



Czech Academy
of Sciences

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**„Research Infrastructures: Backbone of
R&I in the EU and the Czech Republic“**

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RIs and their significance

- **Unique knowledge- and technology-intensive facilities**, operated on the principle of **open access policy**
- Form **backbone network for conducting excellent basic and applied research** at national and international level
- Concentrate **above-critical amount of material, human and financial resources** to obtain breakthrough knowledge and bring **solutions to current socio-economic challenges**
- **Development of top-class professional careers** for **operators** as well as **users**
- Help to increase the efficiency of expenditures invested in R&I
- Critical element in **attracting the best researchers from all over the world**
- Incentivising countries to become associated to the EU R&I FPs



**RIs
=
critical stepping
stone for the
sustainable
development of
the ERA**

(I) RIs and the Czech Republic

- **One of the key elements of the national R&I system**
- **2009** - a new funding instrument integrated into the CZ legislation => conditions for providing support to RIs from the CZ public funds
- The **Ministry of Education, Youth and Sports** (MEYS) - the central public administration body responsible for supporting large RIs
- **Importance** of RIs– proposals to finance RIs **submitted to the CZ Gov. for approval** as the only individual R&I projects
- **Since 2010 - The Roadmap of Large RIs of the CZ** – presenting the concept of support for RIs (2019 - the latest edition of the Roadmap, 2016 to 2022)
- **48 large RIs operated in 6 scientific and disciplinary areas**: Physical sciences and engineering; Energy; Environmental sciences; Health and Food/Biological and Medical sciences; Social sciences and humanities / social and cultural Innovation; e-Infrastructures
- CZ has become a **Member of 15 ERIC legal entities**
 - **2020 – the ELI ERIC legal entity** established with the **seat in the CZ**
- CZ – long-term and an active member of **ESFRI**:
 - **Dr. Jan Hrušák (CAS) – 2019 - 2021 ESFRI Chair**
 - 1st ESFRI Chair coming from the CEE countries

(II) RIs and the Czech Republic

CZ PRES

- **RIs as one of the priorities** of CZ PRES
- CZ will organise the **ICRI 2022** (International Conference on Research Infrastructures) event
 - A major worldwide event: **19-21 October 2022 in Brno**
- **The EU Council Conclusions on Research Infrastructures** are envisioned to be endorsed by the EU Research Ministers in **December 2022**



RIs in times of war

- **LINDAT/CLARIAH-CZ** provides a publicly available **translator between Czech and Ukrainian**
- Created as a result of **hackathon to help refugees from Ukraine overcome the language barrier** and facilitate their contact in the CZ environment.



(I) RIs in ERA

- RIs have a specific priority and specific actions in 2020 ERA Communication (chap. 9)
- Creation of **synergies** through the network of pan-European and national infrastructures, synergies with businesses, RI contribute to the **transfer of knowledge and technology**
- World-class RIs ecosystem as a key element in delivering **solutions to important societal challenges**
 - => Tremendous importance of RIs for the implementation of ERA objectives and priorities (e.g. digitization, biodiversity, water supply, healthy food production, energy security, mitigation of climate change, societal inequalities)
 - Support the competitiveness of European industries and **impact daily lives of EU citizens**

(II) RIs in ERA

ESFRI

- **= European Strategy Forum on Research Infrastructures**
- Established in **2002**, mandate from the Council of the EU to:
 - Support a **coherent and strategy led approach** to policy making on RIs
 - **Facilitate multilateral initiatives**
 - **Roadmaps** for RIs (since 2006)
 - Brings together representatives of Ministers of the **27 Member States, 16 Associated States, and of the European Commission**
 - **Effectiveness** of governance model =) since establishment - raised almost **20 bn EUR** investment committed by the Member States, Associated Countries and the EC for funding 63 ESFRI RIs
- **Vision = equipping Europe with infrastructures for ground-breaking research**

(III) RIs in ERA

Horizon Europe

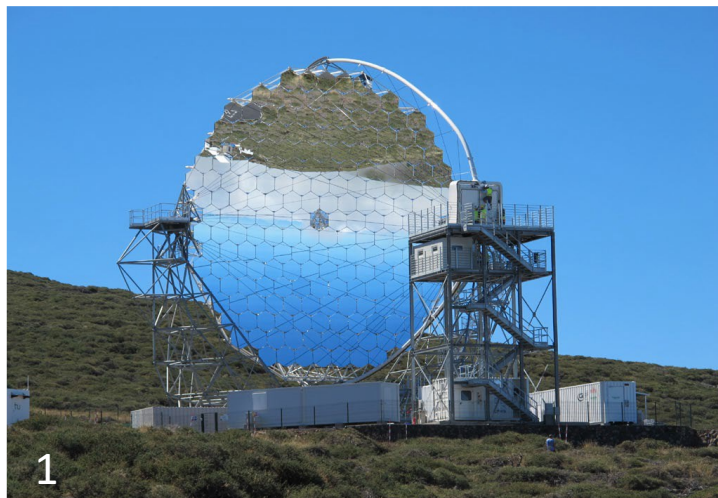
- **Under Pillar I – Excellent Science**
- **2.4 bn EUR** – nearly 10% of Pillar's budget
- RIs exploit the full potential of the new programme to support the various efforts to tackle global challenges
- Central elements of **European Open Science Cloud** – enabling access to digital resources and massive data processing, data exchange, operability



**HORIZON
EUROPE**

Sustainability of the RIs in the EU

- **Require a stable system of public funding** that enables sustainable development of large RIs over the long run
- Sustained from state budget => covering **operation costs**
- **+ investment costs** (covered with the EU Cohesion Policy instruments, i.e. the EU Funds) to modernise the facilities to remain competitive at international level
- Apart from the H2020/HEU and the ESIF, additional **complementary sources of funding** for RIs investments can be found in other EU programmes and agendas, incl. the Green Deal, Digital Europe, and others
- **Issue of RIs sustainability:**
 - Some activities funded through H2020 are not included in HEU work programme, but it is difficult to cover these expenses by Member States
 - i.e. challenging to fund access for users from other countries from a national budget



1 CTA (Cherenkov Telescope Array); 2 CENAKVA; 3 ELI Beamlines; 4 CzeCOS; 5 CZ-OPENSREEN (National Infrastructure for Chemical Biology)