

Science Missions for Sustainability

Global Call for Pilot Missions
and for Visionary Funders
to support the missions

*Be part of game-changing collective action that shapes
the future of science and humanity*



**International
Science Council**

Contacts

For question about the content of the call, contact Katsia Paulavets, ISC Senior Science Officer at katsia.paulavets@council.science



The ISC has organized two virtual Q&A sessions to address questions about the call. We strongly recommend attending the information session for your preferred time zone if you are interested in applying. Register for 25 or 26 April here:

<https://council.science/events/mission-science-information-sessions/>

Useful background documents



1. [Flipping the Science Model: A Roadmap to Science Missions for Sustainability](#)
2. [A Model for Implementing Mission Science for Sustainability](#)
3. [Unleashing Science: Delivering Missions for Sustainability](#)

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About the Global Commission on Science Missions for Sustainability

To identify the most appropriate institutional arrangements and funding mechanisms required to co-construct and deliver on the Science Missions for Sustainability, the International Science Council has established a Global Commission on Science Missions for Sustainability.

The Global Commission is co-chaired by Irina Bokova, former Bulgarian Foreign Minister and Director General of UNESCO, and Helen Clark, former Prime Minister of New Zealand and previous administrator of the United Nations Development Programme. The Commission is made up of more than twenty committed experts, from former ministers and financiers to research leaders and film makers and aims to build actionable mission-led pathways in the face of existential risks to humanity. The work of the Commission was supported by a Technical Advisory Group (TAG).

About the International Science Council

The International Science Council (ISC) works at the global level to catalyse change by convening scientific expertise, advice and influence on issues of major importance to both science and society.

The ISC is an international non-governmental organization with a unique global membership that brings together 250 international scientific unions and associations, national and regional scientific organizations including academies and research councils, international federations and societies, and young academies and associations.



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Background

The International Science Council (ISC) is an international NGO that stands at the forefront of mobilizing scientific expertise, advice, and influence on critical issues that intersect science and society. With a robust global network comprising over 250 scientific academies, research councils, and disciplinary bodies, the ISC has championed the indispensable role of science in propelling the Sustainable Development Goals (SDGs) forward.

In the face of today's uncertainties, the 2030 Agenda and the Sustainable Development Goals emerge as a beacon, offering a strategic blueprint to steer governments and communities towards a transformative and resilient future. Realizing this ambitious vision by 2030 demands an immediate recalibration of global and national priorities towards sustained, collaborative, and significantly expedited actions.

Central to this endeavour is the need for a collective movement that fundamentally shifts the realms of science funding and science systems worldwide, aimed at amplifying science's impact on realizing the SDGs. This imperative forms the core of the Council's pioneering Global Call for piloting Science Missions for Sustainability.

A Decade of Opportunity

This current decade presents a critical window to leverage science for sustainable development like never before. This necessitates a paradigm shift in our scientific endeavours—how we conduct, utilize, evaluate, and finance research.

With around five years to achieve the 2030 Agenda's transformative aspirations, an immediate alignment of global efforts towards long-term, synergistic, and accelerated initiatives is paramount. This also entails a transformative collective movement within the scientific and funding communities.

Historically, science has been a cornerstone in advancing human prosperity. Yet, today, it faces the monumental task of evolving its collaboration with society and policymakers to tackle the most pressing challenges of our time. Achieving the SDGs and ensuring a just and sustainable future hinge on an extensive mobilization of sustainability science.

This moment calls for boldness and unwavering dedication.

Responding to the call by the [Global Commission on Science Missions for Sustainability](#) the ISC is summoning the finest minds in global science to concentrate their efforts on impactful Science Missions. This Commission, comprising political leaders, eminent scientists, and influential figures, sounded an emergency alarm on sustainability inaction in 2021. Addressing this imperative necessitates a fundamental transformation in our scientific practices—how we conduct research, apply scientific findings, and allocate funding.

Beyond the traditional science model, which is predominantly characterized by intense competition, an absence of trustful relationships with stakeholders, and siloed science funding, we need an additional model that encourages science to cater directly to societal needs. Understanding the dynamics of complex social systems and identifying context-specific actions for systems transformations towards sustainability and resilience require stronger engagement with transdisciplinary approaches and an inclusive collaboration among a wide variety of stakeholders in society.

This urgency requires visionary thinking and innovative, collaborative actions that disrupt the status quo. Science funders in particular can play a leadership role, by stepping out of “business-as-usual” approaches and fund science that supports the transformations our world needs to remain within planetary boundaries. We need scaling up of investment in science to strongly support transdisciplinary and engaged mission science for sustainability, with the potential to drive inclusive, intergenerational wellbeing of both people and our planetary life support systems.

In the past, the global community has supported big science approaches in basic science and infrastructure, such as CERN. Now, it is the time think with a CERN mindset to address urgent existential risks, particularly in the regions that face disproportionate burdens and impacts arising from global challenges, and where the SDG progress is lagging the most.

“As someone who has seen first-hand the impact and importance of collective action and cooperation in addressing global challenges, I commend this open call, and encourage consortia of researchers and scientific organizations to pitch their pilot missions, and call on funders to turn these ideas into actions.”

Irina Bokova,
Co-Chair of the Global Commission



The ISC's groundbreaking report, unveiled at the 2023 UN High-Level Political Forum, "[Flipping the Science Model: A Roadmap to Science Missions for Sustainability](#)," outlines this visionary model. It seeks to elevate the collaboration between science, policy, and society to new heights, tailored for our unprecedented era. The goal is to render knowledge fully actionable, integrated, and engaged, aiming for solutions that match the scale of humanity's most critical challenges. The time for action is now. Together, we can redefine the trajectory of science for a sustainable future.

"It is widely recognized that science plays a crucial role in advancing sustainable development goals. However, the timeframe leading up to 2030 requires decisive leadership and coordinated efforts that prioritize critical areas for achieving these goals while leveraging the latest scientific advancements. The scientific missions initiated by the ISC aim to identify and swiftly implement collective actions to maximize the benefits of science within this timeframe, responding to the pressing urgency of the situation."



Ambassador Macharia Kamau,
Chair of the Oversight Committee and member of the Global Commission

We're seeking novel, innovative, collaborative, and diverse consortia to co-design and embark on groundbreaking Science Missions to tackle complex sustainability challenges head-on

In the Flipping the Science Model report the Global Commission **proposes to establish a network of Science Missions for Sustainability**. Each Mission will focus on mobilizing coordinated, collective science-based actions towards addressing complex sustainability challenges at the global, regional and local level. Our [extensive research](#) from the Commission's Technical Advisory Group, showed that existing global multilateral scientific cooperation on sustainable development lacked sufficient and cohesive support to meet the challenges of today. This undermines the effectiveness of scientific efforts in producing actionable knowledge and contributing to the achievement of the SDGs. The Science Mission Model represents the Council's strategic answer to the glaring mismatch between the magnitude of global challenges and the current frameworks and dimensions of scientific research and its financing. This discord is particularly pronounced in the unequal capacity to produce vital scientific knowledge, especially in regions where it is most needed, such as the Global South.

The ISC together with the Global Commission believes there is an urgency to pilot the new modality for science efforts, particularly as we enter the International Decade of Sciences for Sustainable Development. This is the goal of this Global Call.

What are Science Missions for Sustainability?

We define ‘Science Missions for Sustainability’ as science that actively engages with society to address complex sustainability challenges. These missions are characterized by their clearly defined goal and scope, solution-oriented focus, and time-bound nature. They are significant in scale, in ambition, and require inter- and transdisciplinary approaches with a range of scientific disciplines and with a variety of societal actors to produce action and policy outcomes.

The primary role of the Science Missions is to catalyse collaboration at scale between science, policy, and society, to generate actionable knowledge and find context-specific solutions to complex sustainability challenges, particularly in regions where progress towards SDGs is most lacking.

The Science Missions will bring together the best of global science across disciplines and regions to work with policy-makers, the private sector and civil society actors to jointly implement the co-designed missions. Co-design of the research agenda, co-production of actionable knowledge and co-implementation of solutions will be at the heart of Science Missions’ operations.

“The pressing need to transform global communities to more sustainable livelihoods requires community participation and buy-in to secure lasting transformation. Participatory and co-designed sustainability implementation plans, guided by contextual expert knowledge placed in globally distributed science missions, will act as community catalysts to fast-track bottom-up community sustainability. The global network of sustainability missions will also collectively act to rapidly capture and share sustainability implementation best practices and learning.”



Albert van Jaarsveld,
Co-Chair of the Technical Advisory Group

These Missions will offer a multifaceted approach to challenges too complex and intertwined to tackle in siloes. Examples include addressing the burden of malnutrition, plastic pollution in terrestrial and aquatic systems, and meeting interdependent needs for food, energy and water. We’ve highlighted some examples in [Flipping the Science Model](#).

In the comprehensive preparatory phase leading to this initiative, the ISC published a pivotal report titled “[Unleashing Science: Delivering Missions for Sustainability](#).” This publication

highlighted five essential domains for mission-science efforts: Food, Energy and Climate, Health and Wellbeing, Water, and Urban Areas, with the aim of urgently advancing their sustainability, equity, and resilience. This global call invites Missions within these thematic areas, and also embraces additional innovative proposals.

To enact the needed transformational changes, Science Missions must not only focus on technological innovation but also address political, economic, structural, and behavioral aspects within each Mission's domain. Identifying root causes and overcoming obstacles to unsustainable practices are crucial steps in this process.

“We in the scientific community need to act courageously to tackle global challenges head-on. The ISC’s Science Missions for Sustainability is a bold and novel initiative that unites science, policy, and society for a sustainable and equitable future. As Assistant Director-General for Social and Human Sciences of UNESCO, it’s an honour to be part of this global effort!”



Gabriela Ramos,
Member of the Oversight Committee

Call for applications to co-design Science Missions Pilots

How to create your consortium and join the Global Call

The goal of this Global Call is to choose up to five Pilot Missions to test the proposed model, thoroughly examining their execution, outcomes, and impact. Successful Pilots will set the stage for adapting and expanding the model.

The selected Pilots will demonstrate the value of truly collaborative transdisciplinary efforts in helping fast-track the achievement of the SDGs and accelerating societal transformation to sustainability.

We invite **novel collaborative consortia** of scientists, policymakers, non-governmental organizations, communities, and the private sector, working on the cutting edge of identifying

solutions for complex sustainability challenges, to co-design specific Science Missions for sustainability over an 18-month period. The call is open to bids for Pilot Missions worldwide but we are **strongly encouraging Pilots led by institutions located in the Global South to apply.**

The Pilot consortia will be selected to undertake a co-design process over an 18-month period to:

- Engage with all relevant stakeholders and initiatives to clearly define a demand-driven science mission.
- Build commitment and trust among stakeholders to work together towards the mission implementation.
- Identify key obstacles and barriers currently hindering the Mission's goals, and develop effective strategies to overcome them, promoting conditions for systems change.
- Apply a 'systems approach' to each mission and identify what types of knowledge need to be harnessed and integrated from science, policy, and society.
- Collaborate with stakeholders to develop a comprehensive implementation plan, incorporating the required scientific input and interventions at scale that will drive fundamental changes in political, economic, structural and behavioural aspects related to the Mission. This includes mapping existing capacities and resources and identifying areas for capacity building.
- Engage potential funders to secure necessary funding for mission implementation. The ISC will facilitate discussions between Pilots and potential funders alongside Pilots' fundraising efforts.
- Establish an appropriate data management system ensuring data is stored and shared in a FAIR manner and complies with data security and privacy laws.
- By the end of the co-design process, ensure Pilots have functional stakeholder engagement processes, necessary capabilities, organizational structures, and funding to enable full Mission implementation.

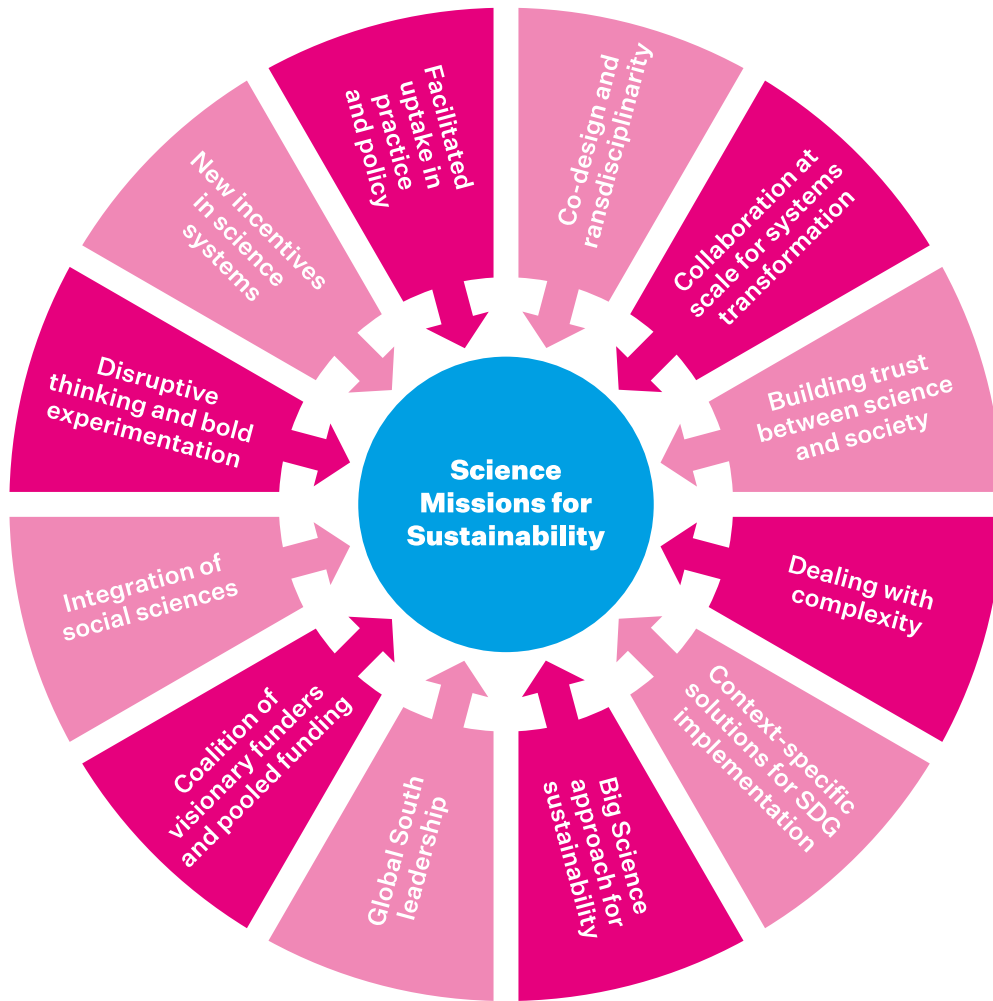
As the co-design of the Missions progresses, all Pilots will be required to conduct regular performance monitoring to facilitate learning and timely adjustments. Additionally, the ISC will conduct a formal evaluation over 18 months to assess co-design progress. This evaluation aims to identify Pilots ready for full mission implementation, capture experiences from all Pilots, document lessons learned, and facilitate the integration and scaling of efforts.

Scope for Submissions

As we have stated earlier, the call is open to bids for Pilot Missions from anywhere in the world and we are strongly encouraging Pilots led by institutions located in the Global South, especially low- and middle-income countries in Africa, Asia, Latin America and the Caribbean as well as in Oceania, to apply. Each consortium should include at least three types of stakeholders (e.g. science, policy, civil society, the private sector), one of which should represent the scientific community. The lead applicants can represent various types of stakeholders and are not limited to scientific institutions. However, each bid should have a strong science component and include science partners, for instance an academy of sciences, a scientific union or association, a research institute, university, an international scientific organization or a research programme. Cross and intra - regional scientific collaboration in each Pilot is also strongly encouraged.

The call seeks to identify Pilot Missions that will work to develop solutions to the most important and intertwined sustainability challenges. The challenge that the Pilots will focus on addressing should meet the following criteria:

- Be demand-driven and co-defined with various stakeholders.
- Be locally/regionally contextualized but globally relevant.
- Located in regions where SDG progress is lagging the most.
- Focused on the Global South.
- Focused on interactions and feedback across multiple sectors and SDGs.
- Significant in size and scope.
- Requiring inter- and transdisciplinary approaches and entailing direct engagement with policymakers and societal actors.
- Requiring systems-level solutions and interventions across spatial and temporal scales.



Learn more about the expected Pilots' structure and their required capabilities

The structures of the Pilots are flexible and will depend upon the scale and nature of the challenges they aim to address. Given the sense of urgency, the Pilots are expected to be operational in the first quarter of 2025, leveraging existing infrastructure, human capital, institutions, and networks while also creating dedicated spaces for immersive engagement with mission goals, free of distractions or constraints.

Pilots may take various forms, including virtual hubs, integrated entities within existing infrastructure, standalone entities, or a combination of the above. They should accommodate a small core staff and provide access to essential science infrastructure, such as meeting spaces for stakeholder engagement and data management capabilities.

Regardless of their design and focus, each Pilot should be able to:

- Attract inspiring leadership with strong boundary-spanning skills and transdisciplinary experience.
- Employ core staff.
- Establish mechanisms from the start for regular exchange between all stakeholders.
- Build collaborations between science, decision-makers, and communities.
- Efficiently mobilize existing scientific infrastructure and knowledge across disciplines and ensure the integration of the social sciences in shaping and implementing the missions.
- Enable within- and cross-regional scientific collaborations to contribute to the mission's co-design and implementation.
- Engage with complexity and integrate diverse ways of knowing.
- Set-up rigorous evaluation process for tracking mission progress, to ensure continuing relevance and commitment and to foster adaptive management and rapid learning.
- Ensure accessible data and knowledge storage to facilitate open global exchange, adhering to FAIR principles and data security regulations.

Therefore, the expertise and capabilities that each Pilot should have or have access to include:

- Transdisciplinary expertise in multi-stakeholder engagement processes.
- Connections to local and regional scientific communities across disciplines.
- Connections to policy actors and policy processes.
- Computational infrastructure and analytical, modelling and pathway exploration capabilities to conduct complex systems analysis of nexus challenges and solutions.
- Capacity to devise theories of change.
- Capacity to obtain, curate and archive data and information. It will be important to ensure that each Pilot is able to store and share data in a [FAIR](#) manner and comply with data security and privacy laws.
- Facilities for stakeholder engagement.

While not all Pilots may initially have access to all listed capacities and expertise, the full bid should demonstrate the strong experience in multi-stakeholder engagement and capacity to conduct complex systems analysis. The full bid should indicate available capacities and those needing development. To be considered as a potential Pilot, a consortium should have or have access to at least 4 out of 7 capabilities listed above. The ISC, through partnership institutions such as our [Members](#) and [Affiliated Bodies](#), will seek to mobilize necessary expertise and develop key capacities for selected Pilots.

Financial support

The full-scale implementation of Science Missions for sustainability will require significant funding. Therefore, strategic partnership and collaboration across funding sectors will be an imperative to maximize the impact and efficiency of investments in mission-led science. Pooling of funding will be necessary. Furthermore, funders will need to be engaged early on in any mission co-design process.

For the initial 18 months, the goal is to mobilize funding of up to \$250,000 per Pilot Mission for the co-design phase. Following the co-design process, the objective is to secure at least 5 million USD annually for each Pilot for a three-year period to facilitate full mission implementation. The exact scale of funding will be determined based on the complexity, needs and location of each Mission. Fundraising will be undertaken collectively by the Pilot Missions, the ISC and the funders involved.

It is important to state that while several funders have expressed interest in being part of this collaborative effort, at the moment there is no funding secured. Funders are interested to see the consortia that will be shortlisted. Therefore, to mobilize the required funding for both the co-design phase and full implementation, the International Science Council will organize matchmaking events between the shortlisted Pilots and interested funders to discuss funding needs and secure appropriate resources. Selected Pilots can also co-fund or fully fund both the co-design process and full mission implementation.

Eligible costs for the co-design phase include:

- Stakeholder engagement activities.
- Implementation activities aimed at putting science into policy and practice.
- Staff cost for coordination and administrative support.
- Monitoring and evaluation.
- Data management.

Application process for the co-design phase

The application process will include the submission of an expression of interest for undertaking the 18-month co-design process and the development of a full bid by shortlisted consortia. The expression of interest should be submitted [via a virtual form, by 31 May 00:00 AM UTC](#). Consortia can use [this template](#) to develop the expression of interest before submitting it virtually. The estimated length of an expression of interest is 2000 words. The goal is to minimise workload at this stage and invite only shortlisted consortia to develop full bids.

All expressions of interest should:

- Introduce the organizations represented by the consortium and indicate the lead applicant. These organizations may include academies of sciences, scientific unions, research institutes, universities, government agencies, private sector or civil society organizations, or other relevant bodies.
- Describe the complex sustainability challenge that the Pilot Mission will seek to address and explain its relevance to the region.
- Justify why the consortium has the capability to deliver the Pilot Mission, indicating which capabilities and expertise it has access to (see Pilots structure and required capabilities) and which ones are missing.
- List key stakeholders to be engaged and explain how the consortium plans to undertake a stakeholder engagement process to co-design the Science Mission and develop an implementation plan over the 18-month period.
- Outline how the Pilot will measure its impact and how progress will be monitored and assessed.
- Indicate whether the consortium would be able to co-fund the co-design phase. If so, specify the scale of co-funding.

Applications should be written in English. However, if the bid is successful, it is not necessary for Pilots to operate, conduct research or publish exclusively in English.

Selection process

The selection of Pilots will be undertaken by a Selection Committee, while the entire call will be supervised by a Global Oversight Committee, comprising of world-renowned experts from science, funders, policy and civil society.

During the selection process, the Selection Committee will consider the following elements:

- Novelty of the consortium in addressing an important issue in context and the goal of leading to actionable knowledge and solutions that can be applied in context and provide lessons for other geographies.
- Strong science component and inclusion of science partners with clear evidence of a transdisciplinary and systems-based approach to an important challenge relevant to Agenda 2030.
- Importance and relevance of the challenge to the region and to the Global South, as well as its potential for impact.
- Leadership from the Global South.
- Diversity of partners in the consortia and their commitment to work together.
- Availability of required expertise and capabilities and ability to mobilize access to missing capacities.
- Stakeholder engagement process.
- Organizational arrangements.
- Availability of co-funding and use of budget.

The application and selection processes will include the following steps:

Step I – Expression of Interest, which will be reviewed by the Selection Committee.

Step II – Matchmaking with Funders in September 2024: A cohort of shortlisted consortia will be invited to attend a meeting with funders in September to present their proposals and engage with funders. The format and dates of the meeting will be communicated to shortlisted consortia in due course.

Step III – Development of Full Bids: After the meeting with funders, the shortlisted consortia will be invited to develop a full bid, which will be reviewed by the Selection Committee and interested funders.

The full bids should elaborate on the following points:

- Description of the complex sustainability challenge that the Pilot Sustainability Mission will seek to address and its relevance to the region.
- Identification of critical barriers/gaps/needs that must be addressed to achieve the mission.
- Commitment of all partner organizations to the success of the Pilot, including enclosed letters of support.
- Envisioned institutional and management arrangements for the Pilot and associated roles of each partner. The overall proposal should indicate the lead organization, which will provide the primary interface with the ISC and take the overall lead for the Pilot.
- Existing capacities/capabilities/expertise/experience that each partner of a given consortium will provide towards the implementation of the missions.
- In-kind and/or financial support from partners of the consortium that would benefit the Pilot (e.g., in-kind salary support, administrative support, infrastructure, provision of facilities for research activities/meetings of partners, etc.).
- Description of a stakeholder engagement process over the 18-month period and the timeline.
- Process for progress and impact monitoring and assessment.
- Budget allocation (up to \$250,000).
- Potential risks and risk management strategy.

Step IV – Interviews with Potential Pilot Missions: Based on the reviews of the Selection Committee, the Global Oversight Committee and potential funders will hold interviews with representatives of the potential Pilot Missions and will select the final five consortia. The goal is to launch five Pilots by January 2025, provided funding for co-design phase is secured.

Timeline

Expressions of interest to co-design Pilot Science Missions	21 March- 31 May 2024
Virtual Q&A sessions about the call	25 and 26 April 2024
Submission deadline for expressions of interests	31 May 2024 00:00 UTC
Selection of shortlisted expressions of interests	End of June 2024
Meeting(s) with funders (matchmaking)	September 2024
Submission deadline for full bids	Mid-October 2024
Interviews with potential Pilots	End of November 2024
Launch of Pilots at the ISC General Assembly in Oman	January 2025

After the Co-design phase

At the end of the 18-month co-design process, the ISC and the Global Oversight Committee will undertake a formal evaluation of all Pilots to identify those that will proceed to full mission implementation. The evaluation process will assess whether a Pilot has the following elements in place:

- A clearly defined mission.
- Commitment of all stakeholders to full mission implementation.
- Commitment of all partner organizations to the success of the Pilot, including enclosed letters of support.
- Functional stakeholder engagement processes, with clearly presented and completed initial engagement.
- Required capabilities (such as analytical, modelling, complex systems analysis, communication and storytelling, and data management capabilities).
- Stable organizational arrangements.
- A solid implementation plan with intervention measures.
- Secured funding for full mission implementation. The fundraising will be a collaborative effort between the consortia, the ISC, and funders.

Based on the assessment and considering various context-specific factors, the ISC and the Global Oversight Committee will identify Pilots that can proceed to full mission implementation.

For more information visit council.science/sustainability-missions. Apply by 31 May 2024.



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