



# Innovation Fund Project Development Assistance

## Knowledge Sharing Event

June 14th, Brussels





# Welcome Note & Overview of Innovation Fund Project Development Assistance

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# EIB at a glance



*Largest multilateral lender and borrower in the world*

*Leading provider of climate finance*

*Governed by the EU Member States*

Over **€1.5 trillion** invested since 1958

- More than **14,400 projects** in over **160 countries**
- Crowding-in bank: **€ 4.9 trillion** overall investment mobilised
- **€197 billion** in climate lending since 2012
- Lending ca. 65bn EUR in 2022
- First MDB to be Paris aligned
- Pioneering investor in green technology

Headquartered in Luxembourg

- Around **4000 staff**: In addition to finance professionals, we have engineers, economists and socio-environmental experts
- **54 offices** around the world



# EIB role: Innovation Fund Project Development Assistance

- The Innovation Fund includes a dedicated **Project Development Assistance (PDA)** service to improve the “maturity” of projects
- **“Maturity”** refers to selection criterion C in Article 11 of the Delegated Regulation of the Innovation Fund.

*“Project maturity in terms of planning, business model, financial and legal structure as well as project of reaching the financial close within a predefined period of time not exceeding four years after the award decision”*

- EIB has been entrusted by the Commission with the implementation of the PDA task in accordance with Article 18(1)(c) of Delegated Regulation (EU) 2019/856
- PDA is implemented by **financial and technical experts of the EIB** with support from external consultants



# Criteria for PDA support

## Project Development Assistance (PDA) criteria are defined in IF Calls for Proposals

Out of the proposals that do not score above the threshold for funding, the proposals that are considered for Project Development Assistance :

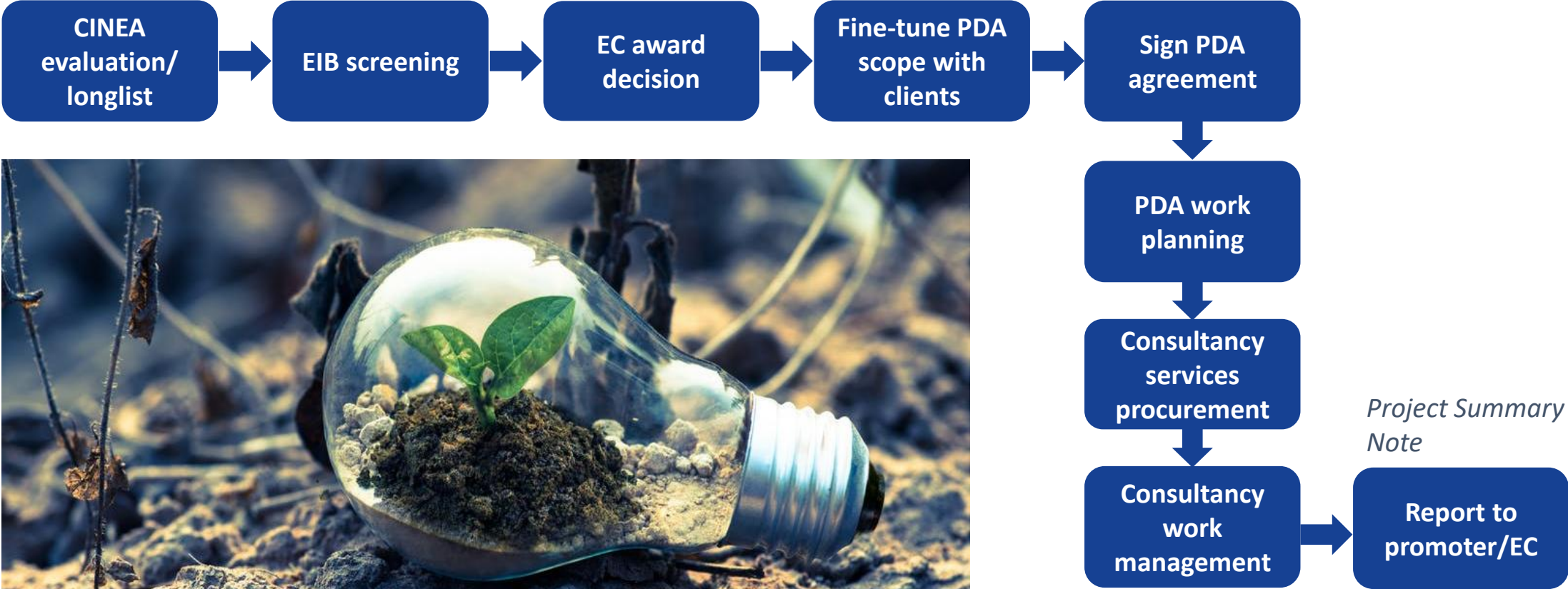
- reach at least the **minimum threshold** for 'GHG emission avoidance', 'Degree of innovation', 'Scalability' and 'Cost efficiency'
- are awarded at least **50% of total points under the 'Project maturity' criterion**, and
- are considered by the evaluators as **having the potential for improving their maturity** through specific PDA

## Activities that may be funded with PDA

According to Art. 13, the following activities may be funded by way of PDA:

- (a) improvement and development of **project documentation**, or components of the project design with a view to ensuring the sufficient maturity of the project
- (b) **assessment of the feasibility of the project**, including technical and economic studies
- (c) **advice on the financial and legal structure** of the project
- (d) **capacity building** of the project proponent

# PDA process



*Project Summary Note*

*Budget  
Time, Quality*



# PDA activities

## Independent reviews

- Technology assessment: Verification of key technical parameters of the project
- CAPEX & OPEX review
- Market analysis review
- Pilot project review and scale-up risk assessment

## Additional studies

- Market research
- Life cycle assessment (LCA)

## Financial modelling

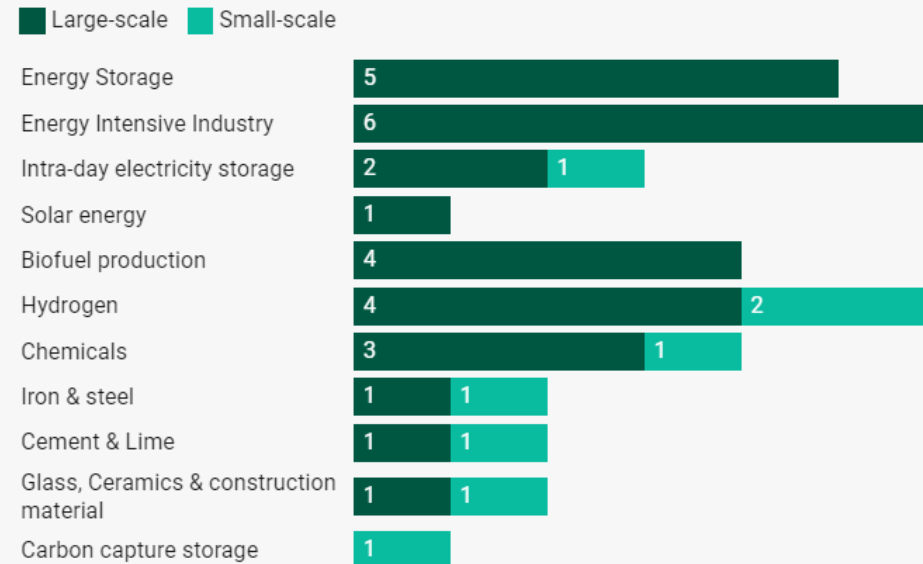
- Review of the existing financial model
- Development of a bank-standard financial model
- Business case modelling

## Other Financial Advisory

- Business plan assessment
- Corporate strategy guidance
- Advice on fundraising strategy
- Support with equity pitch documentation

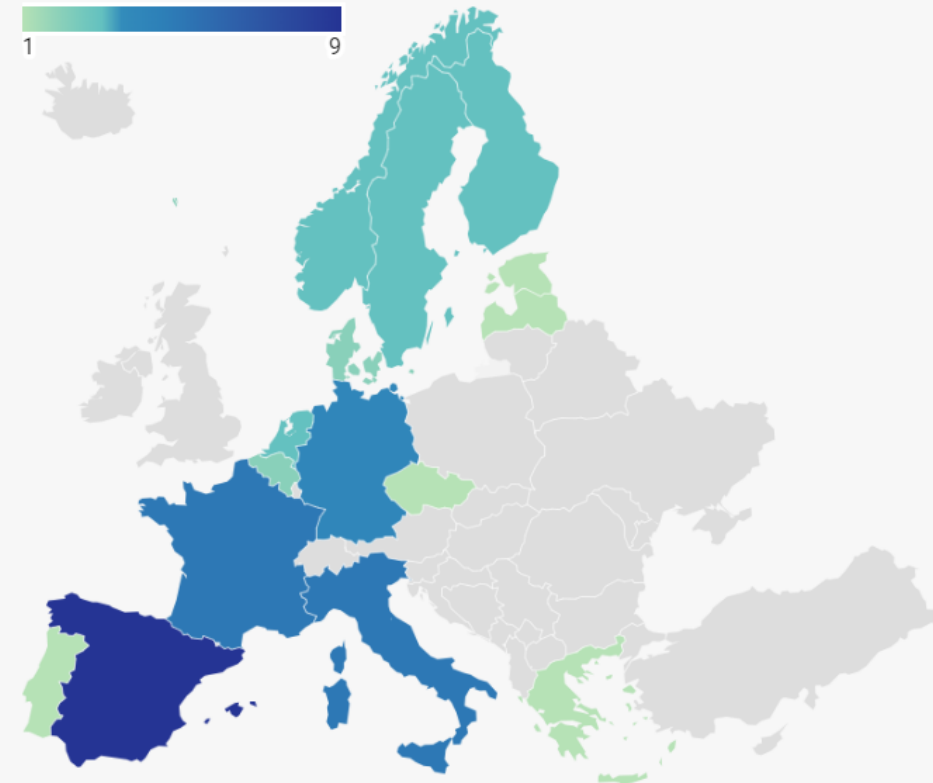
# Overview of projects awarded PDA

## Number of projects that received project development assistance



Created with [Datawrapper](#)

## Our project development assistance across the European Union



Created with [Datawrapper](#)

**PDA screened: 57**

**PDA completed: 25**

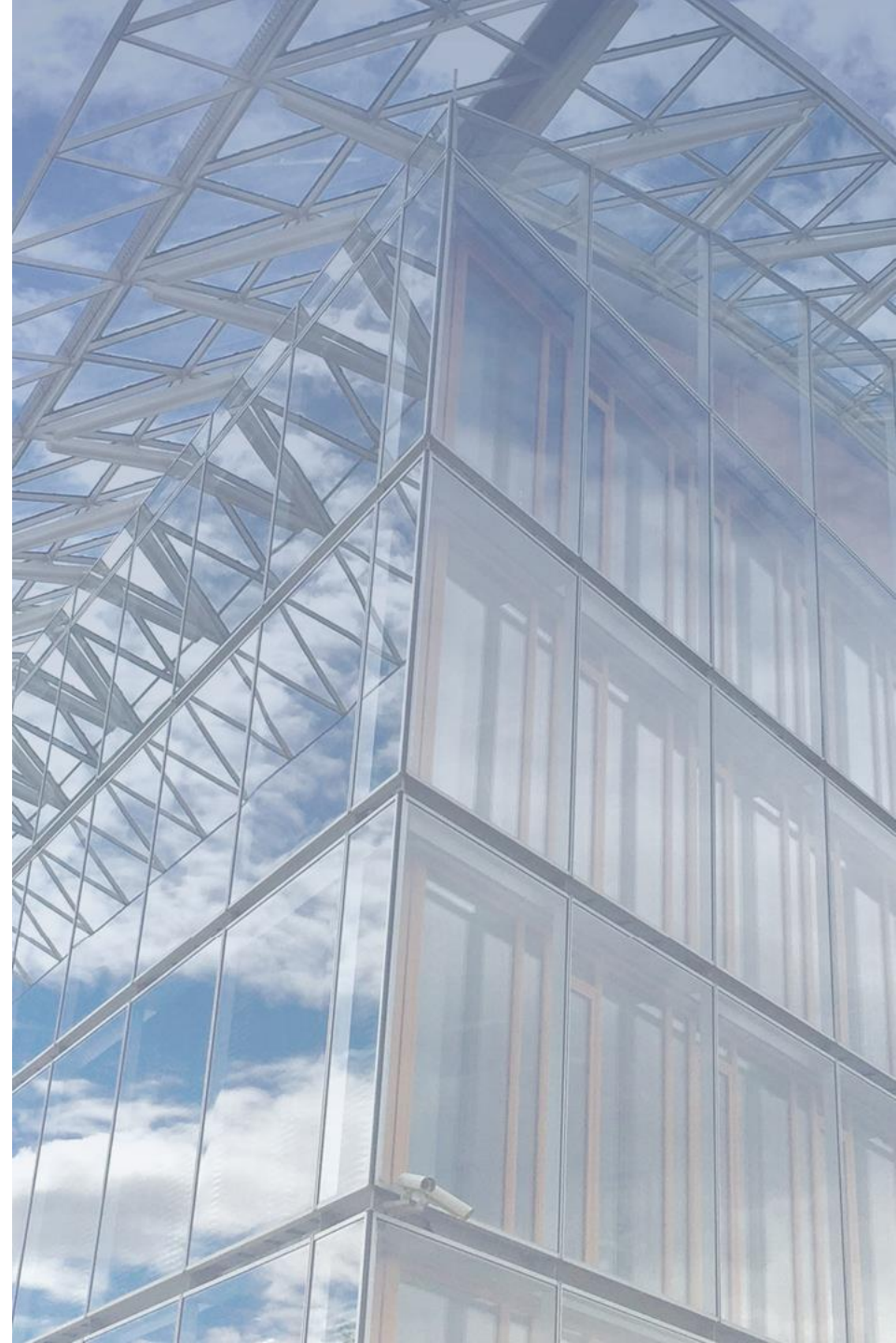
**PDA under execution: 14**

**TOTAL CAPEX of all PDA projects: EUR 5.16 billion**



# Key highlights & lessons learnt

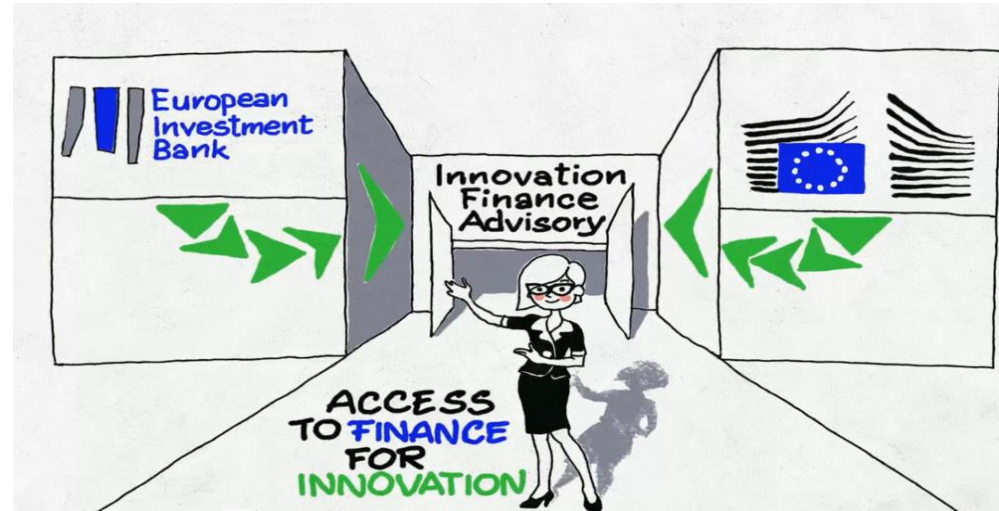
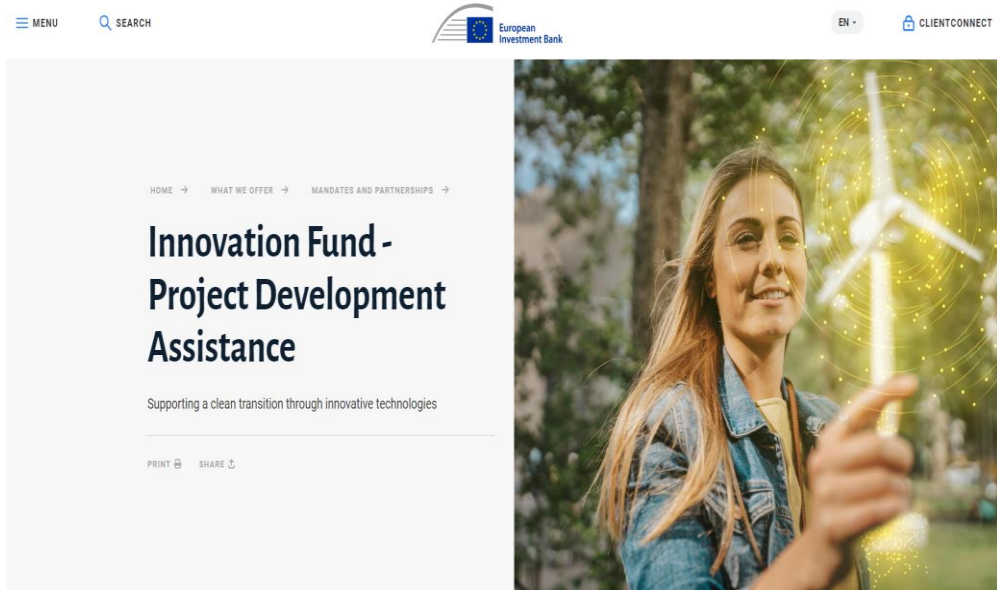
- The purpose of PDA is to **increase a project's maturity** based on specific recommendations, with **limited time and budget**
- Projects receiving PDA support **can re-apply to subsequent IF Calls**
- Projects can receive **technical and/or financial** PDA support
- **Good communication** with the promoter has been key for successful PDA implementation



# Contacts

If you are interested in advisory support for your project please reach out to us at our new mailbox:

[innovationfinanceadvisory@eib.org](mailto:innovationfinanceadvisory@eib.org)



## Innovation Fund - Project Development Assistance (eib.org)

**NER 300**  
Financial Advisory



- ✓ Provides a **bridge between NER 300 and Innovation Fund** due to overlapping eligibility requirements
- ✓ Delivered by a **dedicated advisory taskforce** to develop the financial maturity of innovative clean-tech projects
- ✓ Affords projects an **in-route to EIB lending**

**Financial Advisory available until December 2023**

**Website: [NER 300 financial advisory \(eib.org\)](https://www.eib.org/ner300)**





# Growth Capital for Cleantech

RUBEN DEVOGELAER

SENIOR INVESTMENT OFFICER

EQUITY AND GROWTH CAPITAL FOR CLEANTECH IN THE EU



# Cleantech Growth Capital at the core of InvestEU Green Transition

- The EU has made **climate action a top priority** and aims to be climate-neutral by 2050
- Cleantech companies deserve **reliable and long-term partners, from early stages of commercialisation and deployment to late-stage growth and scale-up**; as well as for **lighthouse and Foak** projects
- Since 2016 the **EIB is a partner of choice for innovative cleantech** companies, having provided over €1bn of venture debt
- With the support of the European Commission, the EIB provides venture debt under InvestEU's Green Transition instrument – well suited for very innovative projects and companies with higher risk and high policy impact
- **EIB Cleantech Venture Debt is a market-based and highly flexible instrument that can meet most (if not all) client's financing needs in the growth space**



# Why does EIB support Cleantech with venture debt?

Silicon Valley Bank [+ Add to myFT](#)

## Tech start-ups assess damage caused by Silicon Valley Bank collapse

Groups prepare to deal with bigger banks after loss of institution that was a one-stop shop for their financing needs



Forbes

## We started with a simple question: Why should founders be paying attention to this down economy?

Investors agree: Behaviours must change. Founders need to conserve capital and runway.

## Restructuring experts gear up as inflation drives insolvencies

Rising costs and interest rates are fuelling UK company defaults and demand for advice



European Commission

Home > Press corner > The Green Deal Industrial Plan

Available languages: English

Press release | 1 February 2023 | Brussels

## The Green Deal Industrial Plan: putting Europe's net-zero industry in the lead

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Quote(s)

Today, the Commission presents a [Green Deal Industrial Plan](#) to enhance the competitiveness of Europe's net-zero industry and support the fast transition to climate neutrality. The Plan [aims to provide a boost](#)

FT Podcast Behind the Money [+ Add to myFT](#)

## Best Of: Why VC funding is drying up

Venture capital fundraising hit a record-high. Now, the bonanza is over. What does that mean for the future of start-ups?



## EU targets 40% of clean tech to be made within the bloc by 2030

Draft regulation is response to US subsidies and Chinese state support for green-tech sector












## Net-Zero Industry Act: Making the EU the home of clean technologies manufacturing and green jobs

Ursula von der Leyen is speaking, and Biden in Washington next day

ing a target that would see 40% of the bloc's the end the decade, as part of a response to a

# Cleantech growth capital for 5 priority sectors

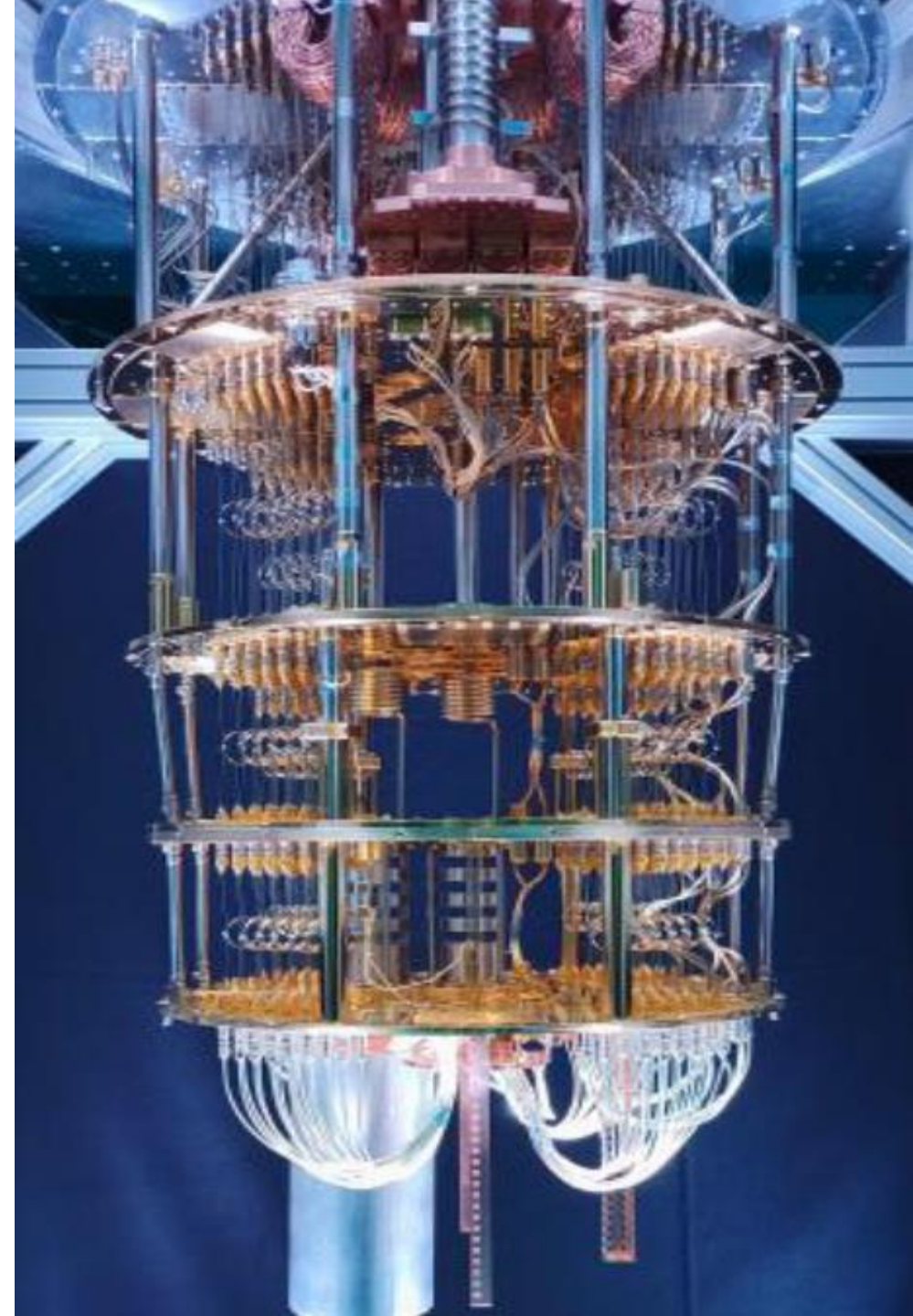
EIB supports innovative products, technologies and business models contributing to a net-zero world across 5 priority sectors.

ENERGY	MOBILITY	CIRCULAR ECONOMY	BIO-ECONOMY	DECARBONISATION OF INDUSTRY
 <p>Renewable energy technologies (wind, wave, solar, etc.)</p>	 <p>New and adapted transport services and infrastructure (e.g. charging networks, drone delivery)</p>	 <p>Sustainable end-product, byproduct and waste product recycling.</p>	<p>Sustainability and climate mitigation in food production and supply chains, agriculture, farming, forestry and blue economy</p>	 <p>Carbon reduction for energy intensive heavy industry incl. cement and steel.</p>
 <p>Energy storage</p>	 <p>Digitalisation of the transport sector and manufacturing of green mobile assets</p>	 <p><b>Key sectors</b> include: textiles, plastics, packaging, ICT, batteries, vehicles, construction materials, food, water, critical raw materials, nutrients and energy equipment</p>	 <p>And more...</p>	 <p>CCU(S)</p> <p>And more...</p>

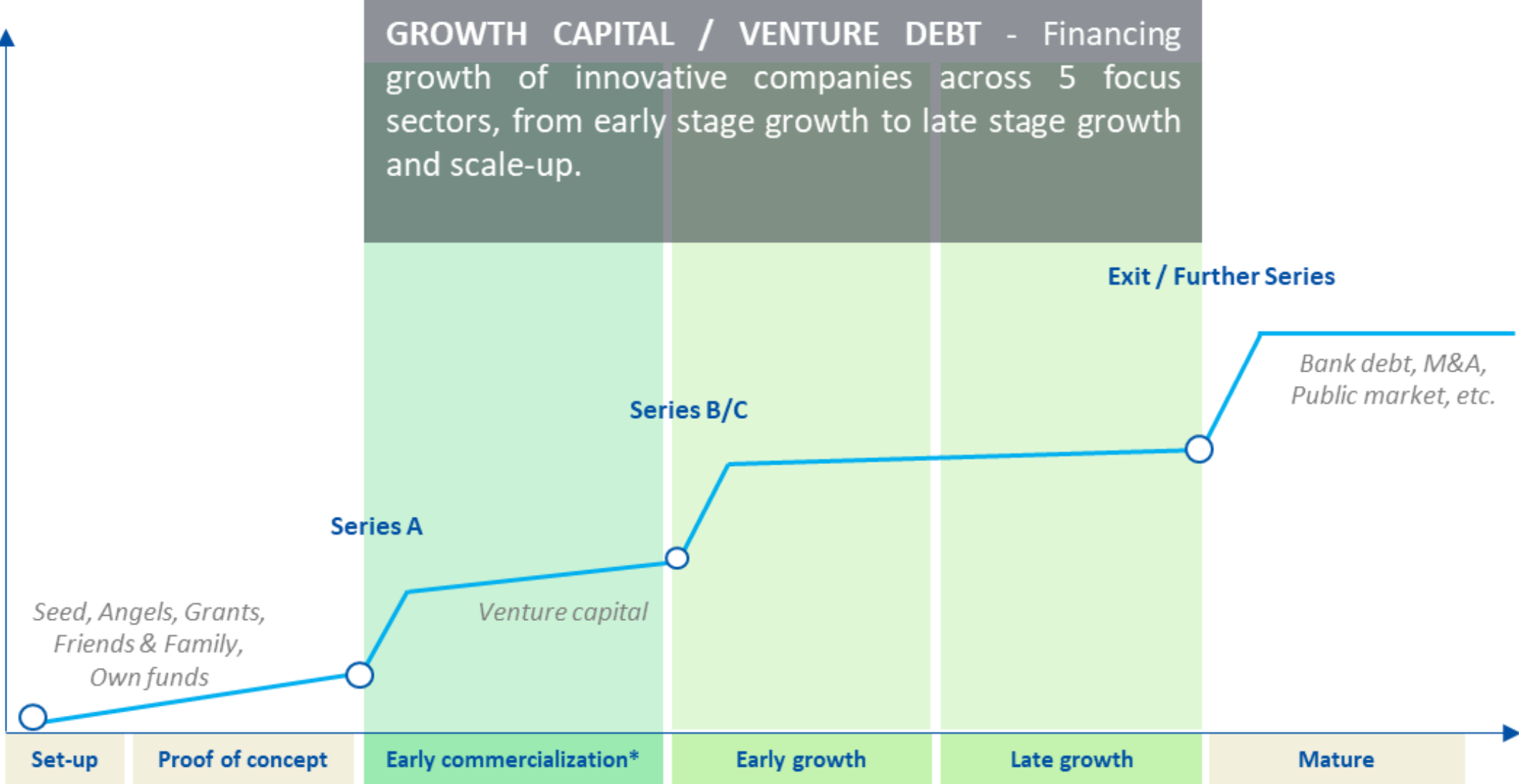


# Which initiatives get EIB support?

- You are a **start-up or more established company or a lighthouse or Foak project** in one of the 5 focus areas; focusing on innovative products, technologies or new business models
- You are not just average, you will make **an important contribution to a net-zero and competitive EU economy!**
- **Investments (capex and/or R&D) to be financed** are deployed **within the EU**
- **You have already raised (Series A/B) equity and your company needs fresh cash** (and are reliant on mainly equity at this stage) for **further development, commercial demonstration**, to accelerate growth or to scale-up
- **Sound and sustainable business model, professional management team and established corporate governance**



# EIB accompanies clients as they grow their business



# Advantages of EIB financing – what’s in it for you?



## COMPANY

- ▶ **Longer tenors to create runway** allowing a company to focus on business
- ▶ **Amounts tailored needs, with bigger tickets** for late-stage growth or scale-up.
- ▶ EIB is a **stable AAA rated, reliable and patient investor**
- ▶ Flexible and bespoke terms to **meet company needs**, function of stage of maturity and growth trajectory.
- ▶ **Increased market visibility** for the company
- ▶ Effective **sharing in technology and commercialization risk**



## FOUNDERS

- ▶ Little to **no dilution** or loss of control
- ▶ **Hands-off approach** though available as sounding board to management when required
- ▶ **Extend time to next funding round** or refinancing when graduating to standard bank lending
- ▶ Potential **start of long term relationship** with EIB via corporate or **project financing**



## INVESTORS

- ▶ **Complementary** to equity investors
- ▶ Little to **no dilution** or loss of control
- ▶ Longer tenors, large tickets and later stage entries as **enhance returns** for equity investors
- ▶ Reduce need for additional equity
- ▶ Possibility to **build relationship with EIB** across different portfolio companies, adding to VC offering



# EIB is a leading investor in Cleantech in the EU

More than 1 billion invested in innovative technology and business models across our 5 sectors



# Your contact in the Cleantech Equity and Growth Capital team

**HOW TO APPLY:**

Just mail us and share a teaser !

**Ruben Devogelaer**



Senior Investment Officer

**r.devogelaer@eib.org**

European Investment Bank  
100, boulevard Konrad Adenauer  
L-2950 Luxembourg

# Project Development Assistance ("PDA")

CASE STUDIES

CO2NCREAT

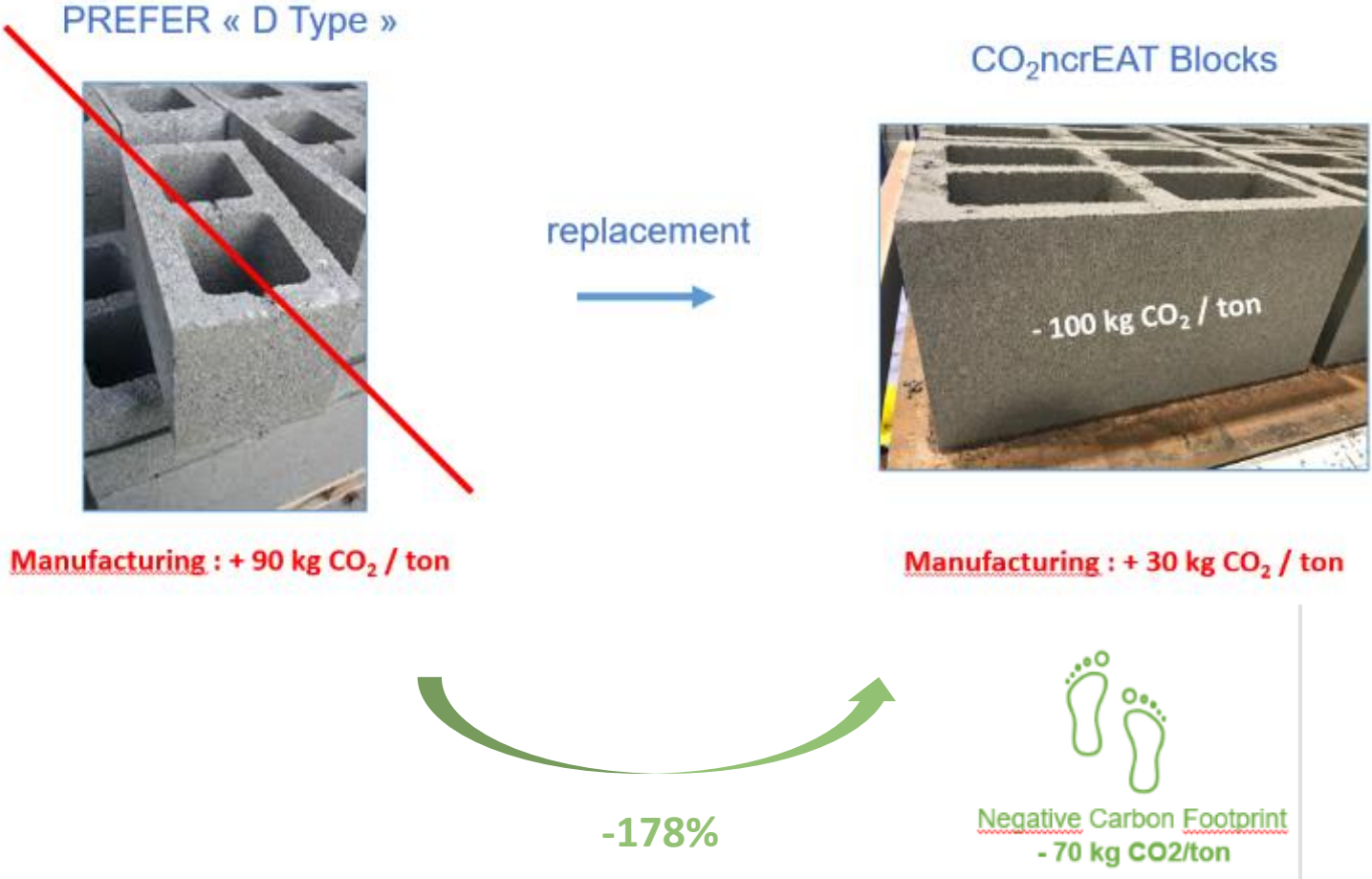




# CO<sub>2</sub>ncrEAT

- Industrial project allowing the production of carbon negative building products (“CO<sub>2</sub>ncrEAT blocks”)
- CO<sub>2</sub>ncrEAT blocks are cement-free and made of steel slag, a by-product from the steel industry, and CO<sub>2</sub> from a lime plant nearby
- Innovation lies in the production of such blocks by injecting industrial flue gases (versus pure CO<sub>2</sub>)
- A consortium of 4 Belgian players are joining forces to conduct this project: Prefer (producer of building materials), Fluxys Belgium (expert in pipeline transport), Lhoist (lime producer, supplier of CO<sub>2</sub>) and Orbix (owner of ad-hoc technology and raw materials)
- In December 2022, the project was selected by the European fund, i.e. the “Innovation Fund Small Scale”, to get a **EUR 4.5 million grant**.

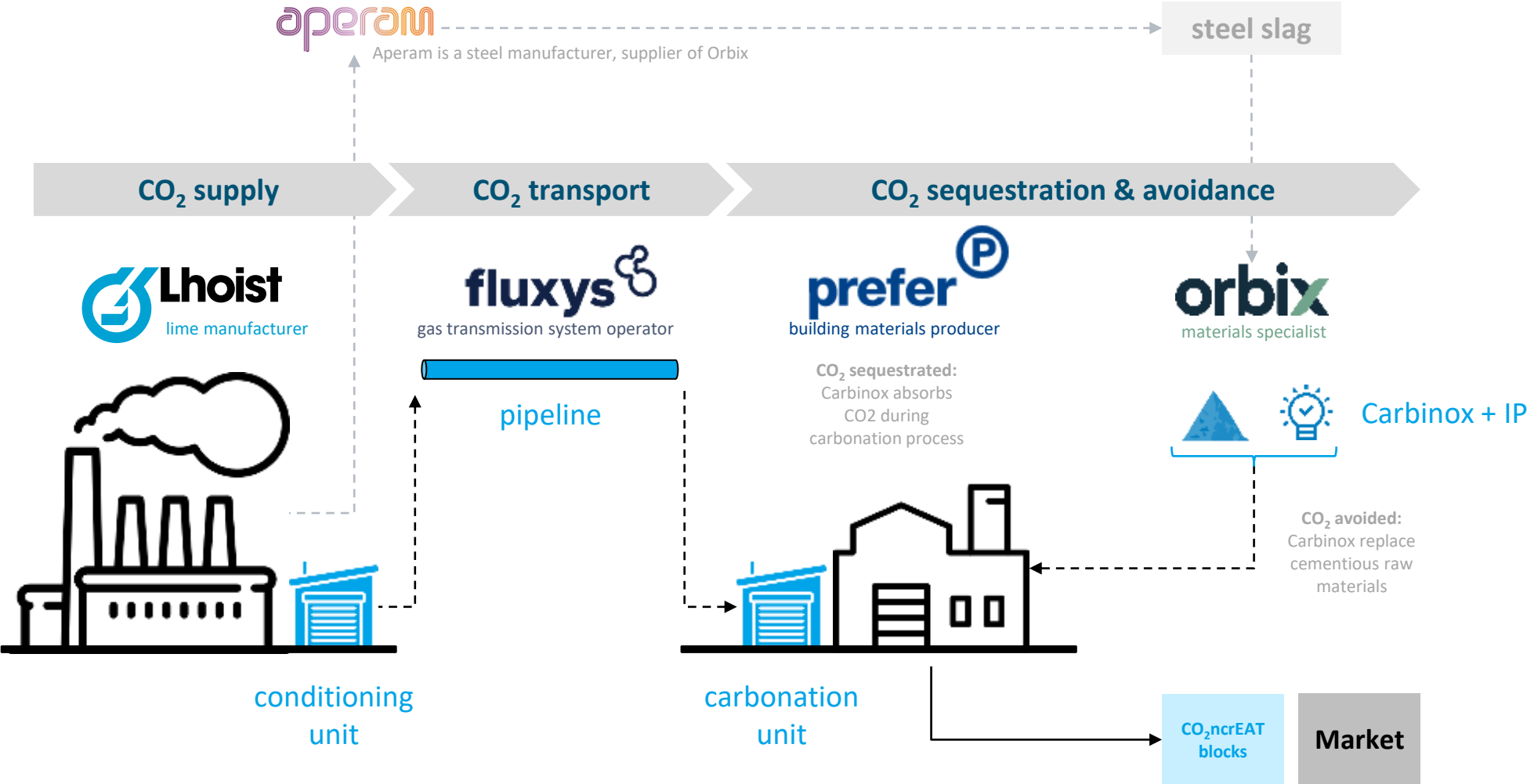
# Carbon negative building product



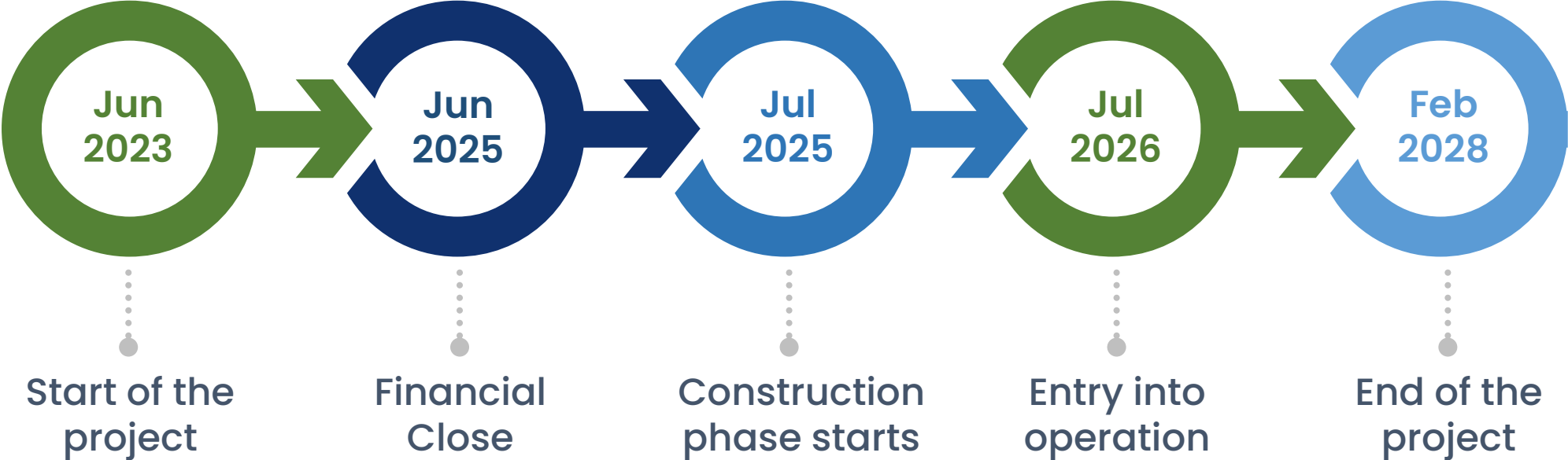
**Motivation for the project is the creation of an innovative masonry block with a carbon negative footprint**

CO<sub>2</sub>ncrEAT blocks carbon footprint is **-70kg CO<sub>2</sub>/t** versus normal blocks which have a footprint of **+90kg CO<sub>2</sub>/t**

# ...using steel slag and CO<sub>2</sub> (cement-free)



# ...with CINEA, operational as from 2026







# Project Development Assistance

- Earlier in 2021 and 2022, CO2ncrEAT failed twice to get support from a European fund
- PDA, why?
  - ✓ Project financial model
  - ✓ Project capex
  - ✓ Project uncertainties
- PDA, how?
  - ✓ **Scope:** definition of support areas and deliverables
  - ✓ **Modus operandi:** definition of roles & timing

# Inception: gaps identified in previous application

## Financial model:

- Align the financial model to the standard used by banks and investors, in accordance with CINEA's guidelines
- Clarify cost sharing mechanisms between consortium partners
- Develop a detailed financing plan...

## Capex:

- Provide a detailed breakdown...
- Explain the rationale behind specific item X...

## Project uncertainties:

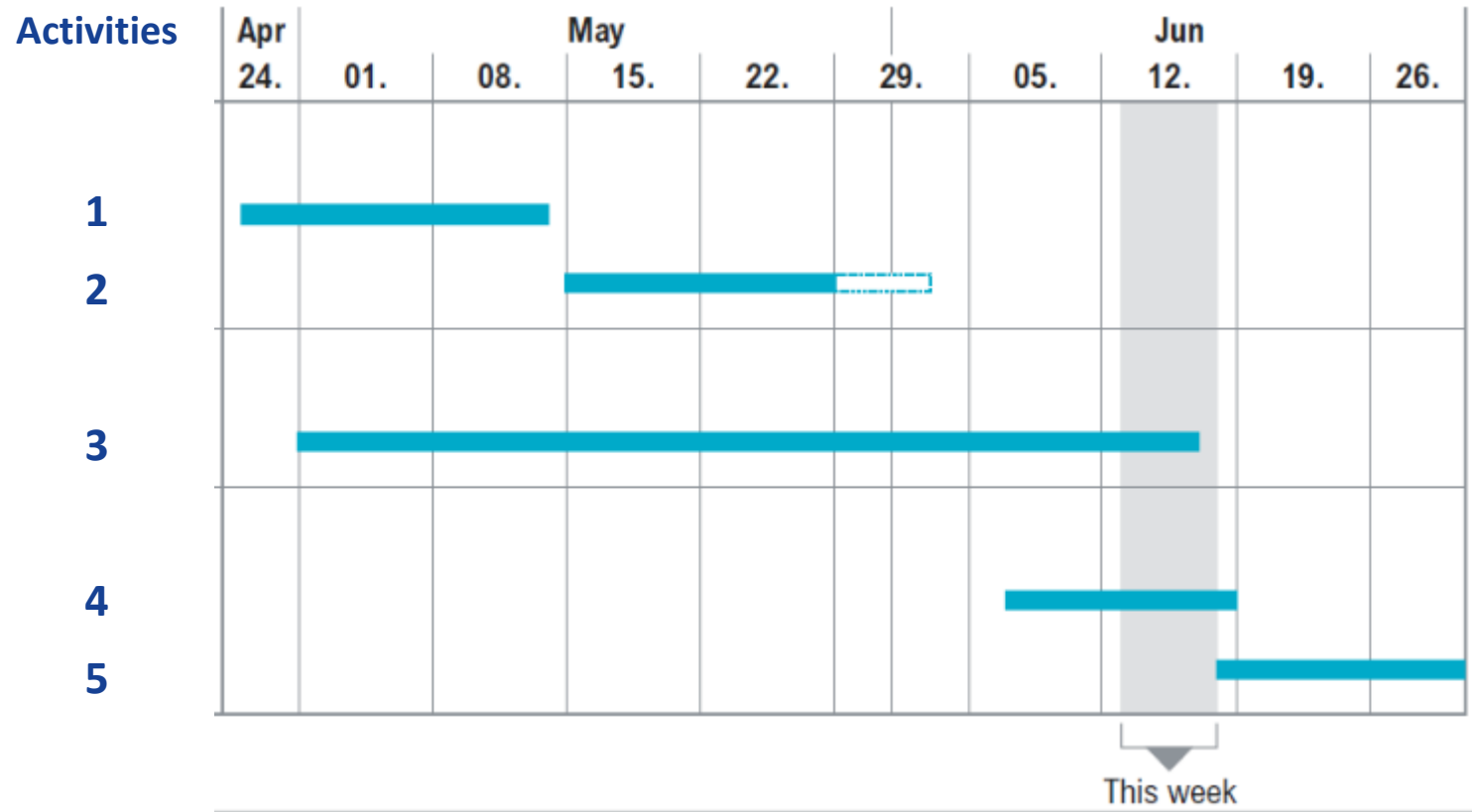
- Research on impact of carbon avoidance/capture...
- Substantiate assumptions regarding uncertainties...

**An application to a European subsidy requires a comprehensive work covering all aspects of the project.**

CINEA assessment can reveal areas that needs to be improved, even if it is clear for you:



# PDA Timeline



**PDA and dedicated consultants are bringing drive to the project within your organization. Also, they will highlight CINEA best practices.**

**Attention points:**

- Scope/focus
- Collaboration with internal resources
- Timing

- ✓ Financial and Technical PDA were completed in parallel
- ✓ Despite the short timeline all PDA support was completed in time for a re-application



# Results: improved application materials that led to a successful outcome

## Financial model



The financial model supported the economic rationale of the project and helped clarify the financial commitment of each partner. It also became a turnkey solution for all stakeholders to play with project assumptions, drivers and outputs.

## Capex



Quotation transformed into a clear and structured list of investments required to setup CO<sub>2</sub>ncrEAT

## Project uncertainties



Key risks addressed during working sessions and dedicated notes so as to provide supporting material for some of the project assumptions

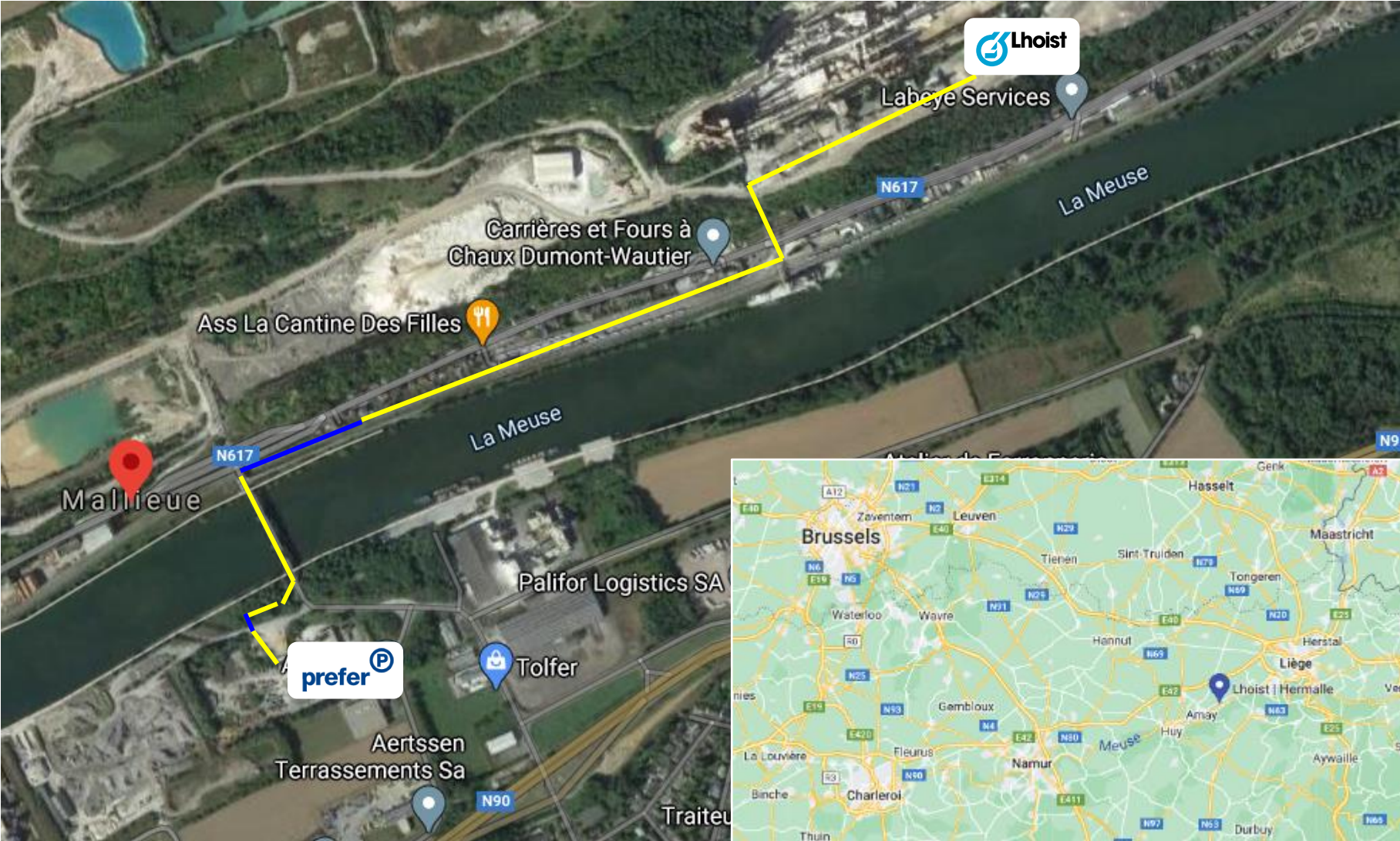


## What's next for CO<sub>2</sub>ncrEAT

- Along the summer we will run tests in a small pilot plant allowing us to make CO<sub>2</sub>ncrEAT blocks based on Lhoist flue gases (until now, tests were made only with pure CO<sub>2</sub>)
- **The results of these tests will allow us to apply for environmental/building permits**
- In parallel, detailed engineering work is starting so that we will ensure construction by 2025
- **Hereafter, construction at a glance**

# Construction: geographic footprint

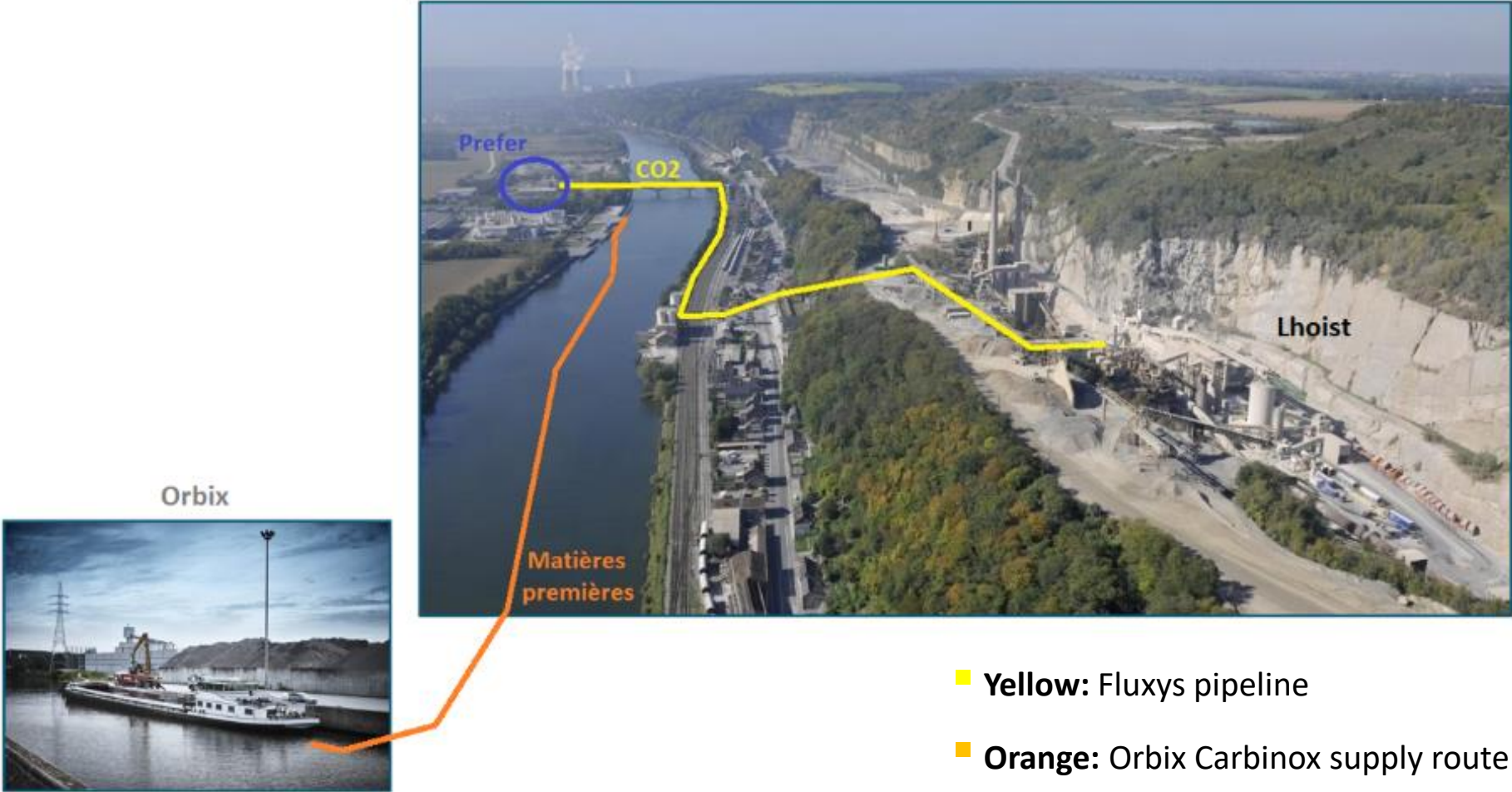
What's next?





# Construction: situational description

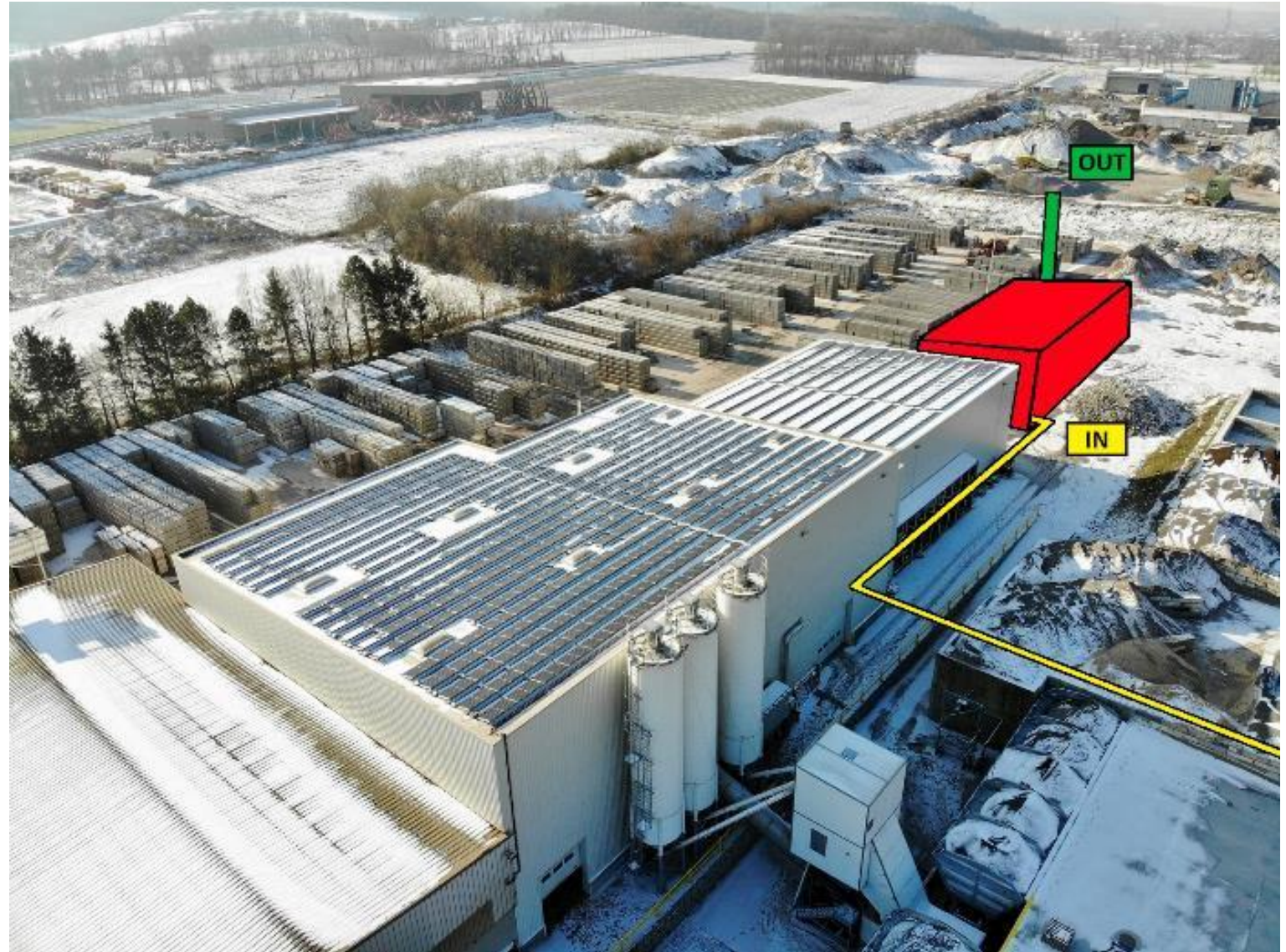
*What`s next?*



- **Yellow:** Fluxys pipeline
- **Orange:** Orbix Carbinox supply route
- **Blue:** Prefer plant

# Construction: Prefer's contemplated unit

*What`s next?*





# Project Development Assistance ("PDA")

CASE STUDIES

ZERO CARBON GYPSUM





# Zero Carbon Gypsum

Goal of the project:

- Switch gypsum plasterboard manufacturing plant from natural gas to low-carbon syngas
- Demonstrate ETGAS core technology in a first-of-a-kind application globally
- Demonstrate technical and financial feasibility in achieving Net Zero in energy intensive industry with substantial process emissions
- Set a benchmark and Net Zero roadmap for gypsum plasterboard industry globally



# Zero Carbon Gypsum

## Project description

- Development of a renewable **synthesis gas generation plant using non-recyclable solid waste** (SRF, RDF) as a feedstock. The plant will be located on gypsum plasterboard producer's site.
- *Benefit:* facilitate the transition towards carbon neutrality of energy-intensive manufacturing by replacing natural gas in traditional industrial processes with on-site generated renewable gas

Location	Latvia
Sector	Energy Intensive Industries - Glass, Ceramics & construction material
CAPEX	7.2 MEUR
Requested EU contribution	4.3 MEUR (60% of eligible costs)



# Innovation Fund Application

- Applied for the first call of Innovation Fund's small-scale projects on March 10, 2021
- Application done using only internal sources
- Results were announced July 2021, our project received the high scoring of **25.42** points (85% of total possible achievable points) or «few points below the line»
- November 2021 we were awarded PDA
- We were one of 10 projects that were shortlisted to receive PDA from that small-scale project call

# PDA Process

- Signed agreement with EIB: Feb 2022
- Project start: April 2022

Focus on following areas (topics selected based on gaps indicated by CINEA evaluators and agreed with the EIB based on time and budget available)

- GHG emission calculations
- Market study on feedstock availability and costs
- Voluntary CO2 market and alignment to ETS
- Independent technology review
- Improvement of financial model (e.g. sensitivities)



# PDA Results

- Development of financial model up to bank standard helped structure discussion with financiers for new company projects
- Independent technology review allowed us to validate critical points in discussions with other industry stakeholders, especially CO2 footprint, technology readiness, etc.
- While our partner our partner (KNAUF) lost interest in the project (parent company was not happy with the long process), we gained new customer in construction materials industry (bricks manufacturing)
- We feel much more confident regarding participation in upcoming Innovation Fund calls, if/when we'll decide to apply

# Key takeaways of project development assistance

- We were **ready to win the grant** in the next IF call
- **Obtained valuable** and still relevant **reports**
- **Improved our financial model** and approach
- Gained a **better understanding on how EIB works**
- Many other **advices received** not directly related to PDA
- Due to budget and time constraint, **PDA activities were focused on desktop studies/reviews**
- The **PDA was concluded within 8 months** from the award
  - Financial PDA was concluded within 2 months;
  - Technical PDA was concluded in 8 months, due to time necessary to hire consultants with specialized expertise

Both PDA were **concluded in time for the next innovation fund application**

# Project Development Assistance ("PDA")

CASE STUDIES

GREENHYSEO

# FNM group: overview

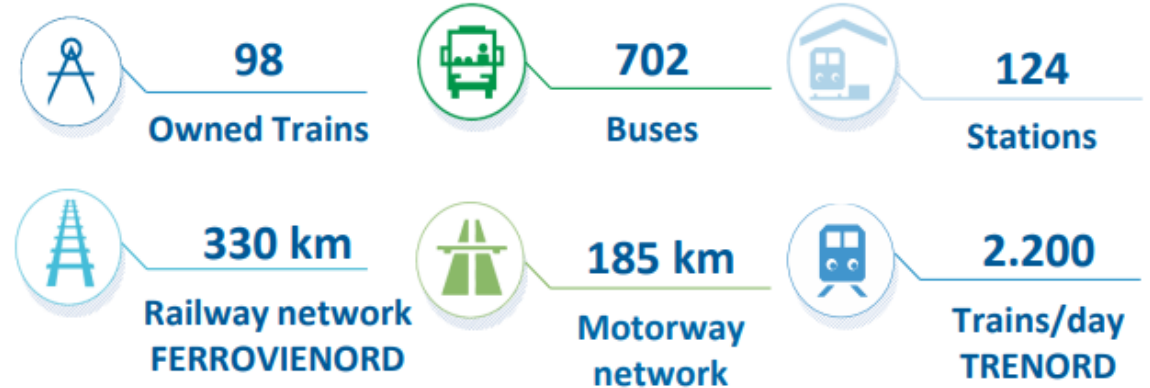
## THE GROUP AT A GLANCE

- ❑ Established in 1877<sup>1</sup>, FNM is the leading **integrated sustainable mobility Group in Lombardy**
- ❑ It is the first organization in Italy to **combine Railway Infrastructure Management, Road Transport and Motorways**
- ❑ The aim of the Group is to propose an innovative model to manage mobility supply and demand, designed to support optimization of flows as well as environmental and economical sustainability
- ❑ The Group's activities are divided into **four main segments**:



- ❑ FNM S.p.A. is a public company, listed on the Italian Stock Exchange since 1926
- ❑ It is one of Italy's **leading non-state investors in the sector**
- ❑ The reference shareholder is Regione Lombardia, which holds a 57.6% stake

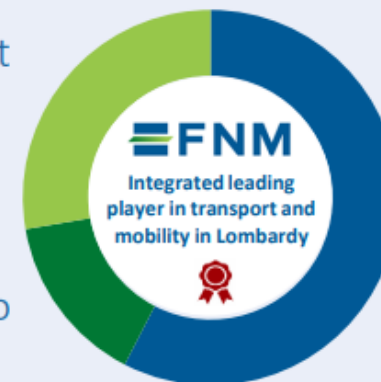
## KEY FIGURES<sup>3</sup>



## SHAREHOLDER'S STRUCTURE

Free float  
**27.69%**

Ferrovie  
dello Stato  
**14.74%**





# FNM group: hydrogen projects (1)

Rail and road Local Public Transport



Road private mobility



# FNM group: hydrogen projects (2)



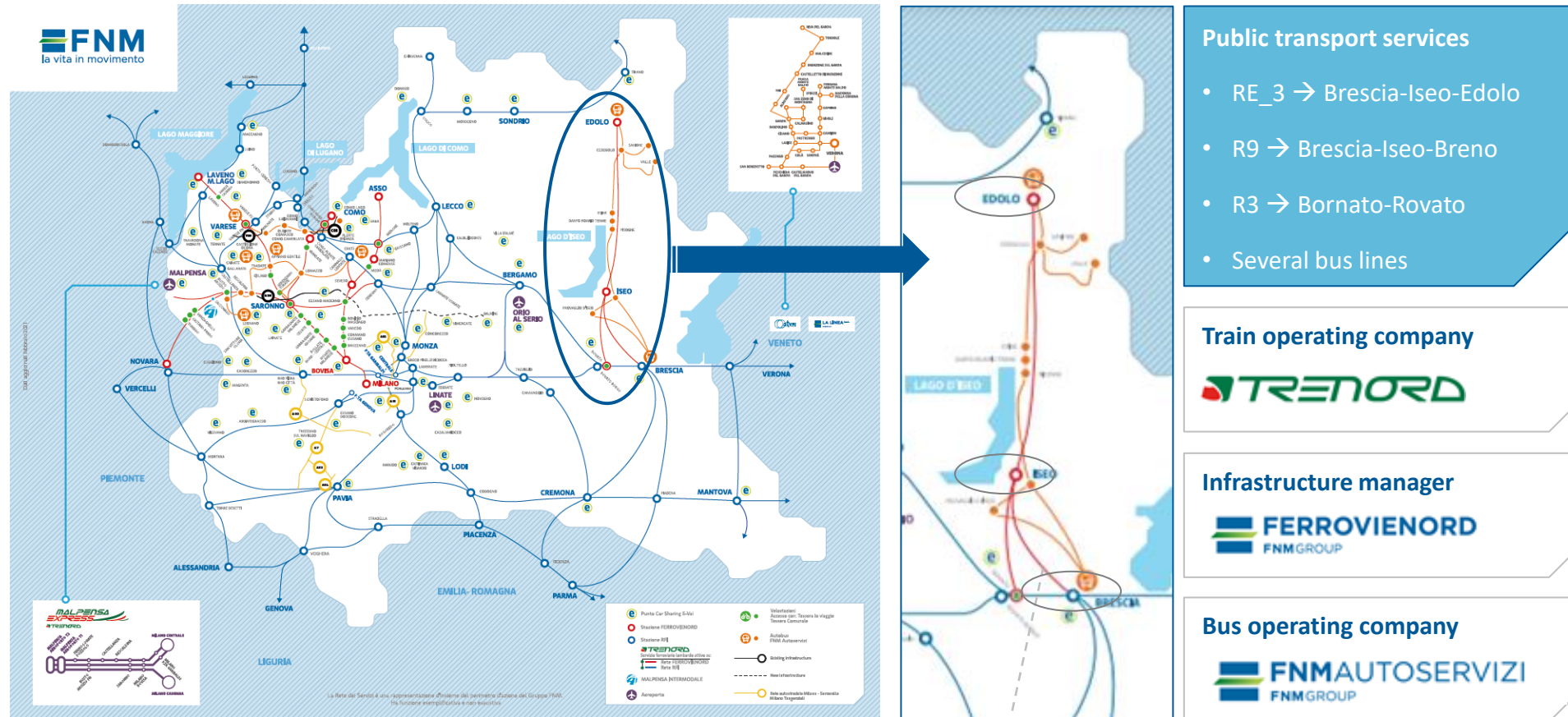
# H2iseO project: overview (1)

“H2iseO Hydrogen Valley”: an Italian industrial hydrogen-based value chain for a sustainable **mobility** system in the UNESCO world heritage site of Valcamonica, along the non-electrified railway line Brescia – Iseo – Edolo

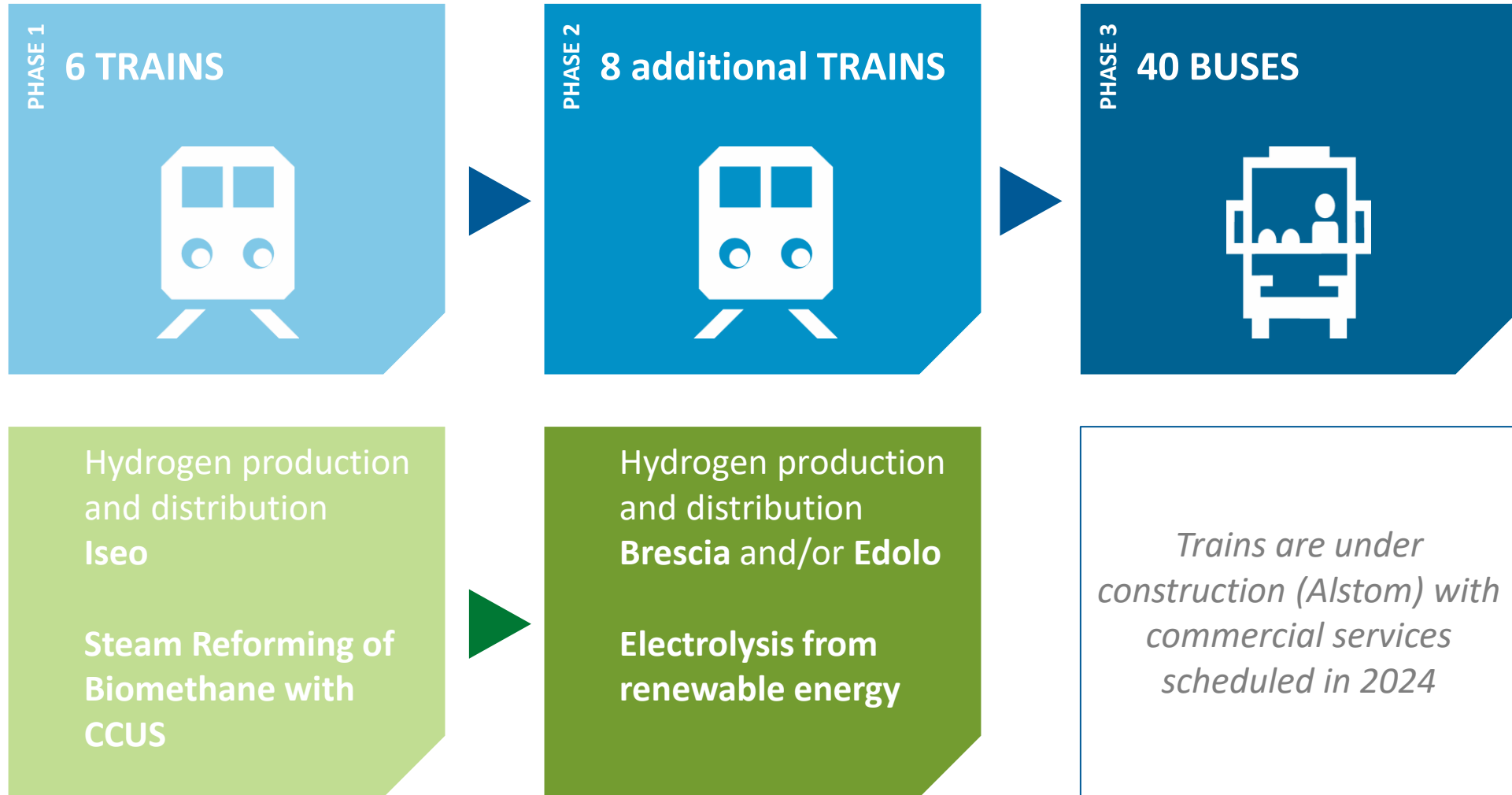




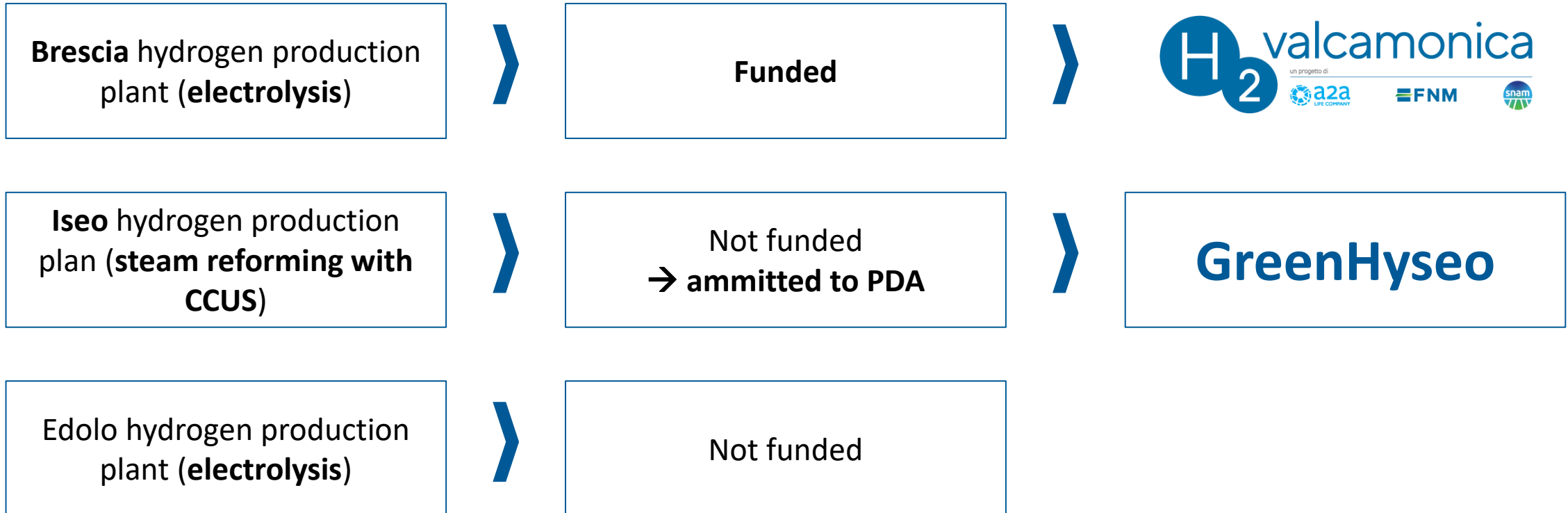
# H2IseO project: overview (2)



# H2IseO project: overview (3)



# H2IseO project: applications to IFSS (2021)





# GreenHyseO: the project (1)

The hydrogen production, storage and distribution plant in the city of Iseo:

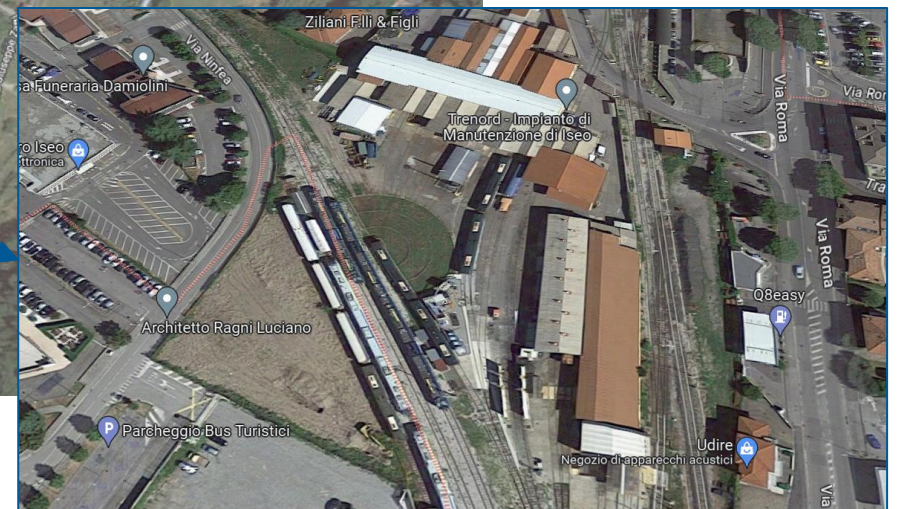
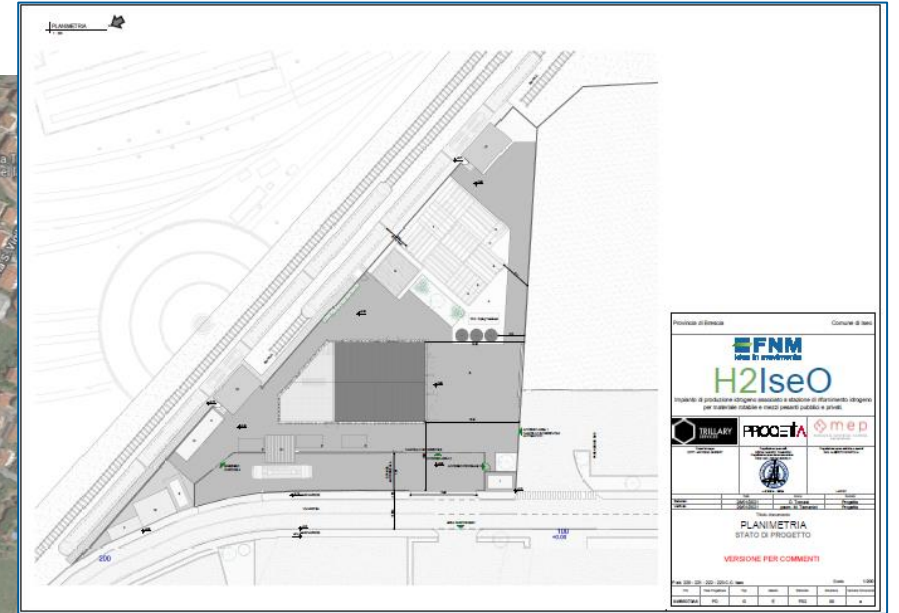
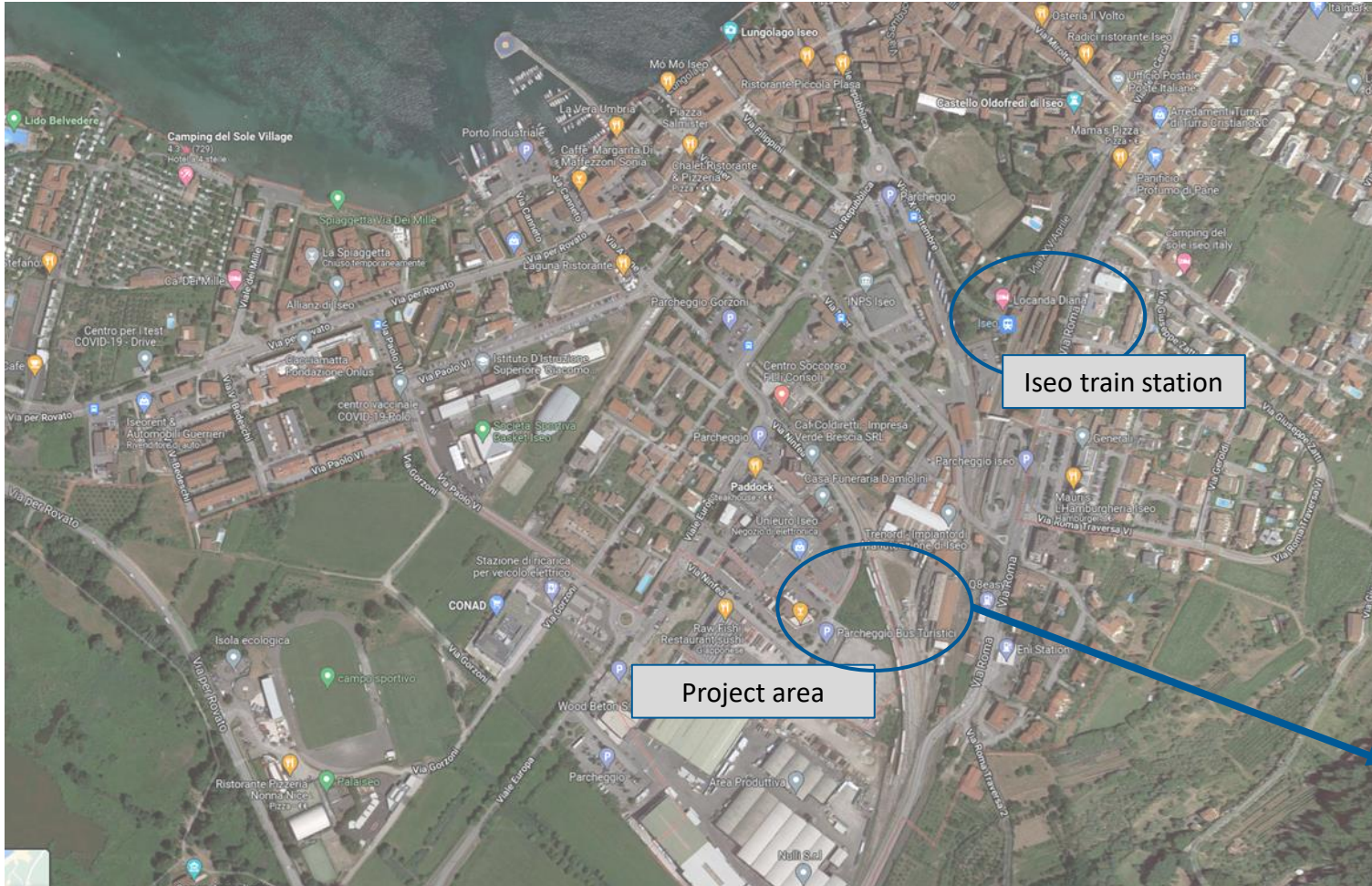
- produces hydrogen from **Steam Methane Reforming (SMR)** starting from **biomethane**, with a **production capacity of about 1,400 kgH<sub>2</sub>/day**
- has a **carbon capture module able to capture and store the CO<sub>2</sub> produced during the hydrogen production** process thanks to the innovative addition of **CCS technology**

The **CCS technology for the Iseo hydrogen production plant is the focus of the GreenHyseO project**, as part of the wider H2iseO project

# GreenHyseO: the project (2)

- The project **aims to make the hydrogen production process greener by capturing the CO<sub>2</sub>**, thus **obtaining a significant GHG emission avoidance** in the production of public transport services.
- The innovation will **realise a circular process of carbon-neutral hydrogen production** from **certified bio-methane**, because the CO<sub>2</sub> captured will be also purified and then liquefied to be easily transportable for final storage (or utilisation)
- The **SMR plant** for hydrogen production, the **CCS facility** and the **train and bus refuelling stations** are **located in the same area**, to **exclude hydrogen transport on long distances**

# GreenHyseO: the project (3)





# GreenHyseO: PDA focus

## Technical assistance

- Identification and assessment of the carbon capture supplier relevant for the project
- Techno-economic analysis of the carbon capture system

## Financial assistance

- General review of the financial model

# GreenHyseO: project update

## Construction of hydrogen production, storage and distribution plant (including CCUS) in Iseo:

- Full plant authorized in June 2022
- Storage and distribution plant: EPC contractor selected in May 2023 (public tendering)
- **Production plant including CCUS module:** EPC contractor under selection (offers from candidate contractors received early May 2023) (public tendering)

## Financing of hydrogen production, storage and distribution plant (including CCUS) in Iseo:

- Funded by Regione Lombardia and by Italian National Resilience and Recovery Plan (NRRP) as part of the wider H2iseO project (total funding of 177M€ for hydrogen plants and connected railway upgrades – excluding trains)

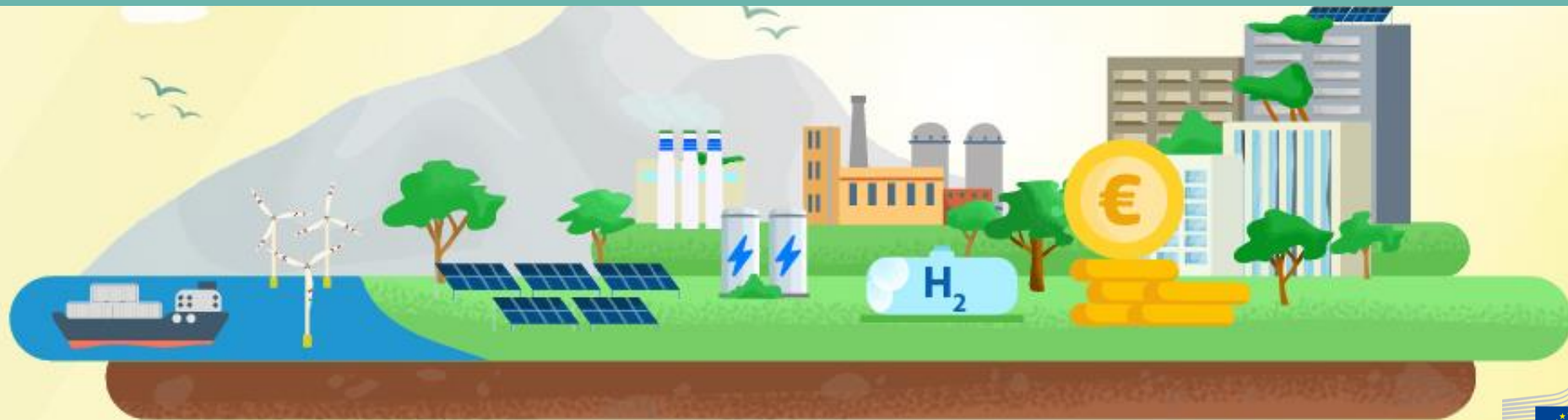


# Innovation Fund

## Project Development Assistance – Knowledge Sharing Event

14 June 2023

Maria Velkova, DG Climate Action





# INNOVATION FUND

Deployment of net-zero and innovative technologies

Funded by: EU Emissions Trading System



Funding through  
Grants and Auctions



EUR 40 billion\* to invest from 2020-2030  
in EU's climate neutral future



Avoid emissions and  
boost competitiveness

Supporting manufacturing, production and use in:



Energy intensive  
industries



Renewables



Energy storage



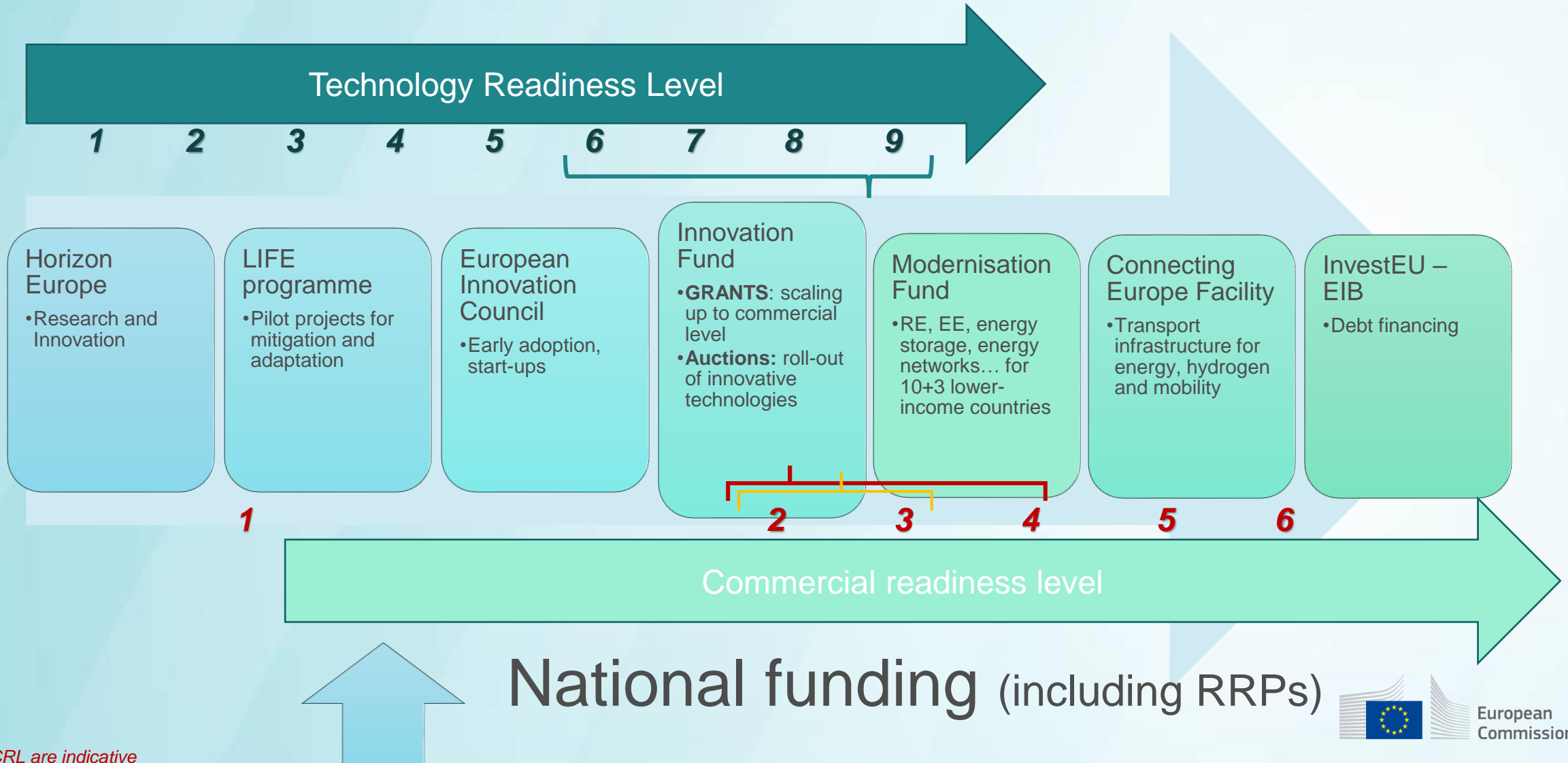
Carbon capture,  
use and storage



Net-zero mobility  
and buildings

\*based on a carbon price of 75 EUR/tonne

# Innovation Fund and other funding programmes



# Award criteria

## DEGREE OF INNOVATION

- Innovation beyond state-of-the-art
- at European level for LSC
  - at national level for SSC

## GHG EMISSIONS AVOIDANCE

- **Absolute** emissions avoidance (*compared to sector depending on median avoidance*)
- **Relative** emissions avoidance
- **Quality and credibility** of the calculation and minimum requirements

## PROJECT MATURITY

- Technical maturity
- Financial maturity
- Operational maturity

## SCALABILITY

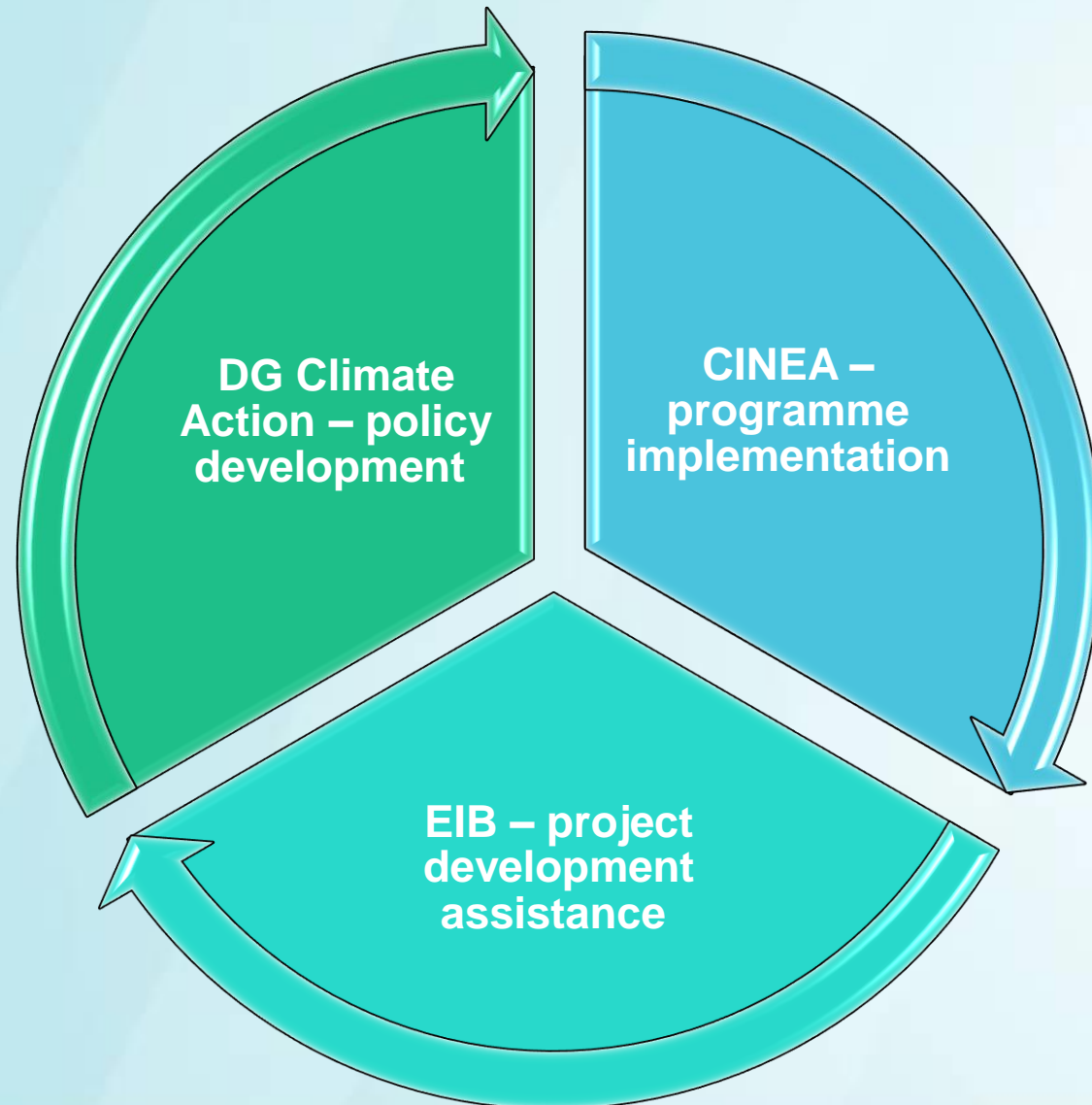
- Efficiency gains: costs & resources
- Further technology or solutions deployment
- Quality and extent of the knowledge sharing plan

## COST EFFICIENCY

- Cost efficiency ratio (i.e. the EU contribution requested per tCO<sub>2</sub> avoided)\*
- Quality and credibility of the cost calculation



# Innovation Fund - Governance



# Innovation Fund – over EUR 3bn already provided for low-carbon innovation projects, EUR 3 bn already engaged for the 2022 calls and over EUR 4 bn in 2023 call and H3 auction

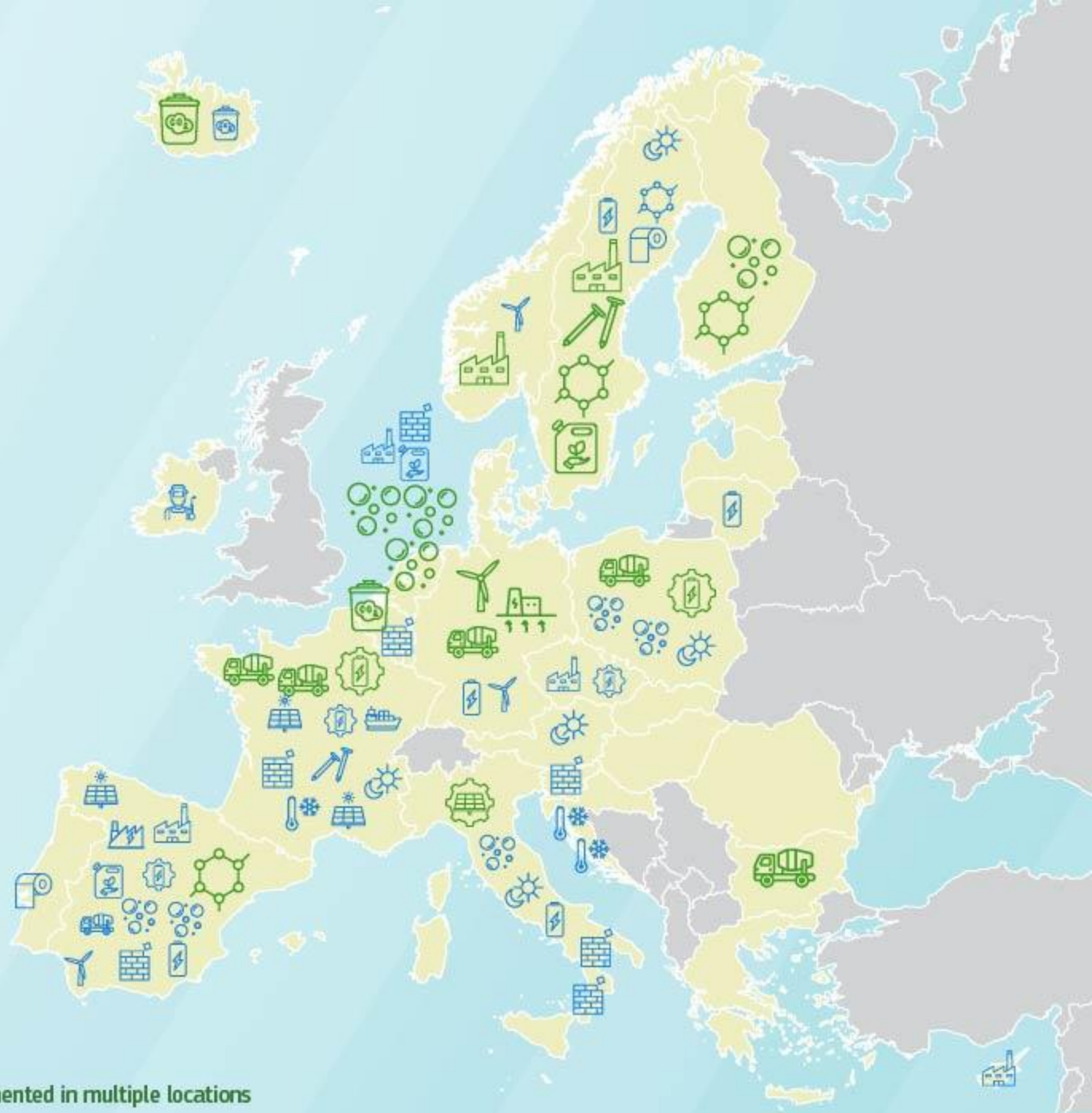


# Innovation Fund project portfolio

**Green:** Large-scale projects (23 awarded for grant)\*

**Blue:** Small-scale projects (46 awarded for grant)\*

- |  |   |
|--|---|
|  Biofuels and biorefineries                         |  Other energy storage                      |
|  Chemicals  |  Geothermal energy                         |
|  CO <sub>2</sub> transport and storage              |  Pulp and paper                            |
|  Hydrogen   |  Refineries                                |
|  Intra-day electricity storage                      |  Renewable heating/cooling                 |
|  Iron and steel                                     |  Solar energy                              |
|  Non-ferrous metals                                |  Wind energy                              |
|  Glass, ceramics and construction material        |  Cement and lime                         |
|  Manufacturing of components for renewable energy |  Use of renewable energy outside Annex 1 |
|  Manufacturing of components for energy storage   |  Other energy intensive industries       |



\*The number of symbols is higher than the number of projects, as some projects are implemented in multiple locations

# Portfolio of 69 on-going projects

2020 LSC, 2020 SSC, 2021 LSC, 2021 SSC



€ 3 Billion  
EU contribution



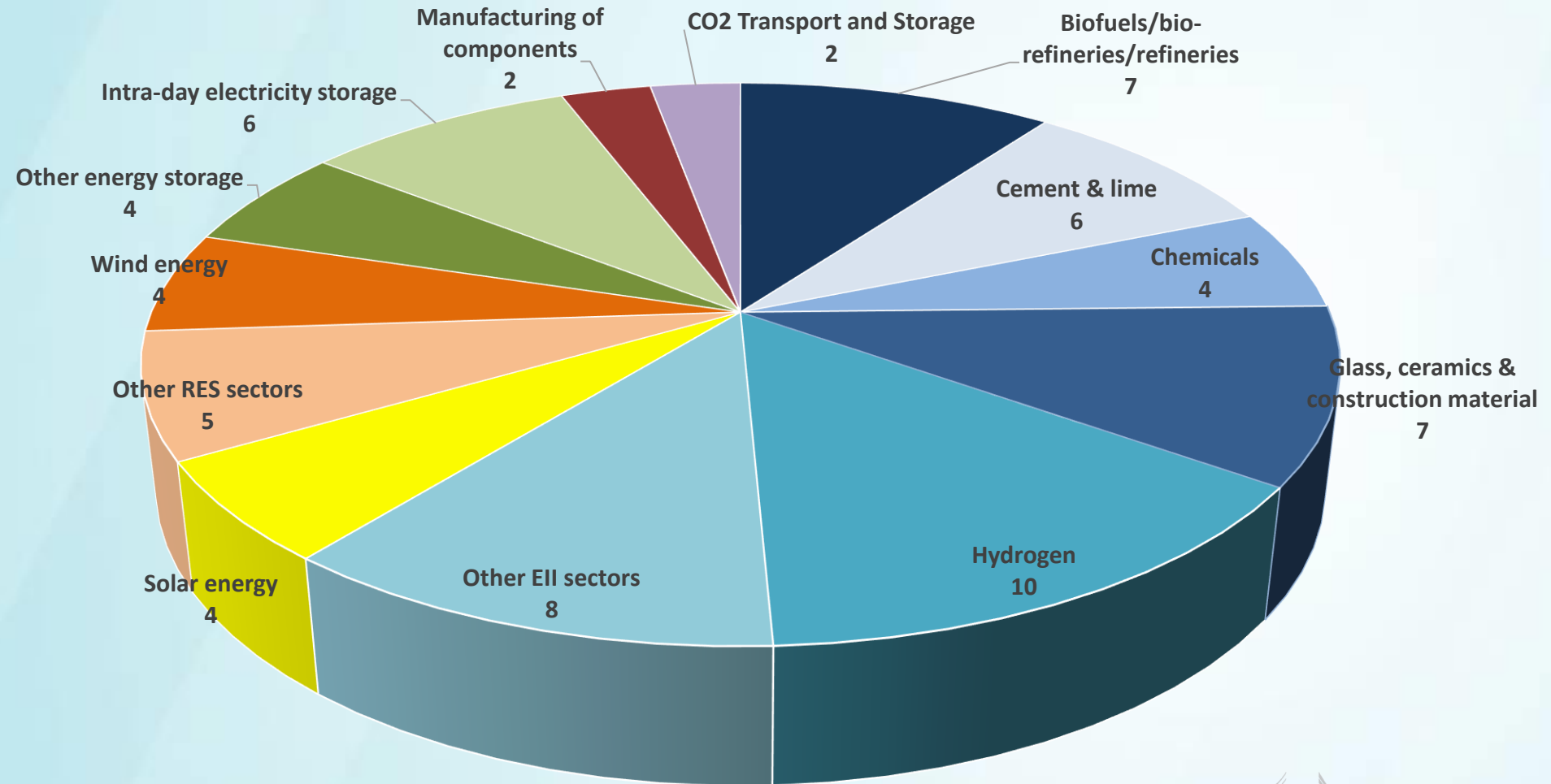
20  
Countries



155  
Beneficiaries



215 Mt  
CO<sub>2</sub> eq avoided





# Innovation Fund – SSC 2022 open till 19 September 2023



**Launch  
Deadline  
Results**

30 March 2023  
19 Sept. 2023  
Q1 2024



**€ 100 Million for grants**  
+  
Project Development Assistance



[Call page](#)  
[CINEA website](#)

## AWARD CRITERIA

**Degree of innovation**

**GHG emission avoidance** (including quality of calculations)

**Project maturity**

**Scalability**

**Cost efficiency** (including quality of calculations)

+ **Bonus points**

- **Net Carbon Removals**
- **Other GHG savings**
- **Use of electricity from additional renewable sources**



**4-5 July [how-to seminar and virtual orientation session](#)**

# Revision of the EU ETS

- ETS revision entry into force in June 2023
- Strengthening of **ETS ambition** from  $-43\%$  to  **$-62\%$  by 2030** (compared to 2005)
- Strengthen **Market Stability Reserve** to ensure better market predictability
- More focused **free allocation** and progressive introduction of the **Carbon Border Adjustment Mechanism (CBAM)**
- Extension to **Maritime sector** and a **new ETS (ETS 2)** for buildings, road transport and non-ETS industry fuels

# Key changes to the Innovation Fund following the ETS Directive revision

Revised ETS Directive includes changes on:



1. The overall size of the Innovation Fund increase from 450 million ETS allowances to ca. 530 million ETS allowances.



2. Scope changes: new sectors (e.g. Maritime); medium-scale projects; DNSH from 2025; stronger reference to multiple environmental impacts



3. The introduction of new financial instruments under the Fund (“Competitive Bidding”): Fixed premium, Contracts for Difference (CfDs) or Carbon Contracts for Difference (CCfDs), covering up to 100% of the funding gap



4. Stronger attention to geographical balance

# Overview of the draft delegated act revision

## “Regular” grants

Award criteria  
Definition of relevant costs  
Small-, medium- and large-scale projects

## Competitive bidding

General framework  
Calls for proposals, qualifications, ranking and other issues

## Project development assistance

Technical assistance for Member States with low effective participation

Strengthened governance



# "Regular" grants – Award criteria

- **5 existing award criteria will be kept** but adjusted to accommodate new requirements:
  - The potential to reduce overall climate impact will be evaluated (not only GHG emission avoidance potential)
  - It will be clarified that scaling-up projects may be considered as "innovative"
  - The potential for addressing multiple environmental impacts and contribution to circularity and zero pollution objectives will be evaluated as part of the "replicability" criterion (previously "scalability")
  - The wording for cost-efficiency criterion will be simplified
- **Possibility to apply an additional award criterion** in the context of sector-specific call or topic

# Grants - Definition of small- and medium-scale projects

	<b>Small-scale projects</b>	<b>Medium-size projects (NEW)</b>	<b>Large-scale projects</b>
Current IF Regulations	Up to EUR 7.5 million	n/a	Above 7.5 million
Proposed changes	Up to EUR 20 million	Above EUR 20 million and up to EUR 100 million	Above EUR 100 million

# "Regular" grants - Relevant costs

1. **Update of Relevant Costs definition:** mention of « economic revenues » and « operational benefits »
2. Preparation for **simplification of the guidance on Relevant Costs (Annex B)** as of the next call for proposals
  - ✓ « **No Reference** » to become **default methodology** (the sum of actual costs/benefits/revenues)
  - ✓ « Reference Plant » methodology (the sum of actual costs/benefits/revenues compared to a counterfactual scenario) would still be possible
  - ✓ « Levelised costs » methodology would no longer be used
3. **Simplified methodology would apply to large-, medium- and small-scale projects**

# Competitive bidding procedures chapter

- New chapter mirroring the “provisions applicable to grants”: “provisions applicable to support awarded on basis of a competitive bidding procedure”
- **Competitive bidding = auctions**
- Types of support:
  - contracts listed in Article 10a(8) of ETS Directive
  - **pilot auctions** will award fixed premiums for renewable hydrogen (grants under the Financial Regulation) → **the European Hydrogen Bank**
  - in the future, **Contracts for Difference or Carbon Contracts for Difference** could be awarded
  - **In the future other types of low-carbon products could be auction goods**



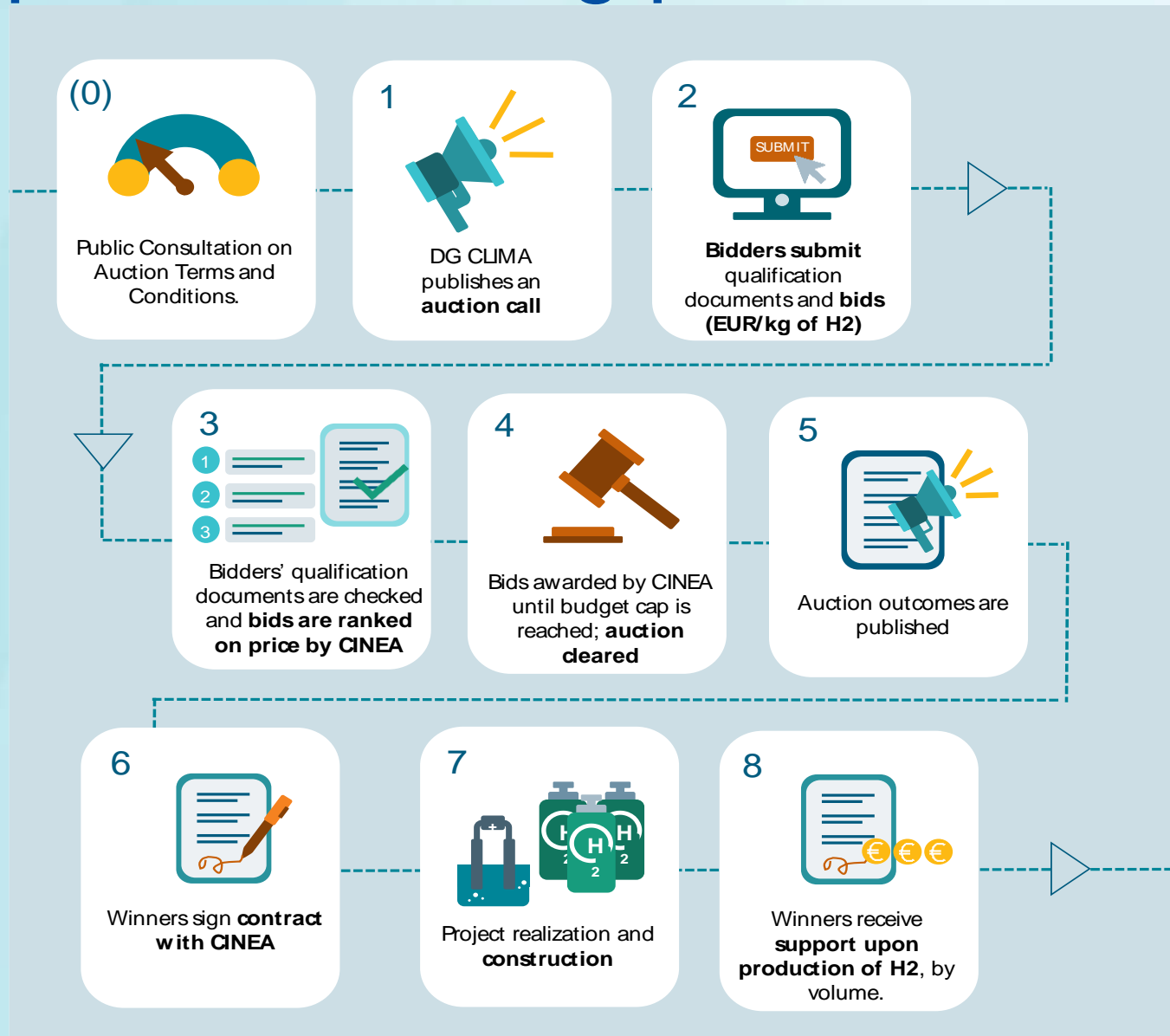


# Competitive bidding procedures principles

## Auction design and principles (aligned with CEEAG guidelines)

- Auctions need to be **competitive** (open, clear, transparent and non-discriminatory)
- Auctions need to be **based on objective criteria** defined *ex ante* in accordance with the objectives of the ETS Directive
- Auctions need to be **designed in a way to minimise the risk of speculative bidding**
- Auctions need to have a binding constraint (budget or volume) → **not all bidders will receive aid**
- **ex-post adjustments** to the bidding process outcome must be avoided

# Competitive bidding procedures stages



# Project development assistance (PDA)

Current situation	Issues	Target situation
<ul style="list-style-type: none"><li>▪ PDA aims to improve the maturity of your project through high-quality technical and financial advisory support</li><li>▪ Projects that applied for an IF call for proposals and met all the criteria except the maturity criteria are eligible for PDA</li><li>▪ CINEA longlists project that have potential, the EIB shortlists those projects and may award PDA</li></ul>	<ul style="list-style-type: none"><li>➤ Limited number of projects can currently benefit from PDA</li><li>➤ The timetable for obtaining a PDA is aligned with that of calls for proposals for grants and a project can only benefit from a PDA if it has first applied to such a call for proposals</li></ul>	<ul style="list-style-type: none"><li>✓ <b>Projects will be able to apply for PDA regardless of whether they applied for a grant ('open PDA')</b></li><li>✓ <b>Projects that applied for an IF grant and met some of the award criteria may have their applications automatically considered for PDA</b></li></ul>

# Implementation Timeline 2023



13 June	Stakeholder <b>Workshop</b> on <b>next</b> calls and <b>auctions</b>
4-5 July	Workshop on 3 <sup>rd</sup> small-scale call for proposals
End June	Publication of IF DR for public feedback
July	Results of 3 LSC evaluation
End July	Adoption of IF DR
Early September	<b>Auctions Final Terms and Conditions</b> published
September	<b>ISC</b> on <b>next Financing Decision</b>
End September	DR enters into force
September	<b>IFEG meeting + Consultation of MS on draft Financing Decision</b>
19 September	Deadline 3 <sup>rd</sup> small-scale call for proposals
November	4 <sup>th</sup> Calls for proposals for grants launched (small-, medium- and large-scale)
December	<b>First pilot auction</b> launched
<b>January 2024</b>	<b>(planned) new Project Development Assistance</b>



# Project fiches for on-going projects

# Innovation Fund Dashboard

**INNOVATION FUND**  
Driving clean innovative technologies towards the market

**Beccs Stockholm: Bio Energy Carbon Capture and Storage by Stockholm Exergi**

The Innovation Fund is 100% Funded by the EU Emissions Trading System

**COORDINATOR**  
Stockholm Exergi

**LOCATION**  
Stockholm, Sweden

**SECTOR**  
Bio-electricity

**AMOUNT OF INNOVATION FUND GRANT**  
EUR 180 000 000

**RELEVANT COSTS**  
EUR 608 863 394

**CAPEX**  
EUR 455 661 141

**TOTAL PROJECT COSTS**  
EUR 2 707 463 271

**GHG EMISSION AVOIDANCE**  
7,8 Mt CO<sub>2</sub>e

**STARTING DATE**  
01 July 2021

**PLANNED DATE OF ENTRY INTO OPERATION**  
Q3 2026

**Project summary**

The Beccs Stockholm project will create a world-class, full-scale Bio-Energy Carbon Capture and Storage (BECCS) facility at its existing heat and power biomass plant in Stockholm. The project will combine CO<sub>2</sub> capture with heat recovery, making the process much more energy-efficient than the process in a conventional Carbon Capture Storage (CCS) plant. It will capture and permanently store large quantities of biogenic CO<sub>2</sub>, leading to carbon removals from the atmosphere, also called negative emissions. The Beccs Stockholm project has a potential to remove around 7.0 Mt CO<sub>2</sub>e over the first ten years of operation. Net carbon removals are seen as an increasingly important technology-based solution to climate mitigation, indispensable to reach climate neutrality in 2050. The project will also be a catalyst for paving the way for a new market of net carbon removals. Besides the actual negative emissions achieved, Beccs Stockholm will also have a positive impact on the balance for renewable heat and electricity, resulting in additional reduction of around 0,8 Mt CO<sub>2</sub>e over the same period.

**A world-class, full-scale Bio-Energy Carbon Capture and Storage (BECCS) plant**

Beccs Stockholm will make use of a novel combination of existing technologies (Hot Potassium Carbonate for CCS and bio-fueled CHP) on a new scale, to develop the first, large commercial BECCS plant in Europe. The HPC-technology is well proven with multiple installations over the years. Its application with flue-gases from a bio-fueled CHP-plant is, however, not tested in full scale. Therefore, Stockholm Exergi has designed, constructed and now operates a smaller-scale R&D facility at the plant site with support from the Swedish Energy Agency with the objective to gain practical experience and results before designing the full scale plant. The Beccs Stockholm implementation will represent the first-of-a-kind global integration of CO<sub>2</sub> capture in an existing combined heat and power (CHP) plant that uses biomass-based fuels. By using the excess heat of the CO<sub>2</sub> capture facility to supply Stockholm's district heating network, the extra energy required for the CCS process (i.e. the energy penalty) will be greatly reduced. This energy penalty is normally in the range of 15-29% of the energy produced, while Beccs Stockholm will reduce it to a mere 2%. Importantly, 90% of the CO<sub>2</sub> in the flue gas will be captured by use of the HPC technology. Stockholm Exergi selected this CO<sub>2</sub> absorption technology based on several advantages, such as its non-toxicity, high selectivity for CO<sub>2</sub> and as a result high purity of captured CO<sub>2</sub>, its low regeneration heat, and, the compact layout of the technology in comparison to other CO<sub>2</sub> absorption solutions. After liquefaction and buffering, the CO<sub>2</sub> will be transported by ship to an underground storage site in the North Sea (although being part of relevant cost-calculation, this part of the technology chain is not part of the project).

**Beccs Stockholm actively supports the climate neutrality goal and multiple European strategies**

The scaling up of carbon removal solutions that capture CO<sub>2</sub> from the atmosphere and store it for the long term is vital to achieve the EU objective of economy-wide Climate Neutrality by 2050. Beccs Stockholm will support the achievement of this climate goal by capturing and storing almost 800 000 tonnes of biogenic CO<sub>2</sub> per year, with the aim to further improve the technology in the future. CCS, as well as bioenergy – the building blocks of the project – are among the ten main priority actions of the European Strategic Energy Technology Plan (SET Plan) to accelerate the energy system's transformation. In particular, the SET Plan highlights

that CCS needs to become a cost-competitive technology and gain public acceptance, to be eventually commercially deployed. Beccs Stockholm will remove/avoid the emissions of 7.8 Mt CO<sub>2</sub>e of absolute GHG emissions during its first ten years of operation. This is the equivalent to more than the 2018 GHG emissions from public electricity and heat production in Sweden. From the overall emissions removed/avoided, 90% will come from CO<sub>2</sub> capture and storage (removal), and 10% will be associated with renewable electricity and heat generation from a renewable source. At site-level, the project will implement solutions in line with the Circular Economy Action Plan, using locally-sourced biomass waste, as a feedstock in the electricity and heat generating plant, reusing process water to eliminate or diminish the use of fresh water, and with the opportunity to supply sustainably managed forests with fly ash coming from the co-incineration of the current biomass waste with phosphorus-rich sludge, with the potential to increase Swedish forest sequestration of carbon by 0.45 Mt CO<sub>2</sub>e per year. In line with the EU recovery ambition, the project will also create direct jobs locally and outside Sweden, acting as a springboard for many more highly-skilled engineering, construction and operation-related jobs throughout the CCS value chain. Measures taken during the preparation phase increased the support of the project among citizens, living as close as 1.40 metres from the facility. For Stockholm Exergi, nurturing a strong and transparent relation with citizens, is and has always been a priority. One example of this, was the launch of a public acceptance survey at an early stage in the project's planning. This is an essential prerequisite for successful implementation within the boundaries of a populated city. Stockholm Exergi, which is already active in the field, will continue its efforts to establish a market for net CO<sub>2</sub> removals as a novel product. This will make the net carbon removals at Beccs Stockholm profitable for a CHP plant, paving the way for other actors to join.

**Strategic location to support scalability and technology transfer**

The Beccs Stockholm technology can be replicated in other sites. For example, two locations have already been identified in the region where the solution could be implemented by 2030. These two sites have the potential to avoid 1.1 Mt CO<sub>2</sub>e per year, of which 0.8 Mt from biogenic sources, thereby contributing to the necessary net carbon removals foreseen by relevant scenarios reaching climate neutrality. The solution also has the potential to be scaled up across the economy, by replicating the technology in other industries, such as the pulp and paper industry, waste incinerators and heat plants. The project overall will help to establish a new European market for net carbon removals. By contributing to the establishment of all necessary links in the CCS value chain in Northern Europe including transport by ship of the CO<sub>2</sub> for storage in saline aquifers or depleted gas/oil-fields in the North Sea basin, Beccs Stockholm's project – are among the ten main priority actions of the European Strategic Energy Technology Plan (SET Plan) to accelerate the energy system's transformation. In particular, the SET Plan highlights

**Hydrogen**  
Pulp & Paper, Chemicals, Refineries, Other, Iron & Steel, Solar Energy, Cement & Lime, Non-Ferrous Metals

**Beneficiaries and EU contribution by beneficiary country/pr...**

Country	Number of beneficiaries	EU contribution (M EUR)
Belgium	~10	~300
France	~15	~250
Spain	~20	~150
Finland	~5	~100
Italy	~10	~100
Sweden	~25	~100

**Number of projects / EU Contribution by signature and call ...**

Year	Number of projects
2021	30
2022	7

**Number of projects and EU contribution by type**

Type	Percentage
Large Scale Projects	18.9%
Small Scale Projects	81.1%

**Project location country name**

Country	Percentage
Belgium	28.4%
Sweden	16.6%
France	13.6%
Spain	10.5%
Italy	7.0%
Finland	1.8%
Others	0.1%

[Link Innovation Fund Project fiches](#)

[Link Innovation Fund Dashboard](#)

# Innovation Fund Country fact-sheets:

fully updated in mid-December

The screenshot shows the 'Innovation Fund projects per country' page. It features a grid of 16 country fact-sheets, each with a flag icon and a link to an 'Overview of supported projects' page. The countries listed are: Austria, Belgium, Croatia, Finland, France, Germany, Iceland, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Spain, and Sweden.

[Link Innovation Fund country fact-sheets](#)

The screenshot shows the 'Innovation Fund Programme' fact-sheet for Spain. It includes the following information:

- Overview of awarded projects in Spain:** Funded by the revenue of the EU Emissions Trading System, the Innovation Fund's goal is to help businesses investing in innovative low-carbon technologies with significant GHG emissions reduction potential. The Innovation Fund currently supports **8 projects** located in Spain, which will contribute to the decarbonisation of European industries with a total expected GHG emission reduction of **3.8 Mt CO<sub>2</sub> equivalent in the first 10 years of operation**. The total Innovation Fund grant in Spain is of **EUR 131.3 million**, out of the total relevant costs of **EUR 230.2 million**, as defined in Art 5 of the Delegated Regulation 2019/856 on the Innovation Fund<sup>1</sup>.
- Projects per category:** A donut chart showing the distribution of projects: Energy intensive industries (EII) at 75% (60 projects), Renewable Energy (RES) at 12% (10 projects), and Energy Storage (ES) at 12% (10 projects).
- Projects per sector:** A horizontal bar chart showing the number of projects in various sectors, categorized by Small Scale (yellow) and Large Scale (green). Hydrogen has the highest number of projects (2), followed by Solar energy (1), Refineries (1), Other energy storage (1), Glass, ceramics & construction material (1), Chemicals (1), and Biofuels and bio-refineries (1).
- Projects per phase<sup>2</sup>:** A horizontal bar chart showing the number of projects in different phases: Preparation (7) and Operation (1).
- Top 5 technology pathways<sup>3</sup>:** A horizontal bar chart showing the number of projects in the top 5 technology pathways: Recycling/reuse: municipal solid waste (3), Energy intensive industries: New process/New product (2), Renewable energy: fuels (2), Renewable energy: electricity (1), and Hydrogen production: renewable H<sub>2</sub> - other technologies (1).

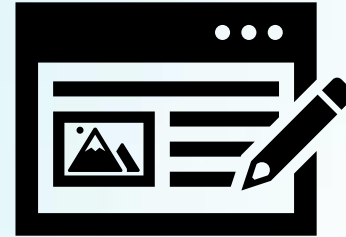
<sup>1</sup> OJ L 140, 28.5.2019, p. 9  
<sup>2</sup> Preparation means the period before financial close is reached; construction means the period between financial close and entry into operation; operation means that the construction is finished and the project has already started production  
<sup>3</sup> Projects may employ several technological pathways, only the top 5 per country are kept in the graph.  
 State of play: 06/07/2022

# Communication Material available



[DG CLIMA website](#)

[CINEA website](#)



[Project Fiches](#)

[Featured Projects](#)



[Innovation Fund  
Dashboard](#)



[Country Fact-Sheet](#)



[Innovation Fund  
Progress report](#)

# JOIN AS PROJECT EVALUATOR



**Technical experts**



**GHG experts**



**Financial experts**



**Rapporteurs and  
Quality checkers**

- **Individual evaluation**
  - To be organised fully remotely from your office or home at your best convenience
- **Consensus group**
  - Discussion with other fellow evaluators
  - Either in Brussels or virtually
- **Confidentiality and conflict of interest rules apply**

Check [CINEA website](#) for  
the application process!



# Highlight on future events



## EUSEW 2023

**Boosting innovation  
and investments  
through carbon  
pricing**

22 June 2023

[More info](#)



## Small-scale call 2022

**Workshop and  
orientation sessions**

4&5 July 2023

[More info](#)



## Small-scale call 2022

**Deadline for  
applications**

19 September 2023

[More info](#)

# Thank you



[https://climate.ec.europa.eu/eu-action/funding-climate-action/innovation-fund\\_en](https://climate.ec.europa.eu/eu-action/funding-climate-action/innovation-fund_en)

[https://cinea.ec.europa.eu/programmes/innovation-fund\\_en](https://cinea.ec.europa.eu/programmes/innovation-fund_en)



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