

CZECH REPUBLIC: Recent National Developments in Research Evaluation 2017 – 2018

2017/2018: **Methodology for Evaluating Research Organisations and Research, Development and Innovation Purpose-tied Aid Programmes (valid for years 2017+)** has been approved under Czech Government Resolution No. 107 of 8 February 2017.

The purpose of evaluating the research, development and innovations (“R&D&I”) system through the Methodology for Evaluating Research Organisations and Research, Development and Innovations Purpose-tied Support Programmes (“**Methodology 2017+**”) is to:

- Collect information for quality management of R&D&I at all levels (the formative aspects);
- Enhance the efficiency of spending public funds (the comprehensive aspects);
- Support the quality and international competitiveness of Czech R&D&I;
- Distribute and add to the accountability of the stakeholders in the R&D&I system;
- Get information for granting subsidies for long-term conceptual development of a research organisation (“LCDRO”).

Taking account of the different missions of research organisations (“RO”) in the system of research, the evaluation scheme evaluates the outputs, impacts and overall development outlook of a RO; takes account of departmental specifics; uses informed and independent peer views in the evaluation process; evaluates ROs in both the national and international contexts; and provides information for allocating those public funds reserved for institutional development of ROs.

This document distinguishes two phases of evaluation: (a) the implementation phase, which is to be conducted in 2017–2019; and (b) regular comprehensive evaluation, which is to be started by 2020.

The fundamental M17+ principles may be summed up as follows:

A) Three different evaluation levels. M17+ distinguishes three levels of management and evaluation:

(a) Evaluation for the management and funding of the complete R&D&I system –the ***central level*** – the R&D&I Council / the Section of Research, Development and Innovations, the Office of the Government of the Czech Republic (the “RDI Section”);

(b) Evaluation at the ***provider level***; and

(c) Evaluation for the management of a RO.

M17+ particularly addresses the national level and defines the methods of collaboration with the provider level.

B) ROs classified into three segments. As the positions and missions of ROs in the system of R&D&I are different, ROs are classified into three segments for evaluation purposes: (a) universities; (b) institutes of CAS; and (c) departmental ROs.

C) Common framework for evaluating the quality of ROs. M17+ introduces a quality evaluation system comprised of five basic modules common for all ROs: M1 – Quality of selected results; M2 – Efficiency of research; M3 – Social relevance; M4 – Viability; and M5 – Strategy and policies. The relative importance of the modules will be different according to the position and mission of a RO in the system of R&D&I. The modules are the evaluation framework, which can be adjusted by providers and adapted to a RO’s position in the system of R&D&I.

D) Periodicity of evaluation. In the implementation phase, the annual national evaluation will cover particularly the tools of the M1 and M2 modules (bibliometric analysis, or remote reviews in those disciplines in which bibliometrics do not provide relevant evaluation data). Full evaluation using all the five modules will have been completed by 2020. The aim for the period after 2020 is to conduct a full evaluation process every five years.

Three basic tools of evaluation. Bibliometric analysis, assessment through remote reviews and by a panel of experts will be applied in each module to evaluate ROs. Onsite visits by panels of experts will be added after the implementation phase is completed.

Inclusion of ROs in the evaluation system. Only those ROs which are entered in the Register of Public Research Institutes, maintained by the Ministry of Education, Youth and Sports (the “MEYS”), can be included in the system of evaluation. Results of ROs that are entered in the Results Information Register (the “RIR”) are those that will be evaluated.

Expert panels. Six expert panels will be set up for expert RO evaluation by the OECD fields of research and development (Frascati Manual): Natural Sciences; Engineering and Technology; Medical and Health Sciences; Agricultural and Veterinary Sciences; Social Sciences; and Humanities and the Arts. Experts in applied and industrial research and experts from practice will also sit on these panels. Where appropriate and expedient, expert panels will be particularly made up of independent foreign experts. Panels will use remote reviews to evaluate selected results, usually with the involvement of foreign evaluators where appropriate and expedient.

Scaling of ROs. Complete evaluation in all modules in a five-year cycle will result in putting the RO on a four-degree scale. Evaluation will produce a distribution of research organisations into four groups:

A – Excellent: Institution internationally competitive in the research parameters of global fields of research, and/or institution with a strong innovation potential and excellent applied research results, and/or institution excellently fulfilling its mission.

B – Very good: Institution of stable quality with excellent results in research, sufficient innovation potential, and/or significant applied research results; R&D&I results correspond to the purpose of the institution.

C – Average: Institution of unstable quality achieving prevalingly good or average results in the parameters of basic and/ or applied research, and/or institution fulfilling its purpose in an average manner. ROs with strategies and efforts to remove weaknesses and deficiencies.

D – Below average: Institution below average in the vast majority of the parameters of basic and/or applied research. ROs with a range of weaknesses and deficiencies, and limited efforts to remove them.

Institutions will be funded institutionally from the state budget according to this distribution. Unlike to previous principles of research evaluation in the Czech Republic, the newly approved methodology **will not evaluate individual results separately, but the research organizations as a whole**. The full evaluation will be carried out at five-year intervals and will be complemented by annual monitoring of the basic research characteristics of each RO. The evaluation process of RO will be influenced by the participation of foreign experts as well. For a complete implementation of M17 + is necessary to create number of procedural rules, large database of foreign evaluators and provide logistical and IT support.

01/2018 “**An Action plan for the Development of Human Resources for Research, Development and Innovation and Gender equality in Research, Development and Innovation in the Czech Republic for the years 2018 – 2020**“ was drafted by the Ministry of Education, Youth and Sports and approved by the Government in January 2018. The Action Plan addresses a wide range of topics related to development of human resources in RDI, including gender equality and gender mainstreaming, the quality of institutional environments, promotion of Ph.D. students and early career researchers, inter-sectorial and international mobility and popularisation of RDI results.

02/2018: **Analysis of the existing state of research, development and innovation in the Czech Republic and their comparison with foreign countries in 2016** was published by the Office of the Government of the Czech Republic at the beginning of this year. (<https://www.vyzkum.cz/FrontClanek.aspx?idsekce=799467>). A comprehensive document evaluates in 10 chapters, including funding, human resources, research infrastructures, research results or the innovation performance of the Czech economy. Basic findings of the publication: Expenditure from foreign sources has declined significantly. The Czech R&D&I system also suffers from poorly applied research results or gender imbalances.

02/2018: **COST information day:** The Ministry of Education, Youth and Sports in cooperation with the Technology Centre of the Academy of Sciences of the Czech Republic and COST Association organized on 16 February 2018 a COST information day focusing on the role of COST in the European Research Area and its links to other European programs. At the same time, there were presentations of direct participants of the events and information about the participation of Czech scientists in the various activities of COST, conditions for entry into the events and information on the national program INTER-COST.

03/2018: The European Parliament's Extensive Study - **Overcoming innovation gaps in the EU-13 Member States**, with a significant involvement of experts from TC CAS, identified the reasons for low participation and success rate of EU Member States in the framework programs that joined the EU in 2004, 2007 and 2013 (EU-13). The Study is available on the website of European Parliament:

[http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_STU\(2018\)614537](http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_STU(2018)614537)

04/2018: **Visegrad 4 project managers training in Brussels:** On 18 – 20 April 2018 the V4 training for project managers took place in Brussels. This time, the organizers decided to open the event for the wider public and offered some places to other liaison offices as well. A total of 32 project managers working mostly for universities and research institutions in the V4, Belgium, Lithuania and Romania took part.

The training was organized by the **Czech Liaison Office for Research, Development and Innovation (CZELO)**, the Permanent Representation of Hungary to the EU, the Slovak Liaison Office for Research and Development (SLORD), the Polish Science Contact Agency (PolSCA) and the Lithuanian Research, Development and Innovation Office (LINO). These offices have a common interest to foster the participation of their respective countries in the framework programmes for research.

The aim of the training was to contribute to build professional capacities of project managers by providing them with 'Brussels added value' information and thus raise their awareness of the political context of the European research programmes and the initiatives beyond Horizon 2020.

06/2018: **Data Warehouse of the Technology Centre CAS** was established to improve analytical and evaluation activities in the area of science and research. Data Warehouse serves as an internal repository of analytical data used in TC CAS. Analytical data and databases are managed through the PostgreSQL. Access to the PostgreSQL database on the server is possible via PgAdmin or MS Excel. Data Warehouse joins data from several data sources: eCORDA H2020 grants, EU Open Data Portal - H2020, ETER (comprehensive database on European Higher Education Institutions), PATSTAT (Worldwide Patent Statistical Database), Registers of Economic Subjects / Entities of the Czech Republic and R&D Information System of the Czech Republic.

The R&D Information System is an information system of the public administration for a collection, processing, publication and utilization of an information about the research and development, which has been supported by public budgets. The R&D Information System administrator is the Research and Development Council, the R&D Information System operator is the Government Office of the Czech Republic. The R&D Information System has following subsystems [parts]: CEP (Central register of

R&D projects, including the searching), CEZ (Central register of research intentions, including the searching), RIV (Information Register of R&D results, including the searching), VES (Register of Public R&D tenders, including the searching).

09/2018: Roundtable for the preparation of the EU's 9th Framework Program for Research, Development and Innovation "Horizon Europe" (2021-2027)

The Ministry of Education, Youth and Sports in cooperation with the Technology Centre of the Czech Academy of Sciences organized a round table for the preparation of the 9th EU Framework Program for Research, Development and Innovation "Horizon Europe". The main objective of this meeting to present partial pillars and objectives of the future Framework Programme and facilitate public debate with representatives of stakeholders on the proposal Framework programme.

The different parts of the draft of the Horizon Europe Framework programme, its form, objectives and novelties in comparison with the current Horizon 2020 Framework Program for Research and Innovation were presented during the round table. National contact points from the Technology Centre of the CAS of the Czech Republic presented in detail the individual pillars of the Horizon Europe Framework Programme. Roundtable participants also discussed crosscutting issues such as the gender dimension or open access to science and the legal or financial aspects of the new Framework Programme.

10/2018: 16th Czech Days for European Research, Jean-Eric Paquet in the Czech Republic

The Technology Centre of the Czech Academy of Sciences (TC CAS) and the Ministry of Education, Youth and Sports (MEYS) organised jointly the 16th annual conference of the Czech Days for European Research (CZEDER 2018), which was held on October 25, 2018 in Prague. The main topic of the conference opened by **Pavel Dolecek**, Deputy Minister for Higher Education, Science and Research of MEYS was Strengthening the Excellence via Participation in EU Framework Programmes for Research, Technology Development and Innovation.

Director General for Research and Innovation of the European Commission **Jean-Eric Paquet** officially visited for the very first time the Czech Republic. His programme comprised of participating in the CZEDER conference, on-site-visits to ELI Beamlines and HiLASE research infrastructures and attending the roundtable debate on preparation of the 9th EU Framework Programme for Research and Innovation "Horizon Europe" (2021-2027).

10/2018: **The fourth continuous report of the CR's participation in H2020** will be published during the October 2018. The report is largely based on international comparative analyses, where the values of selected indicators of Czech participation are compared with those of other EU Member States. Report has 78 pages and is available in Czech language on: <https://www.h2020.cz/files/svobodova/Echo-04-05-2018-priloha-na-web.pdf>

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