



Central European
Research Infrastructure
Consortium



delivery consortium

Developing Regional Centres of (international) Excellence and Innovation

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Belgrade Sept 2017

Outline

- A framework for development
- Why International Research Infrastructures?
- The case of CERIC-ERIC
- The case of ELI-ERIC
- The potential in the CE-WB area: recovering an historical strength

A framework for Development

- **Research, a non economic activity, becomes a driver of Innovation & Economy when it benchmarks Education and Development to international competitive environment.**
- **Research allows direct international competition and its outcome is freely available and shared.**
- **Geographical areas hosting sizeable centres of competitive research are international cores for innovation.**
- **Research Infrastructures are a main component of this strategy.**
- **The Central-East European Area is now progressing in the development and implementation of such centres.**

What is and why a Research Infrastructure?

- **A unique/rare set of facilities/instruments, for service to international researchers, built and managed for top scientific projects.**
- **Users are selected and admitted solely on the quality and challenges of their proposed projects.**
- **This allows to fully expose the instruments, the staff and the management to international competition and benchmark.**
- **The flow of knowledge and know-how of about 1000 selected users/year equals to a flow of about 1 Billion euro/year.**
- **The scope of a good management is to acquire/capture part of this flow of values and provide added value.**
- **This translates into technological, scientific, educational and economic returns to the funders, the local territory, and the EU.**

The case of CERIC-ERIC

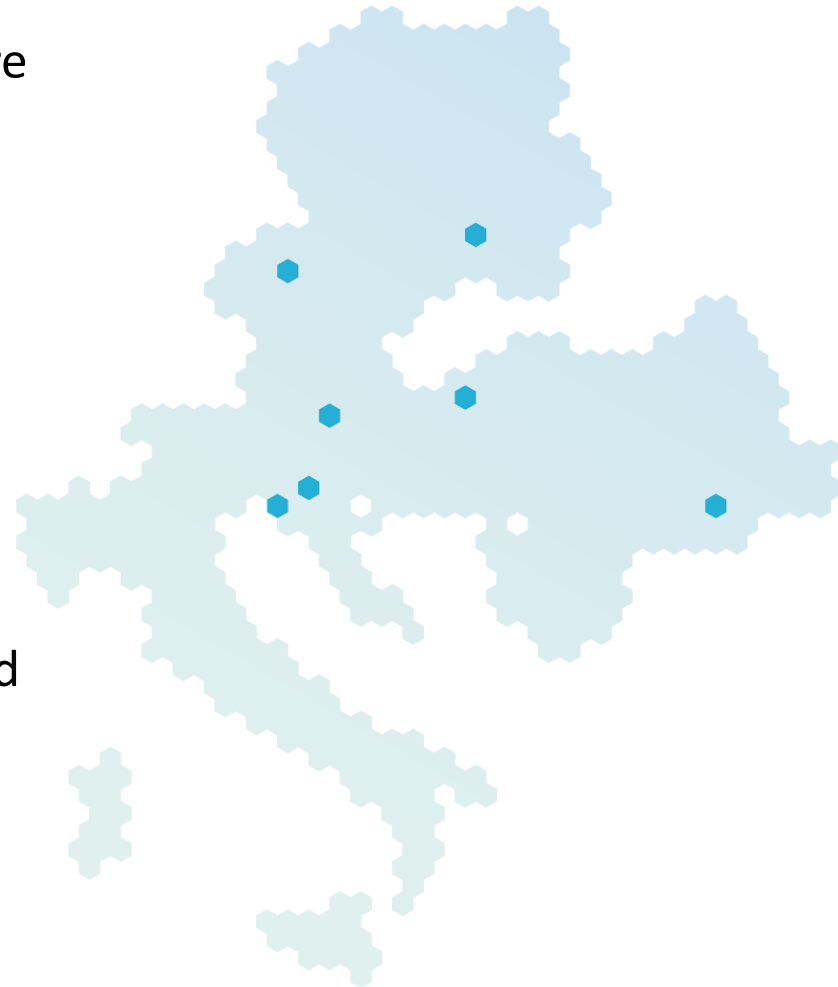
The Central European Research Infrastructure Consortium, CERIC-ERIC, is a distributed Research Infrastructure, with a single entry point to nearly 50 complementary instruments and techniques for multidisciplinary research in all fields of **advanced materials, biomaterials and nanotechnology**



Austria, Czechia, Croatia, Hungary, Italy, Poland, Romania, Slovenia and soon **Serbia** have included their best available laboratory, allowing them to be open for international open access



CERIC operation is supported by each Country investing in its laboratory and in joint excellence



STRUCTURE:
Participating Country (member)
Representing Entity
Partner Facilities

- **Single entry point** for multitechnique approach: **unique at world level**;
- Possibility to ask for **several instruments** in a single proposal;
- **Free and open access** for the best single or multi-technique proposals through **external peer evaluation**;
- Access to **support laboratories**;
- **Mobility support** for 2 users per measurement;
- **Support** in proposals preparation;
- **Awards** to the best publications;
- **Dissemination** of research impact to the community.
- About **150 Users/year** from over **20 Countries**

Open Access (2 calls per year)



2-step access procedure



CERIC collaborates with industry, contributing to science-driven innovation.

Services for commercial users are offered on market-based conditions and include:

- Research and Development (R&D), through:
 - Access to instrumentation
 - Contract research
 - Joint application for projects
- Training
- Innovations' marketplace
- Spin-off and start-up support



Fields of application:
chemical,
medicine and

diagnostics, optics, electronics
and informatics, micro- and
nano-technologies and high-tech
materials, environment,
energy, food and cultural
heritage

The case of ELI

eli

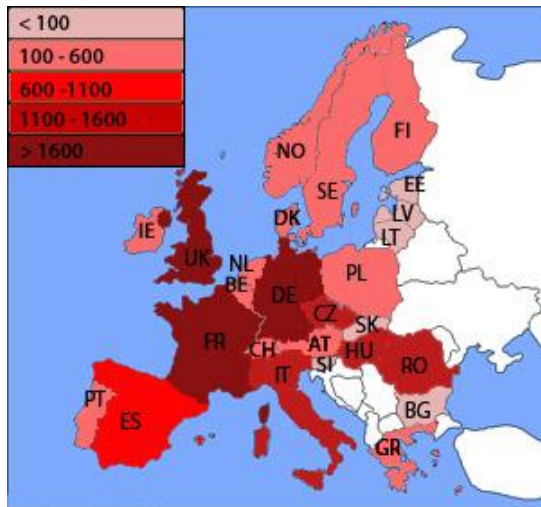
delivery consortium



- ELI is the world's **first international laser research infrastructure**, for its unique set of > 20 lines of instruments and different capabilities.
- Also the first **ERIC distributed research infrastructure** newly implemented in the CE-EU.
- Perspective number of users: **~ 1500/year**
- New **funding model in synergy between ESIF, national and Framework funds.**
- **ELI impacts on a strategic market, bringing its scientific and industrial core into the EU.**
- **ELI brings the EU at the centre of Laser Sciences & Technologies and the Industry in Laser systems & sources.**
- In a market of **37.1 Bn\$ with 10%/yr growth**

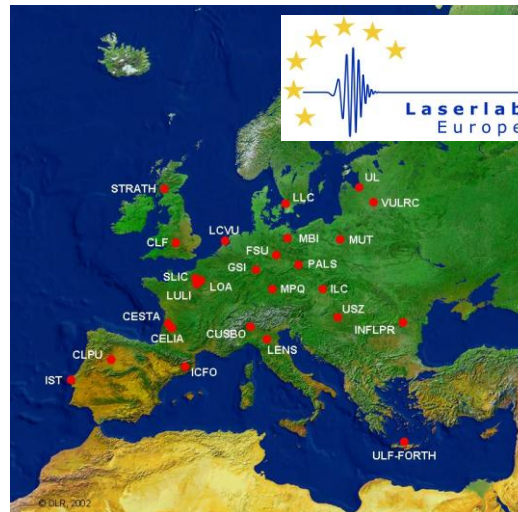
embedded in an effective EU research landscape

European Laser Community



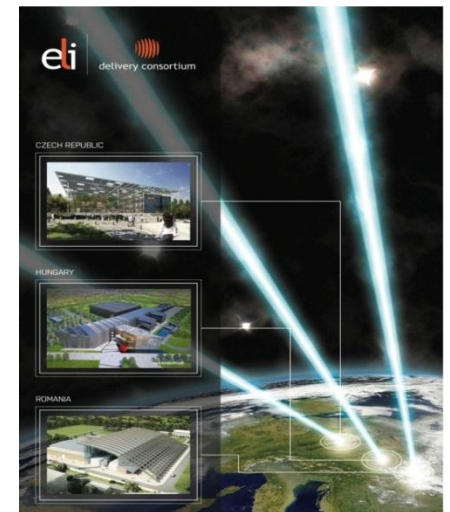
A wide basis: large number and distribution of centres

Infrastructure Network: Laserlab-Europe



Flexible instrument to perform and initiate new science beyond the national scale

ESFRI Pan - European Research Infrastructure ELI



Mission-oriented entity to meet global challenges

New science and applications

Science

- Investigation of Vacuum Structure
- Electron Acceleration
- Ion sources
- Neutron sources
- Terahertz sources
- Ultrafast-laser driven X-ray sources
- Attophysics
- Nuclear & Photonuclear Physics
- Physics of dense plasmas
- Laboratory Astrophysics

Application

X-rays => Materials Research
Medical, Materials Research
Materials research
Analytics
Micro-, Nano-Techn.
Chemistry
Mat. Res., Med., Environm.
X-rays, Fusion

a growing Central European outlook!

