

Backing visionary entrepreneurs

The European Innovation Council

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EIC Greentech Programme Managers

29/04/2021 SUN-ENERGY Event

European
Innovation
Council





What is the EIC?

One stop shop for
breakthrough, deep-tech,
market-creating innovators

- Open to all innovators, in any field, at any time
- Complemented by targeted funding on strategic challenges
- Highly competitive for Europe's high potential innovators

Agile funding from idea to
investment

- Pathfinder for advanced research on emerging technologies
- Transition from lab to commercial setting
- Accelerator & EIC Fund to scale up innovations by start-ups & SMEs

Building ecosystems and
communities

- Access to Business Acceleration Services (coaches, mentors, corporates, investors & knowledge partners)
- EIC Programme Managers to develop visions for breakthroughs, manage portfolios, and connect to ecosystems
- Crowding in other investors (VC, corporates, etc.)



EIC Main funding instruments

Pathfinder

For advanced research on breakthrough / game-changing technologies

Transition

For transforming research results into innovation opportunities

Accelerator

For individual companies to develop and scale up breakthrough innovations with high risk and high impact

Two funding schemes

Open

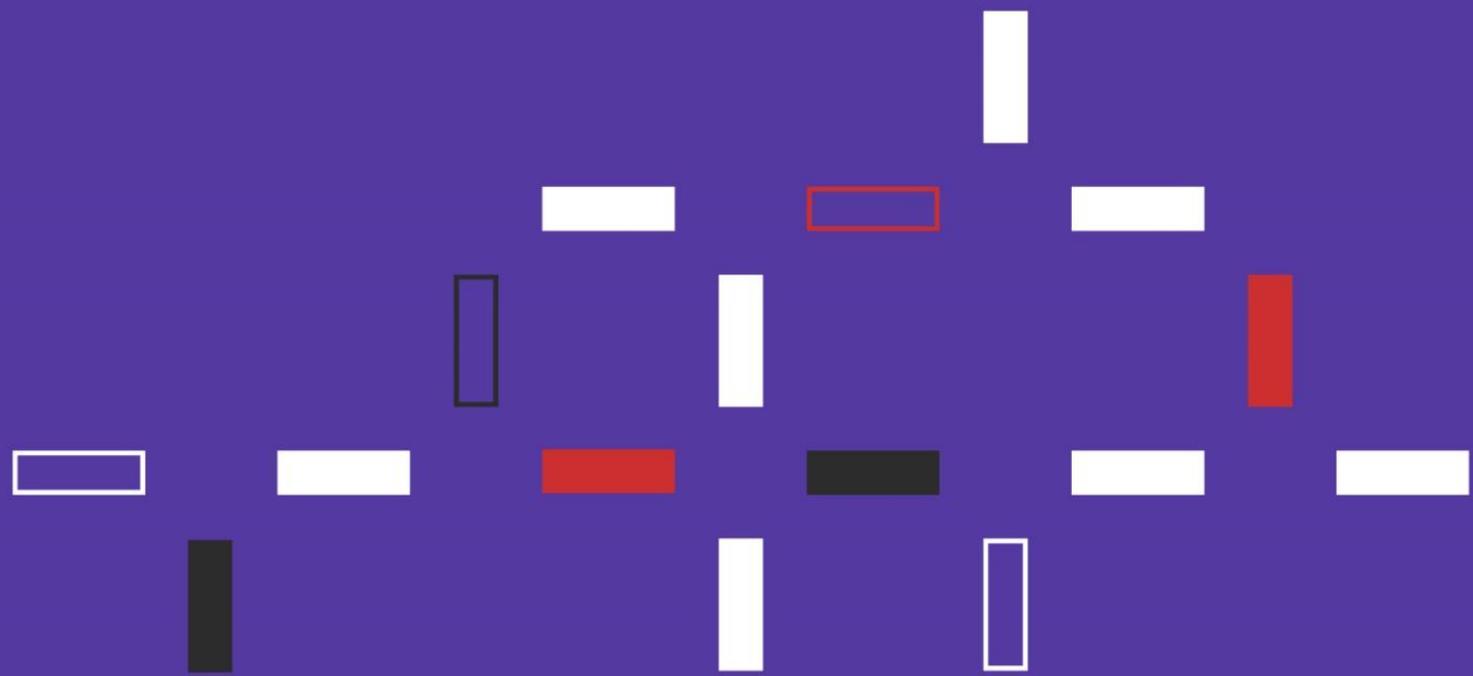
No topic prescription - bottom-up approach

Challenges

Selected challenges – top down approach



Pathfinder call





Addressed to researchers/innovators who:

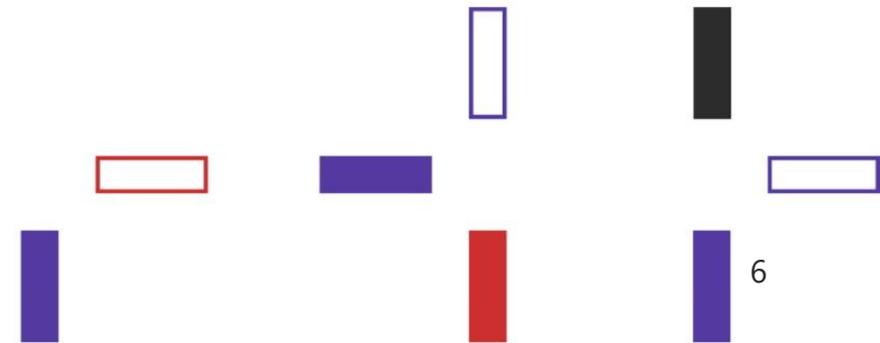
- Have a **vision for a future technology** that could make a real difference to our lives.
- See a plausible way of **achieving the scientific breakthrough** that will make this technology possible.
- Collaborate with an **interdisciplinary team of researchers and innovators** to realise the **proof of principle** and validate the scientific basis of the future technology.
- Low Technology Readiness Levels (between 1 and 4).
- High-risk & high-gain research approach & methodology, with concrete and plausible objectives



Funding schemes

- **EIC Pathfinder Challenges** 

top-down challenge-driven calls for tackling specific issues by portfolios of projects.



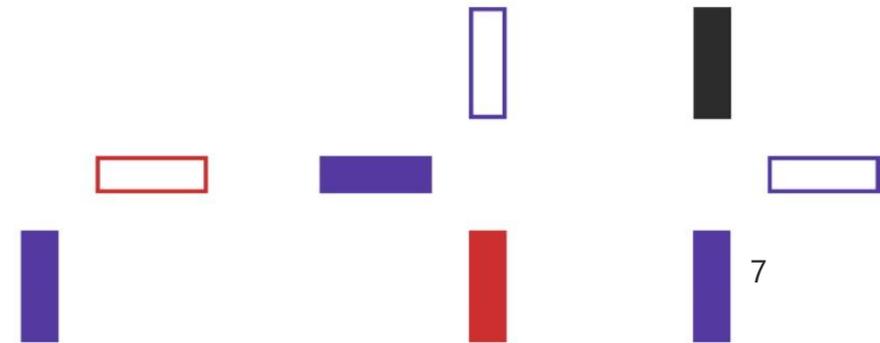


Portfolio approach

Challenge portfolio approach:

- exploring different perspectives, competing approaches or complementary aspects of the Challenge;
- multidisciplinary interactions and exchanges for synergies and serendipity;
- contributing to an overarching medium to long-term business goal and technology-based strategic plan, under the supervision of an **EIC Programme Manager**.

Projects will participate in relevant portfolio activities.





4. Novel routes to green hydrogen production (1/2)

- **Goal:** to **develop novel processes and technologies to produce Green H₂**, at different scales (from small to large) and with higher flexibility, entirely based on renewable sources and on the use of toxic free, non-critical raw materials. It focuses on the potential of new biological, chemical and physical routes for Green H₂ production adopting process circularity, possibly including the co-production of decarbonized chemicals and the integration with existing technologies at system and process level.
- **Target:** to support the development of innovative technologies and platforms for Green H₂ production, including both centralized and or on-demand generation (i.e. at the premises of the end users and for onsite consumption).



4. Novel routes to green hydrogen production (2/2)

Outcome: a proof of concept or lab-scale validated innovative Green H₂ production technology by biological, chemical or physical routes without the deployment of fossil fuels, potentially including the use of salt or waste water, organic wastes or the co-production of decarbonized chemicals.

Strong recommendations:

- **Multidisciplinary and cross sectorial approaches** are particularly welcome.
- Proposers are strongly encouraged to consider the **recovery and recycling** of by-products and wastes (life cycle thinking and circular approach).
- The **use of toxic-free** and **non-critical raw materials** is requested and the projects should include a full life cycle analysis of the proposed solutions and their impact on Europe's decarbonisation goals.

Check the WP for the specific conditions for this challenge, as well as the Topic Guide

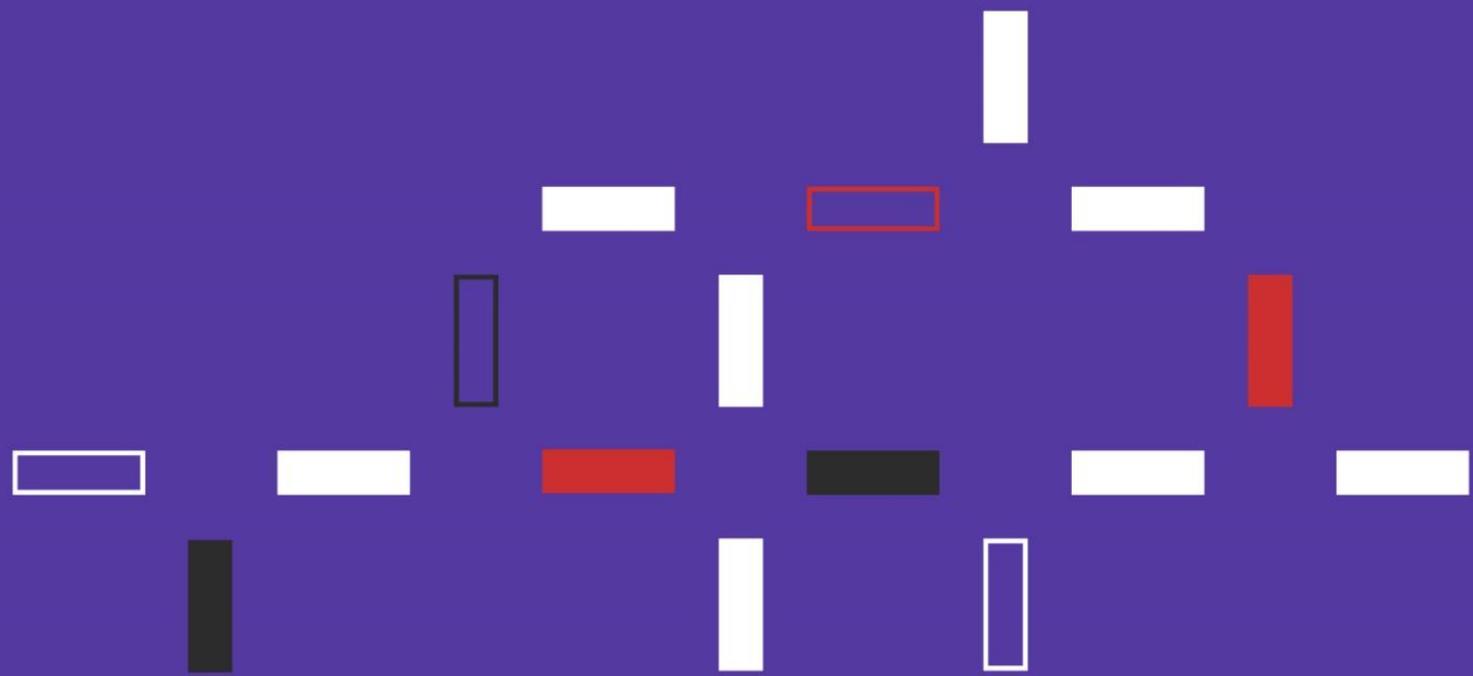


Calls 2021 – Summary table for all funding opportunities

	Pathfinder Open	Pathfinder Challenges	Ad hoc grant
Total budget	€168 million	€132 million	Max. 1% of Pathfinder call budget
Proposals (indicative)	Up to €3 Mio	Up to €4 million	Up to €50000
Funding rate	100% of eligible costs	100% of eligible costs	100% of eligible costs
Opening	18 March 2021	15 June 2021	-
Deadline	19 May 2021 at 17.00 CET	27 October 2021 at 17.00 CET	Not applicable
Length of proposal	17-page proposal – Section 1 to 3	25-page proposal	Not applicable
Applicants	Consortia: Min. 3 partners from 3 different MS/AC (of which at least 1 partner in a MS)	1. Single legal entities in a MS/AC (conditions apply) 2. Consortia: - If 2 partners: from different MS/AC, otherwise - Min. 3 partners from 3 different MS/AC (of which at least 1 partner in a MS) (unless differently stated in the Challenge chapter)	No specific requirement: either an individual grant holder or a group of grant holders.



Transition call





EIC Transition

For transforming research results into innovation opportunities

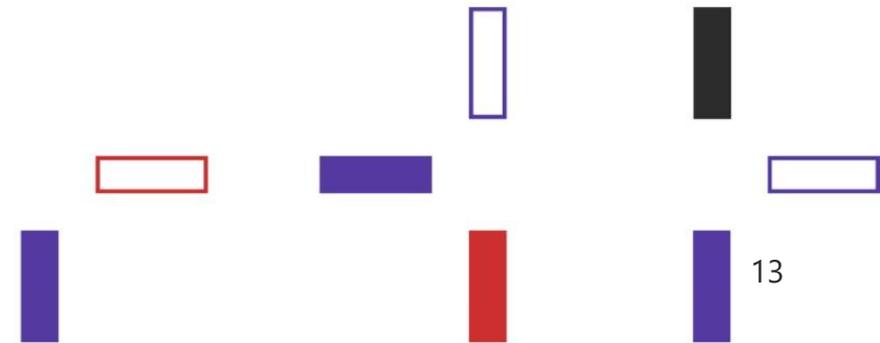
- New funding scheme to bridge gap between research phase (proof of concept) and innovation application
- Mainly open ("bottom up"), but also Transition challenges (for medtech, energy storage)
- Single applicants or small collaborations (max. 5 partners)
- In first phase, only for follow up to results from EIC Pathfinder and ERC Proof of Concept





Why Transition

- **European innovation paradox**
 - A leader in producing top scientific knowledge
 - Lagging behind in turning scientific knowledge into innovation and new products.
- **Funding gap** to mature technologies/ innovations at early/ concept stage (first “valley of death”)
- Need to **find specific application** for a technology with a viable business case
- Not just funding: also **venture building** (building team, knowledge, networks, partnerships)





Who is EIC Transition funding for?

- **Researchers/innovators**
- Restricted to applications based on results generated by:
 - **EIC Pathfinder projects** and **FET Flagships** calls
 - **European Research Council (ERC) Proof of Concept projects**
- **Single beneficiary** (not larger companies) or **small consortium** (2-5 beneficiaries)



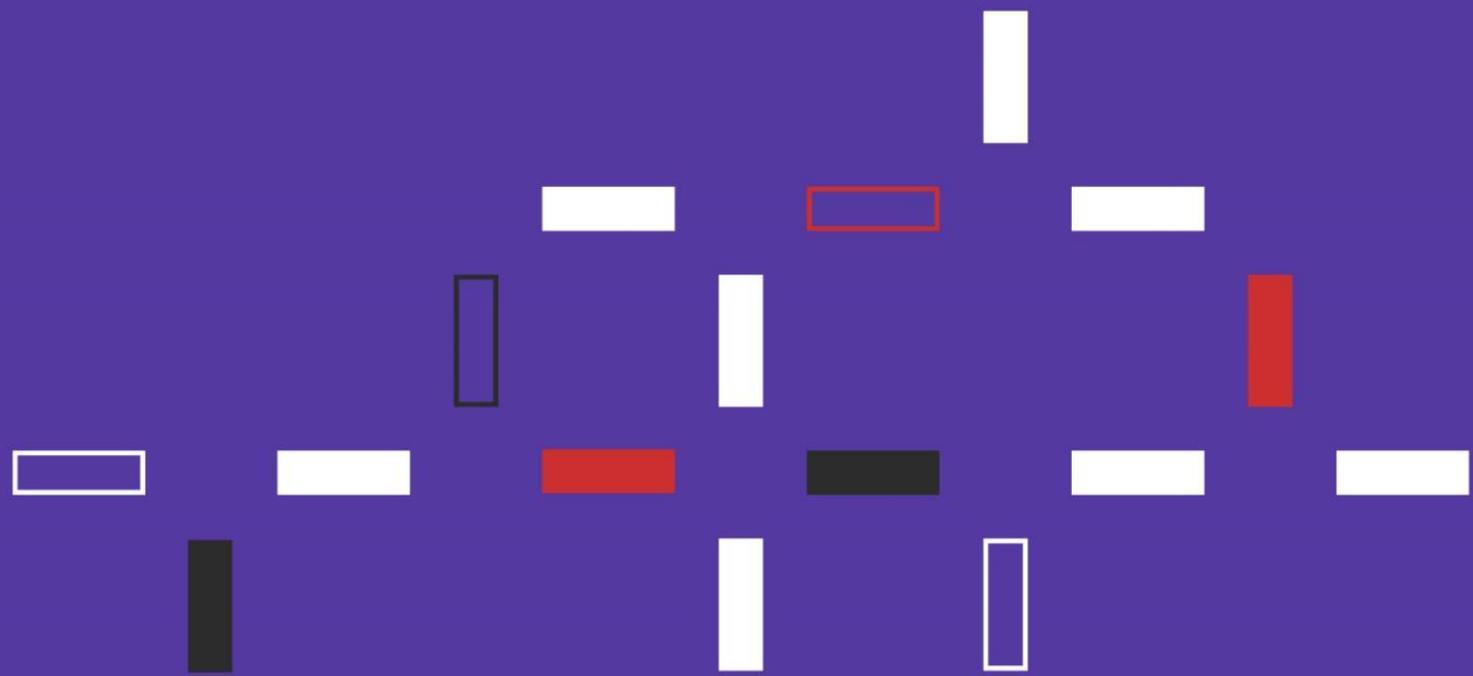
Challenge: Energy Harvesting and storage technologies

The proposals should:

- perform the necessary R&D to advance from an existing proof-of-principle to a mature version
- develop an exploitation strategy, outlining the proposed path to innovation and describing a business plan
- Provide clear and ambitious performance targets and progress milestones
- **Be focused on one or more of the following:**
 - ✓ **combining** energy harvesting and storage into integrated systems and technologies
 - ✓ Propose Innovative concepts for the harvesting and/or storage of **solar energy** (in the form of heat or solar fuels), **geothermal or waste heat**
 - ✓ Propose topics such as long-term and inter-seasonal energy storage, cooling and cryogenic storage, building integrated solutions, thermo-mechanical energy storage and conversion, chemical loop based solutions
 - ✓ Advanced materials and devices for electro-chemical storage (other than Li-Ion batteries) with toxic-free and non-critical raw materials.



Accelerator call





EIC Accelerator

For startups & SMEs to develop and scale up innovations with high risk and high impact

- For individual companies (startups, SMEs, in exceptional cases small mid caps (up to 500 employees))
- Continuously open for applications (also from individuals intending to start a company and investors intend to support a company)
- Mainly open (“bottom up”) but also Accelerator challenges in Green Deal, Strategic Digital & Health Technologies
- Mainly blended finance (grant + investment), but options for “grant only” and “grant first” (with investment follow up)





The EIC Accelerator

Grant funding (non-dilutive) to validate/ de-risk innovations

Equity funding by EIC Fund for scaling up

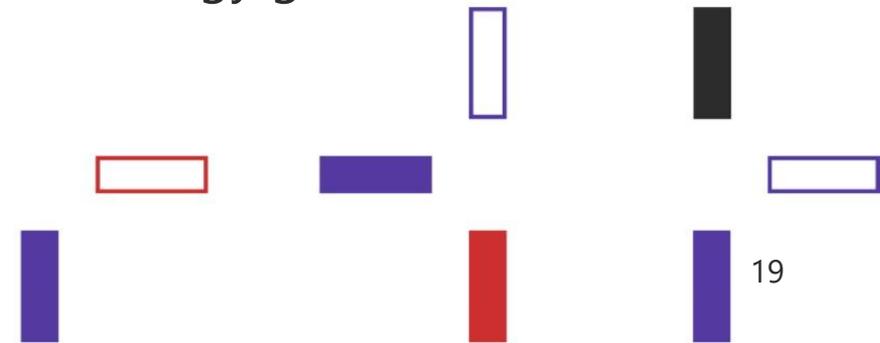
Business Acceleration Services





Challenge topic: Green Deal Innovations for the Economic Recovery

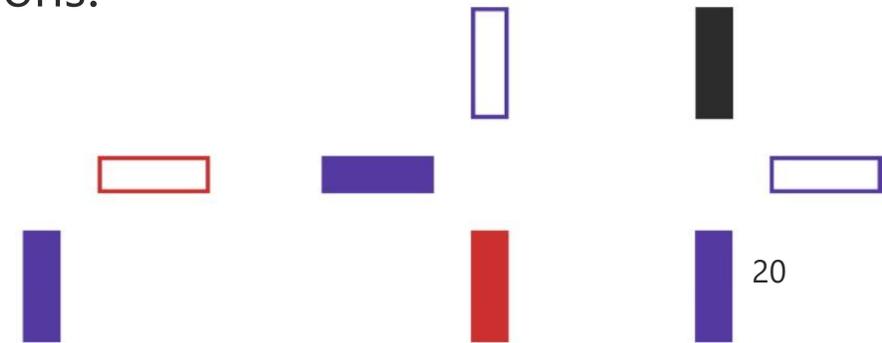
- **Renewable energy, including renewable Hydrogen and energy storage:** breakthrough innovations to further develop renewable energy sources, green hydrogen or decarbonised fuels production and/or storage at different scales, from centralised to on demand, as well as for different applications ranging from stationary to transport, including solutions that address the whole supply chain to limit the use of critical raw materials, to contribute to the goal of a carbon-neutral economy.
- **Deep Renovation of buildings:** breakthrough innovations that accelerate the growth of the deep renovation market to increase the energetic and environmental performance of residential, commercial and public buildings, also bundling energy supply and/or demand through innovative technologies and operating strategies, proposing building embedded energy generation and storage solutions and financial schemes or business models.



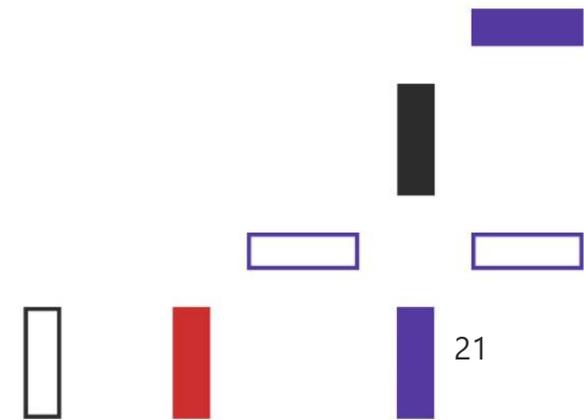
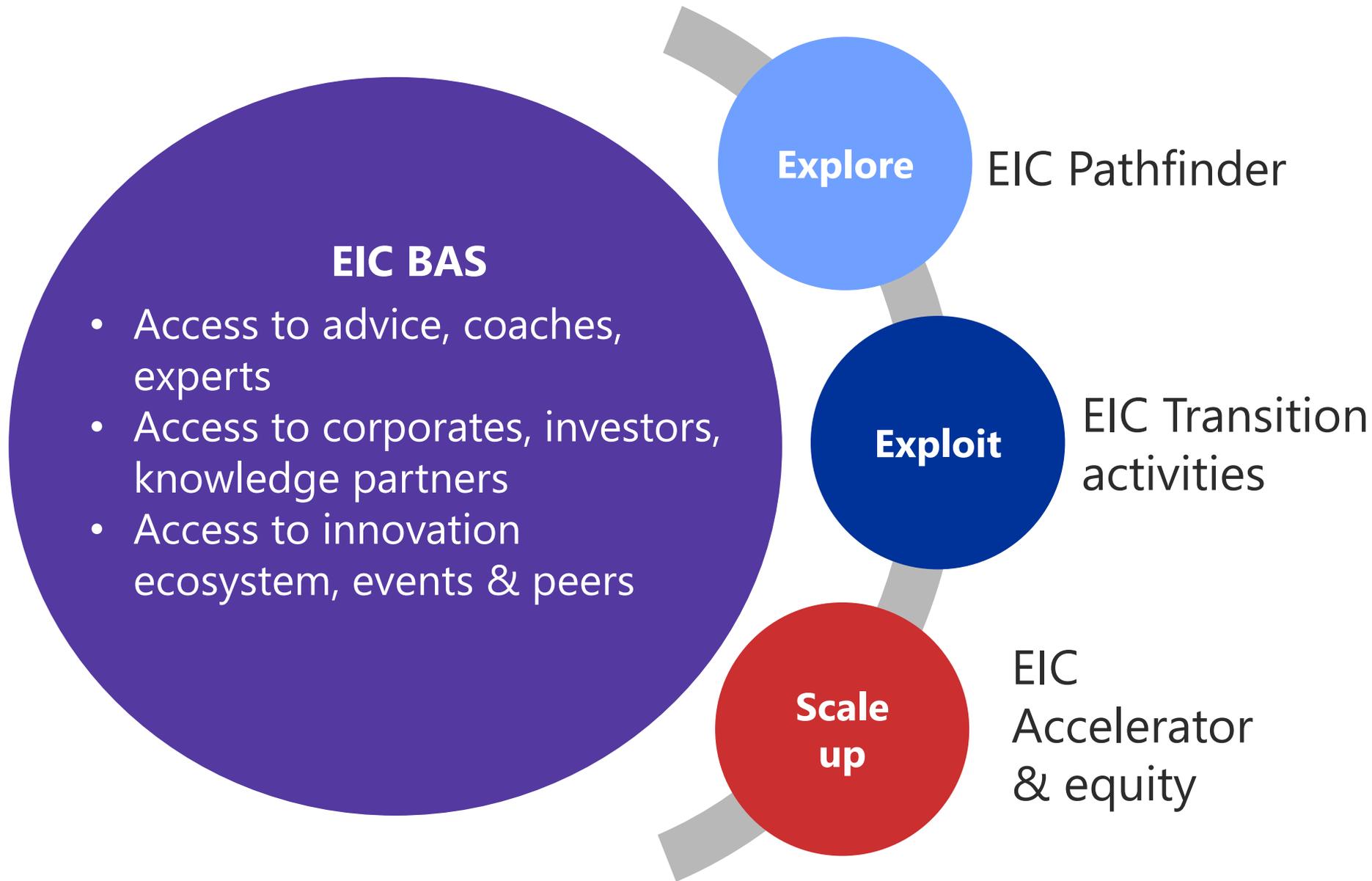


Challenge topic: Green Deal Innovations for the Economic Recovery

- **Low carbon industries:** breakthrough innovations contributing to the de-carbonisation of energy-intensive industries, including solutions on electrification, circularity and industrial symbiosis industrial processes, the use of carbon capture storage and utilisation technologies or the digitisation of industrial processes.
- **Batteries and other energy storage systems:** breakthrough innovations related to the various segments of the strategic battery value chain, from critical raw materials to recycling, and comprising other energy storage systems such as chemical as well as physical storage technologies (including ultracapacitors), for use on stationary as well as transport applications.



Business Acceleration Services

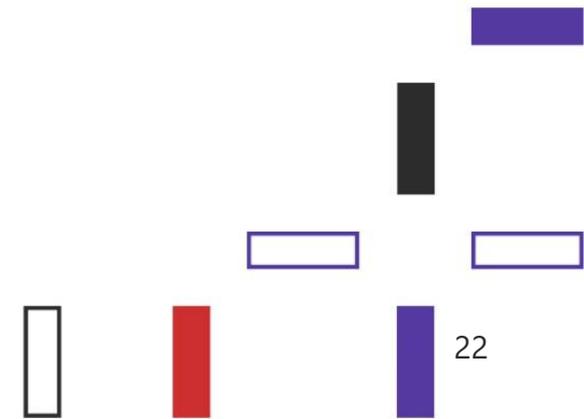


Programme Managers overlook different portfolios of projects



A range of Portfolio Activities

Portfolios are initially centred on Pathfinder, but can be extended with Transition and Accelerator Actions, or with non-EIC funded ones.

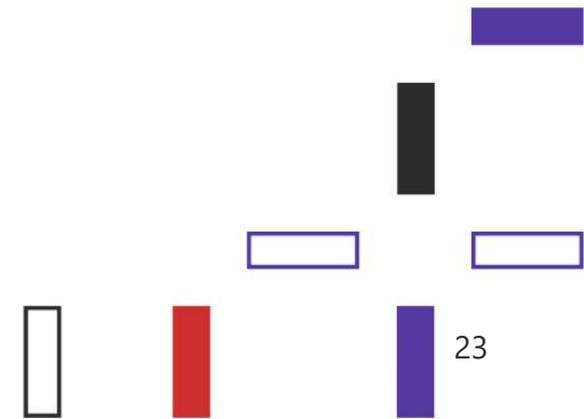


Portfolios approach



Thematic portfolios

- **Hydrogen technologies** (generation, storage, end use):
- **Energy storage** (thermal and electrochemical)
- **Solar conversion technologies** (Third generation PV technologies and solar fuels)
- **Energy conversion, harvesting and recovery**
- **Bio-inspired materials for energy and environment**
- **Sustainable agriculture**
- **Environmental intelligence and Climate Mitigation**





Thank you!

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