DANUBE REGION strategy
Prosperity through Diversity

Slovenian Presidency
of the EU Strategy
for the Danube Region

IMPACT STORY

VEGA SUPERCOMPUTER

BACKGROUND

High-performance computing (HPC) can, with the use of supercomputers or computer clusters, **support the development of applications** in fields such as machine learning, artificial intelligence and high-performance data analysis, help in making significant advances in bioengineering and **enable European SMEs to compete in the high-tech economy of tomorrow**.

On 20 April 2021, the European Joint Undertaking for High-Performance Computing (EuroHPC), the European Commission and the Slovenian government inaugurated the Vega supercomputer in Maribor, Slovenia, hosted by the Slovenian Institute of Information Sciences (IZUM). The supercomputer is the first EU supercomputer **jointly financed with EU funds**, with an investment of 17.2 million euros.

ABOUT THE VEGA SUPERCOMPUTER

Named after Slovenian mathematician Jurij Vega, the Vega supercomputer was commissioned as the primary supercomputer system of the Slovenian national research infrastructures upgrade project “HPC RIVR”. With a processing power of **6.8 petaflops**, Vega is **among the world’s top 50 supercomputers** and enables European industry and researchers in various Member States to cooperate in large international projects and support the development of applications in science, the public sector, and industry.

Vega enables researchers and scientists to tackle some of the most pressing challenges, from climate change to healthcare, with the supercomputer access time allocated to scientific researchers, industrial and public sector users across Europe, providing access to state-of-the-art technology that can accelerate research and innovation.

CONNECTION WITH THE DANUBE REGION

Vega supercomputer is an exciting development with the potential to significantly **impact scientific research and innovation** not only in Slovenia but across the Danube Region and the European Union, with the implications for the Danube Region being particularly significant. The Region has a strong tradition in scientific research, and the availability of such advanced technology can help foster innovation and collaboration.

By providing access to advanced technology and resources, the supercomputer can help **develop the skills and knowledge of researchers and scientists** and **contribute to the development of new industries and technologies** and the growth of the local economy.

Slovenia initialised the **HPC RIVR programme** not just to procure new systems and improve the available computing capacity of its HPC community but also to **ensure that a new generation of experts and developers has engaged within the project** as well as the wider Slovenian community and its national consortium SLING (Slovenian National Supercomputing Network). The Ministry of Education, Science and Sport (now Ministry of Higher Education, Science and Innovation) has been using this mechanism to **promote regional, European and international cooperation**. Since EuroHPC has also been accelerating the adoption of new technologies by supporting the establishment of national centres of excellence in HPC, the new capabilities will be made more readily available to academic as well as scientific and industrial users.

The acquisition and operation of the EuroHPC supercomputer are jointly funded by the EuroHPC Joint Undertaking through the European Union’s Connecting Europe Facility and the Horizon 2020 research and innovation program, as well as the Participating State Slovenia. The HPC RIVR project is co-funded by the EU through the European Regional Development Fund and by the Ministry for Education, Science and Sport of the Republic of Slovenia (now the Ministry of Higher Education, Science and Innovation).

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IZUM
Institut informacijskih znanosti, Maribor

EuroHPC
Joint Undertaking

For more about the **VEGA supercomputer**, visit: https://doc.vega.izum.si/
& https://www.hpc-rivr.si/

Photos by: Inštitut informacijskih znanosti Maribor (IZUM)