



EGI Council Participant: IISAS

Participating in EGI Impact Report

Slovakia_

www.egi.eu

2025

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**EGI Contribution
to the Country
Excellence in
Science**

Infographic_

Slovakia_

192

Service Users

In 2025, 192 researchers from Slovak institutions used the services provided by the EGI Federation

1,292

Publications

The research communities, projects and scientific collaborations from Slovakia supported by EGI led to 1,292 peer-reviewed scientific publications

6

Supported Communities

The infrastructure providers from Slovakia federated in EGI supported 6 research communities in the following disciplines: Health and Medicine, Physics

4

Projects

Slovak partners participated in 4 collaboration projects

22,8M+

Compute Delivery

In 2025, the infrastructure providers from Slovakia federated in EGI delivered 21,437,995 HTC CPU Hours and 1,390,523 Cloud CPU Hours

Country Overview_

Number of supported publications	1,292
Number of total service users	192
Scientific Communities supported	6
Data Centres contributing to the Federation	4
Collaboration projects	4
Total HTC CPU hours	21,437,995
Total Cloud CPU hours	1,390,523

About EGI

EGI is a federation of providers delivering advanced computing, data, and digital services for research and innovation, while driving collaborative development and impact across scientific communities.

The EGI Federation brings together national and international service providers to deliver the computing and data services that research teams rely on across Europe. Working as a coordinated federation, EGI enables research communities to access advanced capabilities in computing, data analytics, and artificial intelligence, while also supporting research and development that pushes the frontiers of digital innovation for science.

Through this collaborative model, EGI helps its members transform emerging technologies and approaches, such as big data, cloud computing, artificial intelligence, digital twins, and FAIR data, into reliable, environmentally and financially sustainable services for research and education. These services are designed to ensure continuity and stability beyond individual projects, enabling scientific communities

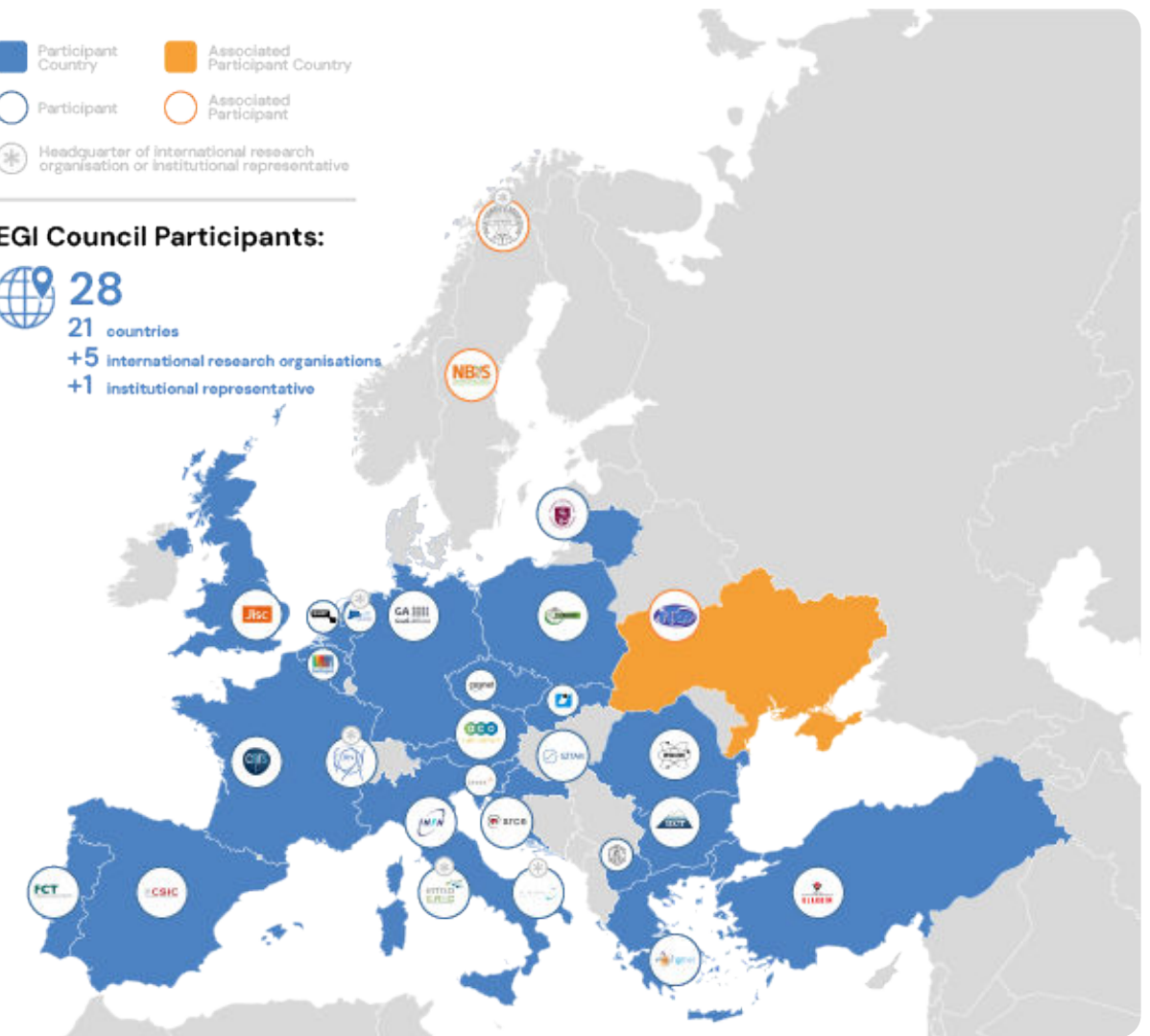
across disciplines, countries, and funding cycles to benefit from ongoing digital innovation. At the same time, the federated infrastructure and its associated R&D activities generate impact across all fields of science, from physics to the humanities, fostering new discoveries and novel research approaches.

Coordinated by the EGI Foundation, the Federation operates through a shared IT platform that connects hundreds of providers with research groups across Europe and beyond. By aligning and aggregating national capacities with European and global priorities, EGI ensures that researchers can seamlessly access digital resources and expert support. Together, EGI and its members establish a strong and lasting foundation for open, collaborative, and data-intensive science, strengthening Europe's capacity for research and innovation.



EGI Council Participants:

 **28**
21 countries
+5 international research organisations
+1 institutional representative



Council Participant IISAS_

About IISAS

The Institute of Informatics carries out excellent research in accordance with the current trends in Applied Informatics, Cybernetics and Microelectronics. The research is conducted by national and international cooperation, especially within the European research area for the long period of FP5, FP6 and FP7 programs. The focus of the Institute is to apply the research results into practice. The Institute has been for a long term involved in building a strategic pan-European infrastructure for High Performance Computing.

The aim of the research at the Institute of Informatics of the Slovak Academy of Science is to contribute to the acquisition of new knowledge and the development of science within the scope of activities of the Institute to improve the quality of life by bringing scientific solutions required by the economic and social practice.

Overall EGI Impact_

The EGI Federation is composed of e-infrastructure providers from national and community initiatives, forming one of the largest distributed computing infrastructures for researchers in the world, integrating about 1,243,400 CPU cores and over 1,4 Exabyte of storage space from hundreds of data centres.

In 2025, the EGI Federation served around 150,000 users (+29%). EGI users consumed 8 Billion HTC CPU hours (+8%), 43 Million Cloud CPU hours (-19%), ran over 351 Million computational jobs (-12%) and published over 2,300 open access publications.

As of the previous year, the research community with the largest number of users is Medical and Health Sciences, while the community with most extensive HTC CPU/h consumption is CMS.

From the scientific communities engaged in 2025, the one with most extensive Cloud CPU/h consumption is WeNMR.

Moreover, EGI engaged with 219 scientific communities, including SMEs and business pilots, and 41 Research Infrastructures

EGI Contribution to Excellence in Science in Slovakia

IISAS coordinates the Slovak participation to the EGI Federation, representing the SlovakGrid (National grid initiative for Slovakia). SlovakGrid promotes the building and operation of a multidisciplinary national Distributed Computing Infrastructure open to all sciences and to developing countries in Slovakia. This report provides an overview of the activities of IISAS in EGI, and the impact that was achieved thanks to this participation. The annual membership fee contributed by IISAS to the EGI Foundation in 2025 was 46,000 EUR.

EGI federates hundreds of resource centres that are located at participant countries, organizations and at collaborating e-Infrastructures worldwide. This federated infrastructure supports data- and compute-intensive research across Europe and the world. In 2025, our federation has been accessed by over 150,000 users.

Research Infrastructures and multi-national research collaborations are the largest adopters of EGI Services, the main contributors of thematic portals, and operate community-specific compute, storage and data systems based on EGI federation capabilities.

The services of the EGI federation have been used by 192 researchers from Slovakia over the year. The estimated annual scientific output produced by research communities, projects and scientific collaborations from Slovakia and supported by the EGI Federation in 2025 is estimated to amount to over 1,292 peer reviewed scientific publications. The EGI Federation is currently working with almost 50 Research Infrastructures, 6 of which include Slovak partners. These EGI-enabled research infrastructures, their Slovak members and their scientific output (publications) are detailed in the following pages of the report.

Slovak Research Collaborations in EGI

ALICE (High Energy Physics)

- Comenius University
- P.J. Safarik University
- Slovak Academy of Sciences
- Technical University of Kosice

EGI Supported Activities and Services

ALICE has been supported since 2012 as part of the EGI – WLCG collaboration. Federated services delivered include:

- **Software support**
- **Infrastructure and Operations Services** (infrastructure

- catalogue, **Software Distribution Services** (UMC, CMD, operations documentation)
- **Operations Coordination** (middleware deployment campaigns, procedures, innovation of tools)

- **Security Services and Activities** (CSIRT, Software vulnerability group, international security coordination, policies, IGTF distribution)

43 SCIENTIFIC PAPER(S)
PUBLISHED IN 2025

Slovak Research Collaborations in EGI

ATLAS (High Energy Physics)

- Comenius University
- Slovak Academy of Sciences

EGI Supported Activities and Services

ATLAS has been supported since 2012 as part of the EGI – WLCG collaboration. Federated services delivered include:

- **Software support**
- **Infrastructure and Operations Services** (infrastructure

- catalogue, **Software Distribution Services** (UMC, CMD, operations documentation)
- **Operations Coordination** (middleware deployment campaigns, procedures, innovation of tools)

- **Security Services and Activities** (CSIRT, Software vulnerability group, international security coordination, policies, IGTF distribution)

74 SCIENTIFIC PAPER(S)
PUBLISHED IN 2025

Slovak Research Collaborations in EGI

INSTRUCT (Structural Biology)

- Slovak Academy of Sciences

EGI Supported Activities And Services

Instruct-ERIC is a pan-European distributed research infrastructure making high-end technologies and methods in structural biology available to users. The collaboration with EGI ensures the reliable

hosting and operation of the ARIA and CRIMS production services on the EGI Infrastructure, providing a robust, secure, and scalable environment tailored to support researchers in the Health and Food domains.

50 SCIENTIFIC PAPER(S)
PUBLISHED IN 2025

Slovak Research Collaborations in EGI

JUNO (Neutrino Observatory)

- Comenius University

EGI Supported Activities and Services

The JUNO experiment has been using compute resources from EGI partners for more than a decade. The services from the EGI federation that JUNO uses include:

- EGI HTC services from 3 EGI federated sites from FR, IT and China.
- > Software distribution services (UMC,

- CMD, operations documentation)
- **Operations coordination** (middleware deployment campaigns, procedures, innovation of tools)
- **Security services and activities** (CSIRT, Software vulnerability group, international security coordination, policies, IGTF

distribution)

66 SCIENTIFIC PAPER(S)
PUBLISHED IN 2025

Slovak Research Collaborations in EGI

NA62 (High Energy Physics)

- Comenius University

EGI Supported Activities and Services

The NA62 experiment has been using compute resources from EGI partners since 2012. The services from the EGI federation that NA62 uses include:

- EGI HTC services from sites in the UK, IT, BE and CERN
- Software distribution services (UMC,

CMD, operations documentation)

- Operations coordination (middleware deployment campaigns, procedures, innovation of tools)
- Security services and activities (CSIRT, Software vulnerability group, international security coordination,

policies, IGTF distribution)

2 SCIENTIFIC PAPER(S)
PUBLISHED IN 2025

Slovak Research Collaborations in EGI

WeNMR (Structural Biology)

- Comenius University

EGI Supported Activities and Services

ThWeNMR is supported by EGI since 2011 and has a Service Level Agreement since 2016. The EGI Services used by the community include:

- High-Throughput, Cloud + Online

Storage services from 23 EGI federated sites from NL, IT, FR, DE, PL, UK, the Asia Pacific region, IberGrid (Spain and Portugal), the Latin America region.

- EGI Workload Manager
- Trust and identity management with Check-in

10 SCIENTIFIC PAPER(S)
PUBLISHED IN 2025

Service Level Agreements

During 2025, IISAS-FedCloud supported 2 Service Level Agreements for international scientific communities via EGI, delivering Cloud Computing and Online Storage services.

Participated Projects

In the reference period, the EGI Foundation was leading seven Horizon Europe Projects, two of which started in 2025:

- iMagine (September 2022–December 2025)
- interTwin (September 2022–August 2025)
- ENVRI-Hub NEXT (February 2024–January 2027)
- EOSC Beyond (April 2024–March 2027)
- EOSC Data Commons (April 2025–March 2028)
- RI-SCALE (March 2025–February 2028)

- SPECTRUM (January 2024–June 2026)

Furthermore, the EGI Federation was involved in 6 additional projects, increasing the innovation potential of its participants.

The EGI Federation participates in Horizon 2020 and Horizon Europe projects together with Dutch institutions to facilitate the uptake and use of e-infrastructure services for science. A summary of these projects, the involved institutes and the scope of the collaboration is provided in the next table.



Project Title



Scope of Collaboration

EGI contributes research and development expertise to the architectural design and implementation of open, distributed software infrastructure for AI4Europe. This ensures the platform evolves as a scalable,

interoperable ecosystem. EGI also applies its deep knowledge of physical resources, usability, distributed systems, and emerging technologies to develop deployment mechanisms for AI tools across private and public cloud and HPC resources.

Participating beneficiaries from the country

- Kempelen Institute of Intelligent Technologies

Project Title



Scope of Collaboration

EGI contributes to developing an innovative, workflow-based Gateway connecting European scientists to computing and storage infrastructures, advancing operational FAIR data services within EOSC.

Participating beneficiaries from the country

- IISAS

Infrastructure Contributions_

The EGI Federation offers two complementary compute capabilities: the High-Throughput Compute (HTC) federation and the Cloud federation. 4 Slovak data centres contribute to these federations:

HTC Federation:

- FMPhI-UNIBA (Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava)
- IEPSAS-Kosice (Institute of Experimental Physics, Slovak Academy of Sciences, Kosice)
- IISAS-Bratislava (Institute of Informatics, Slovak Academy of Sciences, Bratislava)

Cloud Federation:

- IISAS-FedCloud (Institute of Informatics, Slovak Academy of Sciences, Bratislava)

The data centres provided 4 service endpoints and delivered 21,437,995 HTC CPUhours and 1,390,523 Cloud CPUhours in total to EGI communities over the year. With the help of the EGI Security Vulnerability Group, the Slovak sites avoided 49 critical vulnerabilities in foundational software systems during the year.

The most active international user groups of the country compute resources were:

- ATLAS 57.49%
- ALICE: 42.51%

Methodology_

Data for this impact report has been collected from the following sources.

Users

EGI uses the following methodology to capture the number of EGI users who rely on EGI services

- EGI serves users in the form of ‘communities’, called ‘Virtual Organisations’ (VO in short). A VO’s members can range from one to tens of thousands. Members of a VO benefit from and use EGI services in different ways (e.g., by using Services for Federation or Services for Research).
- EGI establishes knowledge about its VOs as part of the user community support lifecycle; therefore, baseline information about VOs is collected through the Customer Relationship Management process (CRM).

At the end of 2025, there were 196 VOs in EGI. EGI Virtual Organisations (VOs) can rely on different technical and non-technical mechanisms to manage

their own members. Depending on their choice, the EGI Federation coordinator (EGI Foundation) has to follow different, corresponding approaches to know the number of members in a given VO, and to obtain additional information about these members (e.g. their ‘country’). The EGI Foundation uses the following mechanisms to obtain information about the VO users:

- Obtain user number statistics from the EGI Operations Portal for VOs, where the members register personally in a ‘VO membership management’ system that is either operated by EGI or can be accessed by EGI.
- Obtain user number statistics from Community VRE REST APIs for VOs that operate Virtual Research Environments (VREs) on top of EGI resources. Those VREs implement a specific API to report users (e.g., WeNMR, Virtual Imaging Platform (VIP), NBIS).
- Obtain user number statistics from interviews with VO coordinators for VOs coordinated by one person.

Publications

Publications are collected from each community’s public repository, if existing. Additional details are checked with the VO coordinators during the interviews to complement this information. EGI also consults OpenAIRE services to countercheck the data. You can check the list of repositories for each VO here (requires login): <https://operations-portal.egi.eu/vo/#collapseVoListOther>.

Institutional members supporting research communities

EGI relies on the information on each community’s website to list institutions supporting research communities at the national level. Additionally, EGI appreciates the feedback from its national representatives to refine and improve those lists.



EGI Membership Impact Report

EGI Foundation

Science Park 140
1098 XG Amsterdam
Netherlands

Connect With Us

Website:
www.egi.eu

Phone:
+31 (0)20 89 32 007

Email:
contact@egi.eu

 [egieinfra.bsky.social](https://twitter.com/egieinfra.bsky.social)

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 [EGI_einfra](#)

