

The header image features a dark blue background with several interlocking gears in various colors (orange, red, green, purple). Each gear contains a white icon: a target, a person, a star, and a hand. The gears are arranged in a cluster, with some overlapping.

The 4Cs behind Georgia's innovation system overhaul

Georgia, a small republic in the Caucasus, has made dramatic economic reforms since its independence, transforming itself into a market economy which entered the World Bank's top-ten list for 'ease of doing business' in 2017. But the country's innovation system is still a work in progress, say experts in a new Policy Support Facility report.

Despite solid economic development and a strong report card from the World Bank, Georgia faces a serious challenge as it looks for ways to improve its research and innovation performance.

The Georgian Ministry of Education and Science (MoES) turned to the EU's Horizon 2020 Policy Support Facility (PSF) to draw up a list of recommendations for revamping its science, technology and innovation system. The support of international experts was then enlisted to help flesh out recommendations for identifying promising research fields by proposing a functional model for selecting national research priorities. Practical guidance was sought to help narrow the gap between research and business, and set up a performance-based funding mechanism for research entities.

Manana Mikaberidze, Director of the Shota Rustaveli National Science Foundation (SRNSF) of Georgia, says "It's very important to emphasise that the major priority topics were agreed with MoES and our Foundation from the very beginning and were in line with the urgent needs and requirements on policy level for science, technology and innovation system diagnosis, identification of weaknesses, preparation of needs assessment and elaboration of major recommendations."

More than 100 stakeholders were involved in meetings and discussions with the PSF-appointed expert group between December 2017 and June 2018, among them representatives from the MoES, SRNSF, Georgian Innovation and Technology Agency, Sakpatenti – National Intellectual Property Center, Ministry of Economy and Sustainable Development and from business, research institutes and universities.

The Georgian science, technology and innovation system (STIS), the experts conclude, is facing a number of "overarching problems", which need to be addressed as a priority. First and foremost is the **low level of research and innovation (R&I) funding**, and general uncertainty surrounding funding streams.

"Without a significant increase in public and private R&I funding, there is a risk that the whole higher education and research system will wither away. This could have serious consequences for the economy and the whole country," says Krzysztof Gulda, co-chair of the PSF expert panel. "Political guidance and strategic planning are crucial for any changes made to arrest this problem."

The second priority focuses on **how research is organised and the need for better integration**. Fragmentation leads to what the experts call "sub-critical mass" in terms of

researchers, facilities and equipment. At the moment, there is little cooperation between research institutes, university labs and sectoral research units.

"This fragmentation leads to duplication in research and facilities, which means available funds are not efficiently used," Maria Nedeva, expert on the panel, points out.

Another priority is to **improve the national R&I system's governance**, including the distribution of responsibility and evaluation regime. Decision-making is currently decentralised, which in principle should be a good thing, but research organisations face undue financial and administrative restrictions leaving little room for exploration and academic and entrepreneurial flair.

The present research evaluation regime is considered a "pointless" administrative burden, bringing little value to the research-performing organisations and offering scant encouragement to researchers. "Salaries and incentives need to reward performance and scientific commitment," stresses Nedeva.

"Georgia has done a good job removing barriers and promoting business and markets, so it was surprising to see the high level of red-tape still holding back its research and innovation landscape," says Manfred Spiesberger, rapporteur of the panel. "Innovation-friendly regulations, framework conditions and targeted financial support for research-business cooperation are required to better use the national research base for the economy and to stimulate private research investment. Here, Georgia's science, technology and innovation system is very much a work in progress."

The way forward...

The policy recommendations prepared by the PSF experts gravitate around strengthening four central issues which they call "the 4Cs" – coordination, concentration, collaboration, and coherence:

Coordination

- Improve the political governance of the R&I system – revise the role of the Research and Innovation Council.
- Create coordination mechanisms for scientific priority setting and implement focused reforms.
- Stabilise financing for public R&I performers – set up funding mechanisms based on evaluation and increasingly reward performance to encourage scientists and innovators to take risks and develop marketable ideas.
- Remove unnecessary legal and administrative burdens.

Concentration

- Embed R&I policy in the overall economic (regional) policy of the country.
- Consolidate the fragmented research system, and finalise reform of the Georgian National Academy of Sciences (GNAS).
- Concentrate R&I resources – research teams and infrastructure, as well as priorities.

Collaboration

- Create communication and coordination platforms to engage all relevant stakeholders.
- Set up a portfolio of financial instruments to promote R&I collaboration.
- Provide better physical research infrastructure.

Coherence

- Guarantee the coherence of governance (authority) structures: define the roles at strategic, operational and performance levels.
- Introduce a coherent baseline funding mechanism, opening it up to all public university research labs, institutes and centres.
- Promote consistency in R&I support measures, avoiding fragmentation and duplication, ensuring complementarity, and coordinating support and funding measures among key players.
- Generate stronger links between R&I economic and strategic priorities.

Positive attitude...

The experts were encouraged by the level of enthusiasm encountered during the investigation and a genuine desire for positive change.

“Georgian senior scientists and researchers are proud of their work and understand its importance to the country’s future,” notes Michael Schlicht, co-chair of the PSF expert panel. But they are concerned that the next generation of researchers is missing out on prime opportunities for advancement in Georgia and may seek them elsewhere. “The scientific community is very open to the proposed reforms and hopes it will stop the brain-drain and enhance closer links between the science, business and innovation sectors.”

Georgia’s government is also keen on an overhaul, and for the chance to implement meaningful, actionable reform proposals as fast as possible. “We highly appreciate the work of the expert panel and the comprehensive report. The detailed recommendations will provide guidance for our work in the months to come,” stated the Georgian authorities. Overall, Georgian stakeholders recognised the analysis as touching precisely on critical issues of their science and innovation system, such as low funding, red tape, lack of coordination among ministries and agencies, and incomplete reforms.

“All recommendations given by experts were based on analysis of existing context and were tailored for the specific priority areas; they were not just theoretical, but possible to implement in practice. The ‘4C’ system of recommendations was an excellent finding indeed”, notes Manana Mikaberidze and adds that, “it’s very important to know that the country can ask the EC to provide revision and monitoring of PSF report implementation in two years, as it can be used as excellent leverage for measuring progress of governmental reforms in the STI system.”

The panel stresses that the science and business community in Georgia expects visible reforms to materialise, so that the country can exploit its potential for research and innovation. It is crucial that these reforms are accompanied by additional resources and relentless efforts to sustain and increase funding for R&I, both from public and private resources, they conclude.

For further information

More information on the PSF, the specific support to Georgia, and the final report of the expert panel is available at:

<https://rio.jrc.ec.europa.eu/policy-support-facility/specific-support-georgia>

About the PSF:

Seeking to improve the design, implementation and evaluation of research and innovation policies, the Horizon 2020 Policy Support Facility provides expertise and practical support to Member States in a number of ways: Peer Reviews of national R&I systems, Specific Support to policy reforms, and project-based Mutual Learning Exercises to improve policy-making and implementation.