WEBINAR REPORT

Building Capacity in the Ukrainian R&I Ecosystem

Balancing Bottom-up and Top-down Research Funding

19 September 2025

NATIONAL RESEARCH FOUNDATION OF UKRAINE

SCIENCE EUROPE
Shaping the future of research

Colophon

October 2025

'Balancing Bottom-up and Top-down Research Funding'

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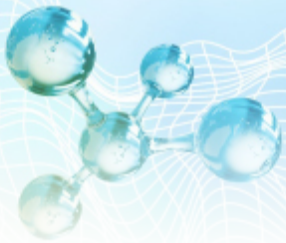

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Context

The National Research Foundation of Ukraine (NRFU) is a state budgetary institution responsible for promoting the development of research and innovation in Ukraine. It was established in 2018 by the Government of Ukraine as a key instrument for implementing national research policy.

The Foundation's activities are aimed at supporting and developing an effective, sustainable, productive and dynamic research community in Ukraine, capable of generating new relevant knowledge in response to the needs of modern Ukrainian society and the state. The Foundation also sees its mission in creating a favorable environment and attractive conditions for Ukrainian and foreign researchers in Ukraine.

The Foundation aims to facilitate the comprehensive integration of the Ukrainian research community into the global research area by increasing its competitiveness and strengthening co-operation with foreign research networks and environments in the interests of Ukraine.

The peculiarities of wartime and post-war reconstruction require the NRFU to comprehensively promote Ukraine's rapid transformation into a highly competitive country by creating opportunities for the development of both human capital and technology. In accordance with the General Strategy of the NRFU for 2024–2027, the Foundation focuses on:

- forming sustainable and effective national research communities;
- integrating Ukrainian research into the global research community;
- enhancing interaction between research and innovation leaders, with focus on national security and defense capability and the step-by-step development of Ukraine;
- disseminating research knowledge in Ukrainian society and formation of a decent social status of researchers;
- further institutional development of the Foundation and improvement of its legal and regulatory framework;

These generalised strategic goals collectively address the main issue – accumulating resources to maximise support for Ukrainian researchers during the ongoing military aggression by the Russian Federation, as well as funding projects aimed at ensuring the internal stability of Ukrainian society.

One of the key achievements of the Foundation's international co-operation was joining Science Europe in May 2022.

This membership plays an important role in strengthening the institutional capacity of the NRFU and advancing Ukraine's integration into the European Research Area by fostering dialogue, sharing best practices, and expanding opportunities for collaboration.

Since joining, the NRFU has been involved in numerous Science Europe Working Groups, including those on **Science Communication**, **Horizon Europe**, **Open Science**, and **Research Culture**. These activities help adopt European best practices, strengthen research standards in Ukraine, and establish long-term partnerships with the European institutions.

Partnership with Science Europe clearly demonstrates the European research community's solidarity with Ukraine.

In the context of the full-scale war, this co-operation has gained particular significance, as Science Europe and its members have provided continuous support through and together with the NRFU.

Their joint efforts focus on helping Ukrainian researchers continue their work, preserving research capacities, and deepening Ukraine's integration into the European Research Area.

As part of this ongoing collaboration, the NRFU and Science Europe are organising a series of three online workshops between September 2025 and February 2026.

The workshops aim to address priority topics for the Ukrainian research ecosystem, support the research community, strengthen the capacity to manage innovative projects, and promote post-war reconstruction.

The three planned online workshops focus on priority areas defined by the National Research Foundation of Ukraine:

- 19 September 2025: Ensuring a **good balance** between bottom-up calls, mainly for basic research projects, and top-down calls for applied research projects.

- 25 November 2025: Developing and implementing effective **monitoring tools** within the project life-cycle and beyond with an emphasis on the (potential) impact of the project.
- 20 February 2026: Practices and policies that integrate **Open Science** principles into both evaluation procedures and project implementation.

Introduction

The first webinar of the series took place on **19 September 2025**. It dealt with ensuring a good balance between bottom-up calls, mainly for fundamental research projects, and top-down calls for applied research projects.

Through speaker presentations and a panel discussion, the webinar focused on several key areas:

- the UNESCO Action Plan to Support Ukraine's Scientific Ecosystem in the Context of War and Post-War Recovery;
- experience and development paths from research systems in individual EU countries;
- modern practices, approaches and key challenges in organising research calls;
- activities of leading European research organisations and their key programmes.

The outcomes of the webinar are summarised in this report and highlight key challenges and opportunities for developing national research systems. The webinar also explored practical approaches in combining bottom-up calls with top-down funding initiatives and supporting opportunities for international collaboration for Ukrainian researchers. The full recording is available on YouTube.

Watch the recording here.

Panel Discussion

Anu Noorma, Director General of the Estonian Research Council (ETAG), Governing Board Member of Science Europe, made the first presentation by sharing Estonia's experience and the history of development of the country's research system. She highlighted that building an effective research system is a long-term, gradual process, drawing on Estonia's experience since the 1990s. This process requires balancing historical legacy, strategic planning, and a combination of bottom-up basic research with top-down applied or government-driven initiatives, value-based principles, and international co-operation.

Noorma stressed the importance of international collaboration, learning from other countries, and aligning research development with national political and strategic objectives. She also underlined that stable resources, including funding, human capital, and collaborative networks, are essential for supporting basic research, which is inherently long-term in nature.

A key principle throughout this process is maintaining value-based approaches, ensuring academic freedom, institutional autonomy, and a strong research culture. Estonia's example shows that systemic reforms, continuous evaluation, and societal commitment—such as allocating a fixed percentage of GDP to research—have been critical to sustaining research excellence. Over the past decade, the balance of funding has gradually shifted from basic research towards applied and experimental development, reflecting a strategic integration of both approaches.

Overall, Anu Noorma concluded that while each country must develop its own tailored strategy, collaborative work and exchange of experiences with international partners are essential to building a resilient, high-quality, and sustainable research ecosystem.

The Italian experience, based on the example of the National Institute for Nuclear Physics (INFN), was presented by **Anna di Ciaccio, Director of the National Institute, Governing Board Member of**

Science Europe. INFN is an Italian public research institute dedicated to fundamental research, with a primary focus on studying the elementary constituents of matter and the fundamental laws of nature.

Anna di Ciaccio highlighted that the Institute has a long-standing tradition of excellence in nuclear, particle, and theoretical physics. She noted that INFN operates under the Italian Ministry of University and Research, with four national laboratories, 20 university-based sections, around 2,000 staff, and collaborations with over 4,000 external researchers. She stressed the Institute's strong engagement in international collaboration, including major projects such as the Large Hadron Collider, astro-particle experiments, and the Einstein Telescope. The Institute also maintains strong national infrastructure, including particle accelerators for medical and cultural heritage applications, underground laboratories, and advanced computing centres such as INFN CNAF, which hosts European AI initiatives.

Established nearly 75 years ago, INFN has extensive experience and is recognised as one of the world's leading institutions in nuclear, particle, and theoretical physics. Its activities also include technological innovation and high-level international collaboration.

Regarding the topic of the webinar, Anna di Ciaccio emphasized INFN's balanced approach, which integrates top-down calls – aimed at addressing national and international research priorities and ensuring alignment with strategic research infrastructure and international roadmaps - with bottom-up calls that foster scientific creativity, encourage high-risk/high-reward projects, and support the development of early-career researchers. She also underlined that INFN places special emphasis on rigorous, independent peer review to guarantee the high quality and credibility of the selected research initiatives.

Marika Edoff, Secretary General for Engineering Sciences, Former Board Member, Swedish Research Council (VR), outlined the role of the Council in the development of research in Sweden - namely to fund high-quality basic research through peer review. In particular, she highlighted the importance of curiosity-driven research which provides a broad knowledge base, new approaches to challenges, and often leads to unexpected breakthroughs, such as the development of COVID-19 vaccines. She stressed that the Council primarily relies on bottom-up initiatives, allowing researchers to define their own questions, while top-down or strategic initiatives are designed to guide priority areas without restricting scientific freedom.

Edoff added that essential preconditions for high-quality research include long-term funding strategies, strong international collaboration, access to advanced research infrastructures, and promotion of attractive research environments. VR also prioritizses gender equality, research integrity, open access, and societal trust in research.

Examples of initiatives in Engineering Sciences include networking grants for excellence clusters, strategic projects in polar and quantum research, nuclear basic research centres, and mapping of research infrastructure, reflecting a balance of bottom-up and top-down approaches.

Nicoleta Dumitrache, Head of Department, Financing Development and Innovation Projects, Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), Romania, presented the agency's activities and its key programmes. She explained that UEFISCDI is a visionary Romanian funding agency under the Ministry of Education and Research, promoting quality and leadership in research, development, innovation, and higher education. In particular, she highlighted that the agency supports both individual and institutional excellence across all branches of science and humanities, fostering international collaboration and human resource development.

Dumitrache noted that over the past nine years, UEFISCDI launched, evaluated, and monitored 81 national calls, funding more than 7,000 projects from over 22,000 eligible proposals. She stressed the use of both bottom-up calls, which encourage creativity, personal engagement, and interdisciplinary breakthroughs, and top-down calls, which address specific strategic challenges identified by public institutions. These top-down calls have successfully supported projects in national security, technology, pandemic response, and other critical areas.

She added that effective top-down calls require careful planning, appropriate budgets, and targeted communication to reach the right researchers, while ensuring sufficient flexibility for innovation. Finally, she emphasised the importance of collaboration with public administration beneficiaries in project evaluation, follow-up, and uptake of results to ensure practical impact.

Chiara Dezzi Bardeschi, Head of the UNESCO Antenna in Ukraine delivered a presentation on the UNESCO Action Plan to Support Ukraine's Scientific Ecosystem in the Context of War and Post-War Recovery.

The Plan is based on extensive consultations with Ukrainian stakeholders, including the Ministry of Education and Science, universities, NGOs, foundations, and researchers, as well as on assessments of damaged infrastructure and the current situation of researchers.

Bardeschi highlighted that approximately one-third of Ukraine's scientific and research infrastructure has been damaged, and numerous researchers face challenges related to continuing their work under the ongoing war.

She noted that the Action Plan is structured across short-, medium-, and long-term perspectives, combining emergency relief with sustainable recovery activities. It focuses on three main areas: stabilisation and preservation of Ukraine's research capacity, coordination of global efforts, and ensuring resilience and long-term recovery of the Ukrainian research ecosystem. She stressed that the Plan includes concrete deliverables, such as psycho-social support for researchers, access to laboratories (including remote access), and the creation of platforms for communication, decision-making, and coordination.

Bardeschi added that the Plan has been integrated within the International Coalition for Research and Innovation launched during the Ukrainian Recovery Conference in July 2025. Based on surveys of Ukrainian researchers, UNESCO has identified priority areas, such as high-performance computing and remote experimental training, and has launched targeted calls in collaboration with international partners, including the VERLAB Institute and the University of Paris (Paris-Cité NABI Laboratory). She emphasised that these initiatives aim to facilitate international co-operation, support Ukrainian researchers in continuing their research, and strengthen the capacity of the national research ecosystem during and after the war.

Following her presentation, Bardeschi also responded to a question on how Science Europe Member Organisations can contribute to the implementation of UNESCO Action Plan.

She emphasised that joining the International Coalition is the first key step, as it facilitates coordination at multiple levels and ensures the integration of the Action Plan. She highlighted several priority areas, including supporting researchers through remote access to research facilities, in particular laboratories and operational platforms, and matching institutions abroad that can provide the necessary expertise and infrastructure. This approach allows Ukrainian researchers to continue their work despite the challenges posed by the current situation, while also strengthening international collaboration and knowledge exchange.

Bardeschi noted that contributions can be both in-kind and financial, particularly to consolidate and amplify the work already carried out by Science Europe and other partner organisations. She underlined the importance of keeping data portals and policy updates current, as well as maintaining a bottom-up approach that reflects the needs of the Ukrainian research community.

She concluded by stressing the importance of expanding international networks and opportunities for researchers, and of sharing best practices to ensure the Action Plan's long-term effectiveness.

Conclusions from the Discussion

The presentations and discussions during the webinar provided valuable insights and recommendations in research funding and policy design, such as balancing top-down and bottom-up calls, supporting early-career researchers, fostering international collaboration, ensuring administrative efficiency, and promoting a strong research culture.

Key conclusions include:

- **Balanced Approach:** Both top-down and bottom-up calls are essential to ensure that research responds to strategic priorities while also fostering creativity and investigator-driven ideas.
- **Flexibility and Freedom:** Even within top-down initiatives, researchers should have the freedom to propose the best methodologies and approaches to achieve the intended objectives.
- **Support for Early-Career Researchers:** Dedicated funding mechanisms for early-career researchers help build future capacity and promote innovative, high-risk projects.
- **Long-Term Perspective:** Stable and predictable funding policies are crucial to enabling research of the highest quality.
- **International Co-operation:** Participation in international infrastructures and collaborative networks should remain a priority to enhance excellence and global competitiveness.
- **Good Research Culture:** Gender equality, transparent peer review, and fair evaluation procedures strengthen trust in the research system.
- **Administrative Efficiency:** Simplifying reporting requirements and focusing on meaningful dissemination of results encourages researchers to spend more time on their work rather than bureaucracy.
- **Stakeholder Roles:** Clear definition of responsibilities for ministries, research funders, and advisory committees.
- **Community Involvement:** Regular consultation with the research community helps identify emerging topics and balance top-down priorities with bottom-up creativity.

19 SEPTEMBER 2025 — BALANCING BOTTOM-UP AND TOP-DOWN RESEARCH FUNDING

Programme

10.00–11.30 CET (11.00–12.30 EET)

Welcome and Introductory Remarks

- **Lidia Borrell-Damián**, *Secretary General, Science Europe*

- **Olga Polotska**, *Executive Director of the National Research Foundation of Ukraine (NRFU)*

Panel discussion

Moderator: **Laure Ognois**, *Head of International Cooperation, Swiss National Science Foundation (SNSF)*

- **Chiara Dezzi Bardeschi**, *Head of UNESCO Antenna in Ukraine*

- **Anu Noorma**, *Director General, Estonian Research Council (ETAG), Governing Board Member of Science Europe*

- **Anna di Ciaccio**, *Director of the National Institute for Nuclear Physics (INFN), Governing Board Member of Science Europe*

- **Marika Edoff**, *Secretary General for Engineering Sciences, former Member of the Board, Swedish Research Council (VR)*

- **Nicoleta Dumitrache**, *Head of Department, Financing development and innovation projects, Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI)*

Conclusions and next steps

- **Laure Ognois**, *Head of International Cooperation, Swiss National Science Foundation (SNSF)*
- **Olga Polotska**, *Executive Director of the National Research Foundation of*

Science Europe-NRFU webinars: 'Balancing bottom-up and top-down research funding'

Science Europe and the National Research Foundation of Ukraine (NRFU) are holding a series of joint webinars dedicated to relevant issues of supporting the scientific community, the research ecosystem of Ukraine, and strengthening the capacity for managing scientific projects in the context of post-war recovery. The initiative aims to increase opportunities for Ukrainian researchers in the international scientific arena and facilitate the exchange of experience with European colleagues.

Science Europe AISBL
RUE DE LA SCIENCE 14, 1040 BRUSSELS, BELGIUM
www.scienceeurope.org

Science Europe is the association of major research funding and research performing organisations in Europe. Our vision is for the European Research Area to have the optimal conditions to support robust education and research & innovation systems.

We define long-term perspectives for European research and champion best-practice approaches that enable high-quality research for knowledge advancement and the needs of society.

We are uniquely placed to lead advancements to the European Research Area and inform global developments through participation in research initiatives where science is a strong and trusted component of sustainable economic, environmental, and societal development.

National Research Foundation of Ukraine (NRFU)
BORYSA HRINCHENKA STREET 1, 01001 KYIV, UKRAINE
www.nrfu.org.ua

The National Research Foundation of Ukraine is the central organisation supporting competitive research and development projects across all fields of science in Ukraine.

Our mission is to strengthen the country's scientific potential, foster innovation, and enable researchers – especially early-career scientists – to contribute to knowledge advancement and societal development.

The NRFU promotes national and international research collaboration, invests in research infrastructure, and champions best practices to ensure high-quality scientific outcomes.