

New ideas for the  
**Investment Plan  
for Europe**

- + **Modelling  
our impact**
- + **Tackling global  
migration**

2016  
Activity Report

# IMPACT FOR INCLUSION





Bike paths in Bologna financed by an EIB loan to the Italian city. More, p. 27

**USE** this report to...

**DISCOVER** what the world's biggest lender is **DOING...**

...and to **LEARN** what Europe's biggest financier of innovation is **THINKING**

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# Foreword by the PRESIDENT

**T**he EIB Group finances and supports projects that make a strong, inspiring impact on Europe's businesses and the lives of its citizens. This impact has been growing quickly in the past few years, as a result of our drive to use money more smartly – combining EIB Group financing with private capital, EU funds and grants, and the advisory support of EIB experts – to achieve the maximum economic effect.

The effect of our activities should be felt all over Europe, as cohesion is a central pillar of our mission and in 2016 we remained true to it. Measured as a percentage of GDP, the biggest share of EIB Group deals went to Estonia, Malta, Bulgaria, Cyprus, Croatia, Poland and Slovakia.

We work to ensure prosperity is spread fairly across our whole continent and beyond. The EIB is an integral part of the EU toolbox in making the EU Global Strategy and the European Consensus on Development a reality. We continue to respond to the challenge of promoting sustainable economic growth in the source countries of recent migration – so that fewer people will be forced into heart-wrenching and often dangerous journeys away from their homelands, but also in order to foster resilient economies in host communities in the Middle East, North Africa, and the Western Balkans.

In 2016, our portfolio of loans, guarantees and investments mobilised a phenomenal EUR 280bn of total investment. The EU bank's deals truly address market gaps in Europe, increasingly using the Investment Plan for Europe to provide support for SMEs and innovative companies that might otherwise never have accessed our financing.

Wherever we invest, we look for innovators. Without innovation, the EU will not be competitive. Here there is a powerful role for the Investment Plan for Europe, which enables us to finance innovative companies that previously might not have

crossed our radar screens. By financing research into new technologies, our support for innovative companies has the power to change lives. Sometimes it even has the potential to save them.

Last year we financed a family satellite business in Bremen and the first fund investing in companies founded by French university scientists, both with the backing of the Investment Plan for Europe. We also financed research into a Zika vaccine in Lyon, and an upgrade to the large hadron collider at CERN – the European Organization for Nuclear Research. Each of these innovators takes a different path, but they are all moving toward a future in which Europe can match companies anywhere in the world. Looking ahead to 2017, I foresee an even greater focus on such investment. This must be the year of innovation at the EIB.

With this innovative future in mind, I am optimistic about Europe. The Bank is vital to keeping the citizens of the EU on a united, European path. The EIB Group's loans and guarantees, the advice we provide and the initiatives we support are the concrete evidence of the EU's importance to businesses and lives across Europe. The stories of our projects in this report illustrate that the EU bank creates links between people, between businesses and economies. We make our continent more united. There could be no more important priority right now.

**Werner Hoyer**

“ Our investments and initiatives create links between people, between businesses and economies. We make our continent more united. There could be no more important priority right now.



# Total FINANCING

EIB Group

83.8 bn <sup>EUR</sup>

signatures

13.5 bn <sup>EUR</sup> for Innovation and Skills

33.7 bn <sup>EUR</sup> for Small and Medium-sized Enterprises

19.7 bn <sup>EUR</sup> for Infrastructure

16.9 bn <sup>EUR</sup> for Environment

Total investment supported

280 bn <sup>EUR</sup>

# 2016 HIGHLIGHTS

Women peel fruit for traditional Cypriot sweets at a small business in the Troodos Mountains supported by an EIB-backed loan. More, p. 19

## Investment Plan for Europe in 2016



EUR **30.2**bn financing approved



Total investment mobilised EUR **163.9**bn



**52%** of EUR **315**bn target reached

# A simple answer on GDP and jobs

A sophisticated economic model gives a simple indication of the big impact of the EIB's investments—and points the way to assessing the effect of the Investment Plan for Europe

This story of economic impact starts with the starkest kind of shock. Four years after the 2008 financial crash, EU gross domestic product remained below its pre-crisis level, fixed investment was down 15%, and long-term unemployment was on the rise. EU Member States asked the European Investment Bank to boost jobs and growth with an increase in its lending, granting it a EUR 10bn capital increase.



This deep analysis gives a straightforward idea of the impact of the Bank's work.

Debora Revoltella, EIB chief economist

By April 2015, the EIB had used this increase in capital to hit its EUR 60bn target for additional lending. But once that investment had been made, the Bank needed to assess its effectiveness. This meant accounting for the complex interaction between those EIB operations and other activities in the economy.

EIB economists used a well-established economic model to assess the future impact of all its operations during the time of the capital increase. They found that the Bank's lending is likely to have a considerable impact on Europe's economy, adding 830 000 jobs by 2017 and 1.4 million by 2030. "The model was developed to capture long-term factors, as well as short-term effects," says Debora Revoltella, director of the EIB's Economics Department. "That's important to estimate the ultimate result for the real economy."

The Bank's economists presented this impact data in 2016. Now they're refining the model to assess the impact of the Investment Plan for Europe's European Fund for Strategic Investments.

## EIB impact test run

The impact assessment of the 2013-15 capital increase period provides many pointers as to how the impact of the EU budget guarantee may be calculated, and also to the possible magnitude of the benefits additional investment will bring. That's increasingly important now that European Commission President Jean-Claude Juncker has said he wants to double the size and timeline for the Investment Plan for Europe.

EIB economists teamed up with the Commission's Joint Research Centre in Seville to figure out the Bank's impact during the capital increase period. They worked with an economic model that was first developed in 2010 to assess the impact of EU structural funds, financial tools designed to cut the disparities between the economies of different European regions. The model, called RHOMOLO, calculated whether increasingly scarce public financing was being used effectively, making it a good fit with the EIB's purpose.

"It's a sound model and we've tried to use it in a conservative way," says Georg Weiers, an EIB economist working on the assessment.

Among RHOMOLO's strengths is that it captures:

- the short-term impact on economic activity
- how investment enhances productivity and, ultimately, growth in the longer-term.

For example, if the EIB finances a road, there is increased economic activity as the road is built. Once

## EIB OPERATIONS

(January 2013 - March 2015)

Investments supported  
through EIB operations

EUR **342**bn

the road is complete, the EIB financing keeps on working, because the road reduces travel times and transport costs, thus increasing productivity, growth and job creation. To truly assess the impact of the EIB loan, both these factors have to be measured.

## LONG-TERM IMPACT (by 2030)

Additional GDP 1.1%  
Additional employment  
**1 400 000** jobs

## EIB impact: the data

With this model, the EIB's economists calculated the short-term and long-term impact of the EIB's activities during the January 2013 to March 2015 capital increase period.

During the capital increase, regular EIB activities and those related to the capital increase amounted to 1 024 contracts from 812 operations across the EU totalling EUR 142bn. This helped finance total investment of EUR 372bn.

The model estimated the short-term results by 2017 as:

- Additional GDP of 0.8%
- Additional employment of 830,000 jobs

The model projects the long-term impact by 2030 as:

- Additional GDP of 1.1%
- Additional employment of 1.4 million jobs

## SHORT-TERM IMPACT (by 2017)

Additional GDP 0.8%  
Additional employment  
**830 000** jobs

## EIB impact and the Investment Plan

It's important for the EIB to assess its impact, so that it can ensure it makes its funds work effectively for EU citizens. As the EU bank, of course, it isn't the only one looking at how its investments pay off. Three prominent organisations have already published impact assessments for the Investment Plan loans under the EU budget guarantee:

- The European Commission estimates EIB deals backed by the Investment Plan for Europe will add as much as EUR 410bn to EU GDP and create 1.3 million jobs
- Oxford Analytica, an economic analysis firm, puts the GDP impact at 1.4%
- The International Labour Organisation predicts the creation of 1.8 million jobs through the Investment Plan

EIB economists are working hard to adapt and refine the model to assess the impact of the Bank's deals under the Investment Plan for Europe, as well as to produce impact figures that cover all EIB lending. "It's a complicated model, because it's quite sophisticated. It gives estimates of the overall effects in the economy, not just its direct effect," says Revoltella. "But the result of this deep analysis gives a straightforward idea of the impact of the Bank's work."



Ultra-thin solar film on the Heliatek production line. It weighs 500 g for each square metre and is less than one millimetre thick

## New structures for new challenges

Quasi-equity investments provide an important tool for the EIB in delivering on the Investment Plan for Europe

“

We are starting to handle small, high-risk and incredibly innovative things.

Adrian Kamenitzer, EIB director of equity, new products and special transactions

**T**he first puzzle: companies want to reduce their carbon footprint, so they'd like to generate their own renewable energy. But space is at a premium in the business districts of big cities—you can't put a wind farm outside Liverpool Street Station or a solar park in La Défense.

The solution: a spin-off from Dresden's Technical University, Heliatek, developed a film that covers the vertical façades of buildings to produce electricity by turning light into energy.

The second puzzle: finance it. The solution: a EUR 20m quasi-equity investment by the EIB.

If that sounds easy, it isn't. EIB financiers spent years figuring out how to structure deals that would provide capital to innovative, new companies without making them focus more on repaying their debts than on growing the business.

Quasi-equity has been in the EIB toolbox for a couple of years, but only in a small way. The arrival of the Investment Plan for Europe makes it a central part of the Bank's plan to expand higher-risk investments in companies that previously wouldn't have been eligible for EIB financing. "We are start-

ing to handle small, high-risk and incredibly innovative things," says Adrian Kamenitzer, the Bank's director of equity, new products and special transactions. "It means that the EIB has to change to fit these new kinds of deals, so that they can be done to their fullest potential."

The Investment Plan for Europe's EU budget guarantee, which is administered by the EIB, is intended to back financing for innovative companies. That's because commercial banks tend to view them as untested and therefore too risky. Yet it's important for Europe that new ideas get a chance to develop. Though this is a new area for the EIB, it fits the Bank's historical role in filling market gaps.

The Bank refers to higher-risk deals as "special activities." The Bank aims to boost special activities in 2017, as the procedures underlying quasi-equity deals and other new structures are streamlined. The Bank's growth capital and innovation finance division already has 1 000 requests for financing from innovative companies and plans to do EUR 1bn in such deals by mid-2018.

"It's a very positive moment," says Hristo Stoykov, the division's head. "We're working with new customers

who wouldn't have received a loan before from the EIB. We're working with innovative companies. And it's largely because of the quasi-equity product."

Quasi-equity is a product that's unique in the market to the EIB. It aims to fill the market gap that afflicts about 2 500 European companies of medium size, where the financing needed is between EUR 10m to EUR 17m. Here's how it works:

The EIB makes a long-term loan to an innovative company. Steady repayment of the loan would drain the company's coffers just when it needs to be investing in research and development. Alternatively, an equity investment would dilute the stake of the people who bore the risk of financing the early years of development. So quasi-equity provides non-dilutive equity risk capital that is remunerated based on the company's performance, just as an equity investment is.

Developing this product took time. Stoykov and his colleagues across the EIB had to create new documentation and contracts, and to change relations between different directorates within the Bank. The Bank's management approved an entirely new equity strategy for deals done under the Investment Plan for Europe. Some of the first quasi-equity deals illustrate the kind of company that needs this financing:

- **Archos** The French electronics firm got EUR 12m to develop a network for the "internet of things"
- **Canatu** A EUR 12m deal to fund the Finnish company's development of flexible screens
- **Ultimaker** EUR 15m for R&D at a Dutch manufacturer of 3D printers

So far most quasi-equity deals were done under EIB programmes like InnovFin Mid Cap Growth Finance. Increasingly, quasi-equity will be an important factor in Investment Plan for Europe deals, which will also enable the Bank to increase the size of its investments, because of the EU budget guarantee.

The first quasi-equity Investment Plan deal did get done in 2016, however, and in an area of Europe

where the EIB has been prominent—Greece. And it wasn't about connecting your fridge to the internet or designing a screen that could be woven onto your sleeve to fit to your arm. It was about sausages.

One of the biggest cold-cuts companies in Greece, Creta Farms spends five times as much as its peers on innovative ways to produce healthier meats and has filed 20 patents in the last five years. The company's inventiveness focuses on a complex, proprietary technology that allows the company to remove saturated animal fats from its meats and, instead, to inject extra virgin olive oil, which includes unsaturated fat. That makes the meats healthier, because it lowers "bad" cholesterol. But it also keeps them tasty.

"When you eat these meats, you experience indulgence with less guilt," says Konstantinos Frouzis, the chief executive of the Rethymno, Crete company. "It is indulgence with good health."

The EUR 15m Creta Farms quasi-equity deal will back the company's further expansion in international markets, as well as R&D to introduce its "oliving" technology into the worldwide snack-food business.

"Investors have many doubts about Greece just now," says Frouzis, "but this deal proves that Greek companies can be built on very solid foundations."

Creta Farms was one of 23 quasi-equity deals completed in 2016. Stoykov expects to do 40 in 2017. The Investment Plan's EU budget guarantee will enable his team to increase the size of the deals to EUR 50m—enough for it to back R&D at larger corporations too.

The Investment Plan aims to put EIB funds and an EU budget guarantee to work on deals that wouldn't otherwise have been financed. The higher risk nature of innovative companies and the equity-style payoff of these new deals give a clear answer to this question of "additionality." Stoykov notes that, of course, this means some of the quasi-equity loans won't pay off. "If we picked only winners, everybody would have put their money into them," he says. "From a policy point of view, these are great investments. That makes it worth the risk."





Workers pack "olived" meat at the Creta Farms facility in Rethymno, Crete

# INNOVATION for competitiveness

A Heidelberger Druckmaschinen printer at work at the company's facility in Heidelberg



13.5 bn<sup>EUR</sup>

to support **Innovation and Skills**

- ▶ EUR **659m** in loans to software companies, up from EUR **102m** in 2015
- ▶ **11** million new and upgraded very high speed digital connections
- ▶ **890 000** students with improved facilities
- ▶ Including **770 000** within the EU



## Muesli and the future of digital printing

Heidelberger Druckmaschinen carries the flag for Europe in the race to make digital printing faster and more efficient—and to find innovative ways to make factories run themselves

The mymuesli shop on Heidelberg's quaint Hauptstrasse stands on the edge of the city's historic old town and just across the Neckar River from Germany's oldest university. But it's at the forefront of the future of digital printing and industrial innovation.

In the back of the airy, bright shop, beyond the pink and yellow canisters of organic oats and berries, there's a black glass machine taller than a man and as wide as a drinks vending machine. Choose a tube of muesli as a gift and a pink-shirted mymuesli worker slips it inside the black machine. On a touchscreen you enter a personalised message and upload, say, a picture of your kids. The machine rolls the tube under a violet light that's actually an innovative piece of ink-jet technology. Seconds later the mymuesli sales person hands over your customised muesli can with the picture and message printed directly onto the container.

The message might read: Europe's competitiveness in the digital printing market depends on Heidelberger Druckmaschinen AG. That's the company that made the sleek black machine at the back of the mymuesli shop. The printing machinery company is also pushing the boundaries of digitally automated industry—something that's key to Europe's economic future as the world enters a so-called Fourth Industrial Revolution in which machines, rather than humans, will increasingly make operating decisions.

"This is industry 4.0," says Jason Oliver, Heidelberger Druckmaschinen's head of digital. "Heidelberger Druckmaschinen is making dramatic changes in where we bet the future will be. It has bet its future on digital."

It's a smart bet. Heidelberger Druckmaschinen is carving a new path for itself, after years in which it was hit by a declining printing machine market and the economic downturn that followed the financial crisis of 2008. The company is a world leader in traditional offset printing, which presses the ink onto packaging with a plate or cylinder. But it's keen to boost its presence in the growing digital market. Digital printing doesn't require a fixed plate to print the ink and therefore the image can be more easily manipulated and changed on a computer screen.

Digital printing, however, is more expensive and slower than offset printing at scale. The race against its competitors to reduce the cost and increase the speed of digital printing is one of the challenges facing Heidelberger Druckmaschinen.

The shift from offset to digital is why the company came to the EIB for a loan to help fund its research and development. The EU bank signed a deal in March 2016 to make a EUR 100m loan backed by the Investment Plan for Europe. "To stabilise the company, they need to work with the changing needs of their customers," says Franz Derler, the EIB



**Manfred Seifert, a product specialist at the Heidelberg facility, holds a ball decorated by the company's printer**

**“ This is industry 4.0.**

**Jason Oliver, head of digital,  
Heidelberger Druckmaschinen**

loan officer who worked on the deal. “That’s why the R&D investment is important.”

The Investment Plan for Europe’s EU budget guarantee is designed to support technological innovation at Europe’s companies, a factor that underlies the loan to Heidelberger Druckmaschinen. A study by EIB economists released in February 2016 showed that Europe must spend an additional EUR 130bn a year to meet the EU’s target of spending 3% of GDP on research and development—a target that would take the continent close to the R&D investment ratios of other leading economies. To keep up with advanced manufacturing technology, Europe will have to spend EUR 90bn.

Heidelberger Druckmaschinen isn’t abandoning its traditional offset-printing strength. After all, most of the EUR 400bn annual market in print production volume is still based on offset printing. Nor is Heidelberger Druckmaschinen going it alone. It’s developing products in partnership with Ricoh and Fujifilm of Japan, the country that’s the leader in digital printing technology.

But the company isn’t just a manufacturer of printing machinery. It’s also, out of necessity, a software company, with engineers developing programmes for the operation of that machinery. “We want to provide the facility for a customer to decide whether it’s economic for him to use offset or digital,” says Jason Oliver. “Ultimately we want to create a system that can actually decide for itself which option to go for.”

In the future, programmes written by Heidelberg Druckmaschinen software engineers will allow manufacturing to be as customisable as that canister of muesli in Heidelberg’s old town.



# Heat and light with less CO<sub>2</sub>

Kiel's planned power plant keeps the heat on, even when you turn out the lights—and cuts carbon dioxide emissions by 70%

**W**hen you drive your car in winter, the heat thrown off by the engine warms up the interior of the vehicle. Turn the engine off, and you're soon cold. To stay warm, you have to run the engine, even if you're parked at the roadside.

Now imagine your car is a massive power station. Gas engines generate electricity and, in the process, create heat. Most power plants vent that heat up a chimney. Combined heat and power plants use the excess heat to create warmth, just as your car does. They heat water that is, in turn, pumped through the radiators of consumers in their homes and offices.

But what happens when there's little demand for electricity and at the same time demand for heat is high? Say, in the middle of a winter's night, when the lights are out and the radiators are on. Combined heat and power plants might have to produce electricity that isn't needed, just to keep the heat on. Unless, that is, the energy service compa-

ny figures out an innovative way to provide heat when it is required by the consumer, while producing electricity only when it is needed. That's what Stadtwerke Kiel is doing with a new combined heat and power plant it aims to bring into operation in 2018.

Even after the Kiel engines are turned off, their excess heat will be stored in a 60m-high water tank, so that hot water can be siphoned away to keep the city warm. The result will be electricity for 250 000 homes and heat for 70 500 customers. The new plant will also emit 70% less carbon dioxide than the coal-fired plant it's replacing. "It's cutting-edge, really ground-breaking," says Branko Cepuran, the loan officer who worked on the EUR 105m loan to Stadtwerke Kiel signed in September and backed by the Investment Plan for Europe's EU budget guarantee. "It's very important for the Bank to support this kind of innovation in European industry."



## Microbes to save babies

The explosive spread of Zika in the Americas made a vaccine a top health priority, not least because of risks to babies of women infected while pregnant. The challenge: ensuring that a vaccine—which typically might include an agent similar to the harmful disease it's intended to cure—doesn't itself harm the foetus.

Lyon-headquartered Valneva aims to make a "purified inactivated vaccine." Inactivated vaccines use a disease-causing agent such as a virus or bacteria that has been killed by chemicals, heat, or radiation. Yet they still stimulate the immune system to protect against the actual disease. Even if the disease-causing agent in the vaccine crosses the placenta, it doesn't infect the foetus, because it has been "inactivated." So far the company's Zika vaccine has "demonstrated excellent purity," says Deputy Chief Executive Franck Grimaud. To help Valneva complete its work, the EIB made a EUR 25m loan in June 2016, which also supports research and development for a Lyme disease vaccine.



Rauno Koivusaari  
on the water

## The diver who saw the power around him

### Big money for bright futures

The Bank put up EUR 3.7bn for 46 education projects in 28 countries, including:

- A EUR 100m loan to University College Cork that sets aside EUR 27m for the first phase of the Cork Science and Innovation Park. Health and innovation projects will get EUR 37m for infrastructure. A EUR 200m investment in 71 Irish schools that benefits 44 000 students is the largest ever EIB loan for Irish schools.
- A GBP 100m loan to Newcastle University includes the GBP 58m Urban Sciences Building and the GBP 40m National Ageing Science and Innovation Centre. The EIB will also support construction of seven new secondary schools to benefit more than 8 500 Yorkshire school children.
- In addition to the EUR 940m allocated in 2015, the EIB will fund a further EUR 530m for an Italian government investment to benefit over 500 000 schoolchildren and cover upgraded infrastructure, energy efficiency, and safety (including anti-seismic measures). At one of Italy's top universities, Rome's Sapienza, EIB-funded projects will include new libraries, and a renovated administrative building and architectural studies campus.

Off the Portuguese coast  
Finnish start-up  
AW-Energy is turning  
waves into electricity

It was a Eureka moment for professional diver Rauno Koivusaari. In 1993 the Finn was on a diving expedition off the Porkkala peninsula in the Gulf of Finland. The powerful motion of the waves, he realised, could be harnessed to generate power. Now a WaveRoller energy converter built by his company AW-Energy has demonstrated its effectiveness during a two-year trial in Peniche, Portugal. "It has taken a long time to get where we are now," he says. "But I am happy that I pursued the idea in the beginning."

WaveRoller operates near the shore at depths of 12 to 14m. There it captures the sweet spot of the wave surge, while avoiding the most violent storms. AW-Energy estimates one 350kW WaveRoller could meet the electricity needs of 440 homes in Peniche. With projects initiated in prime near-shore areas in Portugal, France, Ireland



and Chile, AW-Energy aims to sell more than 50 WaveRollers in the next four years. The EIB made a EUR 10m loan in July to build the first commercial-scale device and speed up the roll-out of the new technology.

### An untapped source of clean energy

The WaveRoller is built around an 18x10m steel panel hinged to a base on the sea bed. The panel moves back and forth in the surge, feeding a hydraulic power take-off system. The take-off system drives an electric generator. Electricity enters the onshore grid through a subsea cable.

Although the potential of wave energy has long been recognised, rough seas held back development of the industry. Technologies have been expensive and vulnerable, while financing was difficult to find. "Until the EIB came into the picture, there had not been bank financing," says Mikael Martikainen, AW's communications chief. "You

could say that wind and solar had a 10 to 20 year head-start compared to wave energy."

Experts believe that waves are the largest untapped resource of clean renewable energy globally, with a potential greater than the capacity of all the installed fossil-fuel plants in Europe combined. "Wave energy could satisfy at least one tenth of the world's energy needs," says Martikainen. Because waves are predictable, they would be a valuable complement to other renewable energy sources.

Maintenance is relatively simple. WaveRollers carry large ballast tanks that are filled with air so they can be floated to their deployment locations. Then they are flooded with water to submerge them. Although the wave energy converter remains fully submerged during regular operation, it can be re-floated for maintenance by emptying the ballast tanks. That means there's no need for complex, costly and potentially hazardous diving operations to repair it. That's even more good news for the diver who invented it.

## Lights, camera, Investment Plan

**The Swedish media group behind "Beck" and "Wallander" aims for a bigger digital presence**

Imagine a retired cross-country skier grappling with an Olympic medal-winning wrestler, playing tennis with a former grand slam winner, or ice-hockey with a Stanley Cup champ. How about a comedy featuring a fervent pastor assigned to an ageing, small-town congregation? Do they sound like great TV shows? To Bonnier, they did. These became some of the most-watched TV shows in Sweden in 2016 on channels belonging to Bonnier. In spite of the advance of global media companies such as Amazon and Netflix, there continues to be a good appetite for local content—as long as it's available on convenient digital devices. "As more and more people speak English, language is not a real barrier in Scandinavia to watching internationally produced content," says Anders Bohlin, deputy economic adviser in the EIB's digital economy division. "But people still want to see local talent and not only Hollywood stars. They want to see shows in local settings." This is why Bonnier took a EUR 100m EIB loan backed by the Investment Plan for Europe's EU budget guarantee to develop advanced digital platforms, as well as to create Scandinavian content. "Our business is based on journalism, knowledge and telling really good stories," says company Chairman Carl-Johan Bonnier. "That's going to continue. But where and how our content reaches the consumer is increasingly on mobile platforms."



Georgia and Niki Kafkalia  
in their meat factory in  
the village of Agros

## Going big on SMALL and MEDIUM-SIZED ENTERPRISES

33.7bn <sup>EUR</sup>

for **small and medium-sized enterprises**

- ▶ European Investment Fund backing of EUR **9.45bn**
- ▶ **300 000** SMEs and midcaps supported
- ▶ **4.4** million jobs sustained in SMEs and midcaps



## The little village and the big bank

Agros gets a vital lifeline for family businesses hurt by Cyprus's banking crisis

The Troodos Mountains, Cyprus's highest peaks, cup the little village of Agros in a natural amphitheatre surrounded by terraces of grape vines and pink roses. But the mountains couldn't shelter the 1 000 residents from the island's financial crisis.

From 2011 to 2013, the crisis struck small businesses particularly hard. The European Investment Bank has increased its lending in Cyprus massively since then. The small-business owners of Agros are among the beneficiaries. "If we did not have these loans, things would be really difficult for us," says Georgia Kafkalia, who runs a smoked meats factory in the village with her parents and sister.

The EIB's loans to Cyprus are mostly channelled through local banks and credit societies, which have close contacts with small-business owners like the Kafkalias. These small-business loans

**“ The financial crisis was a difficult time. But if you have somewhere to work, life will give back to you what you need.**

**Niki Agathocleous, owner, Niki's Sweets, Agros**



**Niki Agathocleous prepares traditional Cypriot sweets in her Agros factory**

helped take EIB support for Cyprus to 15% of its GDP. "The high interest rate demanded by local banks was a big problem for small businesses," says Nicos Yiambides, the EIB's Cyprus loan officer. "We're able to get financing to businesses at lower rates and longer maturities, and that has a very positive effect."

**Cyprus SMEs get better terms**

Small businesses are key to the economic health of any economy. In a tiny village like Agros their success is even more important, yet access to finance is tricky when a business needs to expand or update its equipment. The Kafkalia family needed EUR 80 000 to buy new machinery for the room where they smoke their sausages, as well as new software and hardware for accounting and invoicing. Though they have built relationships with customers over 40 years, "we have to invest to keep in operation," says Georgia Kafkalia.

Even businesses that prospered throughout the financial crisis were hit by the high interest rates that followed. Costas Tsiakkas founded his winery with his wife 28 years ago and now employs 11 people. His sales increased in the year after the financial crisis hit. But when he needed to invest in the renovation of some of his terraces and irrigation systems, local banks demanded 9% interest.



Tsiakkas went to Troodos Cooperative Society, which gave him a EUR 100 000 loan from the Cooperative Central Bank in Nicosia. The Cooperative's loan, in turn, was financed by the EIB. The rate: 2.6%. "This loan opened my eyes that, yes, there can be a lower rate," Tsiakkas says. "Our problem had always been the high rates."

With current production at 160 000 bottles a year, it's important for the local economy that Tsiakkas prospers, because he buys most of his grapes from nearby farmers. It's also important for the future of his family. Two of his sons are currently training in wine-making and agriculture and Tsiakkas expects the other two to follow them into the family business as well.

The Cooperative Central Bank acts as an intermediary with the EIB on behalf of Cypriot cooperative banks for loans between EUR 10 000 and EUR 100 000. All 18 local cooperatives have given Cypriot SMEs loans that originated with the EIB. "The impact of these loans is very big," says Dr Kostantinos Vrachimis, head of retail product development at Cooperative Central Bank. "Agros is very remote. These are family businesses employing local people, and many other businesses rely on them because they supply them with meat or fruit, for example."

Vrachimis grew up in an agricultural village and feels a bond to the small businesses of Agros and

other tiny communities. "I'm close to these places. I feel strongly about protecting the way of life there."

## Island traditions

The traditions of Cyprus are often guarded by small businesses. In Agros, Niki Agathocleous keeps the flame for traditional desserts called spoon sweets, made with cherries, water melon, quince, walnuts or roses and served with thick, strong coffee. Her workshop uses traditional methods to boil the fruit—200 tonnes of it each year—and creates syrup flavoured with vanilla, cinnamon or cloves. She employs 25 people, mostly women, and sells largely within Cyprus for annual revenue of EUR 1m.

She took a EUR 20 000 loan from the Troodos Cooperative Society to buy new equipment and renovate some of her buildings. "It's really important to invest and move forward," says Agathocleous, who runs the business with her husband and two sons. "The financial crisis was a difficult time. But if you have somewhere to work, life will give back to you what you need."

**Costas Tsiakkas in the cellar of his winery in the hills near Agros**

# From Paris universities to the market

With cancer treatments and digital technologies, a French spinouts fund takes academic research “off the laboratory bench”

**A**ngelita Rebollo is a fun-loving Spaniard whose email signature includes the message, “When life hands you a lemon, bring out the tequila and salt.” She also has a brilliant scientific mind, which she uses to kill-cancerous cells, that is.

In her laboratory at Université Pierre et Marie Curie in the historic Pitié-Salpêtrière Hospital near the banks of the Seine in central Paris, Rebollo has developed a technique for blocking specific functions of proteins that turn a healthy cell into a cancer cell. The treatment could help people with a range of illnesses, though initial results suggest it will first

Angelita Rebollo  
in her Paris lab

“ We’re one of the first, so everybody is watching us to see if this is something they can follow.

Philippe Tramoy, partner, Quadrivium 1



be used to treat ovarian cancer and severe types of breast cancers. While chemotherapy causes numerous side-effects by destroying many good cells along with the cancerous ones, Rebollo's targeted therapy kills only the cancerous cells.

Her research into the topic started 17 years ago in Madrid and led her to found a company, PEP-Therapy, with a few other scientists working at prestigious French research institutions. The company name comes from the molecules at the heart of Rebollo's research—cell-penetrating and interfering peptides. The company's role is to convert this scientific breakthrough into a medicine that can be used to save lives. "The reason we created the company was to translate the research from the bench to the hospital," says Rebollo. "The objective is to develop a molecule that will help many, many people."

## An academic spinout fund in France

PEP-Therapy received EUR 1m of support from Quadrivium 1, the first French investment fund to provide seed funding for life sciences and digital technology projects that start out at—or are linked to—a dozen French academic research institutions. It's a model that was pioneered by US universities to found big companies like Genentech and Lycos. A university tends ultimately to earn more money by developing a product than by simply licensing its research to a big company for further development. Equity stakes in the academic spinouts also encourage researchers to remain in their academic posts, instead of taking higher-paid positions in

private industry. In Europe academic spinouts have taken hold in the UK, where the EIB has backed Imperial College's spinout company.

But they haven't been done before in France. Managed by a team at Seventure Partners and funded by several investors, including Bpifrance, a subsidiary of Caisse des Dépôts, Quadrivium got a EUR 20m commitment in April from the European Investment Fund, the EIB Group's specialist provider of risk finance for SMEs. With the backing of the Investment Plan for Europe's EU budget guarantee, the EIF investment took Quadrivium 1's total financing to EUR 56m. "It has been challenging to introduce this concept to France," says Philippe Tramoy, the Quadrivium partner who manages its life sciences portfolio. "We're one of the first, so everybody is watching us to see if this is something they can follow."

## Lessons in academic spinout culture

Before setting up Quadrivium 1, Tramoy worked largely on deals with US companies and firms elsewhere in Europe. He was unsure at first if academic spinouts would work in France. "It's really a question of spirit or culture. In the Anglo-Saxon world, they look at future revenues to value the company. In France they generally look at the last three years," he says. "That's like judging only the surface of the water and not examining the depths."

If Quadrivium's investments succeed, that attitude will change, he believes. So far the fund has

invested in 10 companies. Each one started out at one or more of the 12 research institutions that are involved with Quadrivium from Université Paris IV (Sorbonne) to Institut Curie and the ESPCI Paris.

Quadrivium 1 intends to invest in only 16 to 20 companies, though Tramoy plans ultimately to create a second fund. Quadrivium 1 is focused on supporting the next stages of development for its companies. That's important in life sciences, for example, where it takes many years to bring a product from—as Angelita Rebollo puts it—the bench to the hospital.

PEP-Therapy is currently starting studies to confirm the safety of its compound. Rebollo and her colleagues won't see their product as a generally avail-

able medicine for perhaps eight years, though it will be used in hospitals throughout the clinical trials.

"It's a long path," says Antoine Prestat, a biologist with an MBA who's also a PEP-Therapy co-founder and its chief executive. "It's very important to have a fund like Quadrivium which understands the process."

The economics of scientific research are not lost on Angelita Rebollo. After all, she left her post in Madrid because funds for research were scarce in Spain. She settled in Paris only after stints in Germany and Belgium. "Quadrivium's investment helps us pay for the development stages," she says. "We needed funds to find this molecule—this molecule which will hopefully save lives." That's worth any amount of money.





## When it's good for a loan to be fishy

Give a man a fish, and he'll be fed for a day. Give him a multiple beneficiary intermediated loan, and he'll be feeding others for a lifetime.

PP Orahovica is an agricultural company in eastern Croatia, growing hazelnuts, making Riesling, grazing cows and breeding carp. To transport the fish from its 1 000-hectare fish pond, the company used to carry live fish in special trucks. "You deliver 10 tons of fish, along with 10 tons of water. After delivery, you've just lost 10 tons of fresh water," says Marko Rašić, president of the supervisory board. There's an economic and environmental cost to towing around tons of pond water. So PP Orahovica increased fish production to 4 500 hectares and built a plant

to process the fish, instead of transporting them live. "We can now deliver fish fillet, frozen fish, various different products, which means we are adding value to the fish," Rašić says. The company, which employs 1 262 people, received a EUR 1.4m grant from the EU Instrument for Pre-Accession Assistance in Rural Development and a EUR 4.4m loan from HBOR, a Croatian state bank and an EIB intermediary. In 2016 the Bank signed a EUR 150m extension of a loan to HBOR that's intended to be passed on to midcaps like PP Orahovica.

"It was a very attractive offer, with low interest and a long repayment period," says Rašić. Altogether, the EIB has financed HBOR with more than EUR 2bn to support SMEs and midcaps, and public sector projects in industry, tourism, and small and medium-scale infrastructure schemes.



The PP Orahovica fish farm in eastern Croatia



## First steps in children's shoes

The range of children's shoes has grown rapidly in recent years to include healthy, natural options. To bring this choice of products to Brno in the Czech Republic, Lucie Prokešová got an EU-supported loan through Komerční banka. The COSME Loan Guarantee Facility agreement with Komerční banka is backed by the Investment Plan for Europe's SME Window managed by the EIF.

Lucie opened her shop Neobuto in early 2016. Customers sometimes come from Slovakia and Austria to explore new brands of children's shoes that were previously unknown on the Czech market. Neobuto also works with a children's physiotherapist to expand the range of shoes and respond to specific needs like flat feet. Lucie plans to open a new branch in 2017 in Prague.

# INFRASTRUCTURE for a connected Europe

19.7 bn  
EUR  
for Infrastructure

- ▶ **5 600** MW of electricity generation capacity
- ▶ **86%** of electricity generation from renewables
- ▶ **41 000** km of power lines constructed or upgraded
- ▶ **45** million smart meters installed
- ▶ **4** million households powered
- ▶ **13** million inhabitants of EU benefiting from upgraded urban infrastructure and services
- ▶ **55** million people in EU benefiting from improved infrastructure through co-financed programmes
- ▶ **980** million additional passengers on EIB-financed transport
- ▶ **10** million people with improved healthcare services
- ▶ **120 000** households in new or refurbished social and affordable housing
- ▶ **25** million people with safer drinking water
- ▶ **20** million people with improved sanitation
- ▶ **1.7** million people with reduced risk of flooding



## One city, many needs, one loan

A single EIB loan supports a range of projects in Bologna. From school renovations to bike paths and measures to prevent earthquake damage, the loan represents the kind of sustainable development at the heart of the EU Urban Agenda, which was launched in 2016

**H**igh-school kids in southern Bologna can give up their commute to overcrowded classrooms outside their neighbourhood. Via Lombardia School was completed at the end of 2016, serving 225 children near their homes and with class sizes considerably smaller than their previous conditions. The school is also:

- built with prefabricated sections that sped up construction;
- class A-plus for energy savings, with solar heating and strong insulation;
- earthquake-resistant (a 2012 quake with an epicentre 36 km from Bologna killed 27 in the region).

“The children’s learning environment will be better, and this will improve their education,” says Mari-ka Milani, head of Bologna’s Department of Urban Renewal. “They won’t have to travel far to school. They won’t be squeezed into a classroom. We’re very proud of this.”

Milani has a lot of projects to be proud of. With a EUR 50m EIB loan, Bologna is embarking on a series of very different schemes. Underlying the whole EUR 160m programme is the city’s plan to make itself a better place to live and a more attractive location for businesses and visitors—as well as more resilient to earthquakes and climate risks.



Vincenzo D’Aprile, a city engineer working on the renovation of Bologna’s historic porticos



“ We had not so much money to do all this for our beautiful city. The EIB loan was truly necessary. Marika Milani, head of Urban Renewal, Bologna

**A new school in Bologna, construction financed by an EIB framework loan**

“We had not so much money to do all this for our beautiful city,” says Milani. “The EIB loan was truly necessary.”

Called a framework loan because it’s used for more than a single project, this kind of EIB loan is an important tool for local governments seeking to make their communities more sustainable. Better funding of local and regional governments is key to the Urban Agenda for the EU, which was officially unveiled in Amsterdam in May 2016. In Bologna, the EIB loan backs:

- renovation of several municipal buildings, roads, public spaces, and squares;

- completion of a bike path encircling the historic city centre;

- restoration of the part of Bologna’s famed medieval roadside porticos rising to the San Luca Sanctuary that overlooks the city.

The porticos are candidates to be entered on the UNESCO World Heritage List. “They’re the most important symbol of Bologna in the memories of visitors,” says Milani. “But we don’t have to take all the time and trouble to make a separate deal for their restoration. All these different projects are combined into one deal with the EIB at a very good rate.”



Ilya de Marotta  
at the Panama Canal locks

# Unlocking trade

## The biggest locks in the world open with European technology

The massive ships used to ride the tide on the Scheldt for five hours, waiting their turn to unload their cargoes. Eventually they would enter the Kallo lock, which took them through to the quays of the Waasland docks. "The lock was really full," says Freddy Aerts, head of maritime access at the Flemish Ministry of Mobility and Public Works. "So we had these traffic jams."

In 2016 Aerts gave the cargo vessels a way to beat the traffic. The port of Antwerp inaugurated the biggest lock in the world in June. The Kieldrecht lock triples the amount of shipping using the Waasland docks on the left bank of the Scheldt by providing a second way for ships to enter. "Now we can take the biggest ships that are sailing," Aerts says. "It will be a real stimulus to the economy."

In a momentous month for massive locks, a third lane of new mega-locks on the Panama Canal opened. Both Antwerp and Panama were financed by the EIB, which put up EUR 160.5m of Kieldrecht's cost. The Panama expansion, which cost over USD 5bn, got USD 500m from the EIB.

## Underused dock capacity

On the Scheldt's right bank, Antwerp has six locks, including the big Berendrecht, which opened in 1989. That infrastructure helps make it Europe's second-biggest port, after Rotterdam.

On the left bank the Waasland docks were planned in the 1970s with the potential to handle even today's biggest ships, which have drafts of about 16m. Trouble is, the 30-year-old Kallo lock was the only access to Waasland and it was too small. That was a problem for Antwerp's growth. It was also a



problem for Europe. Freight is expected to double by 2050. Ports must keep up with that increase. "The Kieldrecht lock unlocks the capacity of the port," says Inge Vermeersch, an EIB engineer who worked on the new lock project. "The lock will help Antwerp strengthen its position in Europe." 62 500 people already work directly on the Antwerp docks. The port is worth 4% of Belgian gross domestic product, according to the country's national bank.

## Under the pink hard hat

Across the Atlantic, Ilya Espino de Marotta wore her trademark pink hard-hat for the inauguration of the new Panama Canal locks. It's her response to those who didn't think a woman could be chief engineer on the Canal. "As a woman, some men questioned my appointment, but I can handle it," says de Marotta. "I wear a pink hard-hat to make a statement that a woman can do this job." And even though both her husband and son had to undergo cancer treatment during the massive project, she still got the job done.

# The EU Urban Agenda Toolbox

## Pula, Croatia

EUR 40m for the reconstruction, extension and rehabilitation of the obsolete facilities at Pula General Hospital, the only public hospital in Istria

URBAN  
POVERTY

## Helsinki, Finland

EUR 180m to replace trams, extend the tram service, and refurbish the network to provide a better quality and more reliable service

URBAN MOBILITY

## Belgium/France

EUR 46m of equity for a fund using innovative techniques to decontaminate polluted brownfield sites (see story on Ginkgo Funds, page 34)

SUSTAINABLE LAND USE AND  
NATURE-BASED SOLUTIONS



CIRCULAR ECONOMY

## Belgium

EUR 200m to support climate action and the circular economy across Belgium with Belfius Bank

CLIMATE ADAPTATION

## Lisbon, Portugal

EUR 250m for improved sewerage infrastructure to reduce damage from floods, as well as other infrastructure, such as social housing (see story on page 37)

DIGITAL TRANSITION

## 12 UK cities including London, Manchester, Liverpool and Glasgow

EUR 25m for Hyperoptic, which installs broadband networks inside high-rise buildings



Over 70% of Europeans live in urban areas, and 55% of public investment is made by regional or local governments. The EIB is extending its lending to urban projects with higher risk under the Investment Plan for Europe. In 2016 the EU finalised its Urban Agenda, which includes a full section on the EIB's role in making it happen.

### Upper Silesia, Poland

EUR 329m for regeneration in 10 former mining and steel cities

JOB AND SKILLS  
IN THE LOCAL ECONOMY

### North Rhineland-Westphalia, Germany

EUR 100m for reception centres for asylum seekers

INCLUSION OF MIGRANTS AND  
REFUGEES

### Northern Ireland, UK

EUR 166m for retrofitting and construction of energy-efficient social housing

HOUSING



INNOVATIVE AND RESPONSIBLE  
PUBLIC PROCUREMENT

### Baden-Württemberg, Germany

EUR 825m for the State to finance trains to lease to more and smaller rail operators, to increase competition and thus lower public transport costs

ENERGY TRANSITION

### Luxembourg

EUR 2m from the European Local Energy Assistance programme for technical assistance to support EUR 45m in investments by the European Energy Efficiency Fund, which backs small energy efficiency projects across the EU

AIR QUALITY

### Paris, France

EUR 1bn for the construction of the first section of the Grand Paris Express, an automated metro network. Once completed, this 33 km section will reach 22 municipalities in the south of Paris, serving more than 1 million inhabitants. As an alternative to car use, it will cut air pollution



## Flood relief for a new partner

### Georgia rebuilds and sets up infrastructure for improved trade

Late one night in June 2015, Ilia Darchiashvili drove through central Tbilisi in a downpour. He hit traffic on Chabua Amirejibi Highway as he approached one of the bridges across the Vere, a tributary of the city's main Mtkvari River. Darchiashvili turned his Toyota toward another crossing where cars weren't stalled and went home to bed. "There was just heavy rain and a traffic jam. There was no perception that anything was about to take place," he remembers.

#### "Then it happened."

By the time Darchiashvili awoke, one million cubic metres of mud had slid into the Vere, damming it in two places. The river burst its banks, flooding the centre of the Georgian capital. There were 19 dead and 22 000 of Tbilisi's 1.1 million people were without electricity. Hippos and jaguars escaped from

the zoo to roam the streets. One man was mauled to death by a tiger.

Darchiashvili, who was then manager of the Municipal Development Fund of Georgia, went into action alongside officials from Tbilisi city hall and other branches of the national government, organising aid to the disaster's victims. "Our first goal was to make people safe," says the 35-year-old, who's now vice minister of Regional Development and Infrastructure. "After that, all of us just focused on starting to rebuild. In parallel, we were looking for additional financial resources."

### Emerging from the mudslides

Among the quickest to react was the EIB, which has been ramping up investment in Georgia over the last couple of years. When news of the disaster reached bank officials in Luxembourg, the loan officer in the Public Sector Division team working with Georgia was already wrapping up another operation to upgrade the country's municipal in-



### A hippo escaped from the Tbilisi zoo after the floods

Infrastructure. The team swiftly developed a second line of financing to be used to counter damage inflicted by the natural disaster. Bank officials flew to Tbilisi the following week to start hammering out details. They found a city still crippled by flooding and mudslides. "Bridges and roads had collapsed," recalls Georgia Koutsiana, the loan officer in charge of EIB Public Sector Operations in Georgia. "Normal life was really disrupted."

The result was a EUR 100m loan in February 2016 divided into two portions:

- EUR 50m for flood relief
- EUR 50m for municipal and tourism infrastructure

Most EIB loans amount to no more than half of the cost of a project. That's because the Bank tries to encourage other investors to join in, stretching its money as well as providing a stamp of approval. In the case of the emergency reconstruction credit facility offered to Georgia, the EIB took on the full project cost, because it was responding to a natural disaster.

The EIB's intervention had considerable impact on the ground, as Georgia rebuilt. "Every citizen in our capital has been directly affected by this flood," says Minister Darchiashvili. "The EIB emergency funds have reconstructed roads and infrastructure. They're also being used to mitigate the risks of a repeat disaster in the future."

The Bank is also financing a key section of Georgia's East-West highway between the Azerbaijan border in the east and Batumi, the country's port on the Black Sea. "The highway will be a vital stage of a new Silk Road," says the EIB's Koutsiana. A EUR 50m loan signed in 2016 will renew bridges, tunnels and retaining walls on this vital artery for regional and international trade.

### Kiev by night



## The EU bank delivers on its part of Europe's pledge to Ukraine

The EIB launched its Special Action Plan for Ukraine in 2014 with the aim of providing EUR 3bn in financing for infrastructure, private sector development and climate action by the end of 2016. That went along with the EU's Association Agreement with the country. In December, the Bank delivered on this pledge. The EIB loans are part of EUR 11bn in support for Ukraine from the European Union. The projects are aimed at tangible results for ordinary people. Take the EUR 120m loan for improved energy efficiency in Ukrainian universities. It reduces the environmental impact of the buildings, improves the quality of accommodation and cuts costs. Another example is the EUR 200m EIB loan to modernise public transport in up to 20 Ukrainian municipalities, including new buses, trams, metro wagons and trolleybuses that will contribute to a major shift from fuel- to electric-powered transport. The project should pay off through energy savings, improved quality of life for customers—and a positive impact on the environment.

# CLIMATE and ENVIRONMENT for everyone's future

# 16.9<sup>bn</sup> EUR

## for **Environment**

which includes biodiversity, clear air, clean water, transport safety, renewable energy and energy efficiency.

Ginkgo's Bruno Farber at the Mont-Saint-Guibert site

The Bank commits to climate action loans that amount to more than 25% of total lending across all its public policy areas

In 2016 the EIB financed EUR **19.6bn** of climate action.

That's **26.3%** of all financing

- ▶ Energy efficiency EUR **3.6bn**
- ▶ Renewable energy EUR **3.9bn**
- ▶ Lower carbon and climate friendly transport nearly EUR **8bn**
- ▶ Research, development and innovation EUR **1.8bn**
- ▶ Mitigation in afforestation, waste, wastewater and other sectors EUR **1.1bn**
- ▶ Adaptation to climate change EUR **1.2bn**



# The green answer to urban sprawl

An innovative fund takes old urban industrial sites and turns them into good places to live and work

General contractors, earth-movers and diggers will start construction of 300 apartments and homes in April on the site of a nineteenth-century paper mill in Mont-Saint-Guibert, southeast of Brussels. Not long after, buildings will go up on a disused foundry in the Paris suburb of Choisy-le-Roi, and then in the heart of Lyon in the grounds of the former Brandt washing machine factory.

The connection between all these projects is that the land would've stood empty if it hadn't been decontaminated and redeveloped by a ground-breaking investment fund that uses state-of-the-art environmental techniques to clean away the toxic traces of defunct industries. Such decontamination is important for the future of Europe's cities, where 3.5 million former industrial sites sit vacant. To counter urban sprawl, cities must clear old industrial locations and make them safe for living. "France loses the equivalent of one département to urban sprawl every 10 years," says Bruno Farber, managing director of Ginkgo Advisor, the decontamination fund. "The solution is to build the city upon itself."

## Funds for the cleanup

Farber's Ginkgo Fund raised EUR 80m for seven decontamination and redevelopment projects in Belgium and France, all of which are on course to be cleared for construction by the end of 2018. The fund included EUR 15.6m from the EIB. The success of Ginkgo led Farber to start raising money for Ginkgo II, which would expand his reach to the UK, Luxembourg and Spain.

EIB investment officers were keen to get on board again. But without the Investment Plan for Europe's EU budget guarantee, the EIB wouldn't have been able to invest as much in Ginkgo II as it has. The guarantee was created to accelerate investment in innovative projects. The EIB uses it to carry out investments it might otherwise have done differently. That means, for example, taking bigger stakes or accelerating investment.

Ginkgo II certainly fits the Investment Plan bill. James Ranaivoson, the managerial adviser in the EIB Climate Change and Environment Division who led the Ginkgo deals, recognised that Ginkgo I's path had been smooth. Due to the EU budget guarantee he was able to go quickly into the second fund and with a larger amount than he'd otherwise have been able to do. The Bank committed EUR 30m to Ginkgo II in February. "We can already see how well Ginkgo I is doing," says Ranaivoson. "It's very important that we continue to support the investments targeted by Ginkgo with the second fund right away. The Investment Plan for Europe gives us that acceleration."



## Investment Plan as a cornerstone

The involvement of the EIB was key to convincing other investors to put their money into the first Ginkgo fund. The same has been true for Ginkgo II. “The EIB’s role must be stressed,” Farber says. “As a cornerstone investor, the EIB’s presence showed other institutions that real, in-depth due diligence had been carried out, and that the predecessor fund had been well managed in a challenging economic context.”

By enabling the EIB to put up more funds alongside Caisse des Dépôts (both own a quarter of Ginkgo II), the EU budget guarantee made it possible for Farber to reach his EUR 140m funding target much more quickly, because other investors were encouraged to join a project backed by such major investors.

## Pollution solution

With Ginkgo II, Farber plans to partner with developers and urban planners in other countries. As much as 30% of the new fund will be invested beyond the borders of Belgium and France, where the first Ginkgo fund focused.

There are surprisingly few companies engaged in the decontamination and regeneration of industrial sites. Most often the contaminated materials are

dug up and dumped elsewhere, or even buried under giant slabs of concrete. Neither technique is a true solution to the pollution. Ginkgo uses a more sustainable approach in which the contaminated material is treated on site until it can potentially be reused in the new project.

Ginkgo II will take its technical expertise to countries like the UK, where there’s currently no decontamination fund drawing investment into the sector. Farber’s targeting sites in Leeds, Bristol and Glasgow, as well as former steel mills in Luxembourg and projects in Barcelona. “It’s important for the future of Europe to foster this technology,” says Martin Berg, an EIB investment officer who worked on the Ginkgo deal. “The Investment Plan for Europe enables us to do more of it, and to do it faster.”

“ It’s important for the future of Europe to foster this technology.

Martin Berg, EIB investment officer



# A better Lisbon for families and business

Faced with floods, a declining population, and outdated infrastructure, Lisbon is transforming its urban environment

The population of Lisbon had been declining since the 1960s. People left the city looking for more affordable homes in the suburbs, leaving behind many areas with outdated infrastructure. The number of people living in the city fell from around 800 000 in the 1960s to 513 000 recently. But Mayor Fernando Medina had a vision that went beyond solving individual problems piecemeal. His aim, he says, was to “change the way people live in the city.” He believed Lisbon could once again become a place where people choose to live and work—and an attractive place for visitors.

But Medina also needed the right kind of financing for the long-term infrastructure projects he had in mind. Since the financial crisis, Portuguese banks haven't been able to finance long-term infrastructure projects. This market gap meant that the EIB was also able to use the EU budget guarantee and its own funds under the Investment Plan for Europe to make Lisbon the first EU municipality to receive direct support from the Plan. Lisbon got a 30 year EUR 250m loan.

Certain neighbourhoods of Lisbon, including parts of the historic city centre, have become prone to regular flooding. In 2014, two major floods within weeks highlighted the need for the city to adapt to the effects of climate change. The EIB-backed project will renovate the sewerage



system and build two new drainage tunnels. In future, the intense rainstorms to which Lisbon has become accustomed are unlikely to cause serious flooding.

EIB funds will also finance the renovation of existing social housing and the construction of new units, all of which will benefit from energy efficiency measures to mitigate the impact of climate change. The loan also covers measures to boost urban mobility and to introduce “smart city” innovations, as well as building squares, parks, fire stations, cultural facilities and schools.

# Three strategies to cut the risk

How the EIB draws private money to climate finance alongside public funds

The wind farm at Langmarken, Sweden, will be unlike any other. Not because of the turbines—manufactured by Denmark’s Vestas, they will be much like any other when construction is completed. It’s the financing of the 23 MW onshore facility that is innovative.

## The Langmarken wind farm

The EIB has held a EUR 40m share in Mirova Eurofideme 3 since 2014. In March 2016, after the French fund invested in Langmarken, the EIB made a co-investment backed by the EU budget guarantee of the Investment Plan for Europe. It put EUR 16m directly into the wind farm, so Mirova and the Bank jointly own 90%. It’s a big step—the EIB typically doesn’t take ownership stakes. By sharing risk the EIB aims to draw private money to climate-action projects.

The EIB has three primary ways of doing this:

- **Co-investments** like Langmarken, which enable private fund managers to get behind bigger projects than they could do on their own.
- **Layered-risk** deals in which public funds take a bigger portion of the risk in a project and, thus, make investment more attractive for private money. That’s what the EIB did with its EUR 50m investment in Green for Growth, a EUR 368m fund that backs renewables and energy efficiency in the Western Balkans and Turkey. The CO<sub>2</sub> savings from its work is equivalent to 1.9 million Frankfurt to London passenger flights. In 2016, the EIB agreed to invest another EUR 25m to support projects in the Middle East and North Africa.

- **Soft enhancement** is a term the Bank uses for deals where the EIB’s presence demonstrates that a project has been examined in-depth. This can be critical to investors attracted to the deal but lacking the EIB’s resources or infrastructure expertise. That’s happening now in the first utility-scale solar photovoltaic facility in Senegal. Finalised in February 2016, Senergy is the first investment by the Meridiam Infrastructure Africa Fund, in which the EIB holds a EUR 30m share. The EIB took a lead role in enhancing the environmental and social management system of the fund, which helped bring on board insurance companies, pension funds, and a sovereign wealth fund.

The Investment Plan for Europe plays a role in all these aspects. So far the EIB has approved almost EUR 1bn of climate-action investments in funds with the backing of the EU budget guarantee.



A Catalyst solar farm  
in the Jordanian desert

## Smart regulation from the Jordanian government helps an innovative renewable energy fund

When the Arab Gas Pipeline was first disrupted by explosions in Egypt during the Arab Spring, Jordan suddenly had to switch to imported heavy fuel oil and diesel, so the cost of electricity went up. Meanwhile, refugees poured into Jordan from Syria, spreading social and economic resources thin. Jordan's solution: a regulatory innovation called energy "wheeling." Here's how it works: if you put solar panels on your house, you may be able to "inject" the energy you produce into the grid to offset your energy bill. Even if you can't put solar panels on your roof, the wheeling regulation allows you to set up the panels elsewhere, feed that power into the grid, and still offset what you consume. That drew the EIB-managed Global Energy Efficiency and Renewable Energy Fund to invest in the Catalyst MENA Clean Energy Fund in 2016. "Jordan is a modern, open economy," says Mónica Arévalo, the fund's senior investment manager. "It has become increasingly interesting for private sector investors." Catalyst will establish five solar power plants in Jordan for telecom operator Orange with French renewable energy developer Neoen, each many miles away from where their 30 MW of power will actually be used. Catalyst has already won a second contract from a big hospitality group. "With wheeling, one can use lower-cost land, land with better conditions like more sun," says Catalyst's managing director Ennis Rimawi.



## Transport takes sustainable development lead

When city populations grow quickly, transport infrastructure can become overcrowded and unsafe, and air pollution rises. The Lucknow Metro will counter those effects by boosting the share of its population using public transport to 27% from 10%. The EIB's EUR 450m loan for the first 23 km of the line is the Bank's biggest ever in India. The line will serve 22 stations and 100 million passengers per year.

# The GLOBAL player

8.4 bn<sup>EUR</sup>

in loans outside the EU

- ▶ Enlargement countries and EFTA EUR 3.35bn
- ▶ Eastern neighbours EUR 1.65bn
- ▶ Mediterranean EUR 1.63bn
- ▶ Africa, Caribbean and Pacific EUR 0.77bn
- ▶ Asia and Latin America EUR 0.98bn

## Jobs to build a continent

Investment in Africa means jobs that don't force people to leave their homes and families

For 14 years, Michel Lo worked far from his home in a tiny village on the Senegal River near Saint-Louis on Senegal's northern border. He could afford a trip home to see his family only once a year.

That changed in 2016 when the Compagnie Agricole de Saint-Louis started irrigating arable land near his village. Its aim is to produce 65 000 tonnes of rice each year, answering a big food-security need for Senegal. The company will also provide jobs for hundreds of locals who might otherwise have been forced to move to the capital Dakar 320 km away, or even to migrate to Europe.

Lo, 38, took a job as a foreman on the new project, excavating irrigation ditches for the rice fields. "Now I can return home every day and be with my family," he says. "Thanks to this company, I can live with my family."

Across Africa, approximately 15 million people have left their homes to find jobs as far away as Europe, the Gulf or the Americas. The EIB invests in projects aimed at helping those who arrive in Europe as migrants. But the EU bank also finances businesses in Africa, creating jobs that allow workers to remain in their homes and near their families. Projects like the



“ You can inject all the aid you want, but fundamentally we need to increase the disposable income of workers in our countries.

Patrice Backer, AFIG, Senegal

Workers on the rice plantation  
near Saint-Louis, Senegal

Saint-Louis rice farm, which received a EUR 15.7m EIB loan, build Africa's future by creating viable private sector companies.

## Development means investment, not just aid

"Development in Africa is usually seen through the prism of aid—the notion that in order for African countries to get better, they need this injection of capital through governments and NGOs from overseas basically," says Patrice Backer, a Congo-born fund manager who works in Senegal. "We look at private equity as another aspect of development that is absolutely critical. You can inject all the aid you want, but fundamentally we need to increase the disposable income of workers in our countries."

Backer is chief operating officer at Advanced Finance & Investment Group, which attracted a EUR 15.6m investment from the EIB in 2008. The firm's investments have gone well enough that the EIB signed a new EUR 18m deal with AFIG in July 2016. One of the African companies AFIG has invested in is Senbus Industries. Launched in 2001, Senbus aims to create a domestic Senegalese auto industry. The company received a EUR 3.4m loan from AFIG.

Pape Mbodji is a 35-year-old who wears a blue hard-hat and overalls as he leads a team of 20 on the assembly line at Senbus. Mbodji earns a living in the town where he was born. He also gets a sense of satisfaction at his role in Senegal's economic future.

"I love my profession," he says. "I have the possibility of working in Senegal with the top company in the assembly of buses. That's a great pleasure. I also contribute very much to the development of our country."

## Alternative to migration

In Kenya's Rift Valley Province, the workers on Migotiyo Plantations tend and process sisal, a plant that yields fibres for carpets and roofing. In the fields men and women hoe the long rows of sisal in the hot sun, clearing weeds from between the spiky, knee-high plants. It's back-breaking work, but it's a good job that allows them to avoid the uncertainties and dangers of life as a migrant.

### Pape Mbodji, a foreman at the Senbus factory in Senegal

The farm got support from the EIB through a EUR 2.3m loan from local intermediary NIC Bank. It produces 100 tonnes of fibre each month for export to Arab countries and Nigeria. Each tonne yields USD 2 000 profit, says Peter Gashoka, the 34-year-old estate manager. "It's quite a profitable project."

Despite the tough environment, Samuel Gruto is glad of the work. "If this farm didn't exist," says the young man from a nearby village, "I would go somewhere else, like Nairobi or outside Kenya. I would go to Europe."

Doctor Sharon Ogimda  
checks Rose Kagali's  
unborn baby

## A promise kept

Kibuga Karithi fulfils a vow to his dying wife  
and brings accessible healthcare to a Kenyan region

**K**ibuga Karithi's wife died of cancer three years ago, because she was diagnosed late. He promised her that he would bring better medical facilities to Kenya, so that patients like her would no longer have to save up for a journey to India before they received treatment. Karithi studied how Indian hospitals brought quality healthcare to relatively low-income patients at a quarter of the price of the same treatments in Kenya. What he found was a model he is trying to replicate in Kenya as general manager of a newly renovated and enlarged hospital in Kaimosi, western Kenya. The hospital fills the gap between underfunded government hospitals and Nairobi facilities so expensive as to be out of reach for all but the richest Kenyans.

The first hospital on the site opened 110 years ago, serving western Kenya and parts of Uganda and Tanzania. It became a government hospital in 1967. By the time the National Council of Churches took it over two years ago, the facility was "in dire straits," says Karithi.

For any serious injury or condition, patients in the region had to make their way to Nairobi, 340 km

away. With its updated services, the hospital will be able to treat almost all cases without referring them to distant facilities, says Dr Sharon Ogimda, one of the Jumuia medical staff. "It's a good venture that will help a lot of people around here."

Even on its first day in October, the hospital welcomed new patients. Rose Kagali came from a small village because she was experiencing early labour pains. Dr Ogimda determined that Rose wasn't giving birth and helped her rest in the outpatients unit. "It's the best hospital which has been brought near us," Rose says. "People are very happy about it."

Rates at Kenyan commercial banks have been unstable, so Karithi was keen to obtain financing from the EIB through a regional development bank based in Nairobi. The EIB loan was also longer-term than those offered by local banks. "The EIB funding was extremely flexible," he says. "Most importantly, once they got the idea and understood what we were trying to do, they backed us."

# MICROFINANCE

EIB microfinance facilities  
and technical assistance  
have brought

300<sup>EUR</sup>m

▶ to more than **1.5** million beneficiaries.

With the support of the European Commission and EU Member States, the Bank has dedicated facilities across Africa, the Caribbean and the Pacific, as well as in the EU's Southern Neighbourhood. In 2016 the Bank's board approved three new facilities:

- ▶ Africa, Caribbean & Pacific Smallholder Financing Facility EUR **60m**
- ▶ West Africa Microfinance Facility EUR **50m**
- ▶ Southern Neighbourhood Microfinance Facility EUR **75m**

Phyllis Muthoni  
in her Nairobi shop

## “I feel happy, very, very happy”

Microfinance loans empower  
African small businesses and change lives

The narrow street in central Nairobi seethes with shoppers and delivery trucks and food stalls. Inside the covered market, stores are piled to the ceiling with every kind of merchandise, sprays and multi-coloured tubs and pots and tins and clothing. In one small booth, Phyllis Muthoni reaches for hair gels and skin creams on the high shelves of her cosmetics booth, advising a client about her look. The scene is so crowded that everything might seem plentiful.

It's not. Finance is hard to come by in Kenya. Phyllis was lucky. She went to Faulu Microfinance Bank, which gave her a loan of just over EUR 10 000 to set up her shop, Jophy Cosmetics. “Since we got that loan, for sure we've seen great improvements,” she says. “It has really boosted our profits. The income we earn has increased. We make a nice profit.”

Faulu is one of the local microfinance institutions supported by the EIB. The EU bank's investments in African microfinance have a big impact on people like Phyllis. In East Africa alone, the EIB works with 11 microfinance institutions in Kenya, Tanzania, Uganda and Rwanda, supplying EUR 125m of credit to 278 270 final beneficiaries, 42% of them women and 29% of them young people. Average

loans of EUR 5 276 have supported or created more than 874 000 jobs.

“I feel very happy—very, very happy, seeing as business is not going down,” says Phyllis, 30, who employs two people. “Without the loan, I would be having a hard time. If I hadn't received the loan from Faulu, I would not be where I am now.”

Across Africa, the EIB's microfinance facilities have delivered EUR 270m with almost 1.5 million beneficiaries like Phyllis. They're so successful the EIB has started another facility to lend EUR 60m to agricultural smallholders. They include technical assistance too, helping intermediaries improve credit methodologies and outreach, and sometimes working with final beneficiaries.

“It really helps Africa, especially the young people who need loans,” Phyllis says. “It had been very difficult.”

There's not much room to spare among the cluttered market stalls that surround Jophy Cosmetics. But Phyllis wants to expand anyhow. “I hope the Faulu guys will help me push through, because I know I will make it. With them, I will make it.”

# Where the funds come from

The world's largest multilateral borrower and lender raised EUR 66.4bn on the international capital markets in 2016, including pre-funding for 2017 (up from EUR 62.4bn in 2015). Of that total, EUR 3.8bn was in Green Bonds, which we call Climate Awareness Bonds (CAB). Our issuance reaches investors who might not typically invest in Europe, but who contribute indirectly to European projects by investing in EIB bonds.

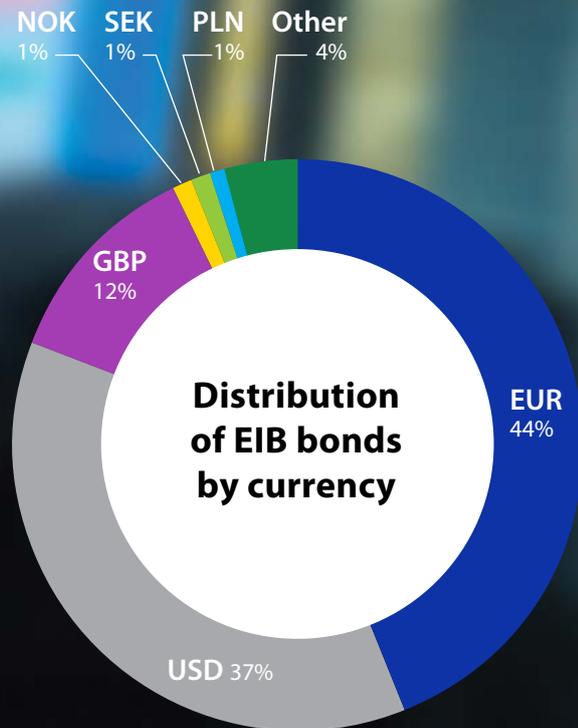
**T**he EIB is a global financial player. In 2016, the Bank issued bonds in 16 currencies, with the majority raised in the core currencies EUR, USD and GBP. Diversified sources and tenors

give flexibility to our funding strategy. The multi-currency approach also enables us to disburse in some local currencies.

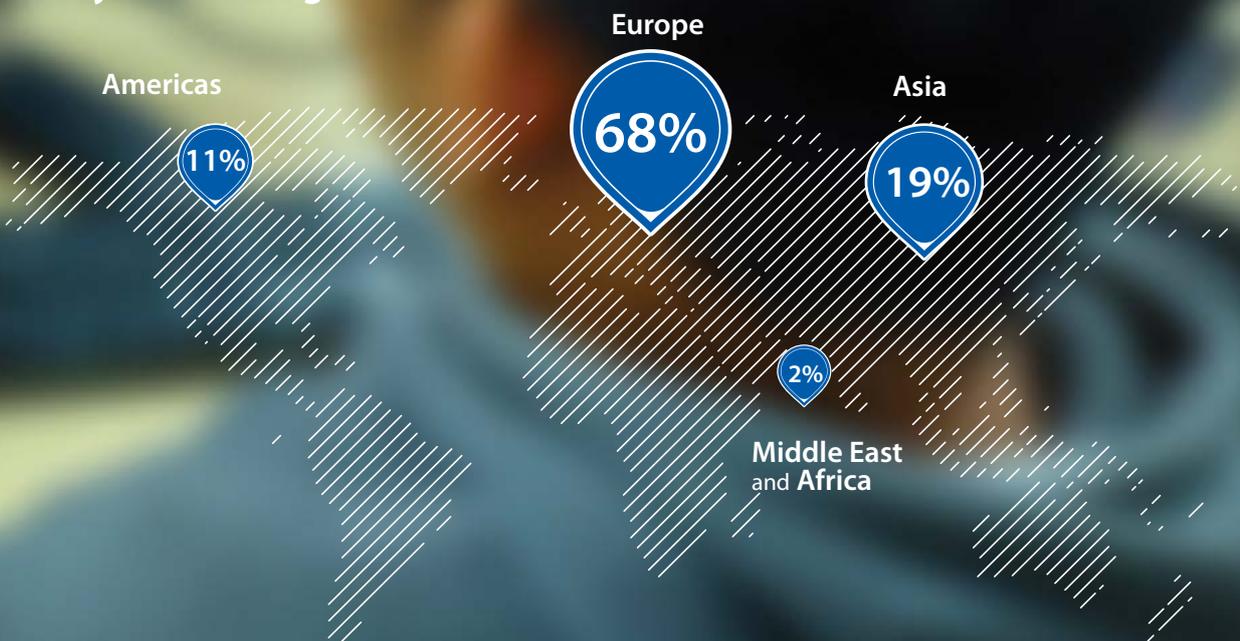
## Highlights of 2016 funding

- ▶ Four new EUR benchmarks in the 3, 7, 10 and 16-year tenor for a total of EUR 17bn, and a new 21-year EUR CAB, the longest-ever Green Bond benchmark in EUR
- ▶ KPMG issued an Independent Reasonable Assurance report on the EIB's Green Bonds, confirming the Bank's leadership position in establishing best market practice
- ▶ The Bank launched USD issuances targeting Italian retail investors, with over 30 000 people estimated to have participated, and a new USD 1.5bn CAB
- ▶ The EIB issued its first Polish Zloty dual-listed benchmark transactions, targeting the domestic investor base, and was the largest issuer of non-governmental PLN debt

Where  
the funds come from



### Distribution of EIB bonds by investor region





# Governance

**T**he EIB is an EU body, accountable to the Member States, and a bank that follows applicable best banking practice in decision-making, management and controls.

The **Board of Governors** is made up of government ministers from each of the 28 Member States, usually Ministers of Finance. The Governors set out the Bank's credit policy guidelines and approve once a year the annual accounts. They decide on capital increases and the Bank's participation in financing operations outside the EU. They also appoint the Board of Directors, the Management Committee and the Audit Committee.

The **Board of Directors** takes decisions on loans, borrowing programmes and other financing mat-

ters. It meets ten times a year to ensure that the Bank is run in accordance with EU Treaties, the Bank's own Statute, and general directives laid down by the Board of Governors. There are 29 directors, one nominated by each Member State and one by the European Commission. There are also 19 alternate directors. To broaden the Board of Directors' professional expertise, six experts may be co-opted to participate in Board meetings as non-voting advisers. Decisions are taken by a majority representing at least 50% of the capital subscribed by the Member States and one third of Board members entitled to vote, unless otherwise provided for in the Statute. The Board is chaired by the President, in a non-voting capacity.

The **Management Committee** is the resident decision-making body. It oversees the day-to-day running of the Bank, prepares decisions for the Board of Directors and ensures that these are implemented. It meets once a week. The Management Committee works under the authority of the President and the supervision of the Board of Directors. The other eight members are the EIB's Vice-Presidents. Members are appointed for a renewable period of up to six years and are responsible solely to the Bank. The four largest shareholders – Germany, France, Italy and the United Kingdom – each have a permanent seat on the Management Committee.

In addition, the Bank has an independent **Audit Committee** answerable directly to the Board of Governors. It is responsible for the audit of the Bank's accounts and for verifying that the activities of the Bank conform to best banking practice. The statement of the Audit Committee is submitted to the Board of Governors together with the annual report of the Board of Directors. The Audit Committee is composed of six members appointed for a non-renewable term of six consecutive financial years.

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