



Council of the
European Union

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NOTE

From: Czech, Hungarian and Romanian delegations
To: Council

Subject: Extreme light infrastructure (ELI)
- Information from the Czech, Hungarian and Romanian delegations

Delegations will find attached an information note from the Czech, Hungarian and Romanian delegations on the above-mentioned subject with a view to the Competitiveness Council on 1 December 2017.

1. The Extreme Light Infrastructure (ELI) project – selected and proposed by the European Strategy Forum on Research Infrastructure (ESFRI), and endorsed by the EU – is positioned to be one of the world’s foremost laser facilities, and the first such facility built with an international effort and fully conceived and implemented to serve external users.
2. ELI will be at the forefront of laser technology and open up new research and technology development opportunities with significant potential impact in a broad range of scientific disciplines and in economic returns. As such, ELI provides a vital strategic capability for European scientists and industry.
3. In addition, ELI will greatly enhance regional competitiveness and cohesion. It is the first large-scale research infrastructure built completely in newer EU Member States.
4. Construction of the ELI facility in the Czech Republic, Hungary and Romania, the three Host Countries, has been implemented upon encouragement by all EU Countries in the Competitiveness Council, and based on national funding (15%) and EU structural funding (85%). The facilities were built within the planned time schedule and the original budget. The total cost of construction is 830 million EUR. The new facility is a bold and innovative initiative by the three Host Countries to invest in a world-class infrastructure that will benefit all of Europe and contribute to overall European competitiveness.
5. EU Countries with the largest laser user communities (France, Germany, Italy and the UK) are represented in the ELI “Delivery Consortium”, and over 1500 researchers from more than 150 research institutions of non-host Countries are involved in scientific collaborations with the three ELI research infrastructure pillars.

6. The project is rapidly nearing its completion, and ELI is preparing to enter the Operations Phase, which is not supported by structural funding. Acting within the mandate they received in 2009 from the 10 other European Countries involved in ELI's Preparatory Phase, the Host Countries are finalizing the steps towards the establishment of the ELI European Research Infrastructure Consortium (ERIC) as a single, unified European organisation that will manage the ELI research infrastructure.
7. Discussions aiming at reaching the sustainable financing of the initial operations of ELI-ERIC are intense. Major preparatory issues have been addressed by the Host Countries. Other EU Countries (France, Italy, Germany and the UK), within the ELI Delivery Consortium, and more other EU Member Countries not yet involved, are considering their future membership. The three Host Countries are committed to support substantially the initial operations. They call on all other European countries to show their commitment to ELI by joining in as founding Members of the ELI-ERIC as soon as possible.
8. It is vital at this point to maintain momentum and continue to build on the success achieved so far. A number of opportunities with significant European added-value call for extra support by the EU budget in this transition phase, on top of the contributions of the three Host Countries and the other future ELI-ERIC members, to fully exploit the potential of this new facility, and strengthen and develop scientific, technological and regional competitiveness in the same manner as other major research infrastructures in the EU. The following challenges should be addressed in particular:
 - ***Maximising impact in a community approach:*** ELI is a natural step forward that builds on the success and growing integration of the European laser community. As a flagship research infrastructure, ELI should, as a part of its mission, assume a leadership role – in liaison with the Laserlab Europe Consortium – in facilitating coordination and consistency in the efforts of the complementary actors of the laser community, in view of maximizing European impact and competitiveness.

- ***Developing an integrated multi-site international organisation:*** ELI faces unique organisational challenges as it is based in three different locations that will be operated under a single legal umbrella. To be able to fully utilise its scientific potential, ensure efficiency and quality in operations, the facility will need to allocate resources on the organisational integration and development of this multi-site organisation. Furthermore, regional development (in terms of science and technology, knowledge transfer, economic and social aspects, pooling resources for and around the three Pillars, etc.) will have a huge impact on Europe as a whole and boost its competitiveness and visibility. ELI will be a success story by attracting the most brilliant minds from the world in this scientific domain.
- ***Achieving unprecedented operational performance:*** ELI will offer access to laser sources with unprecedented performance as soon as it begins operating in 2018. In the next few years, ELI, together with the European laser community, will gradually ramp up the facility to maximum reliability and cost-effectiveness in operations, a condition to guarantee ELI's long-term attractiveness and sustainability. This is the opportunity to gain unique know-how and bring Europe's technical knowledge – in labs and industry – to the forefront of technological competitiveness. To fully capitalise on this opportunity, ELI will partner with labs across Europe and close the innovation divide by combining knowledge in an open, innovation environment. This needs to be underpinned with an active technology transfer function that ensures these innovations are diffused not only in labs, but also to industry and society at large, again strengthening and diversifying competitiveness for Europe and its regions.

