Supporting inter-sectoral collaboration possibilities between Research and Industry
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CONCEPT NOTE

Indicator of achievement:
Availability of methodological guidelines for identification of scientific priorities

Mandatory result 1:
Science - business links strengthened through supportive collaborative activities and funding schemes
Sub-result 1.2.: Scientific priorities identified and set

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Contents

Basic considerations

Countries that have conducted STI priority setting processes have employed a wide range of methods. These reach from Foresight and Delphi-like procedures, to consultative processes. For SRNSFG, the key decision points for choosing a method are:

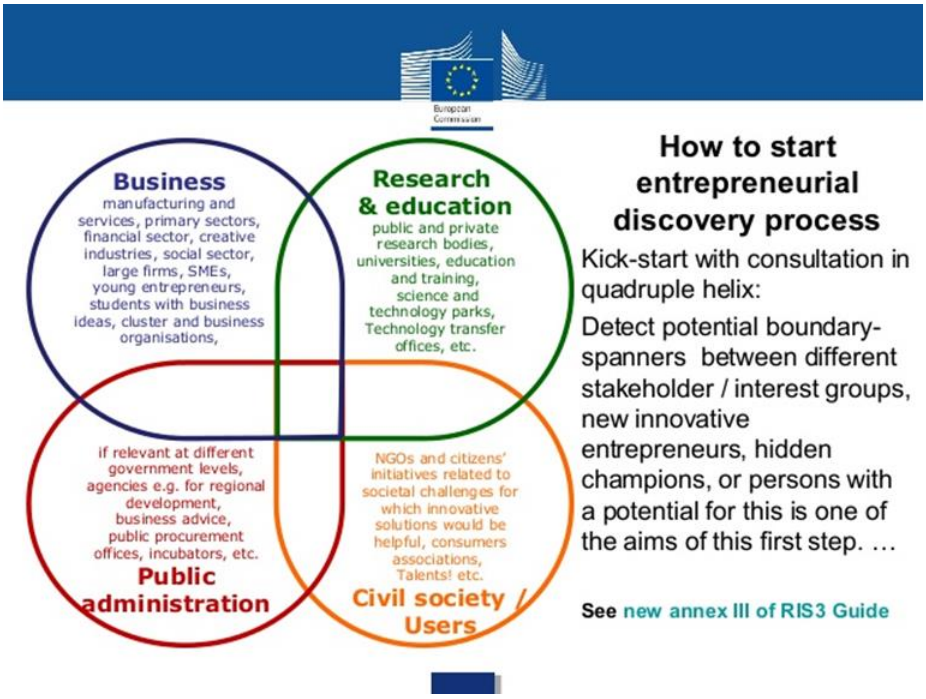
- The process should be carried out within a very short timeframe;
- It should involve all sectors of the quadruple helix (i.e. Science, Government, Economy, Civil Society, Culture);
- Consensus building among stakeholders from the quadruple helix should be given high importance;
- The process should be expert driven, as it should replicated in the future by own means;
- The research agenda should be set for a period of 3 to 5 years, with a mid-term review to accommodate emerging priority issues.

Based on these contextual realities, we propose for defining priorities through consultative expert workshops that would be guided by a clear process, criteria, and ranking framework. To ensure coherence across these workshops, we propose to start off with a train the trainers workshop, i.e. training the facilitators of maximum five planned sectoral workshops.

Selection of Stakeholders

Stakeholders to be involved in the proposed priority setting process should represent the full quadruple helix of the science and innovation system of Georgia.

Figure 1: The quadrupel helix of a regional/national science and innovation system



Source: European Commission

We propose to include the representatives from the following institutions into the planned priority setting process.

Table 1: Proposed stakeholders for priority setting

Area of quadruple helix	**Institution**
Business	Enterprise Georgia Business Association of Georgia Georgian Tourism Association Business cluster: Georgian ICT Cluster, Georgian Furniture Cluster, Georgia Medical (Tuberculosis) R&D Cluster, PMAG Packaging Cluster …
Research and Education	Universities: Tbilisi State University (TSU), Technological University of Georgia, Ilia State University, Tbilisi State Medical University, Akaki Tsereteli State University, Shota Rustaveli State University and the Agricultural University of Georgia Other research institutions: Georgian National Academy of Science (GNAS), Georgian Academy of Agrarian Science (GAAS) …
Public Administration	Ministry of Education and Science (MES) Ministry of Economy and Sustainable Development (MESD) Georgian Innovation and Technology Agency (GITA) Research and Innovation Council (RIC) …
Civil Society/Users	NGOs, e.g. CENN …

Priority setting criteria

Throughout the priority setting process three different 'filters' are used to prioritize the areas defined:

i) The first filter, to be applied during the second day of the sectoral workshops, will focus on the research itself and asked participants to address the following questions:
   - What is the potential for research utilization of the proposed research area?
   - Would the research area involve the development of products or have the potential to improve services?
   - Would the proposed research area bring an innovative element?
   - Would it enhance entrepreneurship?

ii) The second filter, to be used during the third day of the sectoral workshops, emphasizes the dimension of relevance and the opportunity for cross-sectoral work (see Table 2 for a list of the criteria used for ranking of research priority areas); and

iii) The third filter, to be applied during the narrowing process which follow the sectoral workshops, add the dimension of market potential and thus focus more on development than research (see below for a list of criteria used for producing final list of research priorities).

Table 2: Criteria for ranking research priority areas

Criteria	**As determined by**
Appropriateness	Ethical and moral issues Availability of pre-existing data Culturally accepted
Relevance	Equity focus and community concern/demand The size of the problem Contributes to the national and sector objectives
Feasibility	Capacity of the system to support the research Financial and human resources available Cultural/political environment
Impact of research outcome	Chance/opportunity to implement the research Use of the research results Link of the research to policy decisions Overall reduction of the problem, including cost
Opportunity to strengthen collaboration with partners	Presence of capable partners Availability of partner infrastructure and resources Possibility that potential partners will collaborate to undertake the research Possibility of greater research outcome with partner involvement

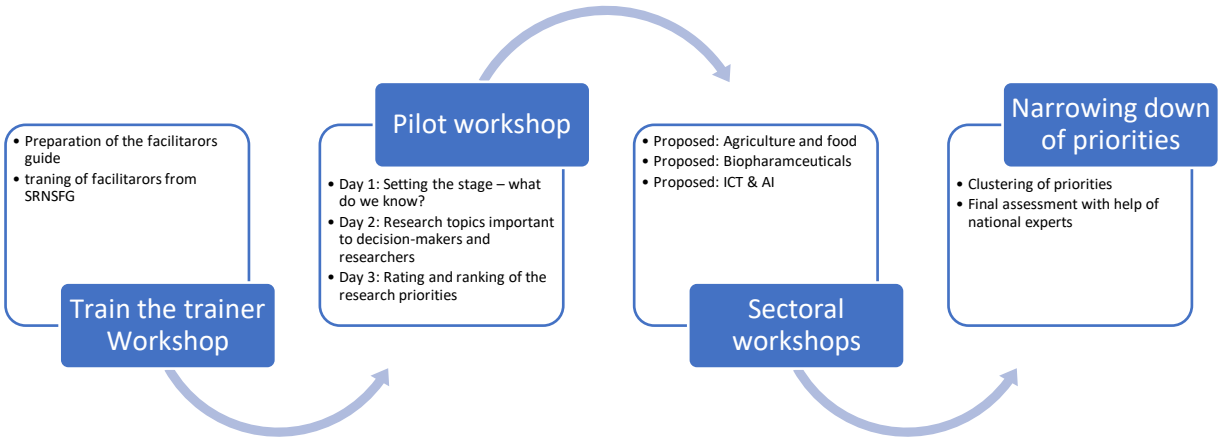
Criteria for producing final list of research priorities are:

i) Linkage to national strategies and development plans / to European strategies and development plans;

ii) Feasibility for implementing the research.

The process design for priority setting

Figure 2: Proposed design of the priority setting process



The train the trainer Workshop

A two-half day train the trainers workshop, will be held end of June 2021. The trainers will consist of Twinning experts. Participants will be senior representatives from SRNSFG and affiliated ministries and institutions.

In preparation for the workshop, a facilitator guide will be prepared. This guide will be used throughout the workshop to familiarize the participants with the design, technical components, and standardized tools that would be used in the eight priority setting workshops to be rolled out to the different sub-sectors. The facilitator guide will address every issue from sectoral workshop start to finish: it will present a draft agenda for the sectoral workshops, outline the detailed process to be followed, and give facilitator tips for dealing with potential conflicts during the workshop. The aim is to ensure future facilitators understand and confident with their facilitator role, and that they will be able to use the facilitators guide in their sectoral workshops, thus ensuring a maximum level of consistency between the sectoral workshops.

Training will provide guidance of how to facilitate the process and on how to use the tools provided in the facilitators guide.

The Pilot Workshop

The Pilot workshop will focus on circular economy and green technologies. The Pilot workshop provides the first opportunity to test the facilitator's guide in practice. The facilitator's guide, workshop sessions, including the length of these sessions, and the tools that have been developed for use in each session will be evaluated during the course of the demonstration workshop to determine whether any final changes needed to be made prior to implementing the remaining workshops. Twinning experts will run the workshop together with trained facilitators. The pilot workshop has the following structure:

Day 1: Setting the stage – what do we know?

Presentations will focus on providing an overview of current research, major research areas, questions to address, research collaborations, and available resources. Any data available from information systems demonstrating the degree of current problems and existing specialisms in science are used. Day 1 will result in a list of (maximum 50) outstanding problems and questions, as well as a list of (maximum 50) research areas presented.

Day 2: Research topics important to decision-makers and researchers

At the start of day 2, participants receive copies of the lists produced on the first day with outstanding research problems, questions, and areas. In addition, the facilitator will provide a summary of the first day. Following this overview, participants are divided into small groups of 5 to 8 experts representing various institutions of a sub-sector. The small groups are given the task to identify areas, from the lists provided, that are already researched and that do not need further research. The groups report back to the plenary following their discussions. Only areas on which consensus exists will be included in the list of areas not needing further research. Following this first exercise of excluding areas not needing further research, the small groups are given the task to list a maximum of 20 priority research areas. The groups are asked to consider four key questions when discussing the priority areas (applying the first priority setting filter defined above). The groups report back to the plenary following their discussions. During this process a facilitator keeps track of areas that were listed across several groups. The expectation is that there would be considerable overlap in priority areas

identified, or that it would be possible to combine areas from the various groups. The aim is to have, at the end of day 2, a consolidated list of maximum 20 research areas per sub-sector representing the needs of both researchers and decision-makers.

Day 3: Rating and ranking of the research priorities

Day 3 starts with a presentation on the rating process whereby participants are taught how to perform the individual and group rating activities. Following the presentation, each participant is asked to conduct an individual rating of the research areas identified, using the criteria of Table 1 (thus applying the second priority setting filter) and giving each criteria a rate of 1 to 5, 5 being the highest. Prior to the individual rating process, the chairperson of each small group makes sure that the participants are well conversant with the research areas proposed. This allows for questions of clarification, facilitating the rating process, and avoiding misunderstanding and potential misrating. However, it is important that the chairperson does not allow further discussion about the research areas listed on day 2, which could influence the rating process. After individual rating, the results of each participant are compiled in a group score sheet, followed by compiling the scores per research area in an overall rating sheet where the ranking was done. This process is followed by a discussion within the small group on areas where there was discrepancy among the members. However, a change in rating is not allowed. The small groups presents their results in the plenary. The final plenary of the workshop focuses on assessing the consensus of people around the ranked research areas. This also helps to identify any outstanding issues, considerations, or concerns for SRNSFG to take on board and reflect on how the priority setting process can remain fair and transparent.

The Sectoral Workshops

Following the demonstration workshop, four further sectoral priority-setting workshops are proposed (Figure 2). These proposed thematic areas do reflect either scientific or economic specialisms of Georgia. These workshops should follow the same process and methodology as described above for the demonstration workshop.

Narrowing down and clustering of priorities

At the end of the four month process of sectoral priority setting workshops we propose to set up an expert panel to assess the collected research priorities against the three criteria indicated above (the third priority setting filter, criteria for producing final list of research priorities) with the aim of reducing the list to a manageable instrument that could be used to guide research investment. Furthermore priorities should also clustered to larger thematic areas. This step is seen as necessary since the process might lead to a very large set of priorities. The expert panel will consist of senior represenattives from SRNSFG that could be complemented by a few experts from European Union countries.