TECHNOLOGY WS6
FACILITATION MECHANISM

SUSTAINABLE DEVELOPMENT GOALS

Session 2:

Design and Evaluate Research Funding with impact

On-line training session on STI policy and policy instruments

for SDGs for Asia and the Pacific

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UN-IATT Workstream 6 on
Capacity-Building in STI for SDGs

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Objectives

1. To provide an overview of the evidence, thinking, and practice on design and evaluation of competitive research funding

    - What should funders systematically think about when designing competitive research funding and when evaluating them?
    - Which key features do they need to consider in each step?

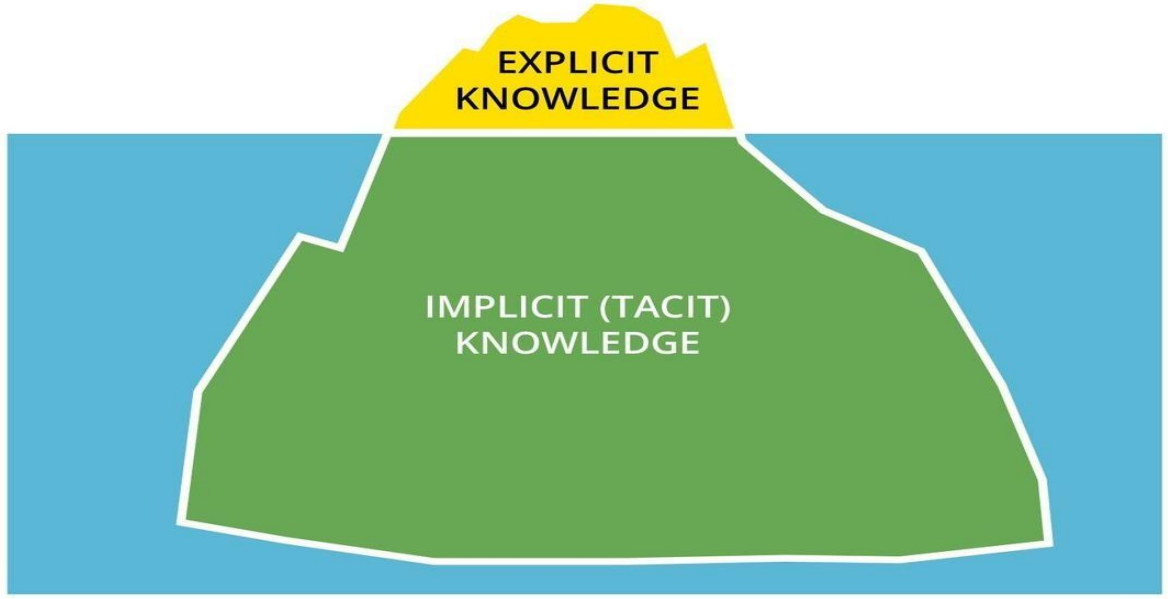
2. To provide an overview of evaluation design **in accordance with** funding design

These slides are based on two reports performed for the IDRC on the development of a protocol for funding and evaluating research with impact:

- “Designing and evaluating research funding with impact: Step-by-step recommendations for the design and evaluation of competitive research funding programmes” (forthcoming)

- “Evaluating research funding with impact: a pilot” (forthcoming)

Steps for funding and evaluating research seem obvious, but they are not

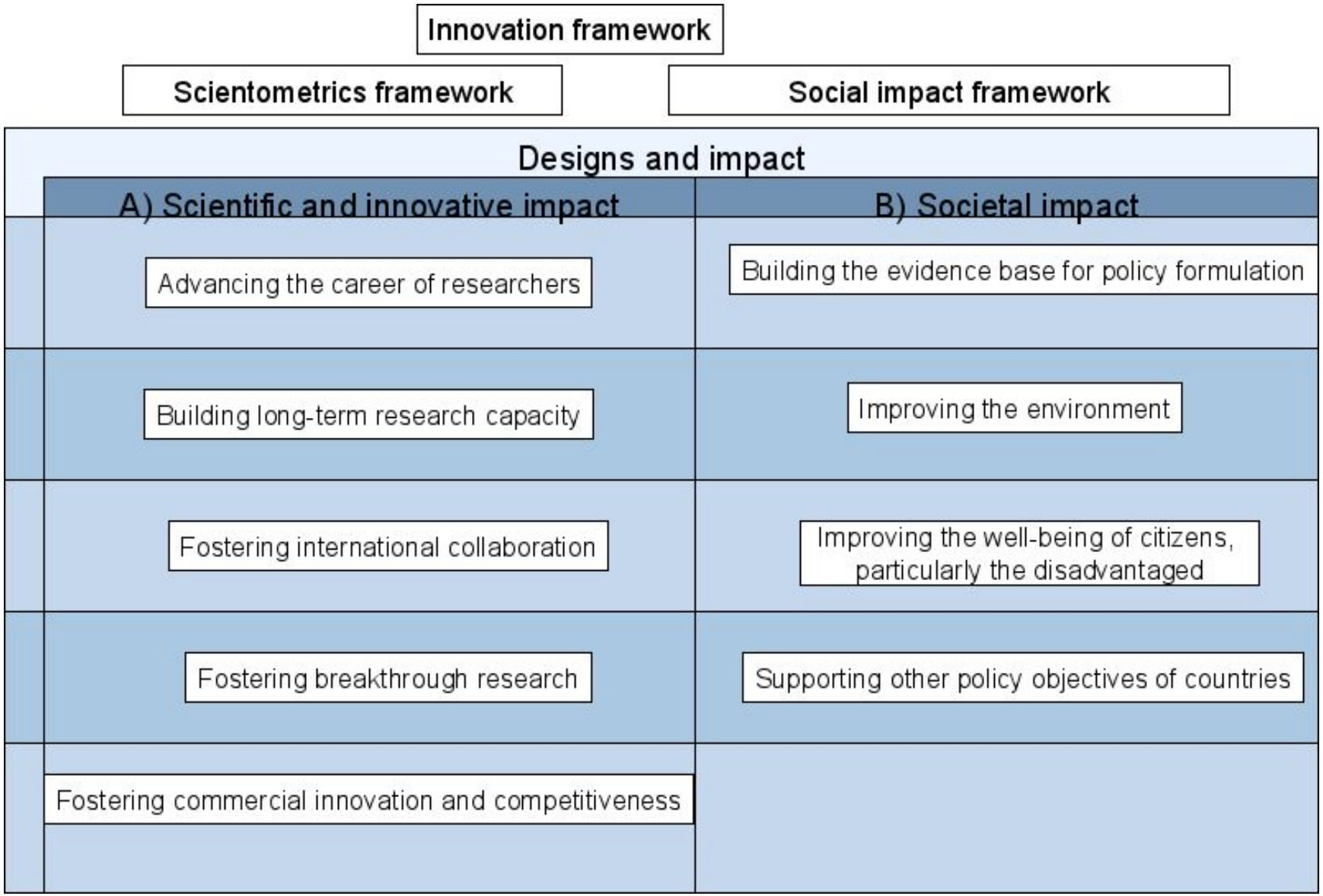


Examples:

- What is the relation between research inputs, outcomes, and impact?
- What impacts should be aimed for?
- Who chooses the objectives?
- What time horizon should the funding programs cover?

Our work intended to uncover the **often tacit knowledge** that is available in the academic and grey literature, emphasising on the steps for funding and evaluating research

Aims and impacts of scientific and social impact funding designs



Procedures and stages of research funding design

	Stage	Scientific impact	Societal impact
1	**Scope (macro priorities)**	Choose domain and stage of research	Domain, societal issues, societal transformations
2	**Research priorities**	Topics: Bottom-up / top-down	Bottom-up, users of research expected to be included
3	**Proposal elaboration**	NA (Researchers)	Interaction between funders and applicants: feedback, training
4	**Proposal evaluation**	Academic peer review: scientific quality	Different types of users; potential societal impacts; disciplinary flexibility
5	**Agenda setting**	NA	Negotiation between funders and applicants
6	**Post-award management**	Supervision, interim outputs, revisions	Support and monitoring Networking and synthesis; transdisciplinary training
7	**Translation and impact**	IPR, commercialisation	Non-bibliographic open products, knowledge exchange, joint learning, transformation activities

Key variables in research funding

- **Time horizon:** Short-term, mid-term, long-term?
- **Target level of the research system**: individuals, organizations, team, project:?
- **Degree of uncertainty**: radical, incremental?
- **Collaborations**, within and across disciplines and knowledge producers: mono-, inter-, trans-disciplinary?
- **Beneficiaries**: academics, non-academics (who exactly)?
- **Selection of variables** should be coherent with macro-objectives, specific priorities, and conceptual models
  - E.g., it is common to find expectations of long-term social ipact from short-term projects aimed at scientific excellence

Peer review

- Challenges:
  - Ranking research proposals that are of similarly good quality
  - No evidence on efficaty of peer-reviewing on predicting social impact
  - Unconscious biases
- Suggestions:
  - Avoiding the option for researchers to suggest peer-reviewers
  - Double blind review of proposals
  - Lottery to select between proposals with siilar high quality

Post-Award management activities

Some post-award management activities	Scientific impact	Social impact
supervision of research activities	X	X
review of interim reports	X	X
suggestions for changes	X	X
review of changes proposed by researchers over the lifetime of the project	X	X
support research teams in the implementation and translation of research outputs		X
facilitating mutual learning environments between researchers, policymakers and other stakeholders		X
designing ways to reward the development of knowledge outputs, including non-academic publications such as maps, software, and media		X

Mentimeter questions

- According to your perception, to what extent researchers in your country possess the skills to engage in social impact work with non-academic communities?
  - a) to a great extent. Researchers know very well how to work with non-academics to achieve social impact goals;
  - b) there is a lack of skills. Researchers usually improvise and find it hard to communicate and achieve common goals with non-academics.

How to participate in Mentimeter quiz?

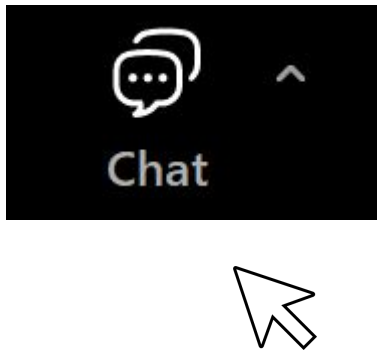
Option 1:

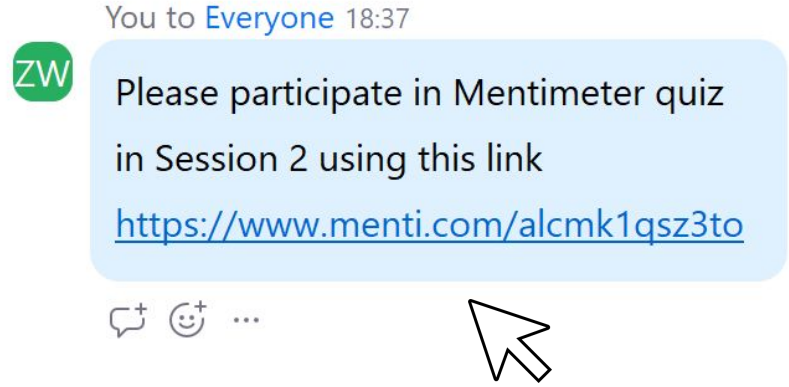
Scan the QR code

QR Code for Session 2

Option 2:

Go to the chat on Zoom and use the link provided





Participation is required, participation is anonymous

Key features to design the evaluation

Stage / issue for discussion	Description
Reflecting on the context of research	How the geo-political and environmental context affects research?
Identifying the most relevant intended uses of the evaluation	Advocacy; Allocation; Accountability; Analysis
Identifying stakeholders	research funders; research participants; researchers; research users; research beneficiaries
Define	Time horizon; Risk/serendipity; nature of collaborations and inter / trans disclinarity
Engaging with stakeholders early on	Joint team: non-academic and academic partners collaborate equally; Exchange: non-academic partners define the agenda; Ideas to application: academics define the agenda; Networks: programme invites proposals from private-public networks who may have different aims and agendas.
Choosing conceptual models	How is research linked to social / scientific impact?
Choosing methods and sources	Quantitative vs qualitative vs mixed, research design
Selecting indicators	Bibliometric indicators? Environmental? Standard vs constructed?
Anticipating ethical issues	Ethical assessment of the purposes and data collection and use, as well as conflicto of interests
Communicating results	What is the best communication strategy for the intended use and users?

Main steps in the design of the evaluation

a) Consider the **design** of the research funding programme
b) Consider main impacts expected (objectives and priorities)
c) Assess the k**ey features** to design the evaluation
d) Define the **aims of the evaluation** based on its design
e) Ensure you have the **data** providing information to measure the impacts of the funded research
f) Build **indicators** to interpret the ipacts of the funded research
g) Analysis of the ipacts of the research funded
h) Analysis of the **results** of the ipact evaluation

Example instrument based on an evaluation of one of the ERC

Features	Funding design	Evaluation design
Context of research	Stable region with capacity to do world leading research	Assess the extent to which the funded research produces scientific outputs used by other scientists, **contributing to scientific leadership**
Conceptual model	Logic framework; portfolio approach	Assess if funding has an impact on producing high quality research and supporting researchers' careers **– inputs that are transformed into outputs**
Intended uses of evaluation	Advocacy; Accountability; Analysis	**Assess** if funding has an additional impact on research output, career, and further funding and under which conditions the funding performs better, and the value of peer-review
Level: unit of assessment	Policy program; Resaerchers	Assess the career of the **researchers** and their ability to progress to highly ranked organizations
Engagement with stakeholders	Wide consultation with academic and non-academic stakeholders	**Co-design** of the pilot evaluation between the funder and the team conducting the pilot evaluation
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We hope that these two step-by-step guidelines will be useful to:

- Design / plan your competitive research funding programmes in the next years to make research impactful – according to your impact priorities
    - Consider the key features, rather than a set of prescriptions
- Design the evaluation of such programmes in line with your macro aims (scientific or social impact) and specific priorities

Thank you!

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