



# Advancing science as a global public good

High level strategy

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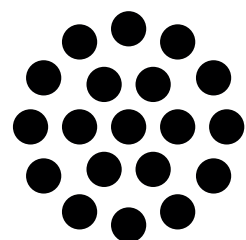
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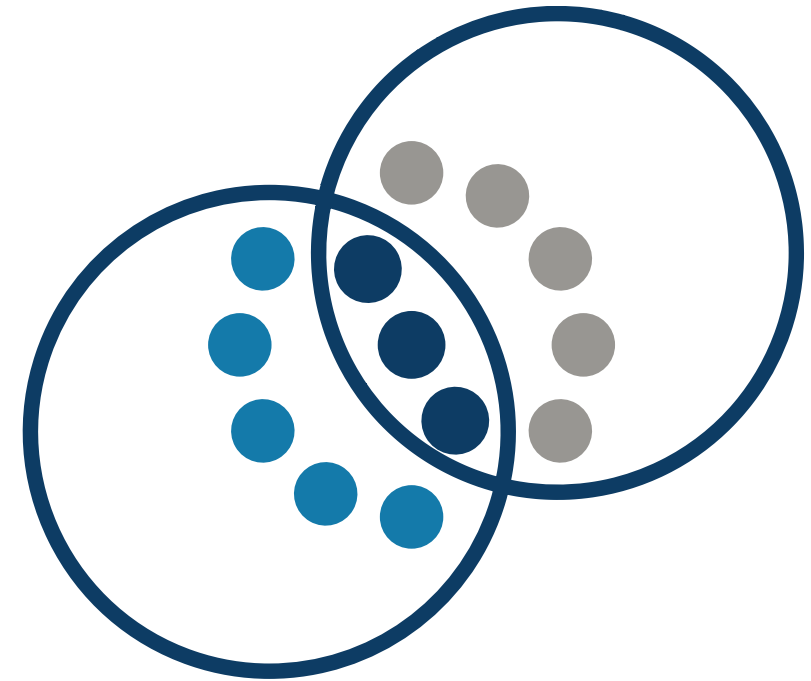
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# Executive Summary

A merger of the International Council for Science (ICSU) and the International Social Science Council (ISSC) forges a new organization – the **International Science Council** – to advance the creativity, rigour and relevance of science worldwide. It creates a unified, global voice for science, with a powerful presence in all regions of the world and representation across the natural (including physical, mathematical and life) and social (including behavioural and economic) sciences.

The importance of scientific understanding to society has never been greater, as humanity grapples with the problems of living sustainably and equitably on planet Earth. The Council will defend the inherent value and values of all science at a time when it has become harder for the scientific voice to be heard. It will strengthen international, interdisciplinary collaboration and support scientists to contribute solutions to complex and pressing matters of global public concern. It will advise decision makers and practitioners on the use of science in achieving ambitious agendas such as the Sustainable Development Goals (SDGs) adopted by world leaders in 2015. And it will encourage open public engagement with science.

## Vision, mission and core values

The vision of the Council is to advance science as a global public good. Scientific knowledge, data and expertise must be universally accessible and its benefits universally shared. The practice of science must be inclusive and equitable, also in opportunities for scientific education and capacity development.

**The mission is to act as the global voice for science. That voice must be powerful and credible in:**

- Speaking for the value of all science and the need for evidence-informed understanding and decision-making;
- Stimulating and supporting international scientific research and scholarship on major issues of global concern;
- Articulating scientific knowledge on such issues in the public domain;
- Promoting the continued and equal advancement of scientific rigour, creativity and relevance in all parts of the world; and
- Defending the free and responsible practice of science.

## The core values to be upheld in the Council's work, governance and partnerships will be:

- Excellence and professionalism;
- Inclusivity and diversity;
- Transparency and integrity; and
- Innovation and sustainability.

## Realizing the mission

The Council will realize its mission by convening the scientific expertise and resources needed to provide leadership in catalysing, incubating and coordinating international action on issues of priority to the scientific community and society. It will direct its voice both *externally* on issues of major public relevance, and *internally*, on matters that support effective scientific responses, particularly where new knowledge, capacities, resources or ways of working are needed.

In developing agendas for priority action, the Council will draw fully on the resources of the organization's members and provide flexibility for designing and implementing imaginative, timely and impactful projects and campaigns. Its activities will be delivered in collaboration with its members and key partners.

## Achieving success

Leadership by scientists of vision, recognized experience and exceptional achievement will be critical in securing the Council's legitimacy, credibility and convening power. They will need to ensure that the Council focuses its efforts on a carefully selected and persuasive agenda of priorities and projects that address issues of international scientific and public importance. Successful delivery on that agenda will require effective partnerships, allowing the Council to function as a major node in a globally connected network of influential and trusted collaborators.

The Council's unique membership provides the essential foundation for the organization's work. The committed engagement of members will be a key determinant of the Council's success. They will benefit from international opportunities to advance their own priorities and interests, including participation in important international scientific conversations and activities, and connections with powerful global networks.

Visibility will also be key. Compelling and astute communications and outreach will support recognition of the Council as an influential global voice. Its reputation and impact will also rest on the competence and capacities of a well-resourced headquarters.

1



**Introduction**

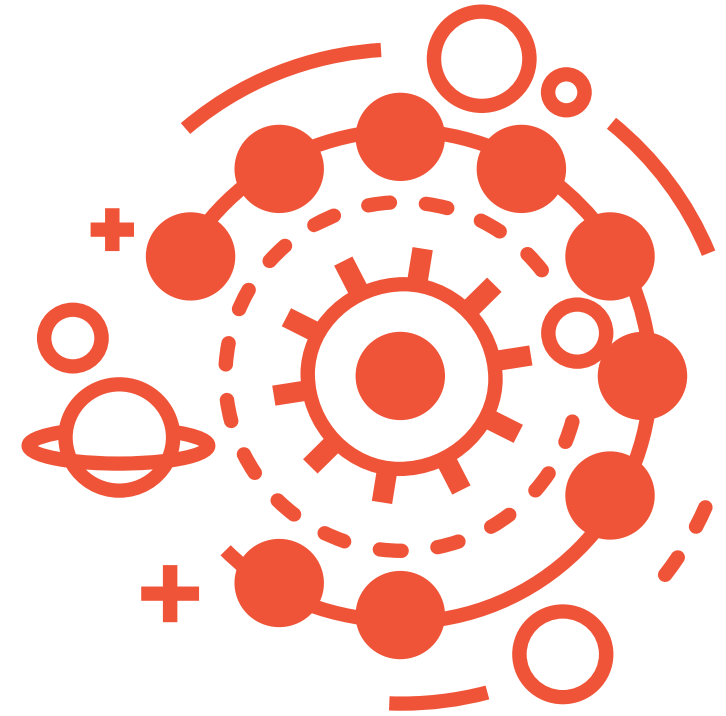
## Introduction

In October 2017, at a meeting held in Taipei, the members of the International Council for Science (ICSU) and the International Social Science Council (ISSC) agreed to merge and found the International Science Council. Established in 1931 and 1952 respectively, both Councils have made major contributions to international science over their lifetimes. The decision to merge is in line with the course of developments in science over the past decades. It follows many years of increasing collaboration between the two Councils, and responds to a shared ambition to magnify the impact of their long-standing commitments to work «*for the benefit of society*» (ICSU) and to «*help solve global problems*» (ISSC). The merger is intended to build a strong foundation for advancing science across the disciplines and in all parts of the world, and for protecting the Council's vital role in shaping humanity's future on planet Earth. The new organization will draw strength from its unique membership, which brings together scientific unions and associations, academies and research councils.

This document sets out a fundamental statement of purpose and high-level framework for guiding the substantive development of the new Council into the future. It articulates a vision, mission and set of core values for the organization, indicates how the mission can be achieved and what the key determinants of success will be. Its recommendations seek to support the creativity of the Council's members and leadership to identify priorities and projects that are imaginative, impactful, timely and deliverable at a global level.

Throughout the document, the word science is used to refer to the systematic organization of knowledge that can be rationally explained and reliably applied. It is inclusive of the natural (including physical, mathematical and life) sciences and social (including behavioural and economic) science domains that will represent the new Council's primary focus, as well as the humanities, medical, health, computer and engineering sciences.

2



**Science in an  
evolving global  
context**



**The priorities and practices of science are determined both by the internal dynamics of scientific inquiry and by contemporary socio-political contexts. Both are increasingly shaped by two fundamental concerns:**

### ***The imperative to help solve global problems***

Major contemporary challenges confronting humanity have global impacts that demand global responses that almost invariably require strong engagement from the world of science. As the range of challenges embedded in the United Nations 2030 Agenda for Sustainable Development shows, these problems are often highly coupled and profoundly complex. Scientists are increasingly expected not only to advance scientific understanding of their nature, but also to make decisive contributions to solving them. The pressure on science is to produce “actionable” knowledge that responds to the needs and expectations of society and that supports transformative societal responses to challenges of the present and foreseeable future.

### ***The need to defend the inherent value of scientific enquiry and interpretation***

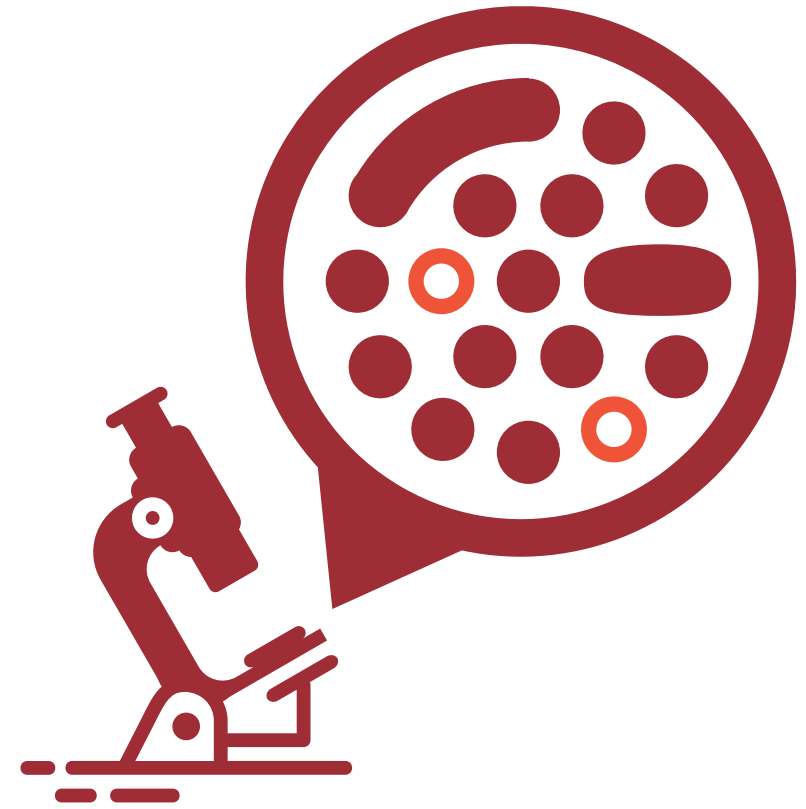
A new digital world is providing unprecedented levels of global connectivity that has powerful implications for the relationships between citizens, the media, elected representatives, interest groups and experts, and more broadly, between science and society. The ubiquitous use of software tools and social media enable the democratization of the processes whereby knowledge and information are generated and used. For science, this digital world offers great opportunities to reach new audiences. But it also drives a “post-expert” dynamic in which people regard access to information as obviating the need for scientific interpretation. It enables the spread of misinformation and its growing use as an agent of political activism, strategy and policy-making. Reduced trust in institutions, accusations of elitism, and broader trends towards populist politics all pose fundamental challenges to the value of deliberative scientific enquiry. Although scientists still enjoy high levels of public trust in many parts of the world, these developments change political dynamics in ways that make it harder for the scientific voice to be heard.

**These are not new trends, but they are intensifying. They are the enduring consequences of ongoing changes that are technological, social and cultural in nature. They create a context in which there is a distinctive need for international collective action to:**

***Enable science for the future*** by securing its practical relevance to complex global problems that no one country and no one discipline can address on its own. This will require strengthened international scientific collaboration that harnesses scientific perspectives and expertise from all parts of the world. It will require a strengthened integration of knowledge through enhanced inter-disciplinary collaboration, involving the joint framing of issues and the collaborative design, execution and application of research across different fields of science. And it will require new ways of working in the trans-disciplinary mode of engaging decision-makers, policy-shapers and practitioners, as well as actors from civil society and the private sector, as partners in the co-design and co-production of solutions-oriented knowledge.

***Secure the future of science*** by advocating the inherent value and values of all science – from fundamental to stakeholder-engaged science – to society. This includes effectively communicating scientific knowledge in relation to a wide range of contemporary issues. It means promoting continued support for focused disciplinary enquiry and unfettered scientific curiosity. It also means championing investment in scientific education, research and development, particularly in the Least Developed Countries (LDCs) of the world.

3



**Vision, mission  
and core values**

### **3.1 Vision: Science as a global public good**

Knowledge derived from scientific research is a staple of human understanding and creativity. It is fundamental to the evidence that should inform societal decision-making and public policy. The importance of deliberative scientific understanding to society has never been greater, as humanity grapples with the problems of living sustainably and equitably on planet Earth. It is vital therefore that we safeguard science as a global public good. Its knowledge, data and expertise must be universally accessible and its benefits universally shared. A mutually supportive global community of science carries responsibility for this by ensuring inclusivity and equity, also in opportunities for scientific education and capacity development.

### **3.2 Mission: The global voice for science**

To realize this vision, the Council seeks to provide a powerful and credible global voice that is respected both in the international public domain and within the scientific community. It will use that voice at the international level to:

-

### 3.2.1 Securing a global voice

The International Science Council's founding members are the former members of the International Council for Science (ICSU) and the International Social Science Council (ISSC), including 40 international scientific unions and associations, and over 140 organizations such as academies and research councils representing science in a country, region or territory.

The Council's founding members represent approximately 70 per cent of the world's nations. Many of the countries not currently represented by ISSC or ICSU can be categorized as "*least developed*". To be a truly global voice for science, the International Science Council must build on its unique membership base and establish a strong and effective presence in all parts of the world, including in regions of the Global South. This is a challenge for an organization committed to fostering inclusivity and diversity. It will be addressed in two ways:

- Firstly, the Council will actively seek to expand its membership to include those countries not yet represented and, in the case of LDCs, address the issue of establishing affordable membership fees.

- Secondly, the Council will develop a strategy for securing effective regional collaboration and participation in the organization's work. Such a strategy should be developed in close consultation with its existing regional offices and members.

Whilst the Council's membership will focus primarily on the natural (including physical, mathematical and life) sciences and social (including behavioural and economic) sciences, the organization will be sensitive to the priorities and include the perspectives of other fields of science in its work. This will be realized, in part, through the comprehensive scientific representation of many of the Council's national members. But it will also depend on building effective and complementary partnerships with other international organizations and, particularly, with international domain-specific bodies such as those included in section 5.3. In addition, the Council will remain open to membership applications from unions and associations of key scientific disciplines not currently represented in its structures.

## 3.3 Core values

In fulfilling this challenging and ambitious role, the values that the Council will uphold in its work, its governance and its partnerships include:

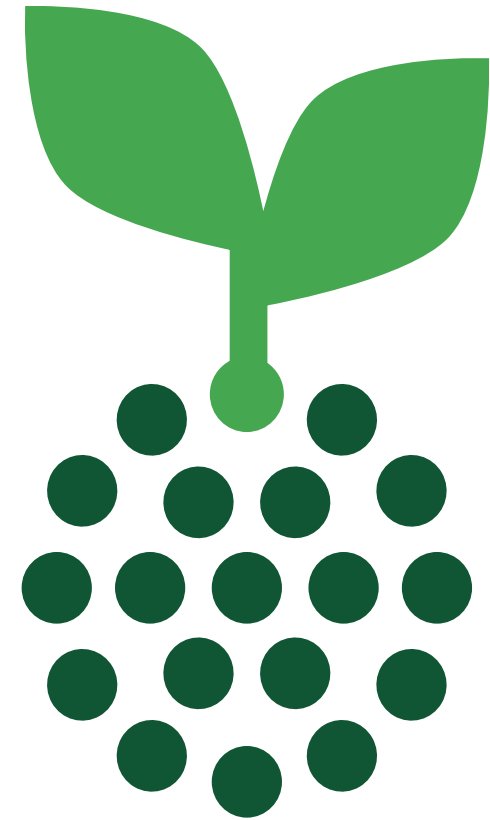
***Excellence and professionalism:*** The Council will deliver work of the highest quality and professional standards. It will be precise in articulating scientific understanding, including its uncertainties, and rigorous in ensuring that what is communicated reflects the best contemporary scientific findings.

***Inclusivity and diversity:*** The Council will promote access to science and its benefits for all, rejecting discrimination in all its forms. It will include perspectives and approaches from all parts of the world, and improve the participation of women and early career scientists in international science.

***Transparency and integrity:*** The default position for the Council's governance and decision-making processes will be openness and transparency, except where confidentiality is strictly required. The actions of all those acting on its behalf must demonstrate the highest standards of personal integrity.

***Innovation and sustainability:*** The Council will identify, attract and learn from new talent and new ideas. It will stimulate new approaches, put forward new solutions and embed the principles of sustainability in its own policies and practices.

4



**Realizing  
the mission**

## 4.1 Priorities

### 4.1.1 Issues and target audiences

The Council will realize its mission by convening the international scientific expertise and resources needed to provide leadership in catalysing, incubating and coordinating action on issues of priority to both the scientific community<sup>1</sup> and the society of which it is a part.

This will involve the Council directing its voice both **externally**, on matters of major relevance to society, and **internally**, to support effective scientific responses to such matters, particularly where new knowledge, capacities, resources, or ways of working are required. External engagement about “*science-for-policy*” priorities thus creates demand-led imperatives for internal engagement about “*policy-for-science*” priorities.

<sup>1</sup> The «scientific community» refers here to the diverse network of interacting individuals, groups and institutions that creates, scrutinizes, tests and openly publishes scientific ideas, progressively weeds out error, and produces the cumulative knowledge base of science.

### External engagement:

**Instances that would motivate external engagement and examples of relevant priorities include cases where:**

- Scientific understanding is appropriate to the formulation of major policy frameworks: e.g. energy systems, antibiotic resistance, risk in complex systems;
- Existing policies have failed to take relevant scientific knowledge into account: e.g. health policies based on homeopathic solutions, implementation of the law of the sea that ignores scientific understanding of the oceans;
- Ongoing scientific input and advice is required: e.g. international strategies for disaster risk reduction, migration, climate change, environmental degradation, inequalities, infectious diseases, security, and sustainable development;
- Issues arising from new scientific understanding have major but unrecognized implications for society, which call for awareness-raising: e.g. artificial intelligence and the future of work, potential transformations of the human through implantation or genetic manipulation;



- The freedom of scientists to express their scientific understanding and its implications is denied, where the free movement and association of scientists is restricted, or where scientists are being persecuted in the pursuit of their work.

The United Nations (UN) and its specialized agencies represent a priority target for work on these kinds of issues, and the Council will strive to be the major conduit for strong, systemic interaction between the UN and the scientific community. Other important target audiences for external engagement would include:

- Regional inter-governmental organizations and their respective scientific advisory structures, e.g. the European and African Unions, Association of Southeast Asian Nations, the G8/G20;
- The international private sector, which plays an increasing (albeit informal) role in global governance, in managing global resources, and in the innovation and marketing of powerful new technologies; and
- Civil society; a difficult target but arguably the most important as, in the modern world, the development of a scientific ethos, an understanding of the nature of scientific evidence, and access to knowledge and its potential uses, are all vital ingredients for a politically vigorous and aware population.

### **Internal engagement:**

#### **Instances that would motivate internal engagement and examples of relevant priorities include the need to:**

- Mobilize support for new research, or the improvement of existing scientific understanding of contemporary challenges: e.g. causality in the climate system, the characterization of complex systems, conflicts, cyber worlds;
- Address inequalities in science, critical capacity needs, and conditions for effective international scientific collaboration: e.g. modern data science capabilities, strengthened support for the social sciences in low- and middle-income countries, the promotion of opportunities for early career scientists, gender equality in science, the role of indigenous knowledge;
- Develop updated and more effective policies and practices: e.g. on expert systems for non-experts, science education and scientific careers, peer review, the evaluation of excellence and societal impact of science, scientific ethics and integrity;
- Promote new ways of working, to adapt to the changing social dynamics of science, or to exploit changing technologies: e.g. the practice and evaluation of trans-disciplinarity, translational research, cross-disciplinary data integration, reproducibility, scientific publishing.

The international scientific community itself is a priority target for work on these types of priorities. This includes the Council's own constituent organizations, as well as the international scientific bodies listed in section 5.3. Other important target audiences include:

- International networks and consortia of science policy makers and research funders, e.g. the Global Research Council (GRC) and Belmont Forum; and
- United Nations (UN) agencies such as the UN Educational, Scientific and Cultural Organization (UNESCO) and other inter-governmental structures that convene ministers of science and have a specific mandate for promoting international scientific collaboration, e.g. the Organisation for Economic Co-operation and Development (OECD), European Commission and Inter-American Institute for Global Change Research (IAI).

#### 4.1.2 Developing an agenda

An agenda for potential action will require access to high levels of scientific comprehension and far-sighted strategic thinking across a broad spectrum of scientific fields. Based on open and deliberative processes of consultation aimed at drawing fully on the resources of the Council's members and broader networks of expertise, the Council's Governing Board will develop a three-year agenda of priorities, to be discussed and endorsed at each General Assembly.

In a fast-changing world where reliance on scientific knowledge and understanding cannot be taken for granted, it will be important for the Council to be able to intervene in a timely manner on major, science-relevant public issues. It should, therefore, ensure the maintenance of sufficient operational flexibility to act in this opportunistic fashion.

#### 4.1.3 Criteria for choice

It is equally important that explicit criteria are applied to the choice of priorities for action such that:

- The choice of issue is timely and relevant to the Council's mission;
- It offers a clear, and ideally, unique role for the Council;
- There is a clear target audience and pathway to influence, and a strong possibility of positive impact;
- The issue speaks to the interests of multiple disciplines; and
- There is due regard to the contexts, cultures and structures of relevant political settings.

## 4.2 Activities

### 4.2.1 Areas of work

In line with its key objectives (as presented in section 3.2), the Council's activities will focus on three principle areas of work. Each depends on effective international scientific collaboration and coordination and each should serve to demonstrate the inherent value of science to society. They are:

- Science-for-policy (stimulating and supporting international scientific research and scholarship, and communicating science that is relevant to international policy issues);
- Policy-for-science (promoting developments that enable science to contribute more effectively to major issues in the international public domain); and
- Scientific freedom and responsibility (defending the free and responsible practice of science).

### 4.2.2 Approach

The Council's response to selected priorities in these three areas of work will involve membership-engaged initiatives – projects and campaigns – that are time-bound and that draw on a toolbox of instruments, including:

- Establishing and supporting international programmes, networks and/or other relevant coordinating structures;
- Publishing advisory reports, policy narratives and statements;
- Organizing (or co-organizing) events, including meetings, workshops, seminars and/or conferences;
- Developing and delivering or commissioning training and/or fellowship schemes; and
- Designing communications and outreach actions, including media events.

### 4.2.3 Modes of delivery

Depending on the availability of resources, the role of the Council headquarters in delivering focused projects and campaigns may vary between:

- Leading on design and implementation;
- Leading on design and engaging others, including groups of Council members, programmes and networks or partners to lead on implementation; and
- Providing international legitimacy and leverage for Council members and others, as appropriate, to lead on design and implementation.

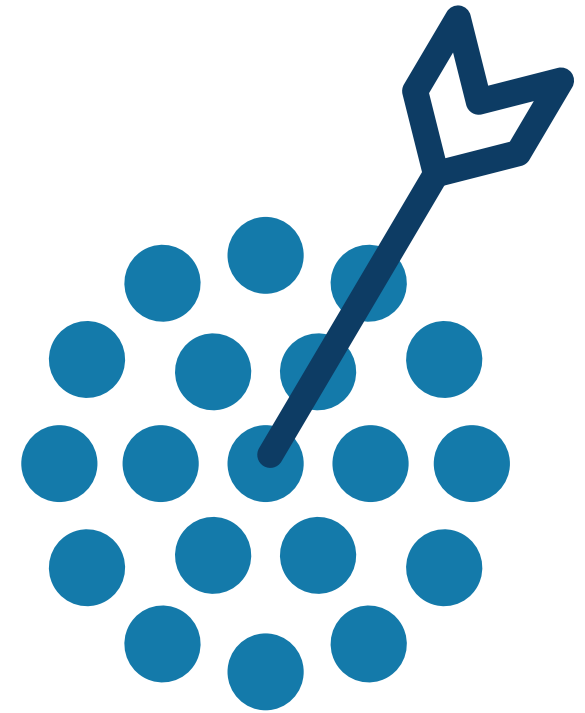
## 4.3 Planning, monitoring and reporting

At each General Assembly, members will discuss and endorse a prospective Agenda of Priorities (see section 4.1.2) and associated Activity and Business Plans, which the Governing Board will be mandated to implement during the inter-sessional period.

Activity and Business Plans will provide a system for regular activity monitoring and reporting to members, funders and stakeholders. They should be based on the principles of results-based management, specifying for each project or campaign:

- Anticipated outcomes and target audiences;
- Key performance indicators that will be used to assess efficacy;
- Outputs necessary to achieve each outcome;
- Sources of funding and key resources needed, including staffing and additional skills and expertise; and
- An identification of relevant partners and membership engagement opportunities.

5



**Achieving  
success**

**The Council seeks to establish itself as a powerful global presence. There are six essential determinants of achieving this ambition.**

## **5.1 Leadership: Legitimacy, credibility and convening power**

The success of the new Council will be critically dependent on the qualities of its leadership. This must include a relevant range of scientists of vision and exceptional achievement, recognized experience and distinction as officers, board members, advisors, and contributors to the work of the Council.

The combination of such leadership and the capacity, through its membership base, to reach deep into the scientific community for the most rigorously tested scientific understanding will be essential if the Council is to have:

- Legitimacy in the scientific community that it claims to represent;
- Credibility with the institutions and individuals that it seeks to influence; and
- Convening power to engage members of the scientific and policy communities, the private sector and civil society in its work.

The Council's leadership must uphold the organization's core values (see section 3.3) and work to develop mutual respect between the scientific domains represented by the merging organizations.

## **5.2 A focused and persuasive agenda**

For the Council to have influence and impact, it must focus its efforts on carefully selected issues that address matters of contemporary international scientific and public importance. This should be done in ways presented in section 4 and on the basis of criteria set out in 4.1.3.

In order to be responsive and dynamic in addressing relevant priorities as they arise, the Council must be able to rely on agile and empowered decision-making. The capacity for innovative thinking and judicious boldness in the face of negative reactions from those with conflicting views should rest on the good judgement of the Council's leadership, as well as the experience of its staff.

## 5.3 Effective partnerships

The Council is intended to function as a major node in a globally connected network of influential and trusted partners, which can help to deliver impact. The strength of the Council's external relationships will therefore be central to its success. Existing partnerships will have to be reinforced, new partners identified, and appropriate terms of cooperation specified, for example with possible partners from the private sector.

### Active and complementary partnerships should be developed with a wide range of bodies, including with:

- UN agencies and programmes, such as UNESCO, the UN Environment Programme (UNEP), World Health Organization (WHO), and the World Meteorological Organization (WMO);
- Other domain-specific international bodies, such as the World Federation of Engineering Organizations (WFEO), the International Council of Academies of Engineering and Technological Sciences (CAETS), the InterAcademy Medical Panel (IAMP) and the International Council for Philosophy and Human Sciences (CIPSH);

- International scientific organizations, such as the InterAcademy Partnership (IAP), The World Academy of Sciences (TWAS), and organizations aimed at advancing science in low- and middle-income countries, such as START;
- International networks of early career scientists, such as the Global Young Academy (GYA) and World Association of Young Scientists (WAYS);
- International consortia of funders, such as the Belmont Forum and Global Research Council (GRC); and
- Bodies that are representative of the international business community such as the World Business Council for Sustainable Development (WBCSD), International Chamber of Commerce (ICC), and international organizations for public-private cooperation such as the World Economic Forum (WEF).

All partnership agreements should bring value to the Council's vision and mission, and respect the Council's core values, as set out in section 3.3. Partnership with organizations that are solely profit-based should be avoided.

## 5.4 An engaged membership

The Council's unique membership, which brings together scientific unions and associations, academies and research councils, provides the essential foundation for the organization's work. The Council will respect the mandates and responsibilities of its members, and will work to create international opportunities for them to advance their own priorities and interests.

These include opportunities for members to participate in important international scientific conversations and activities, and to connect to powerful international networks, enabling them to:

- Shape global scientific agendas and contribute directly to scientific matters of global public concern;
- Showcase the relevance of their scientific contributions at the international level;
- Strengthen national and international awareness of and support for the disciplinary or national scientific communities they represent; and
- Enhance their own influence within scientific and policy communities, including national governments and research funders.

Additional benefits of Council membership include:

- Opportunities to collaborate with each other on issues of common interest, including South-South and North-South collaboration;
- Access to information on international scientific developments, including funding opportunities;
- Support for the exchange of best practices, e.g. on trans-disciplinarity, gender policies, etc.

Mutual advantage for the Council and its members will require the Council to fully engage members in identifying its priorities and delivering associated projects and campaigns. Members will be called upon to participate actively in these processes and to exploit the opportunities that the Council would offer.

## 5.5 Visibility

Recognition of the Council as an influential and impactful global voice for science will require it to be known within the international scientific community and amongst its stakeholders in ways that neither of the merging organizations has been. The Council will need to develop a significantly improved communications and outreach strategy, which should be relevant to the modern world, support clear and sensitive communication with a diversity of internal and external audiences, and make provision for access to expert legal and media advice. In addition, a well-defined and executed brand strategy should serve to sustain the commitment of the Council's members, leaders and staff to realizing its vision and mission.



## 5.6 Competence and capacities

The Council must ensure that it has the necessary competence and capacities to deliver on all aspects of the proposed strategy. The required leadership qualities have been stressed in section 5.1. Within the Council's Headquarters, it will be particularly important to include or have ready access to:

- Expertise in science management, as well as global policy;
- Strong networking, project management and organizational skills;
- Journalistic skills and a significantly enhanced media and communications capability; and
- Fundraising skills.