



The Extreme Light Infrastructure

ELI commitment to technological development

A European Research Infrastructure Consortium



ELI ERIC Leads Innovation and Technology

Training a new generation of scientists and experts

- The ELI Facilities have awarded over €455 million in contracts to companies from 19 European countries
 - Mainly primary and secondary sources, but also R&D contracts for technological development
- See facilities' presentations later today for details about the latest collaborations

*ELI is very open to **industrial collaboration** to complement scientific collaboration, as well as looking to increase the base of our **qualified suppliers** from around the world.*



Thanks to our industrial participants !

Fusion Start-ups

- **Marvel Fusion**
- **Focused Energy**
- **HB11**

Targets / secondary sources

- **General Atomic**
- **Tau Energy**
- **SourceLAB**

Primary sources

- **Trumpf**
- **Thales**
- **Amplitude**
- **D+G**
- **Light Conversion**
- **Coherent**



Thanks to our industrial participants !

Engineering partners

- Leonardo
- Hilase
- TII - DERC

Complementary equipment and systems

- Sphere
- Imagine Optics
- Cristal Laser
- CEO
- RCI Partners

Project Objectives

IMPULSE in particular addresses technical points with an emphasis on the industrial and technological transfer activities.

WP3 : ...standardization of operational procedures and metrology...

WP4 : ...the risk mitigation ...requires the understanding and control of a few key technologies...

WP6 : ...fostering ELI's Innovation Impact : innovation board, industrial club...

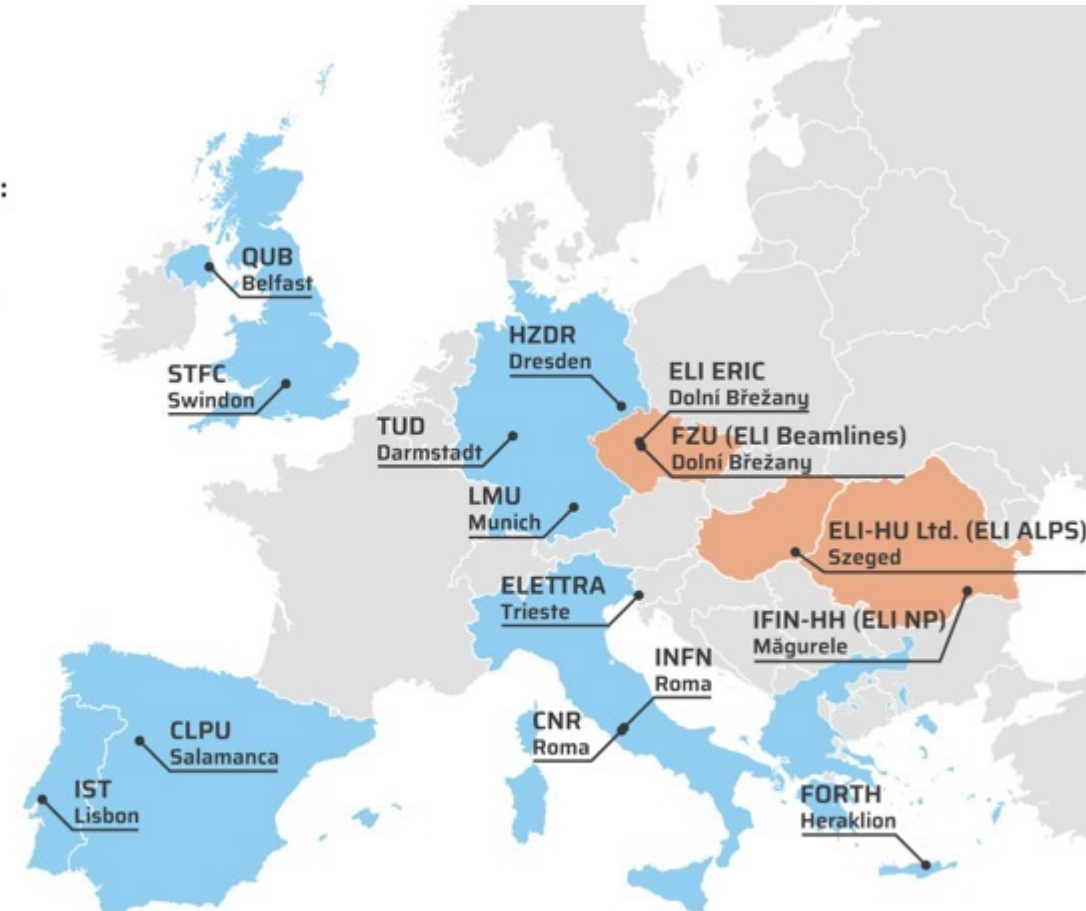
Few examples :

- **Primary and secondary sources diagnostics**
- **Target system (especially high repetition rate)**
- **Coating and LIDT capability**
- **Dedicated detectors for secondary sources**

Project Coordinator:
ELI ERIC

ELI Project Partners

Other Partners



Project Facts

- **14 Partners**
- **9 Countries**
- **42 Months**
- **€19.9 Million**

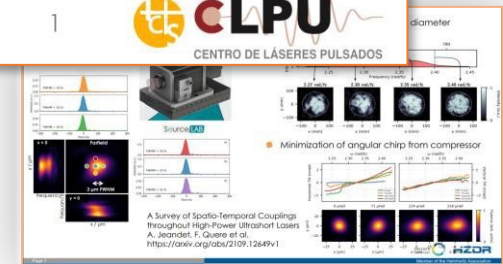
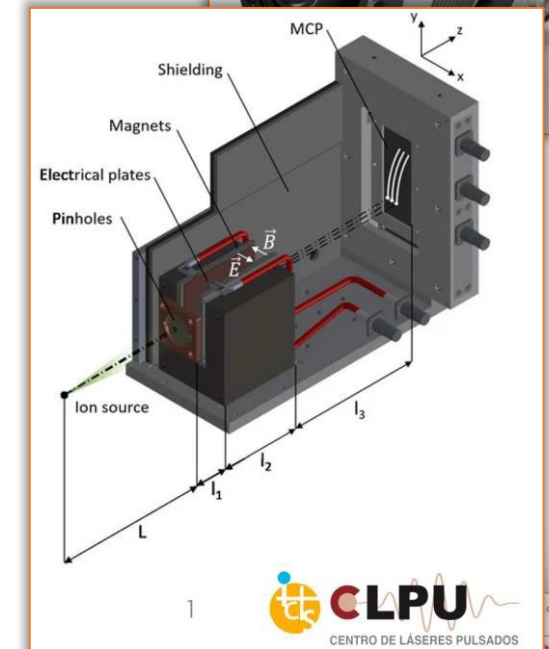
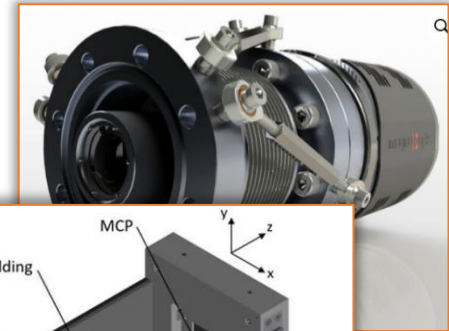


Standardization of the metrology procedures for the lasers & secondary sources

Progress Report

Actions for the following period:

- **Cross facility** standardization (same parameters – same procedures)
- Address community
 - **Dissemination** of procedures (review articles, conferences, etc.)
 - **International Standardization** (do we need this? - form technical committees)
 - **WP6 synergy – involve industrial partners**





Optimized management of spare parts to maximise cost efficiency, machine safety & reliability

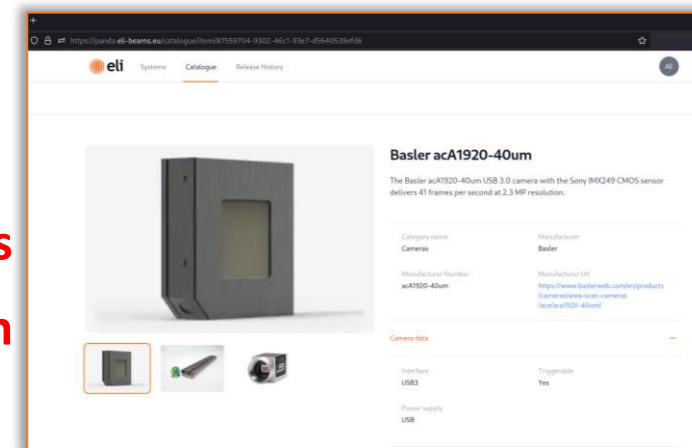
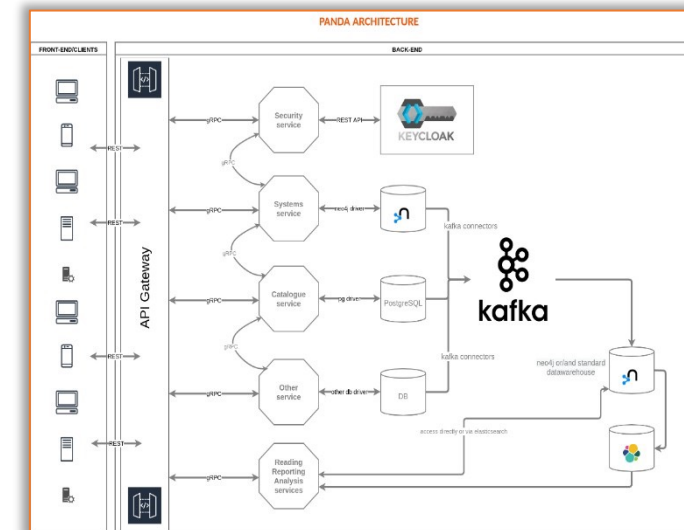
Progress Report

– MS25 „Database rolled-out and populated at ELI Facilities” – **Achieved**

WPL Misson:

Database partly populated at ALPS (code books, system structures, on single beamline parts) – still considering this as a proof of concept project of spare parts database by software engineers participating in the task

„It is essential that we have a clear commitment from all three facilities when it comes to the actual use of the database in daily operations, in particular by operating teams and procurement departments.”





Fusion science and technology at ELI ERIC

- Designing the framework for an industrial pathway - strengthening the academic private sector link
- Pushing the frontier of high peak and high average power lasers - test and assess technologies at high rep rate
- Helping the actors to define roadmaps and move forward in SRL - defining new markets and business development
- Capitalizing on ELI tools with a dedicated access

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Round tables dedicated to industrial participants and contribution

11:00 – 12:30 Parallel Section II

Round table 3 :
Laser technology development for laser fusion

Chair : V. Bagnoud

F. Canova, B. Rus, P. Bakule, L. Gizzi

Round table 4 :
Targetry technology for laser matter interaction optimization

Chair : Rüdiger Quay

V. Leca, C. Gheorghiu, F. Condamine, F. Consoli, JJ Santos