



# PRIORITIES<sub>FOR</sub> PROSPERITY



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**2024** ACTIVITY REPORT

**European Investment Bank Group Activity Report 2024**  
**Priorities for prosperity**

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Published by the European Investment Bank.  
Printed on FSC® Paper.

# WHAT'S IN THIS REPORT

## **People and businesses expect Europe to support investments for the future.**

Investments that improve lives. Investments that reinforce security and offer new opportunities. In 2024, the EIB Group unveiled a Strategic Roadmap that does just that. Organised around our core strategic priorities, we aim to accelerate the green transition, boost technological innovation, bolster security and defence, and support regional cohesion and social infrastructure. Our commitment to international development and capital markets integration safeguards Europe's strong global presence. **Our priorities boost growth, prosperity, and technological and social progress in individual Member States, across the whole European Union and around the world.** They are aligned with the agenda of Europe's leaders on competitiveness, strategic autonomy and economic security. Our work in these areas contributes to a strong voice for Europe around the world and helps tackle today's geopolitical challenges. This report highlights projects that encapsulate our work in each of these priorities.



# CONTENTS

## 2 2024 HIGHLIGHTS, LENDING AND IMPACT DATA

## 4 THE EIB GROUP IN YOUR COUNTRY

## 6 THE EIB IN YOUR WORLD

## 9 OUR CORE STRATEGIC PRIORITIES

### 1. CLIMATE

- 12 Germany: Energy from the good earth
- 13 Germany: A grid for the green heart
- 14 France: Giga-push for batteries
- 16 Italy: Dome of renewables
- 18 Poland: Finally safe

### 2. DIGITALISATION AND TECHNOLOGICAL INNOVATION

- 22 Belgium: No sleep mask required
- 23 Finland: Technology without an expiry date
- 24 Germany: Take a teledrive
- 25 Italy: An electrifying future
- 26 Spain: Sparking motorcycle evolution
- 27 Austria: A green fix for steel
- 28 Spain and Sweden: A tide of innovation
- 29 Poland: Light leap
- 30 France: Adjustable antibodies

### 3. SECURITY AND DEFENCE

- 34 Denmark: Reinventing Esbjerg

### 4. A MODERN COHESION POLICY

- 38 Italy: A tough decision
- 39 Romania: Rooftop transition
- 40 Slovenia: Expanding green energy
- 41 Poland: Track to the sea

### 5. SOCIAL INFRASTRUCTURE

- 44 Cyprus: Rooms to grow
- 45 Austria: Lots of room to rent
- 46 Czechia: Ostrava's encore
- 47 Italy: No oxymoron

### 6. AGRICULTURE AND BIOECONOMY

- 50 Greece: Reservoir of resilience
- 51 Spain: Oil of a different origin
- 52 Denmark: Mycellium mince
- 54 Germany: Modernising the dairy
- 55 Germany: A delicious solution

### 7. HIGH-IMPACT GLOBAL INVESTMENT

- 58 Bosnia and Herzegovina: A current flowing to the future
- 62 Albania: On track
- 63 Ukraine: All of us are helping each other
- 64 South Africa, Mozambique, Taiwan: Equity makes things happen
- 65 Mauritania: A future of diversity

### 8. CAPITAL MARKETS UNION

- 68 Spain and France: Platforms for capital

## 72 WHERE THE MONEY COMES FROM

## 74 GOVERNANCE

## 75 GROUP OPERATIONAL PLAN 2025-2027 HIGHLIGHTS

# 2024 HIGHLIGHTS

**EIB GROUP  
IN 2024**

**€88.8bn**

**EUROPEAN  
INVESTMENT BANK  
IN 2024**

**€68.2bn**  
inside EU

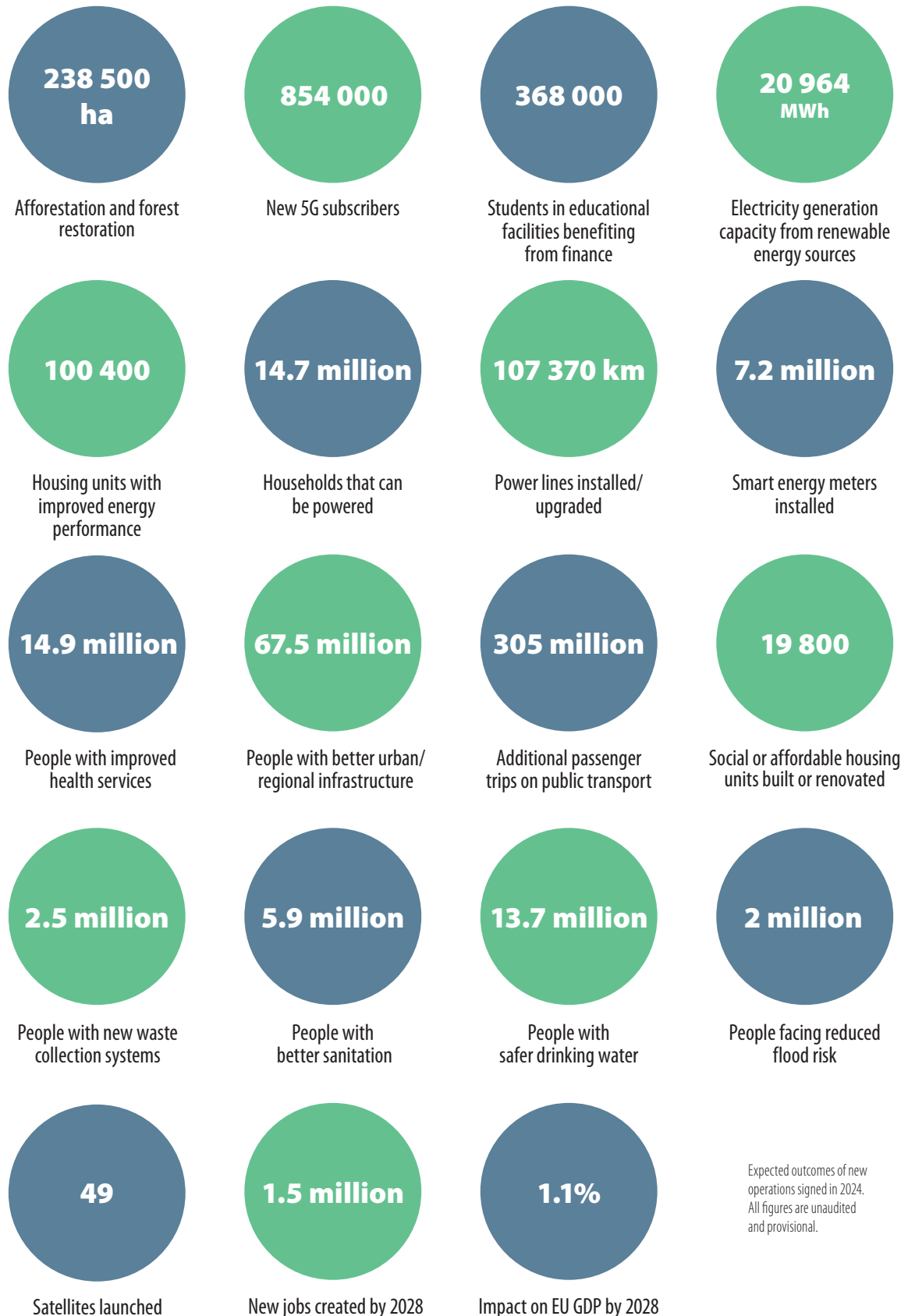
**€8.4bn**  
outside EU

**EUROPEAN  
INVESTMENT FUND  
IN 2024**

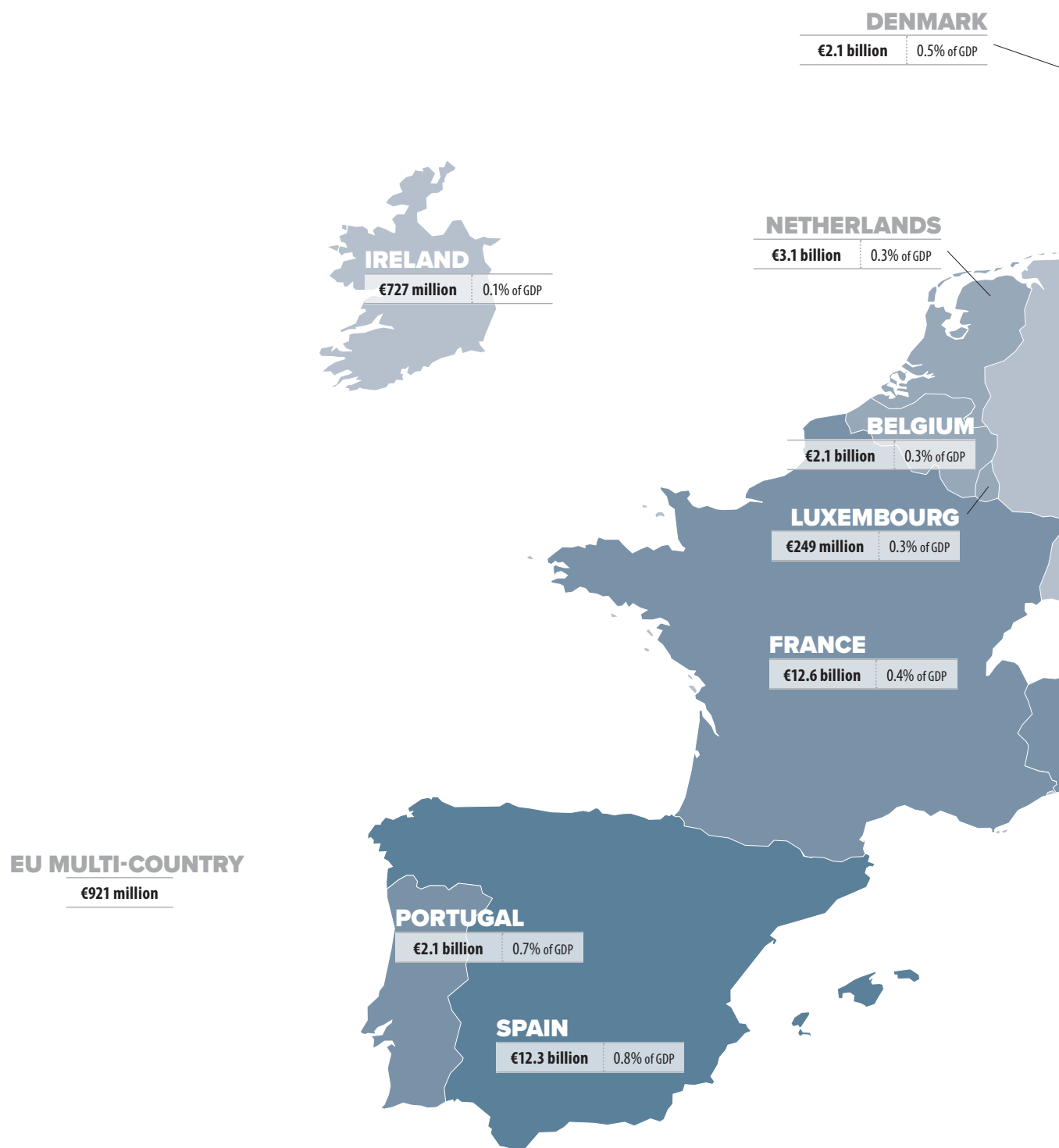
**€14.4bn**

The European Investment Fund (EIF), part of the EIB Group, specialises in risk finance to support micro, small and medium-sized enterprises and stimulates growth and innovation across Europe. It provides financing and expertise for sound, sustainable investment and guarantee operations. EIF shareholders include the EIB, the European Commission, public and private banks and financial institutions.

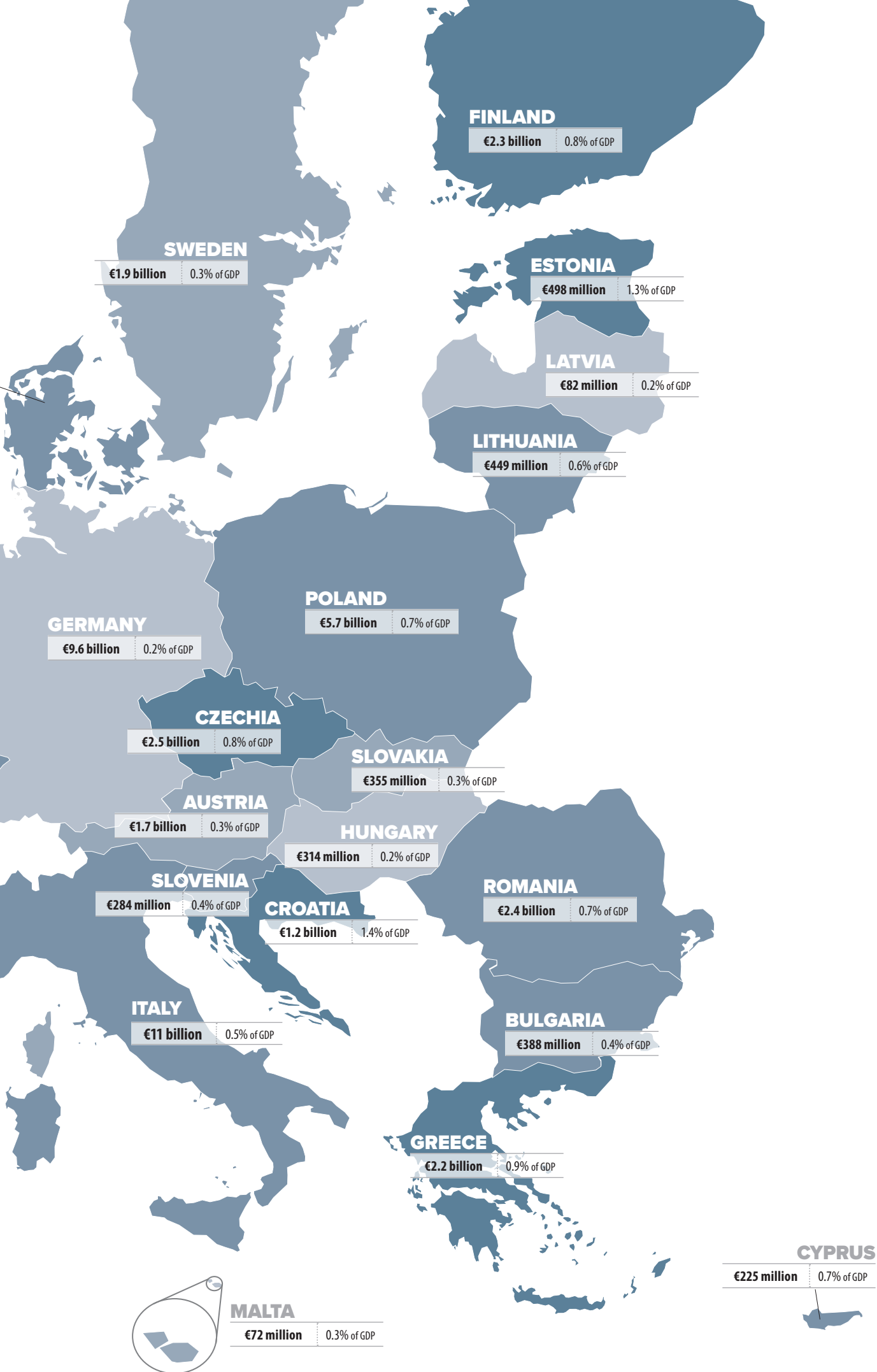
# THE EIB'S IMPACT



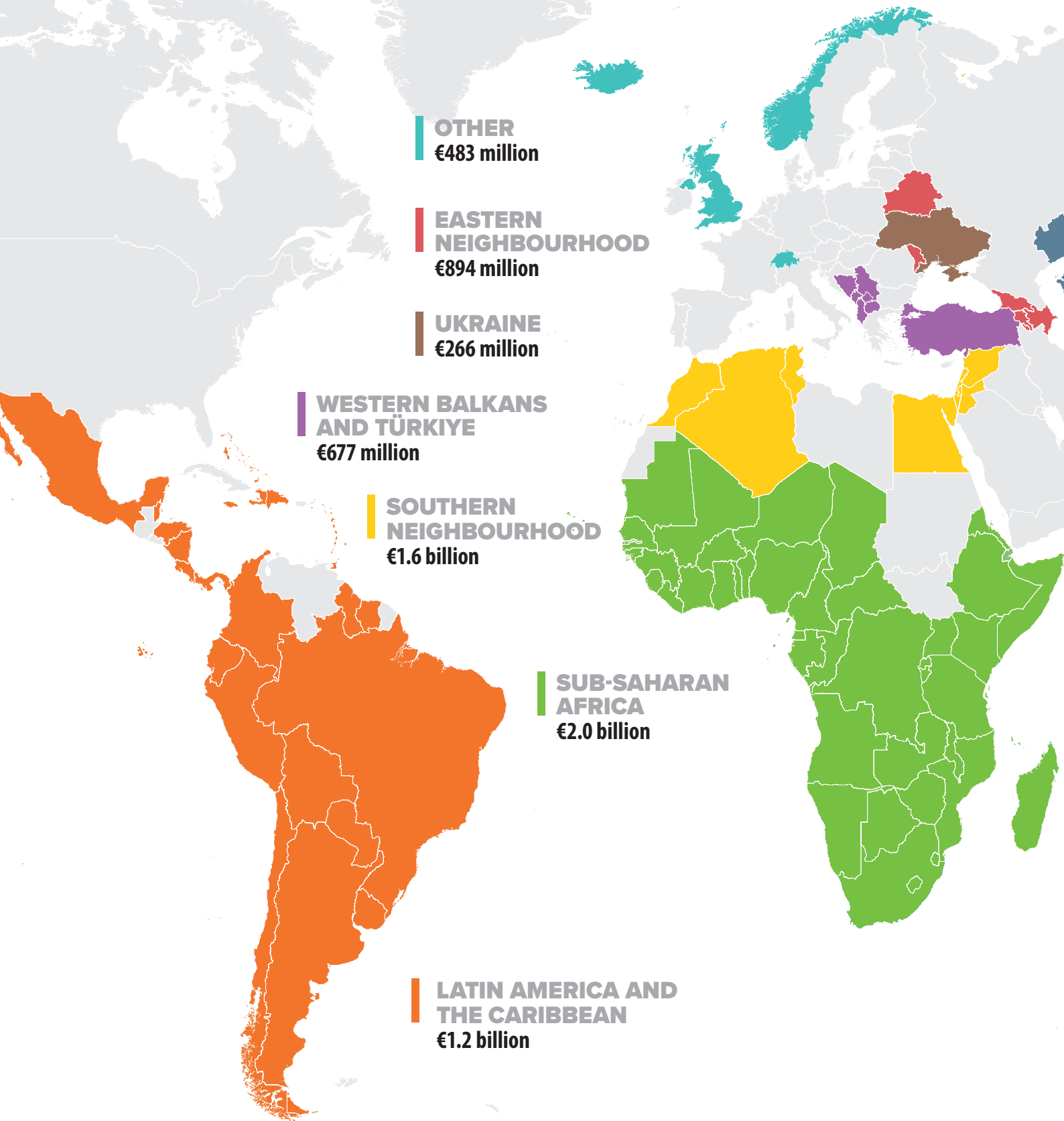
# THE EIB GROUP IN YOUR COUNTRY

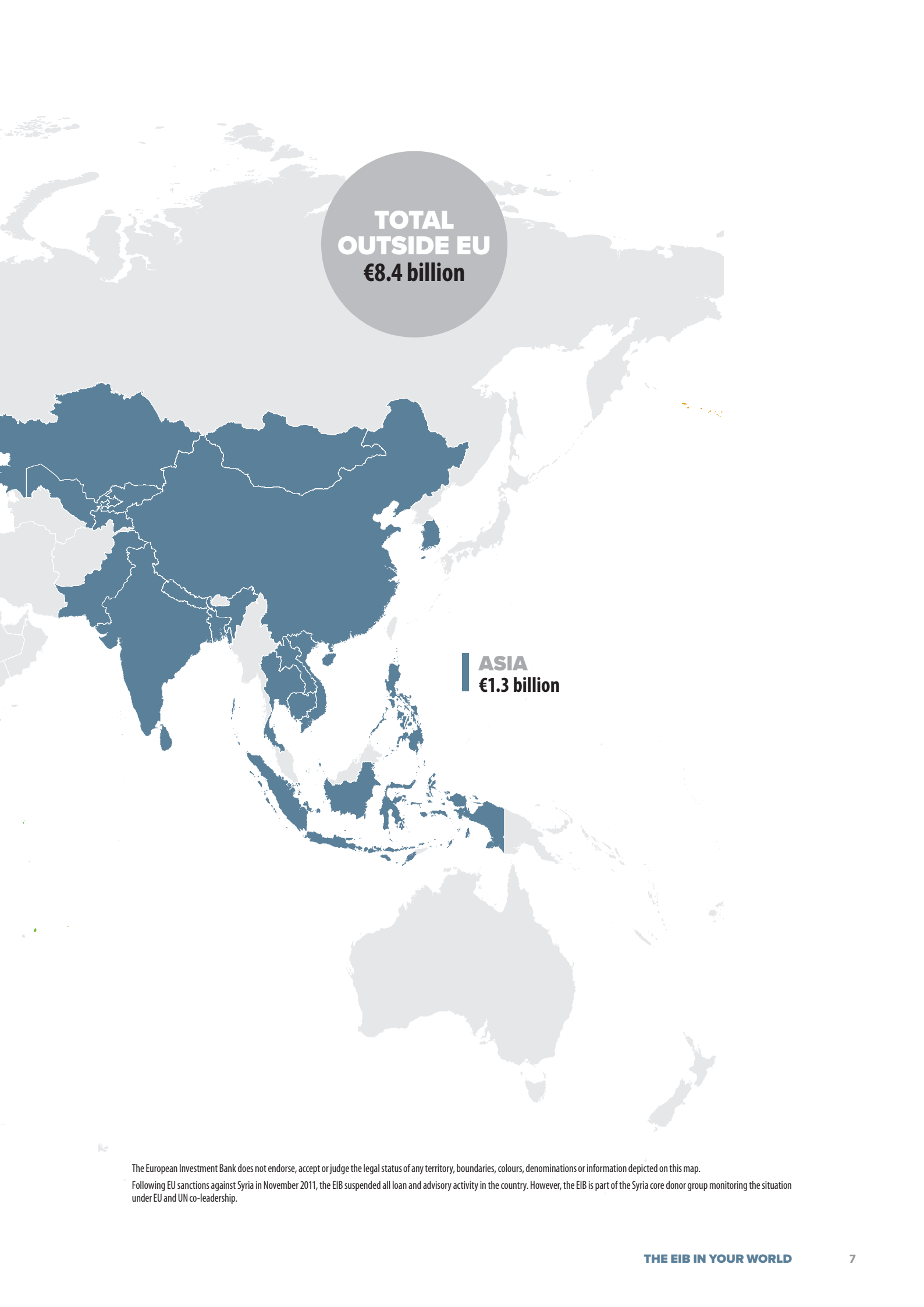


Darkers colours signify higher investment as a percentage of GDP.



# THE EIB IN YOUR WORLD





**TOTAL  
OUTSIDE EU  
€8.4 billion**

**ASIA  
€1.3 billion**

The European Investment Bank does not endorse, accept or judge the legal status of any territory, boundaries, colours, denominations or information depicted on this map.

Following EU sanctions against Syria in November 2011, the EIB suspended all loan and advisory activity in the country. However, the EIB is part of the Syria core donor group monitoring the situation under EU and UN co-leadership.





# **OUR CORE STRATEGIC PRIORITIES**



**€50.7**  
billion

The location of Verkor's gigafactory near Dunkirk facilitates the import of raw materials and the export of its batteries.

# CLIMATE

“

Scaling emerging clean technologies is one of the most urgent challenges Europe faces today. Innovation in cleantech is advancing at an unprecedented pace, but translating breakthroughs into scalable, market-ready solutions – especially through first-of-a-kind demonstrations – remains a formidable and capital-intensive task. These pioneering projects often carry high risks, making it essential to establish strong partnerships between the public and private sectors to overcome these hurdles. We are committed to bridging this critical funding gap for growth-stage companies and catalysing impactful partnerships to accelerate the deployment of transformative technologies. By supporting Europe’s most promising cleantech ventures, we aim to drive our energy transition forward, foster economic resilience and secure Europe’s position in the global clean economy. ”

**Irene Gálvez Verdú**, head of cleantech equity and growth capital, EIB Operations

“

Finance for resilient, green infrastructure is more critical than ever, because of scary, new destructive storms, droughts and rain bombs. The European Investment Bank is in the privileged position of being able to contribute at scale, supporting government policies and attracting important amounts of private capital to climate finance. As the EU climate bank, I believe we can still become more agile in our execution, do more, and maintain a clear, long-term policy direction that perfectly complements all other strategic priorities. ”

**Dirk Roos**, head of energy transition programmes, EIB Projects

# ENERGY FROM THE GOOD EARTH

**In Germany, drilling is underway to harvest heat and energy from subsurface rock, an innovative solution that does not rely on water reservoirs**

**D**aniel Mölk first worked in the Bavarian town of Geretsried in the early 2010s, on a project seeking hot subsurface water reservoirs for a plan by the local utility to generate hydrothermal energy. They didn't strike water, but Mölk and the team learnt almost everything there was to know about the earth and rock formations around the town. That laid the foundations for a pioneering geothermal endeavour in the same spot 13 years later.

Geothermal energy projects mostly involve capturing heat from subsurface water or steam reservoirs through drilling. However, in Geretsried and many other places, underground water is not available or accessible. So Mölk, managing director of Eavor Germany, a subsidiary of the Canadian company Eavor, drills deep into the earth and harvests the heat from the rock itself.

The first commercial-scale Eavor-Loop is being built in Geretsried with the help of a €91.6 million grant from the EU Innovation Fund and €45 million in financing from the European Investment Bank. It's an innovation that will provide clean, renewable heat and electricity to the equivalent of 30 000 households in the region.

The system resembles a giant underground radiator. Eavor's technicians drill two vertical wells to a depth of between 4 500 and 5 000 metres. Then they drill 12 pairs of horizontal lateral channels 3 000 to 3 500 metres long from the base of each well, making a total of about 80 km of drilling per loop. (Geretsried's system will have four such loops.) The giant radiator is then filled with clean water. A pump initiates the flow of water. When the pump is switched off, the system continues to operate naturally on a "thermosiphon." That means the water in the bottom of the system is heated by the underground rock through conduction and naturally rises to the surface, where it can be used directly for district heating or to generate power. The system emits less greenhouse gas than conventional geothermal systems since there is no need to reinject new fluids and because it does not require the extensive use of pumps.

The first loop of the Geretsried Eavor-Loop project is scheduled to be operating by the end of 2024. All four loops are expected to be running by 2026. The company is working on a second project in Hannover.

**“When the pump is switched off, the system continues to operate naturally.”**

# A GRID FOR THE GREEN HEART

## Thuringia's grid gets upgrade to iron out bumps in the road to decarbonisation

**T**o cut its CO<sub>2</sub> emissions and strengthen its energy security, Europe is investing massively in renewable energies like wind and solar power. But the intermittent, weather-dependent supply of electricity from sunshine and wind makes it difficult for grid operators to predict and manage electricity supply and demand. Reliance on renewables can also make it more difficult for grids to maintain a stable electrical frequency. This poses a risk to their stability, as it makes the system less able to withstand sudden disturbances, like the loss of a large generator, or a sudden drop in wind.

The distribution grid operator in Germany's Thuringia region, TEAG, is one of many grid companies in Europe investing now to address these bumps in the road to decarbonisation. Known as "the green heart of Germany" for its dense forests, Thuringia generates more than 57% of its electricity from renewables, including 22.4% from wind.

In April 2024, TEAG signed a €400 million loan under the European Union's REPowerEU plan with the European Investment Bank to help finance a €600 million investment programme to upgrade its sprawling regional network. It serves 620 municipalities, many of which are small, with only 10 000 to 20 000 inhabitants. Thanks to the loan, TEAG will be able to double its investments in the electricity grid and employ at least 300 additional staff.

**“We expect a massive increase in the need for renewables.”**

"We expect a massive increase in the need for renewables," says Mike Karaschinsky, division manager at TEAG. "Germany has gone from a very centralised system based on coal and nuclear power plants located close to consumption centres to a very decentralised system where generation takes place when the weather conditions are best. The challenge is to understand where the future flows will take place and which routes will be busiest."

### Intelligent network

As part of the investment programme, new power cables and overhead lines of all voltages will be installed, and others will be replaced. Substations will also need to be built and modern network components will be required for automated and digital dispatching. The investments are necessary to upgrade the grid to connect more decentralised producers and users of solar and wind power, among them consumers who want to connect solar panels, heat pumps and wall boxes to benefit from the digital transformation.

"With the increase in electromobility, with car batteries and charging systems that can feed back into the network, we need to invest in a much more intelligent network," says Karaschinsky.

# GIGA-PUSH FOR BATTERIES

## French startup Verkor is building a gigafactory in Dunkirk to mass-produce battery cells for 300 000 electric cars each year

**B**enoît Lemaignan and five others founded the French battery company Verkor in July 2020. The startup's name is a reference to the Vercors mountain range, which overlooks Lemaignan's native Grenoble. Growth has been as steep as the slopes of those peaks.

After raising an initial €250 million for its innovation centre in Grenoble, Verkor was quickly able to bring in more funds, including €650 million in state subsidies under the France 2030 plan, which is intended to help French industry keep up by investing massively in innovative technologies and the green transition. The subsidies included €60 million from the Hauts-de-France region and €30 million from Dunkirk.

In April 2024, the European Investment Bank approved €270 million in direct loans to Verkor, to help build the company's gigafactory in Dunkirk, with the support of InvestEU. In addition, the Bank plans to sign intermediated loans with participating commercial banks that could bring its total financing of the project to €400 million.

### Volatile markets

All this investment is not without risk.

"Raising billions of equity and debt financing in the electric vehicle battery market is not simple for startups like Verkor," says Olivier Kueny, a European Investment Bank loan officer who worked on the deal. "Demand for electric cars and prices of raw materials are very volatile, and these mega projects face technology, market and construction risks that make the structuring of finance a delicate matter for sponsors and lenders."

Batteries account for between 30% and 50% of an electric vehicle's cost, and electric vehicles are still more expensive than comparable fossil fuel-powered cars. Carmakers are working to reduce the cost, so that European-made electric cars can be competitive compared to fossil fuel-powered cars and Asian-made electric vehicles. "It is a very competitive sector," says Jonas Wolff, a lead engineer at the European Investment Bank. "There is a technology risk, because manufacturers are constantly pushing the boundaries to get a bit more out of the cells, so they can lower their price."

### How to push boundaries

The cathode, a key component of a lithium-ion battery, for example, is made of a mixture of nickel, manganese and cobalt with some lithium and other metals. "The recipe for this mixture is proprietary," Wolff says.

The metals are expensive and highly volatile, with complex supply chains and extraction and manufacturing processes. The trend is to reduce the amount of expensive and volatile metals in the mix to reduce costs and increase price stability. There are also compliance considerations linked to the supply chains, which are often located beyond the European Union. "We try to have a local production of material and then extend it to Europe and beyond," says founder Lemaignan. "Some materials will still come from Africa, South America and Asia. But typically, our lithium supply will come from Europe. We'll have some nickel supply in Europe and some cobalt supply from Morocco. We are developing these value chains together with Renault."

The gigafactory's location near the port of Dunkirk will facilitate the import of raw materials and the export of finished products to Renault's factories. With four production lines, the gigafactory is expected to produce battery cells for up to 300 000 vehicles annually. The project is also expected to create 1 500 to 2 000 jobs in Dunkirk by 2030.

**“ This operation checks all the right boxes. It’s an innovative European startup, it facilitates the green transition of the European automotive sector, and it contributes to Europe’s global competitive position in a key sector. ”**

# DOME OF RENEWABLES

**Carbon dioxide is causing climate change. But an Italian company has figured out how to make it the solution for renewable energy storage – and to fight global warming**

In central Sardinia, a massive balloon looms on the horizon. It is full of carbon dioxide, one of the main greenhouse gases causing dangerous changes to our climate. Yet the very gas driving global warming could be an important factor in the fight against climate change. Energy Dome, a Milan-based startup, uses the huge balloon, also known as the dome, as a critical part of their CO<sub>2</sub> Battery.

“Renewables are currently taking the lead in terms of power production, but they come with a catch – the sun doesn’t always shine, and the wind is not always there,” says Paolo Cavallini, Energy Dome’s chief of staff. “At the same time, we need renewable electricity day and night. Hence, we need long-duration energy storage.”

Storage is the missing piece in the renewable energy revolution. Energy producers need to be able to save energy produced by the wind or the sun so that it can be used at times of low production. Innovators are trying a number of different methods. Energy Dome’s is one of the most promising. The company’s innovation can store energy for as long as ten hours at a cost half that of lithium-ion batteries. “This duration is pivotal, as it allows renewables to replace fossil fuels and become up to 90% of Europe’s energy mix,” says Cavallini.

Energy Dome’s demo plant, the first of its kind, has been in operation for two years. A full-scale plant, capable of generating 200 MWh of electricity in one single discharge – equivalent to 2 439 Tesla Model 3 Long Range batteries – is under construction in the municipality of Ottana, Sardinia.

“Long-duration energy storage is the missing link in making the energy transition happen,” says Cavallini, “and we believe that with our technology we can lead this wave.”

## From negative to positive

During the day, the CO<sub>2</sub> Battery uses excess energy from the local grid – normally supplied by solar power – to compress and liquefy carbon dioxide, storing it in steel tanks. This exploits carbon dioxide’s ability to liquefy under high pressure at ambient temperature, unlike air. The compression also generates heat which is stored in special thermal energy storage units. When electricity is needed, the process is reversed. The stored liquid carbon dioxide is heated through the storage units, turning it back into a gas. This gas then moves back to the dome. But before it gets there, it spins a turbine to produce electricity.

“The whole process is a closed loop, giving back to the grid 75% of the energy initially used during charging,” says Cavallini. “It can last 30 years without any kind of degradation, contrary to other electrochemical technologies that quickly degrade.”

### Supporting Europe's green transition

To fight climate change, the European Union has an ambitious plan to transition to a carbon-neutral economy by 2050. To meet this goal, Europe will have to replace lost fossil-fuel generation capacity with emission-free sources, particularly renewable energies such as wind and solar.

Energy Dome's storage solution is backed by the European Investment Bank and the Bill Gates-founded Breakthrough Energy Catalyst with combined funding of €60 million. Such solutions are critical for Europe's climate goals. "This is an inspiring example of game-changing technology that we need more of in Europe and worldwide," says Alessandro Ronzoni, a loan officer at the European Investment Bank who worked on the deal. "This financing will help the construction of the site, deployment of the technology and the mobilisation of private funds."

### The future of long-duration storage

Energy Dome's batteries are great for balancing the energy supply from renewable energy sources and energy demand, as well as providing backup storage for several days to stabilise the grid during periods of poor weather that disrupt power generation by solar photovoltaic panels.

The affordability of carbon dioxide batteries is also what sets them apart. They're made with eco-friendly materials and off-the-shelf components. This means they are able to generate electricity for a lower price than lithium-ion batteries.

"Our plant in Sardinia is the first full-scale module of its kind and it's going to be a module that we are going to replicate all over the world," says Cavallini. "Our domes can be operated in multiple sizes and configurations."

“**Long-duration energy storage is the missing link in making the energy transition happen.**”

# FINALLY SAFE

**In September 2024, southwestern Poland faced a devastating flood. The Racibórz Dolny reservoir protected millions, showing the power of flood safeguards**

**C**zesław Burek, the wójt of Lubomia, dreamt of a future where the residents of Nieboczowy could live free from the constant threat of floods. The village in southwestern Poland suffered greatly during the 1997 flood of the River Odra – the worst in the region’s history. With homes destroyed and lives lost, the community was devastated. Burek, whose title refers to his position as the head of a collection of rural villages, vowed to prevent such tragedies from occurring again. The opportunity came when the Polish government decided to build the large Racibórz Dolny reservoir in the Odra Valley, near the village. However, for the project to happen, the residents faced a significant obstacle: they needed to relocate. “With streams all around us, sudden floods occur whenever extreme weather strikes,” says Burek. “Staying where we were would mean the end of our village.”

The community established Nowe Nieboczowy. This “New Nieboczowy” went up just a few kilometres from the original village. It was a difficult decision, but when a catastrophic flood struck southwestern Poland in September 2024, it paid off. The village was unharmed during these floods, thanks to the massive new reservoir. Beyond protecting Nowe Nieboczowy, the reservoir alleviated the impact of the floods for more than 2.5 million residents in three provinces: Silesia, Lower Silesia and Opolskie. “We had to wait nearly 19 years, facing many challenges, but ultimately, we found a way to protect our community and preserve our heritage,” says Burek.

## A first true test

JASPERS, a partnership funded by the European Commission and the European Investment Bank, assisted in the preparation of the Racibórz Dolny reservoir and other flood protection projects along the Odra and Nysa rivers. “The reservoir acts as a gigantic buffer, controlling floodwaters from the Odra and Nysa rivers,” says Łukasz Wyra, a senior water engineer at the European Investment Bank who worked on the project. “It is a crucial component of the flood protection system on the Odra.”

In September 2024, the reservoir faced a challenging test. The region was hit by its heaviest recorded floods, even surpassing the historic inundation of 1997 that caused massive damage affecting 600 000 people in Wrocław. Storm Boris unleashed five times the average September rainfall in just four days, causing huge damage across southern Poland. The reservoir’s effectiveness was so well-received that it prompted thousands of grateful reviews on Google Maps for the sacrifice made by the villages that were relocated for its construction. “It saved the town of Racibórz, where my mother and her parents come from,” says one of the reviews. “I would like to thank the former residents of Ligota Tworowska and Nieboczowy, and the 240 displaced families.”

## Flood protection all over Poland

Recent floods show just how important flood risk management projects are, and the foresight of the Polish government in initiating ambitious flood-protection projects in vulnerable areas across the country, such as Kotlina Kłodzka, Sandomierz, Słubice, Żuławy and Węzeł Oświęcimski.

“With the support of EU funding we have completed 119 projects focused on climate adaptation, including investments enhancing flood safety, water retention, and the development of threat forecasting and rescue systems in Poland,” says Jarosław Orliński, director at the Ministry of Development Funds and Regional Development. “Had these investments not been made, the scale of destruction would have been immense, much larger than what occurred.”

### A growing phenomenon

Floods are some of the most destructive natural events out there, and climate change is making them more frequent and severe. Scientists predict that four-day downpours will become at least twice as frequent and 7% more intense. If global temperatures rise by 2° Celsius, these storms could occur about 50% more often.

“We need more projects like these, and existing infrastructure must be expanded and improved, as we’re losing safety margins,” says Eckart Tronnier, who headed the JASPERS Advisory team. “Many times, flood protection infrastructure might just sit there, not really being used. It’s only when a disaster hits that we see just how important they really are in saving life and avoiding comprehensive damage.”

Under new assignment, the Technical Advisory team is supporting Polish authorities in identifying and prioritising new flood risk management projects.

Flood protection projects can breathe new life into cities, too.

“Restaurants and shops gradually appeared in Wrocław, and the banks transformed into green spaces with cycle paths,” adds Eckart Tronnier. “Hence, water became an asset for the city once again.”



€14.4  
billion

Finland's Swappie  
extends the lifespan of  
smartphones and cuts  
carbon emissions.

2

# DIGITALISATION AND TECHNOLOGICAL INNOVATION

“ Our support for breakthrough technologies like artificial intelligence plays an important role in accelerating scientific discovery, boosting productivity and competitiveness, and transforming business models. It also accelerates the energy transition and enhances our security and defence, for example, through cybersecurity technologies. ”

**Antonello Locci**, head of innovative digital technologies and manufacturing industries, EIB Projects

“ Each of these companies is not only pushing the boundaries of technology but also fortifying Europe's future autonomy in critical sectors. ”

**Yu Zhang**, head of deep tech, digital and life sciences, EIB Operations

“ Our strong engagement in financing innovation and digitalisation supports Europe's efforts to increase its competitiveness. Our funding for strong scientific and technological foundations, for fast access to information and digital services, increases Europe's innovation capacity – and ultimately increases jobs in Europe. ”

**Christine Garburg**, head of Baltic Sea and Northern Europe corporates, EIB Operations

“ Innovative early stage medtechs are deeply involved in European research and development activities that generate positive knowledge consequences. These kinds of investments address unmet medical needs with a high socioeconomic impact, including significant health benefits. ”

**Dana Burduja**, head of life sciences and health, EIB Projects

# NO SLEEP MASK REQUIRED

## Nyxoah's innovation is a minimalist treatment for obstructive sleep apnoea, the world's most common sleep disorder

**M**edical-technology company Nyxoah identified obstructive sleep apnoea as a critical market due to vast patient need and the limitations of current treatment options. This prompted the Belgian company to develop a new device that treats the sleep disorder. "One of our primary motivators was the high patient dropout rate associated with airway pressure therapy, the standard first-line treatment for obstructive sleep apnoea," says Olivier Taelman, Nyxoah's chief executive. "This clear unmet need for some patient-centric solution led us to create a minimally invasive neurostimulation device."

Nyxoah's innovative design for its Genio device could be a big development for the estimated 14% of men and 7% of women who suffer from moderate to severe sleep apnoea.

The standard treatment with "continuous positive airway pressure" machines requires wearing an uncomfortable mask throughout the night. Many patients aren't able to tolerate the treatment, finding it uncomfortable or it disturbs their sleep. Half of users drop the treatment within a few years.

The European Investment Bank recognised Genio's potential and invested €37.5 million in July 2024 to support further research and development and to scale up production.

"Our neurostimulation technology, designed to enhance comfort and compliance, will enable patients to experience a higher quality of life through an effective, patient-friendly solution that addresses a significant unmet medical need," says Taelman.

### Minimally invasive

Obstructive sleep apnoea causes a person's breathing to stop and start repeatedly because of a blockage in the airway. This is often caused by the collapse of soft tissue in the throat. Clinical studies have shown that the mortality rate of non-treated patients suffering from obstructive sleep apnoea increases significantly over time. If left untreated, it can double an individual's risk of having a stroke, and multiply their cardiovascular mortality risk by five. Untreated sleep apnoea can also cause sleepiness during the day and poor concentration, and increases the risk of high blood pressure and type 2 diabetes.

The Genio device is implanted under the chin, roughly 2 cm deep, in a brief outpatient procedure. It operates without an external battery or visible parts, allowing for comfortable and discreet use. The most important muscle of the tongue is called the genioglossus muscle and its nerve is called the hypoglossal. Genio stimulates this nerve on both the left and right side, just under the chin, triggering the contraction of the posterior portion of the tongue, which will be gently pushed forward. By stimulating this nerve, the system keeps the tongue from collapsing back into the throat, ensuring that the airway remains open throughout the night.

# TECHNOLOGY WITHOUT AN EXPIRY DATE

## Finnish company Swappie innovates in smartphone refurbishing to reduce carbon emissions, minimise e-waste and conserve critical raw materials

**E**uropeans bought 130 million new smartphones in 2023. The production of each phone emitted 80 kg of CO<sub>2</sub>. Refurbished smartphones have a 78% lower carbon footprint than new ones, but only 25% of pre-owned phones in Europe are resold. That's nearly 98 million smartphones that aren't refurbished – a significant missed opportunity to cut carbon emissions. A Finnish company, Swappie, is refurbishing and reselling smartphones to help customers shrink their carbon footprint and embrace the circular economy.

And it all started when Sami Marttinen was scammed.

"I bought a used phone online," recalls Marttinen, "but it never arrived." After realising such scams were common, Marttinen and his partner saw a business opportunity. "The entrepreneur in me woke up the next day. We did some research, and that's how Swappie was born."

Today, the company Marttinen founded is Europe's largest iPhone refurbisher, with over 2 million customers served in 13 countries. "If people trust the market, they'll be more willing to consume circular products," Marttinen says. "Extending a smartphone's lifespan by just one year cuts its lifetime carbon emissions by a third."

### Conserving raw materials

The European Union generates 5 million tonnes of e-waste annually. Smartphones play a crucial role in this issue, because they contain critical raw materials like cobalt and lithium. If only 50% of the smartphones sold in 2023 were refurbished or recycled, Europe could save or recover 1 365 tonnes of cobalt and 195 tonnes of lithium – more than half of the 380 tonnes extracted by Europe's largest producer, Portugal, that year.

That's why the European Investment Bank supported the company with €17 million in venture debt financing, backed by the InvestEU programme. "Swappie's work aligns with our commitment to a circular economy and sustainable innovation," says Iwona Biernat, the loan officer working on the project.

The loan will support the company's research and development and robotics, helping to make iPhone repairs faster and more reliable. However, for the refurbishing sector to grow, another important element is missing. According to Eurostat, less than a third of Europeans sell or recycle their old phones, while nearly half keep them in their household. "We need to get people to sell their old smartphones," Marttinen says.

# TAKE A TELEDRIVE

## German startup Vay introduces innovative car sharing with teledriven electric vehicles operated by remote drivers

**W**hen Thomas von der Ohe was building self-driving shuttles in Silicon Valley in 2017, everyone believed that within three years, driverless vehicles would be widely available. “This three-year window always moved out, every year, by a year,” says von der Ohe, the German co-founder and chief executive officer of Vay, a driverless mobility startup. But then he had an idea. Instead of waiting for autonomous vehicles to be perfected, why not introduce clean and efficient car sharing using vehicles controlled remotely by a teledriver? He quit his job, moved back to Europe and joined forces with two other European engineers, Fabrizio Scelsi and Bogdan Djukic. Together they founded Vay in Berlin.

This is how Vay’s technology works: A user can hail a car through the company’s app, and a trained teledriver remotely drives the vehicle to the customer’s location. Once the car arrives, the user takes manual control and drives it like a regular vehicle. After completing the trip, the user ends the rental in the app and exits the car, and the teledriver handles parking or drives the vehicle to the next customer. The remote drivers are totally immersed in their drive. Camera sensors reproduce the car’s surroundings and transmit them to the screens of the teledrive station. Road traffic sounds, such as emergency vehicles and other warning signals, are transmitted via microphone to the teledriver’s headphones. “We believe in a future where humans and computers collaborate,” von der Ohe says. “We’re pursuing a strategy of gradual rollout of autonomous driving, instead of going directly from 100% human to 0% human and 100% computer.”

### Vay in Las Vegas

In January 2024, Vay launched its first commercial service in Las Vegas, where regulations for driverless vehicles are currently less stringent than in Europe. The company plans to scale up the service in Las Vegas and to introduce it across Europe. Vay became the first and only company in Europe to drive on public streets without a safety driver when it received authorisation from Hamburg to operate a driverless car in the city in 2023. In June 2024, Vay announced that it was partnering with Poppy, a car-sharing operator in Belgium, to introduce remote driving there. In September 2024, the European Investment Bank signed a €34 million venture debt investment, supported by InvestEU, to help Vay accelerate the development of its service and technology. “The European Investment Bank helped by giving us good financing terms to take our technology to the next step,” von der Ohe says. “It helps us roll out our technology in more markets, especially across Europe.”

“**We believe in a future where humans and computers collaborate.**”

# AN ELECTRIFYING FUTURE

## Three Italian engineers transform a family business to develop wires that cut carbon emissions and improve electric motor performance

**A**fter working for large corporations, three Italian engineers – Filippo Veglia, Francesco Taiariol and Piero Degasperi – came together to invent a kind of wire-coating technology that enables the production of sustainable, solvent-free, high-performance magnet wire and founded a company called Tau Group to manufacture it. “We had a strong desire to create something meaningful,” says Taiariol, Tau Group’s chief executive. It’s a big advance for motors in electric vehicles, making them as compact and efficient as possible. That in turn enables and accelerates the transition to electrification and lower carbon emissions.

“The solution these guys invented is innovative, they address an emerging market need and a lack of good solutions from current producers,” says Alberto Casorati, the European Investment Bank loan officer who worked on the Bank’s €20 million loan to Tau Group, signed in November 2024. “Tau Group has found this emerging pain point for clients.” Backed by the InvestEU programme, the financing will help Tau Group expand electrical wire production from 2 000 tonnes a year to as much as 12 000 tonnes.

### The core of electrification

Magnet wire is electrical wire with a thin layer of insulation. It carries electricity that is converted to magnetic or mechanical energy in motors, generators and transformers. The materials used in magnet wires haven’t changed much in the last 60 years, despite the fast-changing nature of electric machines. “This has become a problem, as these wires start to fail at 800 volts, which is crucial for many applications in electric motors,” says Taiariol.

Tau Group’s DryCycle technology coats magnet wires with strong, flexible technopolymers with better chemical resistance, electrical insulation and thermal stability. As a result, car manufacturers and electric motor designers can break the 800-volt barrier and potentially reach 1 000 volts.

### Without solvents, less energy and carbon emissions

Traditional polymer coatings for wire are typically applied as liquid solvent-based varnishes. These solvents evaporate during production, which releases harmful particles. They also need to be burned, causing the emission of millions of tonnes of CO<sub>2</sub> from wire production around the world. DryCycle’s innovative approach avoids the use of solvents and additives. It applies very thin coatings of polymer in one layer, which simplifies production, cuts costs and improves performance. This solvent-free process uses about 80% less energy than solvent-based methods. “Tau is all about using energy efficiently,” says Taiariol.

# SPARKING MOTORCYCLE EVOLUTION

**Stark Future wants to revolutionise the motorcycle industry with its electric dirt bikes, to boost innovation, sustainability and the local economy in Spain**

**A**nton Wass discovered his passion for motorcycles when, as a little boy, he watched a neighbour ride a motocross bike through his hometown near Stockholm. By 16, Wass had co-founded an e-commerce business specialising in motorcycle spare parts that became a global leader. Despite his success, Anton still dreamt of inventing a game-changing bike. "For many years, I couldn't stop dreaming that it should be possible to build electric motorcycles that are better than the best gas bikes," he says.

So, he started Stark Future in 2019. Based in Barcelona, the company aims to transform the motorcycle industry with its electric motocross bikes. In 2021, it launched the Stark VARG (Swedish for "strong wolf"), the most powerful dirt bike in the world. "It was a like a bomb in the motorcycle industry," Wass says. "I believe it was the most successful launch of any motorcycle company in history."

The company wants to continue to innovate and plans to make its motorcycles even more sophisticated. That is why the European Investment Bank is supporting the company with a €40 million credit facility, signed in September 2024.

## **Without a clutch**

Stark Future's electric dirt bike's 6.5 KWh battery, coupled with a custom carbon fibre sleeve motor, provides up to 80 horsepower, 30% more power than a comparable petrol-powered 450cc motocross bike. This setup allows up to six hours of technical trail riding or enough energy to complete a full motocross race, with a recharge time of just two hours.

The European Investment Bank's financing will support the company's efforts in developing new e-motorbike platforms and help scale up its manufacturing capacity. The financing is being provided under InvestEU, the European Union's flagship programme to mobilise more than €372 billion of additional investment from public and private sector funds to support EU policy goals by 2027.

"Supporting startups is crucial to fostering a competitive market and retaining knowledge within the European Union," says Joanna Lisboa Tiago, a loan officer at the European Investment Bank who worked on the deal. "Without financial backing, the venture capital market shrinks, reducing players and appetite for risk. We aim to fill this gap."

**“ Supporting startups is crucial to fostering a competitive market and retaining knowledge within the European Union. ”**

# A GREEN FIX FOR STEEL

**We can't stop making steel, but an Austrian company is fighting carbon emissions by ploughing big money into green energy and high-tech research**

**T**he steel industry is responsible for about 7% of global carbon emissions. So the European Investment Bank, Europe's top climate investor, can only back steel investment that is sustainable and innovative. One deal that did qualify for support in 2024 is a €300 million loan approved in June to help the large Austrian steel company Voestalpine conduct research into innovative steel products and sustainable manufacturing.

Voestalpine, one of the largest steelmakers in Europe, will use the money over four years to research and develop processes that use less energy, consume fewer raw materials and extend the life of steel products.

## **How to stay ahead in steel**

More research can help the environment, but it also is the main way Voestalpine can compete globally in the steel market, says Gerald Mayer, the company's chief financial officer. "We are facing an extremely difficult economic environment, especially for European steel companies," Mayer says. "Fortunately, our innovative steel products are highly sought after in the most demanding sectors."

Voestalpine's latest sustainable steel project is called greentec. It will cut emissions by up to 30% starting in 2027, compared with 2019 levels, by partially replacing carbon-intensive blast furnaces with electric arc furnaces.

There are times when the European Investment Bank can extend its support for the steel industry beyond research. It signed a €314 million deal at the start of 2024 for a new H2 Green Steel plant in Boden, Sweden, that will make steel from iron ore with hydrogen and, consequently, will emit 95% less carbon.

## **Helping regions that will be hurt the most**

Because of innovation and investment, the European Union is the second-largest producer of steel in the world after China. Its output is nearly 180 million tonnes a year, or 11% of global production, compared to China's roughly 1 billion tonnes.

The European Commission and the European Investment Bank are working together to support research and innovation in cleaner steel. Investment programmes, such as Horizon Europe, have funded many billions of euros in research to cut emissions in steel, cement and other carbon-intensive sectors. The Just Transition Fund is helping regions and countries that depend heavily on steel production, coal mining and cement switch to more sustainable societies and economies.

# A TIDE OF INNOVATION

## A European Investment Bank initiative boosts innovation in the blue economy, promoting sustainable ocean growth and advances in marine technologies and resources

**R**ene Hansen spent over 20 years working in industries from snowboarding to renewable energy, helping companies around the world grow and innovate. After his global ventures, he felt the need to anchor himself closer to his native Norway. The opportunity came when Konrad Bergström approached him with a vision – creating electric boats. “I realised I wanted to focus my efforts on a company that genuinely valued sustainability,” Hansen says. “It felt like the perfect opportunity to align my work with my values and make a real impact.”

Based in Sweden, the company that Bergström founded aims to revolutionise the boating industry by looking for ways to make boats greener. X Shore combines glass and carbon fibre to optimise weight, performance and environmental impact. The result: four times less CO<sub>2</sub> emitted than a traditional petrol-powered boat. “Boating should be at one with nature,” says Hansen.

That is why X Shore is one of the companies selected for the 20 EU Blue Champions Programme, an initiative of the European Investment Bank and the European Commission that provides free advisory support to companies with best-in-class blue technologies and solutions that tackle the challenges of the blue economy. It aims to boost their competitiveness and prepare them for potential funding by investors or the European Investment Bank. Launched in May 2024, the Blue Champions selected companies based all over Europe, from underwater robotics, green shipping solutions and biorefineries to satellite data applications and wind energy. Inclusion in the programme recognises that these companies are pioneers, driving the sector towards a greener future. The initiative aims to promote a sustainable blue economy and highlight the need for action to protect and restore the oceans for future generations.

### A unique approach

“We saw a need for market support for the development of blue technologies in Europe,” says Paulina Brzezicka, a European Investment Bank financial advisor who set up the Blue Champions with Antonella Calvia-Götz, a principal advisor. “We realised that we need to do something that goes beyond our usual approach, something that we had never done before.”

The new approach uses an open call to identify blue technologies that would benefit from free advisory support, improving the companies' business plans and readying them for potential funding from the European Investment Bank's venture debt instrument or from other investors. Applicants must be scale-up companies with a credible growth investment strategy of at least €15 million over five years, half of which should already be funded by investors. They must be mature enough – or close to it – to be eligible for potential European Investment Bank financing.

# LIGHT LEAP

## A Polish company wants to boost European innovation in everyday devices by developing its photonics technology and infrared detectors

In the 1970s, professor Józef Piotrowski started looking for the best material for sensing applications. At the Warsaw Technical Military Academy, he made a scientific breakthrough that would help transform the world of infrared technology. Piotrowski and his team developed detectors that no longer require cooling with liquid nitrogen. This innovation set the stage for the 1987 founding of VIGO Photonics, a company that has since specialised in producing instruments for photonics (light-wave technology) and microelectronics.

Now led by Józef's son Adam Piotrowski, VIGO Photonics wants to continue its tradition of innovation with a new initiative called HyperPic. This project seeks to integrate lasers and photonic detectors into a single, tiny chip, fundamentally changing the way we interact with everyday devices. "Imagine a smartwatch that not only tracks your steps but also monitors your blood glucose levels in real time, or a refrigerator that alerts you when your food is about to spoil," says Filip Costa, VIGO's corporate finance director. "These are just a few of the applications that HyperPic will have in consumer electronics, environmental protection, medicine and more."

The European Investment Bank is supporting VIGO Photonics with €21 million in venture debt, signed in September 2024, to ensure that Europe remains at the forefront of photonics innovation.

### Detecting the invisible

VIGO Photonics specialises in infrared detectors, complete infrared detection modules and epitaxial wafers – products designed to capture and process infrared signals. The company is now seeking to integrate these components into a fingertip-sized chip, known as a photonic integrated circuit. These circuits represent the next big advance in the sector, with significant applications for everyday and household devices. Their compact size enables complex tests to be conducted easily and conveniently, eliminating the need for a full laboratory.

The EU financing will help VIGO Photonics improve the performance of its detectors and modules and advance research and development for new detectors.

"There is a gap in the Central European market to finance highly innovative, risky but disruptive technologies that may revolutionise whole industries and affect the global economy in the long run," says Philippe Hoett, the senior venture debt loan officer at the European Investment Bank who led the financing for VIGO Photonics.

# ADJUSTABLE ANTIBODIES

## French firm's polyclonal antibody treatments could stop a bio-attack or the next pandemic in its tracks by keeping up with mutating viruses

In many ways, Fabentech is a product of plagues. The French maker of treatments for deadly viruses and biotoxins got its start with two infamous disease outbreaks: Ebola and avian influenza, known as “fowl plague.” Bertrand Lépine founded the company in 2009 with the idea of fine-tuning technology licensed from Sanofi Pasteur, where he worked previously, to create polyclonal antibody treatments that would neutralise lethal viruses and toxins better than existing techniques, such as monoclonal therapies. Sanofi Pasteur had already developed polyclonal antibody treatments that prevented snake and scorpion venom from penetrating human cells. Lépine thought the same approach could be used for deadly diseases.

By 2012, the company was conducting clinical trials for a treatment for avian flu, and by 2015 it was working with the World Health Organization and the European Medicines Agency on Ebola therapies. In 2017, it partnered with the French Army to develop an antidote for a highly lethal biotoxin that comes from plants. While all the treatments were promising, none of them found a big market. Before the pandemic, Europe wasn’t actively addressing the potential threats of bio-attacks or new forms of infectious disease. That contrasted with the United States, which after the September 11 attacks financed biotech startups that were developing treatments. “There just wasn’t a culture of preparing for biothreats in Europe,” says Sébastien Iva, chief executive of Fabentech.

Then COVID-19 hit.

“That was a paradigm shift, because all the individual EU countries, along with EU institutions, started to prepare for these kinds of threats,” says Iva, who joined Fabentech in 2020, just as the pandemic was unfolding. “Budgets started to be dedicated to it.”

### Preparing for biological threats

One of those budgets is HERA Invest, financing provided by the European Commission’s new Health Emergency Preparedness and Response Authority (HERA). The European Commission created HERA in 2021. Part of its mandate is to support European companies and research that address antimicrobial resistance, biodefense and pandemic readiness.

The European Investment Bank signed an agreement to provide Fabentech with €20 million in venture debt financing in October 2024. It is the first investment made under HERA. Fabentech will use the money to further develop its FabShield polyclonal antibody treatments, which grew out of the original Sanofi Pasteur technology, and to scale up production of therapies to treat a range of pathogens, like the Nipah virus and Sarbecoviruses, the family of viruses behind COVID-19, along with plant-based toxins. “For us, HERA is really an unwavering ally that will help us all prepare for future biological threats, whether they be an intentional bio-terrorism attack or naturally occurring epidemics or pandemics,” Iva says.

Fabentech leads the e-Fabric consortium of European universities and firms working on treatments for Sarbecoviruses, which the World Health Organization says have a high-risk of starting another pandemic. SARS-CoV-2 – the virus behind COVID-19 – is part of the Sarbecovirus family. The consortium, which is

working on treatments based on Fabentech's polyclonal antibody treatments, received a €7.7 million grant from the European Commission's Horizon Europe programme in January 2024.

"They were already earmarked by HERA and by the European Commission," says Henri- François Boedt, the European Investment Bank loan officer in charge of the Fabentech investment. "And they are conducting research on a subject where much research and significant financing is needed."

### The big one: COVID-19

When Iva joined Fabentech in July 2020, the company's board told him to shift the firm's focus to high-profile treatments for COVID-19. Fabentech quickly developed a polyclonal antibody treatment for COVID-19 and its variants, called FabenCOV, with the support of EU funds. The lightning development of COVID-19 vaccines and virus mutations somewhat quashed the need for that treatment, although it showed promise in neutralising known COVID-19 variants.

But what had become immediately clear to Europe was the need to identify other lethal viruses that could quickly morph into pandemics and to develop a stock of potential treatments. Many of the treatments for COVID-19 used highly targeted monoclonal antibodies, which basically bind to the spike protein on the surface of the SARS-CoV-2 virus and prevent it from entering cells. As the virus mutates, however, many of these treatments lose their effectiveness.

Polyclonal antibody treatments take a broader approach to a virus or toxin. They identify and target various receptors, or epitopes, that exist on an antigen. Antigens are typically a protein, lipid or nucleic acid that exists on the surface of a virus or toxin. The polyclonal antibodies bind to several sites (epitopes) on a single antigen. By binding to the epitopes, the antibodies effectively neutralise the virus or toxin by blocking its ability to enter human cells and cause infection or illness. "The polyclonal treatments will really catch the virus from all sides and angles," Iva says. "If a virus has mutated, monoclonal treatments will no longer be able to attach themselves very well, so they won't be very effective. The polyclonal will still be able to attach itself to part of the antigen and, therefore, be able to neutralise the virus or toxin."

“**HERA is really an unwavering ally that will help us all prepare for future biological threats, whether they be an intentional bio-terrorism attack or naturally occurring epidemics or pandemics.**”



€1  
billion

The Danish port of Esbjerg is already important to the offshore wind industry. Now it will have a security role, too.

3

# SECURITY AND DEFENCE

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We play a crucial role in enhancing Europe's security and defence by financing vital infrastructure and supporting companies that drive innovation in the sector. By investing in cybersecurity, dual-use technologies and resilient infrastructure, the European Investment Bank strengthens the European Union's capacity to address security challenges and protect its people. Our targeted financing empowers European industries to respond to evolving threats and to support a secure, autonomous Europe. ”

**Timo Kiiha**, head of public sector lending (Austria, Germany and Nordics), EIB Operations

# REINVENTING ESBJERG

## Danish port to serve military vessels and offshore wind industry

**A**t just 156 years old, the port of Esbjerg is relatively new compared to many others in Denmark or across Europe that have been active for hundreds or even thousands of years. Yet during its relatively short life on Denmark's western coast, Esbjerg has undergone a number of reincarnations to serve different industries – from livestock in the 1800s, to fishing in the 1920s and offshore oil and gas in the 1960s and 1970s. Now, as Europe faces new challenges ranging from decarbonisation to geopolitical threats, Esbjerg is reinventing itself again.

“We started to see the change coming a few years ago,” says Dennis Pedersen, the port’s director. “Offshore wind farms in the North Sea are central to Europe’s energy transition, but we need to make significant infrastructure investments to make it happen.”

“Then in 2022 after Russia invaded Ukraine, we realised that we needed to not only worry about decarbonisation but also Europe’s security.”

Esbjerg already plays an important role in the offshore wind industry, where Danish companies such as Vestas are industry leaders. In fact, the port, which is part of the Trans-European Transport Network with strong rail and road connections, has already been a key facility for some 59 offshore wind projects in the North Sea.

### Ready to get bigger...

But offshore wind turbines are getting bigger and bigger. And then bigger still.

Roundabouts on roads leading to the port have already been adapted to allow for extra-long vehicles to drive straight through them. The blades of new turbines in the famously windy region, however, now measure more than 100 metres in length, which means that new turbines have a diameter and height about twice as large as their predecessors. That makes them taller than the “gherkin” tower in London.

Transporting and assembling such massive structures requires special facilities and lots of space. To cater for this, the port of Esbjerg is investing in a new 57-hectare terminal, an area greater than 106 football fields.

### ...and deeper

To better serve Europe’s security and defence needs, the port is also deepening its navigation channel.

NATO vessels have used the port in the past to bring in armoured vehicles such as M1 Abrams tanks and M2 Bradley infantry fighting vehicles from the United States. In June this year, the port handled more than 700 vehicles from the US Army’s 1<sup>st</sup> Armored Brigade Combat Team, and more than 300 items for the US Army National Guard’s 81<sup>st</sup> Stryker Brigade in 2021.

But the port’s navigation channel is too shallow to cater for the transport vessels to arrive fully loaded or during low tides.

“The offshore wind power boom will last for several decades.”

### Investment with a dual use

For the port of Esbjerg, the dual focus has several benefits.

“The offshore wind power boom will last for several decades,” says Pedersen. “Our investment plan will not only help us to consolidate our position in the sector and aid Europe’s energy transition. It will also prepare us for what happens afterwards by opening up new routes to the United States.”

By strengthening its role as a NATO transport hub, the port gains access to significant funding from the European Union and its investment arm, the European Investment Bank. This includes grants from the Connecting Europe Facility and the Danish government and a €115 million loan from the European Investment Bank, which has set aside €8 billion to support the European Union’s Strategic European Security Initiative.

### Investment for security and defence

EU governments want the European Investment Bank to increase its support for Europe’s security and defence. As a result, the Bank has made support for the sector a priority, adapting its lending criteria and internal processes, as well as setting aside more funds. In 2024, it launched a one-stop shop for security and defence projects to make it easier for companies to access its funding and advisory services.

“This is a clear dual-use case,” says Txema Urrutia Aldama, a transport sector specialist at the European Investment Bank. “In fact, it’s probably the first large dual-use infrastructure project we’ve supported.”

## EIB ONE-STOP SHOP FOR SECURITY AND DEFENCE

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As part of its May 2024 Security and Defence Industry Action Plan, the European Investment Bank Group set up a one-stop shop for security and defence, including a dedicated Security and Defence Office and a network of Defence Champions from across the EIB Group. The initiative offers streamlined financial support, expert assistance and improved access to EIB Group financing for the European security and defence sector. The goal is to accelerate investment and deployment of the €6 billion in funding still available under the Strategic European Security Initiative (SESI), and to further boost the EIB Group’s support for Europe’s security and defence. By providing a single point of entry for clients and external stakeholders, the one-stop shop simplifies and facilitates access to the EIB Group’s complete range of financial and technical expertise. It is open to any EU-domiciled firm or innovator active in the security and defence industry. From May to October 2024, it already handled over 200 requests from potential clients seeking clarifications on definitions, eligibility and financing conditions via its dedicated website.

A photograph of a railway track under construction, showing multiple parallel tracks with wooden sleepers and metal rails. The tracks are laid on a bed of gravel and concrete slabs. In the background, there are construction cranes and power lines. The sky is clear and blue.

**€38.2**  
**billion**

Modernising the rail  
link to Gdynia is  
crucial to Poland's  
economy.

4

# A MODERN COHESION POLICY

“ Cohesion policy is the glue that holds our societies together. We play a central role in fostering cohesion across the European Union by financing projects that reduce regional disparities, promote sustainable development and enhance economic and social integration. ”

**Romolo Isaia**, head of lending to Slovenia, Croatia and Italian corporates, EIB Operations

“ Our transport infrastructure projects in cohesion regions bring new economic opportunities to the population. The modernisation of the railway between Kosciierzyna and Gdynia, for example, provides additional capacity for freight between the port and its hinterland. The result: economic development at the same time as a reduced carbon footprint and less dependence on more polluting modes of transport. It makes urban centres more accessible for the population of suburban and rural areas along the line and facilitates clean mobility. ”

**Max Jensen**, head of mobility, EIB Projects

“ Our contribution to cohesion supports investments such as new infrastructure for culture and music in the city of Ostrava. The Czech city suffered significantly from the transition to a low-carbon economy with the closure of the mines and the downturn in heavy industry. We are supporting a centre for cultural and creative industries to contribute to the diversification of new economic development across the Moravia-Silesia region. ”

**Manuel Dueñas**, head of public sector lending for Central and Southeastern Europe

# A TOUGH DECISION

## Ischia rebuilds after a devastating earthquake and landslide

**T**he landslide remains a vivid memory in Casamicciola Terme on the island of Ischia in the Gulf of Naples. “It was immediately clear that something tragic had happened,” says Mayor Giosi Ferrandino. “The amount of muddy debris reaching the centre of the town showed us the scale of the landslide and the devastation it caused on the hill.” Heavy rains on Mount Epomeo in 2022 triggered the landslide, which swept away homes and dragged cars into the sea, claiming 12 lives, including those of a three-week-old baby. And that was only five years after a 4.0 earthquake rattled the whole of Ischia, killing two women and forcing thousands of residents to evacuate.

Rebuilding after the earthquake and landslide is a monumental task. “We’re helping Ischia, making sure funds are available to the Italian government when needed during the rebuilding process,” says Claudia Barone, a senior European Investment Bank loan officer who worked on the €150 million loan signed with Italy’s Ministry of Economy and Finance in November 2024, to rebuild public infrastructure and private buildings affected by the earthquake and floods. It’s the first tranche of a €1 billion financial package.

### Safer, resilient and sustainable rebuilding

Ischia is an idyllic island, known for its thermal springs, unspoiled beaches and breathtaking scenery. But it is also at risk of earthquakes. The problem has worsened over the years because illegal homes and buildings have been built in restricted or risky areas, including riverbeds. This has made it harder for the ground and trees to absorb water, leading to flooding. Natural waterways that should drain the land have been blocked by buildings and left uncleared, with debris piling up.

Casamicciola Terme is particularly vulnerable to landslides. Reconstruction has been underway for a year. Most of the 8 000 residents will be able to rebuild their homes. But 20% will need to move elsewhere on the island. “It’s a tough decision, but it’s for the safety of citizens,” says Giovanni Legnini, the extraordinary commissioner for post-earthquake reconstruction and delegated commissioner for the landslide emergency in Ischia.

The European Investment Bank offered local authorities an innovative study that looks at climate risks and vulnerabilities. This study – the first of its kind in Italy – also recommends sustainable ways to plan, design and carry out the reconstruction. “Ischia rebuilds by reducing the risks that led to the original disaster, creating a positive impact in the process,” says European Investment Bank senior engineer Marco Cecchetto.

# ROOFTOP TRANSITION

## Logistics company WDP equips its warehouses with electric vehicle charging stations and rooftop solar panels, helping tenants transition to green energy

**W**arehouses de Pauw (WDP), a leading logistics real estate company based in Belgium, installed its first solar panels on the roofs of its warehouses in 2008. “The dimensions of the installations that we were putting in were rather small and did not cover the entire rooftop,” says Charlotte De Troyer, WDP’s corporate finance manager, who explains that tenants were not using as much electricity back then. But when demand for electricity surged, fuelled in part by the energy crisis following Russia’s invasion of Ukraine in 2022, WDP decided to change its strategy. “Logistics operations are increasingly electrified, particularly transport,” De Troyer says. “As this transition is happening, electricity demand will triple or quadruple in the years to come.”

To meet this demand, WDP is mounting solar panels on the entire surface of its warehouse rooftops in Romania, Belgium and the Netherlands. The installations will increase WDP’s solar production to as much as 350 MW by 2027 from 180 MW at the start of 2024. WDP is also installing 480 charging stations for electric vehicles at its warehouses, to power trucks ferrying goods to and from its logistics centres.

This kind of infrastructure is expensive, so the European Investment Bank signed a €250 million loan with WDP in July to finance the project.

### Greening Europe’s supply chain

When WDP produces green energy on its roofs, it sells it to tenants. Although powering the warehouses themselves with this electricity results in a modest reduction in carbon emissions, the impact can be huge if it is used to run electric delivery vehicles. “They have trucks coming in and coming out, so if we can help those customers in electrifying their transport, that’s significant,” says De Troyer.

Projects like WDP’s will play a critical role in helping Europe to slash carbon emissions and reach net zero by 2050. WDP is one of several solar installation projects that the European Investment Bank has signed recently with logistics companies. David González García, lead engineer for energy transition programmes at the European Investment Bank, agrees. “What makes it special is that you’re using land that is already in use, so you’re not occupying additional land,” he says. “You have the warehouse and you just put rooftop solar panels on it. It also has the capacity to actually help the electricity grid.”

“**Electricity demand will triple or quadruple in the years to come.**”

# EXPANDING GREEN ENERGY

## Elektro Ljubljana takes on the modernisation of its grid and accelerates the energy transition

**E**lektro Ljubljana, Slovenia's largest electricity distribution network, took on the challenge of modernising and expanding the national grid to help meet the country's climate targets. With electricity infrastructure that covers 30.4% of the country, Elektro Ljubljana reaches every part of central and southeast Slovenia. "With the planned investments, we enable the development of an electricity distribution network even in remote areas," says Urban Likozar, president of the management board. "In this way, we facilitate the economic and social progress of these parts of our country, which otherwise develop more slowly than the urban centres."

It's an important step for Slovenia, which has made strong progress in renewable energy. Hydropower and solar contribute a growing share of its electricity. The country's National Energy and Climate Plan aims for a 55% reduction in greenhouse gas emissions by 2033 compared to 2005 levels, and targets 33% of total energy consumption from renewables by 2030.

**“People will become more engaged in managing their energy consumption.”**

"One of the most compelling aspects of this project is its role in addressing Slovenia's urgent need for energy infrastructure that can integrate renewable sources, especially solar photovoltaic systems," says Katja Belsak, a senior loan officer at the European Investment Bank. "The rapid rise in photovoltaic installations has put immense pressure on the grid, causing delays and rejections in regions with overloaded infrastructure."

That's particularly true in remote areas. In September 2024, the European Investment Bank signed a loan of €50 million to Elektro Ljubljana to expand and upgrade the power-distribution network in central and southeastern parts of the country.

### Boosting renewable energy

Elektro Ljubljana will upgrade overhead lines, install underground cables and refurbish transformers and substations. Devices like smart meters, electric vehicle charging stations and heat pumps will manage energy needs better through clean energy and digital tools. "People will become more engaged in managing their energy consumption, aligning their daily use with climate goals," says Belsak. "This link between local infrastructure improvements and global climate objectives is a practical and inspiring move towards sustainable development."

This project will help Slovenia transition to cleaner energy, reduce environmental impact, and make it easier to use electricity in transport, industry and other sectors. Slovenia's electricity grid will become more reliable and efficient, while keeping electricity prices affordable. It also supports economic and social cohesion by ensuring equal access to modern energy infrastructure across Slovenia.

# TRACK TO THE SEA

**Polish company upgrades and electrifies a 90 km railway line, boosting freight transport to Gdynia and passenger transport to the port and the wider region**

**A**leksandra Merchel-Koter grew up hearing stories about the work her father and grandfather did on the railway. "Trains have been in my blood since I was a kid," she says. So she chose to follow in their footsteps, earning a degree in railway track engineering from the Gdańsk University of Technology. Today, as a project director at PKP Polskie Linie Kolejowe, she wants to make Poland's railway network better and more connected. For over a decade, Merchel-Koter has been working on a project close to her heart and home – the modernisation of the 90 km Line 201, connecting the towns of Koscierzyna and Gdynia in northern Poland. This project aims to add a second track and electrify the line, improving freight transport to Gdynia's busy port. These changes will also help reduce congestion on parallel routes and improve transport for local residents. "The line was built in the 1920s, and it was initially planned as double track," explains Merchel-Koter. "What we are doing today is restoring its original purpose."

The European Investment Bank is supporting the project with a €480 million loan, signed in July 2024. The project is a key phase in a multi-stage railway upgrade, linking Bydgoszcz with the tri-city region, which includes Gdańsk, Sopot and Gdynia.

## **A vital line for northern Poland**

Modernising Line 201 will enable more trains to travel, and at higher speeds. This is possible due to double tracking, which adds a second set of tracks parallel to the existing ones, allowing trains to travel in both directions simultaneously. "A strong link to the port of Gdynia is crucial, not just for the region but for the entire nation," says Merchel-Koter.

**“ A strong link to the port of Gdynia is crucial... for the entire nation. ”**

The European Investment Bank's loan will allow PKP Polskie Linie Kolejowe to carry on with its ambitious project. This investment will help the company build new stations and upgrade existing ones, and facilitates the future installation of the European Train Control System – a standardised railway signalling system designed to enhance safety, interoperability and efficiency across European railways. "The project encourages more people to travel by train and shift freight traffic from roads to rail," says Adam Gephart, a loan officer at the European Investment Bank who worked on the deal. "Since it's located in less-developed areas, it will help boost regional development and provide better access to sustainable transport."



**€8.7  
billion**

When its mining industry closed, Ostrava struggled to find a new identity. A new urban project embraces the Czech city's cultural heritage and looks to the future.

5

# SOCIAL INFRASTRUCTURE

“ Every year, we build resilient cities for future generations, construct social and affordable housing, and provide sustainable urban services. We work closely with our banking partners on strategic investments in key infrastructure, health, education and housing across Europe. I am proud to see our work translated into projects that generate economic growth, jobs and progress for the benefit of all Europeans. ”

**Gemma Feliciani**, head of financial institutions, EIB Operations

“ Investing in the education of our children – in other words our future – is a unique opportunity to overcome challenges to our prosperity and freedom. The Bank plays a fundamental role in supporting all levels of education and improving the skills of European students. We are seeing a growing need to invest in higher education, especially student accommodation, to provide students from disadvantaged socioeconomic backgrounds with an opportunity to pursue education and realise their talent to the full. ”

**Patricia Castellarnau**, head of education and public research, EIB Projects

# ROOMS TO GROW

## Students in Cyprus struggle to find affordable housing. A university and municipality are building sustainable accommodation to tackle the issue

**K**onstantinos Karseras wanted to move to Limassol to start his studies in multimedia and graphic arts at the Cyprus University of Technology. But the COVID-19 pandemic lockdowns forced him to put a halt to his plan. By 2022, when the university reopened its doors, Konstantinos encountered an unexpected challenge – finding a place to stay in Limassol. “For three months, I was commuting every day from Paphos to Limassol to attend classes and be able to continue my studies,” he says. “I had to do this because there weren’t many apartments available, or they were unaffordable for us students.”

After months of searching, Konstantinos finally managed to find accommodation. However, hundreds of students who enrol at the university each year face the same problem. So the Cyprus University of Technology has decided to build affordable student housing and upgrade its campus facilities in the cities of Paphos and Limassol. The project will provide more than 700 new student residences and expand the university’s academic, research and sports facilities. “With this initiative, we will accommodate one-third of our undergraduate students, reaching the highest dormitory availability among universities in Cyprus,” says Panayiotis Zaphiris, the university rector.

The European Investment Bank signed a €125 million loan in 2024 to help the university and the municipality of Paphos with their ambitious projects, and ensure that the planned student lodgings are sustainable and meet the highest standards.

“The students are very pleased,” says Karseras, now serving as the student representative on the university board to help others facing the same challenge. “Having the university provide both accommodation and education is one of the most appealing aspects of pursuing higher education today.”

### Student housing across the continent

In 2024, the European Investment Fund invested more than €50 million to support the development of student housing in central and eastern Europe. The European Investment Bank financed other major student housing projects, underscoring the growing importance of the issue. These projects include:

- the construction and renovation of administrative, academic and research facilities, as well as new student accommodation at the University of Camerino in Italy;
- the modernisation of Grigore T. Popa University of Medicine and Pharmacy in Iasi, Romania, alongside the construction of new student accommodation and research facilities;
- the renovation, extension and construction of educational facilities in the region of Catalonia, Spain;
- the construction and renovation of middle schools in Rhône, France.

# LOTS OF ROOM TO RENT

## Vienna's old Nordbahnhof quarter shows why Austria leads the way in affordable housing

**O**n an 85-hectare disused freight yard attached to Vienna's demolished old North railway station rises one of the largest urban redevelopment projects in Central Europe. The new neighbourhood hosts offices, restaurants, green spaces, a convention centre and a public car park entirely powered by its own solar panels, as well as thousands of new apartments built around a 10-hectare park that has been left free as urban wilderness. In many cities, apartments in such a high-profile new development would be out of reach for people on average salaries. But a large percentage of the new residences in the regenerated Nordbahnhof district are affordable for regular Viennese people. "I really appreciate living in a beautiful and central neighbourhood with lots of peace and charm," says Nathalie Stevanovic, who lives in an apartment owned by Österreichisches Volkswohnungswerk (ÖVW), a subsidiary of Austria's Erste Bank and one of the city's largest landlords, in a development part-financed by the European Investment Bank. "It's particularly attractive for the younger generation."

The availability of affordable housing in Vienna and other Austrian cities is the result of a carefully designed system under which nearly half the population rents rather than owns their own home. In Vienna the proportion of renters is as high as 75%.

### An Austrian recipe

A central part of the Austrian approach is the idea of limited-profit housing associations, which provide rental accommodation at rates typically 25% below market value. Two other factors contribute to Austria's housing success: access to affordable land and a stable financing structure. Developers gain access to prime land, often from repurposed public spaces like the former railway yards, in exchange for dedicating up to 75% of their projects to affordable housing. This ensures a steady supply of affordable units in new developments. Meanwhile, long-term, fixed-interest loans, such as those provided by the European Investment Bank at advantageous rates, provide the financial stability needed to maintain low rents. "Our corporate goal is to provide affordable housing," says Andreas Reitinger, managing director of ÖVW. "Predictable long-term financing is especially important so that we can guarantee reliable rents, even when interest rates rise."

**“It's particularly attractive for the younger generation.”**

The European Investment Bank and Erste Bank have signed more than half a billion euros in loans over the last five years for affordable housing projects, plus a €100 million loan to build energy-efficient homes and renovate existing ones. In 2024, the European Investment Bank agreed to lend €175 million to Salzburger Sparkasse and Tiroler Sparkasse, both part of the Erste Bank Group, for affordable and energy-efficient rental flats in Salzburg and Innsbruck.

# OSTRAVA'S ENCORE

## Ostrava reinvents itself with a state-of-the-art concert hall and House of Culture, transforming the city into a modern metropolis

**O**strava is a city defined by its pragmatic spirit, with its people renowned as straightforward and determined. This no-nonsense approach captivated Jan Žemla, the managing director of Ostrava's Janáček Philharmonic, upon his arrival in the city. A firm believer in the transformative power of music, it inspired him to start a new project that will reignite Ostrava's cultural heartbeat.

The journey began when Žemla discovered that the orchestra was practising in the House of Culture, a building that first opened in the early 1960s. "The building was technically on the edge; it required reconstruction," Žemla recalls. "There were numerous technical issues, such as electricity and water, that made it challenging for us to play and prepare. Crucially, it lacked the acoustics essential for an orchestra."

“**It's about declaring a new direction for Ostrava.**”

The renowned orchestra named after the composer Janáček needed a new home and Žemla sought the support of the local authorities to make it happen. This sparked the renovation of the House of Culture and its expansion with a new concert hall. The new venue will blend contemporary acoustics with historical preservation, offering a 1 300-seat space designed to promote cultural and educational activities. "Our goal is to create something that not only serves the community but also places Ostrava on the cultural map of Europe," he says.

The European Investment Bank is supporting this project with a loan of CZK 2 billion (€84 million) to the city of Ostrava, signed in July 2024.

### Supporting a transition region

Creating a state-of-the-art concert hall, along with renovating the massive House of Culture, demands substantial financing, meticulous planning, and considerable time. The project is also benefiting from a grant of CZK 500 million (€21 million) from the European Union's Public Sector Loan Facility, part of the Just Transition Mechanism.

"This is a flagship project in Czechia, setting a precedent for similar projects across the country," says Peter Chovan, a European Investment Bank loan officer.

Ostrava was once known as the "black heart" of Czechia, due to its rich industrial and mining heritage. When the mines closed in the 1990s, the city struggled to find a new identity. "This is not just about building a concert hall," says Kamil Dörfler, a senior urban development specialist at the European Investment Bank who was closely involved in the development of this project. "It's about declaring a new direction for Ostrava, one that embraces its cultural heritage while looking towards the future."

# NO OXYMORON

## An ethical bank supports women-led businesses and projects in poorer regions, and empowers refugees across Italy

**T**he fact that the term “ethical banking” had to be invented for a new type of lending institution shows you that moral principles are the last thing most people think of when the subject of banks comes up. Yet, some financial institutions are challenging this stereotype and redefining what it means to be a bank today. A great example is Banca Etica. As Italy’s first ethical finance bank, it aims to drive a revolution in the banking sector. With its latest project, Banca Etica wants to help those most vulnerable to financial exclusion: women, refugees and businesses in Italy’s less-developed regions.

“We champion the idea that putting ethical before bank is not an oxymoron – it is a real possibility, and a business opportunity,” says Tommaso Rondinella, who is responsible for impact models and socio-environmental assessment at Banca Etica. “For us, it is our past, present and future.”

Banca Etica's new project is expected to stimulate €168 million of investment and create a positive ripple effect in society. The European Investment Bank is supporting it with a €60 million loan, signed in July 2024.

Refugee reception centres play a key role in facilitating social integration. But they often struggle to secure the working capital they need. With its new initiative, Banca Etica will provide at least 30% of the loan to keep reception centres for asylum seekers and refugees operational, helping the refugees integrate and enter the labour market. “We are trying to support a solid welcome and integration framework,” says Rondinella.

### Support and guarantee

The European Investment Bank will also offer technical support through its Social Inclusive Finance Technical Assistance programme to help Banca Etica use its resources more effectively. Funded by the InvestEU Advisory Hub, this programme has assisted around 60 microfinance and credit institutions in over 20 EU countries, focusing on high social impact investments and offering help with investment planning and project development.

In August 2024, the European Investment Fund entered into a €200 million guarantee agreement with Banca Etica. Also under the InvestEU programme, the guarantee will enable Banca Etica to expand its lending activities to green businesses intending to invest in a green and sustainable transition, enterprises active in cultural and creative sectors, and different sectors, such as students, learners and enterprises active in providing education services.



€6.4  
billion

Denmark's Matr Foods makes a meat substitute that mimics the deep taste and juicy texture of meat without compromising health or the environment.

6

# AGRICULTURE AND BIOECONOMY

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A key deliverable of the EU Green Deal is the transition to a more sustainable agri-food system that delivers healthy food, fibre, bioenergy and biomass for all. Our focus is on food security, water resilience and nature protection as well as strengthening competitiveness. The footprints of some traditional value chains need to be reduced to levels that are aligned with a low-carbon pathway for the sector, while fully exploiting the potential to enhance carbon pools and biodiversity in biomass and soils to compensate for unavoidable residual emissions. Each year the European Investment Bank provides more than €5 billion of loan-based finance to the sector, 70% of which reaches farmers and small businesses active in the value chain via intermediated credit lines channelled through banks. This is complemented by additional leveraged investment through the European Investment Fund. ”

**Felipe Ortega Schlingmann**, head of bioeconomy, EIB Projects

“

We are committed to sustainable energy solutions that drive the circular economy forward. By converting agricultural waste into renewable fuels, for example, our projects exemplify how circular economy principles can cut emissions in hard-to-decarbonise sectors with high carbon footprints, such as air and maritime transport. Our work in agriculture and the bioeconomy strengthens Europe's energy resilience and creates quality jobs. ”

**Gilles Badot**, head of lending to Iberia and the Adriatic, EIB Operations

# RESERVOIR OF RESILIENCE

## Climate change is causing severe droughts in Crete. But a new reservoir and irrigation project will tackle these effects and revive agriculture

In Amari, a Cretan municipality south of Rethymno, history, culture and the economy are intertwined with its fertile valley. But recurring droughts, intensified by climate change, threaten the region's agriculture, potentially leading to desertification. To address this challenge, the municipality intends to use the Platys River that flows through the valley.

Together with the Greek Ministry of Transport and Infrastructure, the municipality plans to build a dam with a reservoir capacity of 21 million m<sup>3</sup>, an irrigation network extending over 4 350 hectares, and close to 20 km of pipes. This aims to improve the irrigation in the Rethymno prefecture, Messara and Heraklion – regions that form the heart of the island's agricultural production. "The construction of the dam is a necessary response to the ever-worsening problem of water sufficiency, especially with the severe drought caused by climate change," says Pantelis Mourtzanos, the mayor of Amari, who played a key role in developing the project. "The new reservoir will allow efficient management of water resources, ensuring a steady supply of water for crop irrigation."

The European Investment Bank and the Council of Europe Development Bank each committed €80 million to support this significant new investment in Crete, signed in January 2024.

### Climate change hitting home

Over the past decade, Crete has seen a sharp drop in rainfall and an increase in extreme droughts. In 2023, rainfall was only 40% of normal levels, and early 2024 saw a similar lack of rain. Meanwhile, the average temperature increased by 0.5° Celsius compared to 1991-2020. The decrease in water availability, rising temperatures and desertification signal that the climate crisis is already affecting the island. This has severe consequences for the island's residents, impacting the quality of life and critical sectors, such as tourism and agriculture.

Faistos, another municipality in the Messara region, is among the areas feeling the impact. There, hundreds of fields grow a variety of fruits and vegetables for export across Europe, serving as a key source of income and livelihood for residents. "The weather has always been unpredictable, but in the last five years, it has become so intense that it is starting to scare us," says Grigoris Nikolidakis, the mayor of Faistos. "If we don't take action, the water we have will not be enough for our people."

“The weather has always been unpredictable, but in the last five years, it has become so intense that it is starting to scare us.”

# OIL OF A DIFFERENT ORIGIN

## Moeve's €1 billion plant will turn used vegetable oils and residues into biofuel that can power heavy transport and aviation

**H**ot, sizzling cooking oil can turn bland potatoes into crispy, delicious fries. Afterwards, that oil can still be processed into biofuel to power a truck or aeroplane. Produce enough biofuel, and you start to chip away at carbon emissions from all types of transport, particularly in hard-to-abate areas like heavy vehicles and aviation.

The Spanish company Moeve is building a second-generation biofuels production facility in Huelva, Andalusia, that will be able to turn 600 000 tonnes a year of used fatty residues, oils and other waste into HVO biodiesel and sustainable aviation fuel. That's equal to about 1% of all the aviation fuel used in Europe.

"What we are producing in this plant, which is pretty new, is renewable diesel fuel. It contains exactly the same molecule as normal diesel or kerosene for aviation," says Matteo Vaglio, director of biofuels at Moeve, formerly known as Cepsa. "The only thing that changes is the origin of the molecule, which is not fossil but is biological. It comes from waste."

### Green molecules

The new biofuels plant is part of Moeve's pivot to green energy. The second-largest oil and gas company in Spain, Moeve wants to reduce its carbon emissions by 55% by 2030 and become carbon neutral by 2050. The company's transition also includes installing ultrafast charging stations for electric vehicles at its service stations in Spain and Portugal.

The European Investment Bank is lending Moeve €415 million for the new biofuels plant, which the company is building with its partner, Bio-Oils, a subsidiary of Apical, a leading vegetable oil processor in Singapore. Total investment in the plant is expected to be €1.2 billion.

"Moeve is really a pioneer," says Luis Velosa, the European Investment Bank loan officer in charge of the project. "Of the oil and gas companies, it has the most ambitious decarbonisation strategy."

### Fuels from fat

New EU directives on renewable energy and sustainable aviation fuels are driving this market for waste, known as feedstock. The directives require diesel and other fuels to contain a minimum (usually a small percentage) of biofuels by 2030 – with the share rising sharply by 2050.

“Moeve is really a pioneer.”

A strength of Moeve's new plant is that it can process a variety of waste. "This is very important," says Carmine Marzano, a senior engineer in the European Investment Bank's bioeconomy division, "because bio feedstock is not infinite in the world, and the EU targets are very high."

# MYCELLIUM MINCE

## Denmark's Matr Foods harnesses fungi fermentation to create a meat substitute that replicates the juicy texture of beef

**M**orten Sommer, a microbiology researcher at the Danish Technical University, began to wonder if microbes could be harnessed to produce healthier, more environmentally friendly food. With his colleague, Leonie Jahn, he discussed microbes' potential with Rasmus Toft-Kehler, a well-known entrepreneur with whom Sommer has started several biotech companies. The three of them knew a lot about microbes and their potential, but none of them knew how to create tasty food. So they reached out to storied chef and restaurateur Claus Meyer, co-founder of Noma, a three-star Michelin restaurant considered to be one of the best in the world. "They basically said, 'food is such a beautiful thing, but it's one of the biggest problems we have on the planet,'" recalls Randi Wahlsten, chief executive of Matr Foods, the company they founded. "It is aggravating inequality, it is damaging nature, and it is causing a health crisis as well."

Wahlsten joined Matr Foods a few months after it was founded in 2021. She had spent more than ten years in the food industry, but wanted a more sustainable approach to food production. Wahlsten immediately thought of the limited commercial meat alternatives that existed at that time. "I thought we could come at this problem of sustainability by replacing meat in a better way than the not-very-attractive options available," she says. "Options that were over-processed and not very exciting gastronomically."

The team set out to develop a new kind of alternative meat. It wouldn't mimic meat, as products on the market then did. Instead, it would try to provide the same deep taste and juicy texture – without compromising human health or the environment. Three years later, Matr's substitute meat uses ingredients that are locally available in Europe, such as beetroot, potatoes, beans and oats, then grows them into a burger or mince using ancient fungi fermentation techniques. "It gives a deep umami flavour without excessive processing or additives," Wahlsten says, adding that the taste resembles a mushroom or deep tomato reduction. "And the fungi create a texture that releases liquids when you bite into it, like when you bite into a really juicy piece of meat."

### Evolving meat substitutes

The company, which is based in Copenhagen, started producing patties by hand in an industrial kitchen. It supplied the meat substitutes to two high-end restaurants in Denmark and a popular burger chain called Gasoline Grill. Chefs and customers were excited about the product.

The company is now investing about €40 million to expand its research and development, and to build and operate a new facility capable of producing 3 500 tonnes of plant-based meat alternatives – about a hundred times more than it produces now. The European Investment Bank signed an agreement in September to provide Matr Foods with €20 million in venture debt financing, backed by InvestEU.

Meat substitutes have evolved considerably over the last decade. First-generation substitutes largely consisted of tofu or tempeh – soy-based products that don't fit easily into a European diet. "Most of us couldn't really use those products in recipes we make at home," says Stephan Mitrakas, a cleantech investment officer at the European Investment Bank. Think spaghetti Bolognese with tofu chunks.

Second-generation meat substitutes made more of an effort to resemble meat, and they had quite a bit of success. Impossible Foods, the maker of the plant-based Impossible Burger, planned an initial public offering that would have valued it at around \$10 billion, although that valuation has since sunk a bit.

Some of those substitutes contained a lot of additives and “quite a bit of fat,” often through the addition of plant-based oils, says Carmine Marzano, a senior engineer in the European Investment Bank’s bioeconomy division. Those products include a relatively long-list of ingredients, and several additives, that are then mixed and pushed through a die to create the burger shape. “It’s kind of like a pasta maker,” Marzano says. “Makers of these products do something very similar, but the ingredients are mixed with vegan protein extracts.”

### A dollop of mushroom spores

Matr’s product is part of the third generation of meat substitutes, which look and feel more like meat and can be mixed into classic western dishes, like a Bolognese sauce or a shepherd’s pie. Instead of gluing ingredients together with additives or fats, the company simply chops up and cooks potatoes, beets, beans and oats, and then mixes the vegetables with selected fungi spores. It puts the combined ingredients in a burger-shaped mould and exposes it to a controlled fermentation process.

That’s where the magic happens.

The mushroom spores germinate and form mycelium, a root-like structure made of threadlike fibres or filaments. Those tiny roots break down the nutrients in the vegetable mix, releasing flavourful amino acids and starches that, like meat, brown when cooked. The mycelium binds everything together, giving the burgers their structure and juicy texture.

“It’s a little bit like baking,” Wahlsten says. If you simply combined water, flour and salt and put that mixture in the oven, absolutely nothing would happen, “but if you add your sourdough or yeast, then the activation of these little microbes will eat into the nutrients of the flour and they will add flavour and texture – and you’ll end up with a beautiful bread. That’s what we’re doing.”

“A deep umami flavour without excessive processing or additives.”

# MODERNISING THE DAIRY

## Gropper, the second-largest producer of organic milk in Germany, modernises to introduce new products and cut emissions

**S**ince 1929, Gropper has been run by the same family. Three generations into its story, the German dairy company sources its raw milk from 780 dairy farmers within a radius of about 160 km from Bissingen. These partnerships are built to last, with contracts spanning two to three years and fair pricing tied to market averages. “We maintain strong relationships with our suppliers through ongoing communication and collaboration, fostering trust and mutual growth,” says Chief Executive Heiner Gropper. “This approach helps us build a resilient and sustainable supply chain for the future.”

But in a fragmented dairy market with few big, cross-border operations, it’s hard to finance innovation. With Gropper diversifying into smoothies, juices and milk-based drinks, it turned to the European Investment Bank for backing. The European Union’s financing arm invested €49 million in September 2024 to back the modernisation of Gropper’s existing facilities – a move that will decrease the use of natural gas and cut transport emissions through automated storage and logistics. The project also includes investments in infrastructure for renewable energy generation. “We are pleased to work with Gropper, as it’s a family-owned company,” says Karol Czarnecki, who works on the project at the European Investment Bank. “Companies like Gropper are the true cornerstone of Germany’s economy. We deeply respect their unique mix of business stability and nimble management. Working with them has been an invaluable experience, enhancing our insights into this market.”

### A sustainable bet

To keep up with its green transition and sustainability objectives, Gropper is betting on modernising with energy efficient storage techniques and logistics that avoid extra kilometres of transport between different stores. “Our modernisation isn’t just about new tools and techniques. It’s about envisioning a sustainable dairy industry,” says Gropper, the chief executive. “This vision aligns with broader global trends in the dairy market, which, despite its challenges, continues to innovate in areas like waste reduction and automation.”

Gropper is replacing its production lines with newer, automated technology and increasing production capacity. “Gropper is not only boosting its efficiency and the quality of its products, but also creating energy savings as it moves away from natural gas,” says Jean-François De Saedeleer, who also worked on the project at the European Investment Bank.

# A DELICIOUS SOLUTION

With its high-tech approach to sustainable aquaculture, Munich-based Oceanloop is taking shrimp farming into the 21<sup>st</sup> century

**W**hite tiger shrimp have a problem: they're so tasty that people can't get enough of them. Demand for shrimp is growing at a rate of 8% a year. But satisfying this demand comes at a huge environmental and social cost. White-legged shrimp are on Greenpeace International's seafood red list, because of their link to mangrove destruction, overfishing in the wild, pollution and significant human rights abuses in some countries.

Munich-based Oceanloop aims to change that. "Our fully automated, indoor, shrimp-farming technology is uninterrupted by climate, so we can farm day and night, in the winter and in the summer, almost anywhere in the world," says Fabian Riedel, the company's chief executive.

The aquaculture technology company has developed a new kind of shrimp farm that will allow the popular seafood to be raised and processed on land in cooler climates, such as that of Europe, with minimal environmental impact and optimal conditions for the animals.

## Urban mangroves

Whereas most shrimp are farmed in outdoor circular ponds, Oceanloop's shrimp are raised in a long, indoor, climate-controlled tank, divided by moving walls that separate the shrimp according to age. The sections use stacked horizontal layers, so that the animals can rest as they would in their natural habitat. The water is filtered and recirculated, in a closed-loop process partly powered by renewable energy, so that no antibiotics or other pharmaceutical products are needed.

"We noticed a few years ago that when shrimp reach a certain size, they tend to spend a lot of time sitting at the bottom of the tank," says Riedel. "This is something they do in the wild, but they can't in traditional shrimp farms because of the lack of space. Our urban mangroves are like underwater skyscrapers, giving the shrimp much more space to relax. And with that we've gained a lot of efficiency in our production system because the shrimp love it."

Now, the company is looking to increase production, first by expanding its pilot project in Kiel, on Germany's Baltic Sea coast, and then opening a new, much larger farm on Spain's Gran Canaria, that will be powered by wind and solar power. To fund the company's ambitious plans, the European Investment Bank has provided €35 million in venture debt, a long-term loan designed to help early stage and growing companies expand without diluting the ownership of existing shareholders. The financing is backed by a guarantee from InvestEU, the European Union's flagship scheme to stimulate investment in strategic sectors.

A photograph of two workers in an industrial setting. On the left, a woman wearing a yellow hijab, safety glasses, and a high-visibility yellow vest with a MAUCIT logo. On the right, a man wearing a white hard hat with a MAUCIT logo, a plaid shirt, and a high-visibility yellow vest with a MAUCIT logo. He is holding a blue clipboard and a pen. The background shows industrial equipment and pipes. A large white circle is overlaid on the image, containing the text '€8.4 billion'.

**€8.4**  
**billion**

A local bank in Mauritania, backed by an EIB loan, finances small businesses that employ young people and women.

# HIGH-IMPACT GLOBAL INVESTMENT

“

Ukraine needs to invest in critical infrastructure to maintain vital public services. We accompany Ukraine in this process by providing attractive financing, as well as technical assistance. I'm proud of the work we're doing there under difficult circumstances. ”

**Rafal Rybacki**, head of public sector lending in the EU's Eastern Neighbourhood, EIB Global

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Gender equality gaps are widening. Societies are struggling to be more inclusive and sustainable. It's vital our financing for gender equality increases year on year. I am proud we support women entrepreneurs in accessing capital and fund solutions for women's health. We make public transport and urban spaces safer and more accessible for all, and we enable female farmers to reach their potential. ”

**Yasmine Pagni**, head of social policy, EIB Projects

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Our first debt for climate conversion – signed in December with Barbados – is historic. It's an innovative financial tool, redirecting funds that would have gone to pay high interest rates on old Barbados debts, and instead investing them in climate resilient infrastructure and ecosystem restoration. This is a blueprint to empower vulnerable countries. ”

**Alexandra Almeida**, senior loan officer, EIB Global

# A CURRENT FLOWING TO THE FUTURE

## Bosnia and Herzegovina lays the groundwork for EU membership with projects that reflect the strength and resilience of its people

**E**very morning at 5:10 a.m., the first tram of the day sets off from Ilidža, a western suburb of Sarajevo, towards the medieval bazaar, Baščaršija, the city's cultural centre. This daily journey has become a cornerstone of life in Sarajevo over the tramway's 140-year history. Generations of residents have made this trip, with the tram becoming part of the city's identity.

For Esad Mujagić, the tram is more than a mode of transport – it's his life's work. "When I started working for the city's public transport company in the 1980s, I didn't think trams would define my career," he says.

During the brutal siege of Sarajevo in the 1990s, the city's trams stopped running for the first time in their history, their routes blocked by the violence that engulfed the city. After two long years, the tram service restarted, even though the siege was not yet over. From then on, Mujagić worked every day to repair the damage caused by bullets and shrapnel. "We wanted to keep the trams going," Mujagić recalls. "We wanted people to have some sense of normality in their daily lives."

For years after the war, Sarajevo's old trams bore the scars of the conflict as they travelled around the city, and Mujagić campaigned for their replacement. His hard work finally paid off in 2024. For the first time in 40 years, Sarajevo unveiled a fleet of new, bright yellow trams. The trams are being financed by the European Investment Bank with two loans worth €75 million. The aim is to reduce traffic congestion and tackle one of Sarajevo's most pressing issues: air pollution.

The trams are just one of the many signs of progress marking 2024 as a turning point for Bosnia and Herzegovina's long-term projects and European ambitions. In early 2024, EU leaders officially agreed to open accession negotiations. Across the country, major infrastructure projects are hitting milestones – new roads are being laid, wind farms are rising and hospitals are being upgraded. The European Investment Bank has partnered with the public and private sectors to drive this progress.

The last time Sarajevo got new trams was in 1984, when the city welcomed the world to the Winter Olympics. Mujagić believes the new tram is part of a move to recover Sarajevo's greatest moment. "It feels like it did back before the war. I hope this project is just one of many to come that will make Sarajevo a true European city and set the country on the path to the European Union."

### The flood of the century

Tucked in a valley surrounded by five evergreen-coated mountains, Sarajevo stretches along the banks of the Miljacka River. Celebrated in many popular songs, the river is home to some of the city's most famous landmarks. Over a dozen bridges cross it, including the Latin Bridge, the site of Archduke Franz Ferdinand's assassination, which sparked World War I.

“ It feels like it did back before the war. ”

A short drive east along the Miljacka takes you from the city centre into sweeping, dark green forests. Here you cross from the Federation of Bosnia and Herzegovina into Republika Srpska, one of two autonomous entities formed after the war. Republika Srpska, home to a predominantly Serbian population, covers much of the eastern and northern parts of the country.

Turn right and the road will take you to Sarajevo's Olympic ski resort. Head left, and you'll end up travelling one of the country's most scenic routes, eventually reaching Bijeljina, Republika Srpska's second most populous city. Like Sarajevo, Bijeljina has faced a tumultuous recent history. In May 2014, it was the epicentre of the worst flood in southeastern Europe's recorded history. The flood affected over 100 000 people, with 33 000 evacuated. It submerged more than 90 000 hectares of land and 35 000 houses and buildings. Damage estimates reached €1 billion.

For the past decade, Miroslav Čvrgić, assistant director of Republika Srpska's public water management institution, has worked on a project to protect the region from future floods. The project, partly funded by €74 million from the European Investment Bank, has rehabilitated 160 km of water channels and 100 km of dykes, making the region more resilient to increasingly frequent floods caused by climate change. "We're now protected from catastrophic floods like the one in 2014, or what they call a 100-year flood," says Čvrgić, a Bijeljina resident.

As he talks, the first drops of rain begin to fall. "It's okay," he says, watching the sky. "We're not afraid of the rain anymore."

### **"I finally feel like a real doctor"**

When the floods hit the city in 2014, the new hospital offered much needed support. The hospital was the first major healthcare facility in the Bijeljina area since 1939. "It was the biggest health project in Republika Srpska at the time, and all eyes were on us," says Dr Siniša Maksimović, the hospital's director during that period.

Opened in 2013 after just three years of construction, the new hospital replaced several outdated facilities, offering nearly 250 beds and five operating theatres. "Everything was new – the equipment, the building – it was the most modern health facility in the country at the time," says Maksimović. "And we've managed to maintain that standard."

For head nurse Radmila Simić, who has worked at the hospital for 24 years, the move to the new building was transformative. "It felt like a new era for our healthcare," she says. "Ever since, we've seen rapid progress." Today, the hospital draws patients from across Bosnia and Herzegovina and even neighbouring countries. "We provide advanced healthcare that wasn't available before," says paediatrician and current hospital director Dr Mikajlo Lazić.

The hospital construction was part of a €115 million project financed by the European Investment Bank, which also included the reconstruction of the clinical centre in Banja Luka, Republika Srpska's largest city. In 2023, the EIB signed another loan to support the construction of a new medical campus at the University of Banja Luka as well as the continued upgrades to its clinical centre. "The most important thing is that our patients are satisfied," says Simić.

The hospital was a game-changer for both patients and staff. “When the new building first opened,” Maksimović recalls, “a colleague came up to me after a night shift and said, ‘I finally feel like a real doctor.’”

### **“The river means life”**

Bijeljina, cradled between the Sava and Drina rivers, isn’t the only region in Bosnia and Herzegovina defined by its rivers. The country itself takes its name from the Bosna River, derived from an Illyrian word meaning “running water.” No river, however, defines a region more than the Neretva in the south. Spanning 225 km, the Neretva is famous for its emerald-green, icy-cold waters – the coldest in the world, in fact. The river cuts through dramatic gorges and historic cities, most notably Mostar, home to one of the country’s most recognisable landmarks – the Old Bridge. Destroyed in the 1990s war and later rebuilt, it now stands as a powerful symbol of reconciliation.

“When I was growing up, we swam at the beaches right in the city centre, just 50 metres from the old town,” says Emir Nuspahić, a lifelong resident. “But we took it for granted.” Poorly managed sewerage systems have weakened the water’s quality, threatening the river’s famous turquoise and green hues. “As the city expanded, the sewer system wasn’t properly planned, and we ended up with numerous sewage leaks concealed in the vegetation along the riverbanks,” he explains.

Born and raised in Mostar, Nuspahić has never left the city, raising his family on these riverbanks. “They say life is like a river, but here the river means life,” he says.

Determined to restore the river’s glory, Nuspahić has spent the past decade leading a cleanup project as part of his role in the city administration. “We’ve installed large-diameter sludge collectors on both sides of the river to avoid sewers being emptied directly into the Neretva. And the results are already visible.”

Just 25 km northwest of Mostar, another man is on a mission to save his local river. Boro Đolo grew up along the banks of the Lištica River. “Here, people learn to swim before they learn to walk,” he says.

A soft-spoken grandfather, Đolo spends his free time working with a local organisation to restore the area’s native fish population. Professionally, Đolo has devoted 35 years to the water sector, working for the city of Široki Brijeg. There he leads a project aimed at improving wastewater services to protect the Lištica. The city has already built and rehabilitated 25 km of sewer lines and 4 km of storm drains and is currently constructing a treatment plant to serve its 15 000 residents.

The projects in Mostar and Široki Brijeg are part of a larger effort, financed by the European Investment Bank, to improve water and sanitation across the Federation of Bosnia and Herzegovina. The €60 million invested in these initiatives is part of the Bank’s broader €240 million in commitments to water infrastructure and flood protection in the country.

## Winding it up

The European Investment Bank isn't just protecting the environment. It's also helping Bosnia and Herzegovina prepare for the green transition by supporting its renewable energy goals. EIB Global, the Bank's development arm, has signed a €36 million loan with the country's public electricity company for the construction of a 50 MW wind farm on the high plateau of the Vlašić mountain in the geographical centre of the country.

The wind farm is set to strengthen the country's energy supply and increase power generation from renewable resources. Known locally for its traditional sheep's cheese, the Vlašić mountain will soon host 18 wind turbines. The project's annual electricity production is expected to total 115 GWh, enough to power 20 000 households and cut CO<sub>2</sub> emissions by 140 000 tonnes a year, equivalent to taking 33 000 cars off the road for the same period.

The loan comes in addition to the €21 million in grants allocated by the European Union through the Western Balkans Investment Framework.

## On the road

Much as the Neretva River connects the people of Herzegovina, a new road passing through the region is set to link the entire country.

Known as Corridor Vc, this 679 km road stretches from Budapest all the way to the Croatian coast, with most of its route running through Bosnia and Herzegovina. The motorway will connect people and businesses, improve travel times and strengthen economic relations. It also marks the country's real as well as symbolic road to the European Union.

With over 148 bridges and 46 tunnels, Corridor Vc is the largest infrastructure project in the country. In 2024, significant progress was highlighted by the breakthrough of the country's longest tunnel and the opening of the 1 km Herzegovina bridge over the Neretva. The European Investment Bank played a key role in these developments, investing more than €1 billion in Corridor Vc to date.

“**We're not afraid of the rain anymore.**”

# ON TRACK

## Albania rebuilds its railways with EU financial and technical support, while also cutting emissions

**T**rains between the central Albanian city of Vorë and the border with Montenegro travel at an average speed of just 50 km per hour along a track that has suffered decades of neglect. As part of the country's sustainable growth strategy, the government is investing in the modernisation of its rail network, a plan that will cut emissions, improve safety and slash journey times. It will more than double the average speed of trains on the line to up to 120 km per hour.

As part of the European Commission's Economic and Investment Plan, the project is benefiting from an EU financial package consisting of a €100 million loan from the European Investment Bank, a €126 million investment grant from the Western Balkans Investment Framework, and a €98.75 million loan from the European Bank for Reconstruction and Development.

As an extension of the core TEN-T Mediterranean Corridor, the Vorë-Hani i Hotit railway line connects Tirana with Podgorica, and further to Europe's major railway network. It's part of the government's plan to restore about 420 km of track that branches north and east from the city of Durrës. Built mainly between 1947 and 1987, Albania's rail infrastructure has been deteriorating gradually due to lack of funds and insufficient maintenance. This situation has been exacerbated by the devastating earthquake that hit the country in 2019.

Now, Albania is looking to modernise, rebuild and electrify over 75% of its rail network over the course of the next decade.

“**There are many of us here and all of us are helping each other.**”

“The European Investment Bank remains one of our most important partners in realising several strategic projects regarding road and rail infrastructure,” says Belinda Balluku, Albania's deputy prime minister and minister of infrastructure and energy.

With over €1.9 billion invested in Western Balkans railways to date, the European Union's financing arm is one of the biggest financiers of the sector in the region. Along with the financing, experts from the JASPERS advisory programme, which is funded by the European Commission and the European Investment Bank, developed an action plan to strengthen capacity for managing railway infrastructure projects in Albania.

“Our advisory support has created an enabling environment within the railway company for improving their skills and for getting rail back on track,” said Jakubik Denis, JASPERS task manager for the assignment.

“This should have a positive impact on the country, contributing also to the gradual integration of the Albanian railways into the European railway network and market, as well as to the EU accession process of the country.”

# ALL OF US ARE HELPING EACH OTHER

## Ukraine recovery focuses on heating, electricity, water, hospitals, women and schools

**V**adym Chursin's mother died long before the war. His father, Dmytro, has been his parent and best friend since he was very young. The two have grown even closer since they fled their town near Ukraine's southern border after it was occupied by Russian soldiers. "There is barely anything left of our house today and not a single building still standing in our old town," says Vadym, who is 16 years old. For the past two years, father and son have been renting half a house in Odesa, near Vadym's new school. "We're what people call displaced persons. There are many of us here and all of us are helping each other."

Vadym attends Odesa School No. 41, one of the first schools repaired under the European Investment Bank's first Ukraine recovery programme. The European Investment Bank is helping to renovate more than 300 schools, kindergartens, hospitals and social housing facilities in about 150 Ukrainian cities. It has improved electricity, gas, water, sanitation and solid waste management in more than a dozen regions and has finished more than 100 projects. It receives new requests for help every week.

### Our key initiatives

- The EIB Group has disbursed more than €2 billion to repair cities and cover urgent needs in Ukraine over the last three years. The Bank has loaned around €4 billion to countries surrounding Ukraine to help with housing, schools, medical care and employment for refugees.
- One of the most recent finance tools available is the EU for Ukraine Fund, designed to rebuild municipal buildings, restore public services and offer help to entrepreneurs. Countries around the European Union have pledged more than €420 million for this fund.
- The European Investment Bank is a partner in a European Union funding mechanism called the Ukraine Facility, a €50 billion recovery programme that runs until 2027. The Bank will use more than €2 billion from this fund on energy, roads, railways, water, housing and education.
- Important projects in 2024 include the expansion of the 112 European emergency phone number in Ukraine to reach the police, an ambulance or firefighters; support for UNIT.City, Ukraine's first innovation park dedicated to digital skills and training; and a €50 million loan for new metro coaches in Kyiv.
- In September 2024, the European Union's financing arm proposed a €600 million energy rescue plan to help Ukraine as winter approaches, ensuring that businesses and homes have electricity and heat. Shelters will be built to protect electricity substations from bombings.

# EQUITY MAKES THINGS HAPPEN

**From logistics in Southern Africa to offshore wind in East Asia, European Investment Bank invests equity in impact funds whose projects are making a real difference**

**E**very day, 1 000 trucks cross the border from South Africa into Mozambique, headed for the port of Maputo. The 100 km drive to the coast typically takes as long as 12 hours. Then trucks laden with commodities such as chrome, magnetite and citrus fruit spend six to eight hours just crossing the border and dealing with customs. But a few kilometres before the jam starts, there's a new road to an alternative crossing facility run by The Logistics Group, a South African company supported by the European Investment Bank Group through its nearly \$75 million investment in the funds of Africa Infrastructure Investment Managers, a fund manager based in Cape Town. There the formalities take just 45 minutes, and goods are transferred onto trains that go directly to Maputo. "You don't need to park your truck, you don't need to get out, and you don't need to fuss about with papers," explains Anton Potgieter, chief executive at The Logistics Group. As well as saving time, the facility helps customers save money and cut their carbon emissions.

To support companies such as The Logistics Group whose projects contribute to the European Union's policy goals in regions like Southern Africa, the European Investment Bank invests in impact funds with experience and expertise. "If you want to make things happen on the ground, then the thing you need is equity," says Gergely Horvath, a European Investment Bank investment officer. "That's what really makes things happen." The European Investment Bank has worked with Africa Infrastructure Investment Managers since 2008. It made a further €30 million investment in the firm's funds in 2024.

## **Made in Taiwan**

By investing in targeted funds with experienced managers, the European Investment Bank can help further the European Union's policy goals with partners around the world. Through its \$100 million investment in Copenhagen Infrastructure Partners' Global Markets Fund II, for example, the Bank is helping develop the offshore wind power industry in emerging markets. The Danish fund manager's Changfang-Xidao offshore wind park, situated 11 km off the west coast of Taiwan and completed in May 2024, is expected to provide almost 600 MW of power once fully operational, boosting the island's offshore wind generation capacity by 25%.

**“ If you want to make things happen on the ground, then the thing you need is equity. ”**

# A FUTURE OF DIVERSITY

## A local bank in Mauritania offers loans to give female entrepreneurs and young people a better chance to run a business or get a job

**W**hen Cheikh Mohamed Elkarachi took over his father's business during the COVID-19 pandemic, one of the first changes he made focused on helping women in the workplace. "I wanted to hire women, but we didn't even have women's bathrooms," says Elkarachi, the chief executive of Rim Foam, one of the biggest foam and mattress suppliers in Mauritania. "I added separate bathrooms, so women would feel more comfortable working here, and I started hiring women for key positions, because I feel my country's businesses need to become more diverse."

To help make these improvements and expand production, Elkarachi took out a small loan in May 2024 from a local bank, the Bank for Commerce and Industry of Mauritania. This bank was able to support Elkarachi and many other entrepreneurs because it received a loan worth €20 million from the European Investment Bank, which signed this loan in February 2024 to offer financial help to small and medium-sized business, especially those employing young people and women in Mauritania. Towards the end of 2024, the Bank for Commerce and Industry had already given out small loans totalling about half of the financing it received from the European Investment Bank.

### Courage to invest in ideas

The main goal of this European Investment Bank loan is to boost employment and encourage more people to start businesses. Mauritania's economy suffered a lot during the pandemic, and there is a big need for investment in business growth. Enterprises helped by the Bank for Commerce and Industry in 2024 include Elkarachi's foam operations, private medical clinics, solar panel installers, a pasta manufacturer and a company selling rice-processing equipment.

In Mauritania, economic inclusion is lower, especially for women, than in many neighbouring countries, such as Morocco and Senegal. The percentage of women in the workforce is about 26%. This level has stayed about the same for the past few decades, according to the World Bank. Among men, labour participation is nearly 60%. Helping women get jobs will provide a major boost to gross domestic product. Youth unemployment is also high in Mauritania, at about 24%.

**“ I feel my country's businesses need to become more diverse. ”**

To get support from the Bank for Commerce and Industry, businesses in Mauritania must show that they are trying to align with a global initiative called the 2X Challenge. The 2X Challenge was started at a Group of 7 economic meeting in 2018 to help development banks invest in women. The 2X Challenge's latest goal is to invest at least \$20 billion to help women from 2024 to 2027. "Mauritania holds vast potential for sustainable growth, especially with its rich natural resources, renewable energy developments and abundant fisheries," says Marc-Antoine Coursaget, a loan officer for West Africa at the European Investment Bank. "By empowering women and youth, we can build on these strengths and create a more resilient economy."



8

# CAPITAL MARKETS UNION

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We continue our pioneering journey to showcase the potential of distributed ledger technologies in fostering transparency, efficiency and security in capital markets. In November, we completed four digital transactions – three bond issues and one bond investment – in close collaboration with prominent market participants. This represents an important step in testing and advancing digital solutions and promoting their integration in the European financial ecosystem.

”

**Marco Zimmermann**, head of treasury and capital markets department, EIB Finance Directorate

# PLATFORMS FOR CAPITAL

**The capital markets union will boost securitisation and venture capital markets to increase investment in the real economy. Some European pioneers are already showing how this could work**

**W**hen IPM Rubi needed to upgrade its metal-stamping production lines, the Vitoria-Gasteiz mid-cap turned to Banco Santander for financing. A €4 million loan from the Spanish bank helped IPM Rubi retrofit its factories in Galicia and the Álava region, which gave the company a sustainability award in October 2024 for cutting energy consumption and, therefore, emissions by half. The retrofit also ensured that IPM Rubi, which employs 400 people, can keep up with developments in the automotive industry and maintain its two biggest clients, Mercedes Benz and Stellantis, which owns a stable of carmakers including Fiat, Opel and Peugeot.

“For us, this is dramatic, it’s essential. Without this project, we couldn’t survive,” says Chief Executive Ricardo Romo. “And we couldn’t do it without the financing.”

The upgraded production lines are for passenger vehicles. But Romo expects he’ll soon need to carry out similar improvements on his lines for goods vehicles. “We hope to come back to the banks for more financing,” he says, “so that we keep up with the electrification of the automotive industry.”

**“Without this project, we couldn’t survive.”**

That’s where the nuts and bolts of IPM Rubi’s metal-stamping business, which has turnover of €128 million, meets the arcane and intangible world of financial securitisation. Banco Santander packages loans like the one it made to IPM Rubi into securities, sells them to investors and in turn uses the proceeds to make new loans, like the one IPM Rubi expects to take for its goods vehicle line. Securitisation is a

huge, liquid market in the United States and Asia. And Europe is trying to catch up, so that there is more financing for businesses like IPM Rubi that are vital to the real economy. The European Investment Bank is investing in securitisation transactions from European banks and developing innovative securitisation structures that it hopes will lead to a bigger market, as part of its backing for the single market for capital across the continent known as the capital markets union.

## **Efficient funding for SMEs**

Compared to the United States and Asia, tight regulation has somewhat slowed securitisation’s growth in Europe – particularly in the part of the market for securitisation operations with a higher rating and lower yield. To counter this, the EIB Group is backing innovative banks with big investments in securitisation transactions that create a more liquid market.

It’s part of a plan by the European Union’s financing arm to promote the capital markets union. At the same time, it also unlocks financing for small and medium-sized companies (SMEs) across various sectors, including key areas such as climate and innovation. “We are increasing our participation in the securitisation market,” says Manuel Conthe, a loan officer at the European Investment Bank. “It’s an efficient way of funding loans to SMEs.”

That’s why the EIB Group worked on a €530 million investment in a securitisation operation with Banco Santander signed in May 2024. The European Investment Bank invested €440 million in highly rated

**“ We need to strategically put the EIB Group investments and efforts in places where the market and the originators need us most. ”**

tranches of securities that were based on a pool of Santander's loans to its clients, while €60 million was allocated to non-investment grade tranches. In return, Santander agreed to originate double that amount in new loans to Spanish SMEs and mid-caps, which are vital to the country's economy and play a crucial role in driving employment and growth. "By selling these bonds, we release capacity for additional loans to customers," says Koldo Oleaga Gascue, head of asset mobilisation at Santander in Madrid. "We recycle capital, and we increase the support we give to communities and to our customers."

#### **Filling a gap in the securitisation market**

The European securitisation market has been growing somewhat since the middle of the last decade. That's mostly limited, however, to the tranches of any deal that carry a lower risk. Senior tranches, where the risk and consequently the payoff is lower, represent the largest portion of most securitised structures – often close to 80%, as in the Santander securitisation operation. That means banks like Santander need to place a significant amount of this kind of tranche in the market.

That's where the investment by the EIB Group plays a major role. "By purchasing an important part of the senior tranche, the EIB Group facilitates the placement in the market of the full structure of very big transactions," says Bálint Kónya, structured finance analyst at the European Investment Fund.

The European Investment Fund is the subsidiary of the European Investment Bank that focuses on SMEs. Though its investment in the Santander securitisation transaction was much smaller – at €30 million – its expertise in synthetic securities plays a key role in structuring, negotiating and executing securitisation operations for both the European Investment Fund and the Bank. The European Investment Fund's contribution, which resulted in Santander agreeing to originate a €60 million portfolio of new loans granted to SMEs and small mid-caps, also included a commitment that 30% of the new loans should target sustainable investments and 20% should be for "gender-balance financing," such as companies run by women entrepreneurs.

Karen Huertas, senior investment manager at the European Investment Fund, believes that these deals prove the value of the EIB Group in the capital markets union. "EIB Group participation in these deals shows that securitisation transactions are economically efficient and effectively placed in the market, while we still contribute to the growth of the European economy," Huertas says. "We need to strategically put the EIB Group investments and efforts in places where the market and the originators need us most."

#### **Born and raised in the European Union**

European companies tend to depend more on bank financing than their counterparts in the United States and Asia, where there is a bigger venture capital market. Consequently, European startups are often bought by US investors. European capital markets also lack the depth of US markets, because they are national and, therefore, relatively limited in scale.

The latest push for the capital markets union started with an initiative from the European Commission in 2020. At a Euro Summit in Brussels in March 2023, EU government leaders called “for stepping up collective efforts, involving policymakers and market participants across the Union, to take forward the capital markets union.” In October 2024, EU finance ministers welcomed proposals from the European Investment Bank to deepen the capital markets union.

President Nadia Calviño has spoken of several ways in which the European Investment Bank might provide some of the building blocks to a capital markets union, so that “ideas that are born in the European Union stay in the European Union.” One of these ideas is a securitisation platform that would allow for more standardised deals, bringing in smaller banks and freeing their capital in turn for loans to SMEs.

### Time consuming

Standardisation would be important, because bespoke securitisation operations are complicated and time consuming to set up.

In July, the European Investment Bank signed a deal with BPCE, a big French banking group. The European Investment Bank and the European Investment Fund bought senior notes – the Bank made an investment of €750 million and the Fund invested €50 million. In return BPCE agreed to make twice that amount in new loans within three years. In a first for the European Investment Bank in France, the new loans will target small companies in the innovation sector, including health technologies. “This is

something we definitely want to do more of,” says Nicolas Mardam-Bey, the European Investment Bank loan officer who worked on the deal. “Capital markets union should relax regulations to allow more issuance.”

“ **The scale of the European Investment Bank's operations allows for economic efficiency.** ”

Until the capital markets union progresses, the European Investment Bank's participation itself facilitates deals that might otherwise not be done at all. “The scale of the European Investment Bank's operations allows for economic efficiency,” says Jean-Philippe Foeillet, expert leader at BPCE's Natixis investment banking unit. “These transactions are demanding in terms of resources, time and information technology, so they benefit from economies of scale that make their management more viable.”

Given the scale of the European Investment Bank deal, Foeillet knows that he will be able to bring other investors into the same structure.

### Structures that could be platforms

And the structure developed for the BPCE deal is more complex even than typical securitisation – and more innovative.

Most securitisation operations represent a set pool of underlying loans made during a particular period of time. The BPCE deal allows the French bank to periodically replace the underlying loans with new loans. The bank could effectively maintain the same structure and keep it running for decades, long after the first underlying loans have been paid off. That makes it closer to the kind of securitisation platform the European Investment Bank might set up as part of its backing for the capital markets union, says Jesper Skoglund, a structured finance manager at the European Investment Fund who worked on the BPCE deal. “We want to keep on deploying these kinds of securitisation instruments to encourage new lending,” he says. “It will create a more active securitisation market in Europe and boost lending to the real economy.”

## Champions of tech

The European Investment Fund is also behind another capital markets union initiative from the European Investment Bank Group that is, effectively, an investment platform in its own right.

The European Tech Champions Initiative aims to plug a hole in the venture capital market in Europe, mobilising public and private resources. That's because most European deep-tech companies are financed by foreign investors. Only a small portion are funded by European investors, and almost none of the financing comes from the capital markets.

The European Investment Fund accounts for a large portion of what venture capital there is in Europe, investing in funds that in turn invest in startups and scale-ups. The Tech Champions Initiative 2.0 will do that too – but it will also target the mobilisation of large pools of resources from European pension funds and insurance companies, for example, which will come to Tech Champions through an investment instrument. Such investors typically don't view venture capital as worth all the time and resources it takes to make relatively small venture capital investments; the Tech Champions Initiative 2.0 will give them an opportunity to make a larger investment through an instrument that gives them access to a diversified European venture capital portfolio all at once. "Once investors start to familiarise themselves with the asset class, they will be more eager to dedicate meaningful resources," says Adrian Zambrano, a structuring expert at the European Investment Fund.

Europe's venture capital market will receive a double boost from the Tech Champions Initiative. First, investors such as pension funds will enter the market by investing in the Tech Champions platform. Second, the consequent increase in investment in venture capital funds will allow more of those funds to reach their fundraising goals and, thus, increase the financing available for startups and scale-ups. "We're trying to open access for European investors to this asset class," says Zambrano. "Even though it's very challenging, we expect it to be a ground-breaking solution."

To get the fund started, six EU Member States and the European Investment Bank have invested €3.7 billion. The fund is expected to open for private investors in 2025.

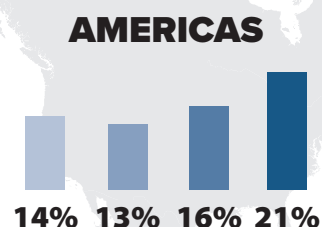
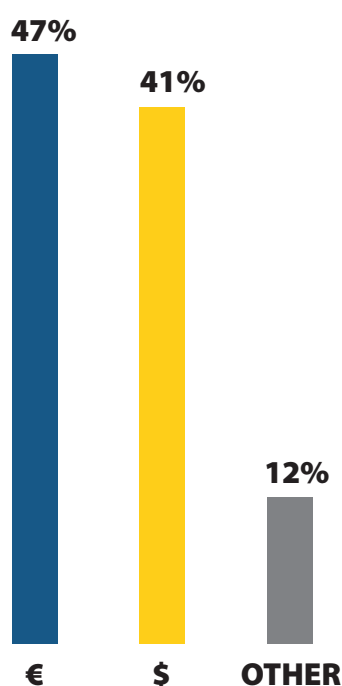
“**We expect it to be a ground-breaking solution.**”

# WHERE THE MONEY COMES FROM

The European Investment Bank, one of the world's biggest multilateral financial institutions and providers of climate finance, is committed to financing projects that drive economic growth, support climate action and promote social progress across Europe and the globe. To achieve these ambitions and meet its lending goals, the European Investment Bank raises long-term funds through bond issuances on the international capital markets. These bonds attract investors worldwide.

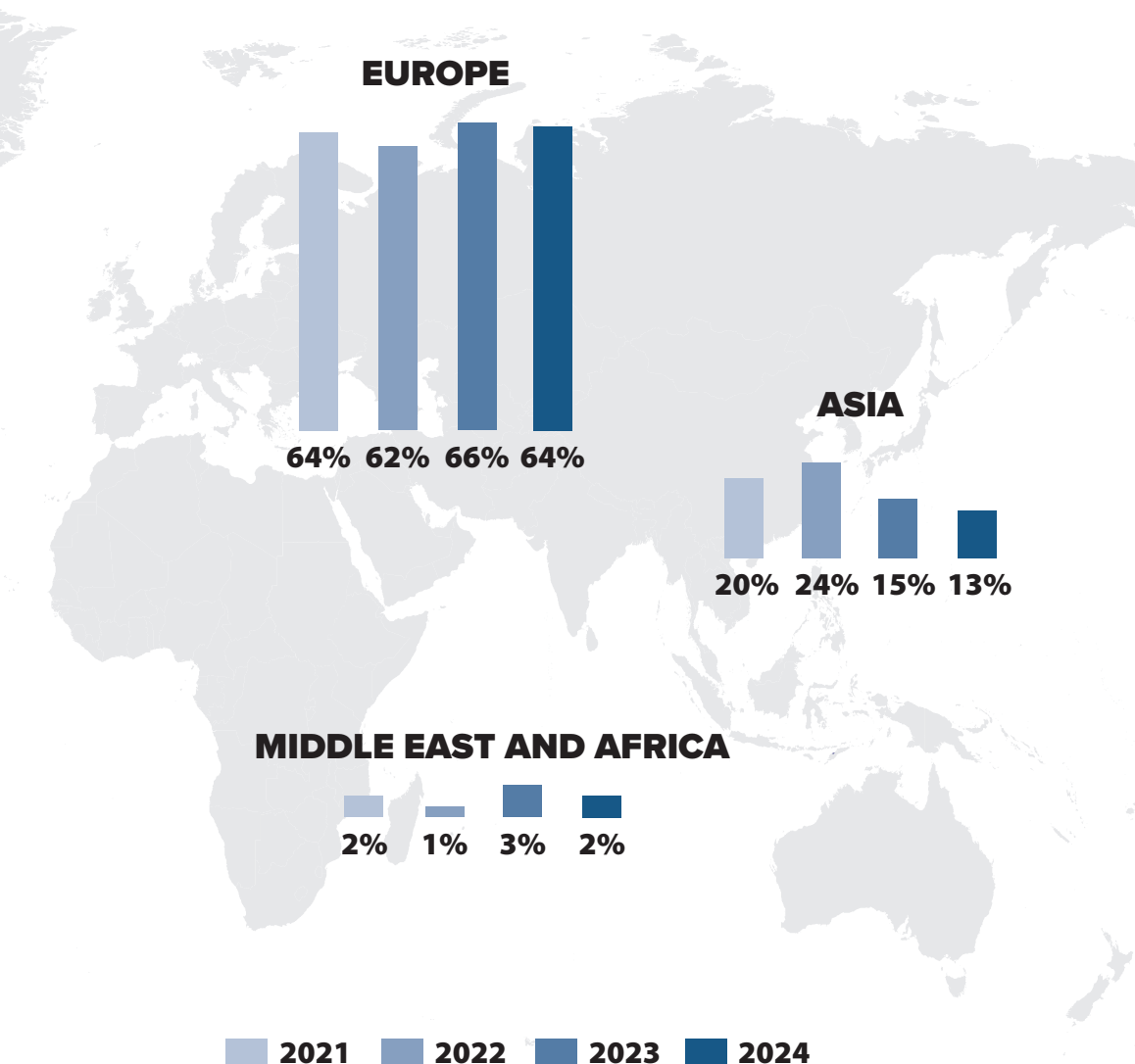
In 2024, we raised €63.4 billion by issuing bonds, including €18.3 billion in green and sustainability formats, across 13 currencies. While the focus was on the euro and US dollar, the Bank also issued bonds in other currencies such as the Australian dollar, Swiss franc, Egyptian pound, pound sterling, Hong Kong dollar, Indian rupee, Mexican peso, Norwegian krone, Polish złoty, Swedish krona and South African rand to diversify its funding sources.

## ISSUANCE BY CURRENCY



The investors for these issuances remain predominantly European, representing approximately two-thirds of the total investment. The remaining third is contributed by investors from Asia, the Americas, and the Middle East and Africa – highlighting the European Investment Bank’s global appeal.

As a leader in capital markets innovation, the European Investment Bank is at the forefront of sustainable finance and digital transformation. In 2024, we surpassed €100 billion in green and sustainability bond issuance since we issued the first green bond in 2007. These bonds are dedicated to financing environmental and social projects. Our latest pioneering efforts extend to the issuance of several digital bonds. We reinforced our leadership in digital innovation in 2024 by participating in the Eurosystem’s exploratory work with new technologies for wholesale central bank money settlement.



# GOVERNANCE

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

The Board of Governors is made up of government ministers from each of the 27 EU Member States, usually ministers of finance. The governors set out the Bank's credit policy guidelines and once a year approve the annual accounts. They decide on capital increases and the Bank's participation in financing operations outside the European Union. 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 matters. It meets once a month to ensure that the Bank runs in accordance with EU treaties, the Bank's own Statute and general directives laid down by the Board of Governors. There are 28 directors, one nominated by each Member State and one by the European Commission. There are also 31 alternate directors. To broaden the professional expertise of the Board of Directors, six experts have been co-opted to participate in board meetings as non-voting advisors. 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 Bank's 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 six years and are responsible solely to the Bank.

The Bank has an independent Audit Committee answerable directly to the Board of Governors. It is responsible for the audit of the EIB and the EIB Group's accounts, for annual verification that EIB operations are conducted – and its books kept – in a proper manner, and for verifying that the activities of the Bank conform to best banking practice. The annual report of the Audit Committee for the financial year is submitted to the Board of Governors with the Management Committee response. The Audit Committee is composed of six members appointed for a non-renewable term of six consecutive financial years. In addition, three observers may be appointed by the Board of Governors to support the committee with specific tasks.

# GROUP OPERATIONAL PLAN 2025-2027 HIGHLIGHTS

- **Business growth and competitiveness**
- **Higher-risk venture debt investments**
- **Research and development in disruptive technologies**
- **Renewable energy and sustainable infrastructure**
- **Security and defence**

Far-reaching technological changes, the increasing costs of climate change and demand for more investment in defence, housing and global needs are the expected focus for 2025 to 2027.

Our total signed deals are expected to increase to about €95 billion in 2025.

The Bank's finance in climate action and environmental sustainability will continue to exceed 50% in 2025. We will step up support for business growth and competitiveness while investing more money in higher-risk equity and venture debt projects.

Our work in Europe in 2025 will support sectors such as renewable energy and sustainable infrastructure, energy grids and interconnectors, better car manufacturing, more green hydrogen and storage, and reduced carbon emissions in heavy industry.

We will support a new Strategic TechEU programme to increase financing for research, digitalisation and technology. We will increase investments for new technologies such as quantum computing, artificial intelligence, biotechnology and health sciences.

The EIB Group will step up assistance provided to security and defence industries. Partnership agreements have already been signed with the NATO Innovation Fund and with the European Defence Agency.

We will expand financial and advisory support for affordable housing, especially for younger generations. We will put a greater emphasis on three areas: research for new building technologies, energy efficiency of older housing and new construction in affordable housing.

We expect to offer new initiatives in 2025 for a stronger capital markets union. We will present proposals for more robust green and digital bond markets to help European companies get more public and private finance. The European Investment Fund will play a key role in leading the venture capital sector.

EIB Global will focus on sectors such as water supplies, small businesses and energy efficiency. We will keep supporting Ukraine and the enlargement of the European Union to the east. The Mediterranean region and sub-Saharan Africa will remain the main destinations for our global work.

Finally, the EIB Group will continue to simplify processes to offer faster financial and advisory support for European competitiveness. We will put forward ambitious proposals to simplify financing mandates, reduce reporting requirements and cut red tape.



**The European Investment Bank's core priorities**  
Find out more [here](#)



# PRIORITIES<sub>FOR</sub> PROSPERITY

