

International peer-review assessment of large research infrastructures of the Czech Republic in 2021



MSMT
MINISTRY OF EDUCATION,
YOUTH AND SPORTS

*National Day of Large Research Infrastructures of the Czech Republic
15th February 2022*

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1. MINISTRY OF EDUCATION, YOUTH AND SPORTS

- Leading public administration body of Czechia responsible for **policy-making and public funding of R&D**, including international cooperation of Czechia in R&D, as well as use of the EU Cohesion Policy Funds in the public R&D sector
- National authority of Czechia in charge of **large research infrastructures** both in terms of the strategy setting – i.e. **“road-mapping”** – and granting the financial support, including payments of membership fees to international legal entities
- **Managing authority** of the state budget expenditures (= operation costs) and the EU Cohesion Policy Funds (= investment costs) in Czechia to finance the projects of large research infrastructures
- Membership in the **European Research Infrastructure Consortia (ERIC)** established under the legal framework of the EU and **international R&D organisations** founded according to the international public law
- Delegation to the **European Strategy Forum on Research Infrastructures (ESFRI)**, the **European Open Science Cloud Steering Board (EOSC)** or the **ERIC Committee**



2. WHAT IS A “LARGE RESEARCH INFRASTRUCTURE”?

- **Minimal key requirements** → Compliance with the definition of large research infrastructure introduced by the national legislation on support of research, development and innovations from public funds of Czechia, and the Framework for State Aid for Research, Development and Innovation (2014/C 198/01)
- Large research infrastructure is an **exceptional facility** necessary to perform comprehensive research, development and innovation, which provides **unique expertise** and **state-of-the-art technologies**, and which is operated by the host research institution for all its potential users on the **open access policy** basis. Projects of large research infrastructures are **adopted by the Government of Czechia** upon the proposal of the Ministry of Education, Youth and Sports.

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- | | |
|------------------------------------|--------------------------------|
| ➤ Strategy investment | ➤ Scientific excellence |
| ➤ Unique R&D facilities | ➤ Outstanding results |
| ➤ Exceptional knowledge | ➤ User community |
| ➤ Top-class technologies | ➤ Nation-wide impact |
| ➤ Open access services | ➤ International overlap |

3. ROADMAP OF LARGE RESEARCH INFRASTRUCTURES OF CZECHIA (I)



*For the first time published in **2010** with updates released in **2011**, **2015** and **2019**, and outlook for the next update in **2023**, following the adoption of the new multiannual financial framework of large research infrastructures in 2023–2029*

3. ROADMAP OF LARGE RESEARCH INFRASTRUCTURES OF CZECHIA (II)



Strategy- and policy-making document in the area of research infrastructures issued by the Ministry of Education, Youth and Sports, and acknowledged by the Government of Czechia

Complementary doc to the **Roadmap of the European Strategy Forum on Research Infrastructures (ESFRI)**, and a contribution of Czechia to the research infrastructure landscape in Europe

Comprehensive overview of the **agenda development** since 2009 with a view to 2029, **landscape analysis**, and scientific and technical one-pager description of **48 large research infrastructure projects**

Membership of Czechia in **8 international R&D organisations** and **15 European Research Infrastructure Consortia (ERIC)**, prospective membership of Czechia in other 6 emerging European Research Infrastructure Consortia (ERIC)

4. HIGH-LEVEL GOALS AND OBJECTIVES OF INTERNATIONAL PEER-REVIEW

- **Interim evaluation** of the current state of implementation and performance of the large research infrastructures, which were approved by the Government of Czechia for public funding until the end of 2022, and already operate and serve their user communities
- **Ex-ante assessment** of large research infrastructure project proposals submitted as new projects to address gaps in the Czech research infrastructure landscape, receive funding from public funds and enter the Roadmap of Large Research Infrastructures of Czechia
- Expert basis to adopt informed, evidence-based political decision by the Government of Czechia on **public funding of large research infrastructures** in the upcoming multiannual financial framework 2023–2029
- Expert basis to **finance the investment costs** of the large research infrastructures adopted by the Government of Czechia using the EU Cohesion Policy Funds to be raised through the Operational Programme Johannes Amos Comenius (OP JAK)
- Expert basis to **update the Roadmap of Large Research Infrastructures of Czechia** in 2023, following the adoption of the large research infrastructure projects for their public funding
- Expert basis to provide the European research infrastructure project proposals participated by Czech research communities with political and financial support for inclusion in the 2025 **update to the Roadmap of European Strategy Forum on Research Infrastructures (ESFRI)**

5. EVALUATION AND MONITORING CRITERIA

- Scientific and technological role and mission
- Governance and management structure
- Relevance, importance and significance
- Cooperation, networking and clustering
- Societal and economic benefits and impacts
- User strategy and open access policy
- e-Infrastructure needs
- Feasibility study and SWOT analysis
- International benchmarking
- Public relations and outreach
- Capacity use and R&D and innovation results
- Costs and budget



6. KEY PERFORMANCE INDICATORS

- Number of user requests for access
- Number of users served
- Number of Master students
- Number of Ph.D. students
- Number of user R&D results
- Number of user publications
- Number of operator R&D results
- Number of operator publications
- Number of publicly available data sets
- Number of commercial users
- Income from commercial users
- Income from non-commercial activities

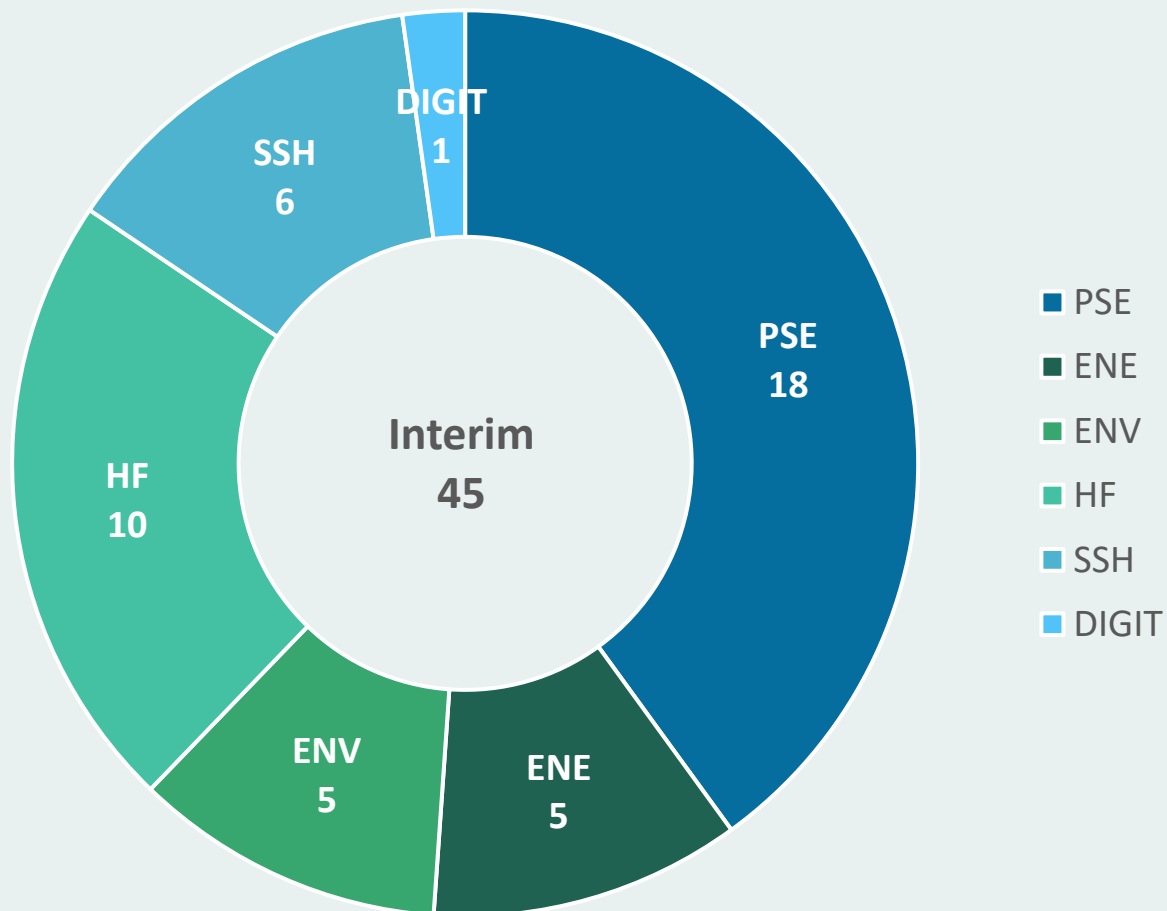


7. INTERNATIONAL ASSESSMENT COMMITTEE

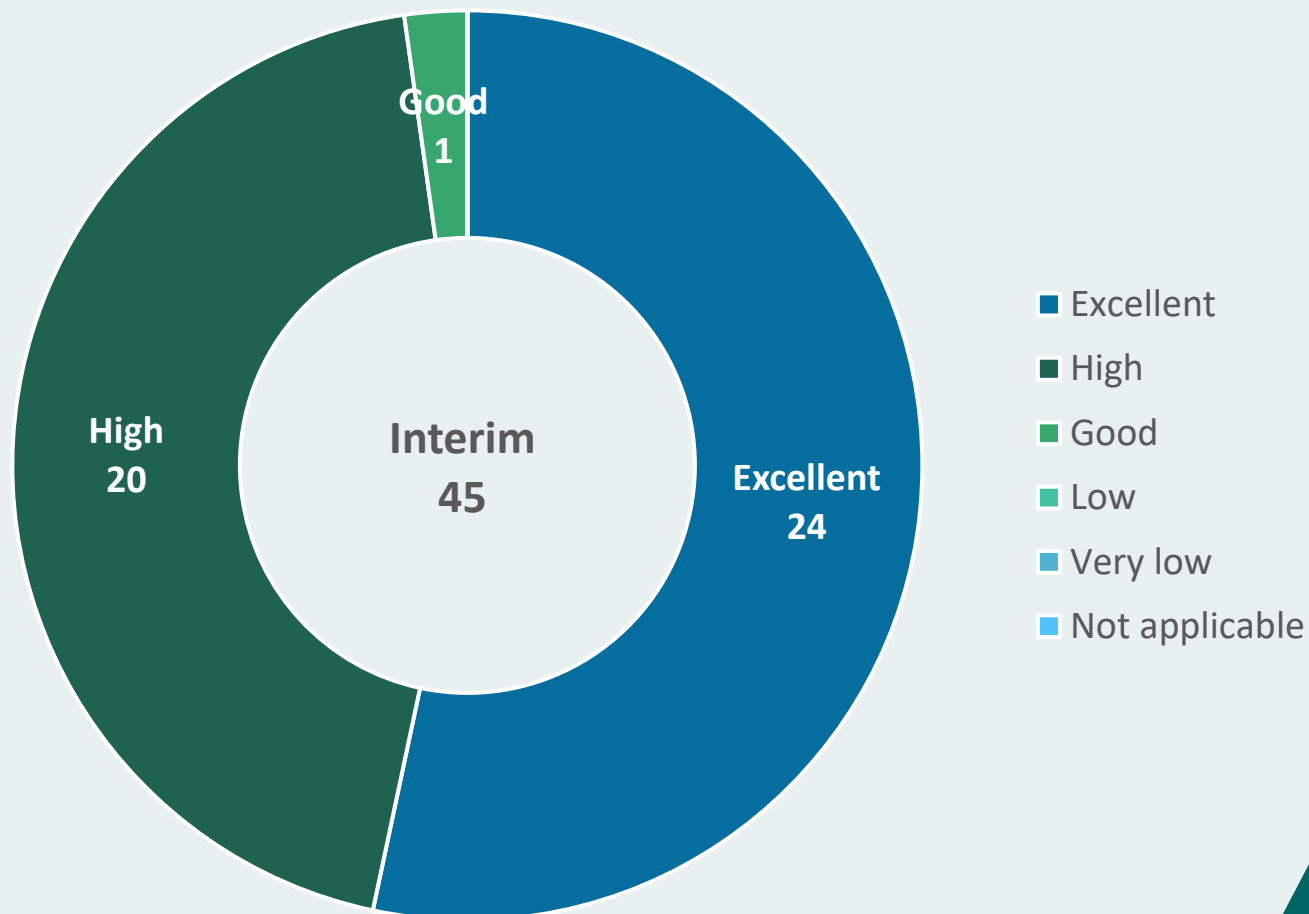
- Formed by renowned and internationally recognised experts in the field of research infrastructures, gathering a **Chair and 6 scientific panels per 5–7 Members** covering 6 science-disciplinary domains defined by the European Strategy Forum on Research Infrastructures (ESFRI)
- Divided in 6 review panels for the areas of **physical sciences and engineering, energy, environmental sciences, health and food** (i.e., biological and medical sciences), **social sciences and humanities** (i.e., social and cultural innovations), and **e-infrastructures** (i.e., data, computing and digital research infrastructures)
- Supported by thematic briefings, **3 external international reviews per project proposal**, outcomes of the **interviews/hearings** with research infrastructure managers/proposers, and **consolidation meetings** between the Chairs of the international review committee



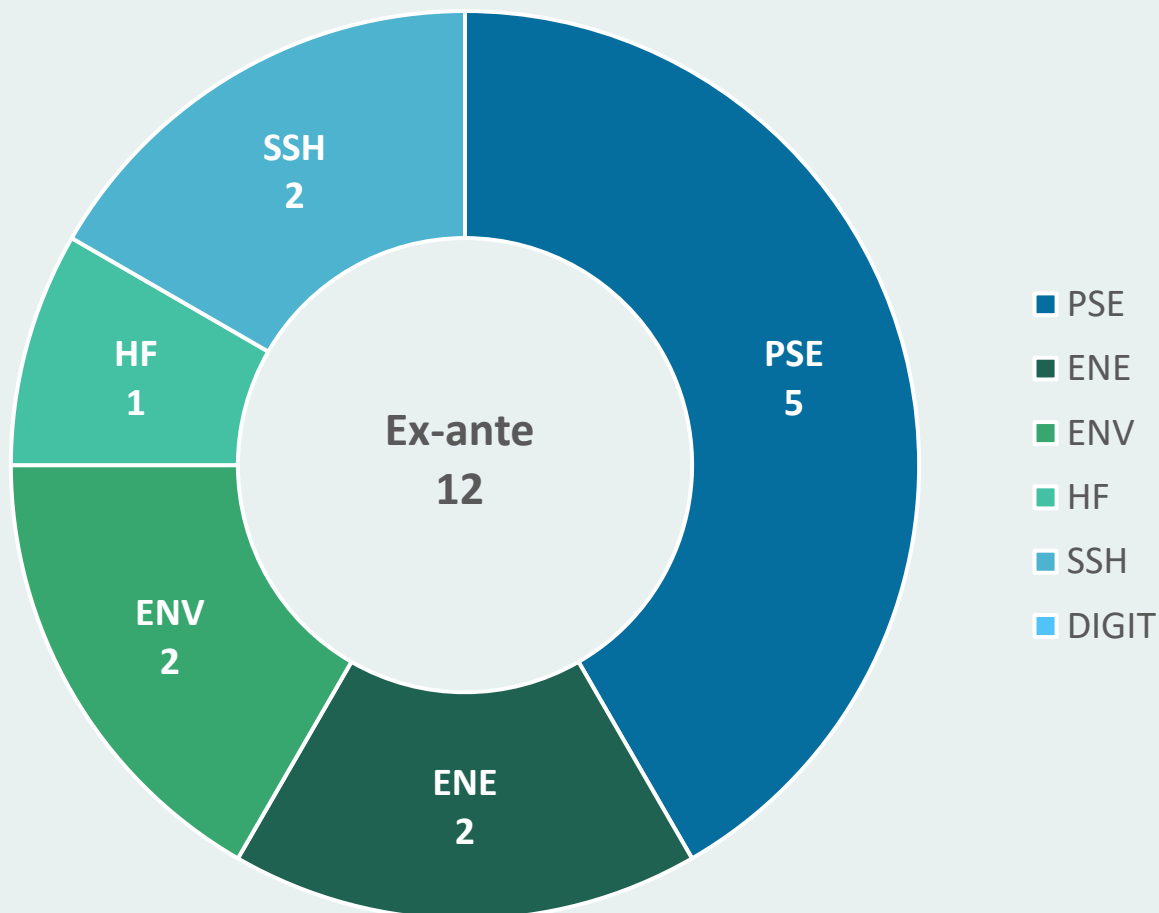
8. INTERIM ASSESSMENT OF LARGE RESEARCH INFRASTRUCTURES (I)



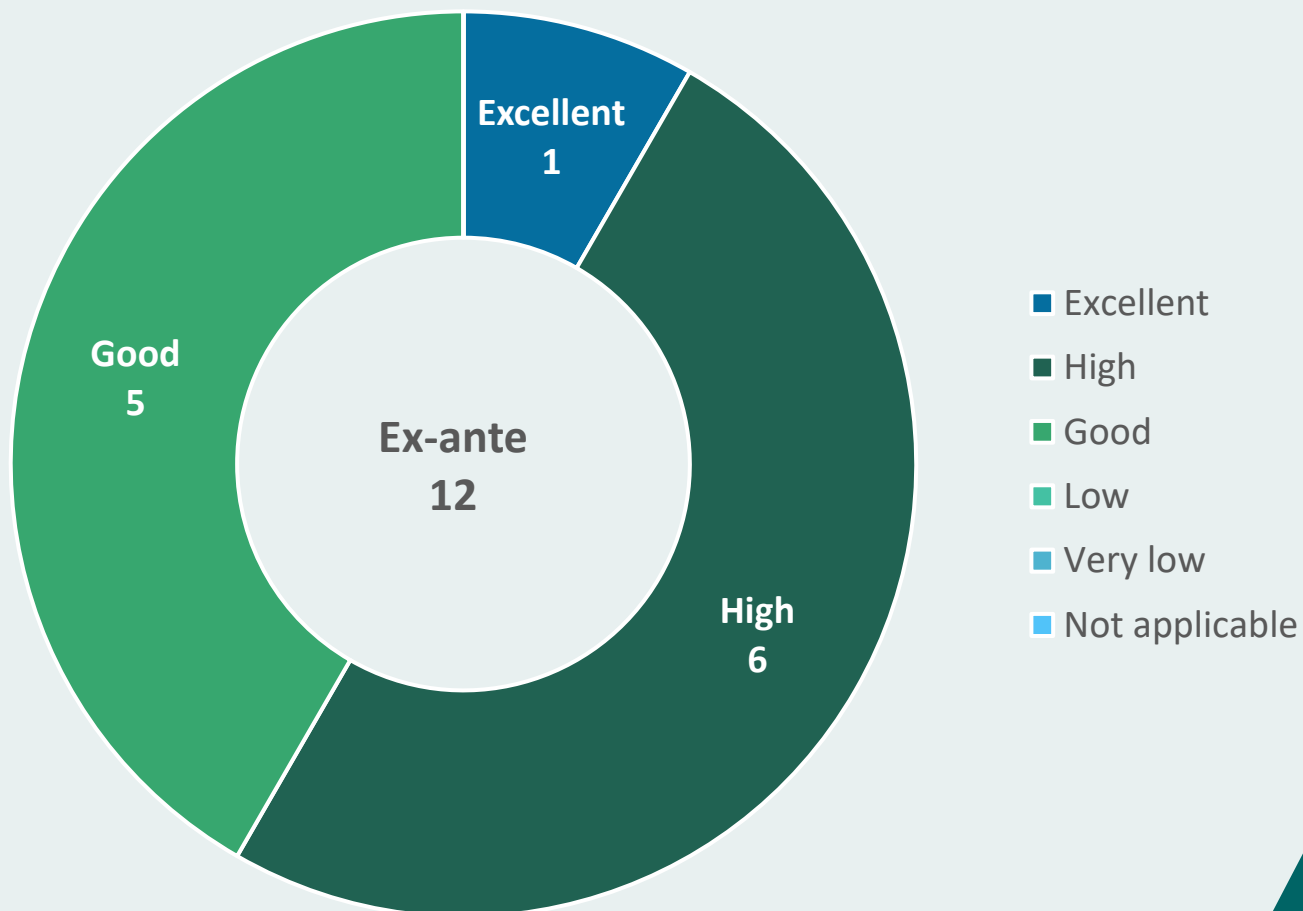
8. INTERIM ASSESSMENT OF LARGE RESEARCH INFRASTRUCTURES (II)



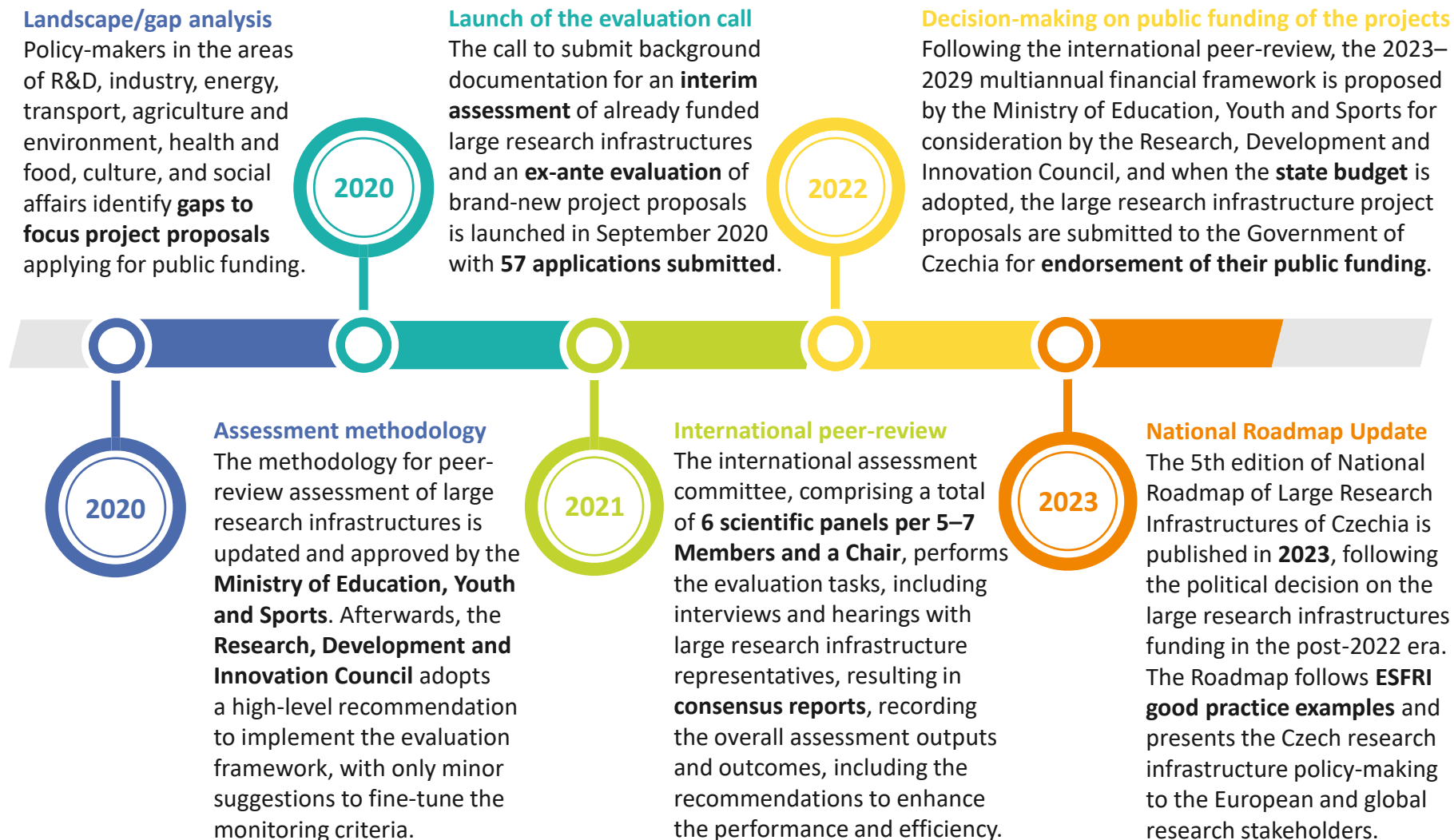
9. Ex-ANTE EVALUATION OF LARGE RESEARCH INFRASTRUCTURE PROPOSALS (I)



9. EX-ANTE EVALUATION OF LARGE RESEARCH INFRASTRUCTURE PROPOSALS (II)



10. LARGE RESEARCH INFRASTRUCTURES ROADMAPPING PROCEDURE



11. FOLLOW-UP AND NEXT STEPS (I)

MULTIANNUAL FINANCIAL FRAMEWORK 2023–2029

- The current budgetary framework of CZK 1.890 mil. per year, which was **frozen for the last 4 years**, not reflecting even the inflation, and thereby actually implying the declining funding rate, caused substantial funding deficit in the agenda of large research infrastructures
- **Sufficient, inflation-friendly, reliable and predictable** funding framework, covering the **next 7-year period**, thus facilitating the long-term financial planning by projects of large research infrastructures, is therefore a must-have

ENDORSEMENT OF PROJECTS BY THE GOVERNMENT OF CZECHIA

- Following the decision on the multiannual financial framework, projects will be submitted for adoption by the Government of Czechia **by the end of 2022**
- Preparation of all the background materials shall be initiated in **early summer** provided the state budget expenditures on R&D and innovation are determined



11. FOLLOW-UP AND NEXT STEPS (II)

INVESTMENT COSTS OF LARGE RESEARCH INFRASTRUCTURES

- Investment costs of large research infrastructures shall be borne through the EU Cohesion Policy Funds raised via the **Operational Programme Johannes Amos Comenius (OP JAK)**
- Detail parameters of the respective calls to be launched shall be specified later once the implementation of the Operational Programme Johannes Amos Comenius is commenced after the **approval by the European Commission**

UPDATE TO THE ROADMAP OF LARGE RESEARCH INFRASTRUCTURES

- Contribution of Czechia to the European and global research infrastructure **landscape and policy-making approach** aimed at developing the fully integrated and interoperable global research infrastructure ecosystem
- To be prepared in **2023** as a follow-up to the endorsement of the large research infrastructure projects and submitted for the information to the Government of Czechia



11. FOLLOW-UP AND NEXT STEPS (III)

KICK-OFF PROPOSAL FOR THE PUBLIC FUNDING IN 2023–2029

- **Interim-monitored** large research infrastructures (*already funded projects*)
 - Excellent quality, i.e., **grade 5** ≈ **85%** of requested financial support
 - High quality, i.e., **grade 4** ≈ **70%** of requested financial support
- **Ex-ante-assessed** large research infrastructure proposals (*brand new projects*)
 - Excellent quality, i.e., **grade 5** ≈ **50%** of requested financial support
 - High quality, i.e., **grade 4** ≈ **50%** of requested financial support

FINANCIAL VALUES

- Current public funding in **2019–2022** ≈ **CZK 1 890 million** (no annual increase, no annual reflexion of the inflation)
- Proposal for public funding in **2023** ≈ **CZK 2 450 million** (≈ CZK 2 550 million in 2024, ≈ CZK 2 650 million in 2024)
- Depending on the state budget recovery, funding rates to be gradually increased to the **optimal level** presented for the international peer-review assessment procedure





eatris

European infrastructure
for translational medicine



cessda

Consortium of European
Social Sciences Data Archives

CERIC

Central European
Research Infrastructure
Consortium



**EUROPEAN
SPALLATION
SOURCE**



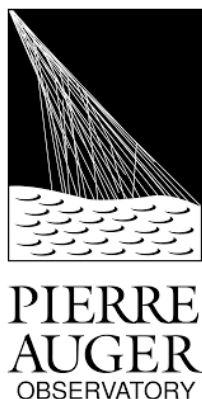


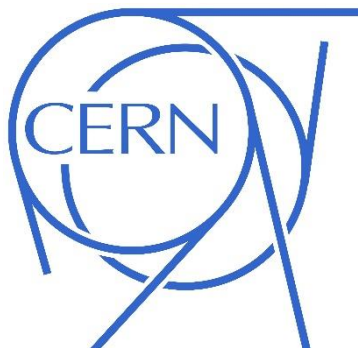
INFRAFRONTIER
mouse disease models



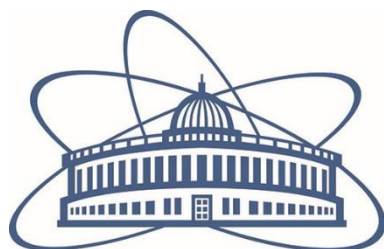
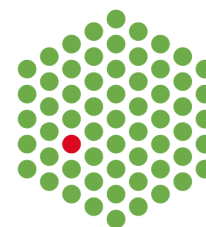
EIRENE RI







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LARGE RESEARCH INFRASTRUCTURES

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MINISTRY OF EDUCATION,
YOUTH AND SPORTS

THANK YOU VERY MUCH FOR YOUR ATTENTION!

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