



**LARGE RESEARCH  
INFRASTRUCTURES**



MINISTRY OF EDUCATION,  
YOUTH AND SPORTS

# **LARGE RESEARCH INFRASTRUCTURES OF THE CZECH REPUBLIC – POLICY OUTLOOK FOR 2030**

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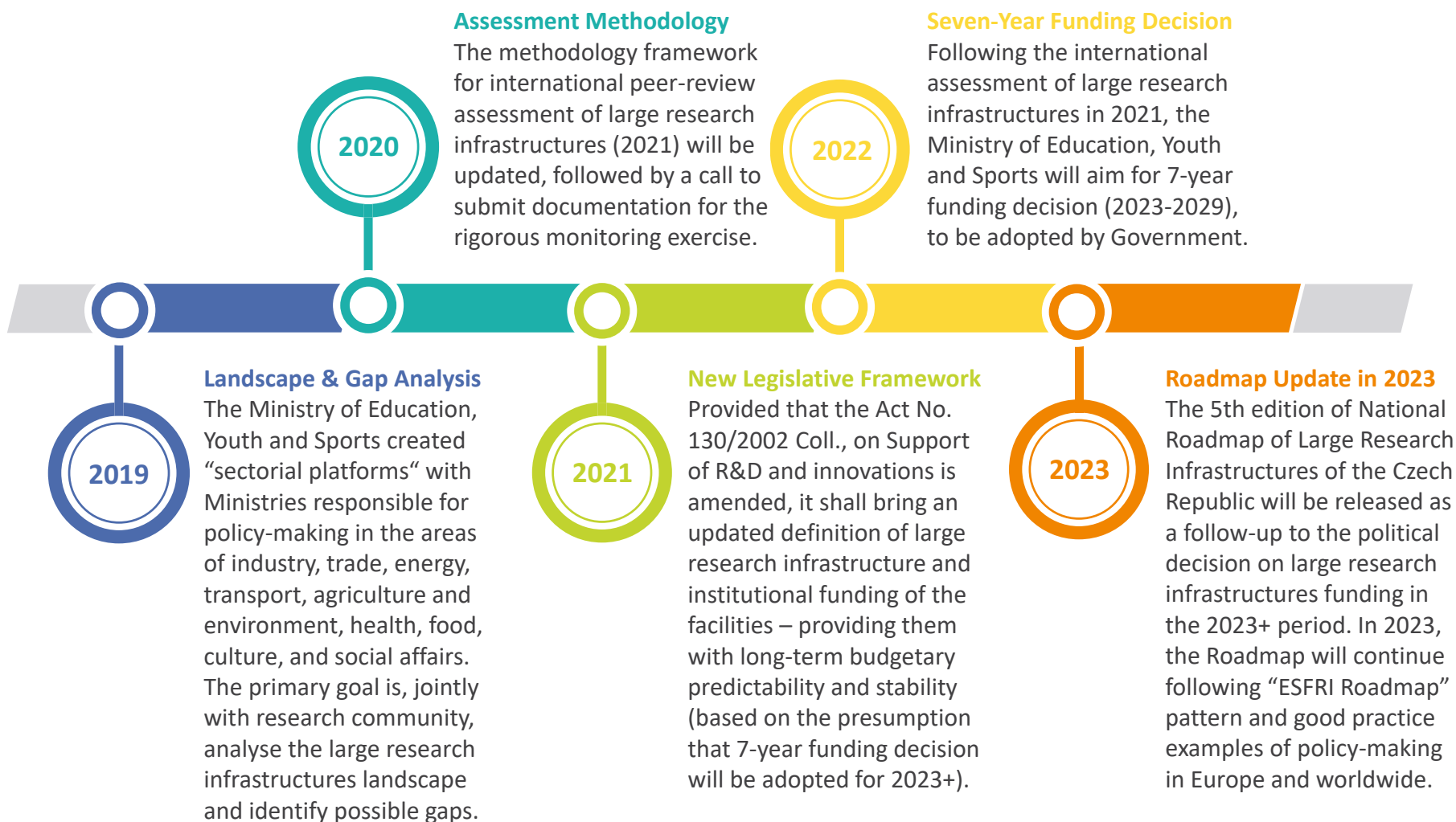
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## 1. LARGE RESEARCH INFRASTRUCTURES – AGENDA DEVELOPMENT







## 2. LARGE RESEARCH INFRASTRUCTURES – LEGISLATIVE SETTING

### ACT ON SUPPORT OF R&D AND INNOVATIONS FROM PUBLIC FUNDS

- **The amendment to enter into force and effect in 2020**
  - Scientific results reached by users of large research infrastructures shall not only be registered in the **information system on R&D and innovations** of the Czech Republic, but also directly linked to individual projects of large research infrastructures
- **The amendment to enter into force and effect in 2021**
  - New **definition** of a large research infrastructure keeping the essence in a better way, particularly in terms of specifying that large research infrastructure is a 100% service-based R&D facility, operated on the basis of open access policy to meet users' needs
  - Support of large research infrastructures from public funds shall be categorised as **institutional support**, not project-based targeted support, and financial framework adjusted accordingly (i.e. long-term strategy investment)
  - The **Ministry of Education, Youth and Sports** shall remain policy-maker and public funding provider for large research infrastructures





### 3. LARGE RESEARCH INFRASTRUCTURES – LANDSCAPE & GAP ANALYSIS

- In 2019, **Sectorial Platforms of Large Research Infrastructures Council** (advisory board to Minister of Education, Youth and Sports) were established, gathering representatives of:
  - **Ministry of Education, Youth and Sports** as large research infrastructures policy-maker and provider of financial support from public funds of the Czech Republic
  - **Ministries of Industry and Trade, Transport, Environment, Agriculture, Health, Culture, and Labour and Social Affairs** as stakeholders of sectorial policies of utmost importance
  - **Leading large research infrastructures** as providers of expertise and technologies to reach knowledge-based solutions to socioeconomic challenges
- Sectorial platforms cover **all scientific fields**, including the physical sciences and engineering, energy, environment, health and food, social sciences and humanities, and e-infrastructures





## WHAT ARE THE TASKS OF SECTORIAL PLATFORMS?

- Facilitate **long-term strategy debate** on large research infrastructures agenda development among all interested stakeholders (i.e. policy-makers, research community, end users, etc.)
- Analyse **how large research infrastructures meet priorities of sectorial policies** of the Czech Republic and identify the potential for a closer interaction between the relevant stakeholders
- Identify **possible gaps in the landscape of large research infrastructures** of the Czech Republic and stimulate already operating large research infrastructures to apply more synergy approach
- **Balance bottom-up and top-down policy approach** to large research infrastructures in terms of priority setting as regards potential new project proposals of large research infrastructures
- **Determine R&D fields of strategy importance to focus new large research infrastructure project proposals**, to be submitted for the 2021 ex-ante international peer-review evaluation





## 4. LARGE RESEARCH INFRASTRUCTURES – INTERNATIONAL ASSESSMENT

### WHAT IS THE SCOPE?

- **Interim evaluation** of 48 large research infrastructures adopted for public funding by 2022
- **Ex-ante evaluation** of possible new large research infrastructure projects to be submitted

### WHAT IS THE GOAL?

- Expert basis for adopting evidence-based policy-decision of the Government of the Czech Republic on the **large research infrastructures public funding in the period 2023-2029**
- **2023 Update to the Roadmap of Large Research Infrastructures of the Czech Republic**



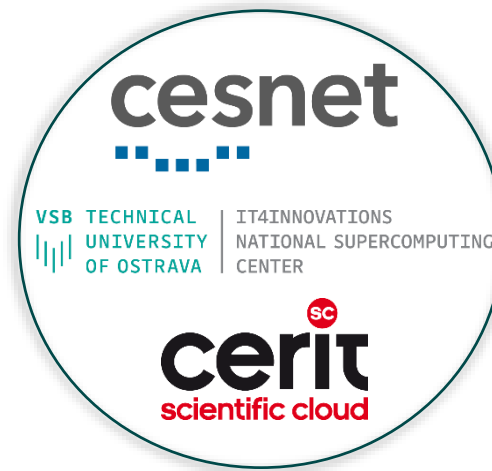


## 5. LARGE RESEARCH INFRASTRUCTURES – NETWORKS & CLUSTERS

- In 2017, the international assessment of large research infrastructures of the Czech Republic revealed **huge potential of clustering** of the facilities at the Czech national level in a number of scientific disciplines (specific recommendations were given by the assessment committee)
- **First achievements** have been already reached in the areas of e-infrastructures (e-INFRA CZ), physical sciences and engineering (CzechNanoLab), as well as social sciences and humanities (LINDAT/CLARIAH-CZ), where facilities have merged into larger project consortium platforms



LINDAT/CLARIAH-CZ



e-INFRA CZ



CzechNanoLab





## 6. LARGE RESEARCH INFRASTRUCTURES – FUNDING FRAMEWORK

- Given the knowledge and technology demands and duration of individual life-cycle phases (i.e. concept, design, preparatory phase, implementation phase, operation phase, upgrade, and decommissioning), **a large research infrastructure needs to be viewed and handled as a long-term strategy investment** of the state, which results cannot be delivered overnight
- In general, strategy planning decisions taken by large research infrastructures necessarily go beyond horizon of one decade, and call for **long-term financial sustainability, stability and predictability** in terms of public funding available
  - The Ministry of Education, Youth and Sports aims to achieve **7-year funding cycle** for the large research infrastructures in **2023-2029**
  - Periodic international assessments of the large research infrastructures shall not lead to binary decision-making process „funded x not funded“
  - Only if a large research infrastructure performs poorly over longer period of time, funding shall be stopped; otherwise → **tool for improvement**





## 7. LARGE RESEARCH INFRASTRUCTURES – MONITORING AND KPIs

- Interim monitoring of large research infrastructures in the course of the period 2023-2029 shall be based on a set of **key performance indicators (KPIs)**, to be filled by their operators
- The monitoring system will be to a large extent inspired by KPIs developed by the European Strategy Forum on Research Infrastructures (ESFRI) to monitor the “ESFRI Landmarks” → the KPIs methodology is being prepared by the **ESFRI Working Group on Monitoring**, which was established following the “EU Competitiveness Council Decision on Accelerating Knowledge Circulation in the EU” – inviting the ESFRI to develop a common approach for monitoring of performance of research infrastructures in Europe
- The **KPIs monitoring system** will be introduced by the Ministry of Education, Youth and Sports in 2021 international assessment methodology
- **Target KPIs values** will be set by large research infrastructure operators on individual basis and assessed by international evaluation committee as regards suitability, relevance and ambitions
- KPIs values will be fixed in the **grant agreements**





## KPIs FOR ASSESSMENT OF “ESFRI LANDMARKS” PRELIMINARY DRAFT

Monitoring objective	Key performance indicators
Achieving scientific excellence	1. Number of user requests for access 2. Number of users served 3. Number of publications 4. Percentage of top (10%) cited publications
Delivery of education and training	5. Number of MSc. and Ph.D. students using the research infrastructure 6. Training of people who are not research infrastructure staff
Enhancing collaboration in Europe	7. Number of Members of the research infrastructure from ESFRI countries 8. Share of users and publications per ESFRI member country
Facilitating economic activities	9. Share of users associated with industry and publications with industry 10. Income from commercial activities and the number of entities paying for service
Outreach to the public	11. Engagement achieved by direct contact 12. Outreach through media 13. Outreach via the research infrastructure’s own web and social media
Optimising data use	14. Number of publicly available data sets used externally
Provision of scientific advice	15. Participation by research infrastructure in policy related activities 16. Citations in policy related publications
Facilitating international co-operation	17. Share of users and publications per non-ESFRI member country 18. International trainees 19. Number of members of the research infrastructure from non-ESFRI countries
Optimising management	20. Revenues 21. Extent of resources made available







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# Thank you for your attention!



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