

EXTEREME LIGHT INFRASTRUCTURE

*Fostering the Innovation
Potential of Research
Infrastructures*

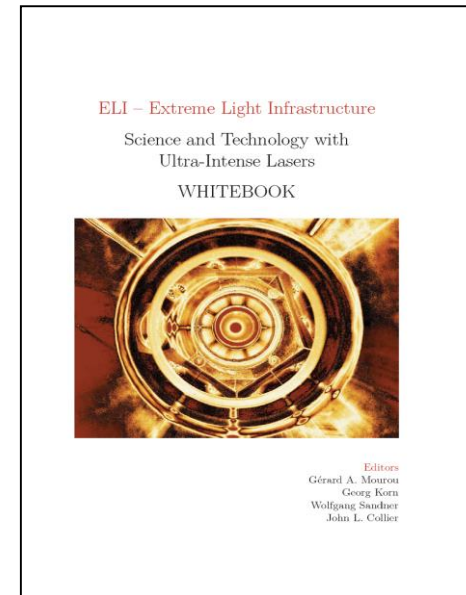
RICH Symposium, Lisbon



- Building the **world's first international laser research infrastructure** with a state of the art laser equipment (ultra-intense short pulse lasers and secondary sources of particles and x-rays)
- **Enabling revolutionary science as a wide benefits to society** ranging from medical and biomolecular, environment, fusion research, space science, astro-biology, fast electronics, creation of new materials, fundamental physics
- Creating an **attractive platform for educating** a new generation of PhD. students, scientists and engineer

Science is the driver Applications brings the impact

- The **science case** is why Europe has decided 11 years ago to build ELI
- The **applications potential** (the socio-economic added value) is why Europe has decided to build ELI in three CE countries, using Structural Funds

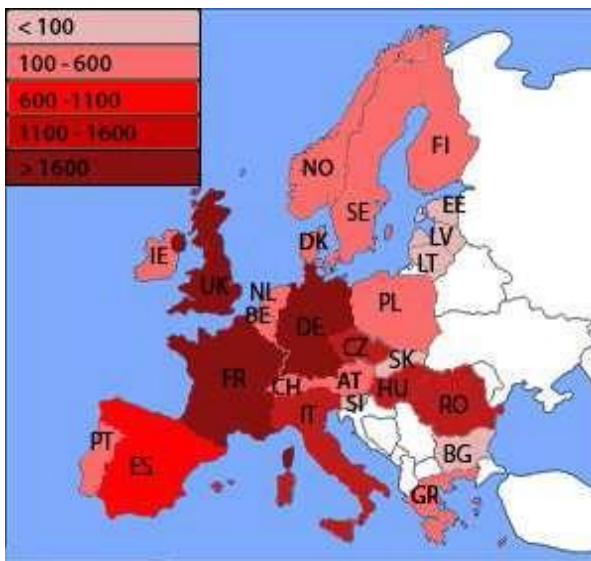




- ELI will be the world's **first international laser research infrastructure**, pursuing unique science and research applications
- ELI is the first ESFRI project to be **fully implemented in the newer EU Member States**
- ELI will be operated as **a distributed research infrastructure** based on 3 specialised and complementary facilities located in the Czech Republic, Hungary and Romania
- ELI is **pioneering a funding model combining the use of structural funds** with national and EC funding and **contributions in an ERIC**

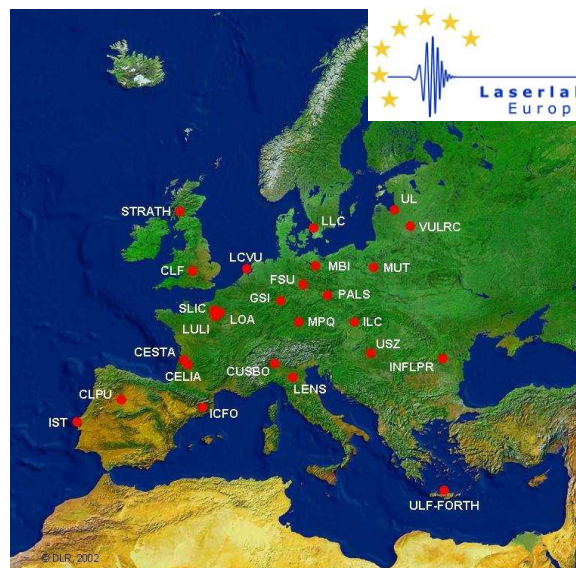
A structured research landscape to meet global challenges and create economic growth

European Laser Community



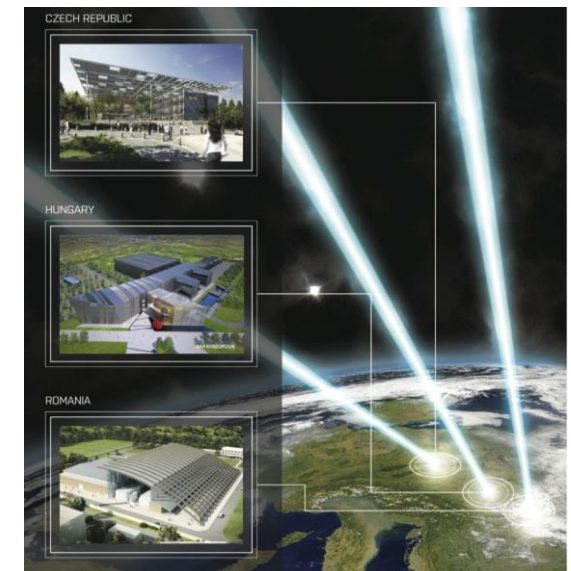
The basis

Infrastructure Network: Laserlab-Europe



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

ESFRI Pan-European Research Infrastructures ELI



Mission-oriented single entities to meet global challenges

- Structural funds
 - Funding with commitments and expectation of return
- Methodology for impact observation
 - Direct, indirect, induced
 - Local, regional, multi-national/global
 - Immediate, mid-term, long-term
 - Measurement and monitoring techniques

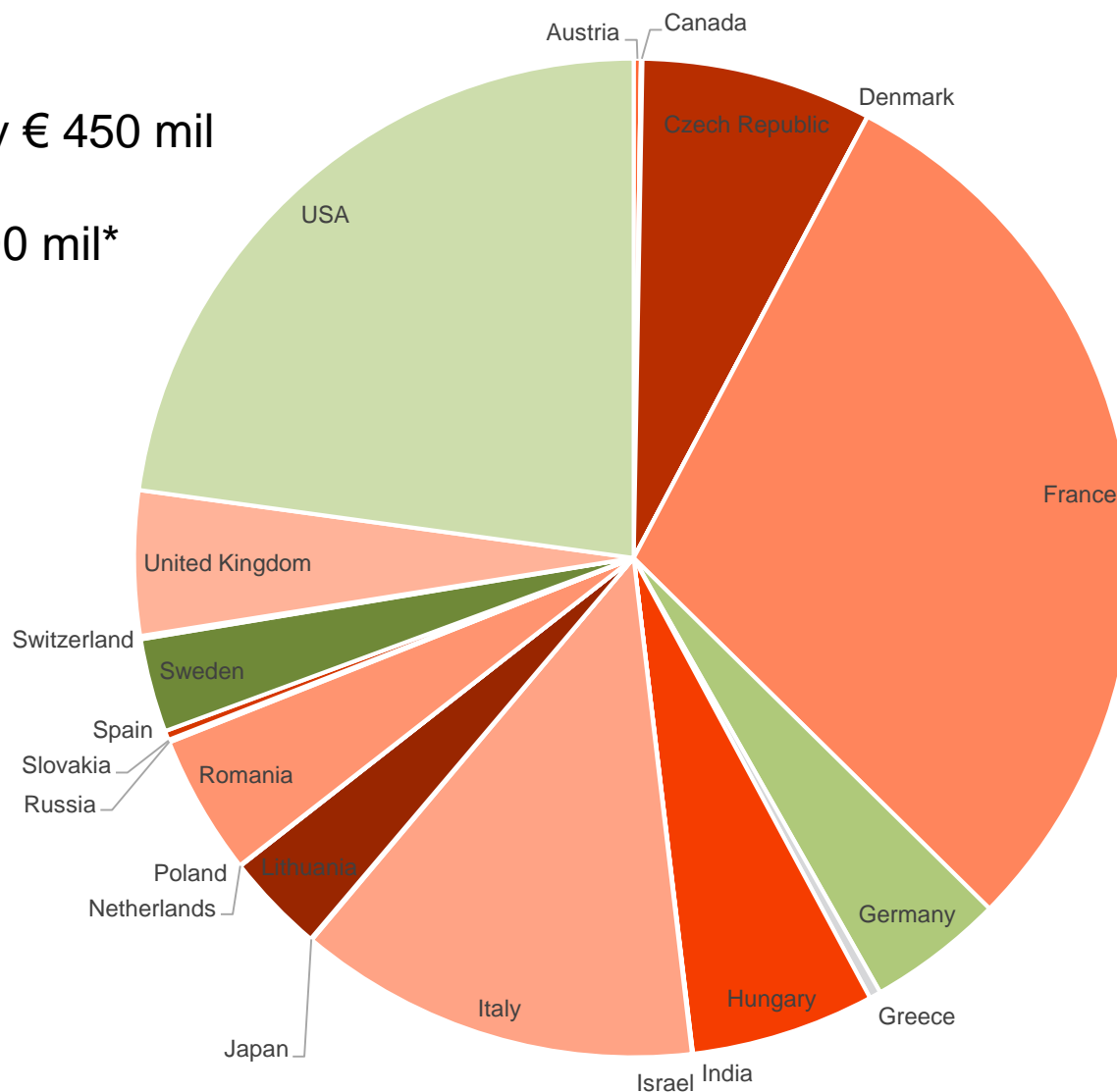
- Generated knowledge
 - Publications (300 articles),
 - Applied R&D results – prototypes (50), patents
- Unique expertise - human resources
 - New 800 jobs, 520 R&D, 1/3 international
- International cooperation
 - >70 MoU with research institutions world-wide

- Innovative cooperation through procurements
 - Over 600 contracts
 - Over € 450 mil invested in technology
 - 2/3 R&D – cutting edge technology, outperforming any existing instrumentation, innovation awards
 - Very broad range of industries
 - Great for lasers and photonics industry, but goes beyond
 - ICT, virtual reality, new materials, surfaces manufacturing
 - Technology transfer to Europe
- First contracted research & identification of spin-off potential

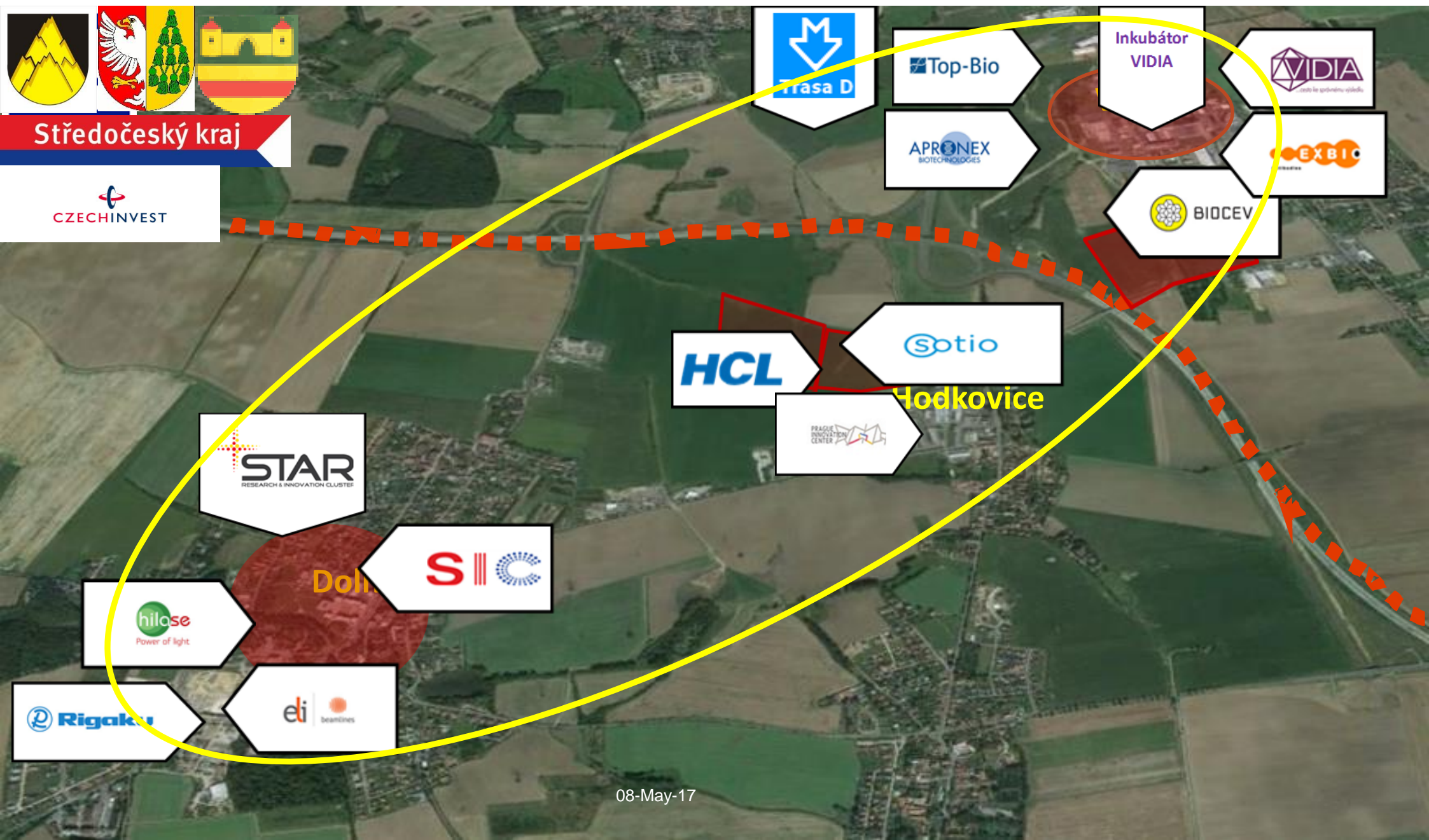
Share on direct supplies to the ELI Technology

Total investment to technology € 450 mil

Technology development € 300 mil*



* estimate



ELI Lasers for Better Future



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