NATIONAL CHALLENGE FUND

From Ingenuity to Research and Solutions

National Challenge Fund Briefing Deck

Rialtas na hÉireann
Government of Ireland

Science Foundation Ireland sfi For what's next

Maoinithe ag an Aontas Eorpach
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The National Challenge Fund

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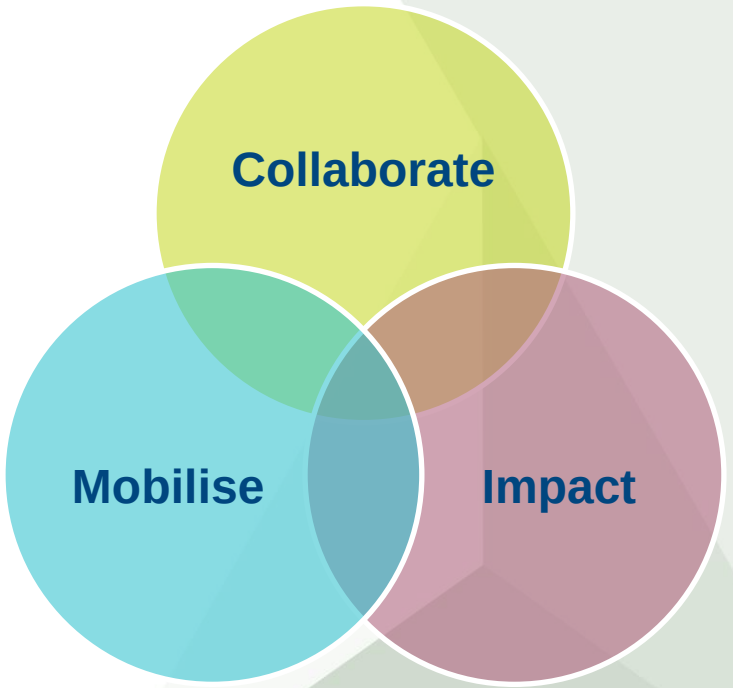
- The **National Challenge Fund** is an initiative under the Government's **National Recovery and Resilience Plan** (NRRP) funded to **€65 million** from the EU's Recovery and Resilience Facility.
- Provides researchers with an opportunity to work with government, enterprise, CSOs and other stakeholders 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.



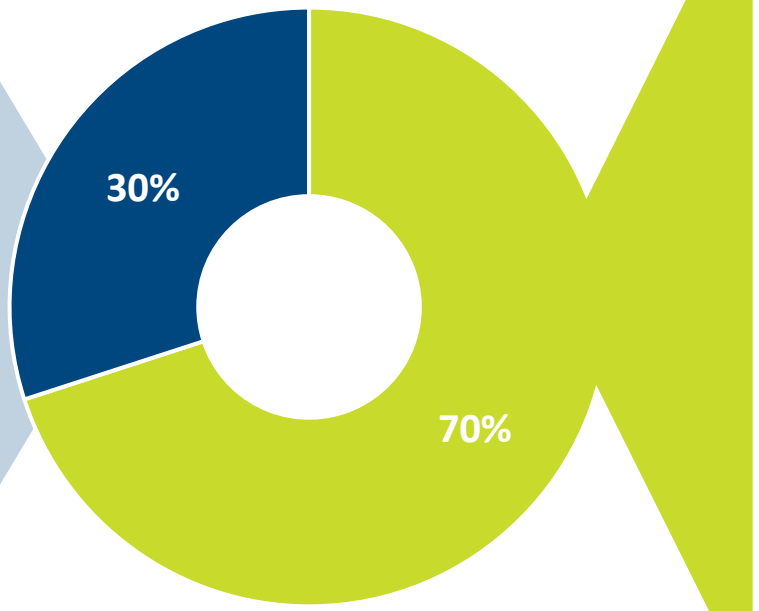
Challenges

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



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 is Challenge Funding?

- **Challenge funding** is a **solution-focused approach** to research funding that uses prizes, defined timelines, teamwork and competition to direct research activities at addressing societal challenges.

- Focus on societal challenges provides researchers with a **significant opportunity to create impact** for Ireland.

- **Transdisciplinary research teams** will be supported, comprising scientists, engineers and researchers from different domains working with non-technical experts.

- Teams will be provided with **grant funding, training and other supports** to accelerate their research toward tangible impact.

Remit of the National Challenge Fund

- Proposed **solutions must rely on or are directly informed by a STEM innovation** and **must involve STEM research activity**.

- **Green Transition challenge** projects must represent research and innovation that focuses on the low carbon economy, resilience and adaptation to climate change.

- **Digital Transformation challenge** projects must represent digital-related research and innovation.

- **Excluded R&I Areas**: Related to the 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.

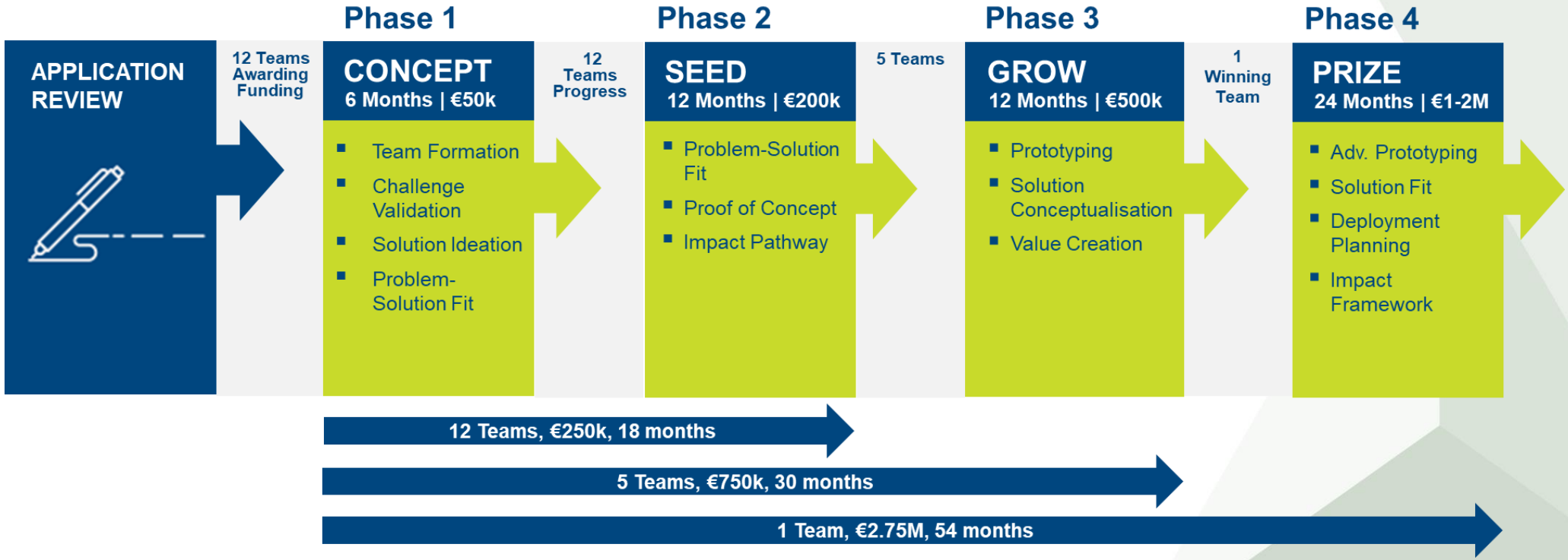
Do No Significant Harm (DNSH)

- All activities supported under the National Challenge Fund must comply with the 'Do No Significant Harm' (DNSH) principle. Researchers must consider possible negative impacts of their research.
- DNSH safeguards that an economic activity is environmentally sustainable in relation to the six environmental objectives:
  - climate change mitigation
  - climate change adaption
  - 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.

Challenge Programme Structure and Supports

Phases

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 Development

Training and Skills Development

- Key differentiator of SFI's approach to challenge funding is its focus on **skills development for researchers**.
- Under National Challenge Fund, significant focus will be placed on development and application of skills in three core areas: design thinking, theory of change and communications.
- Blend of **cohort-based training** and **one-to-one mentoring** will be provided to teams through all phases of a challenge.
- Training will support **direct application of techniques** to projects.
- Training will be delivered by international experts with expertise both in training and application.

Who Can Apply?

Teams – Core Team

- Applications should identify a team of **3 core members** comprising two academic researchers, who will act as lead and co-lead, and a non-academic *Societal Impact Champion*.
  - Applications must include a STEM researcher as lead or co-lead.
  - If a Societal Impact Champion cannot be identified at the time of application, they must be in place not later than Month 3 of the Concept Phase (if the team is successful at application stage).
- Team Lead/Co-Lead must be:
  - Member of **academic staff** (permanent or contract covering award) or **contract researcher** (e.g. postdoc, fellow) with a contract that covers duration of award (or be subject to receipt of award) at an **eligible RPO**.
  - Hold a **PhD** (or equiv.) - Note: Research-active staff without a PhD may be considered eligible to participate.

Teams – Challenge Team

- Applications may also provide information (as part of team profile section) on other challenge team members who will participate in research activities if the application is successful.
- Challenge team members:
  - Can come from different disciplines (non-STEM and STEM);
  - Be at different career stages (e.g. postgraduate, postdoctoral or established);
  - Not required to hold a PhD.
  - Can come from outside academia.
- As a funded project develops, it is possible to add team members dependent on the expertise required.

How To Apply?

Application Process

- Application involves:
  - Input of **information into SESAME** (SFI Grants Management System).
  - Completion and upload of a **short (6-page) application form** (Form is available from SFI website).
  - Upload of **CVs** to SESAME.
  - Upload of **Letters of Support** to SESAME.

- Application form should provide information on four key areas:
  - **Team** – Description of the team (not listing simply listing people).
  - **Challenge/Problem** – Description of challenge and articulation of understanding.
  - **Solution** – Description of the solutions, novel or innovative aspects, broader context.
  - **Societal Impact** – Impact solution can achieve in Ireland and beyond.

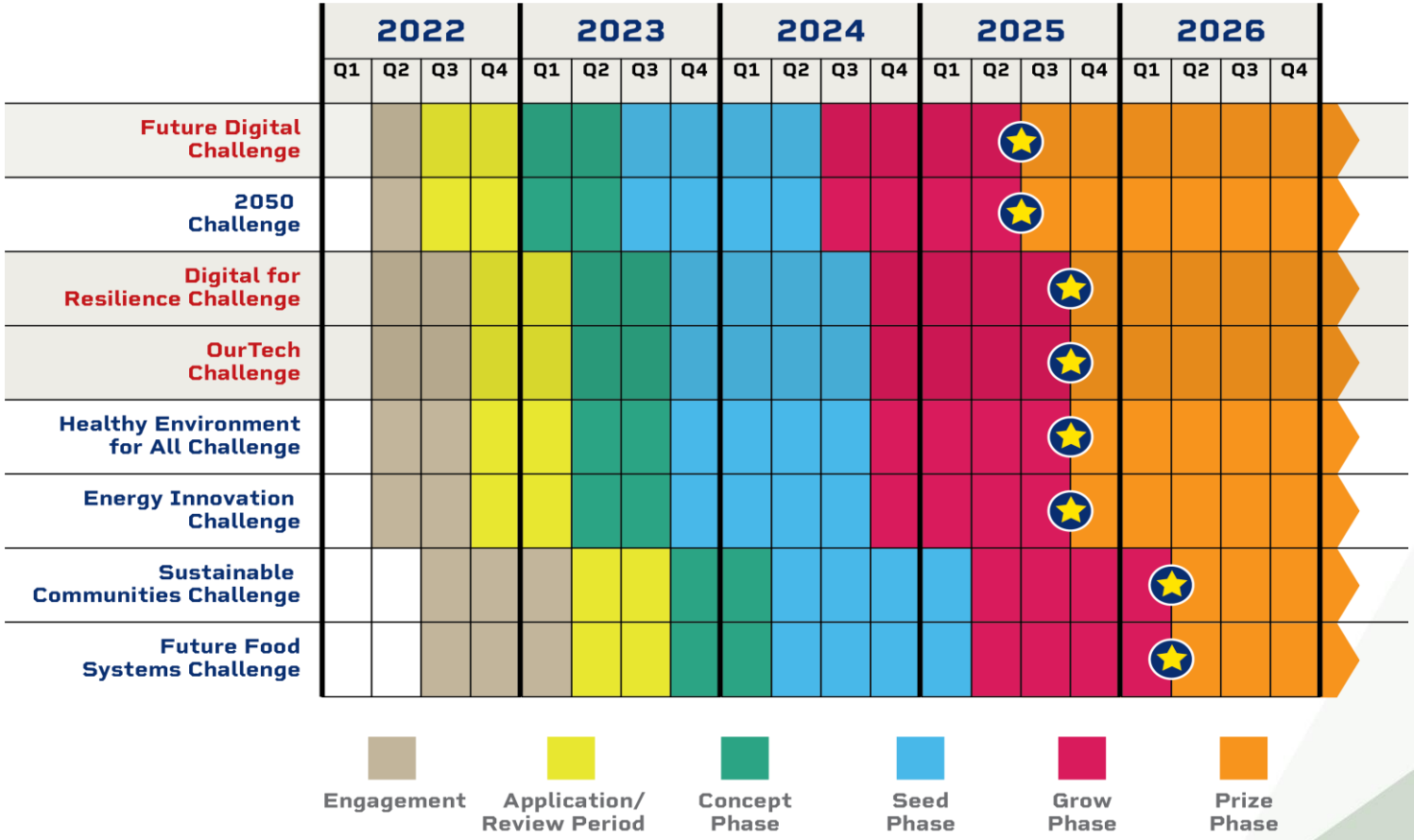
Budget

- Budget information should be input into SESAME:
  - Applications should include budget for Concept & Seed Phases
    - Successful applicants can only access requested Concept Phase amount during the Concept Phase. Seed Phase request released on progression to Seed Phase.
- 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%

Timelines


2022
2023
2024
2025
2026
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
Future Digital Challenge
2050 Challenge
Digital for Resilience Challenge
OurTech Challenge
Healthy Environment for All Challenge
Energy Innovation Challenge
Sustainable Communities Challenge
Future Food Systems Challenge
Engagement
Application/ Review Period
Concept Phase
Seed Phase
Grow Phase
Prize Phase

Contact

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