

EGI's Path Towards Democratising AI for Science

The EGI Federation has been a cornerstone of European and global research for over 15 years, providing a federated e-infrastructure that empowers 150,000+ researchers across all scientific disciplines. The recently approved “EGI Federation Strategy 2026–2030” sets out an ambitious plan for the next 5 years to ensure that EGI remains an accelerator for science.

AI became a broadly applied technique in science over the past few years. Recent EGI flagship projects, such as iMagine (Imaging data and services for aquatic science) and InterTwin (Co-designing and prototyping an interdisciplinary Digital Twin Engine) demonstrated the use of AI frameworks, models and data across the EGI e-infrastructure. iMagine used EGI's federated cloud and EGI members' AI4OS technology to deploy an AI platform for aquatic imaging, and to support 17 scientific teams in AI-powered, large-scale image analysis relating to marine and sweet water ecosystems. InterTwin leveraged HPC services from EGI to prototype an open-source Digital Twin Engine for interdisciplinary science and to support the setup of AI-driven digital twins in physics and environmental sciences.

Current EGI flagship initiatives further strengthen the AI trajectory: The EOSC Data Commons project establishes a trusted Research Commons with AI tools that provide seamless access and integration of research outputs, applications and services. RI-SCALE develops and deploys Data Exploitation Platforms that enable peer-partnerships between Research Infrastructure data holdings and HPC/cloud providers to jointly offer scalable, AI-driven analysis and processing environments for scientists.

The new EGI Federation Strategy aims to strengthen EGI's value proposition in AI, and to make a bold contribution to the European and global AI landscapes. The new EGI strategy is based on three integrated pillars: (1) Expand EGI's sovereign Compute-Data Federation with additional compute resources (for AI GPUs and HPC sites), and with scientific datasets ready for exploitation; (2) eliminate and work around policy and funding barriers that limit cross-border access and delivery of compute, data and application services; (3) Strengthen EGI as an R&I ecosystem where innovations persist beyond project lifecycles.

RAISE (Resource for Artificial Intelligence Science in Europe) is Europe's recent initiative to strengthen the continent's position on science and AI. RAISE aims to establish and run a pan-European virtual institute that pools compute, data and talent to operate on two dimensions: 1) “Science for AI” (advancing safe frontier models) and 2) “AI in Science” (applying AI to scientific disciplines). The new EGI strategy, and a recently acquired EC project will help EGI funnel its AI results into the RAISE programme.

This presentation will provide an overview of EGI's new 5-year strategy, and offer a deep dive into its AI-specific implementation, detailing the contributing and related European and national projects and initiatives.

Primary authors: SERGIO, Andreozzi (EGI Foundation); SIPOS, Gergely (EGI); RORRO, Marco (EGI Foundation); FERRARI, Tiziana (EGI Foundation)

Presenter: SERGIO, Andreozzi (EGI Foundation)

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