

**NATIONAL
CHALLENGE
FUND**

*From Ingenuity
to Research
and Solutions*

National Challenge Fund Webinar 14/09/2022

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Rialtas na hÉireann
Government of Ireland



Maoinithe ag an
Aontas Eorpach
Funded by the
European Union
NextGenerationEU

The National Challenge Fund

- The **National Challenge Fund** is an initiative under the Government's **National Recovery and Resilience Plan (NRRP)** funded to **€65 million** from the EU's Recovery and Resilience Facility.
- Provides researchers with an opportunity to work with government, enterprise, CSOs and other stakeholders to address key societal (and interrelated economic) challenges.
- Challenges aligned with opportunities of **Green Transition** and **Digital Transformation**.
- **Eight challenges** (3 Digital, 5 Green) will be launched **over the next 12 months**.
 - **2050** and **Future Digital** Challenge calls now open



Overarching Objectives

- **Accelerate** development and demonstrate positive societal **impact** for Ireland, inform national & European policy.
- Enable **collaboration** between government, enterprise, academic community and societal stakeholders to inform challenges.
- Support **mobilisation** of transdisciplinary teams to develop solutions.



Challenges

Future Digital

Challenge of bringing disruptive digital technologies to sectors where there is a need to **advance digitalisation** or where **digitalisation** could bring **transformational opportunity**.

Areas: Science, Manufacturing, Construction & Housing, Agriculture, Transport, Energy.

Digital for Resilience

Challenge to gain **deeper insights** and better understanding of the **origins and potential impacts of future environmental, social or economic scenarios, in order to better prepare for future shock events**.

Areas: Anticipate, monitor and manage shock societal, economic and environmental events.

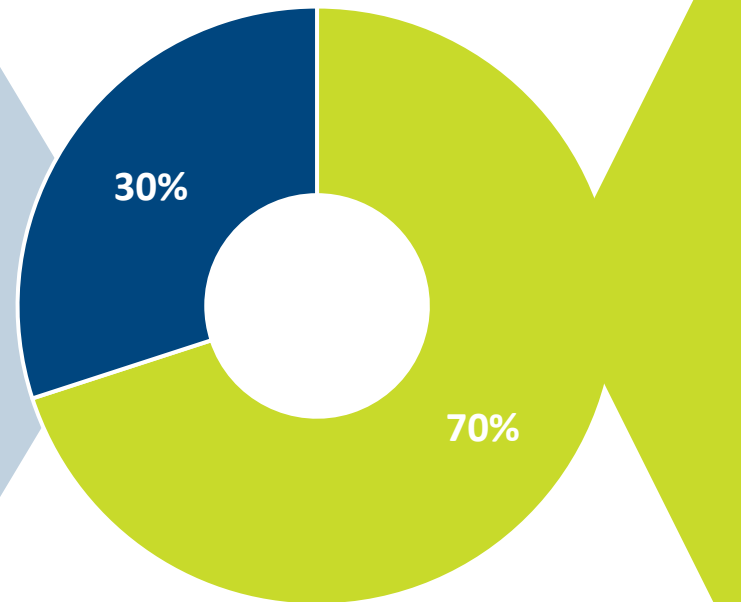
OurTech

Challenge to **strengthen the connections between people, their communities and with government**.

Areas: Knowledge, Trust, Health Systems, Policy, Public Services, Civic Engagement.

National Challenge Fund

€65M



■ Green Transition ■ Digital Transformation

2050

Challenge of developing **transformative, forward-looking solutions** that will contribute to Ireland becoming **climate neutral and resilient by 2050**.

Areas: Zero-/low carbon fuels, Hydrogen, GHG Removal, Energy Storage.

A Healthy Environment for All

Challenge of **restoring and maintaining a resilient environment** that ensure **clean and healthy air, water and soil for humans, animals and plants**.

Areas: Adaptation, Measurement & modelling, Restoration, Natural Capital.

Energy Innovation

Challenge of developing solutions that will **accelerate Ireland's transition to a clean and secure energy system**.

Areas: Energy storage, materials, efficiency, management.

Sustainable Communities

Challenge of **creating sustainable and inclusive ways for all people to live**, be productive and creative, and to thrive **in balance with nature, the environment and our planet**.

Areas: Built Environment, Transport and Mobility, Infrastructure.

Future Food

Challenge of **creating sustainable, productive and resilient food systems**.

Areas: Sustainable and Regenerative Agri., Alternative Proteins, Waste/Loss, Bioeconomy, Soil.

What are we looking for?



Be ambitious.

2050 Challenge

- **National Climate Objective:** climate-resilient, biodiversity-rich, environmentally sustainable and climate-neutral economy by 2050
- Urgent need and opportunity for technological innovation to accelerate this transition
- Transformative, forward-looking solutions to current and future challenges in achieving 2050 targets
- Examples of potential research areas highlighted:
 - Zero-/low-carbon fuels
 - Hydrogen
 - Greenhouse gas removals
 - Low-carbon construction materials
 - Energy storage
- Applications in any area will be considered that can demonstrate transformative impact potential in enabling Ireland's Green Transition

Future Digital Challenge

- Disruptive digital technologies that will lead to **new digital products, processes or services that will unlock transformational societal and economic impact** for Ireland.
- Build leadership in deep tech and, by demonstration of impact potential, **inform future approaches, research priorities and policy** on how digital transformation can enhance our society and economy.
- Identify challenges from multiple sectors, focus on sectors where **digitalisation can bring transformational opportunity**.
- Examples of potential research areas:
 - Science, Knowledge Creation
 - Manufacturing, Value Chains and Logistics
 - Construction, Buildings and Cities
 - Agriculture
 - Energy
- Digital Responsibility.



Don't limit to these areas.

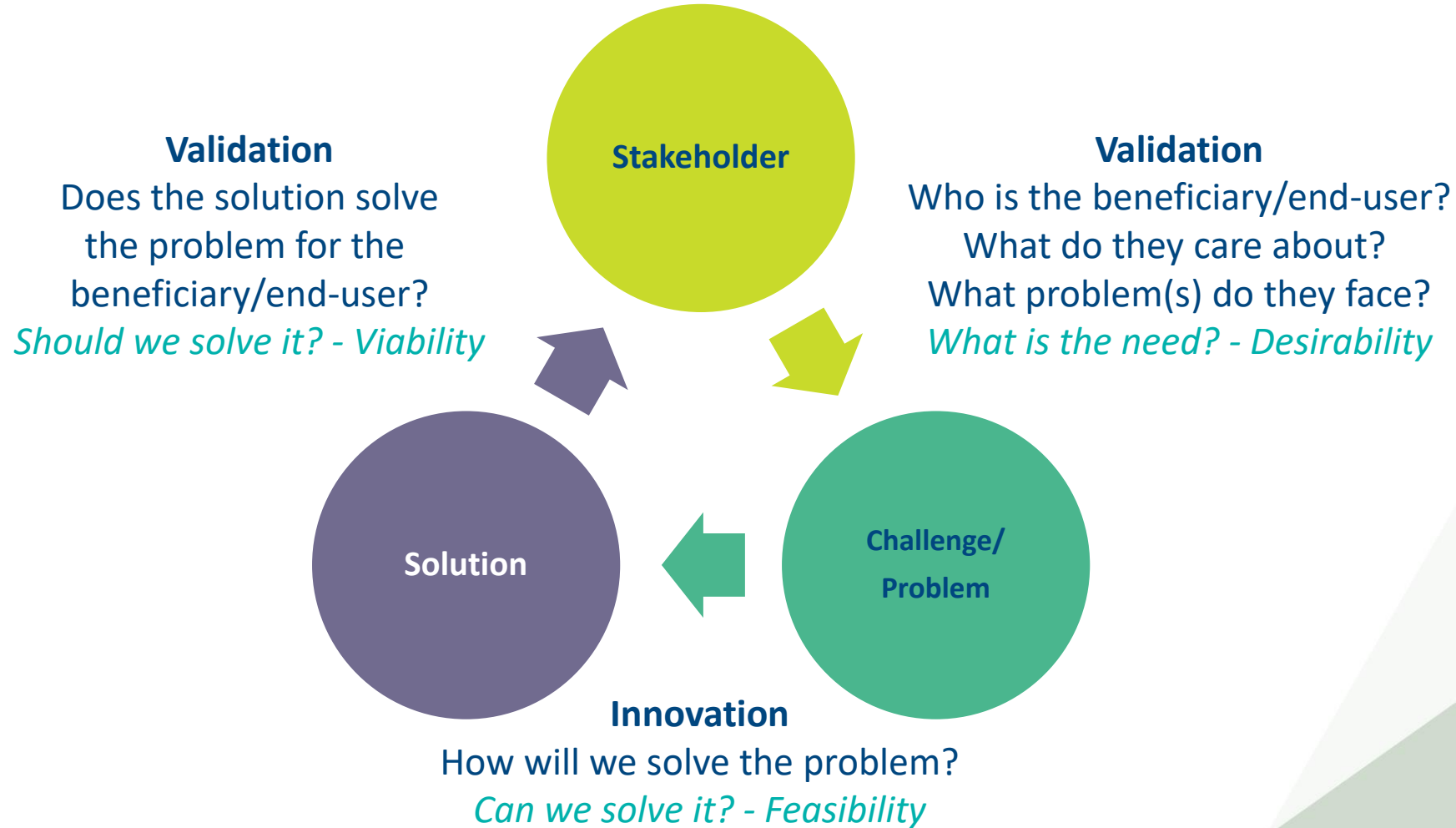
Why Apply?

Support to validate, accelerate and scale your idea



Be motivated.

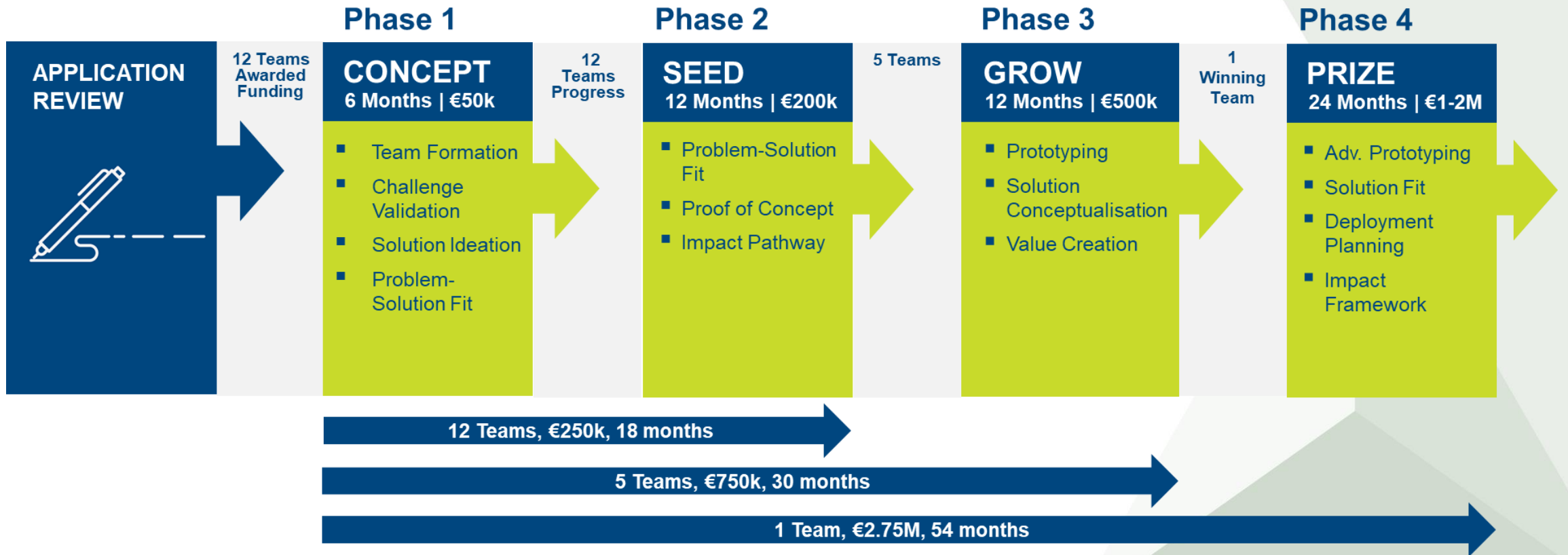
Solution-focused approach



Validation undertaken in advance can strengthen your application.

Phased funding

Each challenge will comprise four phases: **Concept, Seed, Grow and Prize Award**



* Team numbers and award amounts are indicative and may vary with challenge.

Training and Skills

- Focus on **skills development for researchers**
- Three core areas aligned to programme: design thinking, theory of change and communications
- **Cohort-based training and one-to-one mentoring**
- Support **direct application of techniques** to projects
- Delivered by international experts with experience both in training and application
- Close engagement with SFI Challenge Research Team



Training is provided to help you achieve impact.
New skills – new perspectives.

Who Can Apply?

Motivated, transdisciplinary research teams



Think differently about
your team.

Team structure

- Can be led/co-led by postdoctoral, early career or established researchers at SFI eligible research bodies
- Teams can be led by researchers from any discipline – note, teams must include appropriate expertise to the STEM research area underpinning the solution
- Team comprises **3 core members**
 - Two academic researchers [must hold PhD or equivalent]
 - Non-academic *Societal Impact Champion* [if not identified at the time of application, must be in place not later than Month 3]
- Additional members permitted as part of broader team



How To Apply?



Read all documentation,
speak with your RO, give
yourself plenty of time.

Application Process

- Simple application form structured as follows:
 - **Team** – Description of the team (focus on team not individual track records)
 - **Challenge/Problem** – Description of challenge and understanding of problem
 - **Solution** – Description of the solution, novel or innovative aspects, broader context
 - **Societal Impact** – Impact solution can achieve in Ireland and beyond
- Application involves:
 - Input **information into SESAME** (SFI Grants Management System)
 - **Short (6-page) application form** (available from call website)
 - **CVs** for core team members
 - **Letters of Support**
 - **DNSH Assessment**



Team – Who and why?
Give insights if possible.
Technology is part of the
solution.



Start this process early.
Set up a “dummy”
application.

Budget

- Budget information should be input into SESAME:
 - Applications should include budget for Concept & Seed Phases
- Budget requests should comply with SFI Grant Budget Policy
- **Teaching replacement costs** (for Technological Universities/Institutes of Technology) is permitted under the National Challenge Fund
 - Up to a maximum of 50% of teaching load for the duration of each phase
- Societal Impact Champion - Salary or fees not permitted, expenses may be eligible
- Overhead on Awards – 30%



Maximise your
budget ask.

Remit of the National Challenge Fund

- Proposed **solutions must rely on or are directly informed by a STEM innovation**
- **Green Transition:** research and innovation that focuses on the low carbon economy, resilience and adaptation to climate change.
- **Digital Transformation:** digital-related research and innovation.
- **Excluded R&I Areas:** Further use of fossil fuels, including downstream use (i.e., related to coal, lignite, oil/petroleum, natural gas) as well as research related to incinerators or landfills
- **Technological Neutrality** – Challenge themes developed to be technologically neutral, i.e. without preference for any given technological solution.



Look to the context
(policies, strategies
etc.).

Do No Significant Harm (DNSH)

- All activities supported under the National Challenge Fund must comply with the ‘Do No Significant Harm’ (DNSH) principle.
- DNSH safeguards that an economic activity is environmentally sustainable in relation to the six environmental objectives:
 - climate change mitigation
 - climate change adaptation
 - the sustainable use and protection of water and marine resources
 - the transition to a circular economy
 - pollution prevention and control
 - the protection and restoration of biodiversity and ecosystems.
- Applicants to calls required to complete assessment outlining how the proposed outputs are compliant with the principle of DNSH.

Contact

For further information please contact:

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SFI Challenge Research Managers Office Hours (book a slot through your RO)