

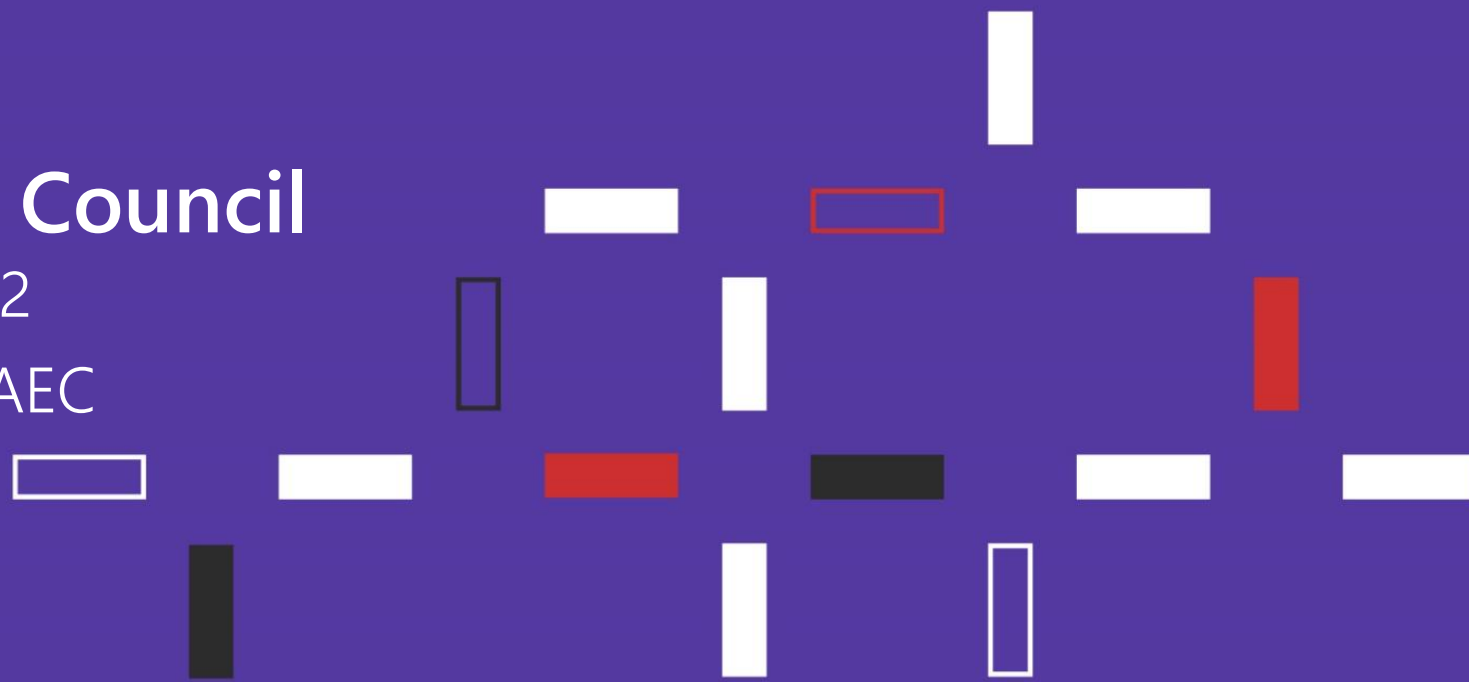


Backing visionary entrepreneurs

The European Innovation Council

Anne-Marie Sassen, Head of Unit D2

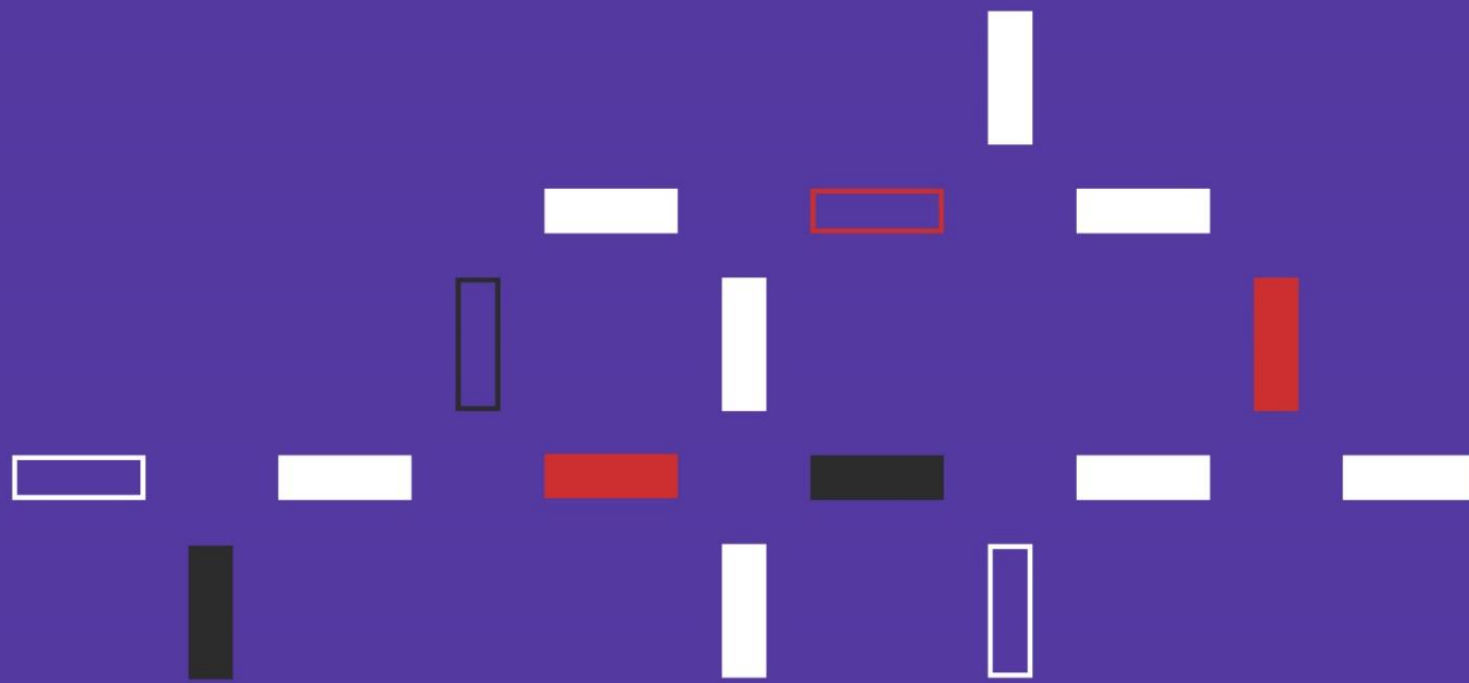
Franc Mouwen, Program Manager AEC



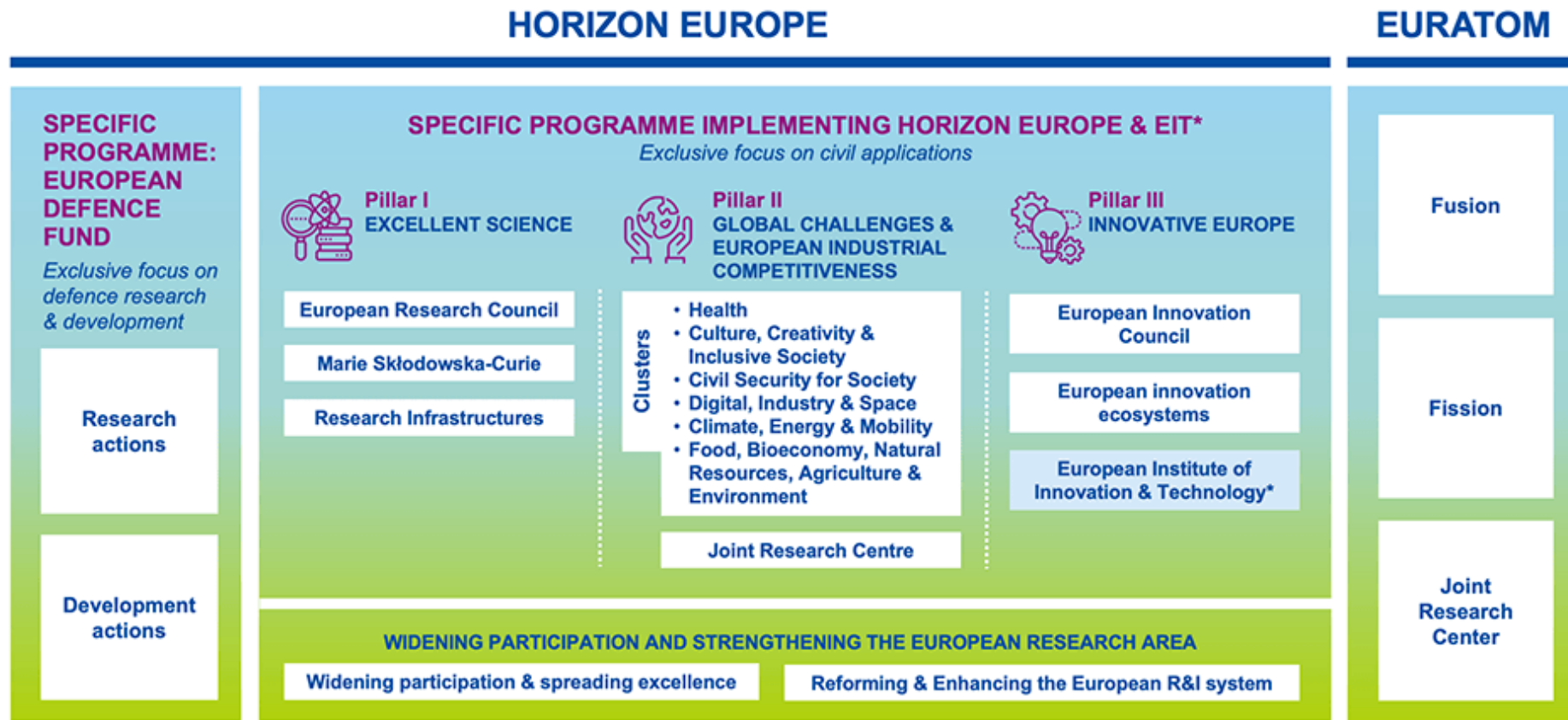


Introduction

Anne-Marie Sassen



Horizon Europe is a leading research and innovation programme with €95bn budget for 2021 to 2027





* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme



Work Programme 2023

What are the main elements?

 **Budget €1.6 billion**

 **THREE MAIN FUNDING SCHEMES**


TRL1-4

EIC PATHFINDER

Early-stage technology research **€343 million**

Grants **< €4 million**

 **EIC Pathfinder Open 2023 (€179.5 million)**
Apply by 7 March 2023

 **EIC Pathfinder Challenges 2023 (€163.5 million)**
Submissions open 20 June, close 18 October 2023

Open: for consortia
Challenge: single, consortia
Science and research

TRL4-6

EIC TRANSITION

Technology validation and spin-out **€128 million**

Grants **< €2.5 million**

 **EIC Transition Open (€67.86 million) and Challenges (€60.5 million)**
Apply anytime from 1 March, cut-offs: 12 April 2023, 27 September 2023

For consortia
For single entities
EIC Pathfinder, ERC PoC
Business readiness

TRL6-9

EIC ACCELERATOR

Commercialisation and scale-up **€1.13 billion**

Grants **< €2.5 million**

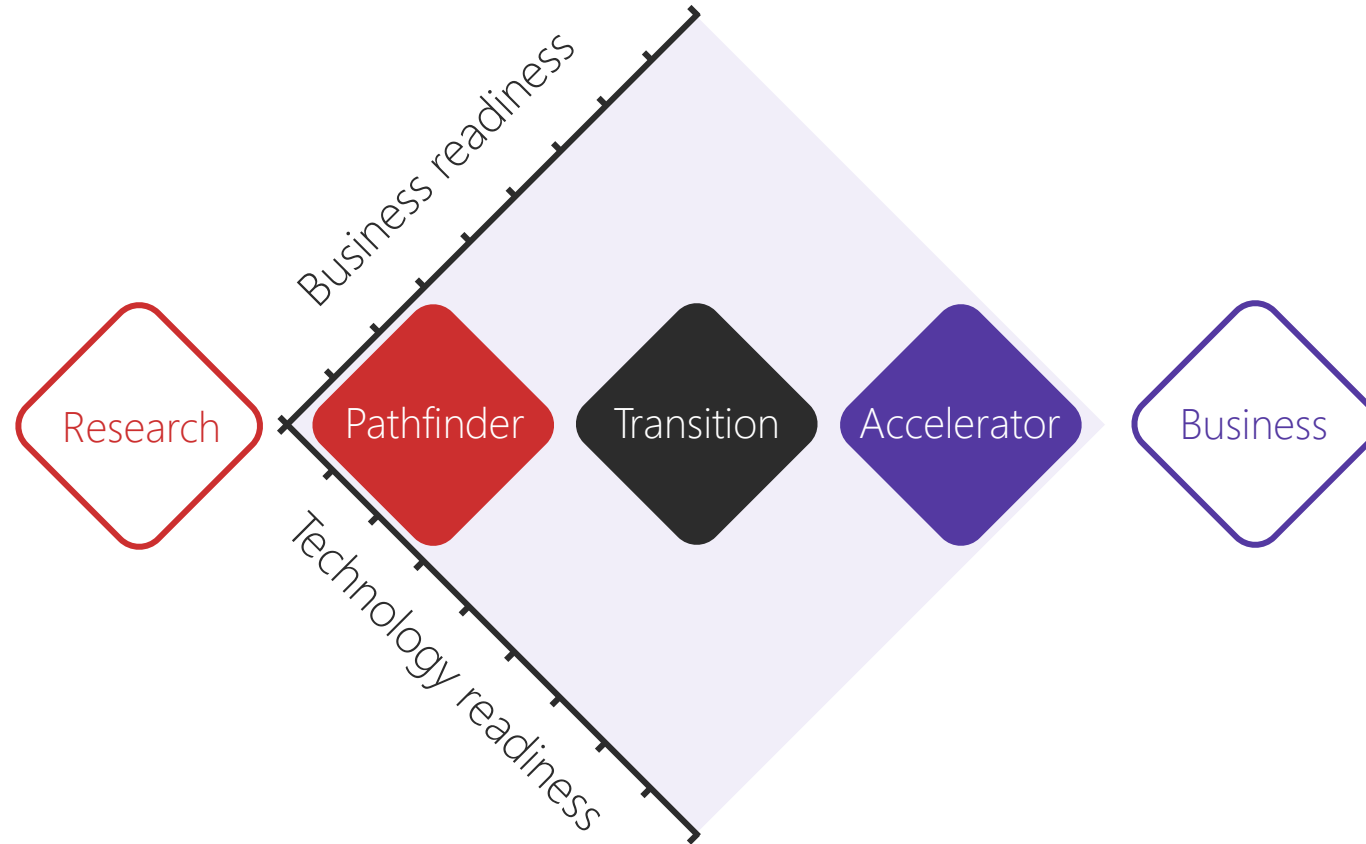
Equity investments **< €15 million**

 **EIC Accelerator Open (€612.98 million) and Challenges (€524.73 million)**
Apply anytime, cut-offs: 11 January 2023, 22 March 2023, 7 June 2023, 4 October 2023

For individual SME / start-ups
Innovation scale-up
Blended finance

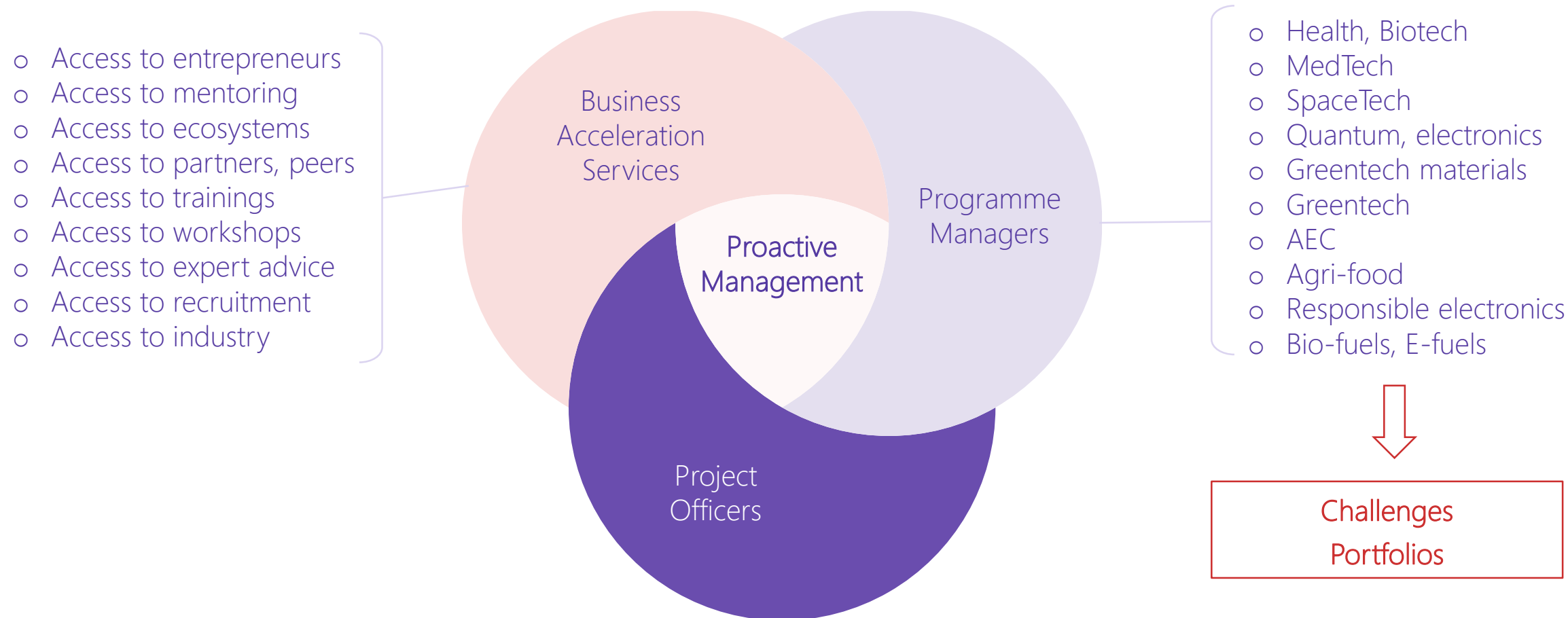
EIC stages the entrepreneurial journey as pathfinder, transition, accelerator with increasing readiness levels

WHAT?

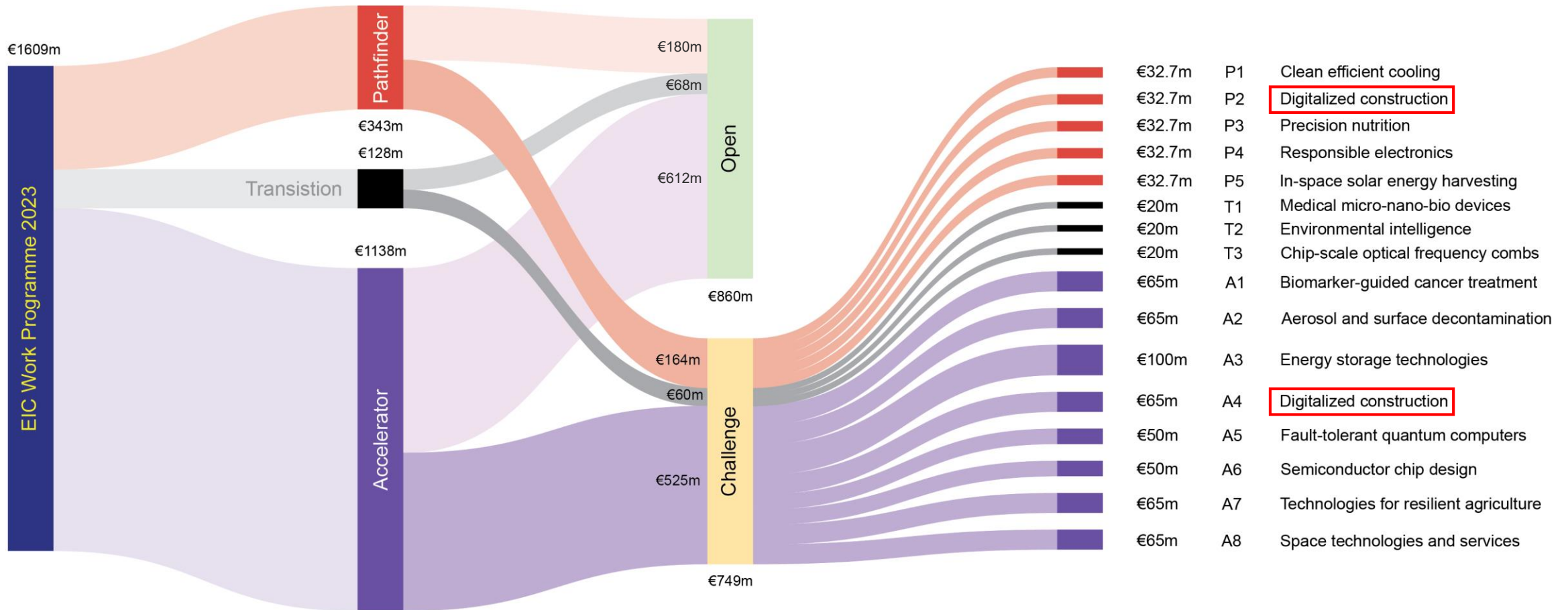


WHY?

With proactive management the EIC aims to maximize its support to success of the entrepreneurial journey



In 2023 EIC allocates ~€1.6bn to Open and Challenge calls by its Pathfinder, Transition, Accelerator programs



Cut-off dates of the various calls

Cut-off dates:	Pathfinder	Transition	Accelerator
Open	7 March 2023	12 April 2023 27 September 2023	11 January 2023 22 March 2023 7 June 2023 4 October 2023
Challenge	18 October 2023	12 April 2023 27 September 2023	22 March 2023 7 June 2023 4 October 2023



Useful links to the EIC Work Programme 2023:

EIC Work Programme 2023:

(the legal basis)



Recording of EIC Info-day 13 December:

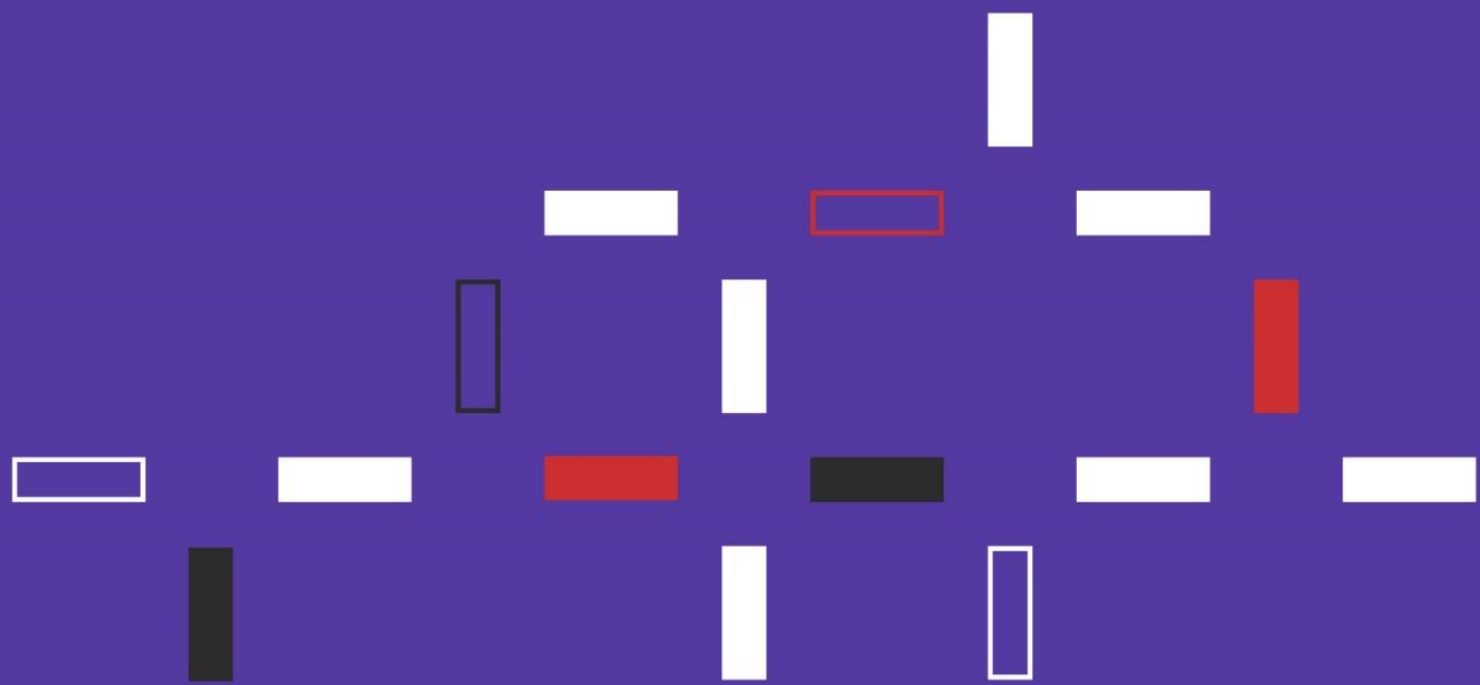
(not repeated today)





AEC Accelerator Challenge

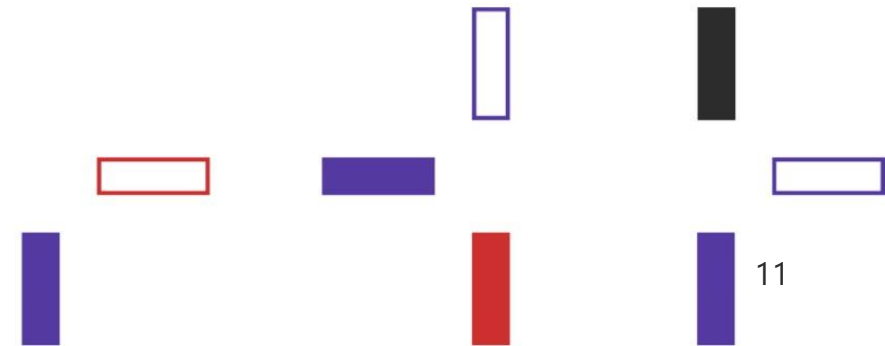
Franc Mouwen





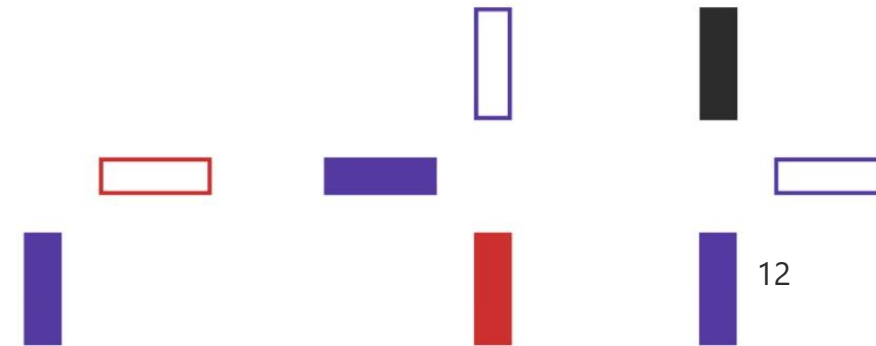
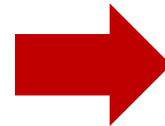
The goal of this Info-day session:

- Provide some background to the Challenge
- Explain the Challenge as presented in the Work Programme
- Answer your questions regarding the Challenge
- Is not to provide you with feedback of appropriateness of your individual proposal to this Challenge call





The Legal Basis: EIC Work Programme 2023:



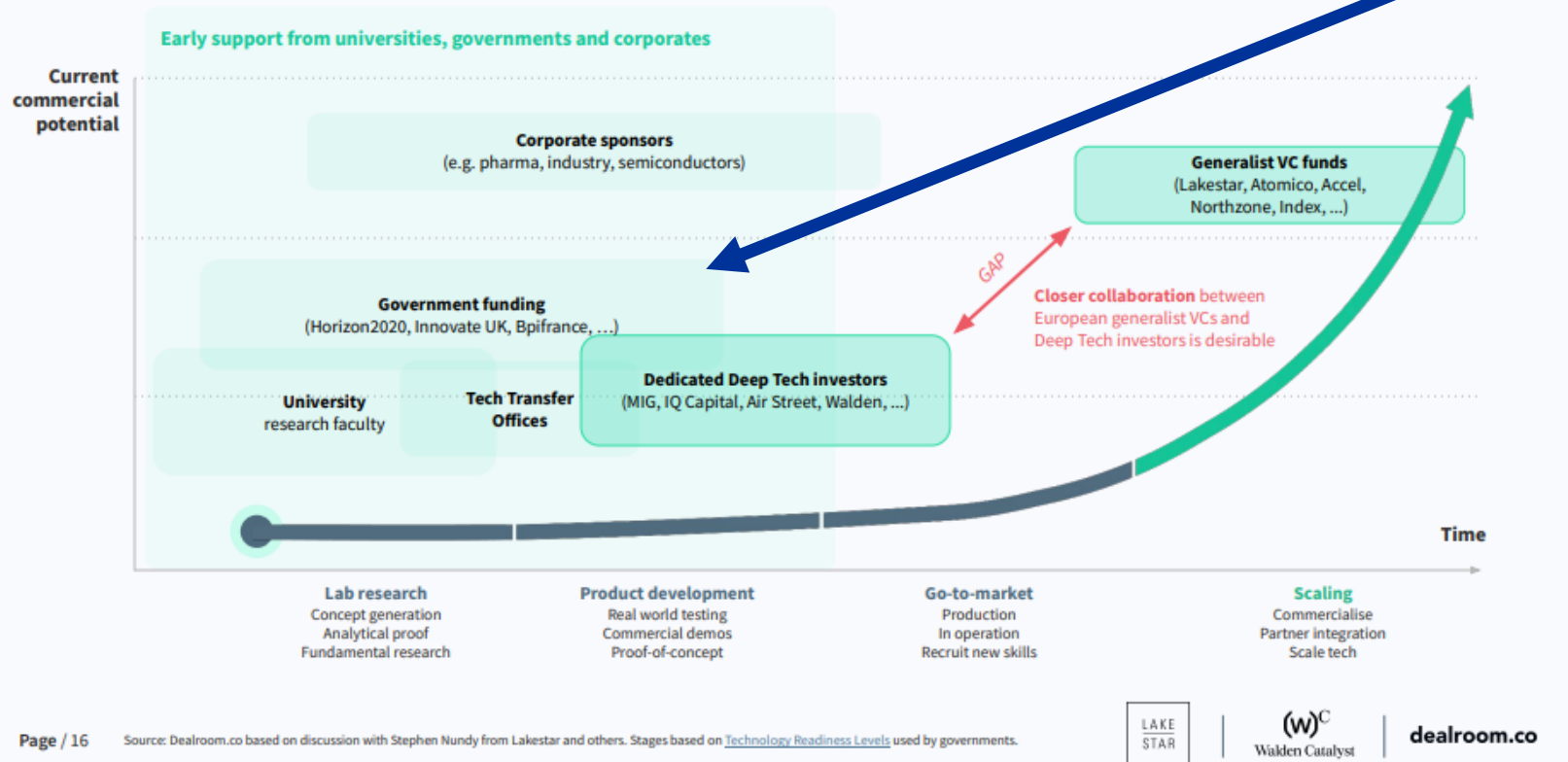
Positioning of EIC accelerator in deep tech



Turning innovation into solid economic success requires patience
Nobel Laureate J. Goodenough developed the Li-ion battery in the 1970s, but it wasn't until 1991 that Sony first commercialised it with its camcorders

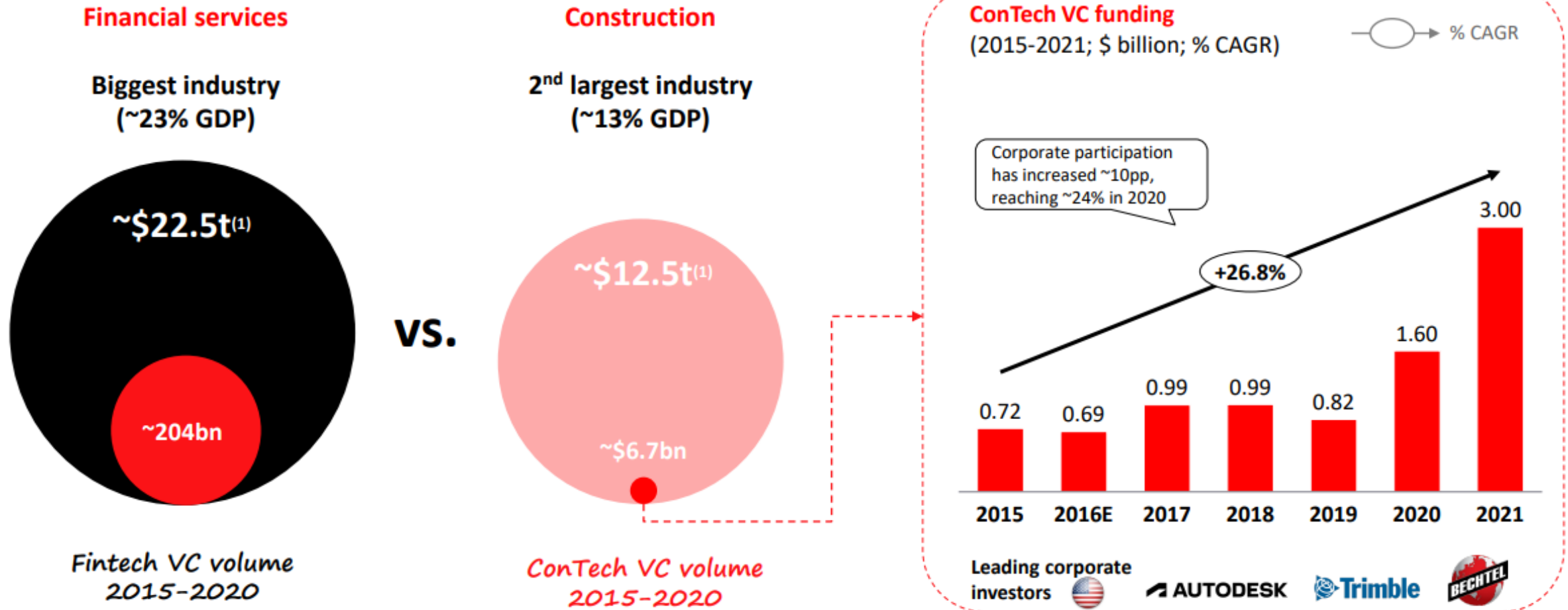
High risk emerging Deep Tech

Deep Tech startups are supported by multiple stakeholders involved in de-risking at each stage, but some gaps still exist.



Venture Capital

Although VC investment in the ConTech industry has increased in the last 5 years, momentum is expected to continue since **funding is still at an early stage if compared to other industries**



(1) 2021; Source: CB Insights; Yahoo Finance; KPMG "The Pulse of Fintech" report; EY-Parthenon analysis

Investment by Focus Area & Topic

Construction technology has come to encompass a broad range of technologies and processes as the industry revolutionizes thanks to new and cutting-edge business models. Below is the breakdown of the different deals in 2022 according to CEMEX Ventures' four market-driven opportunity areas.

Focus Area	Sum of Deal Size (USD Millions)	% of Total Investment
Enhanced Productivity	2782	53.1%
Future of Construction	1191	20.6%
Green Construction	795	14.9%
Construction Supply Chain	612	11.4%
Total	5380	228

Each of the aforementioned focus areas include hundreds of different sub-topics, ranging from popular, mainstream processes to more niche, specialized technologies. The top seven most common topics related to Contech investment in 2022 were as follows:

Topics	Sum of Deal Size (USD Millions)	% of Total Investment
Planning & scheduling	958.0	17.1%
Project monitoring & control	299.1	12.7%
Project design, specification and budgeting	1059.6	11.0%
Offsite & modular construction	361.2	8.3%
Materials & resources marketplaces	387.6	7.9%
Robotics & machine assisted applications	230.2	5.3%
Sustainable materials	214.6	4.4%

Focus Areas:

Green Construction Construction Supply Chain
Enhanced Productivity Future of Construction

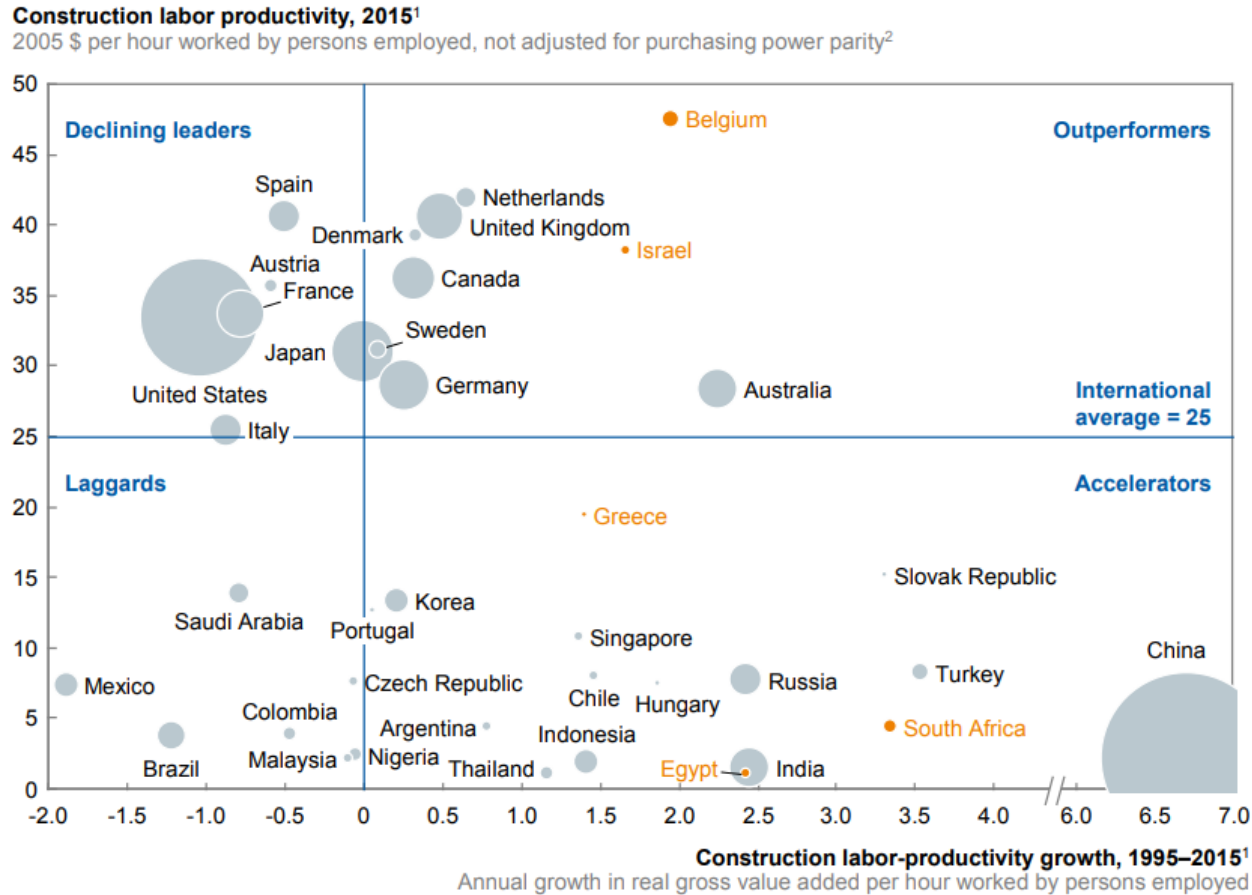
The EU faces a monumental task to decarbonize and modernize the construction sector within 30 years

- The EU committed to net-zero by 2050
- GHG emissions of the construction sector are estimated at 5-12% of EU's total
- Good progress is already being made with **Operational GHG emissions** 👍
- **Embodied GHG emissions** increase both relatively and absolutely 👎

Global context: the world will add the equivalent of 1 New York City, per month, for the next 40 years:



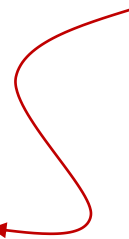
Contrasting all other sectors, the construction sector faces lagging productivity, e/g due to low digitization



The absolute value of productivity



Increase or decrease of productivity over a period of 10 years

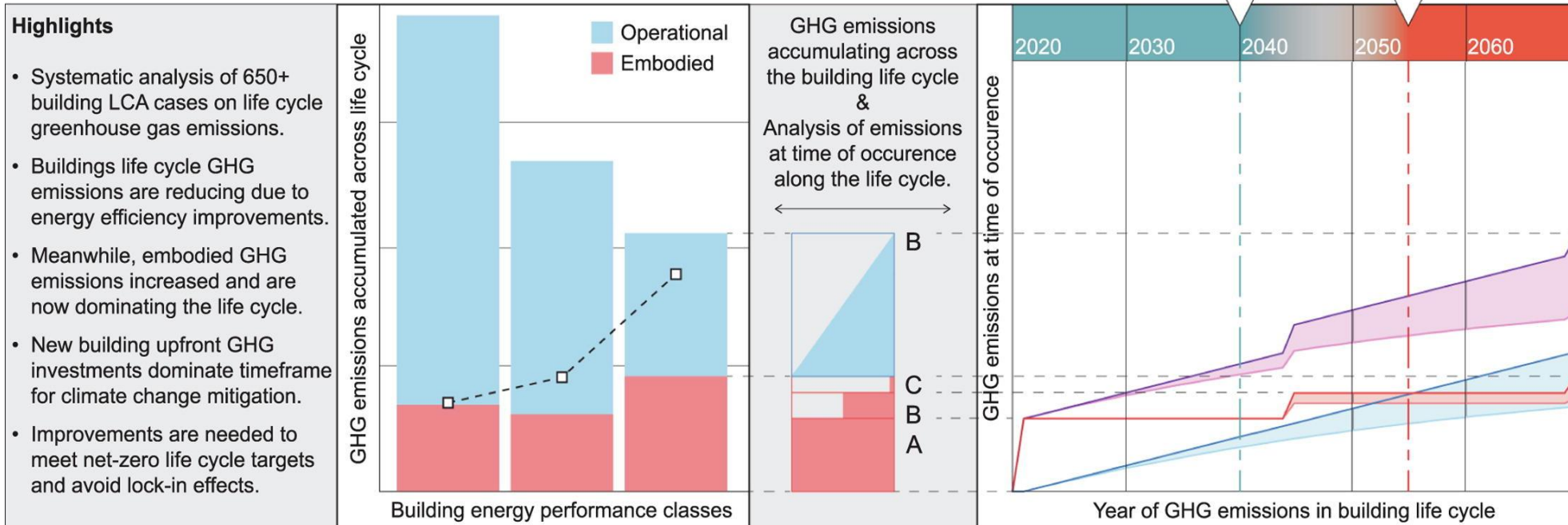


Source: McKinsey Global Institute, Reinventing construction: a route to higher productivity, 2017

Fossil fuels fossil sister is embodied in our buildings and a climate change mitigation challenge

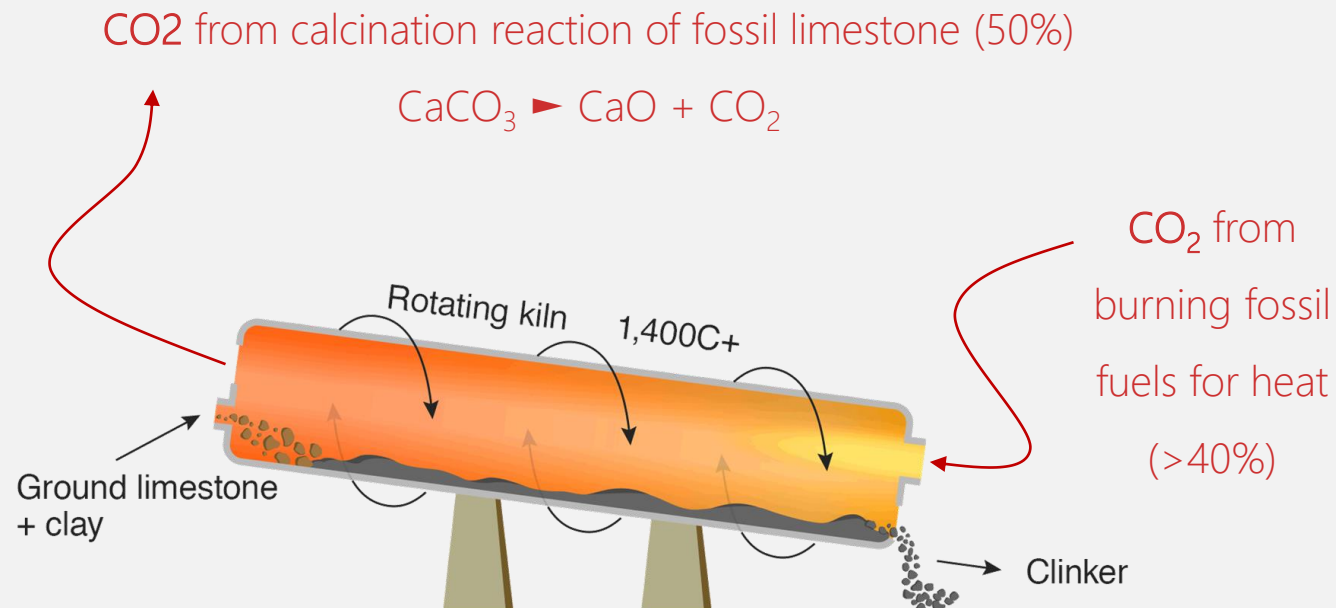
Embodied GHG emissions of buildings - the hidden challenge for effective climate change mitigation.

M. Röck et al., Applied Energy, 2019.



The calcination of limestone at high temperatures is the major source of embodied carbon emissions

The Problem



Solutions

- Use alternatives to cement
- Use less materials, cement
- Bury the CO₂ (CCS)
- Upgrade to electric kilns
- Re-use materials



“ We know that the construction sector can even be turned from a carbon source into a sink, if organic building materials like wood and smart technologies like AI are applied.

Ursula von der Leyen

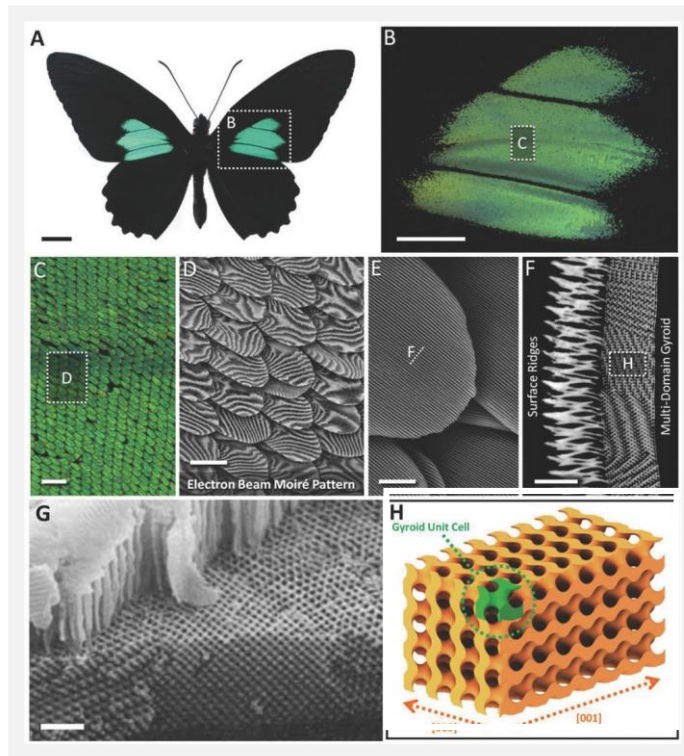
President of the European Commission
State of the Union address, 9 Sep 2021



Nature uses few materials in endless complex ways; humans many materials in simplistic, wasteful ways

Gyroids at nanoscale in butterfly wing

In-situ concrete pouring and formwork



Paradigm



Computational design
Digitalized fabrication
Less or alternative materials



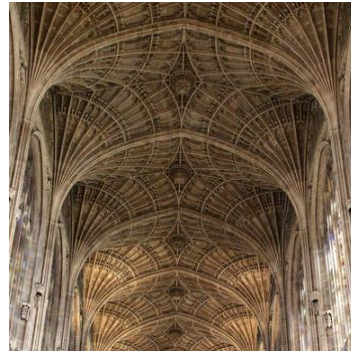
Rooted in EU legacy, computational digital AEC offers pathways to use less and alternative materials

Once ...



Unreinforced
concrete
3D

Then ...



Stone
stereotomy
3D

Then ...



In-situ reinforced
concrete
2D+

... our logical digital future?

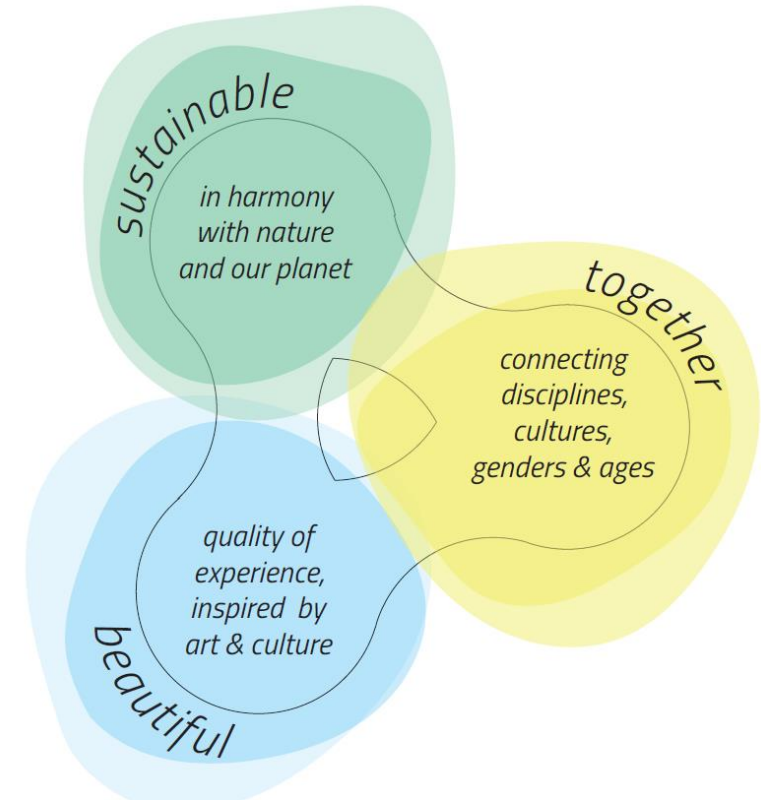


Computational design
Digital fabrication
GHG neutral materials

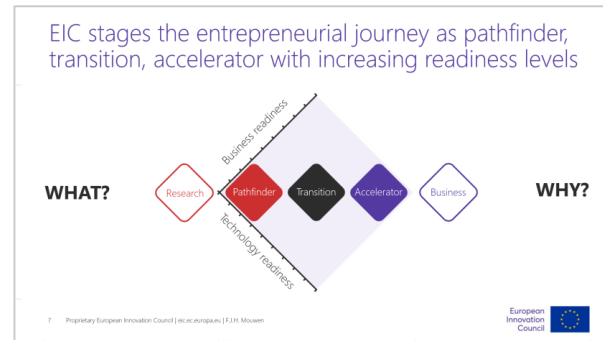
The Art of making efficient use of local materials with "Stereotomy" (designer - stonemason consortium)

- As thin as eggshell
- Compression only
- Local materials

“European Green Deal” and “New European Bauhaus” provide guidance and context for the future of AEC



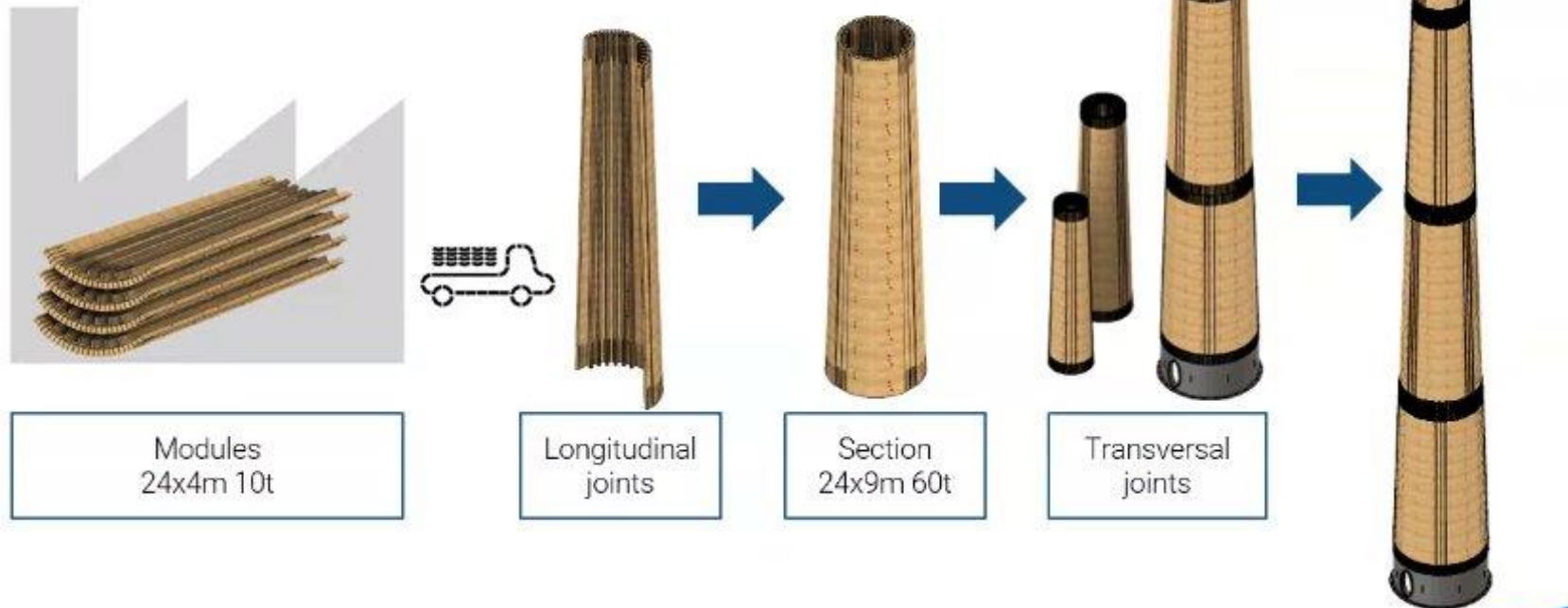
Remember ...





NOVEL APPLICATION FOR NATURE'S CARBON FIBRE

- ✓ Load carrying shell structure in LVL wood
- ✓ Technology validation – 30-meter tower built spring 2020
- ✓ Strong IP protection – 1 patent & 7 patents pending
- ✓ Design basis assessment by TÜV SÜD



STEEL VS LVL WOOD

SAME VOLUME

10N 1N

Steel 10x stronger

SAME STRENGTH

Wood 35% less weight
& 70% lower cost





Background and scope

- Climate neutrality by 2050. Now: 5-12% CO2 emissions
- Buildings show improving operational emissions, however ...
- ... show increase in relative, absolute embodied GHG emissions
- Apart from emissions, AEC also causing 35% of EU waste
- Embodied emissions originate in current practises of design, fabrication, choice of materials
- Digitalisation of AEC value chain is a fundamental transformation
- NEB offers human-centred “pull” framework to technology “push”



Specific objectives

- Support pioneering deep-tech ventures building the digitalized, climate neutral AEC value chain of the future today. Execution on:
 - Computational design
 - Digitalized fabrication
 - Alternative materials
- Spirit: digitally enabled design and fabrication technologies to use less or alternative materials to reduce or eliminate embedded building emissions ...
- ... while striving to contribute to NEB quality values and principles





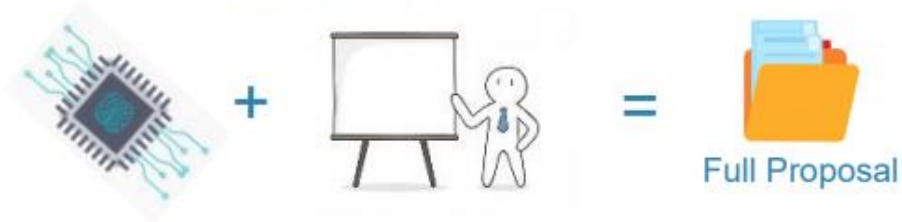
Expected outcomes and impacts

- Attract a range of pioneering, disruptive business ventures in the areas of design, fabrication and materials for AEC
- Focus on achieving a reduction of embodied carbon emissions
- Other impacts include:
 - Higher productivity
 - Higher product quality
 - Reduced consumption and waste
 - Increased business appeal
- Alignment of AEC sector with EGD and NEB

EIC Accelerator – The evaluation process



We will help **you** to prepare your **business plan** and draft a **proposal** with AI tool and coaching



You submit your full **proposal** which will be **assessed** by Remote evaluators

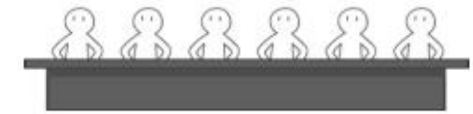


You have a disruptive / deep tech **idea** with a potential to **scale up** and you need **financial support**

Tell us your story in 5 pages



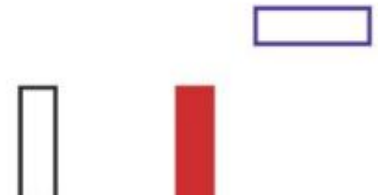
You will **pitch** your innovation in front of EIC Jury Members



If selected, you will sign the **contract**



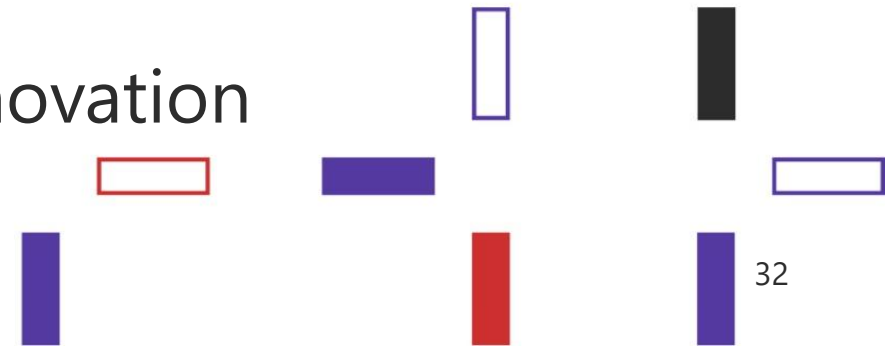
A four-steps process





What can be expected from pro-active management after selection of proposals?

- Help build your company
- Connect to relevant industry stakeholders, match-making
- Connect to investors, funding instruments
- Connect to potential customers, trade-fairs
- Connect to business support and services
- Policy, standards, regulatory bottlenecks to innovation



[Home](#) > [Media](#) > [Media releases](#) > [LafargeHolcim hosts European open innovation day for green construction](#)

Media release • 27 January 2021

LAFARGEHOLCIM HOSTS EUROPEAN OPEN INNOVATION DAY FOR GREEN CONSTRUCTION

- **LafargeHolcim gathers some of the most innovative start-ups in partnership with the European Innovation Council (EIC) to scale up their impact**
- **Start-ups from nine European markets to join LafargeHolcim's open innovation ecosystem to advance sustainable construction**
- **LafargeHolcim and EIC share commitment to build a net zero future**

The European Innovation Council (EIC) and LafargeHolcim, the world's global leader in building solutions, are proud to launch their joint EIC Corporate Day dedicated to sustainable construction. With both organizations committed to building a net zero future, they are gathering some of the most innovative start-ups in Europe in their first digital forum together. LafargeHolcim partners with hundreds of start-ups around the

Documents

[→ Media release - English](#)

Contact Media Relations

Phone: +41 (0) 58 858 87 10

Email: media@holcim.com




Event

Industry

EIC Corporate Day with VELUX

The European Innovation Council and VELUX Group invite EIC beneficiaries to apply to our joint EIC Corporate Day on 6 and 7 March 2023, taking place physically in Copenhagen (Denmark). VELUX is looking for EIC-funded startups/scaleups to work together in the construction industry.



 Register

 Pin it

 Share

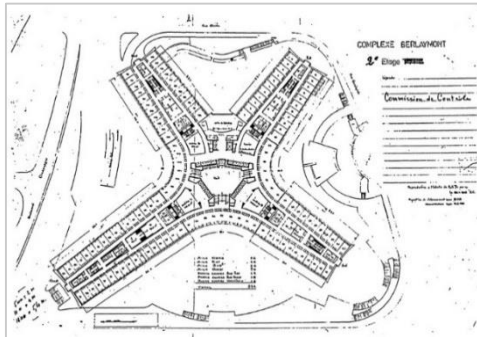
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To the future and back: regulation and design decisions made today affect people generations from now.



----- 1959 ----- 1963 ----- 1969 ----- 2022 -----



LeydenJar secures EU backing in financing of new battery factory

LEYDENJAR

DECEMBER 9, 2022



- Dutch battery innovator LeydenJar lands €30 million EIB financing, backed by an European Commission guarantee, to scale up its technology and production.
- LeydenJar will build a new factory with a production capacity of 100 MWh to produce its pure silicon anodes for a high energy density battery on an industrial scale, accelerating the energy transition.
- The new battery technology is expected to vastly improve battery capacity, as well as open up a range of new possibilities in transportation and other applications.

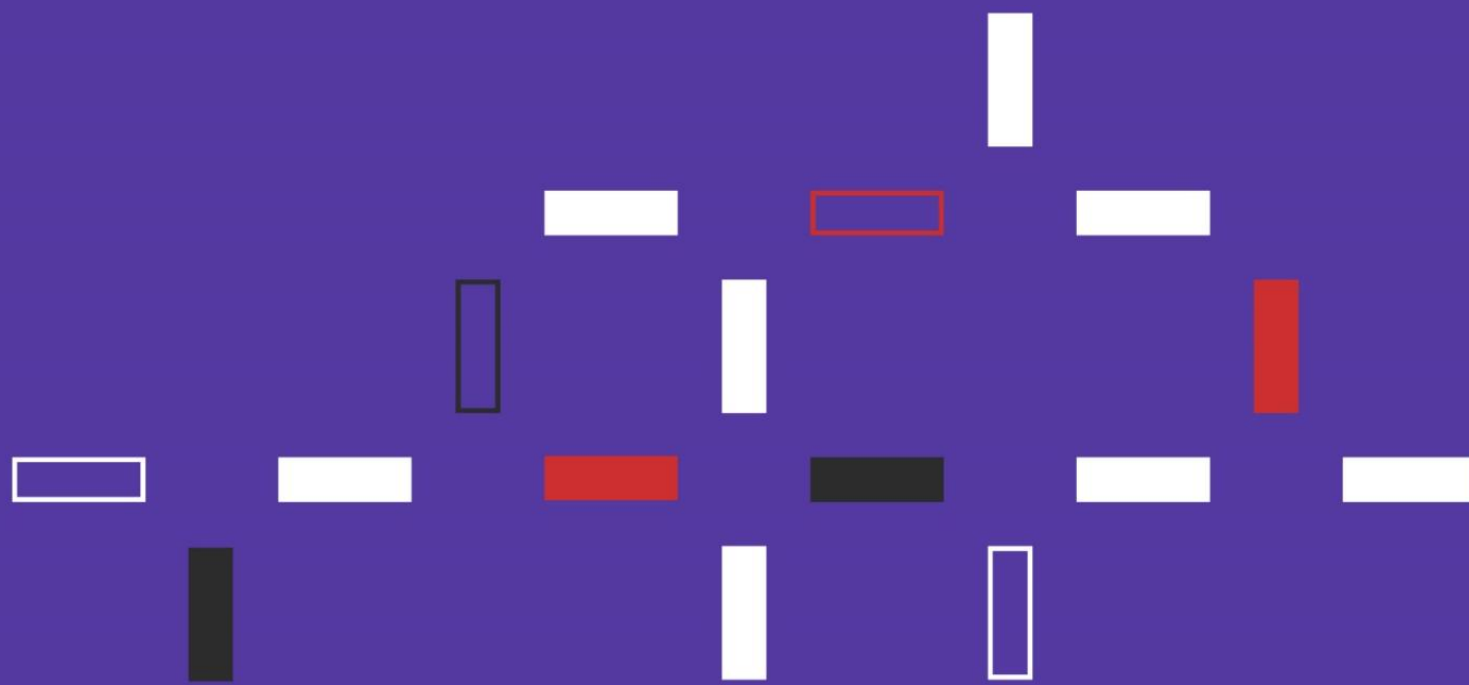
Dutch battery innovator LeydenJar has secured the funding to build its first factory to produce silicon anode foil. The company will invest €60 million in the construction of its first production facility, called "Plant One", of which €30 million comes from a European Investment Bank loan facility. This financing is supported by the InnovFin Energy Demonstration Projects of the European Commission, funded by EU's research & innovation framework program.

The rest of the financing comes from LeydenJar's client projects, earlier committed grants and the Series A investment round in 2021. The production facility is expected to be built in the province of Noord-Brabant, creating employment locally, and should be fully operational by 2026. The aim of the plant is to prepare the silicon anode foil for mass production, subsequently bringing down the cost.



Experiences

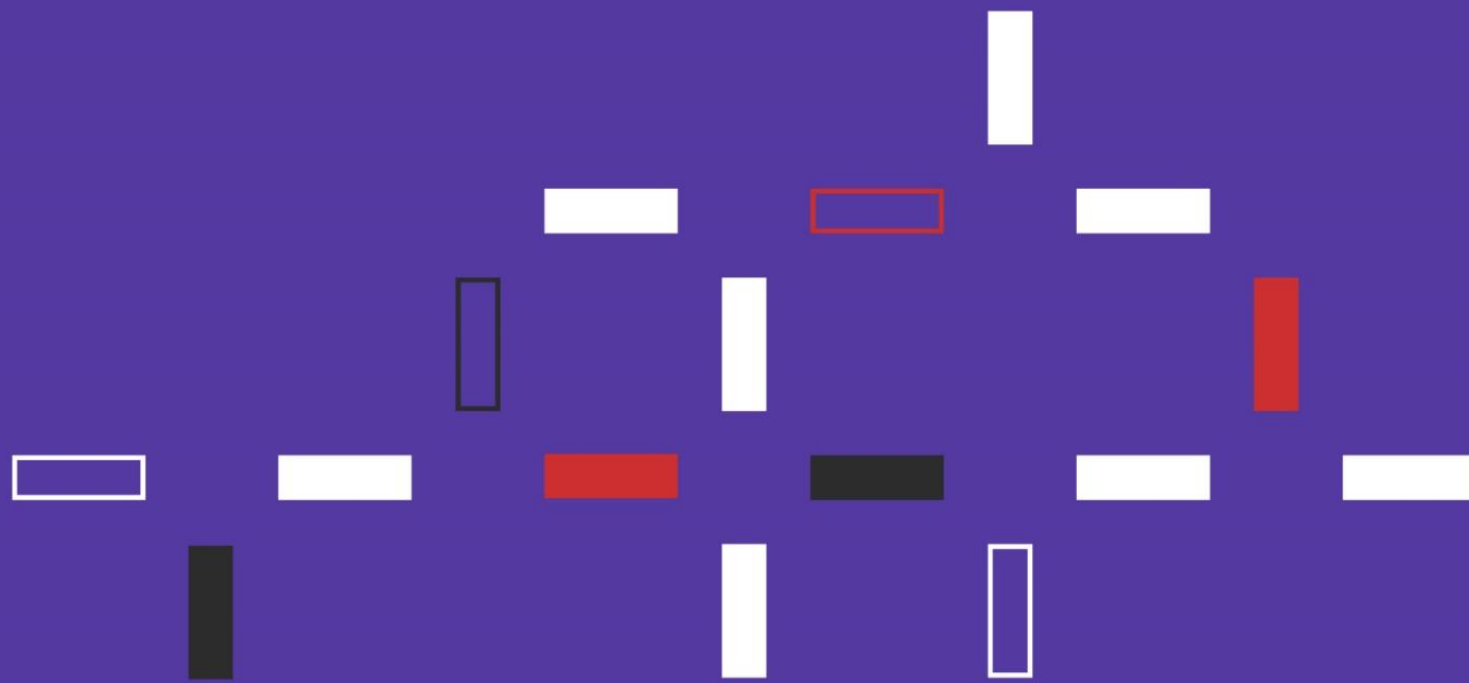
Svelte





Experiences

Odico A/S

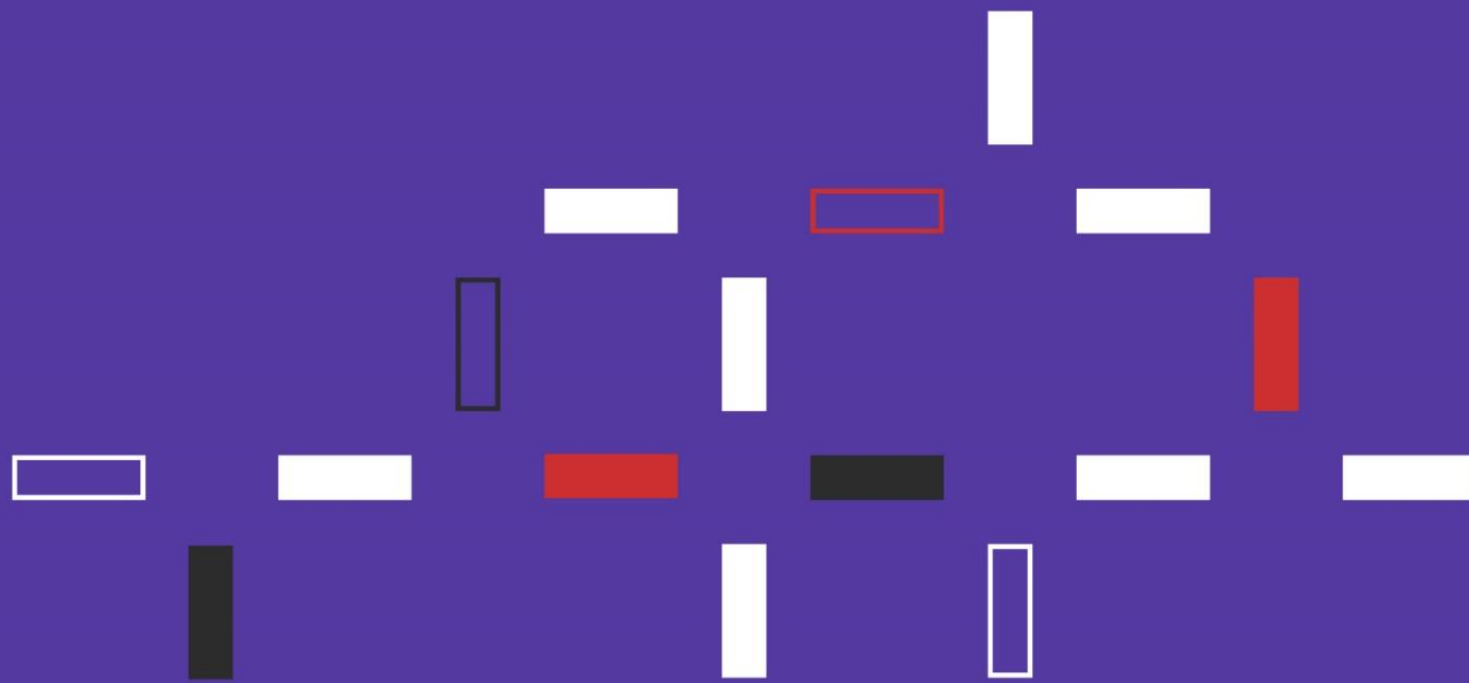




Q&A

Franc Mouwen

Romina Mehmeti



Useful links to the EIC Work Programme 2023:

EIC Work Programme 2023:

(the legal basis)



Recording of EIC Info-day 13 December:

(not repeated today)



Questions: contact your National Contact Point

National Contact Points for Horizon Europe:
(NCP Portal)





Thank you!

<https://eic.ec.europa.eu>

@EUeic

#EUeic

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