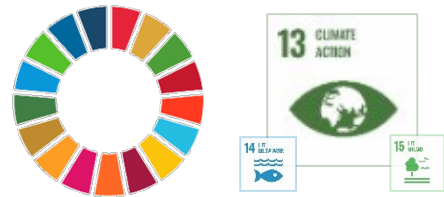


Science Foundation Ireland Future Innovator Prize

SDG Challenge



2022 Call Application Handbook

Version: 03 June 2022

KEY DATES

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|--------------------------------|---|
| • Call Launch | 16 June 2022 |
| • SESAME Open for Applications | End of July 2022 |
| • Application Deadline | 22 September 2022, 13:00 Dublin Local Time |
| • Funding Decision | November 2022 |
| • Award Start Date | 1 February 2023 |
| • Concept Phase Review | June 2023 |
| • Seed Phase Review | June 2024 |
| • Prize Award Start Date | 1 August 2024 |

Terms of Reference

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All responses to this Call for Submission of Proposals will be treated in confidence and no information contained therein will be communicated to any third party without the written permission of the applicant except insofar as is specifically required for the consideration and evaluation of the proposal or as may be required under law, including the Industrial Development (Science Foundation Ireland) Act, 2003, the Industrial Development (Science Foundation Ireland) (Amendment) Act 2013 and the Freedom of Information Acts 1997 and 2003.

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1 The SDG Challenge

The Sustainable Development Goals (SDGs) are a call to action for all countries, in partnership, to achieve a better and more sustainable future for all. They address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace and justice.

Achieving the SDGs lies at the heart of Ireland's international development policy, *A Better World*¹, to achieve a more equal, peaceful and sustainable world and to reach those furthest behind first. In its strategy, *Shaping our Future*², Science Foundation Ireland outlines its ambition to deliver tangible benefits for society, and notes the key role that research and innovation will play in achieving the SDGs. With these common goals, Irish Aid (Department of Foreign Affairs), which delivers a significant part of Ireland's Official Development Assistance (ODA) programme, are partnering with SFI to launch the SDG Challenge 2022.

Changes to our environment threaten our ability to achieve the Sustainable Development Goals, increasing inequity, negatively impacting health and security, and hampering efforts toward sustainability. The effects of climate change are being most intensely felt by the poorest and most vulnerable in least developed countries and small island developing states. As well as its direct effects, climate change exacerbates drivers of biodiversity loss, poverty, food insecurity, changes to terrestrial and marine ecosystems, impacts on cities and communities, as well as barriers to peaceful and inclusive societies. Taking action to address the interconnected challenges associated with climate change, environmental degradation and biodiversity loss is therefore critical to advancing progress against all 17 SDGs.

Ireland commits in both its International Development Policy, *A Better World*, and its Climate Action Plan to support those that face the harshest impacts and lack the resources to adapt. Science, technology and innovation will be key enablers in developing and deploying sustainable solutions, and accelerating and navigating the transitions to a climate-resilient future.

The purpose of the SDG Challenge is to support diverse, transdisciplinary teams to develop transformative, sustainable STEM-based solutions that will contribute to addressing development challenges under the UN SDGs in countries supported by Ireland's ODA. By placing a strong focus on teams, collaboration between the research communities in Ireland and partner countries will be

¹ <https://www.irishaid.ie/media/irishaid/aboutus/abetterworldirelandspolicyforinternationaldevelopment/A-Better-World-Irelands-Policy-for-International-Development.pdf>

² <https://www.sfi.ie/strategy/shaping-our-future/index.xml>

strengthened and links between the international development community, international NGOs, as well as non-academic stakeholders and end-users, will be enhanced.

2 Challenge Funding and the SFI Future Innovator Prize

Challenge funding is a solution-focused approach to direct research activities at specific, often complex, problems. SFI's approach to challenge funding places strong emphasis on (i) **Interdisciplinarity and Teamwork**, reflecting the need to bring together experts and innovators from different disciplines to address complex challenges; (ii) **Engagement & Validation** with stakeholders, beneficiaries and end-users of research to understand the nature of specific problems, to test assumptions and to co-create solutions; and (iii) **Acceleration** through efficient adaptation of approaches based on iterative engagement with beneficiaries and stakeholders.

The SDG Challenge will be run within the challenge-funding framework of the SFI Future Innovator Prize Programme, which is structured around the principles set out above. The SFI Future Innovator Prize consists of three phases: Concept, Seed and Prize Award. Following application review, successful teams will be awarded funding of up to €50k over 6 months to undertake team building, scoping and concept validation activities during the Concept Phase. They then undergo a rigorous review before receiving additional funding of up to €250k in the 12-month Seed Phase to further validate and prototype their proposed solutions. Finalists compete to be awarded follow-on funding within the challenge prize fund of €1M.

3 Objectives of the SDG Challenge

The overarching purpose of the SDG Challenge is to develop transformative, sustainable solutions that will contribute to addressing development challenges under the UN SDGs in Irish Aid's partner countries.

The objectives of the SDG Challenge are:

- To provide opportunities for Ireland-based researchers to form diverse teams and identify key development challenges where technology can deliver transformative impact with a focus on southern partner countries;
- To enable the development of collaborations between researchers in Ireland and researchers in partner countries where Irish Aid operates;

- To support the development, deployment and demonstration of sustainable technologies responding to the identified challenges;
- To promote sustainability and the important role that STEM³ plays in addressing global sustainability issues and the SDGs.

4 SFI Strategy 2025 – *Shaping Our Future*

Science Foundation Ireland’s strategy, *Shaping Our Future*², has been developed to unlock the potential of Irish research to meet current challenges, seize future opportunities and support the government’s priorities. SFI’s strategy has two core ambitions: *Delivering Today* and *Preparing for Tomorrow*. As part of Delivering Today, a key focus will be to deliver tangible benefits for society. SFI will build strategic, national and international partnerships to drive economic impact and to address societal challenges.

Ireland’s Research and Innovation Strategy, *Impact 2030*⁴, identifies challenge funding as a key funding mechanism contributing to one of its pillars, *Maximising the Impact of Research and Innovation on the Economy, Society and the Environment*. *Impact 2030* is overseen by the Department of Further and Higher Education, Research, Innovation and Science. The strategy further supports the development of Ireland’s global connectivity through international research collaboration. The SDG Challenge is underpinned by these organisational and national strategies.

5 Challenge Theme

Climate change, biodiversity loss and environmental degradation are existential threats to humanity, with those most vulnerable feeling the harshest impacts. The **SDG Challenge 2022** is a call to action to international, transdisciplinary research teams to work in partnership to develop solutions that will help to address these risks and support the transition to a climate-resilient future.

The **SDG Challenge 2022** seeks solutions that will contribute to achieving the targets and indicators set out in **SDG 13: Climate Action**. Protection and restoration of nature will be essential in addressing climate change and ensuring future resilience. Recognising this interconnectedness between climate,

³ STEM: Science, Technology, Engineering and Mathematics.

⁴ <https://www.gov.ie/en/publication/27c78-impact-2030-irelands-new-research-and-innovation-strategy/>

biodiversity and the environment, the challenge theme also encompasses **SDG 14: Life below water** and **SDG 15: Life on land**.⁵

Solutions must demonstrate context-specific impact in one of the eligible partner countries where Ireland's ODA is directed (see below), but applicants are also encouraged to consider shared challenges where solutions may have wider impact.

Whilst three SDGs are highlighted, it is evident that climate change cross-cuts all SDGs, as do other underpinning themes such as gender equality, social equity and partnership. This challenge theme encompasses adaptation and resilience, climate mitigation, environmental protection and restoration, pollution of soil, water and air, biodiversity loss, blue economy, nature-based solutions, amongst others, but applicants are also encouraged to consider where STEM-led solutions could be impactful in areas such as climate justice, climate finance, and digital inclusion as relevant to climate action.

Innovative solutions may include development of novel technologies, repurposing existing technologies, and addressing barriers to deployment of known solutions. Consideration should also be given to novel approaches to enable decision and policy-making, such as for planning, measurement, monitoring and evaluation, as well as meaningful inclusion of local communities in these processes, particularly women and youth. Applicants should consider specific barriers related to deployment and scalability, as well as to cost, sustainability and access to infrastructure in the partner country.

Eligible partner countries for this SDG Challenge Call are: South Africa, Ethiopia, Malawi, Uganda, Vietnam, Tanzania, Zambia, Mozambique and Sierra Leone⁶. See Section 9 for more information on applicant eligibility.

6 Remit

The SDG Challenge recognises that addressing the Sustainable Development Goals requires transdisciplinary teams, involving expertise from across research disciplines as well as from outside of

⁵ Challenges associated with related goals and targets will also be considered where a clear impact on climate change, biodiversity loss, or environmental degradation can be demonstrated. Applicants may wish to refer to the [Nexus Approach For The SDGs: Interlinkages between the goals and targets](#)

⁶ If potential applicants wish to propose a collaborative application with a country outside of this list, they should contact challenges@sfi.ie in advance of preparing an application.

academia. While it is required that proposed solutions rely on or are directly informed by a STEM innovation and that teams include corresponding expertise, it is strongly encouraged that teams also include expertise relevant to the adoption and deployment of solutions, in areas such as international development, economics, behavioural science and others. Resources should be allocated appropriately to reflect all contributions to the team.

If potential applicants are unsure about the alignment of their proposed challenge/solution to the thematic area or remit of the call, they may wish to contact us at challenges@sfi.ie in advance of preparing an application.

7 State Aid and SFI Grant Funding

As per SFI's Grant Conditions (inclusive of SFI's General Terms & Conditions⁷, Letters of Offer and SFI Policy documents⁸), all SFI funding granted is subject to, and must be compliant with, State aid legislation based on Article 107(1) of the Treaty of the Functioning of the European Union (TFEU)⁹.

Namely, research activities undertaken as part of a Grant awarded under the SDG Challenge programme, and agreed to subject to SFI's Grant Conditions, must be "non-economic" in nature and be designed to ensure that any funding received does not, directly or indirectly, give rise to the granting of State aid.

Where an application for funding involves an industry collaborator, recipients of Grant funding under the SDG Challenge programme are required to demonstrate compliance with the conditions of "effective collaboration" and the conditions relating to the allocation between the parties of the results and/or intellectual property rights arising from the collaboration as per the Framework for State aid for research, development and innovation (2014/C 198/01) (the "Framework").¹⁰

Where a proposed programme of research activities involves a collaboration with an industry party or "undertaking",¹¹ for all or part of the term of the Grant, applicants must complete an "Industry Collaboration Form" (ICF). The ICF is to assist applicants in defining the relationship with the relevant industry partners in order to comply with the conditions of "effective collaboration". SFI requires that

⁷ <https://www.sfi.ie/funding/sfi-policies-and-guidance/sfi-general-terms-and-conditions/>

⁸ <https://www.sfi.ie/funding/sfi-policies-and-guidance/>

⁹ [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016XC0719\(05\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016XC0719(05)&from=EN)

¹⁰ [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0627\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0627(01)&from=EN)

¹¹ The concept of an "undertaking" under EU competition rules is an entity that is engaged in an "economic activity" (offering a good or service on a market) regardless of its legal status or the way that it is financed.

the ICF is completed and returned to SFI on or before the date that the Collaborative Research (or Intellectual Property Rights) Agreement has been 'agreed' with, or signed by, the relevant partner(s).

Additional guidance on state aid and the ICF is available in the relevant section of the SFI website.¹²

8 Who Can Apply?

The SDG Challenge is intended to support highly motivated, transdisciplinary teams committed to developing transformative, sustainable solutions that will contribute to addressing development challenges under the UN SDGs in Irish Aid's partner countries. It is expected that teams will encompass a range of technical and non-technical skills to address barriers associated with challenge definition and solution deployment.

Partnership and collaboration are at the heart of achieving the SDGs. The SDG Challenge aims, in as far as possible, to foster collaborative and equitable partnerships between researchers in Ireland and those in partner countries, and to fully recognise the capacity and knowledge that each contribute. Applicants are encouraged to refer to good practice guidelines on establishing and maintaining such partnerships¹³.

Teams must include expertise in the STEM research area underpinning the proposed solution, but should also include, where relevant, knowledge or experience in areas such as international development, development economics, or behavioural or social sciences, in order to inform the adoption and impact of novel interventions. Funding should be allocated appropriately to reflect the various contributions to the team.

Applications to the prize must identify a core applicant/leadership team comprising a minimum of three or maximum of four members, as outlined below (please note difference in number of core team members compared to other Future Innovator Prize Calls). Although core team members will have different designations in the application process, all team members will be evaluated equally in the review process.

- **Team Lead** (mandatory) – It is expected that the Team Lead will have responsibility for managing the activities of the team, will provide technical leadership and have overall responsibility for delivery of research programme objectives. It is expected that the Team Lead

¹² <https://www.sfi.ie/funding/sfi-policies-and-guidance/state-aid/>

¹³ There are various guidelines available on engaging in partnerships, for example: [EUA Responsible Partnering - Joining Forces in a World of Open Innovation](#)

has a demonstrable track record relevant to the proposed solution. This team member must be based in a SFI eligible research body¹⁴ and will be designated Lead Applicant in the application.

- **Partner Country Team Co-Lead** (mandatory) – All teams must include a Team Co-Lead based in one of the eligible partner countries listed in Section 5. The Partner Country Team Co-Lead must be based in an eligible HEI or RPO (see Section 9) in the partner country and will have appropriate research expertise relevant to the application. This team member will be designated as a Collaborator in the application (note that the Partner Country Team Co-Lead will have equal status to other team members; designation as collaborator is for the purposes of submission of the Sesame application only).
- **Team Co-Lead** (optional) – An additional Team Co-Lead may be included and will provide leadership as part of the research programme and should bring complementary technical/disciplinary expertise to that of the Team Lead. This team member must be based in a SFI eligible research body¹⁵ and will be designated Co-Applicant in the application.
- **Societal Impact Champion** (optional) - The Societal Impact Champion will provide non-technical leadership and support to identify and validate challenges in addition to advising on solution development. Importantly, it is envisaged that the Societal Impact Champion will play a crucial role in identifying barriers and developing strategies to overcome them. They may also play a key advocacy role and assist in maximising the societal impact of the solution. It is envisaged that the Societal Impact Champion will come from a non-academic sector and have appropriate experience in areas relevant to the societal impact and international development focus of the application. The Societal Impact Champion may come from, for example: public sector/government, non-governmental organisations, charities, patient advocacy, philanthropy or civil society. **Where a Societal Impact Champion is not included at the application stage, applicant teams should indicate how they will access relevant end-users, stakeholders, etc. to inform the non-technical aspects of the project.**

Following successful application, core teams will have an opportunity to build a broader challenge team. This will include identification and recruitment of additional collaborators (e.g., researchers, beneficiaries, end-users, stakeholders or students) and planning or defining activities they will undertake as part of the challenge team. Applications may reference individuals outside the core team

¹⁴ <https://www.sfi.ie/funding/sfi-policies-and-guidance/eligibility-related-information/>

¹⁵ <https://www.sfi.ie/funding/sfi-policies-and-guidance/eligibility-related-information/>

who are anticipated to play a future role as team members. In such cases, it is important to highlight the discipline and skill set that these individuals will bring to the team. Consideration should also be given to the broader challenge/solution context which may require input from experts in disciplines outside of STEM such as the arts, humanities and social sciences (AHSS).

In addition, funded teams will be assigned a liaison in Irish Aid or one of their overseas missions to further inform the development and deployment of their solution, facilitate access to stakeholder networks and to provide relevant policy context.

Gender Strategy

SFI is committed to increasing the number of SFI grants held by women researchers, as described in its Gender Strategy (*Strand 2: Gender Balance in Research Teams*).¹⁶ Women are strongly encouraged to apply to this funding call. Further details on SFI's data on application submission and success rates by gender can be found on the SFI website.¹⁷

9 Applicant Team Composition & Eligibility

For the SDG Challenge, applications must satisfy the following eligibility criteria.

The **Ireland-based** Team Lead/Co-Lead must:

- Be a **member of academic staff** of an eligible Research Body¹⁸ (permanent or with a contract that covers the period of the award),
or
- Be a **contract researcher** with a contract that covers the period of the award (contract may be subject to receipt of the award).
and
- Hold a PhD or equivalent. Please consult the SFI Policy on PhD Equivalence⁶ for further information*.

**It is recognised that in certain disciplines relevant to this call, such as engineering or international development, research-active members of academic staff may not hold a PhD or equivalent. Such research-active staff members may be considered eligible to participate as a Team Lead or Co-Lead but must confirm their eligibility with SFI in advance of submission of an application. Requests*

¹⁶ <https://www.sfi.ie/resources/SFI-Gender-Strategy-2016-2020.pdf>

¹⁷ <https://www.sfi.ie/funding/sfi-policies-and-guidance/gender/>

¹⁸ <https://www.sfi.ie/funding/sfi-policies-and-guidance/eligibility-related-information/>

*must be made by the research office of the host research body to SFI by e-mail (challenges@sfi.ie) and should include a completed narrative CV template, which must demonstrate evidence of appropriate research experience. In such cases, only current members of academic staff will be considered. The track record of eligible team members and their role in the team will be assessed as part of the review process. **Eligibility for this call will not be considered in the assessment of eligibility for other SFI funding calls and does not correspond to confirmation of PhD equivalence¹⁹.***

The **Partner Country** Team Co-Lead must:

- Be employed at a HEI or RPO in one of the partner countries eligible under this call (See Section 5). The HEI/RPO in the partner country must be a publicly funded or not-for-profit institution. The RPO must have the capacity and infrastructure to support the research, should be research active and be able to demonstrate the standard of academic rigour required for a significant research project.
- Be a **member of academic staff or a contract researcher** at an eligible HEI/RPO with a contract that covers the period of the award.
- Hold a PhD or equivalent. Please consult the SFI Policy on PhD Equivalence⁶ for further information.

Unlike other calls under the SFI Future Innovator Prize, applications will not be accepted where a Team Lead or Co-Lead is a postgraduate researcher.

In cases where the Team Lead and/or Co-Lead is a postdoctoral researcher, the application must include a Letter of Support from an established researcher confirming they will act as a mentor to the Lead/Co-Lead for the duration of the award (see Section 12.6 for further details). The Partner Country Team Co-Lead may not be a postdoctoral researcher.

Please note that **Members of the Core Team** (Lead/Co-Lead Applicants, Societal Impact Champion) are permitted to be named on only one application to this call.

10 Programme Structure and Funding

There are three phases to the programme: **Concept, Seed and Prize Award.**

¹⁹This should be noted, for example, for the purpose of ensuring appropriate supervisory arrangements for PhD students.

Applications to the programme can request up to €300,000 in total direct costs over a duration of 18-months. Up to €50,000 can be allocated for use during the Concept Phase of the programme (Months 1 – 6) while the remaining request of up to €250,000 can be allocated to the Seed Phase (Months 7 – 18). It is expected that approximately 5 teams will be funded through the programme and enter the Concept Phase. To reflect the collaborative nature of the research to be undertaken and the joint leadership of teams funded under this programme, applications must include funding allocations for researchers based in eligible institutions in both Ireland and in the partner country (see Section 12.3 for more information on the Budget).

At the conclusion of the Concept Phase, all teams that are deemed competitive and whose project demonstrates high impact potential may progress to the Seed Phase as finalists. Following the Seed Phase, one or more teams may be provided with follow-on funding from the prize fund of up to €1M.

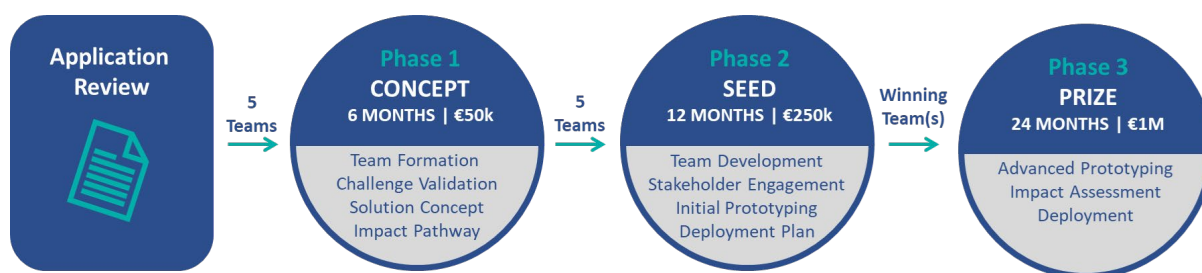


Figure 2. Phase structure of the SFI Future Innovator Prize. Numbers of teams and award sizes are indicative and may differ depending on the specific challenge call and outcome of the review process.

10.1 Application

Applications to this programme should provide information on four key areas:

- **Team:** Applicants should provide a clear description on how, through its composition, complementarity and formation, the team brings a unique perspective in addressing this problem. Applicants are advised not to provide biographies of team members rather to convey the team's ambition and its ability to deliver. Information on the team will be complemented by the curricula vitae submitted as part of the application.
- **Challenge/Problem:** Applicants should describe clearly the specific challenge/problem that will be addressed, articulate their understanding of it and identify key issues or barriers in addressing this problem. This should include consideration of the specific context of this

challenge in the partner country. As part of this description, insights from engaging with stakeholders/beneficiaries and how this has validated the problem should be included. Applicants may also include information on the wider relevance of the proposed challenge/problem beyond the partner country.

- **Solution:** Applicants should clearly describe the solution proposed. This should include a description of how the proposed solution is novel and/or unconventional in its approach, what is its current stage of technical development, what is the current state-of-the-art and how will the proposed approach overcome current barriers. Applicants should include consideration of ethical or regulatory issues where relevant. Evidence that the solution is feasible/viable associated risks should be provided. Applicants may consider providing a number of high-level milestones/deliverables (and achievement times).

Societal Impact: Applicants should outline the societal impact that their proposed solution can achieve in the partner country and more broadly. What outcomes will your solution deliver and what is the timeframe for delivery of this.

Applications will be assessed based on the review process and criteria described in Section 11. Approximately five²⁰ of the most competitive teams will enter the Concept Phase of the programme.

10.2 Concept Phase

The Concept Phase is intended to support teams to develop a deeper understanding of the challenge/problem they propose to address and to explore the feasibility and viability case for the solution concept presented in their application.

Teams will be expected to further validate the challenge identified, provide detail on the proposed solution and its implementation, and describe an impact pathway for their solution. As part of the impact pathway, teams must describe technical and non-technical barriers to be overcome, the opportunity associated with addressing those barriers and how the solution will achieve impact.

During this process, the core (applicant) team will have the opportunity to recruit additional team members with skills and knowledge to support the objectives of the proposal. It is strongly recommended that stakeholders and beneficiaries be included as members of a broader team.

At the conclusion of the Concept Phase, teams will prepare a report and representatives from the team will be invited to pitch their concept to a panel of international experts drawn from a range of sectors such as academia, international development and policymaking. This panel will assess the

²⁰ SFI reserves the right to fund a greater or fewer number of teams at either phase depending on quality and budget availability.

progress of the team and the likelihood of success based on the review criteria in Section 11 and make a recommendation as to whether the team should progress to receive seed funding under the programme.

Based on the outcome of the international review panel, all teams deemed competitive and whose project demonstrates high impact potential may progress to the Seed Phase as finalists. During the 12-month Seed Phase, teams may use the remaining award amount. Those teams that do not progress at the end of the Concept Phase will have their funding decommitted.

10.3 Seed Phase

The Seed Phase enables teams to undertake further stakeholder engagement and collaborative co-development of their solution. This should be guided by the needs of stakeholders and beneficiaries and be informed by key measures of success identified through engagement with stakeholders and beneficiaries. During this phase of the award, the team should commence planning for further development and deployment of the solution. The programme is intended to support pre-commercial activities only, and as such development of existing products is not permitted. Notwithstanding this, as part of the Seed Phase it may be necessary for successful applicants to consider potential commercialisation routes as part of the project to fully scope solution deployment. In this context, teams should take into consideration the necessary requirements to facilitate this process and it is anticipated that the collective skill set of the challenge team will support such activity.

At the end of the Seed Phase, teams will submit a further progress report and will again pitch to an international prize panel who will assess progress made in developing their solution and validation of the deployment plan.

Following assessment of Seed Phase teams against the review criteria in Section 11, one or more teams may be selected to receive a prize award to support development and deployment of their challenge solution.

10.4 Prize Award

A total Prize Award fund of €1M will be available. The winning team(s) will finalise and implement their plan for solution deployment with a view to advancing delivery of the solution within two years of the end of the Prize Award Phase.

<p>NOTE: SFI reserves the right not to grant the Prize Award(s) if the review panel does not identify a winning team</p>

10.5 Skills Development

In addition to the provision of funding, SFI organises a number of training workshops during the Concept and Seed Phases to support team skills and knowledge development. The topics of these workshops are selected to complement team activities within the specific phases of the programme. Further details of these workshops will be provided to teams successful in securing funding under the programme. **It is expected that core team members participate in these workshops.**

11 Review Process and Criteria

The review process and criteria apply at the application review stage and also at the progress review stages at the end of the Concept and Seed Phases.

Following submission, applications/progress reports are checked for eligibility.²¹ As part of these eligibility checks, input may be sought from Irish Aid on the alignment of applications to the SDG Challenge programme and eligibility of applicants. Teams that submit applications that are not deemed eligible under the programme or do not sufficiently align with the programme will be notified and their application will be withdrawn.

Following these checks, documentation will then be assigned to a panel of international experts secured by SFI for review. The reviews for the Concept and Seed Phase Progress Reviews will also include an interview between the expert panel and the applicant group. At all stages, projects will be assessed based on the following criteria:

- **Quality, experience and ambition of the applicant team** – Consideration will be given to the team's ambition, complementarity of expertise, the appropriateness of its composition for addressing the proposed challenge and that necessary partnerships/collaborations are in place to deliver the proposed impact. Consideration will also be given to the quality, significance and relevance of the individual team members' track record and key achievements (in particular, generation and translation of knowledge, leadership, teamwork and collaboration, delivering societal or economic impact, and stakeholder engagement).

²¹ Applications are checked for compliance with: non-technical mandatory criteria (e.g. all sections complete, page numbers not exceeded); technical mandatory criteria (e.g. any applicant eligibility requirements, alignment with the remit of the call); and any other requirements outlined in the call document.

- **Understanding of the challenge/problem** – Consideration will be given to recognition and understanding of the significance of the problem identified. Stakeholder/beneficiary engagement undertaken in validation of the problem will also be taken into account.
- **Novelty of the proposed solution, including its potential to deliver disruptive innovation** – Consideration will be given to the innovation potential of the overall proposed solution, including the novelty of the technology, comprehension of the current state of the art, value for money, the sex and gender dimension etc. Note that novelty may arise through combination, convergence, application or repurposing of technologies in a new or unforeseen way.
- **Transformative societal impact potential of the solution** – Consideration will be given to the potential for the solution to create significant beneficial societal change or impact. Stakeholder/beneficiary engagement undertaken in validation of the solution will also be taken into account.
- **Feasibility of execution within the budget and timeframe permitted** – Consideration will be given to the feasibility of delivering the project within the budget and timeframe of the Concept and Seed Phases and likelihood that this can lead to successful delivery of the solution during the Prize Award Phase.

Under the SDG Challenge, all review criteria will be evaluated considering the context-specific nature of the proposed challenge/solution in the partner country. Only applications deemed to be of both excellent scientific/engineering/technical quality and demonstrating strong impact potential will be recommended for funding by the panel. Teams that are not funded or do not progress between award stages will be notified by SFI.

The identity of international experts who conduct reviews shall remain confidential and will not be disclosed to applicants. SFI shall not be liable for the release of information concerning proposals to third parties by those international peer reviewers involved in the review process.

Reviewers engaged by SFI are required to abide by the SFI Reviewer Code of Conduct²². The submission of an application to SFI shall be construed as consent by the applicant(s) to participate in

²² <http://www.sfi.ie/funding/sfi-policies-and-guidance/review/>

the peer-review process and for their application to be shared with Irish Aid. SFI reserves the right to return applications without review where they do not meet the eligibility criteria.

SFI reserves the right to modify the review process. Applicants will be notified of any relevant modification to the review procedure. The final funding decisions are at the sole and exclusive discretion of SFI.

San Francisco Declaration on Research Assessment (DORA)

SFI is a signatory to the San Francisco Declaration on Research Assessment (DORA) and is aligning its review and evaluation processes with the DORA principles. In this regard, all types of research output are recognised in the assessment of research quality and impact. In the spirit of supporting open research and as a signatory of Plan S, SFI will also consider a commitment to making data and other types of research, open and accessible.

12 Application Procedure

Applications to this call of the SFI Future Innovator Prize must be submitted through SESAME, SFI's online grants and awards management system in advance of the application deadline indicated on the first page of this document. Full details of this application procedure can be found in the **SDG Challenge SESAME Guide** available for download from SDG Challenge webpage.

Application through SESAME, involves completion of an online form with details on, for example, team members, alignment to research areas/SDG and requested budget. In addition, applicants will be required to upload information in PDF documents.

If your submission relates to a previous unsuccessful application to any SFI scheme, a statement referencing the previous application and explaining the differences must be provided as part of the SESAME application and must make reference to reviewer comments where relevant. This statement will assist SFI Scientific Staff in the assessment of the eligibility of a revised application and will not be shared with reviewers. See SFI's Resubmission policy for further details.²³

Applications to the SDG Challenge comprise a number of sections that include:

12.1 Idea

This section of the application allows you to provide summary information on the idea you are proposing. As part of this section, you should provide a clear and concise summary of your idea. Ensure

²³ <http://www.sfi.ie/funding/sfi-policies-and-guidance/eligibility-related-information/>

that you clearly describe the challenge you have identified and your proposed solution. Describe what is visionary about the challenge and what is unconventional about your approach, why you expect it to succeed and how it will deliver impact.

12.2 Team, Challenge, Solution & Societal Impact

This section provides you with the opportunity to provide more detailed information on the team, societal challenge, proposed solution and the societal impact that your solution will deliver. Please download the application form template from the challenge website and please refer to Section 10.1 above for guidance on what should be considered when completing this template.

All fields should be completed, converted to PDF and uploaded in SESAME as part of your application.

Ethics and Scientific Issues

In preparing your application to the programme, please review the SFI guidance on ethical and scientific issues²⁴.

As part of its Gender Strategy (Strand 3: Integrating Gender in Research and Innovation)¹⁶, SFI aims to increase awareness of the sex and gender dimension in research, by requesting that researchers demonstrate that they have considered any potential biological sex and/or socio-cultural gender aspects in their proposed research. A statement on this consideration should be included in the appropriate part of the application form.

12.3 Budget

This section should be used to describe the budget (direct costs) and resources you will need. Given the phased structure of the SFI Future Innovator Prize programme, it will not be possible to provide significant detail in relation to requirements for the Seed Phase. As such, the requested budget and resources for this phase should be indicative and be based on what you currently envisage. It is recommended that you maximise the budget requested at each stage. In this section:

- Provide a breakdown of the indicative eligible direct costs (in €) associated with your application.
- Please review the SFI Grant Budget Policy²⁵ for eligible costs and team member salary scales.
- Please include any subcontracting to be undertaken in the Materials & Consumables section.

²⁴ <http://www.sfi.ie/funding/sfi-policies-and-guidance/ethical-and-scientific-issues/>

²⁵ <http://www.sfi.ie/funding/sfi-policies-and-guidance/budget-finance-related-policies/>

- Please provide a high-level justification for your Concept Phase requests.

Teaching replacement costs (Technological Universities/Institutes of Technology)

Team Leads and Co-Leads in Technological Universities (TUs) or in Institutes of Technology (IoTs) are permitted to apply for teaching replacement of up to a maximum of 50% of their teaching load for the duration of each phase of the programme. Salary scales for replacement lecturers must be reasonable and justified appropriately within the budget justification. Teaching replacement requests must be pro-rata and proportional to the time commitment to the award. It is noted that postdoctoral researchers based in any eligible research body who are acting as a Team Lead or Co-Lead may include up to 100% of their salary as part of the budget request in line with their time commitment to the project.

Societal Impact Champion Costs

While it is not permitted to request direct support for Societal Impact Champions (e.g., salary or fees), expenses that can be directly aligned to the execution of the research programme may be eligible. Activities may include, for example, travel costs associated with team activities, organisation of workshops, stakeholder engagement, and other related activities. Requests for such costs must be appropriately justified.

Partner country costs

Under this programme, it is expected that resources are allocated to all research partners involved in the challenge team. For budget allocations to the Partner Country Team Co-Lead, the following guidance should be followed:

- In the Concept Phase of the award, a maximum of €23k (of the total €50k) may be allocated to the Partner Country Team Co-Lead.
- In the Seed Phase of the award, a maximum of €115k (of the total €250k) may be allocated to the Partner Country Team Co-Lead.
- Eligible costs for the Partner Country Team Co-Lead are the same as those in the SFI Grant Budget Policy. However, local institutional salary scales should be used for research team members (e.g., postdoctoral research assistants, research assistants) funded under this award and should be indicated in the budget justification. Subject to appropriate justification, a contribution of up to 50% of salary costs for the Partner Country Team Co-Lead may be requested. The requested level should be commensurate with the time commitment to the project and the salary scale should be indicated in the budget justification.

- For each line-item, please indicate clearly if this to be allocated to the Partner Country Team Co-Lead.

In addition to direct costs, SFI also makes an indirect or overhead contribution to the host research body, which is reflected as a percentage (30%) of the direct costs (excluding equipment). Overheads are payable as a contribution to the Research Body for the indirect costs of hosting SFI-funded research programmes and are intended to enable the research body to develop internationally competitive research infrastructure and support services.

The Team Lead and their host Research Body will be responsible for administration and management of the whole award made under this programme and will be required to enter into a collaborative research agreement with host research body of the Partner Country Team Co-Lead to manage transfer of funds, including overheads. This collaborative research agreement must include appropriate conditions sufficient to ensure requirements set out in SFI's Grant General Terms and Conditions are met, including but not limited to reporting, auditing and limitation of liability and indemnity. This collaborative agreement must be made available to SFI upon request and may be shared with Irish Aid.

12.4 Authorisation

For an application to be accepted, it must be authorised for submission by the host research body of the lead applicant. It should be noted that Research Body submission of an application represents their approval of an application and agreement to SFI General Terms and Conditions²⁶. Submission may only be made by an authorised Research Body representative. In particular, the Research Body is approving:

- The eligibility of the applicants;
- That the applicants are, or will be upon receipt of the grant, recognised as employees of the Research Body for the duration of the grant;
- That the requested budget including salaries/stipends, equipment, travel and consumables are in line with accepted institutional guidelines;
- The availability of infrastructure within the institution as outlined by the applicant in the research proposal;
- That the proposed research programme has not been funded by other sources;

²⁶ <https://www.sfi.ie/funding/sfi-policies-and-guidance/sfi-general-terms-and-conditions/>

- That relevant ethical and regulatory approval has been or will be sought and must be granted prior to the award commencing;
- That the relevant licences will be in place at the time of award;
- That the details provided in relation to research funding history i.e., current, pending or expired grants, as detailed in the application, are valid and accurate;
- That permission from all team members and collaborators has been obtained, such that SFI may receive their personal information, and may process such data for the purpose of peer review.

12.5 Curricula Vitae

Please upload curricula vita for each of the core applicant team members (i.e., Lead, Co-Lead and Societal impact Champion) using the template available on the challenge website. The CV not only provides an opportunity to give information about your education, employment record and research outputs where relevant, but also allows you to identify up to three key achievements in research and impact.

NOTE: The Societal Impact Champion is not required to use the CV template provided and may use a format of their choosing. However, the overall length of the CV must not exceed three pages.

12.6 Letters of Support

As part of an application to the prize, several Letters of Support must be provided. These include:

- A Letter of Support from the **Host Research Body of the Team Lead, Team Co-Lead and Partner Country Team Co-Lead** which should confirm the eligibility of the applicant, comment on the significance of the proposal and confirm related infrastructure and services available to the applicant. In addition, in cases where team members will be transferring from another active SFI research grant, an outline of the management plan (i.e., a description of how the individual will be replaced on the original award) to assure how these awards progress satisfactorily should be provided. Note also the Host Research Body Letter of Support should contain a description of the institutional policy regarding management of conflicts of interest.
- Where any applicant is a postdoctoral researcher, a Letter of Support must be provided from an established researcher from their Host Research Body endorsing the application. The established researcher may or may not be also an applicant on the proposal. Each Letter of Support must confirm that the established researcher has agreed to act as mentor for the

duration of the award. In cases where the established researcher is not the current mentor/supervisor, the Letter of Support must outline how this situation will be managed and must be countersigned by the current mentor/supervisor of the postdoctoral researcher. The Letter of Support must include details of the postdoctoral researcher's current role and funding arrangements including remuneration level. The grant identification code and grant title under which the postdoctoral researcher is currently funded should also be provided.

- A Letter of Support from the **Societal Impact Champion** outlining their role in the team and how they propose to actively guide/support the team to deliver impact.

NOTE: No additional Letters of Support may be included at the application stage. Any additional/unsolicited Letters of Support will be removed from an application.

13 Data Management Plans

Good data governance and stewardship are key components of good research practice. While data Management Plans are not required to be submitted at the application stage of this programme, teams are encouraged to consider data management at an early stage in their project. At the end of the Seed Phase, as part of the Seed Phase Progress Report, teams will be required to provide a short (2 page) Data Management Plan (DMP). In preparing this plan, consideration should be given to [SFI's Guidance on Data Management Plans](#).²⁷ A DMP is a living document which details the procedures for careful handling of data and other research outputs. A DMP follows the data through the lifecycle of the programme of research²⁸, from collection to analysis and interpretation, sharing and dissemination, and long-term storage.

Data Management Plan Requirements

DMPs will be evaluated by reviewers to ensure that they contain sufficient information on practices and standards as guided below. Although practices and standards vary across disciplines, SFI

²⁷ <https://www.sfi.ie/funding/sfi-policies-and-guidance/open-research/SFI-DMP-Guidance-FINAL-140322.pdf>

²⁸ SFI-funded research programmes, as described in call documents, can range from a single research project to a collection of research projects encompassed in several work packages. The data management plan should reflect the relevant standards for individual research projects while describing a cohesive approach to managing data across the overall programme of research as appropriate.

recommends the use of [Science Europe DMP templates and guidelines](#)²⁹. Each DMP should include the following as appropriate to the programme or project³⁰:

1. Data description and collection or re-use of existing data
2. Documentation and data quality
3. Storage and backup during the research process
4. Legal and ethical requirements, codes of conduct
5. Data sharing and long-term preservation
6. Data management responsibilities and resources including institutional or project-specific resources dedicated to managing data and ensuring adherence with the [FAIR](#) principles (Findable, Accessible, Interoperable, Re-usable).

14 Progress Review and Prize Award Management

Review of progress at the end of the Concept and Seed Phases will be undertaken by a sitting panel of international experts. This process will involve the completion and submission of a progress report to SFI and an interview with the sitting panel. The sitting panel will review progress and future plans and make a recommendation to SFI as to whether the team should progress to the subsequent phase of the programme. Guidance on progress reports will be provided to applicants at the start of each phase.

Prior to completion of the Seed Phase, the remaining teams will submit a progress report to SFI, followed by a final presentation and interview with a prize panel. This panel will assess the potential societal and economic impact of the work undertaken to date through the Concept and Seed Phases of the programme. Based on the recommendations of the prize panel, one or more teams may be selected to receive a prize award to support development and deployment of their challenge solution.

15 SFI's Policies and Positions

In addition to complying with the GT&Cs, applicants are expected to be familiar and consult with SFI policies/positions and with all relevant national policies when preparing their application to any SFI programme. All members involved in the funded research should be apprised of the following non-exhaustive list of relevant policies, which may be revised from time to time:

²⁹ <https://www.scienceeurope.org/our-priorities/research-data/research-data-management/>

³⁰ Based primarily on guidance provided by Science Europe: <https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/> and supplemented by guidance from the European Research Council of the European Commission: https://erc.europa.eu/sites/default/files/document/file/ERC_info_document-Open_Research_Data_and_Data_Management_Plans.pdf

Clinical Trials

Research programmes that include clinical trials as part of the study must adhere to the **SFI Clinical Trial and Clinical Investigation Policy**³¹, as well as with the requirements set out by the Health Products Regulatory Authority (HPRA).

Animal Usage

Applicants intending to use animals in their research projects are obliged to comply with the **SFI Use of Animals in Research Policy**³² and should also ensure that their studies are in line with the HPRAs position on the use of animals in research.

Research Integrity

SFI places paramount importance on ensuring that the highest standards of research integrity underpin all aspects of the research that it supports. To this end, SFI endorses the **National Policy Statement on Ensuring Research Integrity in Ireland**³³; that is, all institutions and SFI award holders are expected to abide by this policy statement and the **European Code of Conduct for Research Integrity**³⁴, in addition to their respective institutional policies and procedures for handling research misconduct allegations.

Doctoral Education

For postgraduate students funded by SFI, the host Research Body is expected to adopt the principles, standards and good practice for doctoral education as described in the **National Framework for Doctoral Education (2015)**³⁵, which SFI has endorsed.

Intellectual Property Management

Intellectual Property (IP) should be managed according to the policies set out in the Government publication: **Ireland's National IP Protocol 2019** and must comply with State aid Regulations.³⁶ The IP arrangements are the responsibility of the Research Body and shall reflect the collaborative nature of the project and the level of cash and in-kind commitment made by

³¹ <https://www.sfi.ie/funding/sfi-policies-and-guidance/ethical-and-scientific-issues/>

³² http://www.sfi.ie/resources/SFI-Policy-on-the-Use-of-Animals-in-Research_June_2016.pdf

³³ https://www.iaa.ie/wp-content/uploads/2019/08/IUA_Research_Integrity_in_Ireland_Report_2019.pdf

³⁴ <https://allea.org/code-of-conduct/>

³⁵ http://hea.ie/assets/uploads/2017/04/national_framework_for_doctoral_education_0.pdf

³⁶ <http://www.sfi.ie/funding/sfi-policies-and-guidance/national-policies-sfi-positions/>

the Industry Partner. IP arrangements should be explicitly described in collaborative research agreements (CRAs).

Gender Strategy

Research should fully consider potential biological sex and socio-cultural gender dimensions as key analytical and explanatory variables. As articulated in the **SFI Gender Strategy (Strand 3: Integrating Gender in Research and Innovation)**³⁷, applicants are advised to demonstrate that they have considered any potential sex/gender aspects in their proposed research programme.

In the SFI Strategy 2025 Shaping Our Future³⁸ targets for 35% of SFI's funded leadership positions (PIs & Co-PIs) to be women and for research teams to be composed of at least 40% of the underrepresented genders by 2025 are set. As such, applicants should consider how these targets can be achieved at all levels of the research team.

Maternity Supplement

SFI is committed to removing and mitigating any existing or perceived factors that may limit the participation of women in Science, Technology, Engineering and Mathematics (STEM) careers. SFI invites its award holders to apply for a supplemental discretionary allowance to support their SFI funded award when either an SFI Awardee or a team member, including PhD students funded on an SFI award takes a period of maternity or adoptive leave.³⁹

Appeals Process

The Appeals Process Policy establishes procedures and responsibilities for the appeal of the declination of a proposal by SFI.⁴⁰

State aid

All SFI funding granted under this call will be subject to, and must be compliant with, State aid law. As such, proposals must be designed to ensure that any funding received from SFI does not, directly or indirectly, give rise to the granting of State aid. Applicants are referred to the guidance provided by the European Commission in Section 2 of its **2014 Framework for State aid for research and development and innovation (2014/C 198/01)**⁴¹ and that which has been

³⁷ <https://www.sfi.ie/research-news/publications/SFI-Gender-Strategy-2016-2020.pdf>

³⁸ <https://www.sfi.ie/strategy/SFI-Strategy-2025-Shaping-Our-Future.pdf>

³⁹ <https://www.sfi.ie/funding/sfi-policies-and-guidance/gender/>

⁴⁰ <http://www.sfi.ie/funding/sfi-policies-and-guidance/review/>

⁴¹ [http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0627\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0627(01)&from=EN)

developed by Knowledge Transfer Ireland.⁴² If in any doubt as to the interpretation or application of this guidance, potential applicants are advised to seek independent legal advice.

Child Protection

Where relevant, applicants and Research Bodies are required to comply with the provisions of the **Children First Act 2015**,⁴³ and the **National Guidance for the Protection and Welfare of Children 2017**.⁴⁴ It is the responsibility of the Research Body to ensure that they are compliant with all applicable law.

Data Protection Policy

The General Data Protection Regulation⁴⁵ is a legal framework that sets out guidelines for the collection and processing of personal information of individuals within the European Union. Applicants are advised that they must be compliant with this regulation if they collect or process personal data.

SFI may collect, use and disclose personal data provided in the application and/or otherwise obtained under, or in connection with, the application for processing the submission, for the performance of its statutory powers and functions, and for the general activities of SFI. Further details regarding SFI's collection, use and disclosure of personal data, and the rights of individuals with respect to any personal data held by SFI, are available in the **SFI Privacy Statement**.⁴⁶

During peer-review procedures, information may be sent to external experts in countries outside of the European Economic Area, including countries that are not recognised by the European Commission as having adequate data protection laws. By submitting an application to SFI, the Research Body and members of the Research Team are agreeing that they consent to the processing and transfer of personal information in this way.

During the application process or at any time thereafter, SFI may contact the Research Body, the Principal Investigator, or any member of the Research Team with regard to funding opportunities, activities or events organised by SFI or other relevant bodies, or for the

⁴² <https://www.knowledgetransferireland.com/Model-Agreements/Practical-Guides/Practical-Guide-to-State-Aid-Considerations-in-Research-Development-and-Innovation-for-RPOs-and-Industry.pdf>

⁴³ <http://www.irishstatutebook.ie/eli/2015/act/36/enacted/en/pdf>

⁴⁴ http://www.tusla.ie/uploads/content/Children_First_National_Guidance_2017.pdf

⁴⁵ <https://www.dataprotection.ie/docs/GDPR/1623.htm>

⁴⁶ <http://www.sfi.ie/privacy/>

purposes of monitoring and evaluation (including, but not limited to, the collection of scientific data or data relating to the application process). SFI may choose to authorise a third party to contact the Research Body, the Principal Investigator or any member of the Research Team on its behalf.

Conflict of Interest

SFI recognises that applicants may have a prior relationship with an industry partner engaged in an application for funding to SFI (e.g., industry consultancy role, founder of an academic spin-out company) which may be perceived as a conflict of interest. Where a potential conflict of interest exists, SFI requires that it is disclosed by the applicant to SFI and their Research Body and that any such situations are managed by the Research Body in accordance with the principles and mandates laid out in **Ireland's National IP Protocol 2019**.⁴⁷

Open access

In line with the principles espoused by Plan S⁴⁸ and those of the National Framework on the Transition to an Open Research Environment⁴⁹ SFI is committed to ensuring that all publicly funded research articles are openly available. Where a research publication arises in whole or in part from SFI funded research (i.e., where one or other of the researchers concerned receives SFI funds in support of their endeavours), **SFI's Open Access policy**⁵⁰ should be adhered to. SFI monitors compliance with this policy through scientific and financial reporting, financial audits and its Annual Stocktake of Research Outputs.

Data Management

Good data governance and stewardship are key components of good research practice. Science Foundation Ireland is part of an initiative for the voluntary international alignment of research data management policies.⁵¹ Applicants may find it helpful to consult with this and Science Europe's framework for discipline-specific research data management if preparing a

⁴⁷ <http://www.sfi.ie/funding/sfi-policies-and-guidance/national-policies-sfi-positions/>

⁴⁸ <https://www.coalition-s.org/principles-and-implementation/>

⁴⁹ <https://norf.ie>

⁵⁰ <https://www.sfi.ie/funding/sfi-policies-and-guidance/open-research/SFIs-Open-Access-Policy-V.3.-04.05.2021.pdf>

⁵¹ <https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/>

data management plan as part of their application for funding to SFI.⁵² Applicants should review individual programme funding call requirements regarding data management plans and timelines as to when they are required to be submitted.

Current SFI policies and positions will be reviewed on a regular basis; applicants are advised to consult the policy information in advance of submission of a proposal.

⁵² <https://www.scienceeurope.org/our-resources/guidance-document-presenting-a-framework-for-discipline-specific-research-data-management/>

Appendix 1

SDG 13: Climate Action: Interlinkages between the goals and targets (taken from [A Nexus Approach For The SDGs, SDG Toolkit](#))

