



The Extreme Light Infrastructure

EXTREME SCIENCE

A European Research Infrastructure Consortium



ELI ERIC – The World's Largest Laser Infrastructure

ELI is the world's largest and most advanced **high-power laser infrastructure** and a global technology and innovation leader in **high-power, high-intensity, and short-pulsed laser systems**.

The **international laser user facility** ELI accommodates some of the most intense lasers in the world. ELI's lasers produce ultra-short pulses of high energy **photons, electrons, protons, neutrons, muons and neutrinos** in the **(sub-)attosecond** regimes on demand.

Legal status: European Research Infrastructure Consortium (ERIC)

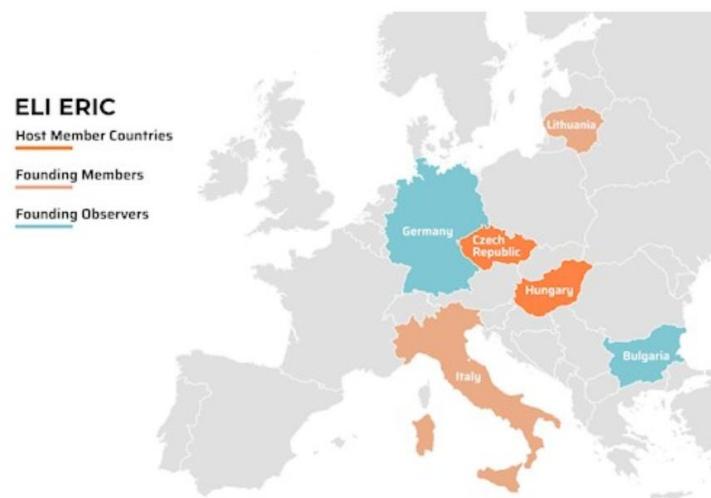
Established: 2021

Founding members: Czech republic, Hungary, Italy, Lithuania, Bulgaria

Founding observes: Germany, Romania

Statutory seat: ELI Beamlines facility, Dolní Břežany, Czech Republic

Staff members: 604 (48 nationalities)



ELI ERIC operates two major facilities:

ELI Beamlines (Czech Republic): Focus on particle acceleration, plasma physics and structural dynamics using PW lasers.

ELI Alps (Hungary): Focus on attosecond physics, investigating ultrafast dynamics on the atomic scale



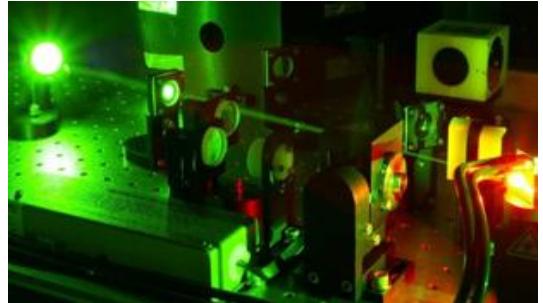


Introduction to ELI ERIC

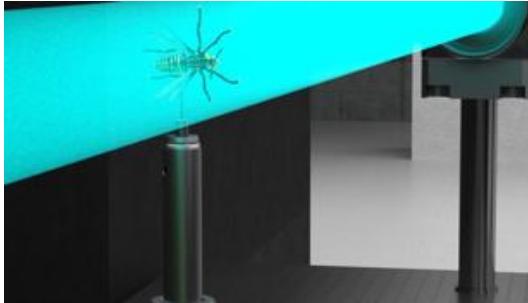
- ELI ERIC is specializing in **ultra-intense and ultra-short laser pulses**
- ELI ERIC supports both academic and industrial users, offering **open access** to unique laser systems and experimental capabilities.
- Our mission is to enable **world-class research**, promote **technological innovation**, and support **real-world applications** in science and industry.



ELI Science Case



Laser research



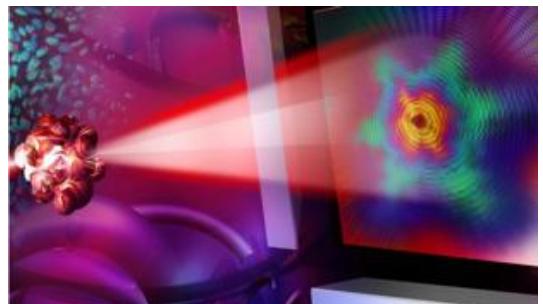
Soft to hard x-rays



Particle Acceleration
250 MeV ions, 10 GeV e^-



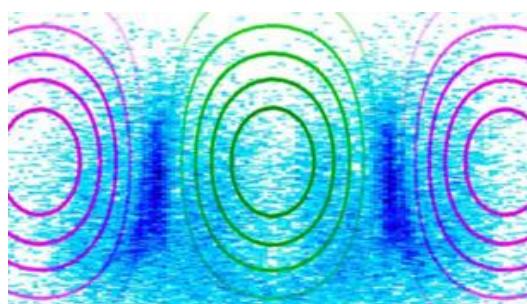
Nuclear Physics and Photonics



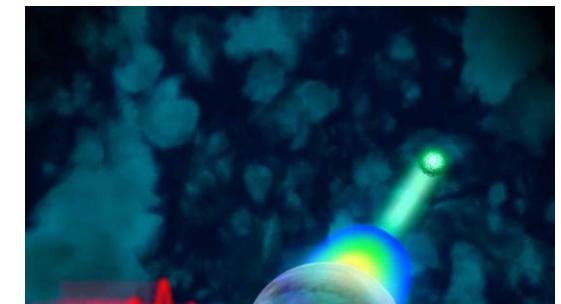
Material Science and Biology



Plasma Physics and High
Energy Density, Astrophysics



Ultra High Intensity Interactions
High-field physics and theory



Ultrafast, attosecond dynamics



Collaboration Opportunities

1. Suppliers

- Seeking new suppliers to support scientific and operational needs
- Expanding collaboration with existing suppliers for advanced services and solutions

2. Innovation Partners

- Joint development of research and innovation projects
- Participation in collaborative R&D initiatives

3. Contract Research Clients

- High-precision measurements
- Scientific and engineering calculations
- Feasibility studies
- Licensing of ELI-developed technologies

Technology development areas at ELI

Vacuum systems & components



Optics & Photonics



Detectors, Sensors, Cameras



Ultrafast electronics, Oscillators



- Prevac, X-ray Project (PL)
- Fantini, Alca (IT)
- VAT (CH)
- AVS (ES)
- Hositrad (NL)
- Vakuum Praha, Streicher (CZ)

- VIGO, Lambda (PL)
- INFN (IT)
- FEI (NL)
- Crytur, Nuvia (CZ)

- Onefive, PSI (CH)
- Holland Shielding Systems (NL)
- Sphere (ES, PT)
- Delong Instruments (CZ)

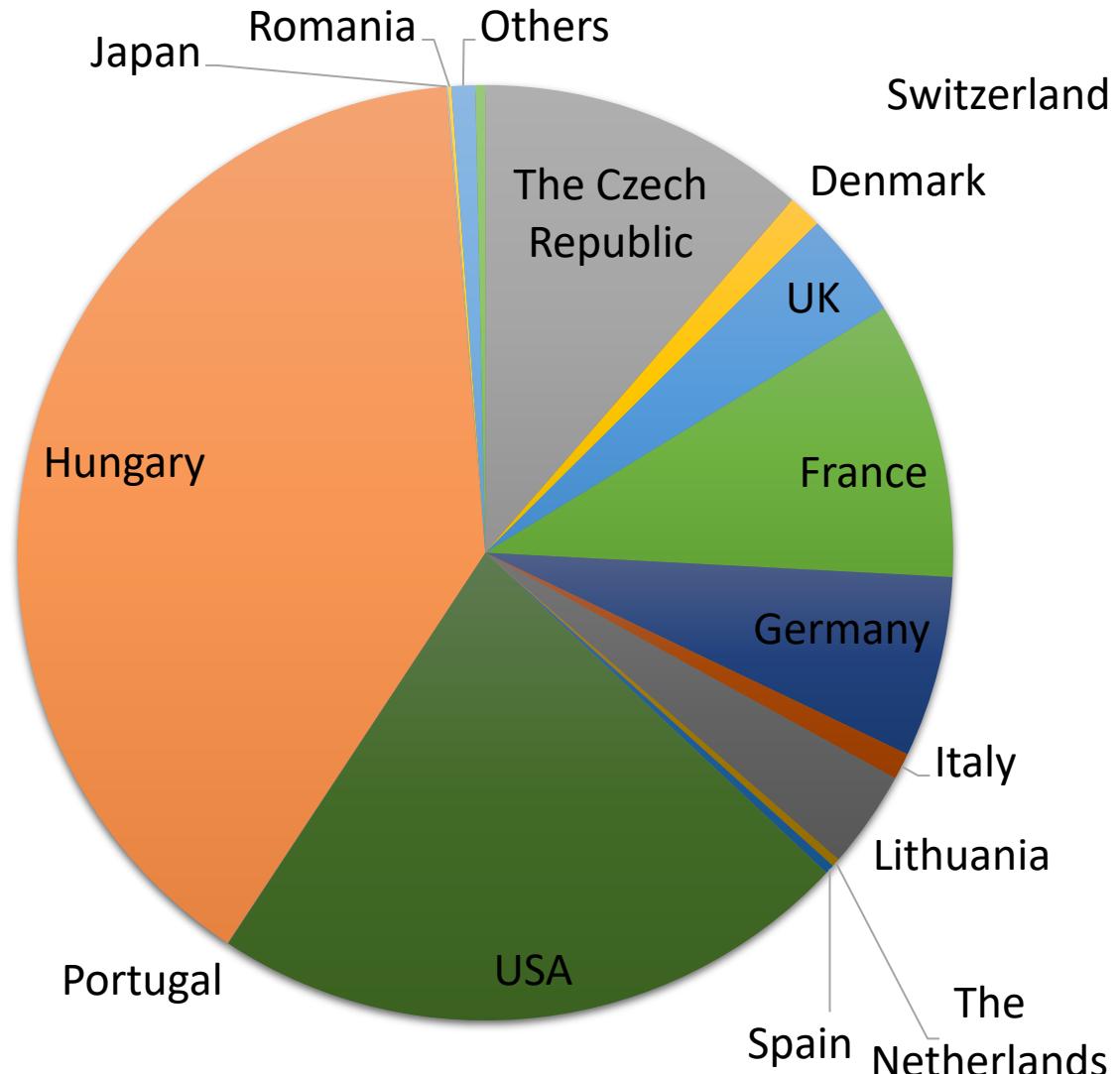
- Createch, CRI Jolanta (PL)
- Holland Shielding Systems (NL)
- Ateko (CZ)
- Seven (ES)

- Total investment **580 million EUR**
- Investment in technologies and instrumentations **415 million EUR**

Overview of existing suppliers to ELI

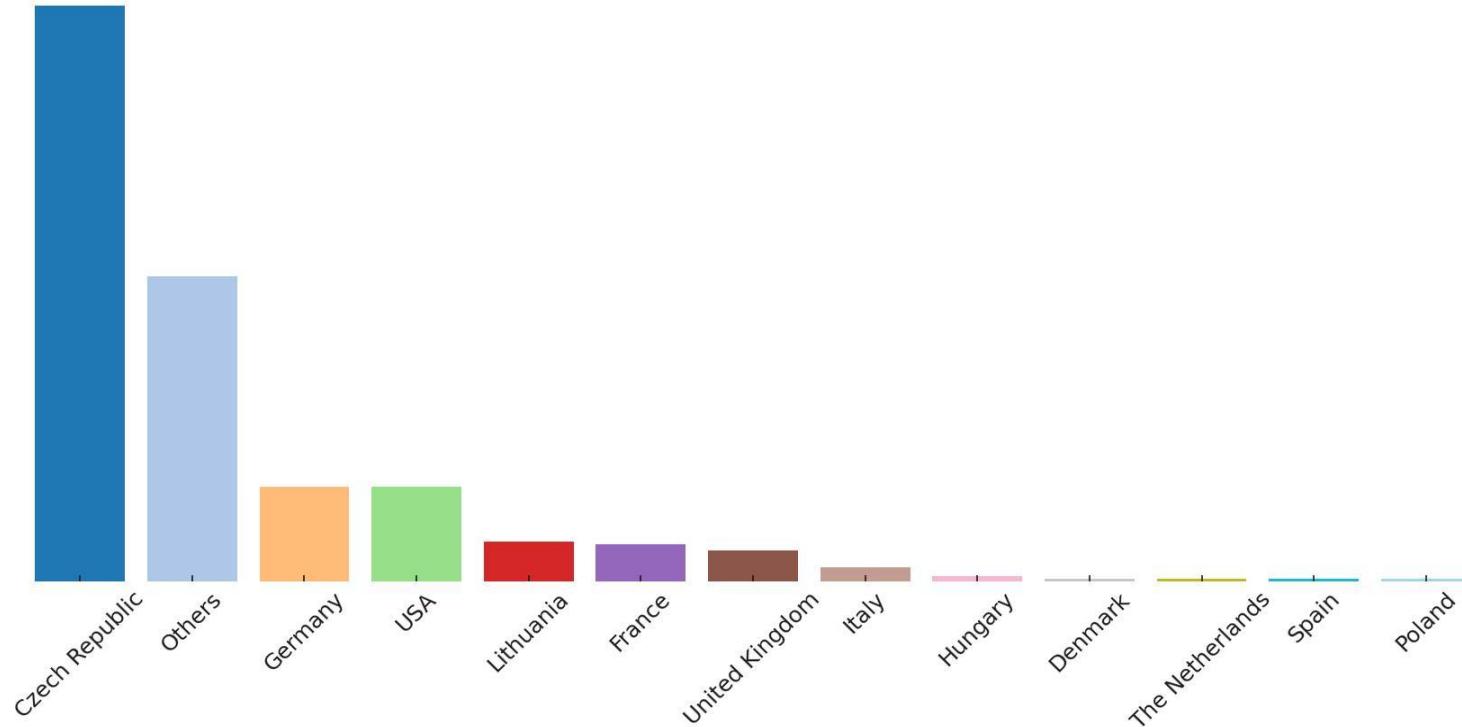
Contracted value of supplies in 2012 – 2022

Country	Contracted value m EUR
Czech Republic	42.7
Denmark	4.8
United Kingdom	15.3
France	39.8
Germany	26
Italy	3.8
Lithuania	14
The Netherlands	1.2
Spain	1.4
Portugal	0.06
USA	92.4
Poland	0.8
Hungary	163.5
Japan	0.2
Romania	0.5
Switzerland	1.4
Others	3.4
TOTAL	415



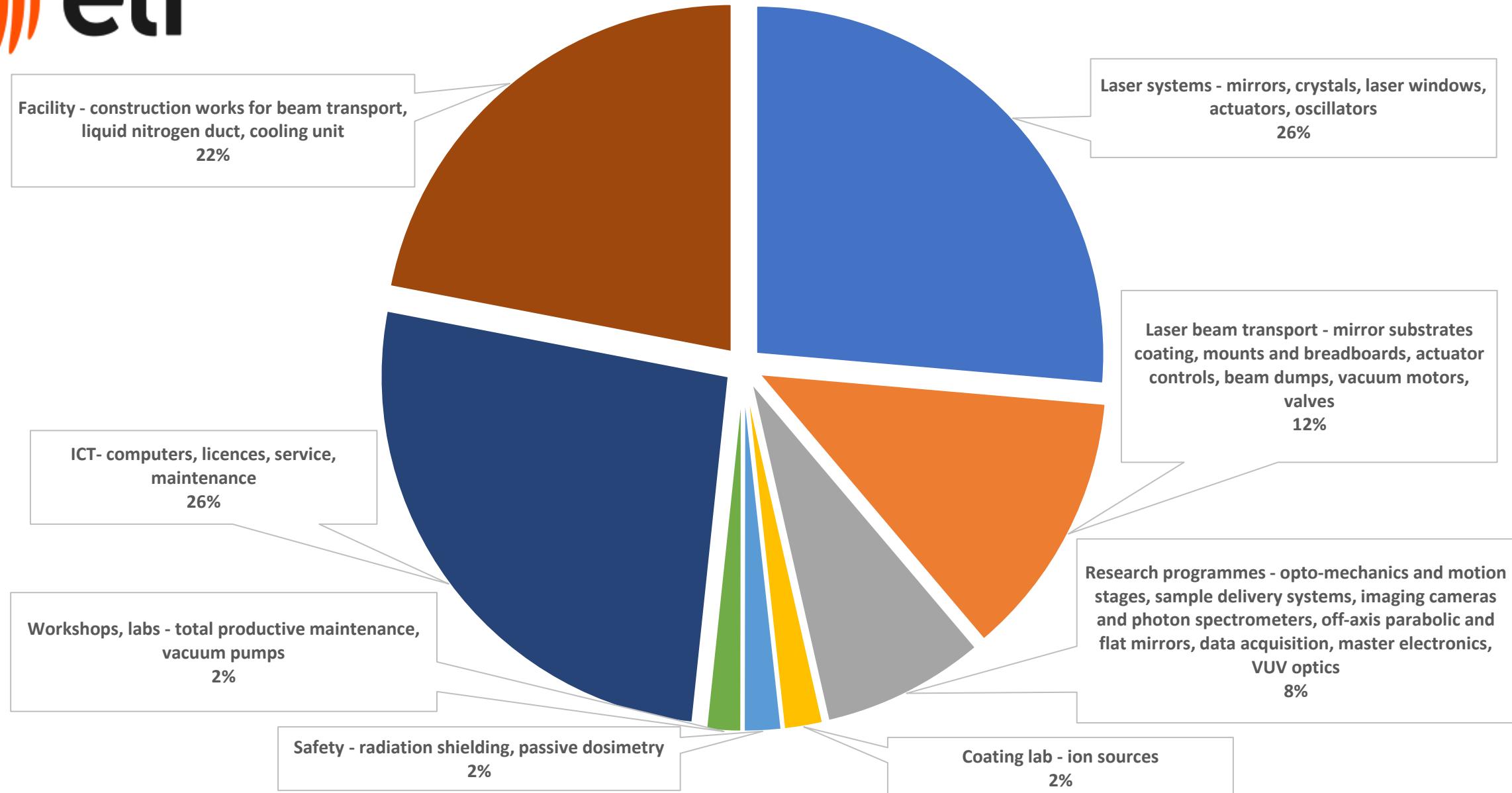
Overview of existing suppliers to ELI Beamlines

Contracted value of supplies in 2023 and 2024



Country	Contracted value m EUR
Czech Republic	20.0
Denmark	0.1
United Kingdom	1.1
France	1.3
Germany	3.3
Italy	0.5
Lithuania	1.4
The Netherlands	0.1
Spain	0.1
Portugal	0.02
USA	3.3
Poland	0.1
Hungary	0.2
Japan	0.04
Romania	0.001
Switzerland	0.01
Others	10.6
TOTAL	42,171

Strategic procurement areas





Overview of planning investments 2024-2029 (in KEUR)

Cost category	Users	Programme	ELI ERIC					
(kEUR)			2024	2025	2026	2027	2028	2029
Instruments and Technology	22 356		12 651	12 777	12 905	13 034	13 165	
Infrastructure	20 597		12 739	12 866	12 995	13 125	13 256	
External Services and Specific costs	2 983		2 204	2 257	2 312	2 367	2 425	
Rolling Investments/Projects	0		8 700	7 500	7 685	7 875	8 069	
Cost category	Users	Programme	ELI BEAMLINES					
(kEUR)			2024	2025	2026	2027	2028	2029
Instruments and Technology	13 672		6 823	6 891	6 960	7 030	7 100	
Infrastructure	8 297		6 449	6 513	6 579	6 644	6 711	
External Services and Specific costs	771		1 297	1 323	1 349	1 376	1 404	
Rolling Investments/Projects	0		6 500	4 000	4 080	4 162	4 245	
Cost category	Users	Programme	ELI ALPS					
(kEUR)			2024	2025	2026	2027	2028	2029
Instruments and Technology	8 684		5 828	5 886	5 945	6 004	6 065	
Infrastructure	12 300		6 290	6 353	6 416	6 481	6 545	
External Services and Specific costs	2 212		907	934	962	991	1 021	
Rolling Investments/Projects	0		2 200	3 500	3 605	3 713	3 825	

Categories of supplies with low number of spare parts suppliers

- Optics and opto-mechanics components
- Optics coating
- Detectors
- Electronics
- Data infrastructure
- Cyber security infrastructure
- Vacuum infrastructure
 - Vessels, valves, bellows



ELI tender process and procurement rules

3 financial limits >> increasing formalization of the procurement process

- Contracts **below EUR 25 000**: procurement rules don't require formalised process, proper level of competition
- Contracts **between EUR 25 000 and 200 000**: simplified open or restricted procedure
- Contracts **above EUR 200 000**: more formalized procedures resembling the EU procurement law

2 types of procedure available:

A) Open procedure = Request for Quotations published on ELI ERIC web / certified on-line tool

B) Procedure without publication = At least 3 suppliers invited to bid without publication

- Deadline: typically 10 calendar days
- Tenders submission: paper envelopes/ on-line electronic

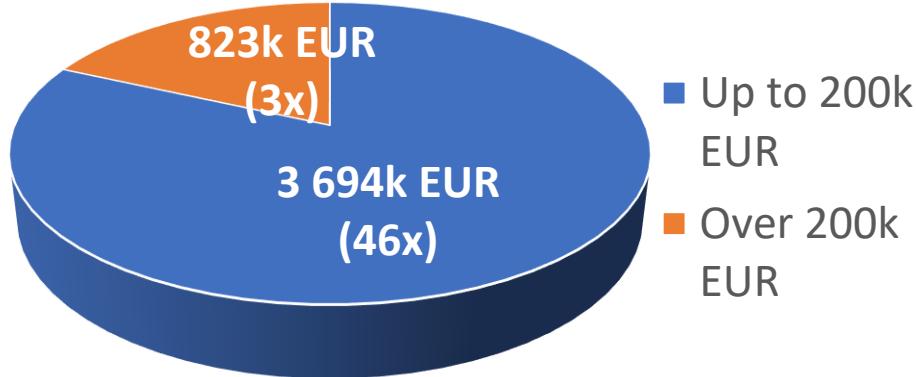
Basic option: **Open procedure** = Call for Tenders published on ELI ERIC web

Other procedures in specific cases: Competitive dialogue, Innovation partnership, Procedure with direct negotiations

- Deadline: 30 calendar days (20 if preliminary notice)
- Tenders submission: paper envelopes / on-line electronic



2024 concluded contracts by price and subject type



- Up to 200k EUR
- Over 200k EUR

- Building
- Technology
- Others

