



TECHNOLOGY  
CENTRE PRAGUE

# EIC PATHFINDER: OPEN VS CHALLENGES

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# WHAT DOES EIC PATHFINDER SUPPORT IN GENERAL?

- Research of **new directions** in science and technology
- **High-risk approach** with the aim to bring **breakthrough technological solutions** and **create market opportunities**
- **Interdisciplinary projects** combining different perspectives opening up new technological pathways
- Projects with a **high potential** to have a positive effect on the **society and economy**
- Further **(market) exploitation of results**

## What projects are not supported

- Focus purely on pushing boundaries of a scientific field with no potential/ambition to develop a new technology/innovation
- Focus on an incremental advancement or development of methods/principles that are already known



# WHAT IS EXPECTED?

- **Expected output**
  - **Proof of principle** that the main ideas of the envisioned future technology are feasible
- **Important aspect of project proposals**
  - Top-level **scientific publications**
  - Adequate formal protection of the generated **Intellectual Property**
  - Assessment of relevant aspects related to **regulation, certification, and standardization**
  - Empowerment of excellent **early career researchers** or promising **high-tech SMEs**
  - **Gender balance** among the WP leaders



**PATHFINDER OPEN**

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# PATHFINDER OPEN MAIN PRINCIPLES

- **Bottom-up** approach
- Expected activities between **TRL 1 and 4**
- International collaborative research (**at least 3 partners from 3 different countries EU/AC**)
- Open to **all types** of legal entities
  
- **Applicants must fulfill „gatekeepers“**
  - Convincing **long-term vision** of a **radically new technology** that has the potential to have a transformative positive effect to **solving a challenge** in our economy and society
  - Concrete, novel and ambitious **science-towards-technology breakthrough**, providing advancement towards the envisioned technology
  - **High-risk/high-gain** research approach and methodology, with concrete and plausible objectives

# PATHFINDER OPEN CALL 2025

- The call opened on **February 20**
- Overall budget: € 142 M
- EC contribution up to € 3 M (higher amounts must be justified)
- Research and Innovation Action = 100 % direct costs
- **DEADLINE: May 21st (17:00)**

# PROPOSAL EVALUATION

1. Individual remote evaluation by at least 4 experts
2. Consensus meeting of an evaluation committee (different experts), decision on the final score
3. Evaluation results: within 5 months from the deadline



# EVALUATION CRITERIA

**Excellence (treshold 4/5,  
weight 60 %)**

**Impact (treshold 3,5/5,  
weight 20 %)**

**Implementation (treshold  
3/5, weight 20 %)**

Long-term vision

Long-term impact

Work plan

Science-towards-technology  
breakthrough

Innovation potential

Allocation of resources

Objectives

Communication &  
Dissemination

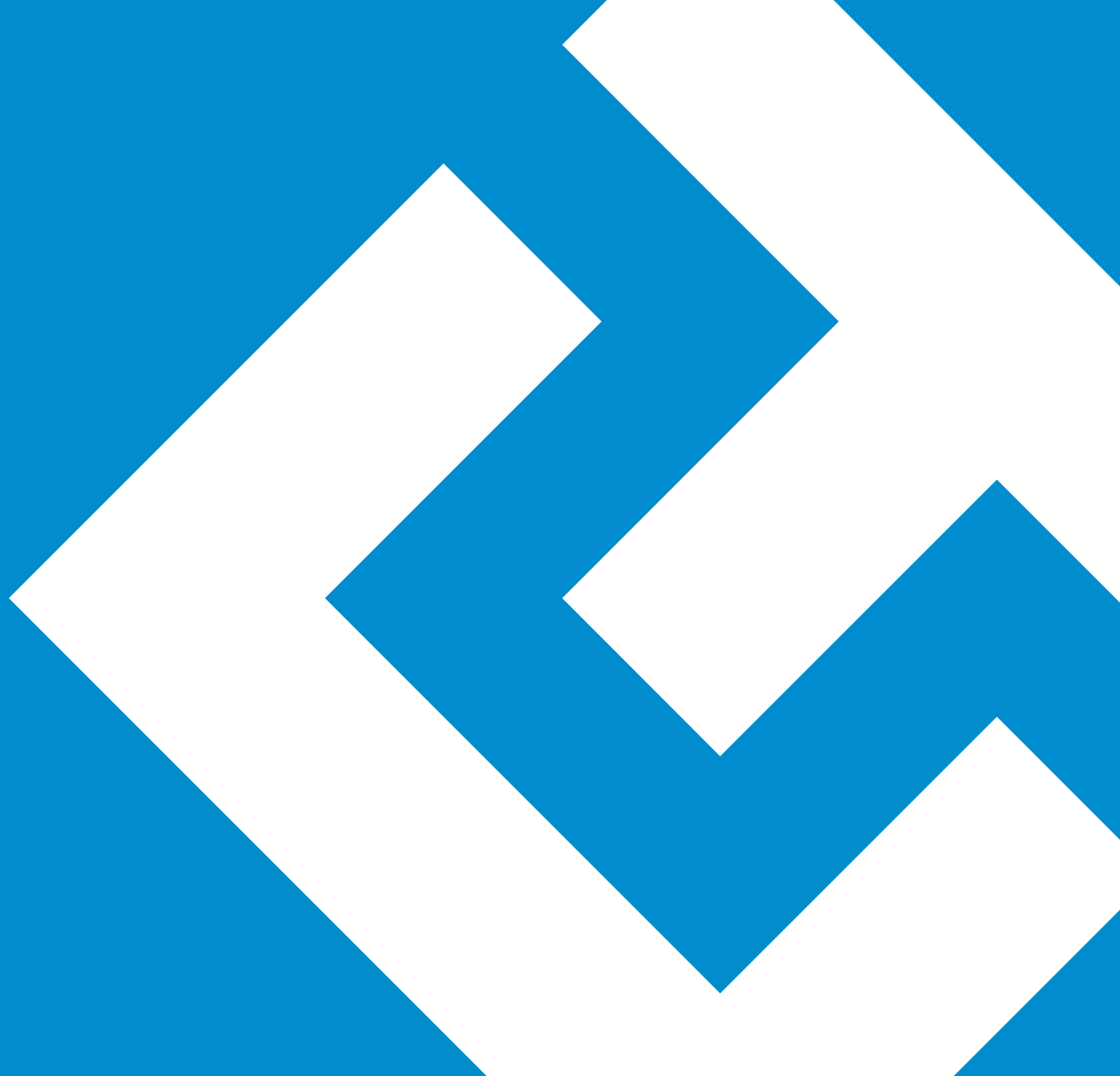
Quality of the consortium

Interdisciplinarity



# PATHFINDER CHALLENGES

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# PATHFINDER CHALLENGES MAIN PRINCIPLES

- **Top-down** approach with an objective to speed up development of new technologies that will reinforce the **EU strategic autonomy and global competitiveness**
- **Portfolio approach**, complementarity and cooperation of selected projects
- Expected activities between **TRL 1 and 4** (projects usually start higher, e.g. at TRL 2)
- Important role of **Programme Managers** (PMs)
- Proposal can be submitted by a **single entity** (except large industry), a small **consortium of 2 partners** (EU/AC) or a larger **consortium of 3 or more partners** (HE rules)
- Open to **all types** of legal entities

# WHO ARE THE EIC PROGRAMME MANAGERS?

- Experts in strategic areas with **academic as well as business** backgrounds
- **Identify potential challenges** for emerging technologies and disruptive innovations
- They take part in the project selection process and **steer selected projects portfolios** towards the Challenge objectives
- [https://eic.ec.europa.eu/eic-communities/eic-programme-managers\\_en](https://eic.ec.europa.eu/eic-communities/eic-programme-managers_en)



Carina Faber

Renewable energy conversion and alternative resource exploitation



Samira Nik

Quantum tech and electronics



Isabel Obieta

Sustainable Semiconductors



Stella Tkatchova

Space systems & technologies



Federica Zanca

Medical imaging and AI in healthcare



Franc Mouwen

EIC Programme Manager for architecture engineering construction technologies



Ivan Stefanic

Food chain technologies, novel & sustainable food



Paolo Bondavalli

Advanced materials for energy



Hedi Karray

Artificial Intelligence



Orsolya Symmons

Health and Biotechnology

# HOW ARE THE CHALLENGES SELECTED?

- The areas are defined based on **industry needs**, the **EU strategies** and an analysis of **funded Horizon projects**
- **The final topic is determined by:**
  - The PMs knowledge of the field/industry
  - Signals coming from EIC and ERC Proof of Concept projects
  - Gaps not covered by Horizon Pillar 2 projects
  - Relevant EU strategies

# CHALLENGES 2025

- **Biotech for Climate Resilient Crops and Plant-Based Biomanufacturing**
- **Generative-AI based Agents to Revolutionize Medical Diagnosis and Treatment of Cancer**
- **Towards autonomous robot collectives delivering collaborative tasks in dynamic unstructured construction environments**
- **Waste-to-value devices: Circular production of renewable fuels, chemicals and materials**

# CHALLENGE GUIDE

*Challenge Guide – Towards autonomous robot collectives delivering collaborative tasks in dynamic unstructured construction environments*



## PATHFINDER CHALLENGE

**Towards autonomous robot collectives delivering collaborative tasks in dynamic unstructured construction environments**

EIC Work Programme reference: HORIZON-EIC-2025-PATHFINDERCHALLENGES-01-03

Call deadline date: 29/10/2025

EIC Programme Manager: Franc MOUWEN

- A „must read“ for applicants
- Detailed **description** of the Challenge
- **Potential exceptions** from general rules
- **Key aspects** for portfolio building
- [https://eic.ec.europa.eu/eic-funding-opportunities/eic-pathfinder/eic-pathfinder-challenges-2025\\_en](https://eic.ec.europa.eu/eic-funding-opportunities/eic-pathfinder/eic-pathfinder-challenges-2025_en)

# PATHFINDER CHALLENGES CALL 2025

- The call will open on **July 28**
- Overall budget: € 120 M
- EC contribution up to € 4 M (higher amounts must be justified)
  - **Lump sum**
- Research and Innovation Action = 100 % direct costs
- **DEADLINE: October 29 (17:00)**

# PROPOSAL EVALUATION

1. Individual remote evaluation by at least 3 experts
2. Consensus meeting of the same experts, decision on the final score
3. „**Portfolio considerations**“: evaluation committee (experts and PMs) considers each proposal's contribution to setting up a consistent Challenge Portfolio of projects
4. Evaluation results: within 5 months from the deadline





# EVALUATION CRITERIA (STEP 1)

<b>Excellence (treshold 4/5; weight 60 %)</b>	<b>Impact (treshold 3,5/5; weight 20 %)</b>	<b>Implementation (treshold 3/5; weight 20 %)</b>
Objectives and relevance to the Challenge	Potential impact	Work plan
Novelty	Innovation potential	Allocation of resources
Plausibility of the methodology	Communication & Dissemination	Quality of the applicant/consortium