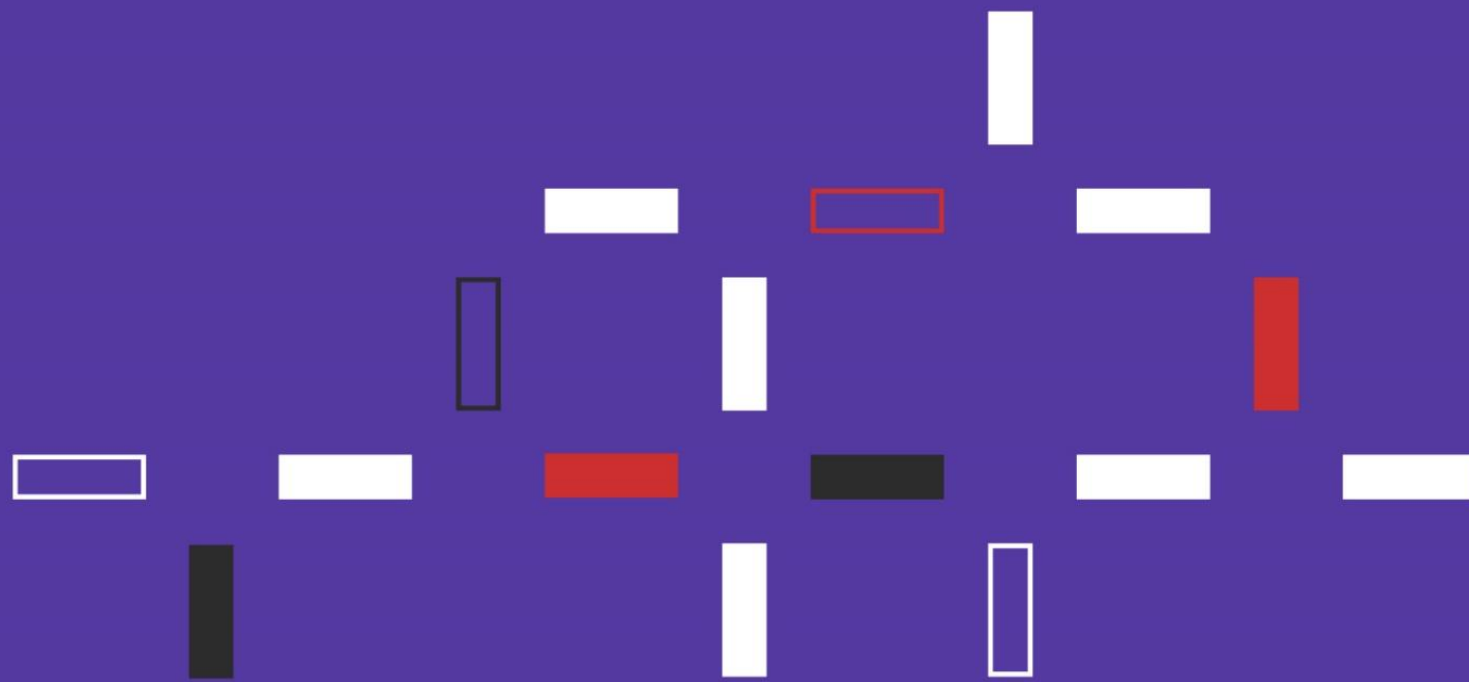




Backing visionary entrepreneurs

**Micro-Nano-Bio
Transition Challenge**

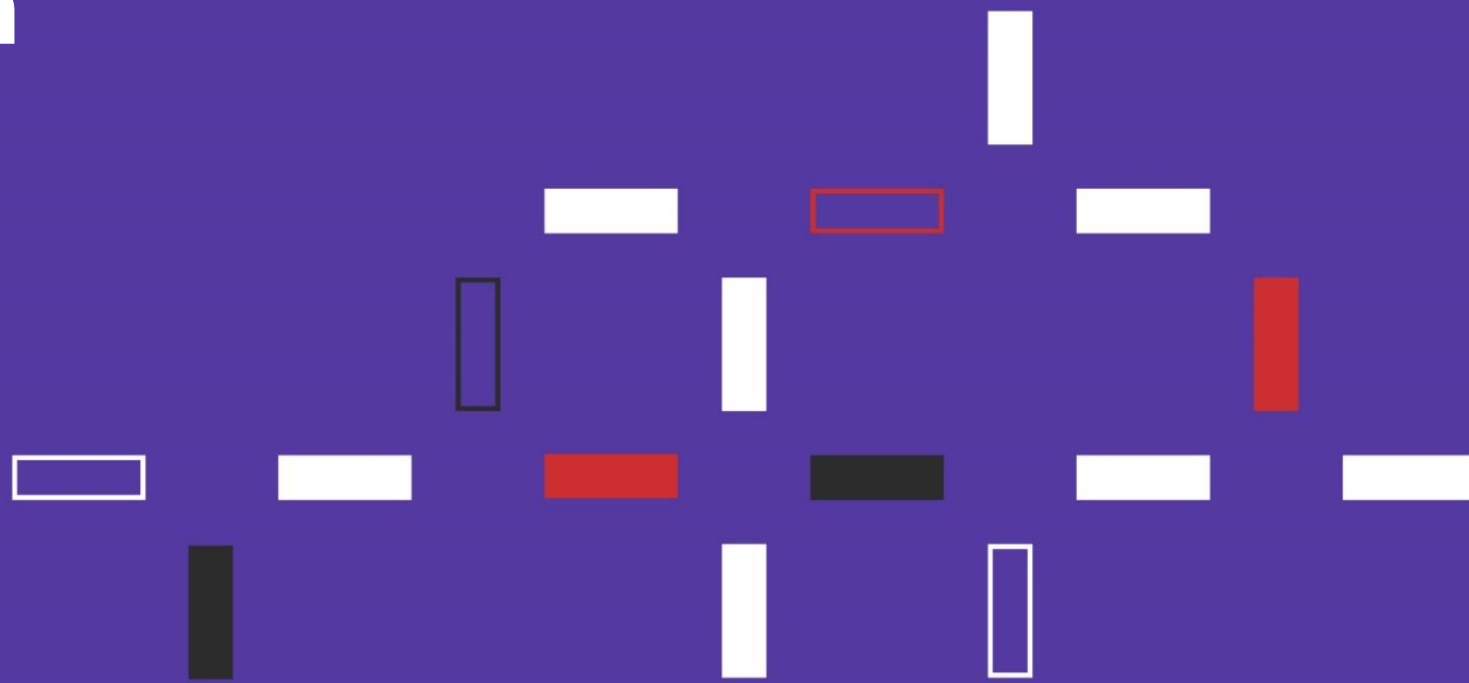
European Innovation Council and SME
Agency





Introduction

Anne-Marie Sassen

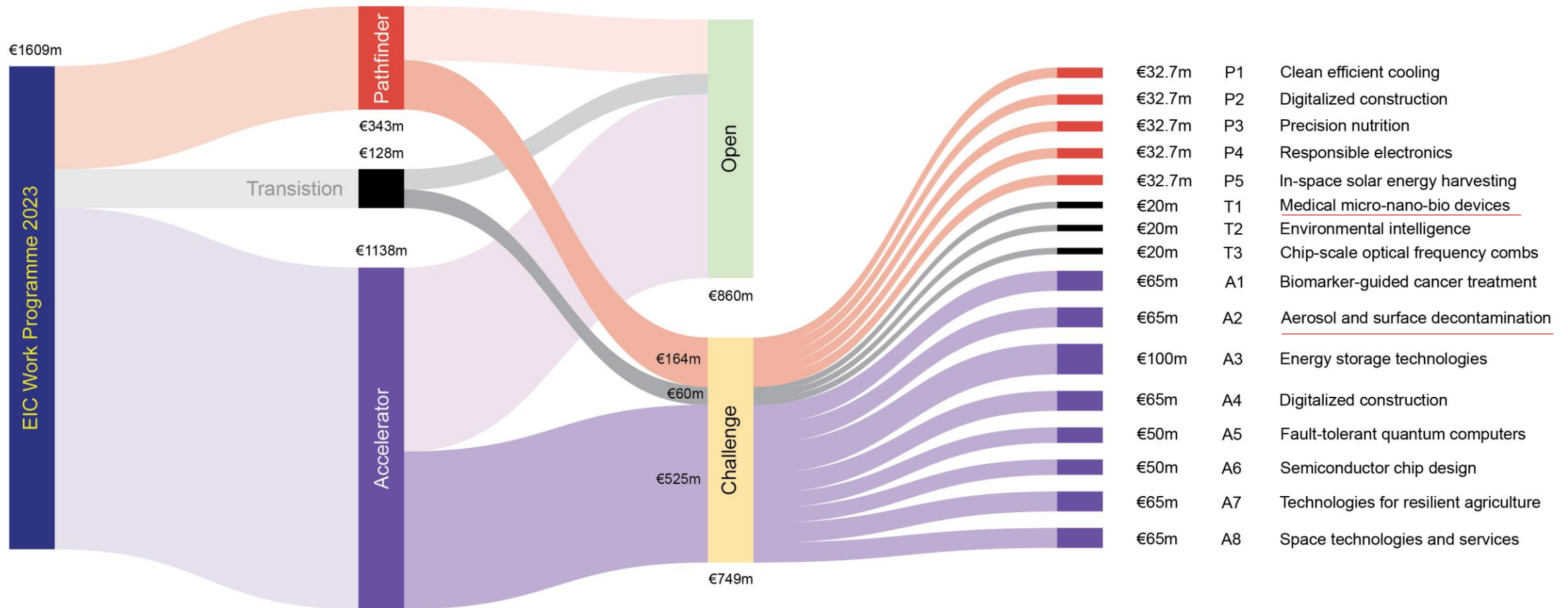




AGENDA | Transition Challenge

Time		Topic	Presenter
15:45	5 min	Welcome	Anne-Marie Sassen (EIC/EISMEA)
15:50	30 min	EIC Transition call "Full scale Micro-Nano-Bio devices for medical and medical research applications"	Enric Claverol (EIC/EISMEA)
16:20	30 min	Q & A session about the challenge and technical details of the challenge	Enric Claverol, Marco Giorgini (EIC/EISMEA); all participants via Sli.do
16:55	5 min	Closing remarks	Anne-Marie Sassen & Enric Claverol
17:00		End of the session	

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



Credits: Franc Mouwen (PM Construction technologies)

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)

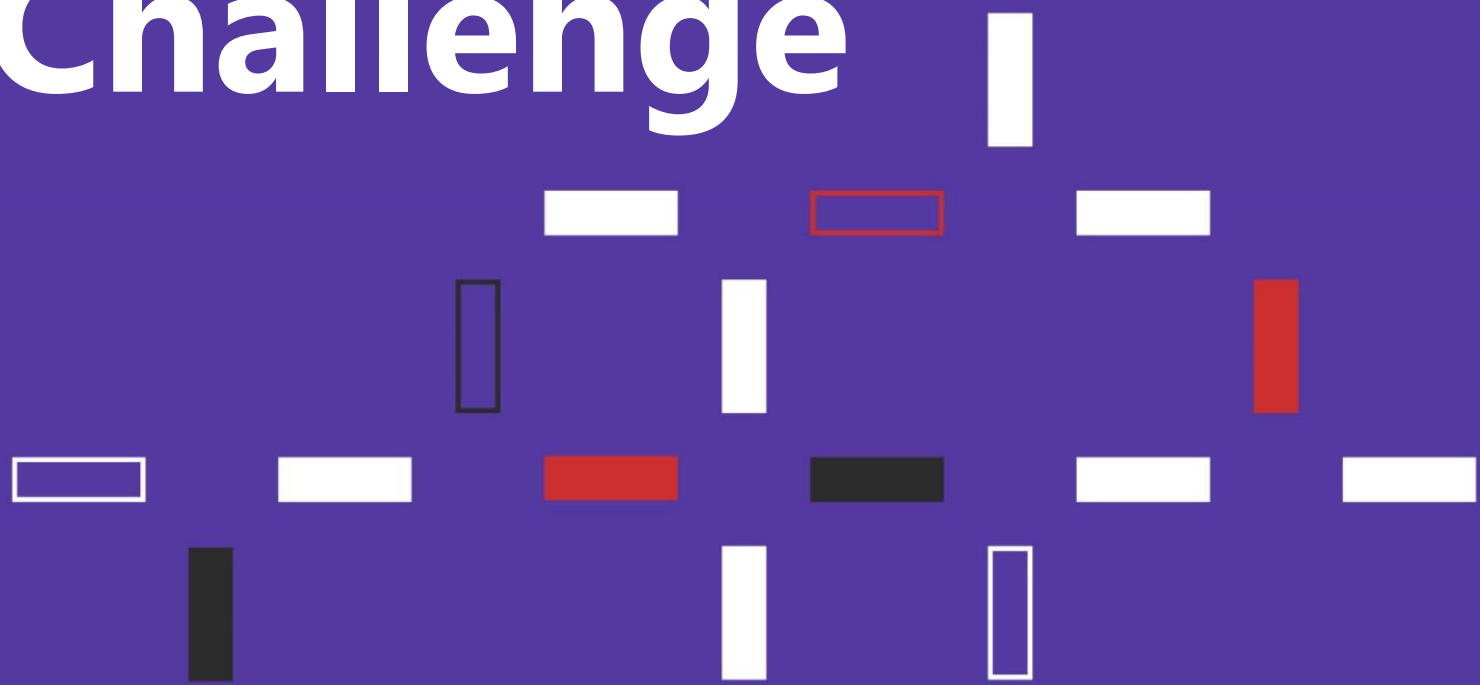




Micro-Nano-Bio Transition Challenge

Enric Claverol

Margo Giorgini





Medical Technologies and Medical Devices

Enric Claverol-Tinturé

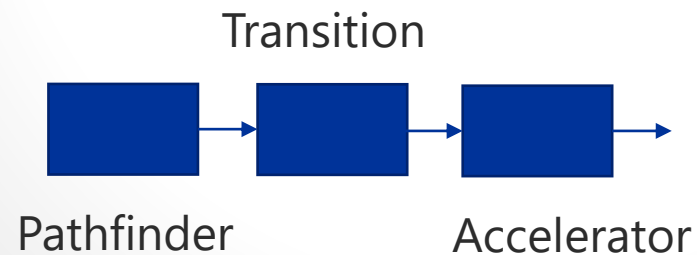
Disclaimer

The views expressed in this presentation is the sole responsibility of the Programme Manager and does not necessarily reflect the views of the European Commission



Brief reminder on Agency goals

- EIC was created to bring EU science to the user (market)
- We seek to create a pipeline of technology projects and companies with high probability of reaching their markets
- EIC supports deep tech projects





Pathfinder vs Accelerator topics

Pathfinder

Topic = area where an important problem needs a new tech solution.

Realizing this solution will bring societal change and market advantage.

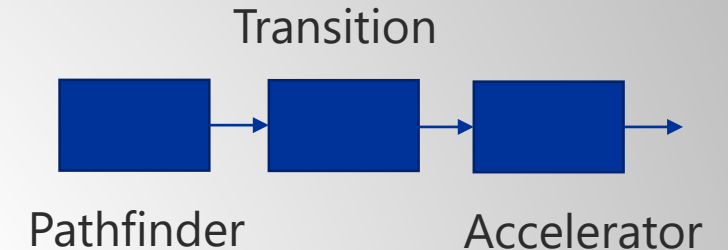
We allow and encourage high-risk high-return technology developments.

But target a real user need (future product or service).

Creativity by technology inventors is welcome.

But fundamental research is more appropriate for ERC and other programmes.

Focus on an end tech product.



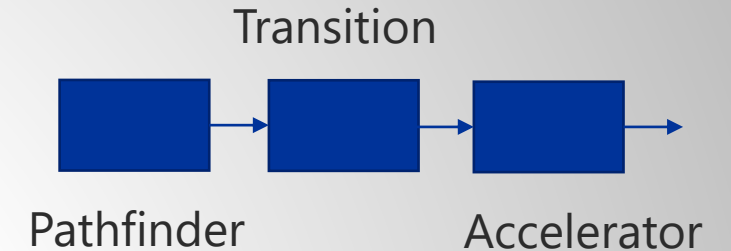


Transition

Capture the most “transitionable” results from PF

Bridge funding to increase readiness for investment

Topics = broad scope, cast a wide net to avoid missing opportunities





Pathfinder vs Accelerator topics

Accelerator (create and grow global medtech companies)

Topic = area where new tech solutions are ready to reach the market.

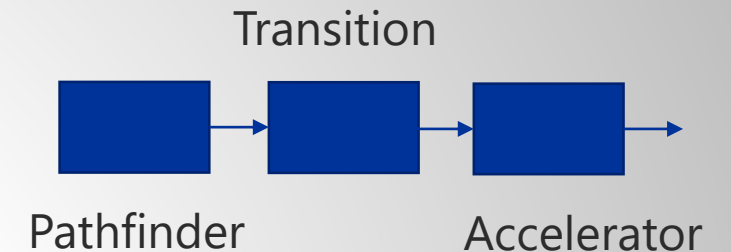
Focus on reaching the persons in need of the solution (market entry).

Focus on growing a Europe-based Global Leader.

We allow and encourage entrepreneurial risk taking.

Target a real user need ("short-term" product or service).

Limited research appropriate for Accelerator (given limited time-frame to enter market).





To know if an idea matches what the EIC is looking for:

- Check successful Accelerator projects funded in the past (these are the end goal)
 - see e.g. EIC 2022 Impact Report, Cordis website or EIC lists of beneficiaries
- High tech content + product focused + market/product fit
- Work with national NCPs
- Successful creation of European market leaders. Save lives.

EIC Transition Open and Challenges 2023



Why EIC Transition?

Support of novel technologies

Commercialisation support

The Open funding support

Challenges: predefined thematic priorities (project portfolios)

Who can apply?

Pathfinder* & H2020 FET*

H2020* or HEU* if on topic

FET ERA NETs*

Eu Defence Fund (Preparatory Action on Defence Research)

ERC PoC*

Financial contribution

€0.5 - 2.5 mil

**Started 12 months before or ended less than 24 months after the call deadline*

Can you apply if you are not part of the initial consortium?



- **Absolutely YES!** WP2023 clearly mention this:
- If you **were not part of the eligible project** whose results are further developed in the EIC Transition proposal, **you need to include in your proposal a commitment letter** from the relevant owner(s) of the result(s),
- which confirms the **commitment of the owner of the eligible project result to negotiate** with you fair, reasonable and non-discriminatory **access to such results**, including IPR, for the purpose of future commercial exploitation.

Core elements of a good proposal

STARTING POINT

Proof of concept
validated in the lab (TRL3/4)
&
YES
to all questions below

technology
track

business
track

END POINT

functional version of the
technology tested or
demonstrated in relevant
environment (TRL 5-6)
supported by a sound and
implementable
commercialisation strategy

Is the **technology ready** for the next steps?
Have you performed **early market / competition explorations** ?
Do you have a **motivated and diverse team** for commercialisation?

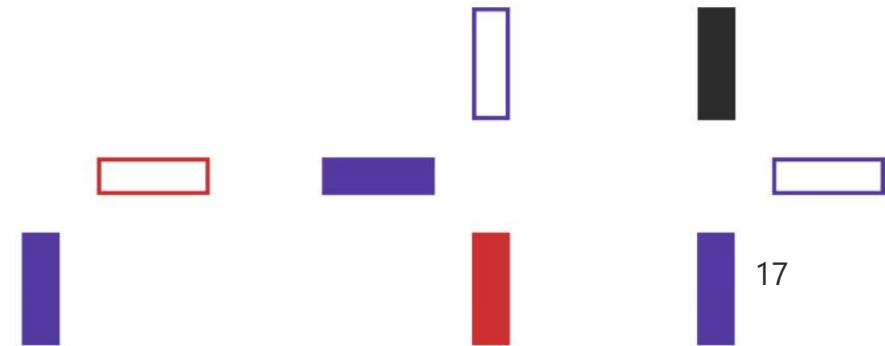
How to find partners?

European
Innovation
Council





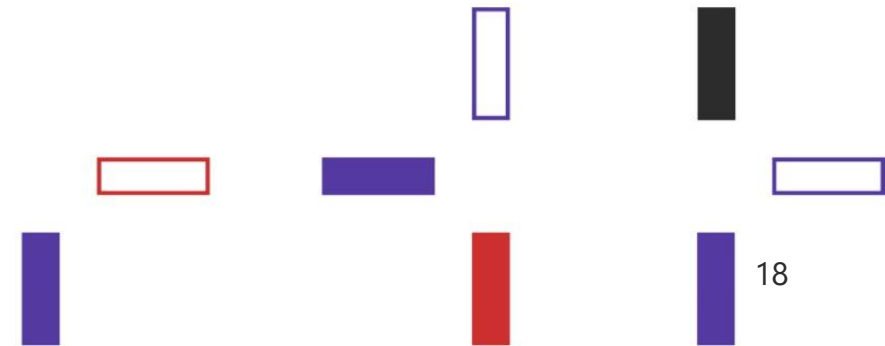
- There are researchers who have developed proof of concept as part of their H2020, HEU or ERC or FET project, but they are not so confident to go to market.
- While there are SMEs, startups or entrepreneurs that want to find, connect with or benefit from project results ...



Getting involved if not part of an eligible project



- Use the list of eligible projects
- Use the Innovation radar to identify projects results
- Use the ERC Research Info System & search PoC
- Contact owner of results and coordinator of eligible project
- Explore if there is an alignment of interest and potential for collaboration
- Start writing (together) your proposal



You found an interesting innovation?!

What's next?

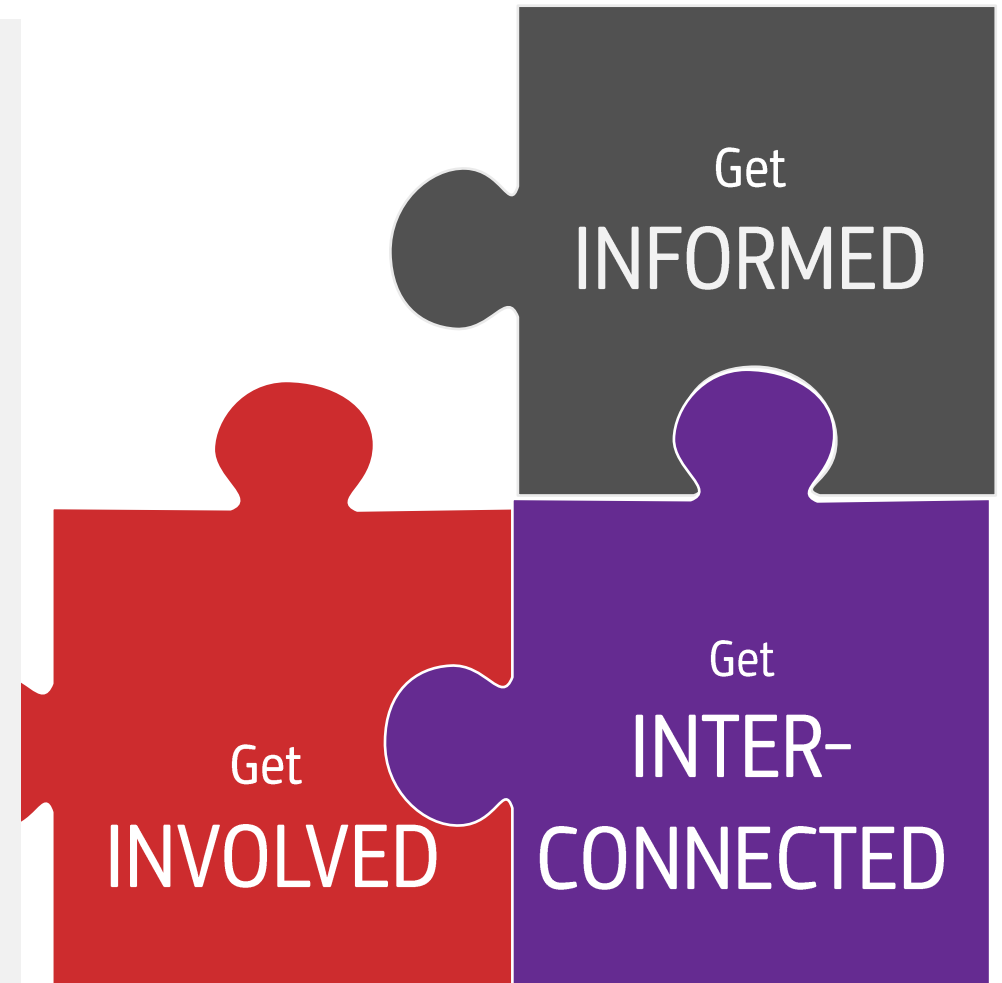


- **Get (inter) connected**

- Talk to your NCP(s) (National Contact Point):
- There are NCPs specialised on ERC or FET/Pathfinder, Accelerator...
- Contact the owner(s) of the technology and/or members of the consortia.
- Explore if there is an alignment of interest and potential for collaboration

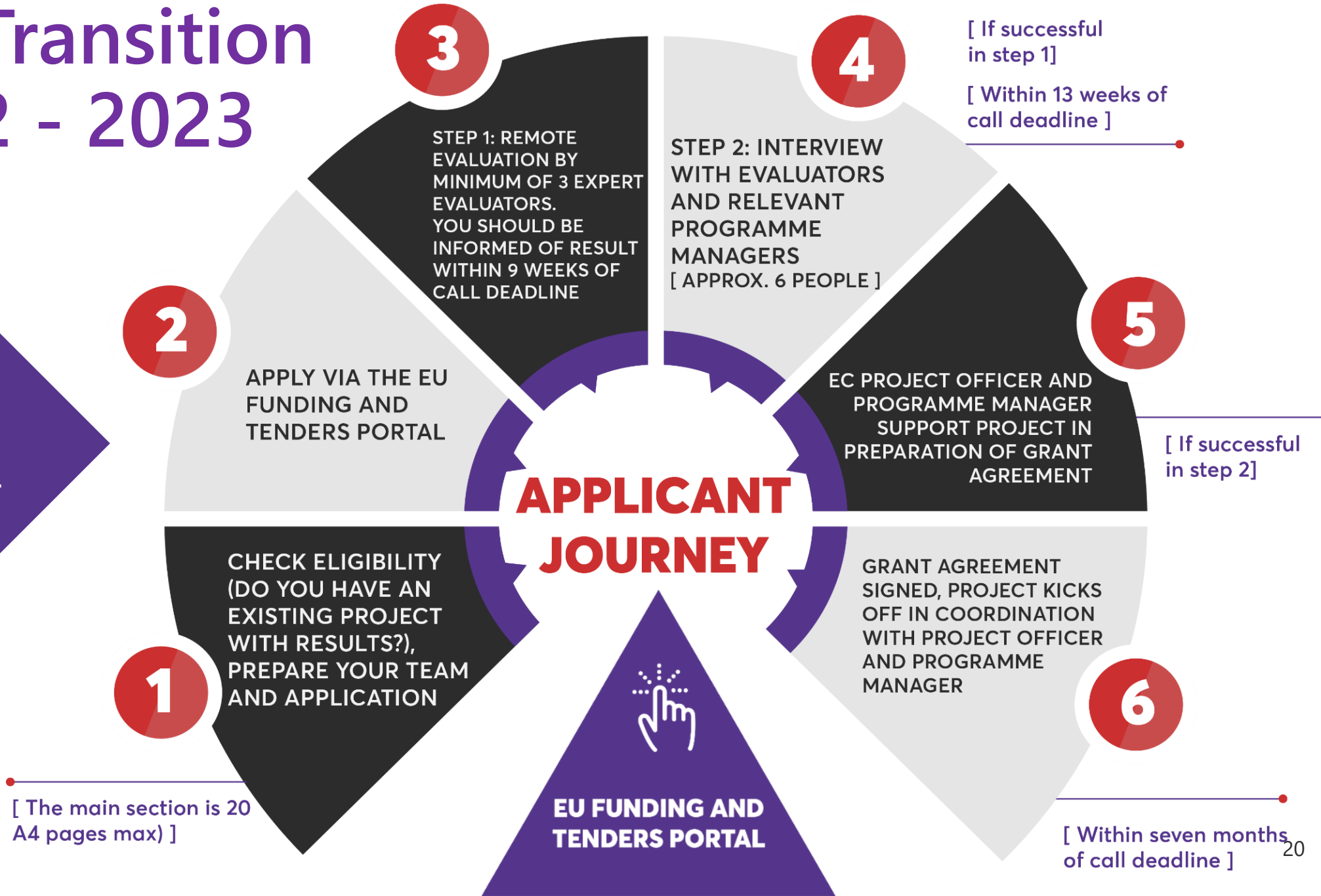
- **Get involved**

- Try to reach an agreement for a possible consortia
- Start writing (together) your proposal.



EIC Transition 2022 - 2023

Apply by
12 April &
27 September





Transition topic:

WP2023

Challenge: Micro-Nano-Bio devices

Total funding: 20M for this Challenge

Deadlines:

12 April

27 September

III.2.1 EIC Transition Challenge: Full scale Micro-Nano-Bio devices for medical and medical research applications

Background and scope

Technologies at the intersection of micro-electronics, nanotechnology, bio-sensing, microfluidics and analytics have demonstrated a great potential where high-throughput, scalability, miniaturisation and automation are required for increasingly complex clinical and R&D tasks.

Previously completed projects funded by various EU programmes have succeeded in advancing the state-of-the-art of Micro-Nano-Bio systems to unprecedented technical attributes, often achieving experimental proof of concept with validation in the lab. Yet, transitioning these developments into market-ready full devices and systems, addressing high-impact user needs, with a cost-benefit balance and usability features aligned with market requirements, has proven challenging.



Transition topic:

WP2023

Challenge: Micro-Nano-Bio devices

Opportunities for impact abound. In the research lab new tools are needed to better understand infection, age-related degeneration, to trigger and control tissue regeneration and cell reprogramming for repair, to uncover and harness complex metabolic processes, inflammation, and many others. Micro-Nano-Bio technologies will be instrumental in tackling the colossal challenge of uncovering yet unknown functions and inter-relations in the massive datasets offered by today's omics technologies. Further, general purpose enabling technologies such as on-demand benchtop DNA and protein synthesis/printing and programmable microfluidics are becoming a reality with Micro-Nano-Bio devices. In the clinic laboratory automation remains of fundamental importance, with a trend towards decreasing sample volumes, scaling up multiplexed architectures to realise comprehensive diagnostics panels, enabling benchtop and point-of-care use (e.g., in the practitioner's office or at home),

accelerating patient stratification for personalised therapeutics compatible with time and cost limitations, and so on.

Total funding: 20M for this Challenge

Deadlines:

12 April

27 September



Transition topic:

WP2023

Challenge: Micro-Nano-Bio devices

Workflows in therapy discovery must be further streamlined, with animal-free validation of effectiveness and toxicity, relying on *in-vitro* models of disease. These physiologically realistic constructs should be suitable for analysis over adequate time-spans, providing multi-modal observations and large data sets.

The scope of the Challenge is the maturation of Micro-Nano-Bio technologies developed in previous EU-funded projects to enable their transition to market, and the creation of the business plans to guide their next steps.

Total funding: 20M for this Challenge

Deadlines:

12 April

27 September



Transition topic:

WP2023

Challenge: Micro-Nano-Bio devices

Total funding: 20M for this Challenge

Deadlines:

12 April

27 September

Overall goal and specific objectives

The overall goal of the Challenge is the completion of Micro-Nano-Bio technology suitable for transition to market.

The specific objectives of the Challenge are:

- ✦ To realise and validate a fully functional integrated Micro-Nano-Bio device or system hinging on Micro-Nano-Bio modules developed under previous EU-funded projects. Focus is on integration and/or refinement (e.g. further miniaturisation, production scaling etc.) of the existing modules to realise, within the limited time-span of the project, a transitionable investment-ready product.



Transition topic:

WP2023

Challenge: Micro-Nano-Bio devices

Total funding: 20M for this Challenge

Deadlines:

12 April

27 September

- ✦ The development of devices or systems under this Challenge should lead to a high-impact technological development driven by market needs. Examples of these include:
 - the acceleration of the discovery of the principles underlying cell, or pathogen, biology by means of advanced milli/micro-fluidics (e.g., complex 3D flows, organ- or body-on-chip, nanopores/nanocavities), integrated bio-sensing (e.g., using MEMS/NEMS, photonics and imaging, surface functionalisation, arrays), novel biomaterials and chemistries and others.
 - the automation of clinical workflows, reducing sample volumes, offering unique data sets aiding in diagnostic, therapy optimisation and follow-up, miniaturising assays and displacing execution to point-of-care settings if advantageous, etc.
 - the streamlining of therapy discovery or production, while minimising animal testing. To this end proposers can rely on high-performance computing and advanced Artificial Intelligence (AI) / Machine Learning (ML), experiment parallelisation enabled by array microarchitectures, embedded closed-loop control for autonomous process optimisation and so on.



Transition topic:

WP2023

Challenge: Micro-Nano-Bio devices

Total funding: 20M for this Challenge

Deadlines:

12 April

27 September

Expected outcomes and impacts

The expected outcome of this Challenge is the realisation of significant progress in Micro-Nano-Bio systems to a level of technological maturity suitable for exploitation.

The long-term expected impact includes positioning the European Micro-Nano-Bio ecosystems at the leading edge of product innovation, supporting global market leadership.

An exploitation strategy (including the formal IP protection) and a credible business model, its initial validation and a business plan are also expected outcomes of the project with the goal of attracting private investors and industrial partners.

Specific conditions

Ethics, safety and sustainability/circularity should be taken into account by design ('eco-design' of disposables). Gender-specificity should be addressed. Opportunities for policy development and standardisation should be identified throughout the project and pursued within the Challenge portfolio.



Transition topic:

WP2023

Challenge: Micro-Nano-Bio devices

Total funding: 20M for this Challenge

Deadlines:

12 April

27 September

If successful, you will receive a grant for a Research and Innovation Action to cover the eligible costs, necessary for the implementation of your project. For this call, the EIC considers proposals with a requested EU contribution of more than EUR 0.5 million and less than EUR 2.5 million and duration between 1 and 3 years as appropriate. Nonetheless, in exceptional cases, this does not preclude you to request larger amounts, if very well motivated and duly explained. The funding rate of this grant will be 100% of the eligible costs.

Pro-active management after selection of proposals



- Projects implementation
- Matchmaking EIC funded project with VCs, (private) equity investors, corporates, trade-fair, EU Research infrastructure, OITBs...
- Stakeholder mapping and engagement strategy, business plans, promoting partnerships & fundraising opportunities
- Synergies with other funding instruments
- Policy, standards, regulatory bottlenecks to innovation
- PM guides you towards Accelerator



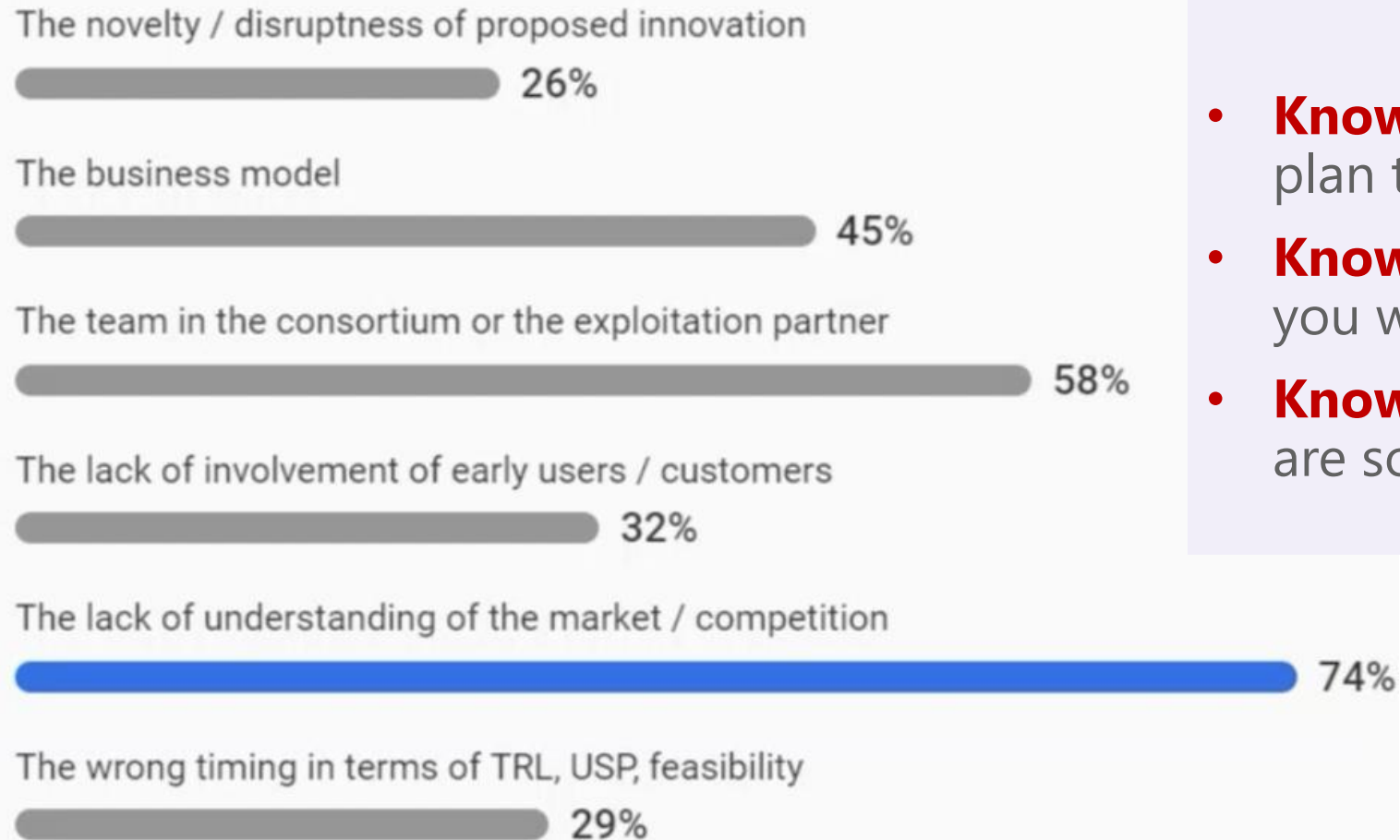


Feedback from the Jury Members

Applicants must provide clarity on aspects related to

- Technical **milestones**,
- **IPR** ownership,
- budget and allocation of resources,
- **technical** and **business** risks,
- current and expected **TRLs** at the end of the project,
- **interdependence** of work packages and tasks,
- the **future exploiting team**, and
- the **credibility of the business objectives**.

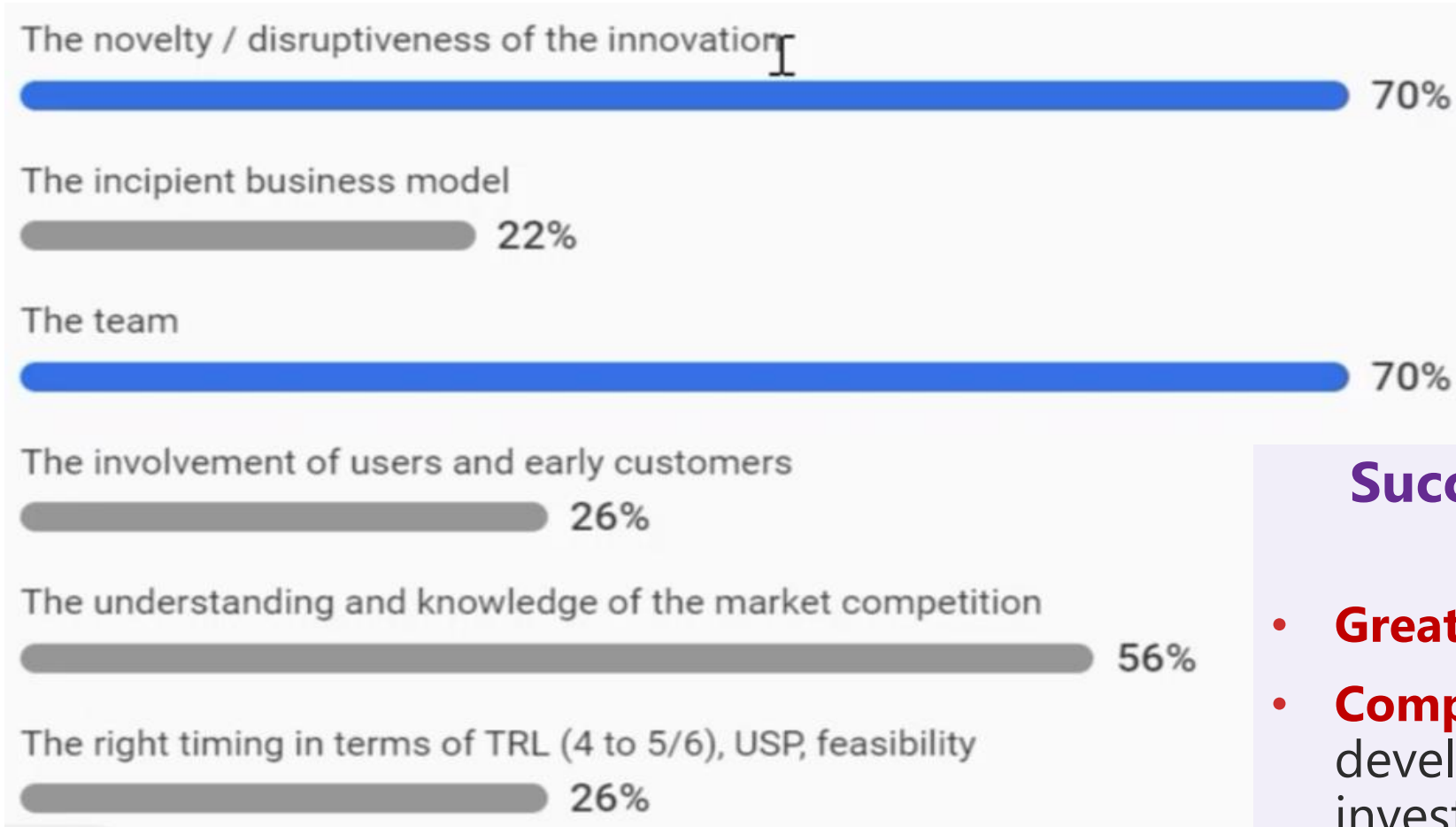
Major weaknesses of the NoGO proposals



Lessons

- **Know the market** you plan to enter
- **Know the competition** you will face
- **Know the problem** you are solving

Major strengths of the GO proposals

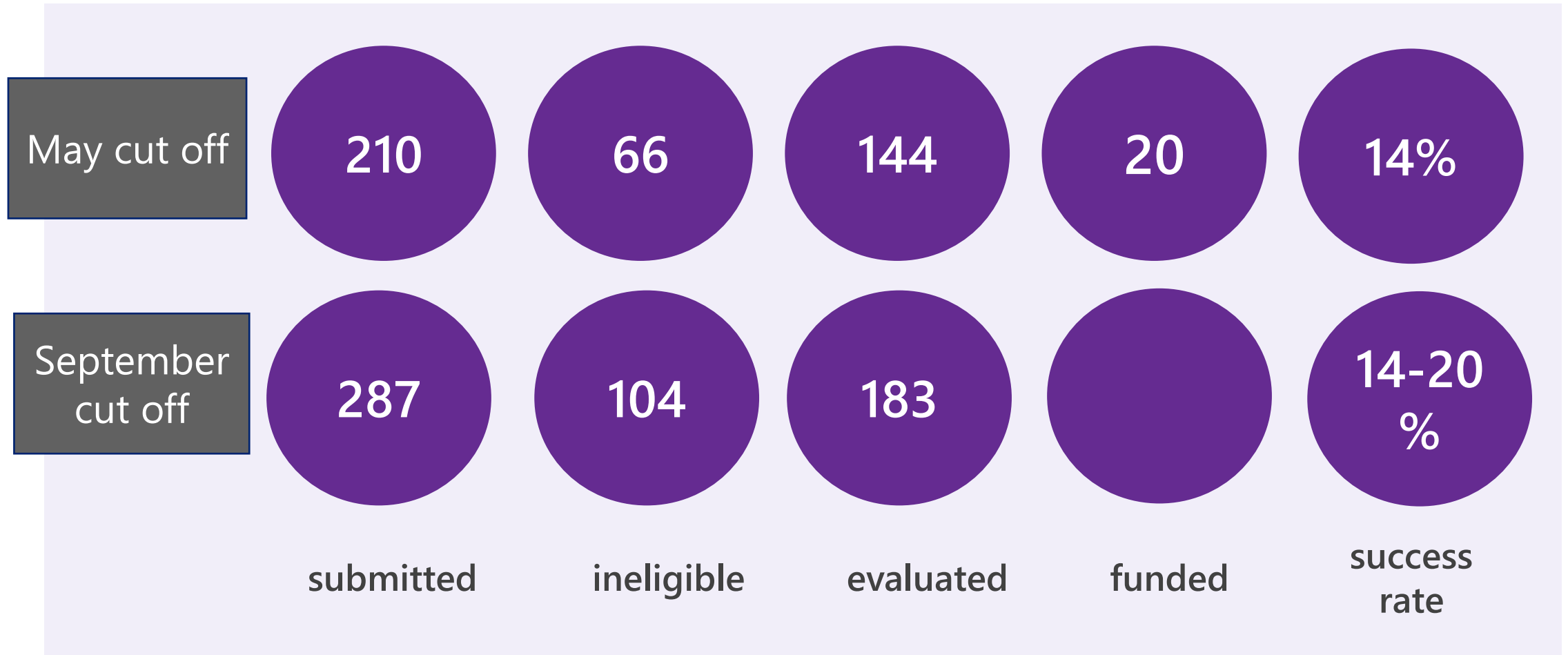


Successful proposals have

- **Great innovation**
- **Competent team** to develop technology and investigate market and business



EIC Transition Overall results 2022



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)

