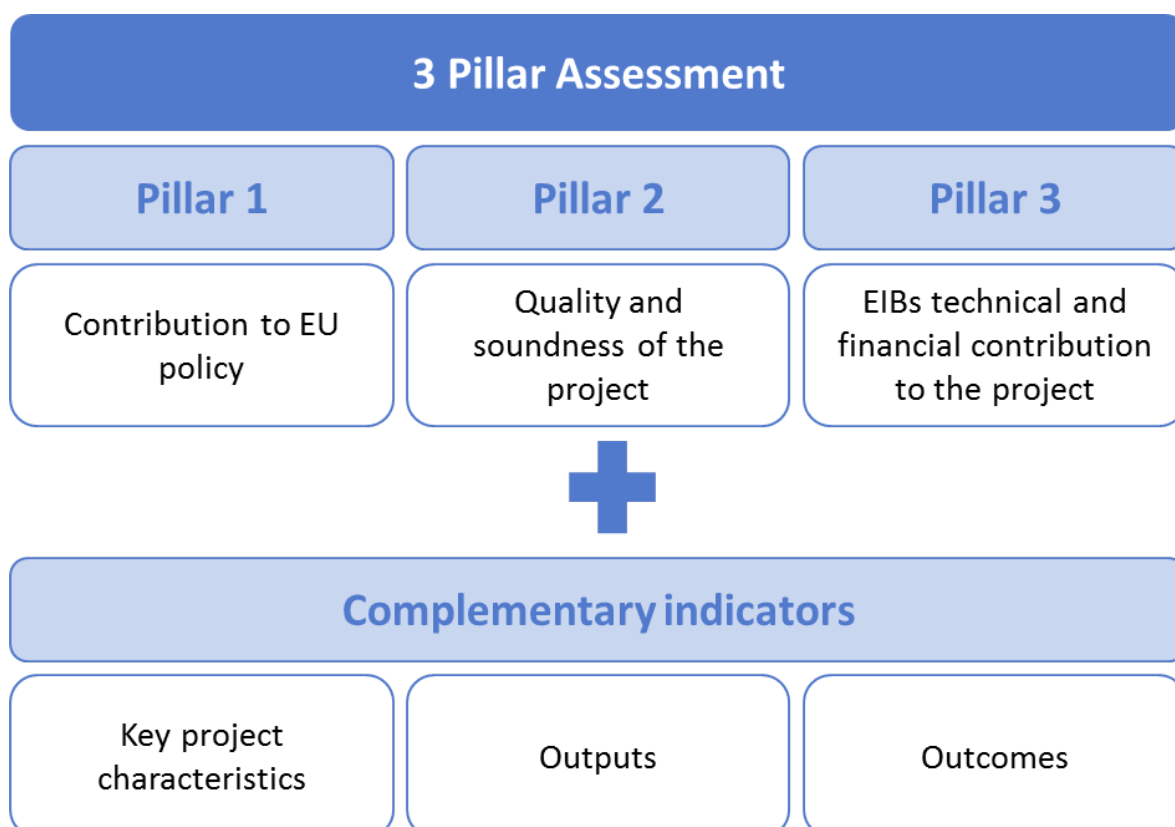
expected to generate over 2 million person-years of employment during the construction or implementation stages.

Sustained employment – The Bank also estimates employment that will be sustained after a project is constructed or implemented. For new operations in 2015, sustained operational employment is expected to be over 316,000 full-time equivalent positions. In addition, the MBIL operations signed by the Bank in 2015 are expected to sustain the jobs of about 5 million people working in 242,000 SMEs.

1.4 The 3 Pillar Assessment (3PA)

The EIB applies high standards in its project appraisal to ensure that its investments are economically and technically sound and comply with stringent environmental and social requirements. The EIB introduced its *3 Pillar Assessment Framework*, or 3PA, in 2013. In 2015 the methodology was reviewed to take into account the requirements of the EFSI regulation. The 3PA is used to assess potential operations before Board approval, and identifies indicators to monitor the projects' expected results. The 3PA is structured around 3 pillars (or metrics), and is complemented by three categories of results monitoring indicators (see [Figure 5](#)).

Figure 5: Summary of 2015 3 Pillar Assessment Methodology



The Bank collects three types of complementary indicators for each operation, seeking to capture the effects of its lending operations:

- **Key project characteristics (or core results):** These relate to the project cost, implementation period, temporary and permanent employment impact of the operation, energy efficiency savings.
- **Output indicators:** These are sector indicators that monitor the amount of goods and services produced by the operations financed by the Bank.
- **Outcome indicators:** These are also sector indicators that try to capture the effects of EIB's operations on people's quality of life, the environment, the beneficiary's activity, sector, and the economy.

1.4.1 3PA ratings of operations signed in 2015

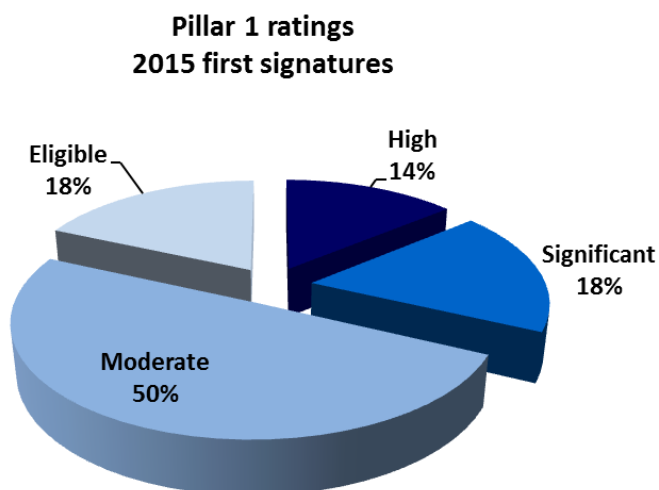
EIB operations inside the EU are rated before Board approval according to their strength with respect to each of the 3PA pillars.

The 3PA ratings of the new EIB operations inside the EU in 2015 are summarized in the following three charts.

Pillar 1 rating (Contribution to EU policy)

The range of Pillar 1 ratings is Eligible, Moderate, Significant and High.

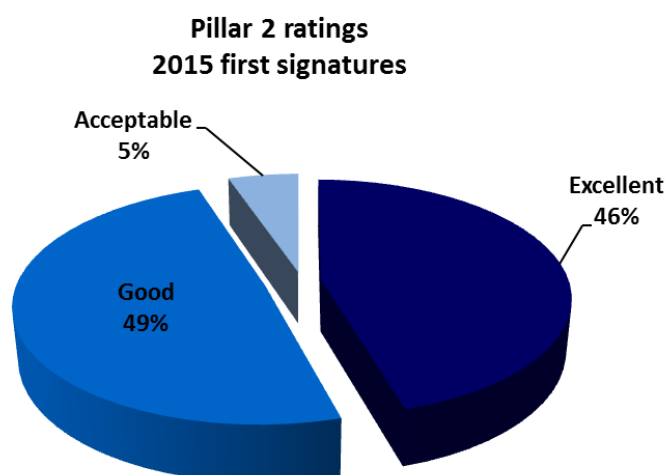
Figure 6. 3PA – Pillar 1 ratings



Pillar 2 rating (Quality and soundness of the project)

The range of Pillar 2 ratings is Unsatisfactory, Marginal, Acceptable, Good and Excellent.

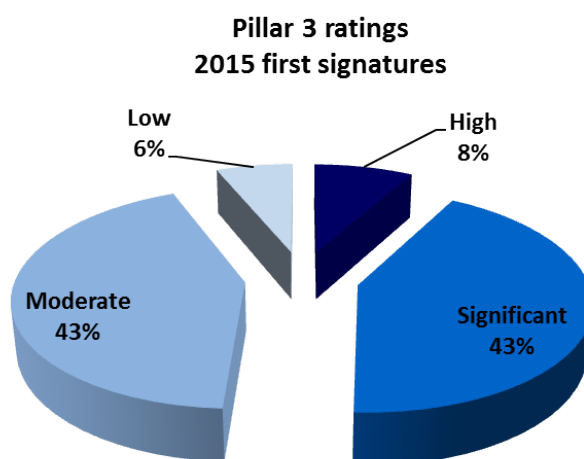
Figure 7. 3PA - Pillar 2 ratings

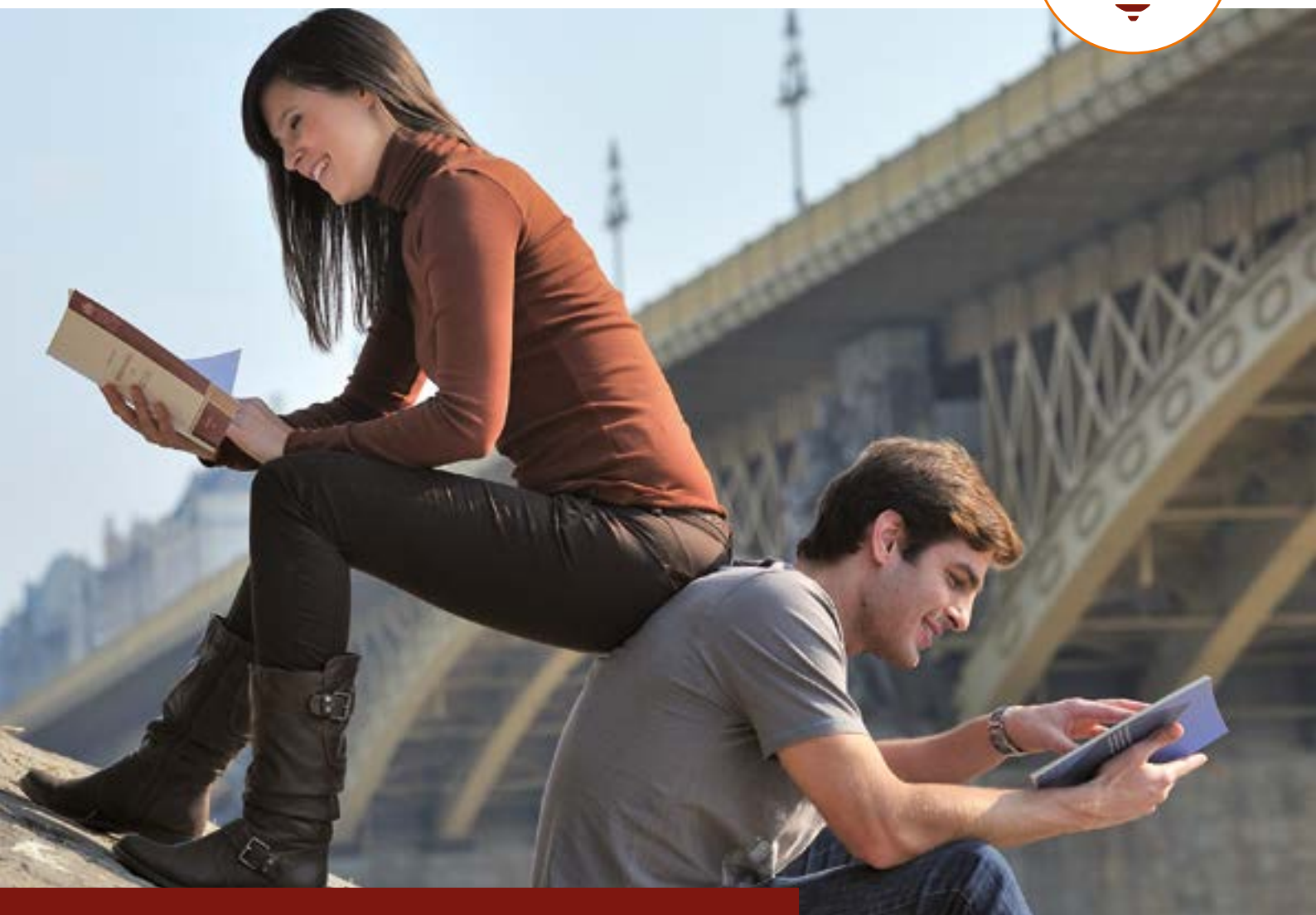


Pillar 3 rating (EIB's technical and financial contribution to the project)

The range of Pillar 3 ratings is Low, Moderate, Significant, and High.

Figure 8. 3PA - Pillar 3 ratings





Report on **EIB operations**
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Innovation and Skills

Banking on ideas

2 Innovation and Skills

Research, Development, Innovation (RDI) and the digital economy drive global competition. Europe's prosperity and growth depends on its ability to refine skills, expand knowledge and commercialise ideas. Europe's investment in innovation and skills lags significantly behind its competitors. The EIB plays a key role financing projects that fall outside public support schemes, and acts as a catalyst for crowding in private investment.

2015 new EU RDI and Skills

Highlights of expected results
from a selection of projects

11 billion euros

of investment in private sector RDI

1 million

new subscribers to 4G services

17 million

households covered by high-speed connections

1.45 million

students benefiting from EIB financing

1.3 million m²

of new or rehabilitated education facilities

2.1 Research, Development and Innovation

RDI and the digital economy are the main drivers of EU economic growth. The long term economic benefits of private investment in innovation are big. But the commercial and technical risks associated with uncertainty in early stages of development discourage investments, resulting in too little RDI expenditure. Such market-failure and funding constraints slow the deployment of modern technologies, such as Key Enabling Technologies (KETs); Strategic Energy Technologies (SETs); clean and green transport technologies; and low carbon technologies, which are vital to enhance productivity and competitiveness. These barriers to investment are particularly significant for SMEs and Midcaps, which are often the main actors in technology-intensive sectors.

The Bank uses various types of loans to promote RDI, including its dedicated SME and midcap finance facilities. Financial support aims to partially de-risk investment in Research and Development (R&D), and public sector co-investment for higher risk-sharing (for example, through InnovFin)² incentivises R&D spending.

ICT networks are key components of the EU's modern infrastructure aimed at enjoying the benefits of profound changes related to big data, cloud technologies or the 'internet of things', all of which foster total factor productivity.

The 2015 Innovation and Skills lending programme places increased emphasis on investments in information technology, especially for smaller service companies. As a result, the EIB can step up finance for all aspects of a firm's technology investments, including software, automation and cyber security. For the first time, the EIB directly finances high risk, high-tech SME and Midcap companies. It also finances projects that focus on deployment of innovative technologies.

New operations in 2015 related to RDI amounted to EUR 10.2bn. That is 15.8% of the EIB's first signature lending volume for 2015. The majority of funding in 2015 was for Research & Development projects (EUR 7.4bn). Innovation projects accounted for the remaining EUR 2.8bn.

Based on the 3PA project complementary indicators, [Figure 9](#) illustrates the selection of expected results of a subset of Innovation and R&D new operations (including telecommunications and broadband) signed by the EIB in 2015.

² [InnovFin](#) "InnovFin – EU Finance for Innovators" is a joint initiative launched by the European Investment Bank Group (EIB and EIF) in cooperation with the European Commission under Horizon 2020. InnovFin is a series of financing tools and advisory services offered by the EIB Group, covering the entire value chain of research and innovation (R&I). By 2020, InnovFin is expected to make over EUR 24bn of debt and equity financing available to innovative companies to support EUR 48bn of final R&I investments.

Figure 9. Selection of expected results from RDI (including telecommunications and broadband) new operations signed in 2015

	Outputs	Outcomes
Research & Development	EUR 11 billion of investment in private sector RDI	Over 10,000 EU collaboration agreements with universities, research institutions etc.
	More than 50 private sector companies supported directly in R&D	Over 11,400 national or international patent applications
Innovation (inc. telecommunications)	6,700 additional 4G sites	Over 1 million new subscribers
	17 million additional households covered by high-speed broadband services	10 million new subscribers for high speed data services
	48,700 additional VDSL street cabinets	4.4 million additional upgraded highspeed broadband lines

A 2020 policy target for the EU is to invest 3% of GDP in R&D. In addition to bolstering the knowledge economy, R&D activities increase competitiveness and enhance innovative capacity. New EIB R&D operations in 2015 fall under two categories:

- (i) those aimed at improving the health and nutrition of European citizens through researching new treatments and medications, as well as food and sustainable agriculture;
- (ii) those targeting safety technology in the automotive sector, digital technologies, advanced manufacturing technologies, circular economy, or climate action by developing energy efficient technologies and renewables.

A common feature among all R&D projects is that they help safeguard skilled employment opportunities in Europe, and thus contribute to the EU Innovation and Skills Initiative.

Next generation hearing aids in Europe

The EIB is providing a loan of EUR 110 million to William Demant Holding A/S, the world's second-largest manufacturer of hearing aids and related services, to support RDI for next-generation acoustic hearing devices and fitting software in Denmark, France and Poland.

The project is expected to lead to around 500 patent applications. This will deliver significant social benefits to people currently excluded from business and social environments because of hearing impairment.

Energy efficiency for renewable energy, industrial and transport equipment

A EUR 55 million loan from the EBI is supporting RDI at Ingeteam, a Spanish renewable energy and industrial, naval and rail transport equipment producer. The RDI will focus on enhancing the energy efficiency of electric equipment and related applications, through better energy generation and recovery, and reduced energy consumption.

The project will help strengthen an innovative European firm, retaining skilled employment in the EU and generating knowledge spill-overs and benefits to the energy efficiency and the renewable energy sector. It will also enable the firm to leverage additional financing for further RDI activities.

Through InnovFin the EIB offers a range of financial instruments, including venture capital, bank guarantees and direct mezzanine/growth finance, which address some of the financing constraints faced by R&D projects. For example, the EIB is providing financing of EUR 10m under its Midcap Growth Finance instrument to support Danobat's R&D into innovative, high-tech custom machine tools. European machine-tool producers lead the global market and this project will support Danobat, which is based in Spain, in maintaining its leadership and improving competitiveness. The project will have significant spill-over through collaboration with universities and research centres.

R&D in material science is an increasingly key area for European competition. Through the Investment Plan for Europe's EFSI, the EIB is providing EUR 50m to Novamont to develop innovative bio-plastics in Italy. Research and innovation in this area is risky. There is considerable uncertainty as to when and to what extent biodegradable plastics will be adopted (mainly as a result of regulation). Development projects have difficulty attracting competitively priced finance.

Novamont is a medium-sized Italian industrial company and a world leader in bio-plastics. Bio-plastics are mainly used in high-added value niche applications. Novamont's core product is a biodegradable thermoplastic which has already been commercialised internationally. The majority of its sales are within Italy and it may face strong competition from larger chemical companies when the market for bio-plastics grows. The project promotes potentially significant environmental benefits. In addition, some of Novamont's manufacturing plants are located in areas of industrial and agricultural economic decline, so the project will contribute to local economic regeneration.

With next-generation grades of bio-plastics Novamont expects sales revenues to rise, because production is expected to increase from 40,000 tonnes per annum to 140,000 tonnes and export volumes from 10,000 tonnes to 70,000 tonnes.

The project will:

- lower the environmental impact and greenhouse gas emissions of the plastic manufacturing process and of certain uses of plastics in households, food packaging and agriculture through the replacement of fossil-based plastics with compostable bio-plastics alternatives
- reduce problems posed by fossil-based plastic packaging including landfill, waste management, micro-pollution and its accumulation in nature
- employ 405 person-years during implementation

- create 96 permanent additional skilled jobs in R&D and manufacturing activities after the project has been implemented.

CASE STUDY: INNOVATION AND SKILLS - R&D

M -sized biotech firm tackles Ebola and cancer

Sector: Health	Sponsor: Bavarian Nordic A/S (Denmark)
Total cost: EUR 128mn	EIB finance: Up to EUR 50mn
Objectives: <ul style="list-style-type: none"> • Support the R&D activities of a mid-sized European biotechnology firm to help address unmet medical needs, improve patients' quality of life and help prevent future pandemics of infectious diseases, especially Ebola. • Promote knowledge sharing with research institutes and universities • Strengthen European competitiveness as a technology supplier and safeguard and create skilled employment opportunities. 	
Expected results: <ul style="list-style-type: none"> • Specific support to pipeline projects including Ebola clinical trials, Ebola Marburg pre-clinical trials, RSV pre-clinical trials, small-pox phase II clinical trials, Prostvac phase III clinical trial, CVAC-301 colorectal, breast and lung cancer phase II clinical trials and metastatic cancer preclinical trials. • Manufacture of over one million doses for the Ebola clinical trials • Safeguarding of Bavarian Nordic's current 143 full time jobs and create 16 new full time skilled jobs in pharmaceutical research and manufacturing. 	

Motivation

There is a global need to develop medical solutions and improve patient's quality of life for a range of infectious diseases and cancers. For example, the recent Ebola outbreak is so far responsible for 28,637 infections and 11,315 deaths³. Even though Ebola has so far been largely contained to Africa, there is concern over its potential to spread to emerging markets such as India and China, which would enable it to spread more easily to Europe and the US. Similarly, the current smallpox vaccines cannot be used in 25% of the population and Respiratory Syncytial Virus (RSV) has a high mortality rate in people over the age of 65 as well as infants.

³ Source: WHO (10/12/15)

Pharmaceutical research to find solutions is characterised by both high costs and risks. As a result, there is limited competition in pharmaceutical research. There is also a more general need to support European investment and employment in technology research to maintain Europe's competitiveness in this area.

Bavarian Nordic (BN), a mid-sized European biotechnology firm, has a promising pipeline based on its proprietary and validated technology platform. It has been successful in gaining approval for its smallpox vaccine from the US Food and Drug Administration (FDA) and the European Medicines Agency (EMA). Its promising prostate cancer vaccine is at phase III clinical trials and, if successful, would be the first cancer vaccine developed by a European company. BN's Ebola/Marburg vaccine is being developed in partnership with Johnson and Johnson. To trial the vaccine, BN needs to manufacture over 1 million doses. It is also working independently on a novel vaccine construct to protect against all known strains of Ebola.

EIB contribution

EIB is providing BN with a competitive loan in terms of its pricing, term and profile to support BN's pre-clinical and clinical trials of vaccines with potential therapeutic effects against a range of infectious diseases. The EIB's involvement sends out a positive signal to other potential lenders that have not previously engaged with BN, and so it may encourage future lending activity.

The loan is being provided under the EU's Horizon 2020 "InnovFin – EU Finance for Innovators" facility. Through this BN is receiving support from a new generation of financial instruments which improve access to risk finance for research and innovation projects.

Benefits

The project aims at acquiring new knowledge to address unmet medical needs, improve patient's quality of life and help prevent future pandemics. In particular the project will contribute to the development of vaccines with potential therapeutic effects against smallpox, Ebola, Respiratory Syncytial Virus and prostate, colorectal and breast cancer and metastatic tumours.

The project will also help to strengthen the competitiveness of BN and enhance Europe's position as an important contributor to innovation. There will be increased opportunities for knowledge sharing between BN and other European research institutes and universities. It is expected that EIB's financing will create 16 new full time jobs in manufacturing and research and safeguard BN's current 143 full time jobs in the research areas mentioned above.

Policy links

The project helps to address EIB's Innovation and Skills high level public policy objective and corresponds to the European Community's role to encourage Research and Technological Development (defined in Article 179 of the EC Treaty). It also contributes to the Growth and Employment Facility's (GEF) EU Innovation and Skills initiative.

Investment in BN is provided under the InnovFin – EU Finance for Innovators initiative, a joint initiative between EIB and EIF in cooperation with the EC under Horizon 2020, which offers a series of integrated and complementary financing tools and advisory services covering the entire value chain of RDI.

EIB's focus on innovation projects is moving from funding the deployment of new technologies (in pilot and demonstration plants and dedicated equipment for commercial roll-out) towards projects that support innovation in manufacturing sectors that are exposed to international competition, where the investment in new manufacturing equipment is based on knowledge-intensive technologies.

Belgium innovation gets a boost

With a loan of EUR 100 million, the EIB is helping Van de Wiele, a fast-growing midcap Belgium textile-weaving machinery manufacturer invest in R&D to improve existing equipment and production processes and to develop new, advanced manufacturing technologies, such as automation.

Van de Wiele is a global leader in weaving technology and other textile applications and has stayed abreast of global competition by innovating its products and production processes (85% of its sales come from products developed within the last 5 years). The project will generate around 15 patents and sales of EUR 60 million.

Roll out the loan for Italian steel rolling

Arvedi is the EU's 11th-largest steel producer. An EIB loan of EUR 100 million is financing part of Arvedi's ongoing modernisation programme to improve its energy efficiency, environmental performance and to increase capacity in its profitable downstream processes.

The project will finance further investment and innovation, including the installation of a modern electric arc furnace with waste heat recovery, a new cold-rolling mill for thin gauges, an update of plant infrastructure and R&D to develop new high strength and electrical steel grades and related processes.

EIB's assistance will enable Arvedi to maintain its competitive position in the world steel market and to attract further finance. This is of prime importance to the EU as the steel industry provides 1.25% of European manufacturing employment.

The EIB continues to expand its product portfolio to overcome Europe's funding constraints for innovation and skills. In 2015 the EIB invested EUR 25m in QWANT under the Horizon 2020 initiative "InnovFin – EU Finance for Innovators." QWANT, a Franco-German start-up, is developing a European search engine. The EIB aims to foster innovation and the digital economy to encourage the emergence of new leaders in the internet search market.

The EIB broadened project eligibility for ICT in 2015 to include the modernisation of ICT networks, hardware and software with latest generation technology, including the upgrading of automation and data management systems in manufacturing (an area that is particularly important for SMEs and Midcaps). To address the broadening gap in ICT security between Europe and the rest of the world, a dedicated window has been created for the financing of investment in the security of data systems and networks.

The ICT sector has the potential to trigger economic growth by rolling out high-speed broadband and, in particular, optical fibre infrastructure, to enable a broad range of innovative broadband and fibre services, including in the EU's less-developed regions. Recognising that ICT networks are key components of modern infrastructure and of economic and social cohesion, the EU set the Digital Agenda for Europe target of providing all EU citizens with broadband speeds above 30 Mbps and 50% of the population with access to speeds above 100 Mbps by 2020.

Better mobile coverage in Finland and Estonia

A loan of EUR 150 million from the EIB to Finland and Estonia's leading telecom operator is helping improve the quality mobile networks. In Finland, 4G/LTE population coverage will increase to around 98% (from 50%) and 3G high-speed data services coverage will increase to 85% (from 75%). The replacement of all existing 3G nodes with multi-purpose nodes will increase the efficiency of the Finnish network. In Estonia, 4G/LTE population coverage will increase from 60% to 97%.

Enhancing mobile network services and access in rural areas, the EIB's investment will help drive productivity and job creation, without negative environmental impact.

CASE STUDY: INNOVATION AND SKILLS – Innovation (including Telecoms)

Fibre broadband for rural Hessen

Sector: High-speed broadband telecommunications	Promoter: Wirtschafts und Infrastrukturbank Hessen (WIBank), Germany
Total cost: EUR 300mn	EIB finance: EUR 150mn
Objective: <ul style="list-style-type: none"> Roll out of several passive fibre access schemes in the German Federal State of Hessen, to provide high speed fixed broadband telecom services to residential and business users in uncovered rural areas. 	
Expected results: <ul style="list-style-type: none"> Support to three rural broadband projects - Nordhessen Cluster (5 districts), Wetterau/Vogelsberg (2 districts) and Russelsheim High speed broadband access (>50 Mbps) to 1.6 million rural inhabitants who currently do not have access to advanced broadband services (>=30 Mbps) 156 km of empty ducts and strengthen inter-district cooperation 	

Motivation

The German Government has an objective to provide high quality, country-wide broadband coverage by 2018. Individual Federal States, Districts and Municipalities are responsible for delivering this objective and so the Federal State of Hessen has developed a Next Generation Access Strategy to bring area-wide broadband services of at least 50 Mbps by 2018.

Roll out in most parts of the State is profitable and can attract investment from private telecom operators and local utility firms (81% of urban households already have access to a broadband connection of at least 50 Mbps). However, roll-out in many rural and some semi-urban areas of Hessen is financially not profitable (current penetration levels are 39.5% in semi-urban areas and 18.5% in urban areas, for broadband over 50 Mbps) and therefore needs additional financial support. Germany has only a limited amount of public funds to subsidize the rural roll out of broadband services and financial, legal, technology and market assistance is required to help meet the national target.

EIB contribution

EIB is providing long-term funding with flexible drawdown opportunities to WIBank, the state of Hessen's development bank supporting regional economic and social objectives, largely through infrastructure projects. EIB is also sharing its knowledge and experience in financing similar rural broadband operations in other regions of Germany and Europe.

Benefits

Supporting ICT in rural and semi-rural areas in Hessen is expected to generate significant economic benefits in terms of productivity improvements. To date the project covers a population of about 1.6m inhabitants, all of whom will be able to access broadband services with download speeds of at least 50 Mbps by 2020 (compared to the current basic service of 2 Mbps). Priority is being given to areas with relatively high business coverage to help to strengthen SMEs in the area.

The project is expected to create direct employment equivalent to 90 person-years over a three-year period. It is also expected that the project will deliver significant employment impacts both through employing skilled technical staff during the construction phase and later, by supporting local enterprise and innovation.

Policy links

The project contributes to the EIB's high level public policy objective of Innovation and Skills through investment in ICT infrastructure. It directly supports the German Government's national broadband strategy 2014-2017 and the Hessen Federal State's next generation access (NGA) strategy, both of which have the objective of providing an area-wide coverage of broadband services of at least 50 Mbps by 2018.

The project also implements the European Commission's (EC) Digital Agenda for Europe (DAE) flagship initiative for all Europeans to have access to broadband speeds above 30 Mbps by 2020.

2.2 Education and training

Education is a key driver of productivity and growth, and has high private and social returns. Significantly more investment in training highly skilled people is needed if Europe is to close the innovation gap with competitors such as the US. A life-long learning approach to investment in education and training is required, including improvements to the training of teachers throughout the education system, developing the vocational skills and employability of all individuals, and increasing financial and human resources for Europe's top research universities.

In 2015, the EIB revised its lending priorities for education projects as part of its review of the Knowledge Economy Programme. For education and training, the EIB plans to widen its vocational training funding to include individuals of all ages. It will also support investments in teacher training for all levels of the school system. Under the new Innovation and Skills lending programme, which covers EIB activities until 2020, the lending priorities for education projects are:

- Improving the quality of education on offer
- Supporting the European Higher Education Area and the European Research Area by reforming the quality and competitiveness of tertiary education and driving excellence in leading edge universities;
- Encouraging the mobility of students, researchers and academic staff
- Bridging the gap between academia and business enterprises, promoting innovation by lending to technology transfer initiatives and programmes;
- Addressing social exclusion and demographic change, supporting reforms brought on by new technologies, such as applying innovative digital technologies in education; and facilitating the educational integration of immigrants.

For new 2015 operations, EUR 5.2bn of these related to education and training operations. This equates to 8.1% of the Bank's total first signature lending volume for 2015.

Figure 10. Selection of expected results from Education and Training new operations signed in 2015

	Outputs	Outcomes
Education and Training	1.45 million students directly benefitting from EIB projects	Over 23,600 additional graduates facilitated as a result of EIB financing
	EUR 145 million of new equipment supplied	
	Over 1.3 million m2 of new or rehabilitated education facilities	127,000 additional students enrolled
	Over 50,000 additional places created in educational facilities	

A large share of the EIB's 2015 education and training projects funded investments in tangible education infrastructure, to upgrade educational facilities which have

deteriorated significantly across the EU. In addition to improving the education facilities, these projects incorporate a significant energy efficiency component, maximising improvements to building efficiency, furthering the EU's environmental targets and enabling a greater share of the education expenditure to be channelled into teaching and research.

Upgrades for Italy's schools

A 30-year EIB loan to the Italian Ministry of Education University and Research, of EUR 940 million, is supporting Italy's Good School strategy, delivering infrastructure improvements to 41,000 pre-school, primary and secondary school buildings.

This investment makes a significant contribution to Italy's new education strategy. It aims to reduce school early leaver rates and meets the high-level objectives of the Europe 2020 strategy in the education field as well as the EIB's Innovations and Skills (Knowledge Economy) priority on Education and Training.

Over four million pupils will benefit from the increased standard of the infrastructure in over 20,000 schools.

World-class research and teaching facilities for Oxford

The EIB is helping Oxford University, one of the world's top universities, to deliver its Capital Masterplan through a loan of EUR 266 million.

The loan will assist the construction of several new facilities, including the Nuffield Department of Medicine (a biological science and medicine laboratory), the BioEscalator (for new bioscience start-ups), the Big Data Institute (a data centre focusing on disease prevention and treatment), Hans Krebs (a biochemistry research centre), and the Blavatnik School of Government building. The project will also refurbish existing library facilities and an outpatient building.

These new facilities will increase the relevance and quality of teaching, learning and academic research at Oxford University which in turn will contribute to human capital formation and RDI capabilities in the UK. Moving into modern, purpose built facilities will also reduce CO2 emissions and the operating costs of the university.

Finance for Poland's Science and Research National Centres

In line with its objectives for the knowledge economy, the EIB is supporting the implementation of the Polish Science Strategic framework with a loan of EUR 420 million.

The loan will part-finance the RDI projects of Ph.D. students, post-doctoral fellows and senior scientists who have already successfully applied for an external grant for research tendered by Poland's Science and Research National Centres.

The project will promote new knowledge and support 40,000 skilled posts in the fields of new energy technologies, health, IT and mechatronic technologies, new material technologies, environment, agriculture and forestry, and social and economic development. It will leverage private RDI investment and increase the overall proportional of national income spent on R&D.

CASE STUDY: INNOVATION AND SKILLS – Education and training

Constructing and refurbishing campuses in Ireland

Sector: Higher Education	Promoter: Trinity College of Dublin (TCD)
Total cost: EUR 148.2m	EIB finance: EUR 70m
Objective: <ul style="list-style-type: none"> To improve the quality, efficiency and effectiveness of TCD's educational programmes through the construction of the Trinity Business School's 'Business and Innovation Hub', the purchase and fit out of premises for the Institute of Public Health, construction of on campus student accommodation and providing TCD with a high speed wireless network 	
Expected results: <ul style="list-style-type: none"> 28,364m2 new or rehabilitated education facilities, creating 958 additional student places and 296 additional student accommodation places with childcare and health facilities EUR 3 million of additional revenue generation and 1,957 additional students enrolled Lower energy consumption by TCD buildings 	

Motivation

Trinity College Dublin is one of the world's top universities. It ranks 129 of the world's top 200 universities (THES/2013 ranking) and is number 18 in European rankings (QS university rankings). Its business school has a worldwide reputation (the school is ranked 37th in the world (Eduniversal)) as has its research which is ranked number 42 worldwide.

To stay competitive and to generate the additional income it needs both from (foreign) student fee income, research grants and projects, funding council grants and projects and other sources such as student accommodation, it needs to improve the quality of its teaching and research facilities to continue to attract students, and produce high quality research.

This project helps increase UCD's attractiveness by investing in the Universities' teaching and research facilities (building a business and innovation hub, and refurbishing accommodation for the institute of Population and Health), constructing new students accommodation and providing high speed mobile data access on the campus Health the public buildings makes the university a more attractive place to study and do research, it also makes research more effective and accessible to address these issues.

EIB contribution

EIB's financing provides hard to obtain long term financing to the University and will diversify its funding base. EIB also provided technical advice during the appraisal process in the areas of procurement, energy efficiency and savings and environmental best practice, including avoiding or minimising the project's environmental impact.

Benefits

The project will provide a state of the art education environment to students and teachers, providing 958 additional students places and 28,364m² of new or rehabilitated education facilities. As a result an additional 1,957 students are expected to be enrolled. The Trinity Innovation Hub is expected to be able to grow the Business School's revenues from EUR 9.7m to EUR 24.5m by 2018. And in addition, the new on-campus student accommodation will provide 296 additional beds, increasing TCD's attractiveness to first year and overseas students. Childcare facilities will help attract mature students. The accommodation itself will generate an additional EUR 3m of revenues.

Ireland demonstrates significantly higher rates of return from investment in tertiary education, when compared with the OECD and European average. Investing in TCD graduates' skills will generate benefits to the wider economy promoting productivity (higher wages and tax income) and making the Irish economy more competitive.

The project will also help to address youth unemployment. Ireland's youth unemployment rate was 25.1% in July 2014. This project helps to address this by focusing on project investment sectors where employment prospects are good and through TCD's existing initiatives aimed at increasing the participation rate of young adult and mature students from under-represented social groups. In 2012, 91% of TCD's first degree students and around 87% of higher degree students were in employment or further study six months after graduation.

The project itself will generate direct employment of 54 new permanent jobs (28 of these academic). Building efficiency will also be increased as all the new buildings are targeting a zero energy consumption level.

Policy links

The project increases investment in research and education in line with the objectives of the EU 2020 strategy. TCD's cooperation with the European Institute of Technology (EIT) and Knowledge and Innovation Communities (KICs) makes a high contribution to the EIB's Innovation and Skills (Knowledge Economy) COP objective.

The project investments are intended to reduce energy consumption and to improve energy efficiency, supporting the EIB's transversal goal of Energy Efficiency.



Report on **EIB operations**
inside the EU 2015

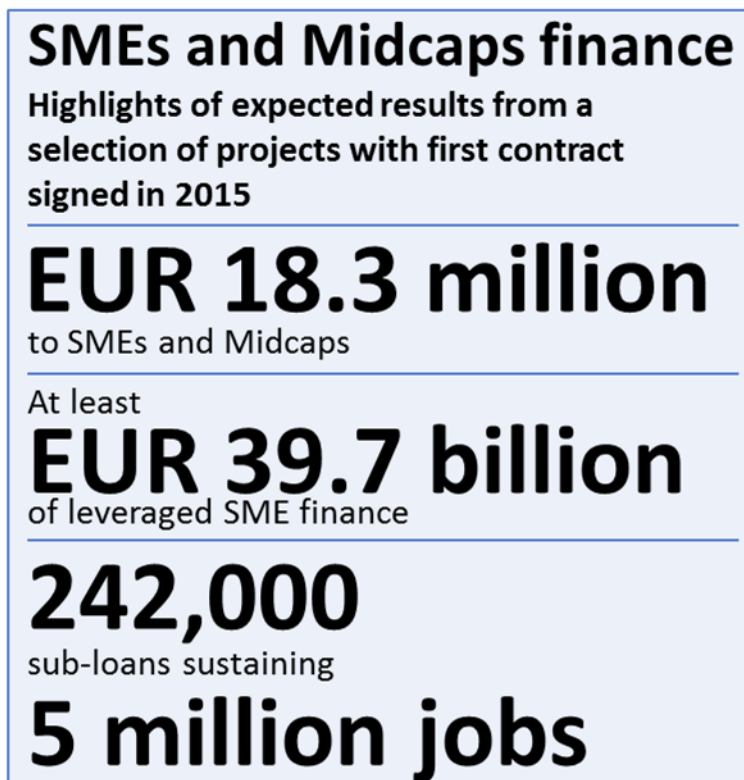
With the
three pillar
assessment methodology

SMEs

Employment and growth

3 SMEs and Midcaps finance

SMEs and Midcaps are vital to the wellbeing of Europe's economy. Europe's 22.3 million SMEs account for two-thirds of employment and generate nearly 60% of total value-added (EUR 3.7 trillion). The growth of SMEs and Midcaps is inhibited by financial institutions' difficulty in assessing project risk and the relatively high cost of providing small loans. The EIB addresses these issues through dedicated, innovative SME products delivered via financial intermediaries.



The EIB's largest public policy objective is to help SMEs and Midcaps access finance. In 2015 the EIB's new SME and Midcap finance operations amounted to EUR 18.3bn (including loans to Midcaps of EUR 3.8bn), representing 28.4% of new EIB volume.

The EIB provides finance to SMEs through intermediated loans and a range of innovative instruments, either on its own risk or leveraging on the risk-taking capacity of third parties. The EIB's financing assistance is complemented by the European Investment Fund's (EIF) specialised products for SMEs, including risk-sharing through guarantees, credit enhancement, intermediated equity, venture and growth capital, mezzanine finance, microfinance and social impact finance, leveraging, wherever possible, additional funding from the EC and member states.

The EIB Group's support to SMEs and Midcaps benefits from the substantial risk-bearing resources provided by the EC under the Investment Plan for Europe's EFSI.

3.1 Expected results from access to finance to SMEs and Midcaps

Figure 11. Expected results from new SME operations in 2015

	Outputs	Outcomes
SMEs and Midcaps	EUR 18.3 billion financing SMEs and Midcaps in the EU expected to leverage at least EUR 39.7 billion of SME finance	242,000 sub-loans expected over the next two years, leveraging at least EUR 39.7 billion of SME finance and sustaining 5 billion jobs
Key new initiatives and pilots for SMEs and Midcaps	SME Initiative launched providing a guarantee capacity of more than EUR 1.4 billion. 6 operations signed with a total value of EUR 91 million	The SME initiative will catalyse private investment and foster job creation
	InnovFin Midcap Guarantee (EUR 150m), Midcap Growth Finance (EUR 214m) launch of InnovFin Energy Demo Projects and InnovFin Infectious Diseases	The new InnovFin windows will deliver renewable energy and hydrogen and fuel cell projects that help to bridge the gap between demonstration and commercialisation and stimulate investment in research into infectious diseases
	The European Export Funding Platform pilot is providing a credit line of EUR 50 million to an EU export buyers' platform	Support to export orientated SMEs and their internationalisation process outside the EU

3.2 Project highlights

The financial crisis exacerbated the problems faced by SMEs in accessing finance. Banks, the main providers of loans to SMEs, have become more risk-averse as a result of an increase in loan defaults and tightened regulation. Although access to finance for European SMEs is improving, this is still a major barrier for firms in several countries, including Greece.

Liquidity for the Greek financial system to support SMEs

The EIB is providing a loan of EUR 500 million to support new activities of Greek SMEs in the industry, tourism and services sectors. Supporting SMEs is vital to the recovery of the Greek economy. SMEs employ 70% Greece's workforce and account for 99.9% of all enterprises. They have been hard hit by the economic crisis and face serious survival problems. EIB's support will address the liquidity problem faced by the banks which support Greece's SMEs. The long-term loan provides these banks with their sole source of new liquidity to support and develop their business base.

The EIB continued to support the underdeveloped European Securities market via participation in securitisations targeting the SME sector. This creates a secondary market for SME loans enabling banks to obtain more liquidity and free regulatory

capital, thereby enabling them to lend more readily to SMEs. The EIB's investment in over EUR 800m in SME Asset-Backed Securities (ABS) in 2015 was complemented by the EIF, which provided guarantees for investors in SME-backed ABS. This year's activity included the EIB group's first public SME ABS operation in Poland (Raiffeisen-Leasing Polska S.A. - RLPL ABS IV).

European SMEs export-funding platform

EIB is addressing a market gap in providing small-scale export buyer credit through a loan of EUR 120 million to Northstar Europe, an export buyers platform located in Luxembourg. The funding will enable European machinery and equipment manufacturers to offer small-scale credit of between EUR 500,000 to EUR 5 million to non-European customers. The loan and credit is offered through a financial intermediary without recourse to the exporting firms. This enables the exporters to offer credit without affecting their own borrowing ability for production expansion or R&D investment. This is the first such facility from the EIB. It will boost the sales of SME and Midcap exporters, improving competitiveness and creating employment in the EU. The loans will target customers mainly in emerging countries such as Turkey, Africa, Indonesia and Latin America, enabling these firms to benefit from attractive, low cost financing.

In 2015 EIB enhanced its operational cooperation between EIB and public promotional institutions (for example with regional promotional institutions in Germany) in the EU. EIB signatures for SMEs with public counterparties amounted to EUR 6 bn, of which EUR 3.4 bn was signed with public promotional institutions and EUR 2.6 bn with public authorities in nine EU Member States (Croatia, Cyprus, Greece, Hungary, Latvia, Lithuania, Malta, Slovakia and Spain).

Enhanced cooperation with public promotional institutions for SMEs in Germany

Through a EUR 400 m loan with Landwirtschaftliche Rentenbank, the German national promotional institution for the agricultural sector, the EIB will support funding to SMEs, particularly to micro-enterprises active in the sector. The EIB also signed a EUR 400 m loan with NRW.BANK, the promotional financing institution of Bundesland Nordrhein-Westfalen, aimed at supporting sustainable economic development, enabling the creation of new employment opportunities in the region. These public promotional institutions work with other financial intermediaries, enabling the EIB to further decentralise its financing and reach an even greater number of German SMEs.

Portuguese agricultural SMEs and Midcaps access to low cost finance

An EIB loan of EUR 50 million to the Portuguese bank Banco BPI SA is helping local agricultural SMEs and Midcaps access the credit and liquidity they need to develop. The operation is dedicated to agri-food SMEs, Midcaps and projects in rural areas along the entire value chain. It is expected to contribute to the sustainable growth of the Portuguese agriculture sector and rural economy, thus having a positive impact on the national economy and on employment. Less developed regions will benefit from this operation. SMEs and Midcaps will benefit from lower interest rates.

Support for Spain's agricultural economy

Agriculture is a big part of the Spanish economy, providing jobs and significant export income. The EIB is providing a EUR 650 million loan via intermediary financial institutions to help small and medium-sized Spanish agricultural enterprises overcome their difficulties accessing finance and providing a boost to the local economy. The project will support over 8,650 enterprises involved in food and feed production and processing, forestry, fisheries and aquaculture and related transformational industries, as well as those in storage and distribution.

Energy efficiency help for Czech firms

Through the Private Finance for Energy Efficiency instrument, the EIB is providing a loan of EUR 150 million to the financial intermediary Komerční Bank, to help firms in the Czech Republic improve energy efficiency. The project gives access to finance to improve buildings' energy performance, industrial and technological process efficiency and power and heat distribution. Firms can install waste-heat recovery systems and cogeneration or renewable energy generation units. The project also supports public lighting and district heating schemes. The Czech Republic consumes 50% more energy per unit of GDP than the average EU country and relies heavily on coal. By reducing carbon emissions and energy consumption the project will help the Czech Republic to meet EU targets on energy efficiency and reduce energy use to that of comparable economies in the EU.

Rabobank Impact Loan for SMEs – Sustainability

The EIB signed a EUR 50 m loan with Rabobank to provide finance to Dutch SMEs, which are front-runners in social responsibility and sustainable development. Through discounted loan pricing to SMEs, Rabobank incentivises business owners with demonstrable corporate social responsibility practices to fund sustainable investments. SMEs will be selected because they meet sustainability requirements in areas such as environmental impact, fair trade and animal welfare. This pilot operation could lead to further EIB initiatives in the area of social responsibility across Europe.

Capital markets access for Italian SMEs and Midcaps

An EIB loan of EUR 175 million is helping the Italian Export Credit Agency establish a debt fund targeting Italian SMEs and Midcaps.

The fund will enable selected export-oriented firms to issue mini-bonds and so access the mid- to long-term finance that they may have difficulty obtaining from a banking system that faces credit deterioration, capital constraints and stricter regulation. The project will benefit around 70 firms, supporting employment and economic growth in Italy.

CASE STUDY: SME AND MIDCAP FINANCE

Asset-leasing to SMEs and Midcaps in the Czech Republic and Slovakia

Sector: All sectors	Sponsor: SG Equipment Finance Czech Republic SRO (SGEF CZ), Czech Republic
Total cost: EUR 400 million	EIB finance: EUR 200 million
Objectives: <ul style="list-style-type: none"> To support economic development in the Czech Republic and Slovakia by supporting asset leasing to SMEs and Midcaps through a loan to an asset leasing company. To address youth employment by partly targeting firms that hire or train young people. 	
Expected results: <ul style="list-style-type: none"> Provision of an additional 5,000 loans of total value of EUR 400 million to Czech and Slovak SMEs and Midcaps, focusing on the transport and storage, manufacturing and construction sectors. An increase in youth employment. 	

Motivation

SMEs and Midcaps are the backbone of the Czech and Slovak economy, driving employment and economic growth. Leasing is a popular asset financing option for SMEs and Midcaps, but in recent years leasing firms have faced slowing demand for new leasing contracts, increasing financing costs and a deteriorating quality of lease assets. As a result, they have had to re-price their new operations, increase their credit provisioning and be more selective in their lending. This has resulted in a credit crunch for SMEs and Midcaps.

This project offers medium and long term finance to a leasing company targeting SMEs and Midcaps specialising in the Transport, Industrial Equipment and High Tech sectors in the Czech Republic and Slovakia.

EIB contribution

EIB's key contribution is to diversify SGEF CZ's funding sources and to provide access to relatively low cost, long term financing, which will be passed on to the final loan beneficiaries.

Benefits

Each EIB loan will provide direct financial benefits to recipients in terms of the loans' favourable pricing and maturity structure. The financial value added (FVA) will be transferred to SMEs and Midcaps in terms of reduced pricing of sub-loans. The project guarantees this benefit to firms by defining a minimum level of FVA.

The SME loan project is intended to enhance SME and Midcap access to finance, and to contribute to sustainable growth and employment in the Czech Republic and Slovakia. It will contribute to reducing

youth unemployment by partly targeting SMEs which employ or train young people. Based on the performance of similar previous EIB loans, the transport and storage, manufacturing and construction sectors are likely to benefit the most from the project.

Policy links

By supporting SME and Midcaps in the Czech Republic and Slovakia, this project makes a positive contribution to the EIB's COP objectives of growth and employment. Its provision of loans to firms directly addresses EIB's key public policy objective area of SMEs and Midcaps finance.

With the exception of Prague, the entire Czech Republic is classed as an EU convergence region so the funding will also contribute to the EIB's transversal convergence objective.

This project also contributes to the Jobs for Youth initiative (JfY), under which the EIB incentivises financial intermediaries to target their lending to those SMEs which contribute to an increase in youth employment. It also complies with the EU-28 programme 'Loan for SMEs and Midcaps'.

3.3 New initiatives for SMEs and Midcaps

The EIB launched new initiatives in 2015 to support SMEs and Midcaps, the most relevant ones being the SME Initiative and a further development of InnovFin.

The SME Initiative is a joint financial instrument of the European Commission, the EIB Group and Member States. It aims to stimulate SME financing by providing partial risk cover for SME loan portfolios originated by financial institutions. Alongside European Structural and Investment Fund (ESIF) resources contributed by Member States, the SME Initiative is co-funded by the EU budget through Horizon 2020 and/or COSME resources as well as EIB Group resources. The SME Initiative covers two products:

- (i) an uncapped portfolio guarantee for new SME loans/leases/guarantees (Option 1) and
- (ii) the participation in securitisations—either through ABS investments or via guarantees—of new or existing SME loans/leases with an obligation of the originator to build up new (de-linked) SME portfolios meeting a minimum leverage factor on ESIF resources (Option 2).

The EIF is the entity entrusted by the adhering Member States with implementing the SME Initiative with the EIB. The EIB provides senior risk cover, whereas EIF provides risk cover at upper mezzanine level. Option 1 was signed with Spain and Malta in 2015 and is being deployed further in 2016 in Bulgaria, Romania and Finland. Deployment of Option 2 is also expected in Italy in 2016.

CASE STUDY: SME AND MIDCAP FINANCE - New initiatives

Spanish SME's access to finance

Sector: All sectors	Sponsor: The Kingdom of Spain
Total cost: EUR 5.7bn	EIB finance: EUR 2bn
Objectives: <ul style="list-style-type: none"> To support economic development in Spain by increasing the provision of favourable condition loans to SMEs through a joint initiative between the EIB, European Investment Fund (EIF), European Commission (EC) and the Kingdom of Spain. To demonstrate the effectiveness of this new SME Initiative in order to encourage participation by other Member States. 	
Expected results: <ul style="list-style-type: none"> An additional EUR 5.7bn in loans to more than 88,000 Spanish SMEs with favourable interest rates and terms. A financial benefit of up to 250 basis points on the guaranteed portion of loans. Sustaining 825,000 jobs across a broad range of sectors. 	

Motivation

SMEs employ around three-quarters of Europe's workforce and play a major role in Europe's economy. However these organisations have been heavily affected by the current economic crisis. A key factor for SMEs and their ability to contribute to economic recovery is access to finance. Demand for loan financing by SMEs is increasing whilst, at the same time, banks' increasing risk adversity and tightening financial regulation is reducing the availability of these loans.

The SME Initiative (SMEI) is a new joint initiative between the EIB, EIF, EC, and Member States (MS), which facilitates lending by banks to SMEs (including innovative and more risky SMEs) through a risk sharing instrument. The initiative comprises two options: uncapped SME portfolio guarantees and a securitisation instrument. In both cases, MS funds cover the majority of junior risk with the remaining risk tranches covered through a combination of resources from MS, the EC, EIB and EIF.

The SMEI is being rolled out first in 15 regions in Spain, which jointly account for 96% of Spanish GDP. It is anticipated that other EU countries will follow suit once the SMEI is successfully launched in Spain.

EIB contribution

EIB's financial contribution to this project is expected to generate positive effects in terms of financing costs and the availability of liquidity or long term funding to Spanish SMEs. EIB's

participation also enables funding from the European Structural Investment Fund (ESIF) to be leveraged, acting as a first loss buffer.

EIB, together with the EIF, has made a significant technical contribution by advising the EC, the Spanish Government and regions in the design and implementation of the structure.

Benefits

The initiative is intended to provide EUR 5.7 billion of credit over a period of five years to Spanish SMEs. More than 88,000 SMEs are expected to benefit from the initiative which will reduce the price of the guaranteed portion of the loan substantially.

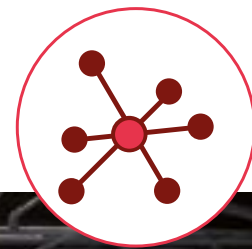
The structure is expected to sustain projects undertaken by SMEs operating in different sectors of industry and services. It may help to increase the productivity of SMEs, promote a more rational use of energy and diversification of energy resources and private initiatives in the areas of energy and health.

As a result there will be significant economic benefits to the local economies of the 15 participating regions, potentially safeguarding 825,000 jobs.

Policy links

The SMEI initiative is fully consistent with the EU's objectives as well as the EIB's priority objective for SMEs. By increasing the volume of attractive loans offered to Spanish SMEs it directly addresses the EIB's high level public policy objective of SMEs and Midcaps finance. It also addresses the Bank's transversal 'cohesion' policy objective by supporting the economic development of SMEs in Spain where 51% of the territory consists of less developed and transition regions.

The participation of EU Horizon 2020 funds means that the project will support research, development and innovation projects carried out by SMEs in line with the Horizon 2020 criteria.



Report on **EIB operations**
inside the EU 2015

With the
three pillar
assessment methodology

Infrastructure

Efficient, sustainable, integrated

4 Infrastructure

Efficient, sustainable and well-integrated infrastructure networks and systems at a local, national and interregional level are essential to Europe's economic growth and social cohesion. The EIB advances Europe's critical infrastructure development, providing significant financial investment and technical guidance to infrastructure projects across EU member states.

Infrastructure

Highlights of expected results for a selection of projects with first contract signed in 2015

Almost **23 million** additional passengers benefitting from improved rail transport per year

Almost **90** road fatalities saved per year through road safety improvements

Over 4,900 km railway track upgraded or built

3.2 million people benefitting from upgraded or new urban infrastructure or services

810 GWh electricity generated from conventional sources per year

9.3 million people benefitting from improved health services

For new operations in 2015, EUR 15.8bn were related to infrastructure operations (or 24.5% of the Bank's signatures for new projects). Strategic transport (including TEN-T) projects account for EUR 5.8bn (or 9 % of new signatures); competitive and secure energy projects account for EUR 5bn (or 7.8%); while urban renewal (including health) projects account for EUR 5bn (or 7.7%).

The EIB's operations inside the EU are aligned to EC strategy and policy goals. The focus is on effective infrastructure networks for the EU's economic, social and environmental well-being.

The EU's **transport** policy establishes a core transport network (TEN-T) based on nine major corridors aimed at improving connections, removing bottlenecks, upgrading infrastructure, streamlining cross-border transport operations, and developing inter-modal transport connections throughout the EU. The key aims of the new policy, which are reflected in the EIB's 2015 transport signatures, are:

- completing and updating core structural networks across the EU;
- improving connections between ports, airports and urban centres; and
- creating multi-modal platforms to improve logistics.

The EC's new **energy security** strategy outlines short-, medium- and long-term measures to address the challenges of supply security, requiring significant and swift mobilisation of funds, in which the EIB can play a pivotal role.

To help provide infrastructure for **refugees**, the EIB is adapting its current operations funded through Structural Programme Loans and Municipal Framework Loans to include a 'refugee window', which enables the EIB to finance housing and shelter and associated infrastructure projects. The Bank is also providing direct loans to cities and regions for refugee-related infrastructure projects and in 2015 donated EUR 5 million to the Council of Europe Development Bank's Migrant and Refugee Fund.

4.1 Strategic transport (including TEN-T)

Investments in the transport sector create direct employment during construction and operation. They act as key growth enablers by supporting efficient business and trade flows. The current fiscal environment puts a premium on selecting projects with a high expected economic impact.

The Bank's strategic transport (including TEN-T) operations signed in 2015 are shaped by the Bank's Transport Lending Policy, which has 3 main objectives:

- (i) climate action and safety;
- (ii) resource efficiency;
- (iii) strategic infrastructure supporting cohesion and the Single Market.

New EIB Strategic Transport operations totalled EUR 5.8bn, representing 9% of EIB first signature funding for 2015.

Figure 12. Selection of expected results from strategic transport (including TEN-T) operations signed in 2015

	Outputs	Outcomes	
Road	Almost 2,000 lane-kilometres of roads and highways upgraded or built	Some 90 road fatalities avoided per year through road safety improvements More than 137 million passengers benefitting per year	Over EUR 168 million per year of vehicle operating cost savings
Rail	Over 4,900km of railway tracks upgraded or built	Almost 23 million additional passengers benefitting per year.	34 million hours of time savings per year
	Over 160 units of rolling stock purchased or rehabilitated		
	Over 30 stations constructed or upgraded	An additional 88 million tonnes of cargo transported per year	
Sea	Over an additional 74 million tonnes of annual port cargo capacity	An additional 42 million tonnes of annual cargo traffic handled in the terminals	
Air	Additional airport capacity of 2.5 million passengers per year	Additional annual passenger throughput of 400,000 passengers	

A key element of EU transport policy is to improve connections between ports, airports and urban centres.

Promoting TEN-T port development in Amsterdam

An EIB loan of EUR 163 million is helping to construct a new sea-lock that will be the main maritime access to the Port of Amsterdam, a key link in the TEN-T core network. The new lock, which will be the world's largest, will allow large new-generation vessels to enter the port, providing a broader tidal window, and enabling more vessels to pass through simultaneously. It will also form part of the flood barrier that protects the Northwest Netherlands from flooding. The lock will significantly lower import and export costs and, thus, the cost of raw material and energy products. It will contribute to a more sustainable logistics chain in Europe, reducing harbour delays and rerouting to other ports.

There is a strong urban agenda associated with EIB's strategic transport operations. In 2015, the EIB funded urban node projects in Budapest, Madrid, Krakow, Sofia, Lodz, London, Hamburg and Paris.

Better road and rail access to TEN-T ports

To ensure that the benefits of the TEN-T network are fully realized, it is crucial to facilitate seamless transport across the network. Improving operability between transport modes is key to achieving this goal. In Spain, an EIB loan of EUR 105m will finance small road and railway projects aimed at improving access to national ports. Without the support of the EIB, these projects would not have been financed until 2020. In the meantime, access to the ports would be limited and operations would have been restricted. The EIB's loan enables the ports to handle the optimal capacity of cargo and passengers, contributing to sustainable growth and employment in the regions.

Rail safety, capacity and interoperability in Spain

Through a 20 year loan of EUR 180 million, the EIB is helping ADIF-Alta Velocidad, the public entity responsible for constructing and managing Spain's high speed rail infrastructure, to invest in improvements to the national rail network. The project is installing track-side command control and signalling equipment, including the European rail traffic management system alongside 264km of high speed and 553km of conventional rail track. This investment will improve Spanish rail safety, capacity and inter-operability, encouraging air and road passengers to switch to rail transport, and reducing carbon emissions. The investment will upgrade parts of the core EU TEN-T rail network as well as improving the rail infrastructure in Andalusia, an EU convergence zone.

Tunnel safety improvements for the TEN-T network in Austria

A EUR 180m loan will ensure that the Arlberg tunnel in Austria is updated to comply with regulatory safety standards, particularly the EU Tunnel Safety Directive. The project supports the national tunnel safety investment programme and the loan will finance the modernisation of the tunnel and new monitoring technology. Besides being a key national infrastructure asset that connects the western-regions to the rest of the country, the Arlberg tunnel is also part of the TEN-T network, facilitating social and economic cohesion across Member States.

Improving Europe's core transport network can bring significant cohesion benefits to the regions, raising living standards and addressing economic imbalances. In 2015, for example, the EIB signed a co-financing agreement to support cohesion projects in Hungary. EUR 160m of the EIB's financing will contribute to strategic transport (TEN-T) projects, investing in roads in less developed areas and railways throughout the country, improving Hungary's economic competitiveness and its integration in the EU.

CASE STUDY: INFRASTRUCTURE Strategic transport (including TEN-T)

Expansion for the Port of Calais

Sector: Transport (Ports)	Sponsor: Région Nord Pas de Calais
Total cost: EUR 771 million	EIB finance: EUR 365 million
Objectives: <ul style="list-style-type: none"> • Provide a Project Bond Credit Enhancement facility to support the expansion and rehabilitation of the Port of Calais. The expanded port will be able to handle more and larger vessels by creating 3 additional roll on roll off berths as well as upgrading the port's existing berths. The project will also upgrade supporting infrastructure such as the port railway, access roads, yards and passenger buildings. 	
Expected results: <ul style="list-style-type: none"> • An increase in the freight and passenger capacity of the Port of Calais to enable the port to meet its demand forecasts beyond 2022. • Improved logistics efficiency at a key point on the TEN-T network. • Increased employment opportunities in the Nord – Pas de Calais region as shipping lines businesses grow with the increase in port business. 	

Motivation

The Port of Calais is the largest continental port for cross-Channel traffic, handling around 10 million passengers and 41 million tonnes of freight transit every year. It forms part of the core TEN-T network and is a vital facilitator of trade between Great Britain and continental Europe. Demand for roll on roll off (RORO) freight services is increasing and the port is forecast to reach full capacity from around 2022. In addition, the characteristics of the current port impose several operational constraints on cross channel service providers, such as being unable to accommodate larger and more efficient 160m and 240m jumbo vessels.

To accommodate this growth and improve the port's efficiency, a significant extension and rehabilitation plan has been drawn up. The plan includes the construction of a deeper outer basin, construction of new breakwater structures, and new infrastructure comprising three RORO berths that can accommodate new jumbo 240m vessels. It will also upgrade the port's existing berths to be able to accommodate larger 160m vessels as well as upgrading vital supporting infrastructure such as the railway, access roads, yards and passenger buildings.

EIB contribution

EIB is providing a EUR 365m Project Bond Credit Enhancement (PBCE) facility to enable the extension and rehabilitation plan to be carried out before the Port's capacity constraints are reached. The PBCE facility provides high financial value added to the project by making available long-term financial resources at a lower financing cost. This was blended with a Connecting Europe Facility (CEF) grant, allowing the Region to implement an important and complex infrastructure project.

The EIB supported the Promoter in optimising the phasing of the project with a procurement plan to guarantee a transparent and competitive tendering process, ensuring that public resources are optimally used. As a result of EIB's financing, the project will be able to attract additional long term financing from institutional investors that would otherwise not have occurred. As a result funding sources for Europe's Port sector will be further diversified.

Benefits

The project will reduce the costs of trade between Great Britain and continental Europe (through for example, accommodating larger vessels with lower unit logistics costs at the port). This will have positive benefits in terms of regional economic competitiveness, fostering sustainable growth and creating jobs both during construction and operation of the port. The project will avoid the diversion of traffic to other ports or other transport modes which would increase overall logistics costs.

The Port of Calais is situated in a transition region where unemployment (particularly for young people, the over-50s and the long-term unemployed) is high (standing at 12.7% in 2014, unemployment in the Région Nord-Pas de Calais was the second highest of all the French regions). As the port continues to grow, employment in the region from the shipping lines is expected to grow.

Policy links

One of EIB's key activities is to finance projects that promote social and economic cohesion among Member States. Due to the port's crucial role in transporting people and goods across the Channel, connecting Great Britain to continental Europe, the project is a key part of the TEN-T network and strongly contributes to the EU policy objective to connect Europe by promoting the development of Trans-European networks.

This project is the first port project to be financed under the EU 2020 Project Bond Initiative during its pilot phase.

4.2 Competitive and secure energy

Secure and sustainable energy at affordable prices is crucial to the EU's economic growth, competitiveness, economic integration, and social cohesion. The EU is highly dependent on energy from abroad, importing more than half of its energy at a daily cost of EUR 1 billion and making member states vulnerable to events outside of the EU's control.

The EU 2014 Energy Security Strategy responds to these issues by proposing several key actions, among which:

- Increasing energy efficiency
- Increasing energy production in the EU
- Completing the internal energy market
- Strengthening emergency and solidarity mechanisms (e.g. reverse flows and coordination to use existing storage facilities)

The set of new EIB operations signed in 2015 which contribute to the Competitive and Secure Energy (including TEN-E) policy objectives account for EUR 5bn or 7.8% of the EIB's annual lending for 2015.

Figure 13. Selection of expected results from competitive and secure energy new operations signed in 2015

	Outputs	Outcomes
Electricity and heat	166 MW and 130 MWth of highly efficient cogeneration from conventional energy sources	810 GWh additional electricity and 586 GWh additional heat cogenerated from conventional energy sources per year
	298 km of networks for heat/refrigeration installed or upgraded	An additional 600 GWh of heat transported per year
Power distribution and transmission	31,000 km of power lines constructed or upgraded	28,000 MWh of reduced transmission losses per year
	More than 11,500 MVA of substation capacity constructed or upgraded	
	6.5m electricity smart meters installed and 471,000 new electricity and 3,000 new heat connections to the network	An additional 13,100 GWh of electricity and 600 GWh of heat transported per year
Gas and Oil	More than 3,600 km of gas or oil pipelines constructed or upgraded	More than 171,000 GWh of gas transported/storage capacity utilisation per year
	7.9m gas smart meters installed and more than 1.2m new gas connections to the network	

The EIB's 2015 signed operations support the key actions of the Energy Security Strategy. Electricity networks were a key area for investment in 2015, especially with respect to the integration of renewable energy generation in the core distribution network as well as improving the quality of the overall network.

Modernising France's electricity transmission network

With a loan of EUR 500 million to the French electricity transmission network operator, Réseau de Transport d'Electricité, the EIB is helping upgrade France's electricity transmission network to integrate renewable energy supply and to increase its overall safety, capacity, reliability and efficiency. Europe's drive to increase renewable energy generation and France's location at the cross-roads of Europe's cross-border electricity transmission means that it has to handle increasingly variable cross-border flows. France itself is investing in significant renewable energy generation capacity, which will also need to be integrated into the current transmission network. This project, which comprises 32 transmission schemes and 3 IT modernisations, will help address these issues, as well as reinforcing the network to accommodate increased electricity demand.

Energy independence in Lithuania

The EIB is providing a loan of EUR 28 million to Ambergrid, the Lithuanian gas transmission system operator, to construct a 110km gas pipeline between a new Liquid Natural Gas terminal in Klaipeda and Kiemenai. The project is of national importance for Lithuania, which until recently was entirely dependent on a single supplier. Increasing pipeline capacity so that the LNG terminal can utilise its full capacity will improve the gas network's flexibility and its interoperability with those in Latvia and Estonia, helping Lithuania toward energy independence by 2020.

The EIB supports smart-meter roll out in the EU for electricity and gas sectors. Individual member states shall ensure under the Electricity and Gas market directive the implementation of advanced metering systems in their country. In 2015, the EIB provided assistance to a number of smart metering schemes, including a EUR 200 million loan to 2iRG in Italy to help finance over 2.8 million gas smart meters, mainly in the domestic sector, and a EUR 515m loan to Calvin Capital, a UK meter asset provider, helping finance the installation of around 7 million domestic electricity and gas smart meters.

CASE STUDY: INFRASTRUCTURE - Competitive and secure energy

Sustainable and secure energy in Poland

Sector: Energy	Sponsor: PGE Mining and Conventional Power Generation PGE GiEK SA
Total cost: EUR 154 million	EIB finance: EUR 114 million
Objectives: <ul style="list-style-type: none"> Invest in efficient electricity and heat generation at two sites to replace coal fired facilities with a highly efficient Combined Cycle Gas Turbine (CCGT) plant at one site and with an Internal Combustion Engine (ICE) cogeneration plant at the other site. Renew, expand and diversify existing power generation capacity in Poland. 	
Expected results: <ul style="list-style-type: none"> Provision of 165.7 MW of upgraded and expanded power capacity and 130.3 MW of upgraded heat capacity with an expected primary energy saving of 18% at one side and 25% at the other side. Generation of 800 GWh of electricity and 2,100 TJ of useful heat to over 368,000 households each year, achieving energy savings of 473,200 MWh per year. Complete elimination of coal fired generation at one site and relegation to peak generation at the other site leading to a reduction in CO₂ emissions. Reliable supply of electricity and heat to customers. Increased level of competition and diversification in the Polish electricity market. 	

Motivation

The demand for electricity is expected to grow in Poland at a robust rate in line with economic growth, driven primarily by the demand in residential and commercial buildings sectors. Simultaneously, EU environmental legislation will require the decommissioning of significant number of coal-based old generation facilities.

The promoter has an obligation to provide heat to district heating systems in both locations. Obsolete condition of existing facilities, their reliance on coal and resulting high emissions of pollutants and CO₂, and also planned decommissioning or relegation to only peak generation, enforce construction of new facilities.

To address these challenges, this project will renew heat and expand electricity generation at two sites. The investment will replace coal-fired facilities with efficient gas-fired installations, supporting the energy efficiency objectives of the EU.

EIB contribution

The EIB loan contributes to PGE's aim of diversifying its overall funding base in relation to its medium/long-term business plan while providing a low cost loan, which will mature in line with the anticipated economic life of the project assets.

Benefits

The project will increase electricity capacity to meet forecast demand and improve reliability in supplying both heat and power. In addition, the replacement of two coal-fired installation with an 85% efficient gas-fired CHP CCGT plant and an 80% efficient CHP ICE will provide primary energy savings of 18%-25% and energy efficiencies of 473,200 MWh/year, and will reduce CO2 emissions.

The project will also provide 350 person-years of temporary employment and create 6 permanent new jobs.

Policy links

The project contributes to the national energy policy aim of transitioning to a low-carbon and energy secure economy. Promoting sustainable, competitive and secure energy for Europe is one of the EU's strategic priorities. This project supports those priorities by providing highly efficient cogeneration technology and bringing online new electricity capacity to meet demand. The project will replace retiring coal plants and will contribute to the EIB's lending policy Higher Priority Areas of energy efficiency, climate actions and convergence regions.

4.3 Urban renewal (including health)

Fully integrated and efficient municipal infrastructure is vital for the economic growth and social cohesion of EU Member States. As urban populations grow, pressures on housing, public services (including health facilities) and urban transport networks, can limit economic growth. These pressures are exacerbated by the refugee crisis in 2015.

The EIB's urban renewal lending focuses on:

- encouraging more mixed-use development, to accommodate higher densities and reduce the need for motorised travel;
- improving individual building performance, to reduce energy consumption and carbon emissions;
- supporting sustainable, efficient and affordable public transport;
- mitigating urban poverty through investing in social and affordable housing;
- upgrading hospitals to provide higher quality health care.

Of new EIB operations, EUR 5bn contributed to urban renewal (including health). These operations represent 7.7% of the EIB's new lending volume.

Figure 14. Selection of expected results from urban renewal (including health) new operations signed in 2015

	Outputs	Outcomes
Urban development	Over 185,000 social or affordable housing units built or renovated	Over 220,000 households in new or refurbished social and affordable housing
	Over 760,000m2 of additional building surface	3.2 million beneficiaries of upgraded or new urban infrastructure and services
	More than 2.4 million m2 of open space created or restored	
	More than 219 lane km of road built or upgraded	
Health	920,000 m2 of health facility floor area constructed	9.3 million people benefitting from improved health services

Many of the EIB's urban renewal (including health) operations are financed through Framework Loans. These are a flexible financial instrument for funding a series of investments in a city or region over a number of years (typically 3-5 years). Schemes are added to the loan over the investment period and can be multi-sector, including health, public buildings and social housing⁴. In 2015, the EIB signed five Municipal Framework Loans in Sweden, including a EUR 193mn loan to the Municipality of Uppsala, and a EUR 186mn Framework Loan in Poland to co-finance rental social housing throughout the country.

The onset of the refugee crisis in 2015 put additional pressure on the EU's urban infrastructure. The EIB provided an immediate response by adapting its current operations that are being delivered through financing instruments such as Municipal Framework Loans and Structural Programme Loans, as well as providing direct loans to EU cities and regions. The EIB is providing up to 100% of the required financing for refugee related urban renewal projects. In 2015, the EIB signed its first refugee-related direct loan, providing EUR 120 million to help refurbish and construct refugee temporary accommodation in the German Federal State of Brandenburg.

Around a third of EIB's overall urban renewal funding in 2015 supported the rehabilitation or construction of hospitals.

Better primary health care at the Jyväskylä Central Hospital in Finland

With a loan of EUR 200 million to the Central Finland Health Care District, the EIB is helping consolidate the existing services of the Jyväskylä Central Hospital in a new purpose-built facility, while integrating a new Primary Healthcare complex. Jyväskylä Central Hospital serves central Finland, treating 99,000 in-patients in 2013. The current hospital facilities are scattered around an extensive campus and are unable to provide efficient modern services. The new facility will provide 86,000 m² of secondary and tertiary hospital facilities and 13,700 m² of primary hospital facilities. It will also increase five-fold the accommodation for medical students. EIB's investment is expected to deliver significant manpower efficiencies equivalent to EUR 25m each year, to reduce infection rates and provide improved working conditions for hospital staff.

Modernising Poland's hospitals

An EIB loan of EUR 41.2 million is helping the Polish region of Kujawsko-Pomorskie continue its healthcare investment programme by helping rehabilitate, modernise, extend and equip five provincial hospitals. The project will help increase the overall health and well-being of the local population, improve working conditions for hospital staff, improve health service efficiency by increasing access to effective services and improve the exploitation of large-scale capital investments in hospital infrastructure.

⁴ And also urban roads, public transport, water and sewerage, solid waste, education facilities, health facilities.

Sustainable recovery for the Greek economy

The Greek economy has been in recession since 2008. Around one quarter of its population is unemployed and most regions are classified as less developed. To assist its recovery, the EIB is providing a multi-sector Structural Programme Loan of up to EUR 100m to finance small and medium-sized investment schemes across Greece targeting a wide range of sectors. The schemes, which will include renewable energy and energy efficiency, research centres, broadband coverage, business innovation projects, education and health, water supply, waste and e-government, should help develop the economy's infrastructure as well as its institutional and human resource capacity, to boost local employment and the competitiveness of small and medium-sized enterprises.

CASE STUDY: INFRASTRUCTURE - Urban renewal

Framework loans boost the regional economy of Uppsala

Sector: Multi-sector	Sponsor: The Municipality of Uppsala (Sweden)
Total cost: EUR 681mn	EIB finance: EUR 198mn
Objective: <ul style="list-style-type: none"> Provide a framework loan to finance around 50 small to medium-sized multi-sector investment schemes in the Municipality of Uppsala, including the renovation and construction of 2,000 affordable housing units, seven schools, four kindergartens, sports facilities and a health centre as well as improvements to the municipal infrastructure (including roads, cycle lanes, street lighting and open spaces). 	
Expected results: <ul style="list-style-type: none"> To contribute to urban renewal and transformation by meeting the demand of a growing population and new business developments, delivering long-term economic growth for the region as well as an improvement in the quality of life of Uppsala's residents. 	

Motivation

The Municipality of Uppsala is located 70km from Stockholm and with a population of over 200,000 is the fourth largest municipality in Sweden. The Municipality is home to one of Sweden's oldest universities, catering for 40,000 students and academic and research staff. Uppsala's population is growing rapidly. It has a strong economy, low unemployment, is a university town and also attracts Stockholm commuters owing to its lower property prices. Its population is expected to continue to grow by over 250,000 by 2033.

The Municipality has constructed a long-term Master Plan for the period 2010-30 which is supported by a three year investment plan for the period 2014-16. The Uppsala Master Plan identifies investment in urban regeneration and municipal infrastructure as key needs to be met in order to meet the demands of its growing (and ageing) population, with a focus on new housing for students and youth. These investments are considered vital to improving the economic competitiveness and attractiveness of the Municipality and generating economic growth in the region as a whole.

EIB contribution

The EIB's key contribution to the project is the provision of long-term, cost efficient financing enabling the Municipality to diversify its financing sources and extend the maturity profile of its debt. The EIB has also provided the project with an awareness of procurement, environmental and social issues.

Benefits

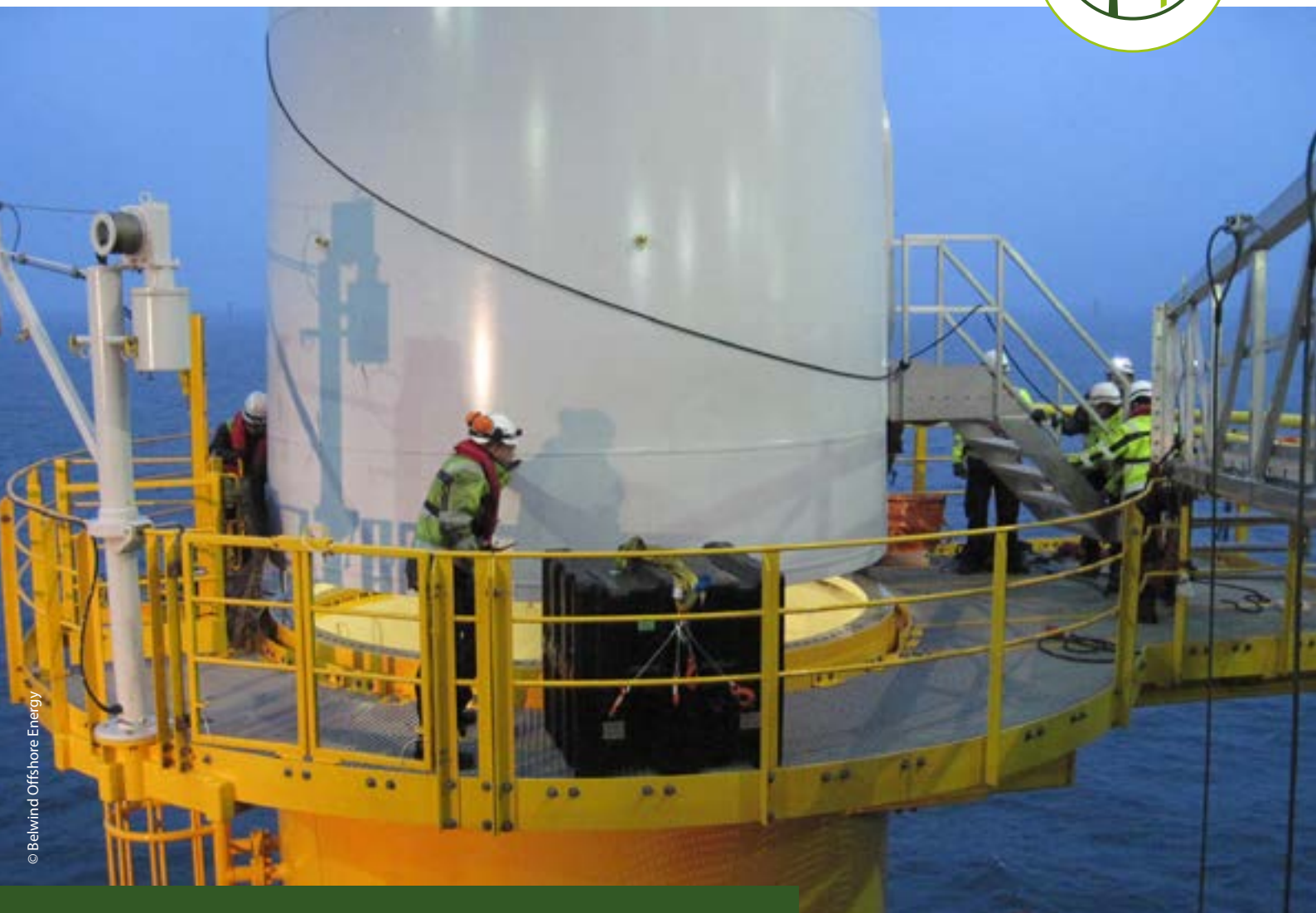
The project will deliver a number of environmental benefits. The renovation of buildings will result in energy savings, whilst improvements to traffic systems and the expansion of cycle lanes will reduce travelling times and vehicles operating costs and will promote a modal shift to public transport and cycling. The improvements to municipal water, wastewater and sewerage treatment facilities will also deliver environmental benefits.

There will also be significant social impacts, delivered through the construction of around 2,000 rentable social housing units in the city, helping to reduce the current housing deficit. The project itself will deliver 2,000 person-years of temporary employment, whilst the investments in seven schools and four kindergartens will deliver up to 50 permanent full-time equivalent posts. There will also be an indirect employment effect from the creation of urban developments and housing projects which is estimated at around 100 permanent full-time equivalent posts.

Policy links

The operation will deliver investments in line with the EIB's criteria on urban renewal and regeneration to achieve competitive sustainable cities under the EU's Leipzig Charter and the EU 2020 strategy. Its contribution to increasing building energy efficiency and encouraging a modal shift towards public transport and cycling means that EIB's investment also contributes to its transversal objective of Climate Action to provide finance for climate mitigation.

The project delivers priority investments from the Municipality's three-year investment programme which are key components of Uppsala's integrated long-term investment strategy.



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Environment

Sustainable solutions

5 Environment

Conserving the EU's natural resources and ecosystems and ensuring the sustainability of energy and transport investments are fundamental to the well-being of Europe's communities and its economy. Through long-term financing solutions, the EIB supports sustainable development across sectors and provides key inputs and services for Europe's industries.

EU environment projects

Highlights of expected results for a selection of projects with first contract signed in 2015

More than **338 million**
additional passengers demand
Generated by public transport services per year

More than **30 million** hours
annual time savings

2.25 million households
supplied by 10 TWh of new renewable energy
Generation per year

428 GWh energy savings
from efficiency measures per year

19.8 million people
benefitting from safe drinking water

1.7 million people
served by new waste treatment facilities

The EIB's environment operations cover a broad range of investments focussed on driving sustainable development in the EU. These support sustainable transport solutions, provision of environmental services (e.g. water, irrigation and wastewater), forestry, and agriculture initiatives, renewable energy and energy efficiency. The Bank's operations also aim to support biodiversity and enhance the resilience of water systems and ecosystems to the impacts of climate change.

Of the new operations signed by the EIB in 2015, EUR 14.9bn (or 23.1% of the Bank's first signatures) targeted environment policy goals. Of these, sustainable transport operations account for EUR 5.8bn (or 9.1% of the EIB's total new signatures); protection of the environment operations account for EUR 5bn (or 7.7%); while renewable energy and energy efficiency operations account for EUR 4.1bn (or 6.3%).

Support for the UN Sustainable Development Goals

The United Nations announced its Sustainable Development Goals (SDGs) in 2015. Five of these are directly related to the EIB's environment activities:

- End hunger, achieve food security and improve nutrition, and promote sustainable agriculture
- Ensure availability and sustainable management of water and sanitation for all
- Ensure access to affordable, reliable, sustainable and modern energy for all
- Make cities and human settlements inclusive, safe, resilient and sustainable
- Protect, restore and promote sustainable use of terrestrial and marine ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

In addition, the SDG to combat Climate Change is largely driven in Bank lending by the sectors reported under EIB's environment activities

The EIB is committed to supporting the UN in achieving these goals. Its environmental operations will be a valuable part of the global effort to achieving the SDGs' underlying targets.

5.1 Sustainable transport

Comprehensive and efficient transport networks at local, regional and EU-wide levels are vital to drive economic growth and social cohesion. It is important for EU Member States to prioritise high-quality, low-carbon passenger and freight transport.

This prioritisation is most pressing regarding the connectivity of urban centres across Europe, where inadequate infrastructure and outmoded public transport services cause congestion, safety risks and pollution, negatively impacting the environment and quality of life and constraining economic growth.

The EIB's sustainable transport operations signed in 2015 adhere to the Bank's transport lending objectives which include climate action and safety and resource efficiency. The 2015 projects are also aligned to the key aims of the EU's sustainable transport policy, namely:

- Promoting co-modality, i.e. optimally combining different modes of transport within the same transport chain, particularly for freight; and
- Supporting a shift towards the least polluting and most energy efficient modes of transport, and the RDI needed to achieve this, especially in the case of long distance and urban travel.

The set of EIB operations contributing to Sustainable Transport account for EUR 5.8bn, or 9%, of the EIB's new lending volume in 2015, split across different transport modes.

The transport projects financed by the EIB are increasingly green. In 2015 for the first time, the majority of transport projects financed by the EIB fall under the sustainable transport policy objective category (50.2% of transport projects were 'sustainable', compared to 38.3% in 2014).

Figure 15. Selection of expected results from sustainable transport new operations signed in 2015

	Outputs	Outcomes	
Urban transport and rolling stock	More than 1,400 public transport vehicles and rolling stock purchased or rehabilitated	More than 338 million additional passengers' demand generated by public transport services per year (including rolling stock operations)	More than 30 million hours of annual time savings
	More than 200 km of urban rail and bus lanes upgraded or built		
	More than 130 stations or stops upgraded or built		

The sustainable transport projects of 2015 have a strong urban agenda. As the Urban Mobility for London case study shows, investing in public transport systems to increase capacity, improve safety and address climate concerns by facilitating modal shifts to green transport solutions (such as cycling through dedicated cycle highways) are pre-requisites for growing a city's economy.

Investing in Krakow's urban tram system

The EIB is committed to encouraging sustainable urban transport. In Poland, the EIB is providing a loan of EUR 20m to bring Krakow's urban trams up to speed. The project builds on the EIB's past EUR 38m investment in Krakow's tramway network. This loan provides financing to modernise and extend the tramway network and purchase 24 new trams. New trams and ticketing machines will improve the comfort, reliability and speed of the service, making public transport an attractive alternative to private transport. Prior to the project, 50% of transport in Krakow was private. A key objective of the project is to encourage a modal shift towards public transport usage within the urban centre, benefitting Krakow's urban environment. The trams will also be equipped with a regenerative braking system that is more energy efficient.

Improving the quality of passenger train rolling stock in Germany

A EUR 300m EIB loan is enabling the Federal State of Baden-Württemberg to purchase new rolling stock through a public law subsidiary, the newly founded SFBWG. The SFBWG will in turn rent the rolling stock to the private Railway Undertaking, which will provide rail transport services. Most of the trains for the first two networks to be financed under this loan will run on TEN-T railway lines, including the Rhine-Danube Core Network. As well as increasing the attractiveness of rail travel, the new rolling stock will improve the efficiency of the regional rail network, reducing vehicle operating costs by EUR 30 million each year for the two first networks and reducing noise pollution levels.

Road congestion can lead to increased levels of air pollution. The EIB is investing in road safety and improvements to pollution level (both noise and air).

Better safety for Italy's roads

The EIB is providing EUR 300 million in loans to ANAS, the state-controlled company responsible for constructing and maintaining Italy's motorway and national road network. By constructing road safety barriers, noise barriers, equipment and tunnel improvements on 156 national roads and 13 motorway sections of the road network (a total of 5,800 km), the project will improve road safety and environmental performance, making progress towards the EU directives on road safety, tunnel safety and noise pollution. As the roads and motorway sections are heavily used, with some sections forming part of the Trans-European Transport Network (TEN-T), the project is expected to deliver significant benefits in terms of reduced traffic congestion and fewer accidents, injuries and fatalities.

CASE STUDY: ENVIRONMENT - Sustainable transport

Urban mobility for London

Sector: Transport	Sponsor: Transport for London (TfL) (United Kingdom)
Total cost: EUR 2.74 bn	EIB finance: Up to EUR 1.27 bn
Objectives: <ul style="list-style-type: none"> • Increase London's overall transport system capacity through the modernisation of the London Underground system and extensions and improvements to London's cycle lane network connecting the city with its suburbs. • Encourage modal shifts in transport away from motorised transport to cycling. • Improve transport network safety by reducing London Underground station overcrowding and making cycle lanes and road junctions less dangerous for cyclists. 	
Expected results: <ul style="list-style-type: none"> • Renewal of 57km of tracks on the London Underground. • Modernisation and expansion of the Bank and Victoria London Underground stations. • Creation of a 3.5km North-South Cycle Superhighway and a 10km East-West Cycle Superhighway and upgrades to parts of existing Cycle Superhighways and 16 important road junctions (66 km total cycle track upgrade or construction). • 12 million hours/year travel time savings for Bank and Victoria station users and more direct cycle routes for cyclists. 	

Motivation

London has a fast growing population and a vibrant economy. An additional 1.25 million people are expected to live in London and there will be 0.75 million more jobs in 2031, compared with 2010. For this to happen, significant investment in London's transport infrastructure is required, both to facilitate growth and to compensate for the lack of investment in the past.

London's public transport represents around 42% of all motorised trips in the city, and use of the London Underground is growing by around 3% per year, with 1.3 billion passengers in 2013-14. The two London Underground stations that are to be upgraded by this project are heavily used and overcrowded, raising considerable safety concerns.

There has also been a doubling of the number of cyclists in the city centre (0.6 million trips per day in 2011, compared with 0.3 million in 2001) and bicycles now make up a quarter of all peak hour traffic in central London. London's transport strategy aims at increasing the number of bicycle trips to 1.5 million by 2026, however many of the heavily used cycle routes are dangerous, owing to lane sharing with cars and buses and junctions which require cyclists to cross several lanes of traffic. The project aims at addressing these safety risks whilst further increasing the number of people cycling in London.

through upgrades to existing cycle routes and the construction of major segregated cycle routes throughout London.

EIB contribution

The EIB invested significant resources to put together the optimum investment scheme to support this project. As this was the first time that the EIB invested in such a large scale cycle scheme it developed with TfL a methodology for appraising this project, as well as similar schemes in the future.

Benefits

Direct benefits include local environmental benefits from encouraging a modal shift away from road transport to cycling and the London Underground.

The project will also reduce average travel times by around 5 minutes during rush hour for users of Victoria and Bank stations, equating to around 12 million hours of time savings each year. Overall capacity on the Underground network will increase through the track upgrades. Average cycle journey times will also be reduced because the Cycle Superhighways will provide a more direct route through London.

Overall safety will increase for both Bank and Victoria station users and cyclists. Segregation of cycle lanes from other traffic lanes and major junction improvements are anticipated to result in significant reductions in road fatalities and injuries.

The employment impact is expected to be 10,400 person-years during construction. There may be indirect permanent employment benefits as a result of increasing the capacity of the London Underground.

Policy links

By increasing the capacity and quality of public transport services in the Greater London regions and promoting cycling, the project supports sustainable transport solutions in line with EU objectives. It addresses EIB's Sustainable Transport high level public policy objective by supporting investment in public transport and safety in all modes; it also supports EIB's transversal policy objective of Climate Action by promoting low-carbon and climate resilient growth in the UK.

The project is linked to TfL's Cycle Superhighways programme and Better Junctions programme.

5.2 Protection of the environment

The promotion of sustainable development through the preservation and enhancement of environmental and social capital underpins the EIB's lending strategy and objectives across sectors. As the largest debt finance provider to Europe's water sector, active across the entire water value chain, the EIB plays a vital role in supporting the EU's water and wastewater services. In addition to the water sector, the EIB also supported forest operations.

For new operations in 2015, the EIB invested EUR 5bn, or 7.7%, of the EIB's total first signature lending volume in Protection of the Environment operations.

Figure 16. Selection of expected results from Protection of the Environment new operations signed in 2015

	Outputs	Outcomes	
Irrigation	15,275 ha of land with improved irrigation management	29 million m3 of annual water savings due to modernisation of irrigation systems	
	76 million m³ per year of water storage/conveyance capacity (or reserves) for irrigation		
Sewerage	735,000 population equivalent of sewerage plant rehabilitated or constructed	An additional 589,000 m3/yr of waste water treated to acceptable standards	Over 21.2 million people benefitting from improved sanitation services
	75,000 domestic connections to sanitation services created or rehabilitated		
	2,240 km of sewer and/or stormwater pipes built or upgraded		
Waste	197,000 tonnes per year of new waste facility capacity	1.7 million people served by new waste treatment facilities	
	47,700 tonnes per year of new or rehabilitated transfer station capacity		
Water	860 km of water mains or distribution pipes built or upgraded	19.8 million people benefitting from safe drinking water	
	Additional water treatment capacity of 381,000 m³ per day from constructed or rehabilitated water treatment plants		
	205,000 domestic connections to water supply created or rehabilitated		
	5 flood prevention and protection structures	4.0 million people face a reduced risk of flooding	

The Bank's new operations aim to mitigate water security threats and associated risks to the economy, environment and people's well-being. They prioritise the mitigation of environmental and public health hazards related to waste, while

contributing to increased materials and energy recovery from waste in support of EU goals toward a resource-efficient, green and competitive low-carbon economy.

The year saw a particular focus on:

- improving agricultural irrigation;
- improving the ecological status of surface water-courses and aquifers;
- helping countries meet their EU Waste Water Directive targets;
- significant investment in the circular economy for solid waste;
- improving flood protection and resilience to climate change.

Forestry and agriculture activity reveals a shift towards projects that focus on delivering modern irrigation systems that halt or reduce the over-exploitation of ground and surface water masses, while at the same time boosting the local rural economy.

Protecting Spain's river basins and supporting rural development

In line with the EIB's lending objectives of protection of the environment and climate action, the EIB is providing a loan of EUR 55 million to replace the pumping of irrigation water from over-exploited river basins with a pressurised, gravity-fed water distribution system from the Canal de Navarra, enabling installation of modern water-efficient irrigation systems by beneficiary farmers. As well as reducing the energy consumption of irrigation, the project will generate water savings of 46%, enabling a further 5,700 hectares of land to be irrigated and higher-value crops to be grown, supporting local SMEs. Despite redeploying part of the water for the creation of new irrigation areas, the project will produce net water savings in the Ebro river basin. Restoring the downstream river flows will more than double the electricity supplied by the nine mini-hydropower plants located in these rivers from 1,300 MWh to 3,000 MWh.

A major focus for the EIB in 2015 was flood management. A EUR 200m flood risk-management project in Ireland is helping to finance about 30 schemes around the country to meet the requirements of the EU Floods Directive. A EUR 630m project for Severn Trent Water in the UK is addressing climate change on a number of levels, including ensuring reliability of services under extreme weather conditions (including the flooding of water treatment works and greater climate resilience through improved water management).

EIB support is particularly crucial in those countries still lagging behind in complying with the standards of EU Environmental Directives. This year, a significant amount of EIB support under its water and waste water objective has been focused on helping countries comply or continue to comply with the Urban Waste Water Directive. Other projects such as the EIB's financing of a replacement wastewater treatment in Finland are improving the efficiency of waste water treatment by centralising treatment facilities, closing older, smaller ones and protecting sensitive eco-systems such as the Baltic Sea.

An upgrade for the Flemish sewerage network

An EIB loan of EUR 100 million is co-financing an improvement and extension to the wastewater collection service that serves 51 municipalities throughout the Flemish region of Belgium. The project will construct and rehabilitate small and medium-sized sewerage collectors and municipal sewerage networks over the period to 2018. A total of 439km of sewer or storm water pipes will be upgraded, providing benefits to 1.1 million households. The main benefits of this investment are environmental, through improvements to sewerage collection and conveyancing to treatment plants. Surface water quality will be greatly improved, ensuring compliance with stringent EU environmental directives and Flemish environmental legislation.

Growth in the EU's population and economy places unsustainable strain on natural resources. Consumption and waste patterns need to change, extracting more value from what is consumed and disposing of less. These are the fundamental principles of the Circular Economy. In 2005-14, the EIB co-financed circular economy projects worth around EUR 15bn. But more needs to be done. For example, achieving compliance with the EU Solid Waste Directive (whose objectives are in line with a circular economy) requires investment of more than EUR 40bn by 2020. There will also be significant benefits from a circular economy, supporting economic growth, competitiveness and job creation in the EU. In 2015 the EIB focussed on circular economy investments in waste recycling and industrial effectiveness.

Reducing the environmental impact of waste management in Western Macedonia

A Public Private Partnership (PPP) is being assisted by a loan of EUR 12.7 million from the EIB to implement and operate solid waste treatment, disposal and transfer facilities in Western Macedonia. The project will construct and operate a Mechanical Biological Treatment facility to handle up to 120,000 tonnes of solid waste each year, producing compost-like output, recyclable materials and landfill materials. It will also construct a new landfill facility and solid waste transfer station, and operate and maintain nine existing transfer stations. By diverting waste from landfill and increasing recycling, EIB's loan will reduce landfill greenhouse gases and help to meet EU targets on environmental sustainability and climate change mitigation, making a contribution to the Europe 2020 Strategy's initiative "a resource-efficient Europe". This is the first PPP waste project to be implemented in Greece and will act as a pilot for this implementation approach.

Other circular economy projects that have been financed this year include the Aankoski pulp mill in Finland where the EIB is using EFSI funds to co-finance the recovery boiler, associated turbines and heat supply systems to the mill, a bark gasification plant and a tall oil plant which will ensure the pulp mill is fossil fuel-free and able to convert its by-products into electricity and steam, tall oil, turpentine and biofuels. Many waste water investments improve nutrient recovery and use biogas digesters to treat sludge and extract energy (for example the Walloon sewerage sludge project in Belgium, the Finnish waste treatment project of Blominmäki, and the Vienna wastewater plant). Many of these circular economy projects make a significant contribution to climate action through the production of natural gas for the natural gas grid or for use as transport fuel.

Improving wastewater treatment in Finland and protecting the Baltic Sea

Through its loan of EUR 200 million, the EBI will contribute to the construction of a new water supply distribution main and the financing of a new wastewater treatment plant in the bedrock of Blominmäki in the Helsinki region of Finland. The new plant will treat the wastewater of up to half a million people and maximise nutrient removal. The sludge generated by the treatment process will be converted into biogas and used to produce heat and electricity in a district heating scheme. The project will bring about significant environmental benefits. Helsinki lies on the Baltic Sea, a sensitive ecosystem. Treated water from the new plant will far exceed the current treatment standards for nutrient removal. By generating heat and power from waste sludge, the project will also produce sustainable energy.

CASE STUDY: ENVIRONMENT – Protection of the environment

Renovating Vienna's wastewater treatment plant to incorporate biogas recovery and prevent sewerage overflows

Sector: Wastewater treatment	Sponsor: Ebswein Hauptkläranlage Ges.m.b.H (EBS)
Total cost: EUR 300mn	EIB finance: EUR 150mn
Objectives: <ul style="list-style-type: none"> • Renovate existing sewerage treatment infrastructure to meet the EC Urban Wastewater Treatment Directive. • Make Vienna's main sewerage plant energy self-sufficient through incorporation of biogas recovery and energy generation through a Combined Heat and Power (CHP) plant. • Reduce sewerage over-flows into the Danube river through the creation of 41 500 m³ storm water retention basins. 	
Expected results: <ul style="list-style-type: none"> • Improved environmental conditions for the Vienna population as waste water treated to acceptable standards. • Reduced pollution levels for the Danube river. • Lower waste water treatment tariffs for end users. • 78.8 GWh renewable energy and 82.8 GWh heat generated from the treatment plant's sludge gas. 	

Motivation

Vienna's central wastewater treatment plant handles all of Vienna's domestic, industrial and commercial wastewater, treating an average of 569,000 m³ each day. The first biological stage and preliminary sedimentation have been in continuous operation since 1980 and are in need of renovation to continue to meet the EC Urban Wastewater Treatment Directive.

This renovation provides an opportunity to construct a sludge digestion system to enable the treatment plant to become fully energy sufficient by generating energy from the sewer gas using CHP technology.

Vienna's sewer system currently suffers from overflows during periods of heavy rainfall in the Danube River. Storm retention basins will reduce the level of discharge into the Liesing River, the Danube Canal and the Danube River.

EIB contribution

EIB's financing brings a number of benefits to the project sponsor, Ebswein Hauptkläranlage Ges.m.b.H (EBS). The relatively low financing cost will reduce EBS's overall interest burden, enabling EBS to lower its water treatment tariffs to end users. The loan's long-term maturity, which matches the related asset depreciation profile, meets the needs of EBS's funding model. EIB financing also diversifies EBS's funding base, which is currently supplied by three lenders only.

Benefits

A key benefit from investing in the sewerage wastewater treatment system will be an overall improvement to Vienna's water quality and the quality of life of the city's residents and industry. Working conditions at the plant are also expected to improve. River and canal water quality should also improve, as sewerage overflows are reduced during rainy periods.

The project will also make Vienna's wastewater treatment plant energy self-sufficient. The planned CHP plant will produce 78.8 GWh of renewable electricity and 82.8 GWh of heat energy. This will make the plant completely self-sufficient in terms of its energy requirements, protecting the plant's operator from any negative impacts of future energy price fluctuations. It will also contribute to reducing overall carbon emissions.

The project is expected to create 1,540 person-years of temporary employment and 10 permanent jobs at EBS.

Policy links

Accelerating lending for investment in Vienna's ageing wastewater management infrastructure relates directly to EIB's policy goal of Protection of the Environment. In addition, the investment in a CHP plant to generate renewable energy from sewerage gas will contribute to EIB's transversal policy objective of Climate Action, which aims at supporting investment for climate change mitigation.

The project falls under the Growth and Employment Facility's EU Resource Efficiency Initiative, in particular the support for waste water treatment and the improvement of aquatic biodiversity.

The project will also enable Vienna's central wastewater treatment facility to continue to comply with the EC Urban Waste Water Treatment Directive 91/271/EC as amended by Directive 98/15/EC.

5.3 Renewable energy and energy efficiency

The EU's reliance on imported energy and the associated risks to energy security, coupled with the environmental impacts of carbon-based energy production, make it more crucial than ever to develop alternative, sustainable energy sources, and to maximise energy efficiency. Renewable energy and energy efficiency initiatives offer affordable, secure energy, while mitigating climate change and, in many instances, reducing environmental damage.

The EU has set ambitious targets for renewable energies and improvements in energy efficiency, aiming to create 20% of energy consumption from renewables and increase energy efficiency by 20% by 2020. These targets require significant investment. As one of the world's largest energy lenders, the EIB is committed to providing financial backing and technical assistance to energy operations aimed at achieving sustainable, secure and competitive energy for all EU Members.

In July 2013, the EIB adopted new guidelines to reinforce support for investment in:

- renewable energy,
- energy efficiency,
- energy networks,
- energy RDI projects that help the EU meet energy and climate objectives, and boost employment.

Energy efficiency projects supported by the Bank need to demonstrate that they are economically justified on the basis of cost-benefit analysis, i.e. that the net present cost of the project over its life is less than the net present value of the energy saved. In those cases where it is difficult to separate the energy efficiency components in the project cost from other components (for example, in retrofitting buildings, or in the case of industry and SMEs), the savings have to cover at least 50% of the project costs.

The new energy lending criteria include streamlined guidelines for lending for energy efficiency projects in buildings or industrial plants, for example with reliance on pre-calculated cost-optimal levels. Also, the new energy lending criteria support projects involving the extension of existing technologies to new markets, and support for new and innovative technologies, including near-zero energy buildings.

Of new signatures in 2015, EUR 4.1 billion were related to renewable energy and energy efficiency operations. That is 6.3% of the Bank's total first signature lending volume for 2015.

	Outputs	Outcomes
Electricity and heat production	3,000 MW of additional electricity generation capacity from renewable sources	Over 10,000 GWh of electricity produced from renewable sources per year
	An additional 409 MW of heat/refrigeration production capacity from renewable energy sources	1,682 GWh of additional heat produced from renewable energy sources per year
Energy efficiency	EUR 1,002m of investment in highly efficient CHP and building energy efficiency	428 GWh of energy savings from efficiency measures per year

EIB lending to renewable energy projects in 2015 declined (taking into account the sum of all projects appraised), reflecting the overall decline in European investment in renewable energy (a fall of 18% on 2014 levels⁵). However, EIB involvement in financing renewable energy—and off-shore wind in particular—is still significant, as member states struggle to access the significant finance they need to reach their targets for 2020 renewable energy generation.

In 2015 the EIB increased the use of fund operations in place of project financing, especially for financing renewable energy. Compared to direct project financing this may have a higher catalytic and multiplier effect on overall project financing.

Small and medium-sized renewable energy investments get a boost

Through its EUR 50 million contribution to the Capenergie 3 Fund, the EIB helps fund investments in onshore wind, solar PV, hydro and district heating projects in Western Europe. The investments will generate approximately 583 MW of renewable power capacity and 10 MW of renewable heat capacity, serving the energy needs of 360,800 households. Capenergie 3 will target small to medium-sized renewable energy assets which are “below the radar” of large market investors. The fund will make renewable energy projects happen that would have otherwise not. The EIB’s contribution will attract further finance to the fund and ensure that the fund is aligned with market best practice.

5

<http://about.bnef.com/press-releases/clean-energy-defies-fossil-fuel-price-crash-to-attract-record-329bn-global-investment-in-2015/>

An increase in loans to support energy efficiency projects is countering the decline in renewable energy financing in 2015. In 2015, the EIB provided loans of total value EUR 3.6 billion to EE projects (compared with EUR 2.4 billion in 2014).

Under the EU Energy Efficiency Directive, every three years, member states must draw up National Energy Efficiency Action Plans (NEEAPs) setting out their estimated energy consumption, planned energy efficiency measures and the improvements they expect to achieve. “Private Finance for Energy Efficiency (PF4EE)⁶” is a new instrument that increases debt finance available for energy efficiency projects, supporting member states in the implementation of their NEEAPs. The EIB is making available at least EUR 480 million in long-term financing, alongside support from the European Commission for risk-sharing and technical advice (to enable the financial intermediary to identify energy efficiency projects for financing). The instrument is intended to facilitate one project in every member state. During 2015, the EIB signed three projects, including *Komerčni Bank* (See 3.2).

Another example of innovative financing in 2015 is the “Société de Tiers Financement” (STF) programme put into place in the French regions and supported by EUR 400 million of EIB long-term financing. An STF is a private or public entity which offers a packaged solution to homeowners to counter the current underinvestment in home energy efficiency in France and to help the French government reduce national energy consumption levels. Two operations were signed in the Ile de France and Picardie regions. A total of 40,000 flats and houses are expected to be supported under the programme.

Another important component of EIB lending to increase energy efficiency supports the development of sustainable cities, improving the energy efficiency of existing public and private buildings and setting high standards for new buildings.

Low-energy office buildings in Sweden

The EIB is providing a loan of EUR 100 million to the property company Fabege to help finance the construction of two Near-Zero Energy Building (NZEB) office complexes in Stockholm, Sweden. With a combined lettable area of 21,600 m³, the buildings will house between 3,000 and 5,000 workstations. Their energy consumption will be around 42-46 KWh per square metre per annum, which is half that stipulated by current building standards. The buildings will support national and European energy efficiency objectives and will help develop craftsmanship regarding NZEB. As well as supporting local employment by providing much demanded office space, their NZEB status will enable the buildings to attract higher rents, because firms are increasingly demanding high quality, energy efficient office space.

⁶ This initiative falls under the EIB's DEEP Green initiative.

CASE STUDY: ENVIRONMENT – Renewable energy and energy efficiency

Hitting Belgium's renewable energy target

Sector: Energy	Sponsors: Parkwind NV, Sumitomo Corporation and Zeewind 1BV
Total cost: EUR 653 m	EIB finance: Up to EUR 250 m
Objective: <ul style="list-style-type: none"> Implement the second phase of the Belwind offshore windfarm (165 MW of a 330 MW total nominal capacity, corresponding to 50 wind turbines) to help Belgium to meet the EU and national targets for energy generated from renewable sources. In 2014 Belgium generated 13.4% of its electricity from renewable sources. It needs significant investment in renewable electricity generation before 2020, to reach its target of 21%. Construction of turbine foundations, inter-array cabling, off-shore substation, balance of plant and transport, installation and logistics services 	
Expected results: <ul style="list-style-type: none"> Net energy yield of around 600 GWh/year. 	

Motivation

Europe and individual EU member states have signed binding agreements to limit the amount of CO₂ they emit by generating 20% of final energy consumption from renewable sources. Belgium has a target share of 13% by 2020, which equates to around 21% for electricity generation. In 2014 Belgium generated 13.4% of its electricity from renewable sources suggesting the need for significant additional investment in renewable electricity generation before 2020⁷.

There are several off-shore wind farm projects under development in Europe which are expected to contribute to meeting the 2020 targets. These projects are developed on a project finance basis requiring significant capital expenditure with the risk that suitable finance may not be available for all of them within the planned timeline.

⁷ Source: Eurostat
<http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tsdcc330&pluqin=1>

EIB contribution

EIB finance addresses a potential financing gap for the project, helping it to reach financial close within a challenging time frame. EIB also brings its significant technical know-how from financing previous financially complex off-shore wind projects and its experience of cooperation with export credit agencies. A part of EIB's financing will come under EFSI which has allowed the Bank to increase its lending to high risk projects such as this one.

Benefits

The project is expected to generate approximately 600 GWh of renewable energy each year at levelised cost, which compares favourably with previous EU projects.

Further benefits will derive from the creation of up to 2,400 person-years of temporary employment during project implementation, followed by up to 20 new jobs during the operational phase.

Policy links

The development of offshore wind energy supports EU and national targets for renewable energy generation and contributes to the EIB's renewable energy and energy efficiency objective. The project also contributes to the Bank's transversal objective for climate action by providing finance for a climate mitigation project.



Report on **EIB operations**
inside the EU 2015

With the
three pillar
assessment methodology

EFSI
Unlocking investment

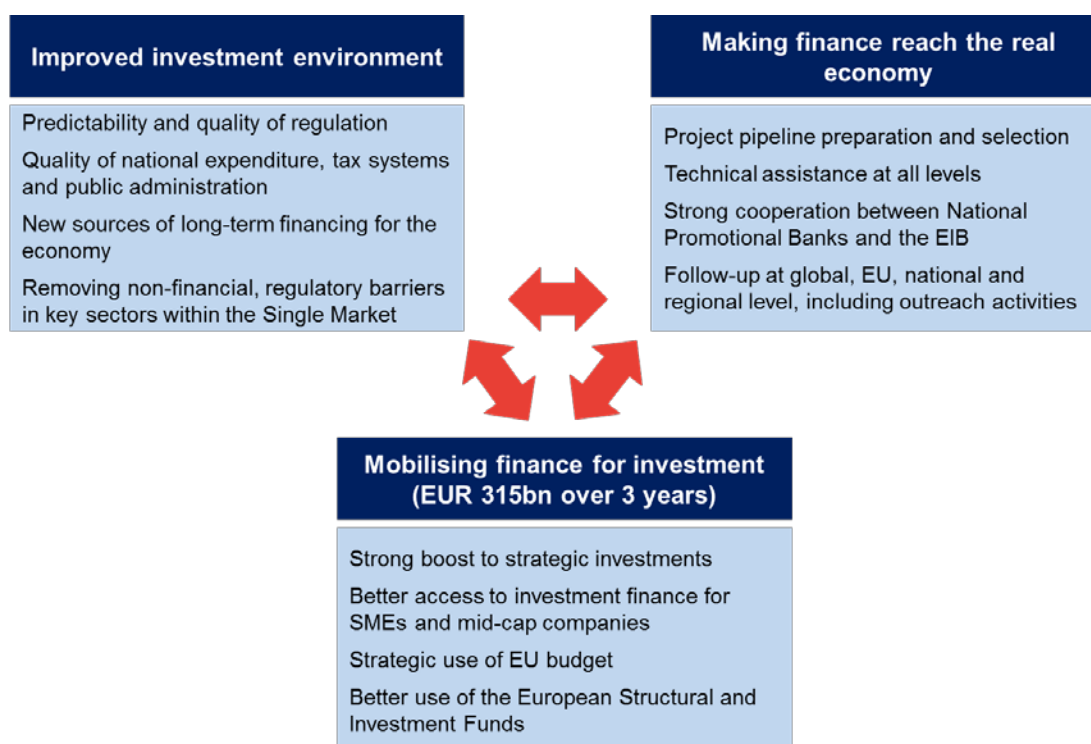
6 European Fund for Strategic Investments (EFSI)

Under the Investment Plan for Europe, EFSI is a EUR 21 billion risk-capital initiative provided jointly by a guarantee from the EU budget and EIB funds. By targeting high-risk projects in the areas of strategic infrastructure, education, RDI, renewable energy and resource efficiency, and support for SMEs and Midcaps, EFSI is expected to trigger EUR 315 billion of investment.

The Plan is an answer to the drop in total investment between 2007 and 2014 of around EUR 430 billion (or by 15%)⁸.

The Investment Plan for Europe, which was launched by the European Commission in 2014, aims at unlocking public and private investment in the European economy. EFSI is one of the three pillars of the Investment Plan (mobilising finance for investment), as summarised in **Figure 18**.

Figure 17. The Three Pillars of the Investment Plan for Europe

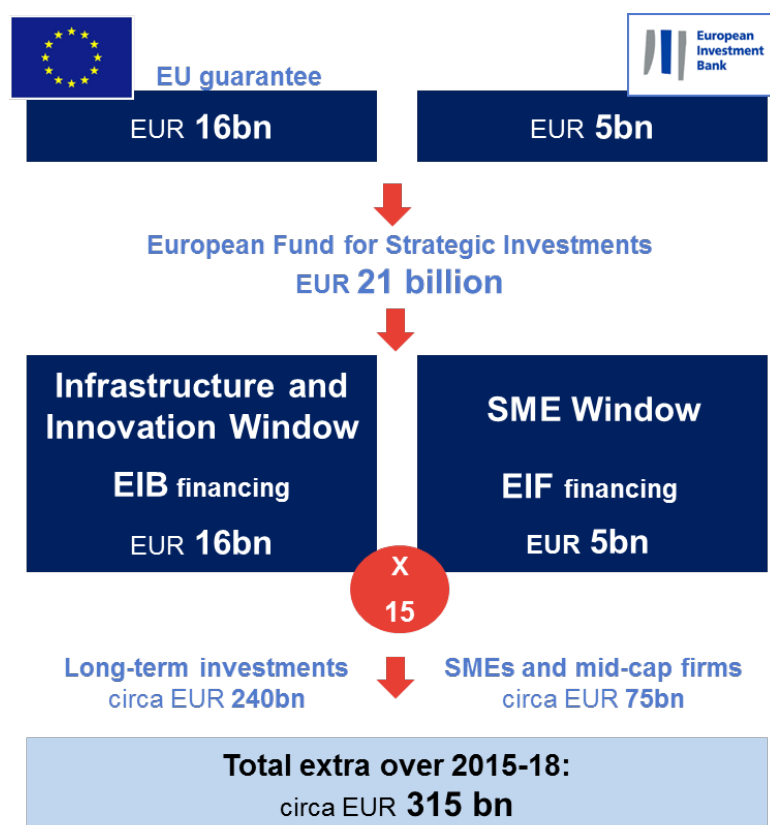


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http://ec.europa.eu/priorities/sites/beta-political/files/factsheet1-why_en.pdf

6.1 How does EFSI work

Figure 18. EFSI sources of funds



Through EFSI, the EIB Group improves its ability to perform its catalytic function, increasing the capacity to mobilise additional investments. It can accelerate the decisions for financing projects, where otherwise investors still do not enter due to an aversion to risk. This higher value-added triggers additional investments, because other investors can put in funds at a senior position.

The goal of EFSI is to provide finance to projects that have significant potential to boost sustainable growth, but which cannot attract the necessary finance because of their risk profile.

The EIB makes use of the EFSI Infrastructure and Innovation Window (IIW) (EUR 16 billion), targeting economically viable, higher-risk projects within the EU that contribute to any of the following objectives (see [Figure 20](#) below)⁹:

⁹ Source (and more detail on the objectives): Article 9 of Regulation (EU) 2015/2017 of the European Parliament and of the Council of 25 June 2015 on the European Fund for Strategic

Figure 19. EFSI Infrastructure and Innovation Window (IIW) project objectives

Research, development and innovation	Through projects that are in line with Horizon 2020, education and training, health, demonstration projects, research infrastructure
Development of the energy sector in accordance with the Energy Union priorities, including security of energy supply, and the 2020, 2030 and 2050 climate and energy frameworks	Through renewable energy, energy efficiency and energy savings, development and modernization of energy infrastructure projects
Development of transport infrastructures and equipment and innovative technologies for transport	Through for example smart and sustainable urban mobility projects, and projects connecting nodes to TEN-T infrastructures
Financial support to entities with up to 3,000 employees with a particular focus on SMEs and small mid-cap companies	Through the provision of working capital and investment and provision of risk financing
Development and deployment of information and communication technologies	Through digital content & services, high speed telecommunications infrastructures and broadband networks projects
Environment and resource efficiency	Through environmental protection and management projects, strengthening eco-system services, sustainable urban and rural development, climate change actions
Human capital, culture and health	Through education and training, cultural and creative industries, innovative health solutions, new effective medicines, social infrastructures and tourism projects

The remaining 25% (EUR 5 billion) of EFSI funds are managed by the EIF through the “SME window”. This provides intermediated financial support via portfolio guarantees or fund investments to entities having up to 3,000 employees, with a particular focus on SMEs and small mid-cap companies (firms with up to 499 employees).

6.2 EFSI project appraisal under the IIW

All EFSI projects under the IIW are EIB operations. EFSI projects are subject to the same due diligence (including also procurement, environment and social impact) and are approved by the EIB’s standard governance structures.

Investments, the European Investment Advisory Hub and the European Investment Project Portal and amending Regulations (EU) No 1291/2013 and (EU) No 1316/2013 — the European Fund for Strategic Investments

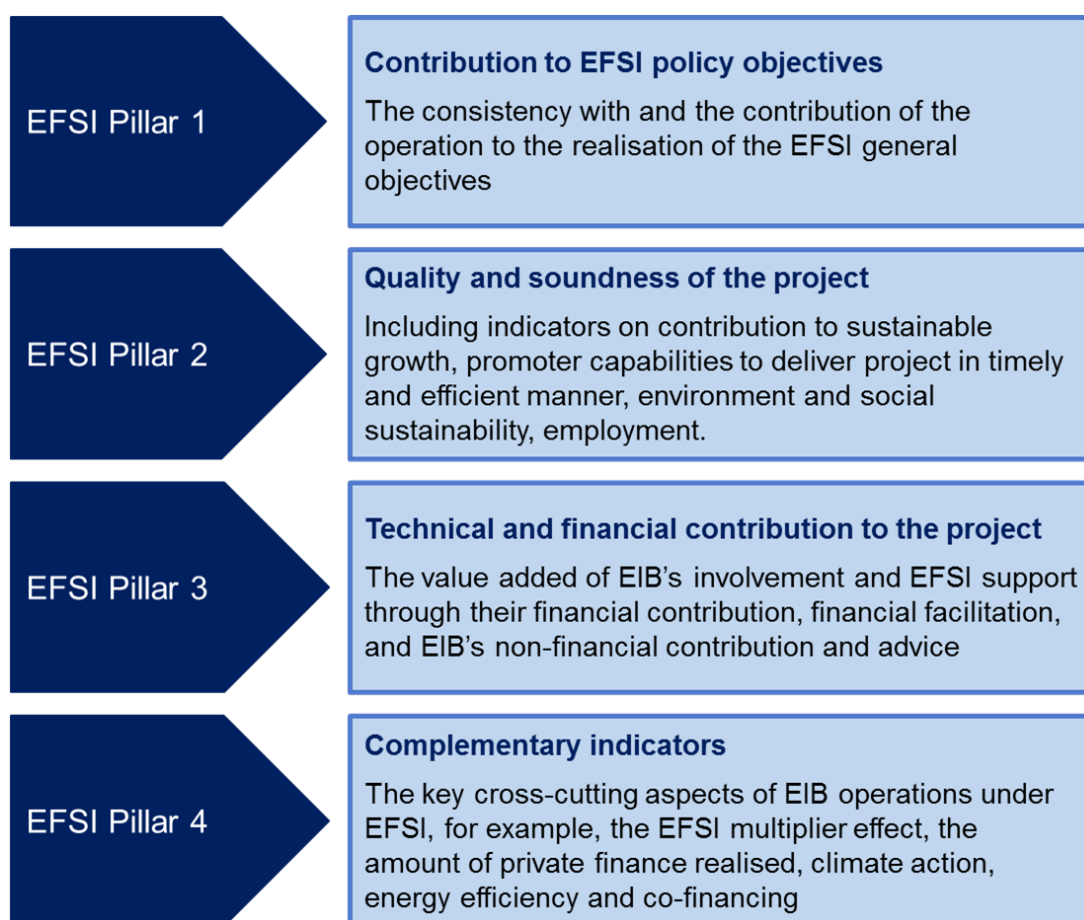
Figure 20. EFSI governance structure

EFSI GOVERNANCE		
EFSI Steering Board	EFSI Managing Director	EFSI Investment Committee
<p>Sets the operating policies and procedures, strategic orientations and the rules applicable to the operations with NPBs* and Investment platforms</p> <p>Approves the SME Window instruments jointly with the Managing Director after consultation with the Investment Committee</p> <p>Four members (one EIB, three EC)</p> <p>Appoints Investment Committee members</p>	<p>Responsible for the day-to-day management of the EFSI and preparation and chairing of the EFSI Investment Committee meetings</p> <p>Jointly responsible with the Steering Board for approving the SME window instruments after consultation with the Investment Committee</p> <p>Responsible for reporting on EFSI activities to the Steering Board</p> <p>Selected by the Steering Board and a member of the Investment Committee</p>	<p>Approves the support of the EU guarantee for EIB projects and the instruments used by the EIF</p> <p>Nine members (the EFSI Managing Director and eight independent experts)</p> <p>Accountable to the Steering Board</p>

In addition, all EFSI projects are assessed by the EFSI Investment Committee to ensure the project is eligible for backing under the EU guarantee. Projects need to demonstrate they:

- are economically and technically sound,
- match the eligible sectors,
- provide additionality,
- contribute to EU objectives and to sustainable growth and employment,
- maximise the mobilisation of private sector capital,
- are mature enough to be bankable and are priced in line with the associated project risk.

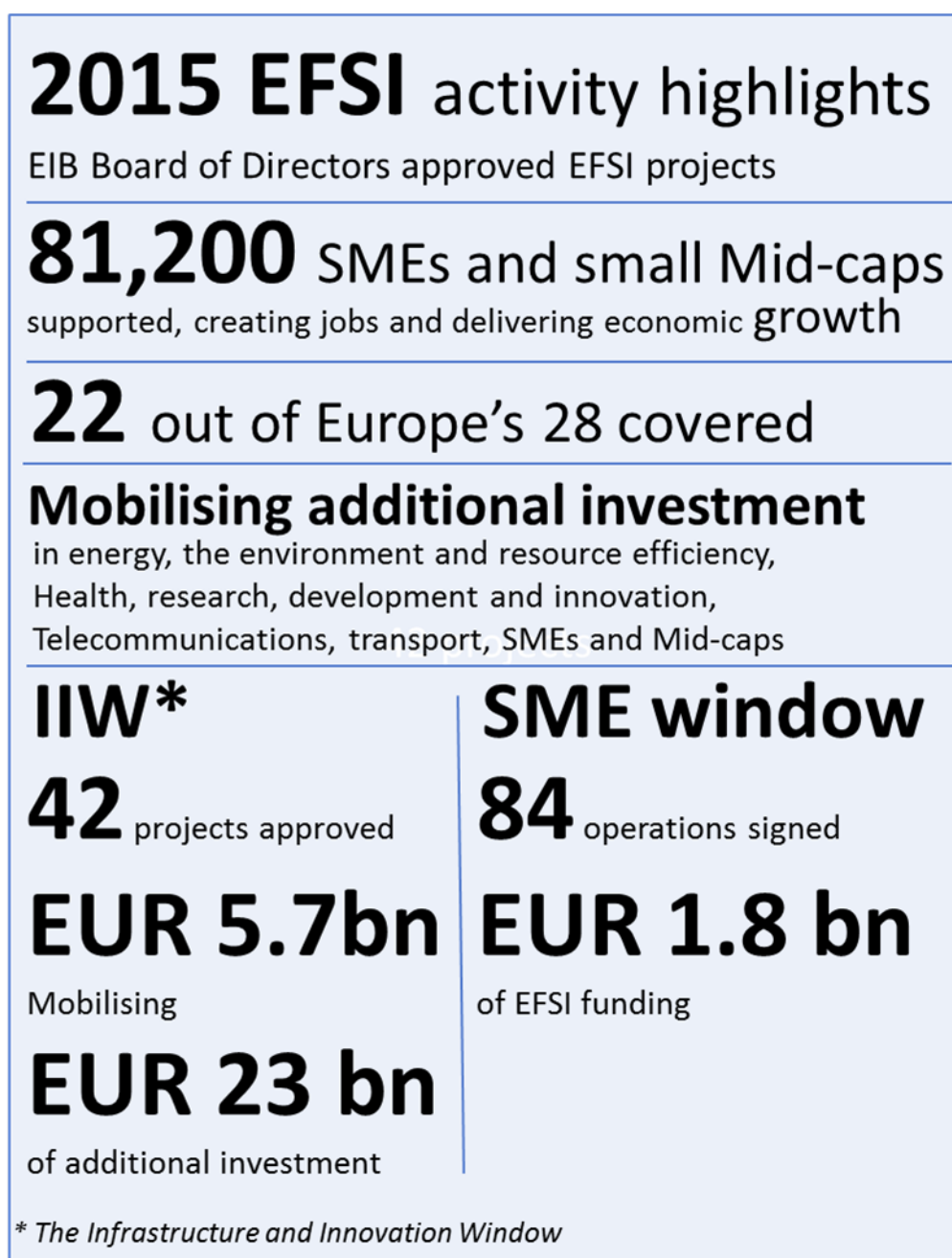
EFSI projects are assessed using a scoreboard of indicators under four pillars (in a similar way to the 3PA framework used to assess EIB projects).

Figure 21. EFSI Pillars Assessment

Source: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:JOL_2015_244_R_0004

These indicators help to ensure that EFSI financing reaches those projects representing the highest value added. The structure of the scoreboard is compatible with the EIB's 3PA methodology.

6.3 EFSI activity in 2015



In 2015, the EIB Board approved 42 projects for EFSI support under the IIW. These projects represent EUR 5.7bn of EFSI financing and are expected to support projects with a total of EUR 23bn of additional investment¹⁰. These projects collectively contribute to all of the main EFSI objectives listed above.

¹⁰ Excluding the EFSI investment related to cancelled operations Abengoa RDI II (EFSI tranche) and Beatrix Lock.

Under the SME Window, which focuses on the support of SME and Midcaps¹¹, the EIF signed 84 operations for EUR 1.8 billion by year-end 2015, expecting to mobilise EUR 25bn.

¹¹ Note: SMEs and Midcaps are also supported through the Infrastructure and Innovation Window.

CASE STUDY: EFSI

Smart meter roll-out in the UK

Sector: Energy	Sponsor: Calvin Capital Limited, UK
Total cost: EUR 1.38bn	EFSI finance: EUR 515m
Objective: <ul style="list-style-type: none"> To finance large-scale smart meter roll out to domestic gas and electricity consumers in the UK, resulting in the installation of around 7million electricity and gas meters. To attract further private finance for smart meter roll out. 	
Expected results: <ul style="list-style-type: none"> Energy savings of around 1,350,000 MWh per year from 2021. 	

Motivation

Smart meters enable energy suppliers to read household's electricity and gas meters remotely, access near real-time consumption data and so better manage their supply. In doing so they help consumers control their consumption and make meter reading significantly less expensive.

The UK government has mandated a roll out of around 53 million smart meters by 2020. Energy supply companies are responsible for procuring and installing these meters. This project is providing an experienced smart meter asset provider with a loan to help finance the purchase of around 7 million smart meters and their rental to the UK energy supplier British Gas.

EIB / EFSI contribution

Financing large-scale smart meter roll out is viewed by investors as high risk. EFSI financing for this project removes financial barriers and will leverage significant external investment funds for future smart-meter projects.

As its first operation relating to the smart metering implementation programme in the UK, the EIB's participation will co-finance smart meter roll out, crowd-in further investment and open up the market for future off-balance sheet financing of smart meters. As a result, future projects aimed at delivering the overall GBP 10bn programme of smart meter investment should be able to access new, more cost-efficient sources of financing.

Benefits

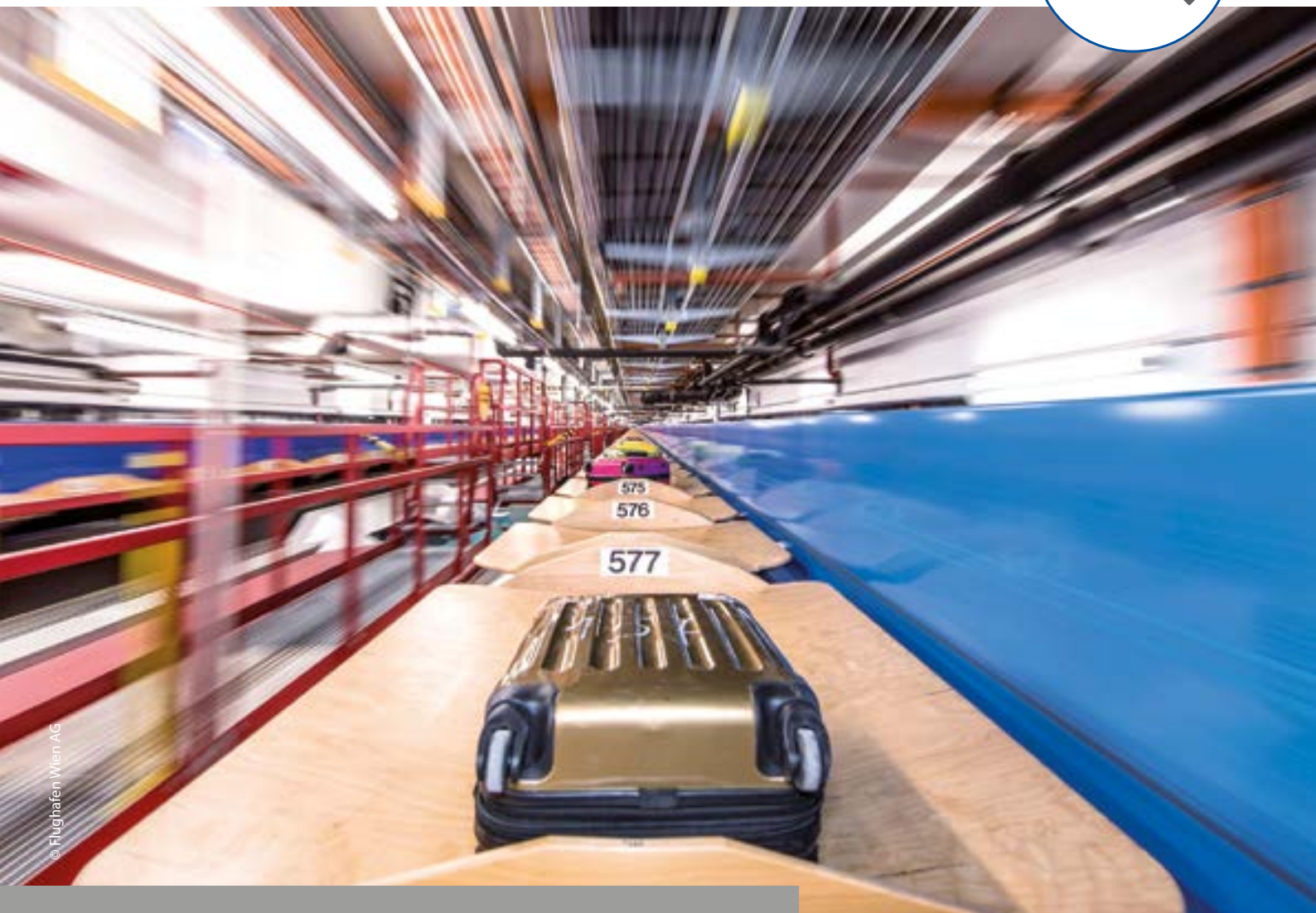
The roll out of smart meters for electricity and gas supply will reduce the cost of meter reading as individual meters no longer have to be read in-situ. Another benefit stems from an improved flow of information on electricity and gas consumption and for households to change their consumption patterns to make energy savings.

Policy links

This project makes a positive contribution to the EFSI objective of development and modernisation of the energy sector and EIB's key public policy infrastructure objective to achieve a competitive and secure energy supply. Around one-fifth of the smart meters will be located in a cohesion region

thereby contributing to EIB's transversal policy objective to finance projects in less developed regions and reduce economic disparities between European regions.

The project forms part of the UK government's national Smart Metering Implementation Programme to replace 53 million gas and electricity meters by 2020.



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Monitoring

Performance and execution

7 Physical Monitoring of Projects

The EIB's project cycle includes physical monitoring processes to observe the execution of the projects and programmes it finances. The key purpose of monitoring is to regularly, pro-actively and cost-effectively observe and measure project performance to identify deviations from the description and conditions as laid down in the finance and/or implementation contract with the promoter. All post-signature activities are monitored. This allows potential problems to be identified in a timely manner, so that corrective actions can be taken where applicable.

The detailed monitoring requirements depend on the specific characteristics of each project. These detailed monitoring requirements mainly relate to the servicing of the loan, the appropriate use of funds, and the developments around the project and its promoter. Sector experts verify that a project is completed in accordance with the finance contract and that it operates as planned. Physical monitoring also helps to mitigate project-related risks and support the long-term success of financed operations. It is therefore an important vehicle for the Bank to continue adding value throughout the project cycle, and to gather feedback to improve processes.

7.1 Key results

The Bank monitors the physical implementation of around 1,500 investment projects, excluding operations involving financial intermediaries. Given the increasing scope of Bank activities, the monitoring portfolio increases every year. A total of almost 200 physically-monitored projects reach the end of their implementation period every year. Usually around 85% of those completed projects relate to projects within the European Union.

In 2015, promoters met their reporting obligations. However, following the introduction of 3 Pillar Assessment (3PA), Results Measurement (ReM) assessment, and EFSI, the work underlying physical monitoring has become more complex over the last three years, including the compilation of an array of indicators as part of a project's physical completion report.

In terms of results, at completion all projects remained eligible under the Bank's policy objectives or external lending mandates. For the vast majority of projects the promoters honoured the technical and financial requirements agreed in the Finance Contract, and the projects received high ex-post ratings in terms of their quality and soundness. Moreover, there was always a positive financial or technical contribution of the Bank to a project. The two case studies below illustrate the high quality of the Bank's monitoring portfolio. AMSTERDAM AIRPORT BAGGAGE SYSTEM reflects the Bank's focus on the sustainability of the projects it finances. GEDEON RICHTER INNOVATIVE DRUGS, the largest industrial R&D spender in Hungary, benefits from EIB financing due to its innovation capacity and its location in a less-developed EU region.

AMSTERDAM AIRPORT BAGGAGE SYSTEM (2009-0720)

Netherlands

Sector	Air Transport
Promoter	Schiphol Nederland BV
Total cost	EUR 846.2m
EIB finance	EUR 350m
Key results	Improved baggage distribution for transfer passengers Direct temporary employment of 11,630 person-years during implementation and 200 full time equivalent during operations

Why did EIB support this project?

Amsterdam Airport Schiphol is one of the world's leading airports. It is the 5th busiest in Europe and the 14th busiest worldwide in terms of annual passenger volumes. Schiphol's 6-runway system can handle up to 600,000 air transport movements a year. Current terminal capacity is about 65 million passengers per year. A further planned terminal and pier expansion will accommodate demand up to the mid-2020s. About 40% of Schiphol's passengers are transfer passengers, requiring a highly efficient system of baggage distribution. The baggage Irregularity Rate (IR) at Schiphol was at the time of project appraisal higher than that recommended by IATA.¹²

The Project:

To install and operate a modern underground electromechanical baggage conveyor system. This was expected to improve the reliability and performance of the baggage system and improve its peak-hour handling capacity to cater for future growth in demand. This would allow Schiphol to remain competitive as a major transfer airport operator in Europe, building upon the significant number of transfer options that it offers national and international travellers.

By taking part of the baggage transfer operation below ground, replacing pollution emitting diesel powered baggage service vehicles, the project was expected to have a net long-term environmental benefit.

Schiphol is an International Connecting Point within the airports Trans-European Network (TEN). The Bank's project appraisal showed a strong economic rate of return at 10%, meeting the requirements of EIB's transport lending policy, which supports airport projects with a high economic value.

¹² In 2013, IATA's IR target rate was a maximum of 45 bags lost or mishandled per 10,000 passengers.

How did the EIB add value?

The EIB provided a EUR 350m loan, contributing towards the total project cost of EUR 846.2m, to be repaid over 20 years. The EIB's financing diversifies the company's funding to a more optimal distribution of the debt maturity profile through the provision of longer-term funds and an overall lower cost of funding.

Results

The installation and management of a state-of-the-art, efficient and reliable baggage transfer system has resulted in a significant fall in the baggage Irregularity Rate at Schiphol, to only 25% of IATA's recommended rate in 2013. This improvement is fundamental for Schiphol airport's business model.

The innovative technologies involved (robot loading, mechanical unloading systems and an advanced early bag system) can increase productivity and improve working conditions. Peak-hour system capacity was expected to increase from 6,000 bags per hour to 9,000 bags per hour.

The project has resulted in 11,630 of person-years of employment during project implementation, and will sustain 200 full-time equivalent jobs during operations.

Thanks to this project, the baggage handling operation at Schiphol is an example for other European airports with a high share of transfer passengers.

GEDEON RICHTER INNOVATIVE DRUGS RSFF (2010-0694)

Hungary

Sector	Bio-Pharmaceuticals
Promoter	Gedeon Richter Plc.
Total cost	EUR 360m
EIB finance	EUR 150m
Key results	<p>A new US FDA-approved drug for the acute treatment of bipolar disorder and adult schizophrenia. Development of a number of other drugs, including <i>biosimilars</i>¹³</p> <p>Regional knowledge and skill creation, Consolidation of qualified employment in a convergence region</p>

Why did the EIB support this project?

In 2010, Hungary had a low level of R&D intensity (1% of GDP versus 1.8% average for the EU), an even lower level of business R&D spending, and weak patent activity. Hungary's R&D activity was heavily concentrated in relatively few large firms under foreign ownership, operating in a narrow range of industries.

The EIB agreed to support the development of innovation capacity in Hungary and the competitiveness of the European pharmaceutical industries by providing finance to Gedeon Richter, the largest industrial R&D spender in Hungary and a domestic company with strong co-operation links with public research organisations. Richter was the only Hungarian company featured on the Top 1000 EU R&D investor list compiled by the European Commission in 2014, ranking 19th among pharmaceutical companies.

The project concerned Richter's R&D activities related to: (i) New Chemical Entities in Central Nervous System indications and; (ii) the development of new biosimilars. The research supported by the project helps to gain further knowledge and potentially even novel drugs for diseases with a high

¹³ A similar biological or 'biosimilar' medicine is a biological medicine that is similar to another biological medicine that has already been authorised for use and has gone off-patent. Because of their complexity (at molecular level and concerning production), biosimilars require substantially higher expertise, investment and development time than traditional generic medicines.

unmet need, making biological drugs more accessible for a wider population due to the development of biosimilar alternatives.

EIB financing aligns with the Bank's activities under the Knowledge Economy, research & development, which pursue the EU public policy objective that encourages Research and Technological Development. The project qualified as a convergence project supporting a less-developed EU region.

How the EIB added value

The EIB provided a EUR 150m loan, contributing to total project cost of EUR 328.5m during 2011-2014, to be repaid over 9 years. EIB financing provided long-term funding, complemented and leveraged EC funds through the Risk-Sharing Finance Facility. The Bank's co-financing allowed the project to go ahead more quickly than it otherwise would have.

Results

The most significant outcome of the project materialised in September 2015, when the United States Food and Drug Administration approved Cariprazine, under the commercial name of Vraylar, an antipsychotic for the acute treatment of manic or mixed episodes associated with bipolar disorder and for the treatment of schizophrenia in adults. This novel drug provides further treatment options for patients with bipolar disorder and schizophrenia, where there are still high, unmet medical needs.

The project has supported a medium-sized European company in the successful development of a significant drug, developed in-house, and its marketing approval in the US, which is the largest and most important global pharma market.

Another compound for the long-term management of uterine fibroids, Esmya, was approved in 2015 by the European Medicines Agency. (Pre-operative treatment was approved in 2012). This condition affects approximately 40% of women between the ages of 35 and 55, including 24 million women in Europe and over 20 million women in North America.

The European Medicines Agency also accepted Richter's regulatory submissions for its proposed biosimilars to Amgen's Neulasta (pegfilgrastim) in December 2015 and to Eli Lilly's Forteo (teriparatide) in January 2016. Pegfilgrastim helps reduce the chance of infections in cancer patients receiving chemotherapy, while teriparatide is used for the treatment of osteoporosis.

The project has supported the consolidation of highly skilled jobs in a convergence region. The Group had 10,000 employees in 2010 and now has 11,439 employees, of which 6,507, or 57%, are graduates.

Overall, project promoters managed environmental, legal and other risk-related issues well. This reflects the contribution of EIB services at a project's appraisal stage, which for some projects supports project preparation and implementation based on strict screening and sector experience. Projects presented to the Bank that are not expected to perform well are either screened out early on, or an appropriate implementation support is identified before they are presented to the Bank for approval.

Projects that received a relatively low rating on their quality at completion mainly faced problems with procurement, technology or profitability during implementation.

Most of the projects financed by the Bank are highly complex, which is mainly due to their large size, long implementation periods, large number of final beneficiaries, and/or remote project locations. However, many of the challenges experienced during project implementation can be anticipated during the project appraisal stage. This allows the Bank to articulate risk-mitigating disbursement conditions. The introduction of these conditions may result in longer negotiations, but the benefits become clear later on, as evinced by a low number of unsatisfactory ratings at completion. Ultimately, these conditions lead to a lower risk of default.

7.2 Key Lessons Learned

The financial and economic crisis still affects projects. This is evident in lower energy consumption and lower traffic and transport volumes than forecast, and in smaller public budgets for infrastructure spending and maintenance. Moreover, some projects (mainly related to research and development) were hit by cost-cutting exercises, leading to lower project costs at completion than envisaged at appraisal.



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Annex

EIB's carbon footprint exercise 2015

Annex 1: EIB's carbon footprint exercise for 2015

The EIB Carbon Footprint Exercise estimates and reports Greenhouse Gas (GHG) emissions from projects in all sectors, not just mitigation activities, where, in one standard year of operations, either:

- their absolute emissions (actual emissions from the project) exceed 100 000t CO₂-eq/year;
- and/or
- their relative emissions (estimated emissions increases or reductions compared to the expected alternative) exceed 20 000t CO₂-eq/year.

Absolute emissions refer to the direct emissions of the project itself (Scope 1 emissions) plus emissions from generation of the power supply used by the project (Scope 2 emissions). Other indirect emissions (Scope 3 emissions), are not normally included in project data, except for projects with physical infrastructure links such as roads, railways and metros where emissions from vehicles using the infrastructure are the main source of GHG and are included.

Relative emissions are estimated by comparing the absolute emissions of the project with the emissions from a baseline identified as the expected alternative scenario without the EIB-financed project, which would imply the use of different sources of energy or transport modes, for example. Whilst relative emissions are important for comparing technologies and projects, the EIB's footprint approach focuses on the absolute emissions from each project, as they are those which will ultimately affect our climate.

Individual project GHG data is assessed at project appraisal stage, and reported on the Bank's Environmental and Social Data Sheets, which are published in the Bank website on the Public Register. For the purposes of annual reporting, the project emissions are aggregated, but with figures prorated to the volume of EIB financing of each project in the year. Thus if the EIB funds 50% of a project in a given year, 50% of the project emissions will be reported in that year. Without prorating, total project emissions (absolute) and emissions reductions (relative) would be significantly larger, and the exercise would risk double-counting emissions with other IFIs that also report GHG project emissions.

Operations signed in 2015 inside the EU

In 2015, 49 of all signed projects in the EU (including five large allocations approved during the year) had estimated GHG emissions above the absolute or relative emissions thresholds, and were therefore included in the 2015 Carbon Footprint Exercise. They include GHG figures for projects related to Energy, Transport, Industry, Water and Wastewater and Forestry.

The 49 signed projects (including five allocation approvals) amount to EUR 8.89bn, or 13% of the total volume of EU projects signed by the Bank in 2015. The corresponding total absolute GHG emissions are estimated at 3.5 Mt CO₂-eq/year, with overall reduced/avoided emissions from the same financing estimated at 1.8 Mt CO₂-eq/year.

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