



Implementing a pan-European RI with structural funds

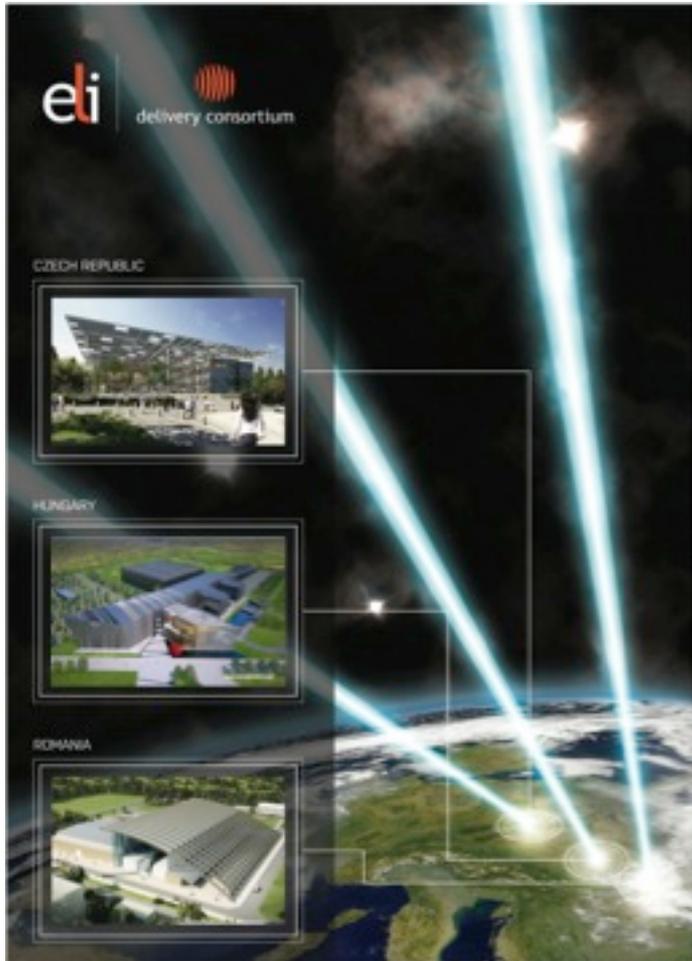
Key lessons from ELI's and ELI Beamlines' experience

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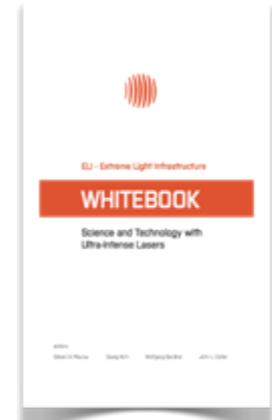
ELI at a glance



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

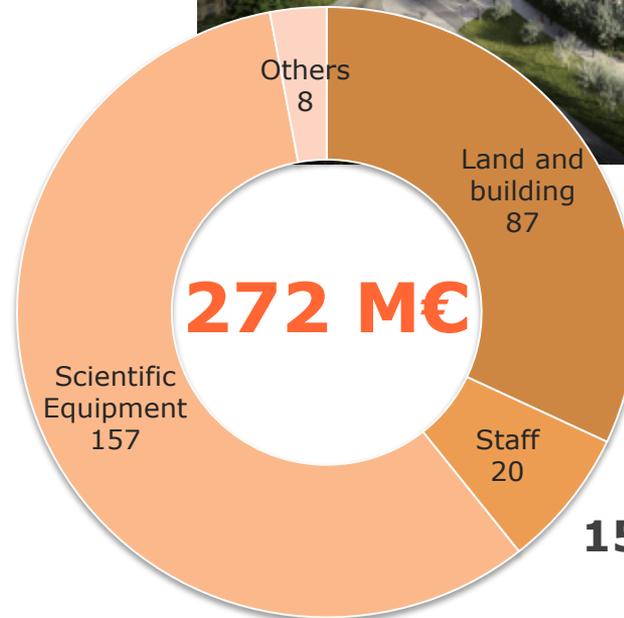
Milestones towards implementation

- **2005:** initiation of the ELI project
- **2006:** ELI selected as a priority project for Europe (ESFRI Roadmap)
- **2007:** launch of ELI-Preparatory Phase (13 EU countries involved, €6 million EC funding)
- **Oct. 2009:** decision to implement ELI as a unified distributed infrastructure / mandate to CZ, HU and RO to build the first 3 sites
- **Apr. 2010:** MoU between the host countries
- **Dec. 2010:** end of the ELI-PP



ELI Beamlines in brief

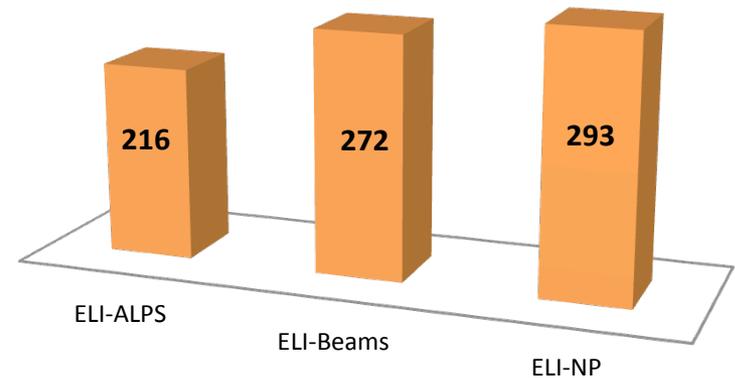
- **High energy repetition-rate pillar of ELI:** development of ultra-short pulses of high-energy particles and radiation stemming from the ultra-relativistic interaction
- **6 research programmes** (fundamental research and multidisciplinary applications)
- Site: **Dolní Břežany** (South of Prague)
- **Funding approved in Apr. 2011** and grant contract signed in August 2011
- **Phasing** under negotiation
 - Building contract signed and technology under procurement



85% ERDF
15% national budget

Structural funds Characteristics and opportunities

- Structural funds allocated **at the national level** through 3 separate processes and grant agreements
- Grant beneficiaries (ELI-Hu, IoP, IFIN-HH) **individually responsible for the implementation** of the 3 ELI facilities
- ERDF: **objectives of socio-economic development** for the hosting regions (besides RI objectives)



Key opportunities and benefits:

- Structurally interesting ESFRI funding model: opportunity for the development of RIs and scientific communities in new Member States
- Facilitated site decision and swift transition towards implementation, no initial delay due to multi-national ERIC negotiations

1 Institutional challenge

- How to keep the pan-European character and consistency of the project?
- What approach towards ERIC?

2 Application challenge

- Challenges related to the content of the application
- Challenges related to the application process

3 Management challenge

- How to deal with the strict time constraints applying to the use of structural funds?
- Review of main management issues connected to the use of structural funds.

1 Institutional challenge



1/ Institutional challenge

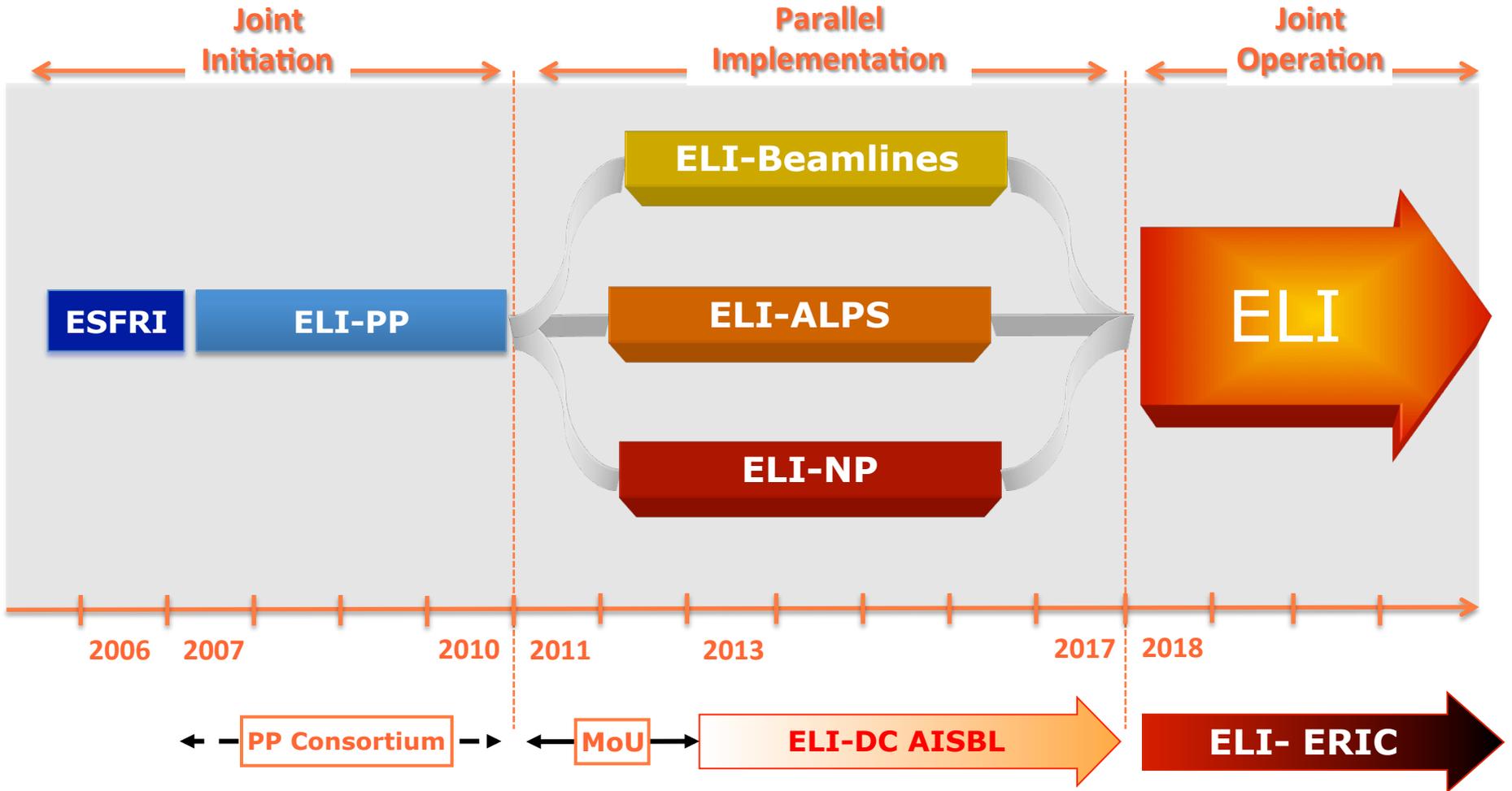
- **Two layers of responsibilities and interests** to protect and combine:
 - Pan-European dimension and character of the project (ELI borne by international user community, preparation of future joint operation)
 - Legal responsibility of the sites in the implementation + socio-economic benefits and scientific development of the hosting countries
- **Political and administrative constraints:**
 - No synchronisation of operational programmes (OP) in the three countries
 - Time needed to secure political commitment at highest level in the hosting countries
 - Different administrative arrangements (OP under responsibility of Research Ministry or development agency)

1/ Institutional challenge

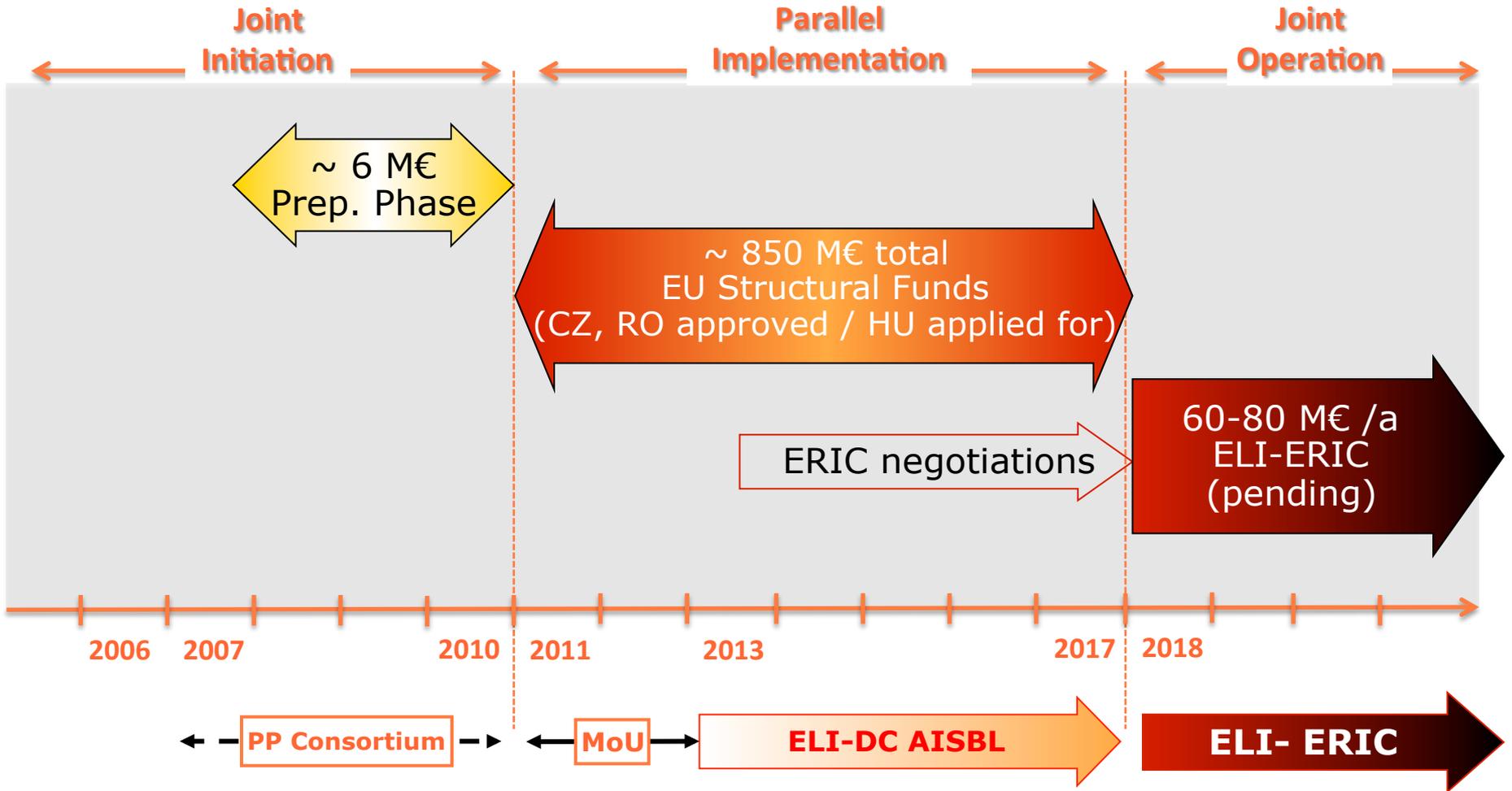
- **Risk of a loss of larger international commitment** during implementation
- **Need for coordination** between implementation teams to prepare joint and high-quality operation and ensure overall scientific coherence
- Need for initiation and **preparation of ERIC negotiations** in parallel with implementation
- **Staged approach to ERIC**: in ELI's context, no possibility for ERIC to be in charge of implementation and to take over immediately after closure of Preparatory Phase.

Need for an **interim structure** at the European structure to address these challenges and risks: **ELI Delivery Consortium AISBL** founded on 11 Apr. 2013

1/ Institutional challenge ELI's institutional roadmap



1/ Institutional challenge ELI's institutional roadmap



2 Application challenge



2/ Application challenge

- **Scope and duration of the application process (ELI Beamlines)**
 - Thorough evaluation process at the national level (technical, environmental, legal, financial, organisational, management aspects) followed by evaluation by EC for “major” projects
 - Lengthy procedure (22 months between submission of national application to Managing Authority and signature of grant agreement)
 - Evaluation period at EC level – in principle no longer than 3 months – delayed because of lack of coordination between DGs (situation under improvement since then)
 - Overall, positive attitude of DG Regio towards the project (during evaluation and after), very helpful support from DG Research.

2/ Application challenge

- **Main challenges:**

- **Cost-Benefit Analysis:** compulsory economic tool to demonstrate socio-economic relevance of the project:
 - Choice of indicators, quantification and monetisation inherently subject to high level of uncertainty in the context of a RI project
 - CBA more adapted to traditional investments where benefits are more easily appropriated by the hosting region
 - No standard reference period for impact analysis of R&D project (specific guidelines under preparation by JASPERS?)
- **Compliance with competition rules:** need for clearer guidelines on how to ensure project compliance and better understanding by DG Competition of the nature of RI projects
- **Demonstration of financial sustainability:** need for long-term financial perspectives and assurances in hosting countries to support operation

2/ Application challenge

- **Conclusions / recommendations on application:**
 - Overall, application process is adapted to scale of projects, but possible adjustments to take into account RI specificities
 - Heavy application process more adapted to mature projects (otherwise risk that application preparation prevails over project preparation)
 - Pre-funding to support application preparation and team building before implementation is necessary
 - Connection between Managing Authority and Ministry of Research / ESFRI delegate necessary (+ connection between RI roadmap and operational programme strategy)
 - CBA useful to compare between projects and assess performance, but regional-based strategy for maximisation and appropriation of impact should be the main focus
 - Need for more practical guidelines on compliance of RIs with competition rules (checklist?)

3 Management challenge



3/ Management challenge – Dealing with time constraints

- **Phasing** as an answer to the time constraints of structural funds:
 - Strict time boundary to the funds' eligibility creates potential risk of non-completion in case of delays
 - RI projects – like ELI – involving challenging technological developments need sufficient time contingency and may extend over a single programming period
 - “Phasing” the implementation over two programming periods is an appropriate answer to mitigate the risk of non-completion
- **Conditions for phasing:**
 - Need for two distinct and physically identifiable phases
 - Investment delivered by Phase 1 needs to be “ready for its use / purpose” (condition assessed *in concreto*)
 - “Horizontal phasing” as an appropriate approach in the context of RIs like ELI.

3/ Management challenge – Procurement and financial aspects

- **Stringent procurement rules increasing schedule risks:**
 - Threshold above which competition with publication is required: 200k CZK (about 8k€)
 - Monitoring of procurement process by Managing Authority makes process much longer than when using other types of funding
 - Exemption for procurement of R&D services and sole-supplier procedure inapplicable in practice.
- **Financial management constraints**
 - Contingencies not allowed in budget (possibility for risk budget under discussion with Managing Authority)
 - Savings on building costs recoverable up to 30% for other use based on negotiation with Managing Authority
 - Possibility to reallocate funding within budget limited and subject to negotiation with Managing Authority (for example, reallocation from a big technology system to another, or from travel to services).

3/ Management challenge – Reporting and monitoring

- **Complex audit and monitoring system**
 - Multiple audit layers:
 - Annual external audit paid by beneficiary
 - On-going audit and monitoring by Managing Authority (accounting, procurement, salaries, deliverables, milestones and performance)
 - Project audit by control department of Managing Authority at least once over programming period (same audit scope as on-going audit)
 - Audit of projects representing at least 5% of the allocation of the Operational Programme by controlling department of the Ministry of Education and by the Ministry of Finance
 - Annual audit of Operational Programme by the EC (implying audit of several projects every year).
 - Progress and performance of project assessed based on a list of 172 milestones (subject to interpretation)

Conclusions and recommendations

- Key **opportunity for a more balanced European Research Area** and for the socio-economic and scientific development of less-advanced regions
- Need for institutional arrangements **balancing national and pan-European responsibilities** and interests (for distributed RIs)
- Better **adaptation of application process to RI specificities** would help maximise impact of projects using structural funds
- **“Phasing” as a valid model to mitigate risks** due to time limitation of eligibility (clarification of “readiness for use” still needed)
- Need for **consistency in management and governance practices** across EU programmes:
 - Eligibility of contingencies is a must for proper risk management (application-based contingency system at EU level as an answer?)
 - Consistent approach to performance and progress monitoring based on key milestones



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