

# **Pilotní ověření návrhu nové metodiky hodnocení výzkumných organizací**

## ***Pilot Test of New Evaluation Methodology of Research Organisations***

**Samostatný doplňující dokument 6:  
Průvodce pro členy panelů**

***Background document 6:  
Expert Panel Member Guidelines***

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Dokument „Expert Panel Member Guidelines“ neprošel jazykovou korekturou.

## R&D Evaluation Methodology and Funding Principles

### Expert Panel Member Guidelines for the Pilot Testing



evropský  
sociální  
fond v ČR



EVROPSKÁ UNIE



MINISTERSTVO ŠKOLSTVÍ,  
MLÁDEŽE A TĚLOVÝCHOVY



OP Vzdělávání  
pro konkurenceschopnost

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

## R&D Evaluation Methodology and Funding Principles

Expert Panel member Guidelines for the Pilot testing

2015

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## Table of Abbreviations

ASCR	Academy of Sciences of the Czech Republic
CR	Czech Republic
MCZK	millions of Czech crowns
EM	evaluation methodology
EvU	evaluated unit
EO	excellent output
ERIH	European Reference Index for Humanities
EPO	European Patent Office
FTE	full time equivalent
GaCR	Grant Agency of the Czech Republic (Czech Science Foundation)
GRD	gross domestic product
GERD	gross expenditure on R&D
IBRO	industry & business services research organization
HC	head count
HEI	high education institution
HR	human resources
IREO	Integrated report on excellent outputs
MEYS	Ministry of Education, Youth and Sports
NatRes	national resources
OECD	Organization of Economic Cooperation and Development
PRFS	performance-based research funding system
PSRO	public services research organization
PT	pilot testing
R&D	research and development
RD&I	research, development and innovation
RD&I IS	Research, Development and Innovation Information System
RIV	Rejstřík Informací o Výsledcích (National RD&I IS)
RO	research organization
RU	research unit
RTO	research and technology organization
SHS	social and human sciences
ScRO	scientific research organization
SWOT	strengths, weaknesses, opportunities and threats analysis
TACR	Technological Agency of the Czech Republic
WoS	Web of Science - Thomson Reuters

# 1. INTRODUCTION

A *pilot testing* of a new R&D Evaluation Methodology developed for the Czech Republic <http://metodika.reformy-msmt.cz/en/> is currently under way. This testing is aimed at examining all procedures of the proposed Methodology involving a limited number of research organizations differing by their missions and size. The selected research organizations cover institutions of several typologies: faculties of public universities, institutes of the Academy of Sciences, private research and technology organizations, and national resources. The common denominator for these institutions is an exclusive or partial focus on research in one of two scientific fields: chemistry and history. Selecting these two scientific disciplines allows testing to what extent the new Evaluation Methodology is fit for purpose both in natural sciences and engineering on one side and in social and human sciences on the other side.

The Evaluation Methodology takes an approach partly analogous to that of the British Research Excellence Framework (<http://www.ref.ac.uk/>) where panels of experts score subject field specific Research Units according to a certain number of evaluation criteria: the research environment and potential, the membership in the national and global research community, the scientific research excellence, the overall research performance, and the societal relevance.

Since the primary objective of this project is to test the Methodology the results of the evaluation will not be made public and will not have any consequences for individual participating institutions. On the other hand a feedback on the procedure will be requested both from the evaluated organizations and from the panel members.

This document was prepared for guiding panel experts in the evaluation process. In the first part of these guidelines is the background information on the RD&I system of the Czech Republic and on the main features of the new Evaluation Methodology. The second part concerns the pilot testing itself, presenting its scope and describing the materials available to expert panel members as well as informing about the on line access in the IPN Metodika support system. Several Annexes contain additional information namely comparative overview tables and templates.

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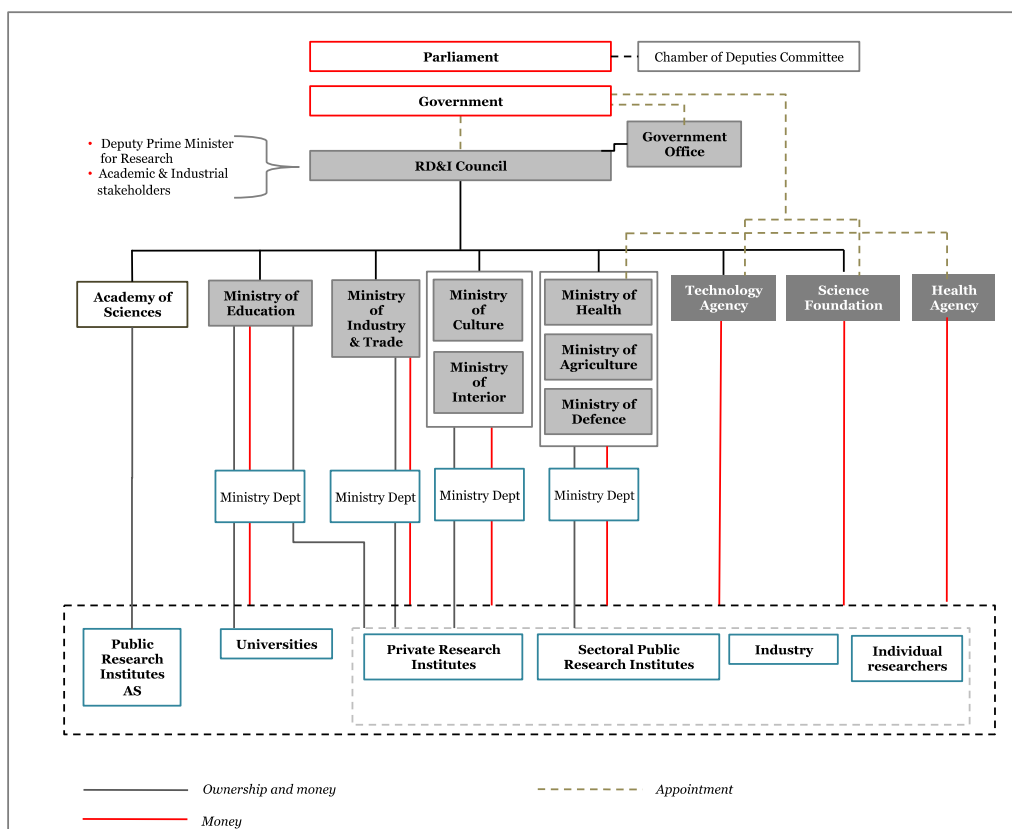
## 2. BACKGROUND INFORMATION

### 2.1. The RD&I system in the Czech Republic<sup>1</sup>

#### 2.1.1. The RD&I governance structure

The *Council for Research, Development and Innovations* (further: RD&I Council) is the highest level body that advises the Government on the priorities, budget and the overall organisation of the RD&I System in the Czech Republic. It is the key 'arena' in which overall research and innovation policy is coordinated. A member of the Government - currently the Deputy Prime Minister - acts as the Chairman of the RD&I Council, thus enforcing its legitimacy. The Council has 16 members nominated by the Government on proposal of the Chairman with a mandate of 4 years (once renewable). The RD&I Council covers a broad range of tasks in the national governance of RD&I, including the definition of main directions across the National RD&I System, long-term strategy development, monitoring and evaluation. It is supported by 3 disciplinary advisory Expert Committees and 2 Advisory Commissions, i.e. the Commission on Bioethics and the Commission for Evaluation.

Exhibit 1. The RD&I governance system in the Czech Republic



source: *R&D Evaluation Methodology and Funding Principles, Summary report 2015*

At the second 'intermediary' level (Exhibit 1) there is a set of 7 ministries, the Academy of Sciences of the Czech Republic (ASCR) and three agencies, responsible for the implementation of the RD&I policy.

<sup>1</sup> Prepared with use of the Summary report , First Interim Report : the R&D Evaluation methodology, and the Background report : The institutional funding system in the Czech republic of the project *R&D Evaluation Methodology and Funding Principles* led by the Technopolis consortium

Four ministries i.e. the Ministry of Education, Youth and Sports (MEYS), the Ministry of Industry and Trade, the Ministry of Culture, and the Ministry of Interior are in charge of cross-sectorial RD&I while three Ministries, i.e. the Ministry of Defence, the Ministry of Health, and the Ministry of Agriculture were assigned responsibility for sector-specific RD&I. The three agencies i.e.; the *Science Foundation*<sup>2</sup> (GACR), the *Technology Agency* (TACR) and the newly founded *Health Agency* have a unique status with their governing bodies nominated by the Government upon proposal of the RD&I Council, while their supervisory bodies are nominated by the Parliament.

All the Ministries manage institutional funding for different types of the research organisations – public or private non-profit – in the area of their competence; the Academy of Sciences has a similar status for its research institutes that perform mainly basic research covering all disciplinary areas with exception of agriculture. Most ministries develop and manage competitive RD&I programmes ('targeted' research funding). The above three agencies distribute exclusively competitive funds.

The institutional funding for research system is rather decentralised with a high degree of autonomy for both funding providers and recipients (i.e. the research organisations). Laws guarantee the funding bodies a relative independence in terms of institutional funding allocation and distribution. However, they are not able fully to utilise their autonomy since, except for the Academy of Sciences, have not developed a specific evaluation methodology and strategies for institutional funding distribution.

The ministries and ASCR make competing claims about their needs – and have an annual battle with the Finance ministry about how many of these claims can be afforded. Such a competition can benefit from being expressed in an 'arena' such as the RD&I Council, where it is possible to coordinate and negotiate. Such an arena may also be helpful to focus the national effort in pursuit of a strategy.

The Czech Republic can appear well placed organisationally to coordinate RD&I policy because it has an over-arching RD&I Council closely linked to Government. Yet a key weakness of the Council is the fact that it comprises only members of the research community, as opposed to incorporating wider stakeholder interests. Furthermore, it is an advisory body of the Government without real executive power. The RD&I governance structure in the Czech Republic is therefore in fact decentralised, lacking an official central decision making and co-ordination body. An establishment of a new governing and coordination body, a ministry in charge of RD&I is under negotiation at the governmental level.

### 2.1.2. The RD&I state budget expenditures

In the Czech Republic, the R&D gross expenditure (GERD) is *less than 2%* of the gross domestic product (GDP), the evolution over the 10 years is apparent from the international comparison in Exhibit 2. The changes in composition of GERD over the five past years are shown in Exhibit 3. They are mainly due to a massive funding of R&D from European structural funds starting in 2011; in addition a decreasing share of private national funding can be also noticed.

The *state budget for R&D expenditure* 26 635 MCZK ( $\approx 972 \text{ M€}$ )<sup>3</sup> in 2014, corresponding to about 35% of the total R&D expenditure in CR, can be subdivided into two major groups of instruments: institutional and competitive:

- *Institutional expenditures*, cover the funding lines for 'the long-term conceptual development of Research Organisations' and a set of other budget lines, including costs related to the international co-operation of the CR in RD&I, co-funding of the EU operational programmes, project management

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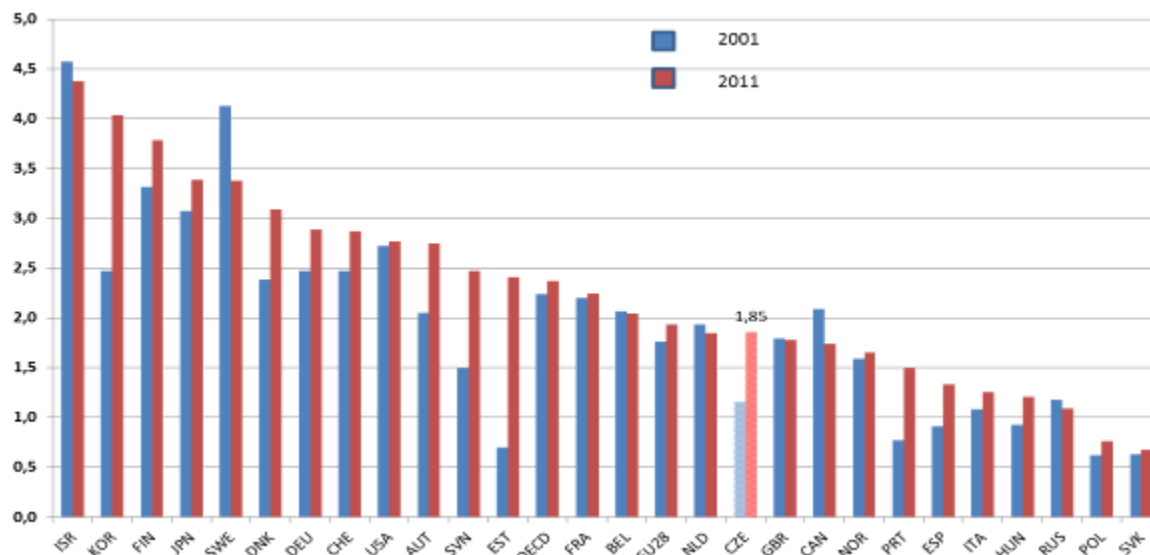
<sup>2</sup> Grant Agency of the Czech Republic

<sup>3</sup> Are not included here 8 billions € from EU structural funds (programme *Research and Development for Innovations*) supporting mainly newly founded national and regional research centres outside Prague

costs, costs for major infrastructures, and expenditure related to the management (RD&I Council, Agencies, Presidency of ASCR etc).

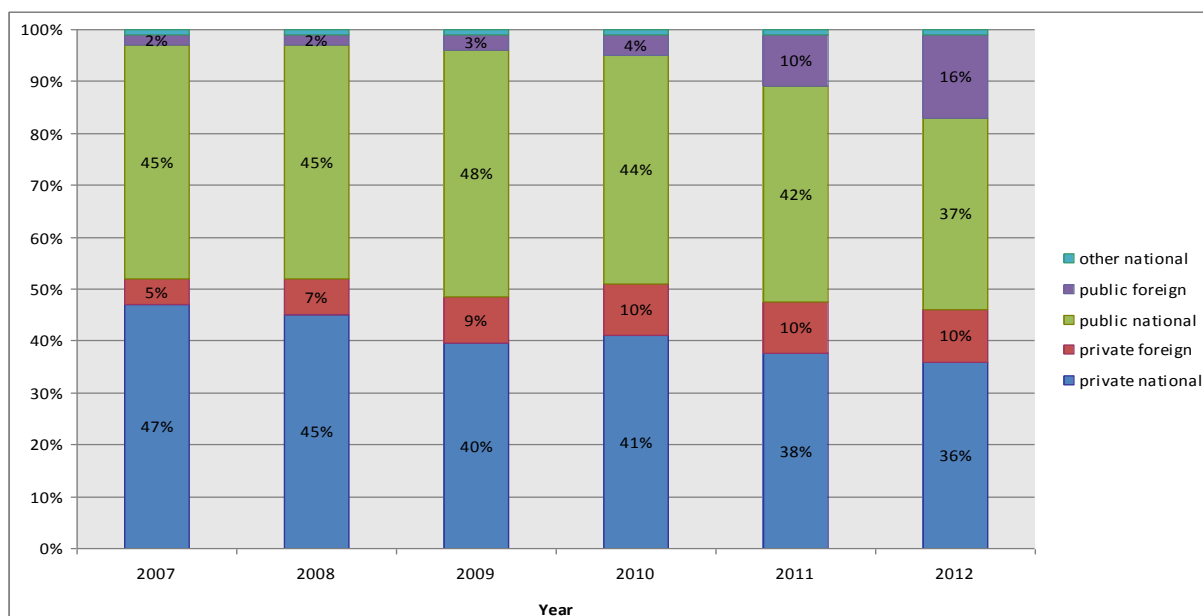
- *Competitive expenditures* refer to the funding of grants, research programmes, specific university research, and major infrastructures.

Exhibit 2. GERD as percent of GDP in 2001 and 2011, comparison of CR with other countries



source: OECD Science, Technology and Industry Scoreboard 2013

Exhibit 3. Czech GERD 2007 to 2012 by source of funding



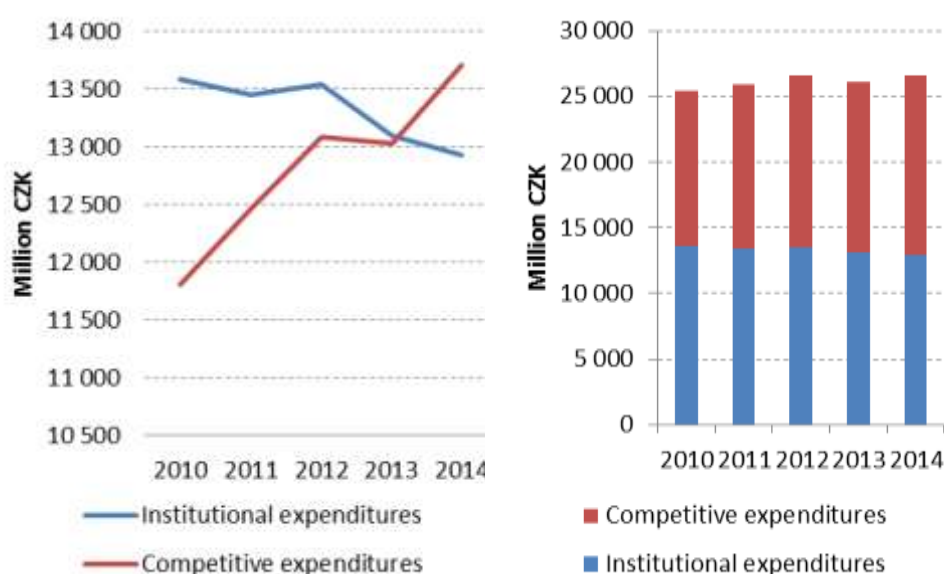
source: Science and Technology Indicators in 2012, Czech Statistical Office, 2013

The Ministry of Education, Youth and Sports with its overall annual expenditure for R&D in 2014 of 10 530 MCZK (≈384 M€) is the main actor providing public support to research. In 2014, it distributed the largest share of the state budget line for institutional funding for research organizations (ROs) 56%, followed by the ASCR (32%). It is also the main funder of competitive research programmes (28% of the competitive expenditure budget in 2014), followed by the Agencies (GACR 24% and TACR 21%).

The process for the distribution of institutional funding among the funding providers (the Ministries and the Academy of Sciences) is result of political negotiations and decisions taking into account previous commitments for the funding of on-going RD&I activities and research organisations' evaluation results.

In the international landscape, the Czech Republic is unusual in being among the countries with a *high ratio of project-based to institutional funding for research* and this trend gets more pronounced in the last years as shown in Exhibit 4. In 2014 ~50% of the RD&I State Budget was allocated in the form of competitive funding while most governments in developed countries support the majority of R&D through institutional rather than project-based funds. For illustration an average monthly net salary (before taxing) in 2013 of a researcher in institutions of ASCR was 42 200 CZK (≈1540 €) corresponding to an annual personal cost for an employer of about 762 000 CZK (≈27 800 €). Over 40 % of this sum originated from non institutional funds what is surprisingly high percentage for a RO focusing primarily on basic research.

Exhibit 4. Development of institutional and competitive expenditures



source : R&D Evaluation Methodology and Funding Principles ; Background report The Institutional Funding in the Czech republic, 2015, ; state budget act

### 2.1.3. The RD&I base – research performing organizations and human resources

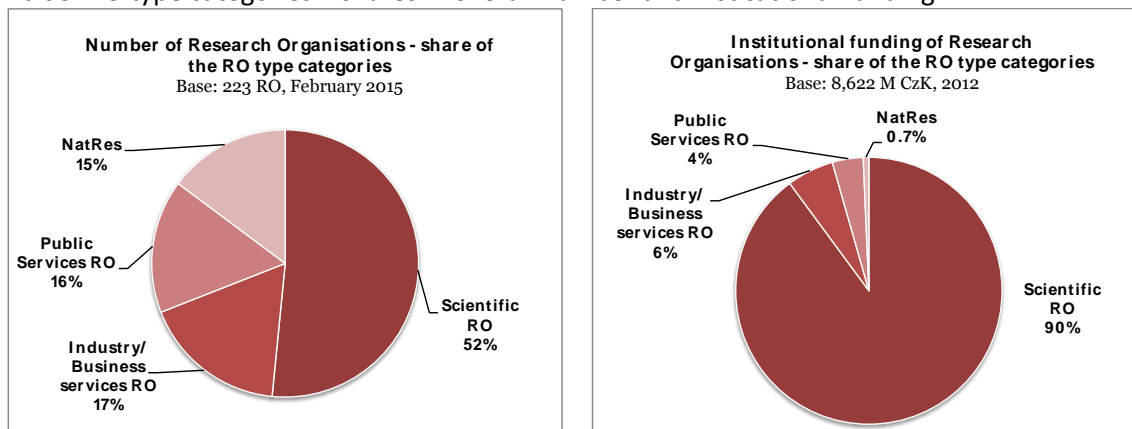
The Czech Republic permits a bottom-up process where different institutions can apply to become recognized as RO what makes them eligible for institutional funding. This fragments the research performing system to a considerable extent; at the time of writing, there were in total 223 *research organisations* that can be categorized as follows:

- *Scientific Research Organisations* - ScRO conduct research to the benefit of the research community. They have as primary activity the conduct of research (the ASCR research institutes) and also the teaching and training of future researchers, i.e. the higher education institutions (HEI), and the research hospitals.
- *Industry & Business services Research Organisations* – IBRO are institutions that have as primary mission to develop and transfer technologies and knowledge to the benefit of the industry and business sector. This category includes research technological organizations (RTOs) and consultancies offering expert and other professional services.

- **Public Services Research Organisations** - PSRO are institutions that have as primary mission to develop and transfer knowledge and technologies to the benefit of the public sector. These are government laboratories or consultancies offering services to the public sector.
- **National Resources** – NatRes. These ROs collect and curate national or regional cultural public goods and provide access to the public and researchers (archives, museums, and galleries).

From a numeric perspective, the ScRO category accounts for approximately half of the ROs, while the three other RO categories take up a close-to-equal share of the RO base (between 15% and 17%). In terms of institutional funding actually allocated the ScROs accounted, however, for about 90% of the institutional funding for ROs in 2012 (see Exhibit 5).

Exhibit 5. RO type categories – shares in overall number and institutional funding



source: R&D Evaluation Methodology and Funding Principles, Summary report 2015; proposal for RD&I budget 2012

The public research community in the Czech Republic consists of over 40 000 employees out of which 29 000 are researchers employed in HEI (21 000), ASCR research institutes (over 3000), and 'sectoral' public research institutions (including state research organisations), private research institutions, and industry. Key actors in public research are 26 public universities (consisting of over 180 faculties), 2 specialized state universities and 54 research institutes of ASCR.

About 25 000 PhD students are enrolled in Czech public or state HEI, both in full time and in part time (correspondence) studies. HEI are the only ROs entitled to deliver PhD degrees, yet students can be trained outside universities in other ROs, mainly in institutions of ASCR (over 2000). PhD students are supported by small institutional stipends (about 300 € per month during 3 to 4 years for full time studies only) and/or from project based funds. Compared to the most developed EU countries the success rate in PhD studies is low (less than 50 %) and those who defend take usually more than 4 years to complete the thesis.

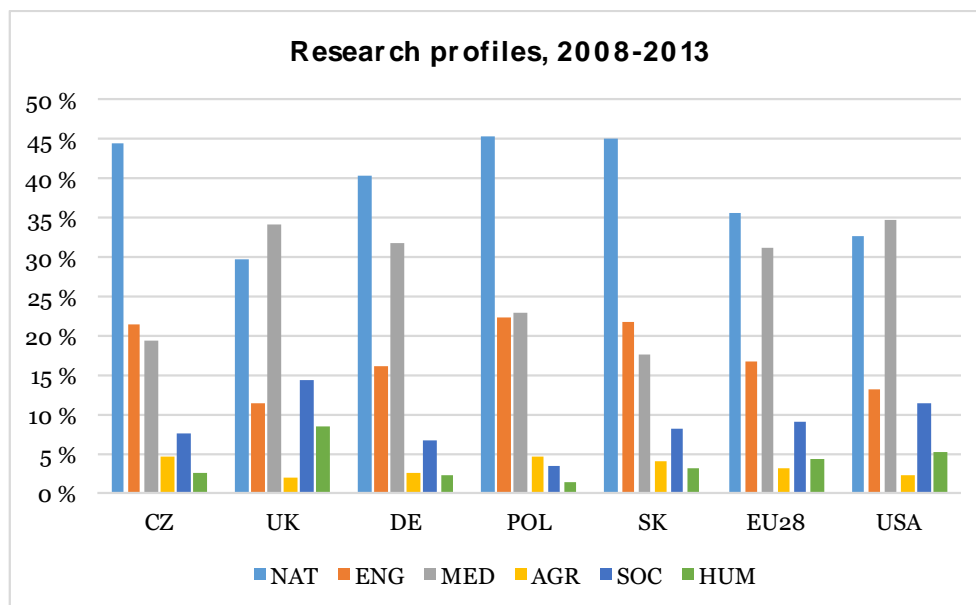
#### 2.1.4. Profile of the Czech R&D productions from a bibliometric perspective

Research profile in the Czech Republic is relatively stable over time as a result of long-term scientific traditions. Exhibit 6 shows percentages of scientific productions per OECD scientific categories in an international comparison as recorded in Web of Science for the period 2008-2013. The profile of CR indicates a similarity with that of Poland and Slovakia. The emphasis on Natural Sciences is also shared with Germany, while there is less emphasis on Medical and Health Sciences than in the EU in general and in the United States.

It is important to bear in mind that the Social and Human Sciences (SHS) have limited coverage in the Web of Science or Scopus – the main databases of peer-reviewed research publications. There is also a concentration on Anglo-American journals in these databases though English is much less dominant

in SHS than in other disciplinary areas. Consequently, these areas are certainly more important in CR than the exhibit suggests.

Exhibit 6. Comparative analysis of the research publications profiles, 2008-2013



source: R&D Evaluation Methodology and Funding Principles, Summary report 2015, WoS

The Czech Republic has a unique *National RD&I Information System*<sup>4</sup> ("RIV" Rejstřík informací o výsledcích) where researchers of all ROs that are beneficiaries of public funding upload annually information on their scholarly and non scholarly research outputs. This data base is then used in determining repartition of the institutional funding between providers and subsequently ROs depending on the quality and quantity of research outputs registered (see next Section for more information). For year 2012 the Czech research community reported 58 400 different research outputs out of which 44 500 were research publications (1 700 books, 4 900 book chapters, 12 600 reviewed proceeding articles and 25 300 reviewed journal articles). Over 11 600 publications were registered in WoS with a 30 % increase between 2007 and 2012. The trend in the last 5 years has also been towards an increase in international co-publication and citation impacts in the Czech Republic, compared to the international level.

Exhibit 7 presents several indicators (normalized to the country size) allowing comparison between the Czech Republic and neighbouring countries. It is apparent that for most indicators CR is between Germany and Austria on one side and Poland and Slovakia on the other side. While the differences compared to other countries are not striking for R&D personals and number of publications, somewhat higher spread can be observed for citation impacts. However, Austria and Germany differ by an order of magnitude regarding the number of patents registered at the European Patent Office (EPO).

<sup>4</sup> The national RD&I IS was used in this pilot testing for obtaining research output profiles of evaluated RU

Exhibit 7. R&D human resources and results; comparison of CR with neighbouring countries

	Czech Republic	Germany	Austria	Slovakia	Poland
Employees in R&D (FTE in 2011)	55 697	562 763	60 378	18 112	85 219
Employees in R&D (FTE to 1000 employed persons)	11	13.7	14.6	8.2	5.3
Researchers (FTE in 2011)	30 682	327 953	37 084	15 326	64 133
Researchers (FTE in 2011 to 1000 employed persons)	6.1	8.1	9	6.9	4
Nr. publications in WoS to 1000 inhabitants (2012)	0.92	1.16	1.5	0.55	0.54
Nr. citations of publications from 2008 cited in 2012 to 1000 inhabitants	4.86	8.33	11.29	2.41	1.98
Nr. patents at EPO to 1 mil. Inhabitants (2011)	15.4	272.3	194	4.3	9.9

source: Analysis of the state of RD&I in the Czech Republic and comparison with foreign countries in 2013

### 2.1.5. The evaluation policy in the Czech Republic

Currently, in the Czech Republic, there is a single framework for the evaluation of performance in ROs focusing exclusively on research outputs and combining two functions: it is both a mechanism for evaluating research and for allocating a part of institutional funding for R&D, with a direct, automatic link between the two. The evaluation results therefore directly drive the Performance-based Research Funding System (PRFS).

The current evaluation framework in the Czech Republic has its roots in the National Policy on Research & Development for the years 2004 – 2008, which included an attempt to improve the quality of the evaluation system. It said a stronger ‘evaluation culture’ was needed and stressed the importance of evaluations as inputs to policy development and decision-making. The objective was to tackle the perceived failure in evaluation quality in the R&D system. It set the basis for evaluating R&D institutions, programmes and final evaluations of projects, including the so called ‘*research intentions*’ through which institutional funding was at that time awarded.

The 2004 Evaluation Methodology (further: Metodika) introduced to the Czech Republic the concept of a metrics-based quantitative results evaluation, seen as a tool – and only one of the main criteria – to prove the quality of research performance. It also stressed the importance of respecting the differences between disciplines when evaluating research results. A major shift occurred with the 2008 Reform of the RD&I System. The Metodika 2009 marks the launch of an evaluation system that was profoundly different from the 2004 evaluation methodology. The fundamental changes were:

- A *narrowing of the function* of evaluation, abandoning the previous attempts to instil ‘evaluation culture’ and embed learning in the system, and replacing them with the idea of evaluation as a component in a performance-based resource allocation system,
- A *progressive restriction of the scope* of the evaluation guidelines focusing almost solely on the quantification of research outputs for the evaluation of ROs,
- An increasing *breadth of coverage*, the Metodika 2009 established the use of the metrics-based evaluation of R&D results for institutional funding at the level of funding bodies and the Metodika 2010 enforced and expanded the use down to the level of research institutions

The 2011 International Audit<sup>5</sup> of the RD&I System in the Czech Republic strongly criticised the Metodika. It identified important flaws in the evaluation system from the perspective of the quality

<sup>5</sup> Arnold, E. (2011), International Audit of the R&D&I System in the Czech Republic, Synthesis report, Technopolis Group

of the evaluations and the role of evaluation in the policy cycle. The negative effects can be resumed as follows :

- The number of “RIV points” attained, i.e. the points attributed to the different research outputs in the ‘evaluation’, are considered as an indication of research quality and a tool for rewarding/punishment throughout the entire R&D system, down to the level of the individual researcher.
- The direct link between evaluation and funding heavily dominates the evaluation culture and has affected profoundly the Czech R&D evaluation and policy making system.
- The discourse on evaluation is detached from any discourse on policy and strategy related to the national R&D system.

Following the International Audit, changes were made in the methodological approach to evaluation, leading to the Metodika 2013-2015. The most important changes consisted in the improvement of the research assessment method through the introduction of a panel review component, more precise definitions for the research outputs and restrictions in the eligible typologies to contrast gaming, and efforts to increase the trust of the research community in the fairness of the system. While this was a positive development, it corrected only partially the methodological flaws and Metodika remained close to exclusively focused on research outputs.

## 2.2. The new methodology

### 2.2.1. Key principles of assessment

The key principles of the proposed Evaluation Methodology (EM), to be used in the future for all institutions involved fully or partly in RD&I in the Czech Republic and benefiting from the support by the state budget for R&D, are as follows:

- The evaluation will be a national evaluation system focused on the assessment of performance in R&D. It will reflect the strategic policy objectives for the Czech RD&I system, take into account its needs and characteristics, and cover all types of ROs.
- The assessment of the research performance will take place at the level of a subject field-defined research units (RUs) within an Evaluated Unit (EvU). Participation in the evaluation will require a minimum of critical mass of research productions<sup>6</sup>.
- OECD classification<sup>7</sup> (see Annexe I) of the disciplinary areas and scientific fields will be a basis for defining subject fields
- RU includes all individual researchers in an EvU (not necessarily respecting its organizational structure) that conduct research in a single scientific field, each researcher can be assigned only to one RU in his major field of research.
- Special provisions will be taken for dealing with interdisciplinarity across scientific fields and disciplinary areas (RU with cross referral and interdisciplinary units).

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<sup>6</sup> A minimum volume threshold for the registration of a Research Unit is set at 50 eligible research outputs over the evaluated period.

<sup>7</sup> OECD, Revised Field of Science and Technology (FoS) classification in the Frascati manual, version 26-Feb-2007, DSTI/EAS/STP/NESTI (2006)19/FINAL.

<http://www.oecd.org/science/inno/frascaticmanualproposedstandardpracticeforsurveysonresearchandexperimentaldeveloipment6thedition.htm#fos>

- EvU will be identical with RO with the exception of universities where EvU is defined as a faculty. EvU can register only one RU per subject field.
- The evaluation will be a panel-based process of informed peer review. The international expert panels will draw on a mix of appropriate quantitative and qualitative information to form their professional judgement. The evaluation process will be conducted in English. It will consist in remote assessments by subject panel, complemented with panel meetings, and in reviews of the best research outputs by international referees.
- The evaluation will be a fair and egalitarian system. It will use a single framework for assessment across all disciplines and types of ROs while allowing for a reasonable level of field- and RO type-specific variations. It will be comprehensive, covering all dimensions of the research activities and research outputs, outcomes and impact, as well as the conditions facilitating or hindering research performance.
- The evaluation results will be predominantly qualitative. They will show the reached quality levels against each assessment criterion, and hold conclusions and recommendations for future development. Analytical reports will be developed at the level of EvU, field and disciplinary area, aggregating the information collected at the RU levels.
- The evaluation process is organized typically in a 5 years period and will be fully transparent.
- The cost and burden of the evaluation will be the minimum possible (1% of institutional R&D annual funding) to deliver a robust and defensible process.

Evaluation results need to be based on human judgement via expert panels. Only peers, experts in the fields, have the needed understanding of the field specifics and the role and positioning of the different ROs in these fields. They will be informed by metrics, but essential for their evaluation will be the qualitative information provided by the evaluated RUs.

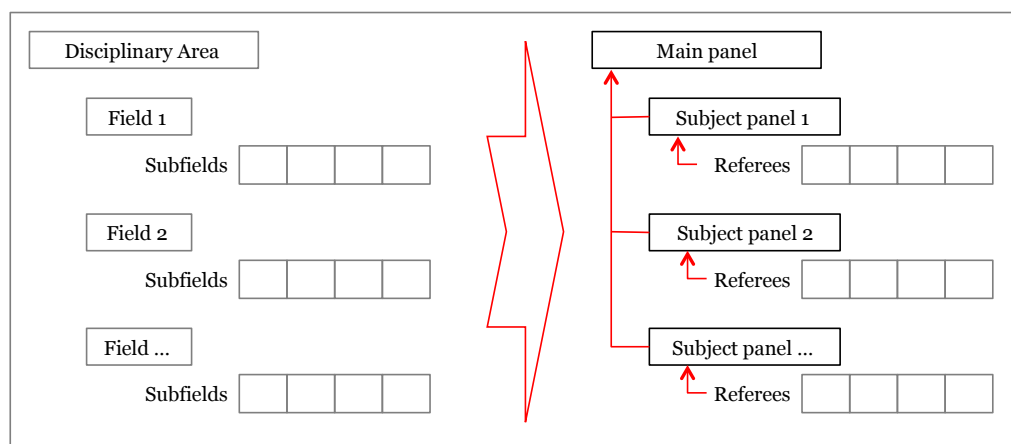
Unity in the assessment method is key to achieving ‘field-neutral’ evaluation scores for each RU, applying common criteria across the different fields and types of ROs (but enabling the panels duly to take into account variations to these criteria). It also constitutes a critical requirement of the EM as a source of strategic information at the national level.

The expert panels will not assign an overall score to the evaluated RUs in their field. This avoids setting the RUs that were registered by the different ROs in competition with each other. The evaluation results will consist for each RU of the scores and related explanatory texts against each of 5 evaluation criteria, together with the panel conclusions and recommendations.

### **2.2.2. The evaluation panels**

The evaluation is entrusted to a core structure of Main panels, Subject panels and referees of selected excellent outputs as schematized in Exhibit 8.

Exhibit 8. Organization of the evaluation by panels and referees



- In the real evaluation process there will be 6 Main panels, organized at the level of disciplinary areas. The Main panels will have a Chair and 3 additional members.
- The number of Subject panels organized by scientific fields will be probably from 30 to 35. The OECD classification defines 42 fields, where some of them can be merged, yet some others (very broad ones as biology for example) will have to be divided to keep a reasonable number of RUs per panel<sup>8</sup>
- Subject panels need to be small and high-level. The recommendation is to keep the number to 5 to 7 members per panel
- Main and subject panels work remote and convene also for at least two meetings.
- The referees selected on the level of subfields work on the best research outputs (two referees per output) exclusively remotely and do not interact directly with the panel.
- The EM as proposed by Technopolis does not expect any on site visits

Mainly international experts will be in charge of the performance assessments. This takes account of the high risk felt in the Czech RD&I community that the assessments would be biased if they involved mainly national experts because of clientelism. High requirements will be imposed on the eligibility of the international experts in terms of conflicts of interest.

These international experts will be supported by a number of Czech advisors the main role of which will be to provide knowledge on the national context.

The Chair of each main panel will be an international expert with a strong reputation in the disciplinary area and experience in evaluations. The three other members will be Czech nationals representing the national research community, the user community (such as industry) and the provider of R&D institutional funding nominated on the governmental level.

Subject panel members, all international, should have a broad overview of the scientific field and sub-fields within a given disciplinary area. Breadth should be prioritized over depth, especially for the panel Chairs. In each Subject panel, some members should have expertise in inter-disciplinary research or in application areas (for which different fields of disciplines are often combined or integrated).

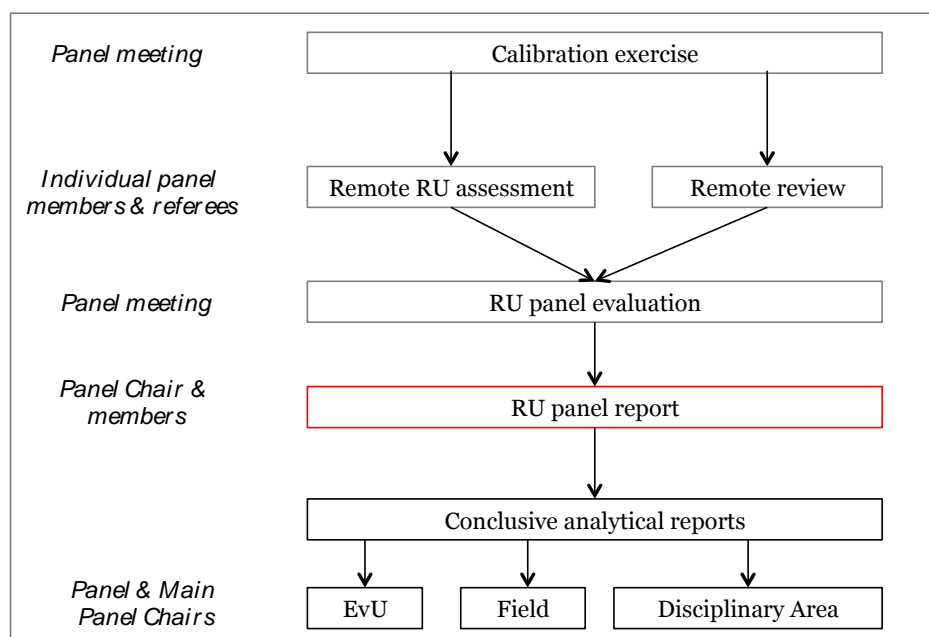
<sup>8</sup> Considering that there are 220 ROs in CR out of which 28 universities consisting of about 180 faculties, the number of EvUs will be between 300 and 350 (considering that some ROs do not pass the minimum threshold of research outputs) splitting up in 800 to 1000 RUs.

Referees of excellent research outputs will have a fine-grained expertise. They will be in charge of reviewing the selected excellent outputs submitted by the RUs. The referees will be international experts only, working remotely.

### 2.2.3. The evaluation process

The evaluation will be implemented by means of an introductory calibration exercise, remote reviews by referees and remote assessments by subject panel members combined with evaluation panel meetings. Here the final RU evaluation is performed, the individual RU assessments and their outcomes will be discussed and the panel members will reach a final consensual common view. The scheme is outlined in Exhibit 9.

Exhibit 9. The evaluation process



The panel members provide judgments on the Research Units' performance for each of the 5 assessment criteria through a quality levels scoring system, using scores from A to E. The values for the attribution of these quality levels, i.e. the criteria for the panels to take their decision are described for each assessment criterion.

The outcome of the evaluation is an RU panel report, containing the quality level scores against each assessment criterion, explanatory texts for each score, conclusions and recommendations. The panels will not allocate an overall score for the RU; this makes it possible to use the 5 assessment dimensions to create incentives for 5 different but desirable behaviours in the funding system.

The evaluation will also result in a set of analytical reports at the EvU, field and disciplinary area level. These reports will take the form of a panel-based aggregation of RU-level judgement to the higher levels.

- The Subject Panel Chair will be responsible for the analytical report at the field level.
- The Subject Panel Chair for the major field of involvement of an EvU will be responsible for the analytical report at the EvU level in cooperation with the other relevant Subject Panel Chairs and with a possible aid from the Main panel chair(s).
- The Main Panel Chairs will draft the analytical report at the disciplinary area level, in co-operation with the Subject Panel Chairs.

## 2.2.4. Overview of the assessment criteria

We give here an overview of the assessment criteria that will be used in the evaluation and indicate how these assessment criteria and the evaluation process in general take the field-specifics and the different missions of the Research Organisations into account.

Exhibit 10. Assessment criteria and sub-criteria

Assessment criteria	Sub-criteria
Research environment and potential	The quality of the research management (including HR management)
	The adequacy of the research strategy
Membership of the global and national research community	National research presence and collaboration
	International research presence and collaboration
Scientific research excellence	
Overall research performance	Research output
	Competitiveness in research
Societal relevance	

The EM uses a single framework for the assessment of all scientific disciplines and RO types, thereby ensuring full comparability of the evaluation results across all dimensions. Comparability is a fundamental condition for the use of evaluation results in a performance-based research funding system (PRFS). Quality scores should have the same value for all field-specific RUs evaluated and the assessment should base itself on the same set of indicators and information.

The subject panels will assess RUs against the five assessment criteria and the set of sub-criteria shown in Exhibit 10.

During the calibration exercise, the expert panels will define key concepts for the assessment according to the 5 criteria and define also the importance of the sub-criteria for the final quality level score at the assessment criterion level, taking into account the specifics of the field and the types of ROs.

For the sake of fairness in the evaluation, consistency in the interpretations by the different panels is important. This will be ensured through coordination among Subject panel Chairs in a disciplinary area and the participation of the Main Panel Chairs in the Subject Panels meetings. Coordination among the Main Panel Chairs will allow for consistency at the overall level.

## 3. PILOT TESTING

### 3.1. Scope of the pilot testing

#### 3.1.1. Evaluated units, research units and panels

As indicated in the Introduction an effort was made to include in the pilot testing a limited number of research organizations of different types participating on voluntary bases and having research in chemistry or in history as substantial part of their activities. On the side of Scientific Research Organizations (ScRO) participate 7 faculties of four high education institutions (HEI) from Prague, Brno (capital of Moravia, 210 km east of from Prague), Pardubice (100 km east of Prague) and Ceske Budejovice (150 km south of Prague) and 4 Institutes of the Czech Academy of Sciences (ASCR) in Prague. The Research and Technology Organisations (RTO) are represented by two private centres located on industrial sites in Usti nad Labem (80 km north west from Prague) and near Pardubice. For the category of National Resources (NatRes) an archive and a museum, both situated in Prague, were included.

Exhibit 11. Overview of Evaluated units and numbers of their research units

	Name of EvU	Website of EvU	Type of RO	Num. RUs in EvU	RUs registered in FoS
NATURAL SCIENCES, ENGINEERING AND TECHNOLOGY	University of Chemistry and Technology Prague - Faculty of Chemical Technology	<a href="http://fcht.vscht.cz/">http://fcht.vscht.cz/</a>	ScRO-HEI	2	1.4, 2.5
	University of Chemistry and Technology Prague - Faculty of Environmental Technology	<a href="http://ftop.vscht.cz/">http://ftop.vscht.cz/</a>	ScRO-HEI	2	2.4, 2.7
	University of Chemistry and Technology Prague - Faculty of Food and Biochemical Technology	<a href="http://fpbt.vscht.cz/">http://fpbt.vscht.cz/</a>	ScRO-HEI	3	1.4, 1.6, 2.9
	University of Chemistry and Technology Prague - Faculty of Chemical Engineering	<a href="http://fchi.vscht.cz/">http://fchi.vscht.cz/</a>	ScRO-HEI	2	1.4, 2.4
	Brno University of Technology -Faculty of Chemistry	<a href="http://www.fch.vutbr.cz/">http://www.fch.vutbr.cz/</a>	ScRO-HEI	4	1.4, 1.6, 2.5, 2.7
	J. Heyrovský Institute of Physical Chemistry of the AS CR	<a href="http://www.jh-inst.cas.cz/">http://www.jh-inst.cas.cz/</a>	ScRO-ASCR	1	1.4
	The Institute of Chemical Process Fundamentals of the AS CR	<a href="http://www.icpf.cas.cz/">http://www.icpf.cas.cz/</a>	ScRO-ASCR	4	1.4, 2.4, 2.5, 2.7
	Centre for Organic Chemistry Ltd.	<a href="http://cocltld.cz/en/">http://cocltld.cz/en/</a>	IBRO- RTO	1	1.4
	The Research Institute of Inorganic Chemistry, Inc.	<a href="http://www.vuanch.cz/">http://www.vuanch.cz/</a>	IBRO-RTO	1	1.4
HUMANITIES	The University of Pardubice - Faculty of Arts and Philosophy	<a href="http://www.upce.cz/">http://www.upce.cz/</a>	ScRO-HEI	3	6.1, 6.2, 6.3
	The University of South Bohemia in České Budějovice - Faculty of Philosophy	<a href="http://www.ff.jcu.cz/cs/web/ff/">http://www.ff.jcu.cz/cs/web/ff/</a>	ScRO-HEI	2	6.1, 6.2
	The Institute of History of the AS CR	<a href="http://www.hiu.cas.cz/en/">http://www.hiu.cas.cz/en/</a>	ScRO-ASCR	1	6.1
	The Institute for Contemporary History of the AS CR	<a href="http://www.usd.cas.cz/">http://www.usd.cas.cz/</a>	ScRO-ASCR	2	6.1, 6.3
	The National Technical Museum	<a href="http://www.ntm.cz/">http://www.ntm.cz/</a>	NatRes	1	6.1
	The National Archives	<a href="http://www.nacr.cz/">http://www.nacr.cz/</a>	NatRes	2	1.4, 6.1

Exhibit 11 shows the 15 *Evaluated Units* (EvU) that agreed to participate in the pilot testing and have filed all together 31 subject field specific *Research Unites* (RU) corresponding to 3 *disciplinary areas* and 9 *scientific fields* according to classification of OECD (see Annexe I). Although the focus is on chemistry and history such a spread is understandable since only a part of the EvU(s) conducts research exclusively in one of these two priority fields. A consideration of the whole EvU was a sine qua non condition for this pilot testing, therefore the presence of other fields close to chemistry and history is logical. Note that National Archives having focus in their research on history (6.1) filed also a small RU specialized in conservation chemistry (1.4). Annexe II gives more details on individual participating EvU(s) regarding their human resources, volume of research outputs and their RU(s). Large differences in the number of researchers per EvU are namely apparent.

The main and subject panels established for pilot testing, their OECD codes and the number of evaluated RU(s) are in Exhibit 12.

Exhibit 12. Main and Subject panels and numbers of RUs in the pilot testing

Main panel	Subject panel	Num. of RU
<b>Natural Sciences</b> (disciplinary area: 1)	Chemical Sciences (field of science: 1.4)	9
	Biological Sciences (1.6)	2
Engineering and Technology (2)	Chemical Engineering (2.4)	3
	Materials Engineering (2.5)	3
	Environmental Engineering (2.7)	3
	Industrial Biotechnology (2.9)	1
Humanities (6)	History and Archaeology (6.1)	6
	Languages and Literature (6.2)	2
	Philosophy, Ethics and Religion (6.3)	2

Three experts are on main panels while the number of experts in subject panels varies between 2 and 6 depending on the number of RU(s) per panel. Exhibit 13 lists the experts on main and subject panels.

A complete review of all RUs can be found in Annexe III with information on their human resources and volume of research outputs. The research outputs profiles of RUs, categorized according to National RD&I IS, and presented by three disciplinary areas in Annexe IV.

Exhibit 13. Composition of main and subject panels

OECD Name	Surname / Name	Affiliation / Town / Country
<b>1. NATURAL SCIENCES</b>	<b>Thulstrup Erik</b>	Roskilde University, Roskilde, Denmark
	Němeček Zdeněk	Charles University, Prague, CR
	Rejholec Václav	Charles University, Prague, CR
<b>1.4. Chemistry</b>	<b>Hapiot Philippe</b>	CNRS- University of Rennes 1, Rennes , France
	Guillon Daniel	CNRS - University of Strassburg, Strassburg, France
	Haines Michael	Cofree Technology Ltd, Bricklehampton, UK
	Heintz Andreas	University of Rostock, Rostock, Germany
	Kukhar Valery	Nat. Academy of Sciences of Ukraine , Kyiv, Ukraine
	Rizzi Andreas	University of Vienna, Vienna, Austria
<b>1.6. Biology</b>	<b>Driessen Arnold JM</b>	University of Groningen, Groningen, Netherlands
	Elska Ganna	Nat. Academy of Sciences of Ukraine, Kyiv, Ukraine
	Rodger Alison	University of Warwick, Warwick, UK
<b>2. ENGINEERING and TECHNOLOGY</b>	<b>Seville Jonathan Peter Kyle</b>	University of Surrey, Guildford, Surrey, UK
	Hanika Jiří	Czech Academy of Sciences, Prague, CR
	Souček Ivan	University of Chemistry and Technology, Prague, CR
<b>2.4. Chemical Eng.</b>	<b>Lapicque François</b>	CNRS-ENSIC University of Lorraine, France
	Grievink Johan	University of Technology, Delft, Netherlands
	Ocone Raffaella	Heriot-Watt University, Edinburgh, Scotland, UK
<b>2.5. Materials Eng.</b>	<b>de With Gijsbertus</b>	Eindhoven University, Eindhoven, Netherlands
	Drillon Marc	CNRS - University of Strassburg, Strassburg, France
	Katgerman Laurens	University of Technology, Delft, Netherlands
	Salmi Tapio	Åbo Akademi, Åbo (Turku), Finland
<b>2.7. Environ.Eng.</b>	<b>Rulkens Wilhelmus Henricus</b>	Wageningen University, Wageningen, Netherlands
	Legube Bernard	University of Poitiers, Poitiers, France
	Sánchez Hervás José María	Unit for Energy Valor. of Fuels and Wastes, Madrid, Spain
<b>2.9. Industrial Biotech.</b>	<b>Jelen Henryk</b>	Poznań University of Life Sciences, Poznań, Poland
	Voragen Fons	Wageningen UR University, Wageningen, Netherlands
<b>6. HUMANITIES</b>	<b>North Michael</b>	University of Greifswald, Greifswald, Germany
	Ledvinka Václav	Prague City Archives, Prague, CR
	Pešek Jiří	Charles University, Prague, CR
<b>6.1. History and archaeology</b>	<b>Hadler Frank</b>	University Leipzig, Leipzig, Germany
	Catalano Alessandro	University of Padua, Padua, Italy
	Hengerer Mark	Ludwig-Maxmilians-Universität, Munich, Germany
	Melnikov Georgiy Pavlovich	Russian Academy of Sciences, Moscow, Russia
	Mayer Françoise	Paul Valéry University, Montpellier, France
	Müller Leoš	Stockholm University, Stockholm, Sweden
<b>6.2. Languages and literature</b>	<b>Achard-Bayle Guy</b>	University of Lorraine, Nancy, France
	Balogh Andras	Babeş-Bolyai-Universität, Cluj-Napoca, Romania
	Raynaud Savina	University Cattolica del Sacro Cuore, Milan, Italy
<b>6.3. Philosophy, ethics and religion</b>	<b>De Roover Jakob</b>	Ghent University, Ghent, Belgium
	Müller Daniela	University of Nijmegen, Nijmegen, Netherlands
	Thomassen Einar	University of Bergen, Bergen, Norway

### 3.1.2. Organization of the pilot testing

This pilot testing is organized in a period of time much shorter than that envisaged for a full fledged evaluation that should extend over three years according to recommendation of the Technopolis led consortium. The pilot testing started in December 2014, when the first contact with the participating ROs was made, and will close in October 2015, when the final evaluation panel reports for RUs and conclusive analytic reports for EvUs must be finalized including feedbacks. Considering these time constraints a certain number of modifications and simplifying measures had to be introduced to speed up the process and for better adapting it to a limited number of RUs evaluated. Therefore the

pilot testing deviates to some extent from the recommended evaluation methodology (EM) as presented in the Reports of the Technopolis Consortium. Here we mention the main differences.

- The proposed EM expects a cascade system for staffing the panels, the main panel being nominated on a governmental level (RD&I Council of CR), the main panel then assigning the international subject panel members who then select international referees of excellent outputs on the level of subfields. In this pilot testing the search for experts on main and subject panels and for reviewing excellent outputs was performed by the KA4 team with aid of several data bases of European experts supplied by Technopolis and using also personal experience and contacts of the team members.
- A minimum of 50 eligible research outputs over an evaluated period is expected by EM as a threshold for participation of a RU in an evaluation exercise. This limitation was not strictly imposed in the pilot testing as apparent from Annexe III.
- Three calibration meetings (main panels, cross panels and subject panels) are expected by EM to launch the evaluation process. Only one meeting per disciplinary area was held between the main panel and subject panel chairs.
- It is expected in EM that two referees, different from the subject panel members, will evaluate each excellent output. Due to time constraints it was not possible to contract sufficient number of referees and panel members are asked to review a limited number of excellent research outputs under coordination of the panel chair.
- While on site visits of evaluated Ru(s) are not a part of the EM concept, the Czech scientific community as well as experts having participated in different previous evaluations consider on site visit an asset for better apprehending activities of a RU. Therefore the subject panel members will visit some RUs (1 to 3 depending on the panel) in order to examine to what extent on site visits are useful bringing a new perspective.
- In EM the conclusive analytical report for a EvU having two or more RUs should be responsibility of a designated subject panel chair. It was decided during calibration meetings that the main panel chair will be involved in this process coordinating the work of the subject panel chairs in the fields where RUs of a given EvU were evaluated.

The pilot testing can be divided in two consecutive parts: preparation of documents and evaluation process.

#### **Preparation of documents (February 15 to May 15 2015)**

RUs obtained instructions how to prepare a self assessment report in the middle of February. RUs uploaded in the Metodika support system: i) the pdf files with excellent research outputs for evaluation by referees (the second half of April) and ii) a Self-assessment report (the middle of May). In addition, the Bibliometric report for each RU was supplied by KA2 team of Metodika using the National RD&I IS (end of May). A detailed information on these documents and how they can be accessed is in the following Sections 3.2 and 3.3.

#### **Evaluation process (May 15 to September 2015)**

The evaluation process in the pilot testing entails five phases:

- The meetings of main panels with the chairmen of their subject panels were held for each disciplinary area in Prague in May (14.5 for Engineering and Technology, 20.5 for Humanities and 21.5 for Natural Sciences). The focus was on the calibration exercise defining the field-specific and RO type-specific interpretation of the assessment criteria. The minutes of all three meetings are available on line in the folder Common documents of the Metodika support system.
- A remote peer review of the submitted excellent research outputs by international referees started in the third week of May, and a remote evaluation of documents for RUs by subject panel members in the first week of June.

- Panel meetings of 3 to 5 days depending on the number of evaluated RUs will be held in Prague for the final assessment of the Research Unit's performance against the five main criteria including on-site visits of some RUs followed by consensual scoring and outline of RU evaluation reports. Meetings of subject panels belonging to the disciplinary areas Natural Sciences, and Engineering and Technology will take place from June 29 till July 3, 2015, and for Humanities panels will meet from July 6 till July 10, 2015.
- A remote preparation of the final RU evaluation reports and conclusive analytical reports on the EvU level are expected to be completed latest by the end of August 2015.
- EvUs management will be requested to provide the feed back on RU evaluation reports and conclusive analytical reports on the EvU level as well as on the EM by the end of September. In addition, the panel members will be also invited to comment the EM (September 2015).

### 3.2. Description of documents available to expert panel members for evaluation

The experts on the subject panel work with documents available online allowing them to assess the corresponding RUs according to the five evaluation criteria (I to V) and give scores from A (outstanding) to E (poor). Most documents are RU specific, in addition several panel specific or common documents are also available for facilitating the evaluation process. The covered evaluation five year period is from 2010 to 2014, the data regarding research outputs correspond, however, to the period from 2009 to 2013.

The main document is the **Self-assessment report of RU** consisting of responses to 60 Questions (tables<sup>9</sup> and/or short narratives) structured in six Sections (registration, five evaluation criteria) and SWOT analysis. Questions relating to the first criterion are answered both on *EvU and RU levels* while the other four criteria are handled on the *RU level only*. The information was supplied by RUs and some statistical data regarding funding and research outputs were directly taken over from the national RD&I Information System (RD&I IS). All financial indicators are in thousands of Czech Crowns (1€≈27 CZK).

Other documents prepared by the Metodika team are available relating particularly to Criterion III (Research excellence) and Criterion IV (Overall research performance) namely:

**Integrated report on excellent outputs** containing overview of basic bibliometric indicators and scores given by referees to the “best” outputs, this report is presented per subject panel and has specific sections for individual RUs;

**Excellent outputs** selected by RU, their list and pdf files in a separate RU specific folder, for consultation by experts;

**Bibliometric report** is RU specific and contains quantitative and analytic information about overall research outputs of RU (both scholarly and non scholarly);

**Research unit evaluation report template** is also available for the final report on RU as well as for drafting this report by experts on the subject panels under coordination of the panel chair, see Annexe VI.

Lists of all books published per RU are stored for the disciplinary area Humanities, as decided during the Calibration meeting of the Main panel with the Subject panel chairs. In addition, common

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<sup>9</sup> When appropriate, the number of items listed in tables is limited to most important ones, and also taking into account the size of RU

documents such as presentations during the Calibration meetings in May, their minutes, RU Evaluation Report Template for drafting and others will be accessible to all experts.

The documents are stored in the Metodika support system with Share Point interface in three types of folders: *i)* disciplinary area main panel folders, each accessible only to the experts on this panel *ii)* subject panel folders, each accessible to the experts on this panel and experts on the corresponding disciplinary area main panel, *iii)* folder with common documents accessible to all experts (the folder is denoted “Common documents” and is accessible after clicking on the menu item Panels). An expert sees exclusively the folder(s) where he/she has access.

Most information crucial for evaluation is stored inside subject panel folders that are structured in three branching levels. The first level are the corresponding RUs, the second level are (for each RU) the self assessment report, the bibliometric report, a folder with excellent outputs and a template for uploading the final RU evaluation report. The third level is the list of excellent outputs and their pdf files. The integrated report on excellent outputs will be available on the first level of each subject panel before starting panel meetings. For more information how to access on line the files in the **IPN METODIKA support system** see the next section 3.3.

During the panel session the hard copies of the above documents will be available for each panellist with exception of the full texts of excellent outputs accessible in electronic form only.

### 3.2.1. Self-assessment report of the RU

#### Registration information

Q001 Contact person EvU

Q002 Contact person RU

Q003 Evaluated Unit organigram

Q004 Type of research organization

Q005 Research Unit code, subject panel, Research Unit Field

Declaration of the accuracy of the information and signature

Additional questions concerned suggestions and oppositions to panel members / referees as well as requests for registration of a unit with a cross referral within one OECD disciplinary area or of an interdisciplinary unit across disciplinary areas (Q6-8). There was not, however, any such case for this pilot testing (PT) and therefore these questions were omitted.

#### Information relating to **Criterion I Research environment on the level of EvU and RU**

Q009 or Q010 or Q011 (depending on the type of RO) Staff overview – Head Count (HC) for researchers, technicians and other staff and Full Time Equivalents (FTE) for researchers' category only

**Researchers:** professionals engaged in the conception or generation of new knowledge, products, processes, methods and systems or managing of such projects. This category is further subdivided according to the type of ScRO:

- professors, associate professors, assistant professors, instructors, scientific workers (HEI);
- senior scientists, scientists, associate scientists and postdoctoral fellows (ASCR);
- no subdividing for other types of RO than HEI and ASCR.

**When determining FTE devoted to research activities for teaching personnel of HEI the physical FTE was divided by 2** (Table Q009) considering that approximately 50% of the working time is devoted to pedagogical duties<sup>10</sup>.

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<sup>10</sup> An example: A young researcher is working half time due to its parental duties: for a teaching position in HEI such as assistant professor his FTE(research) is  $0.5/2=0.25$ , for an assistant researchers in an institute of AS CR FTE(research) would be 0.5.

**Engineers and technicians and equivalent staff (referred to as “Technicians”):** persons who participate in R&D activities by performing scientific and technical tasks involving the application of concepts and operational methods (usually under the supervision of researchers);

**Other supporting staff (referred to as “Other personnel”):** skilled and unskilled craftsmen, secretarial and clerical staff participating in R&D activities or directly associated with such activities; included are also managers and office staff who provide direct support for R&D.

*Important note on Q009-Q011:* PhD full time students in CR have stipends of the Ministry of Education MEYS (typically during three to four years) that are insufficient, they can be therefore additionally supported by funding from grants; in this case PhD student has a work contract in EvU. In Czech statistics of HR the PhD student trained in ROs are included in the category of researchers with exception of ASCR where PhD student are listed separately. For that reason RUs were asked to indicate below the tables the number of PhD students (HC and FTE) who had a work contract in 2014 in the researchers category. Subtracting this indicator from the overall number of researchers allows to determine the count of „core researchers“ having tenure or tenure track positions.

#### [Q012 Career development](#) and [Q013 Career development of PhDs and post-docs](#)

These two questions consisting of 4 sub-questions each ask for a statement on the policy in the EvU in relation to career development of researchers in general and young ones in particular. It provides background information on how the EvU management develops and maintains practices fostering good research in the field and helps early-career researchers to make their way into the profession to become gradually independent.

#### [Q014 Concise Activity Report - Description of research activities, objectives and achievements over the period 2010-14 of the EvU,](#)

Contribution of the RU can be highlighted when appropriate.

#### [Q015 Fields and foci of research of the EvU](#)

Description of the main fields and foci of research in the EvU and the role of RU; the role of multidisciplinary or interdisciplinarity, and the role of basic and applied research.

#### [Q016 Peer-reviewed journals published by the EvU](#)

EvU informs also on the reach of the journals based upon databases in which the journal is indexed (Thomson Reuters Web of Science, Scopus, European Reference Index for Humanities – ERIH, reviewed Czech periodical not indexed in WoS or Scopus or ERIH, other periodical).

#### [Q017 Age of the researchers](#)

Age profile of researchers across EvU and RU on December 31, 2014 excluding PhD students.

#### [Q018 Inbreeding](#) and [Q019 Eventual clarifications or notes or trends](#)

This question aims at understanding the openness of the EvU and RU to researchers from other ROs, particularly getting information to what extent the EvU and RU are made up of researchers who received their PhD training in the same RO.

#### [Q020 PhD student overall enrolment in each year, Q021 Newly enrolled PhD students in each year, Q022 PhDs awarded in each year, Q023 Eventual clarifications or notes on trends in the evaluated period](#) (applies to HEI only)

#### [Q024 PhDs trained in each year, Q025 Newly trained PhD students in each year, Q026 PhD studies successfully completed in each year, Q027 Eventual clarifications or notes on trends in the evaluated period](#) (applies to other RO than HEI)

*Important note on Q020-Q027:* Questions are answered both on EvU and RU level. Graduate students in the CR can be enrolled exclusively in universities that award also PhD degree. They can, however, work on their PhD project partly or fully outside HEI, mostly in the institutes of AS CR, where they are supervised and have usually a part time work contract. The number of PhD students enrolled in an HEI EvU is therefore usually higher than the number of those actually present there.

The formulation of questions therefore differs for HEI (where a distinction is made between “enrolled” and actually “trained” PhD students) and other RO (where only the term “trained” is used). Note that the numbers can be higher than HC of PhDs in tables Q009-011 since all the PhD students are listed here independently if they have or not a work contract in EvU.

An important problem of the graduate studies in CR is a high rate of PhD candidates leaving graduate studies unsuccessfully and a considerable number of late thesis defences. The listing of PhDs trained, newly entering and completing the thesis per year during the evaluation period allows panellists to get a picture how efficient is EvU and RU in PhD training.

#### **Q028 Institutional funding for research in the period 2010-14 and Q029 Eventual clarifications or notes on trends in the evaluated period**

Funding for research (1<sup>st</sup> row)- sum of money which EvU obtained from the state budget on the basis of the acquired points for R&D results using the current Evaluation methodology (Metodika 2013). This is institutional funding for personal cost of permanent staff (partly or fully) and the development of RO. The data originate from RD&I IS (validated by EvU) and are comparable between different EvUs.

Funding for other activities (2nd row) - sum of other different subsidies which EvU obtained from the state budget, not only for R&D. There are e.g. money for teaching at HEI, money for equipments etc. The data were supplied by EvU.

#### **Q030, Shared/collaborative use of infrastructure, Q031 Other national research infrastructures from the Czech roadmap of RI (non-competitive access), Q032 Other research infrastructures (competitive access) and Q033 Research infrastructure self-assessment**

Infrastructures available at the level of EvU with a minimum threshold of 25000 € for Natural Sciences and Engineering and Technologies, and no limit for Social Sciences and Humanities; use of infrastructures of other ROs, self-assessment of the adequacy of infrastructure and facilities, including buildings, equipment and other physical infrastructure, relating it to the research needs of the EvU.

#### **Q034 Research Strategy of the Evaluated Unit for the period 2015-19**

This information should be used to assess whether there is shared plan for guiding the research of the EvU and whether strategic, long-term research plans been defined and, if so, how does the EvU seek to realize those plans.

The following topics are supposed to be covered:

Research plan description: What are the key research objectives and means to achieve these objectives? Have you defined performance indicators to measure progress?

Development needs: Is there need for new knowledge, facilities; is the present level of funding sufficient for attaining the objectives laid down?

Use of resources: What is the intended use of resources (human, financial, equipment) in the light of the strengths and weaknesses in the SWOT analysis and how does the RU intends to combat the weaknesses and exploit the strengths?

The strategy in the context: Do the strategies of State and the Institution/Unit support each other? How do you take into account the possible ethical questions within research?

#### **Information relating to Criterion II Membership of the national & global research community on the level of RU**

This part collects the data necessary to understand what the main channels through which the RU interacts with the national and international scientific community are. The data also focuses on whether the professors and leading researchers at the RU are active in international societies and the most relevant research projects that have been carried out jointly with other institutions or abroad. Finally this part also collects data on major international conferences where RU was the main organizer.

### **National research presence and collaboration**

Q035 National collaborations and partnerships and Q036 The most important outcomes of these collaborations and partnerships

The most important national collaboration partners of the RU and observable outcomes such as key joint publications, researcher training, adoption and use of new technologies or new approaches.

### **National reputation and esteem**

Q037 The most significant scientific prizes, honours and scientific positions of trust awarded to researchers in the RU and Q038 The most important memberships of scientific advisory boards in academia among the researchers in the RU

### **International research presence and collaboration**

Q039 Collaborations with institutions in other countries and Q040 Describe the most important outcomes of these collaborations and partnerships

The most important international collaboration partners of the RU and observable outcomes such as key joint publications, researcher training, adoption and use of new technologies or new approaches.

Q041 Study visits coming from abroad in the period 2010-14 and Q042 Study visits from the Research Unit to institutions abroad in the period 2010-14

### **International reputation and esteem**

Q043 Membership in editorial boards and Q044 International conferences organized

### **Information relating to Criterion III *Research Excellence on the level of RU***

The excellent outputs (publications, books, patents, licences etc.) were selected by the RU, representing between 1 and 2 % (and not less than 3 and not more than 20 items) of its overall research productions for the period between 2009 and 2013. These best outputs are listed in the self-assessment report with a short narrative explaining why RU considers the given outputs as excellent in the context of its research activity, objectives and achievements. Most submissions were provided in electronic format as pdf files and can be consulted by panel members on line in a separate folder. In exceptional cases, e.g. large books (Humanities), a hard copy was provided and should be available for consultation during the subject panel meeting. Scholarly outputs are being reviewed ideally by two international referees who score each item on a five level scale from A (outstanding) to E (poor) and write a short justification of the score. An **Integrated Report on Excellent Outputs** presenting selected bibliometric indicators, scores and their explanations will be available several days before the subject panel meeting (see more information below).

### **Information relating to Criterion IV *Overall Research Performance on the level of RU***

#### **Research output**

Q045 Research output in the period 2009-13

The table contains the counts of main types of research outputs per year and over the total evaluation period based on the data stored in the national RD&I IS. This table is in fact an excerpt from more detailed tables (Indicators F1 and G1) in the Bibliometric report where all the categories of research outputs and activities are listed as classified in the national RD&I IS. The main tool for assessing quality and quantity of the overall research outputs in detail is the separate **Bibliometric report** (see more information below).

Q046 Value of the RU activities for the advancement of research (self-assessment)

RUs were asked to highlight major scientific breakthroughs, research leading to the development of new concepts, methods, standards, industrial and utility designs, pilot plants, proven technologies,

prototypes, software, new or improved processes, products, research enabling an improved access to information or knowledge etc.

### **Competitiveness in research**

#### **Q047 National competitive funding (“targeted” funding) in the period 2010-14**

The data on the funding received over the years in open competitions from national public sources, based on the data stored in the national RD&I IS. The first two rows indicate funding from the Grant Agency of the Czech Republic (GACR) and from the Technological Agency of the Czech Republic (TACR) that are the two leading bodies providing project based support for basic and applied research, respectively.

#### **Q048 International funding from EU programs in the period 2010-14**

Competitive project funding from FP7 (1<sup>st</sup> row) obtained in the open calls (Cooperation, Capacities, People). RU was instructed to indicate separately funding from ERC grants, if any.

Funding from the EU Structural funds operational programs shows the overall support from different EU SF available to CR. The Prague based institutions were not by definition eligible for receiving this type of funding targeted to the regions only. The allocation of funds was not based primarily on previous results and strategy of ROs, but rather on political decisions of the Czech governmental authorities.

#### **Q049 International competitive funding from other public sources in the period 2010-14**

Competitive project funding from foreign funding agencies, foreign ministries, embassies etc.

#### **Q050 Income from contract research in the period 2010-14**

Contract research funding obtained directly (i.e. not in response to an open call for projects) with the conditions of the work to be carried out set directly between the RU and the client, income without VAT (DPH).

#### **Q051 Income from the commercialisation of research outputs in the period 2010-14**

This includes sales and licensing income from patents, sales of software, prototypes etc. Number of reported items is limited to 50 % of FTE for research, no more than 20.

#### **Q052 - Explain reasons for any change trends observed in the data**

Additional comments and clarifications on the trends in the evaluated period.

#### **Q053 Competitive positioning in the national context**

RU was asked whether its research focus is unique in the country or are there competing actors in this specific field? Is there a strategy/motivation/possibility to cooperate with these competing actors aiming to strengthen the research field? Or is there a strategy to dissociate and strengthen the own research profile?

#### **Q054 Competitive positioning in the international context**

RU was asked to evaluate its position in relation to its leading international competitors. How does the RU perceive itself in the international context? What is the “niche” of the RU in the global research environment? What characteristic features distinguish the RU from its international competitors?

### **Information relating to Criterion V Societal relevance on the level of RU**

#### **Q055 Collaborations with non-academic societal actors during the period 2010-14**

The most important collaborations with non-academic societal actors. Types of collaboration include e.g. joint projects, researcher mobility, and use of resources and/or creation of outputs.

#### **Q056 Participation in incubators and clusters during the period 2010-14**

The most important cases of participation in incubators or clusters.

#### **Q057 Participation in advisory boards during the period 2010-14**

The most important memberships in advisory boards outside academia among the researchers in the RU (e.g. for government, foundations, charities, NGOs, or industry).

#### Q058 Spin-off creation during the period 2010-14

The spin-off companies launched by the RU.

#### Q059 General statement

Description how the RU activities promote and support the activities of other societal actors, e.g. industry of SMEs, schools, citizen associations, ministries or governmental agencies. What are the main channels used (joint projects, conferences, articles in sector journals, use of the general or social media, publications for the broader public etc.)?

#### Q060 Societal value of activities

RU was asked to give up to 3 specific examples illustrating the value of the RU activities for society following a list of potential topics (not comprehensive and RU was free to report other relevant impacts):

*Economic impacts*- Impacts where the beneficiaries may include businesses, either new or established, or other types of organisation which undertake activity that may create wealth.

*Impacts on practitioners and services* - Impacts where beneficiaries may include organisations or individuals involved in the development of and delivery of professional services.

*Impacts on public policy and services* - Impacts where the beneficiaries are usually government, public sector, and charity organisations and societies, either as a whole or groups of individuals in society, through the implementation of policies.

*Impacts on society, culture and creativity* - Impacts where the beneficiaries are individuals, groups of individuals, organisations or communities whose knowledge, behaviours or practices have been influenced.

*Health and welfare impacts* - Impacts where the beneficiaries are individuals and groups (both human and animals) whose quality of life has been enhanced (or potential harm mitigated).

*Impacts on the environment* - Impacts where the key beneficiaries are the natural environment and/or the built environment, together with societies, individuals or groups of individuals who benefit as a result.

### SWOT analysis

Strengths, Weaknesses, Opportunities, Threats

## 3.2.2. Bibliometric report on the RU

This report produced by the Metodika team (key activity 2) and presenting a number of quantitative bibliometric indicators is an important tool for the subject panel, namely in evaluating the overall research productivity of RU (Criterion IV). Table Q045 of the self-assessment report presents the data extracted from report sections F and G.

The report opens with a short introduction presenting purpose of quantitative information, data sources used, the selection of bibliometric indicators and their time span, field categorization of research outputs, and type of information given and indicators. The report is then structured in seven sections as follows:

#### A: Characteristics of the field in the Czech Republic

This group of indicators all give the panel an overview of the characteristics of the field at country level, thereby providing a context for interpreting the indicators for a specific RU in a specific field.

### **B: Characteristics of the RU**

These indicators identify the relative size – measured in publication output of the RU within its field in the country and within the EvU it belongs to.

### **C: Publishing Profile of the RU**

The indicators in this group give an overview of the publishing profile of the RU that should be contextualized with other materials provided to the evaluation panel, such as: the information on the level of the field given in indicator group A above, field and type of research, mission, size and resources of the EvU.

### **D: Citation Impact of the RU**

Citation indicators inform about the international influence, impact, or usefulness of the research, as seen in the frequency of received citations per publication. It should be noted, however, that citation distributions can be highly skewed by a few highly cited articles that may influence the averages considerably and cause large variations from year to year as well.

### **E: Collaboration of the RU**

These indicators provide information about the relations to main partners in international and national collaboration in the field, as seen in the addresses of co-authored publications. Generally, the relevance and validity of the collaboration indicators will have to be related to the publication practices in the specific field of research and their Web of Science coverage (the collaboration indicators are not presented in fields with low WoS coverage).

### **F: Research outputs and activities – statistical data for the RU**

The statistical data presented give the panels a view on the trends in scholarly and non-traditional research outputs during the evaluation period and set the publication profile of the RU in the context of the field in the Czech Republic. It also provides information on the potential reach of the journals in which the articles are published (national versus international), based upon the databases in which the journals are registered (WoS, Scopus, ERIH, etc.)

### **G: IPR-related outputs of the RU**

The panel is given a view on the trends in patents awarded, as well as on utility and industrial models produced by the RU. The data set the information in the context of the field in the Czech Republic and give a view on the importance of namely the patents in terms of geographical reach.

## **3.2.3. Integrated report on excellent outputs**

This report is produced by the Metodika team (Key Activity 4) and summarizes on the level of each subject field panel<sup>11</sup> results of the evaluation of Excellent Outputs (EOs) submitted by individual RUs. Such a presentation facilitates for the subject panel evaluation of research excellence (Criterion III) since it provides a comparative view of the results across RUs belonging to one scientific field.

An effort is made to obtain the scores (ranging from A “outstanding” to E “poor”) with an explicative note for all submitted scholarly EOs<sup>12</sup> (articles in journals and reviewed proceedings, chapters and books) from two independent international referees without a conflict of interest with the (co)author(s). For the documents indexed by WoS the referees are also guided by five bibliometric indicators reflecting the citation and journal impacts. More details on the procedure are available in the Guidelines for Referees that are enclosed (see Annexe V). In the conception of the new

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<sup>11</sup> All together 9 IREO will be available: 2, 4 and 3 for disciplinary areas Natural Sciences, Engineering and Technology and Humanities, respectively.

<sup>12</sup> All together were submitted: 80 ;80, and 59 scholarly outputs for disciplinary areas Natural Sciences, Engineering and Technology and Humanities, respectively.

Evaluation Methodology as outlined by the Technopolis consortium the referees should be proposed by the subject panel members, yet under the time constraints of the pilot testing it was decided that the Metodika team (KA4) selects the referees for accelerating the process. In addition, the subject panel members might be asked to act as referees themselves for a limited number of submitted EOs where it was not possible to get at least one evaluation from a referee. In addition the panel members will have also to examine the EOs where the scores of two referees differ by two points or more (B and D for example).

Non-scholarly research outputs (patents, licences, verified technologies and industrial samples) are not numerous<sup>13</sup> but the submitted text is often partly in Czech. It was decided that such EOs will be examined directly by the subject panel members during the session in Prague with the aid of a Czech advisor.

Since the reviewing process started in the second half of May 2015 only and not all the referees were found by the end of May, the Integrated Report on Excellent Outputs (IREO) will be available for panel members only immediately before the session in Prague. In this way the maximum of items can be evaluated.

Each of the IREO will be an Excel file consisting of a **Summary EOs sheet** presenting condensed information for all RUs of the given subject field followed by **RU EOs sheets** presenting information by individual RUs.

- Summary EOs sheet presents for each RU included the following information:

Type of RO, code of the RU, total number of scholarly research outputs over the evaluated period, total number of non-scholarly research outputs over the evaluated period, number of submitted scholarly EOs, number of submitted non-scholarly EOs, number of EOs reviewed, number of EOs reviewed by two referees, number of EOs where the two scores differed by two points or more, number of scores, number of “outstanding” scores (A), number of “very good” scores (B), number of “good level” scores (C), number of “adequate” scores (D), number of “poor” scores (E).

- RU EOs sheet presents for each EO the following information (listed are first the scholarly EOs followed by non-scholarly ones):

Type of the research output (according to the national IR&D IS classification), code of the EO, full reference of the EO, number of citations, category expected citation rate, journal impact factor, journal percentile, score of the first referee, explicative note of the first referee, score of the second referee, explicative note of the second referee.

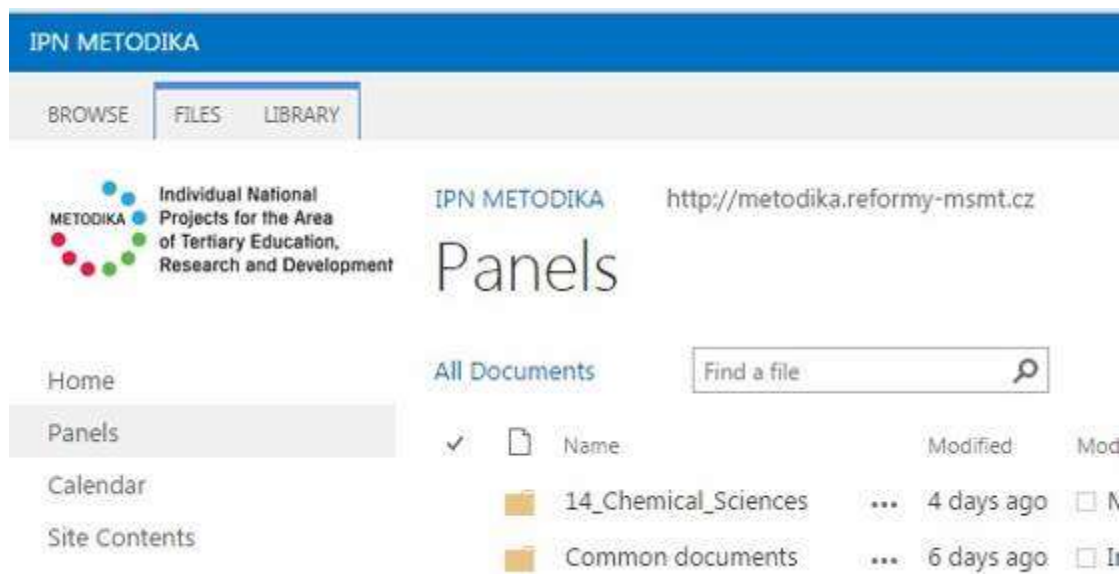
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13 Altogether were submitted: 5 and 13 non-scholarly outputs for disciplinary areas Natural Sciences and Engineering and Technology, respectively; no submissions of this type in Humanities

### 3.3. Instructions how to access the IPN METODIKA support system

Go to the site <https://ipnmetodika.cvut.cz>

Sign up with your user name and password sent earlier by email from the Evaluation Management team (please type in the user name and password rather than copying it using Ctrl-C and Ctrl-V). After clicking on the Homepage to the field Panels you will see the following screen (the folder displayed, in the example below 14\_Chemical Sciences, depends upon the assignment of the panel chair or member to the particular subject panel; main panel chair or member will see the main panel and all subject panels belonging to the given disciplinary area). If you see another screen, click on **Home**.



In the folder **Common documents** you will find C.V. of all experts involved in the evaluation, some general documents, templates, and minutes of the meetings.

Open the panel by clicking on it (panel **14\_Chemical Sciences** in the example below), and select the research unit (**AVCR\_UCHP\_14-The Institute...** in the example below)

The screenshot shows the IPN METODIKA web interface. The top navigation bar includes 'BROWSE', 'FILES', and 'LIBRARY'. The main header displays 'Panels · 14\_Chemical Sciences'. Below the header, there is a sidebar with 'Home', 'Panels', 'Calendar', and 'Site Contents'. The main content area shows a list of documents under the heading 'new document or drag files here'. A red arrow points to the first document in the list: 'AVCR\_UCHP\_14 - The Institute of Chemical Process Fundamentals of the AS CR'.

Name	Modified
AVCR_UCHP_14 - The Institute of Chemical Process Fundamentals of the AS CR	May 18
AVCR_UFCH_14 - I. Heyrovský Institute of Physical Chemistry of the AS CR	May 18
COCH_14 - Centre for Organic Chemistry Ltd	May 18
NA_14 - The National Archives	May 18
VSCHT_FCHL_14 - University of Chemistry and Technology Prague - Faculty of Chemical Engineering	May 18
VSCHT_FCHT_14 - University of Chemistry and Technology Prague - Faculty of Chemical Technology	5 days ago
VSCHT_FPBT_14 - University of Chemistry and Technology Prague - Faculty of Food and Biochemical Technology	5 days ago
VUANCH_14 - The Research Institute of Inorganic Chemistry, Inc	May 18
VUT_FCH_14 - Brno University of Technology - Faculty of Chemistry	May 18

After opening the folder (**AVCR\_UCHP\_14-The Institute...**) you will see the sub-folder **AVCR\_UCHP\_14\_Excellent outputs** containing excellent outputs in PDF format, a list of excellent outputs, and a short description of excellent outputs prepared by the research unit.

The screenshot shows the IPN METODIKA web interface with the '14\_Chemical Sciences · AVCR\_UCHP\_14' panel selected. The sidebar shows 'Panels' as the active section. The main content area displays a list of documents under the heading 'new document or drag files here'. The list includes four documents: 'AVCR\_UCHP\_14\_Excellent outputs', 'AVCR\_UCHP\_14\_Bibliometric Report', 'AVCR\_UCHP\_14\_Evaluation\_report', and 'AVCR\_UCHP\_14\_Selfassessment'.

Name	Modified	Modified By
AVCR_UCHP_14_Excellent outputs	4 days ago	Ing. Tomáš Kopriva
AVCR_UCHP_14_Bibliometric Report	4 days ago	Ing. Martin Lhoták
AVCR_UCHP_14_Evaluation_report	Yesterday at 11:54 AM	petracek
AVCR_UCHP_14_Selfassessment	10 hours ago	Ing. Tomáš Kopriva

The **AVCR\_UCHP\_14\_Selfassessment** is a PDF image of the self-assessment report. By clicking on it you will open it. You can also download the self-assessment report.

IPN METODIKA - AVCR\_UCHP\_14\_Selfassessment.pdf Microsoft Word Web App Dr. P

FILE EDIT IN WORD DOWNLOAD PRINT SHARE FIND

**Registration**

Registration Form

Name of the Evaluated Unit: Institute of Chemical Process Fundamentals  
ID of the Evaluated Unit: AVCR\_UCHP\_14

Q001 - Contact persons for the Evaluated Unit Q002 Contact persons for the Research Unit

	Evaluated Unit	Research Unit
Name & Surname	Miroslav Puncochař	Jan Sykora
Position	Director	Head of Department
Telephone number	220 390 286	220 390 307
E-mail address	punc@icpf.cas.cz	sykora@icpf.cas.cz

Q003 - Evaluated Unit Organigram

**Organization Chart**

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graph TD
    Secretariat[Secretariat] --- Director[Director]
    Director --- Personnel[Personnel and Payroll Section]
    Director --- DeputyScience[Deputy Director for Science]
    Director --- ScientificSecretary[Scientific Secretary]
    Director --- DeputyEconomy[Deputy Director for Economy]
    DeputyScience --- Departments[Departments]
    ScientificSecretary --- Library[Library]
    DeputyEconomy --- Administration[Administration]
  
```

By clicking on the file **AVCR\_UCHP\_14\_Evaluation Report** you will open the template for the RU evaluation report. You will store the template in Word format on your local computer by clicking on **FILE, Save As**, and **Download** (usually the file is stored in C:\Users\username\Downloads). It is up to the decision of the panel chair when and how the reports of individual panel members will become mutually available.

IPN METODIKA - AVCR\_UCHP\_14\_Evaluation\_report.docx Microsoft Word Web App

Info Edit Save As Print Share Help Exit

**Save As**

Download  
Download a copy of this document to your computer.

The **AVCR\_UCHP\_14\_Bibliometric Report** is a Word image of the bibliometric report. By clicking on it you will open it. Then you can either read it on the screen or print it or download it in the PDF format by clicking on Print. You can also store the bibliometric report in Word format following the steps as described above for the RU Evaluation Report template.



## ANNEXES

## Annexe I.: OECD Structure of disciplinary areas and scientific fields

Area	Scientific field
<b>1. Natural Sciences</b>	1.1 Mathematics
	1.3 Physical sciences
	1.4 Chemical sciences
	1.5 Earth and related environmental sciences
	1.6 Biological sciences
	1.7 Other natural sciences
<b>2. Engineering and Technology</b>	2.1 Civil engineering
	2.2 Electrical engineering, electronic engineering, information engineering
	1.2 Computer and information sciences
	2.3 Mechanical engineering
	2.4 Chemical engineering
	2.5 Materials engineering
	2.6 Medical engineering
	2.7 Environmental engineering
	2.8 Environmental biotechnology
	2.9 Industrial Biotechnology
	2.10 Nano-technology
	2.11 Other engineering and technologies
<b>3. Medical and Health Sciences</b>	3.1 Basic medicine
	3.2 Clinical medicine
	3.3 Health sciences
	3.4 Health biotechnology
	3.5 Other medical sciences
<b>4. Agricultural Sciences</b>	4.1 Agriculture, forestry, and fisheries
	4.2 Animal and dairy science
	4.3 Veterinary science
	4.4 Agricultural biotechnology
	4.5 Other agricultural sciences
<b>5. Social Sciences</b>	5.1 Psychology
	5.2 Economics and business
	5.3 Educational sciences
	5.4 Sociology
	5.5 Law
	5.6 Political Science
	5.7 Social and economic geography
	5.8 Media and communications
	5.9 Other social sciences
<b>6. Humanities</b>	6.1 History and archaeology
	6.2 Languages and literature
	6.3 Philosophy, ethics and religion
	6.4 Art (arts, history of arts, performing arts, music)
	6.5 Other humanities

## Annexe II.: Evaluated Units and their Research Units

	Name EvU	Type of RO	Researchers HC <sup>(1)</sup>	Researchers FTE <sup>(2)</sup>	PhD trained <sup>(3)</sup>	Total outputs <sup>(4)</sup>	Scholarly outputs <sup>(5)</sup>	SF code	Subject field OECD	Code RU
Natural Sciences, Engineering and Technology	University of Chemistry and Technology Prague - Faculty of Chemical Technology	ScRO-HEI	175	81	215	1939	1812	1.4	Chemical Sciences	VSCHT_FCHT_14
								2.5	Materials Engineering	VSCHT_FCHT_25
	University of Chemistry and Technology Prague - Faculty of Environmental Technology	ScRO-HEI	78	35	149	1134	1024	2.4	Chemical Engineering	VSCHT_FTOP_24
								2.7	Environmental Engineering	VSCHT_FTOP_27
	University of Chemistry and Technology Prague - Faculty of Food and Biochemical Technology	ScRO-HEI	154	71	204	1667	1618	1.4	Chemical Sciences	VSCHT_FPBT_14
								1.6	Biological Sciences	VSCHT_FPBT_16
								2.9	Industrial Biotechnology	VSCHT_FPBT_29
	University of Chemistry and Technology Prague - Faculty of Chemical Engineering	ScRO-HEI	173	69	40	1783	1678	1.4	Chemical Sciences	VSCHT_FCHI_14
								2.4	Chemical Engineering	VSCHT_FCHI_24
	Brno University of Technology -Faculty of Chemistry	ScRO-HEI	77	36	90	1561	846	1.4	Chemical Sciences	VUT_FCH_14
								1.6	Biological Sciences	VUT_FCH_16
								2.5	Materials Engineering	VUT_FCH_25
								2.7	Environmental Engineering	VUT_FCH_27
	J. Heyrovský Institute of Physical Chemistry of the AS CR	ScRO-ASCR	119	94	45	1147	1124	1.4	Chemical Sciences	AVCR_UFCH_14
	The Institute of Chemical Process Fundamentals of the AS CR	ScRO-ASCR	82	66	41	867	839	1.4	Chemical Sciences	AVCR_UCHP_14
								2.4	Chemical Engineering	AVCR_UCHP_24
								2.5	Materials Engineering	AVCR_UCHP_25
								2.7	Environmental Engineering	AVCR_UCHP_27
	Centre for Organic Chemistry Ltd.	IBRO-RTO	10	9	0	42	21	1.4	Chemical Sciences	COCH_14
	The Research Institute of Inorganic Chemistry, Inc.	IBRO-RTO	65	52	17	209	119	1.4	Chemical Sciences	VUANCH_14
Humanities	The University of Pardubice - Faculty of Arts and Philosophy	ScRO-HEI	83	44	82	584	554	6.1	History and Archaeology	UP_FF_61
								6.2	Languages and Literature	UP_FF_62
								6.3	Philosophy, Ethics and Religion	UP_FF_63
	The University of South Bohemia in ČeskéBudějovice - Faculty of Philosophy	ScRO-HEI	65	40	42	635	626	6.1	History and Archaeology	JU_FF_61
								6.2	Languages and Literature	JU_FF_62
	The Institute of History of the AS CR	ScRO-ASCR	46	46	4	745	710	6.1	History and Archaeology	AVCR_HU_61
	The Institute for Contemporary History of the AS CR	ScRO-ASCR	36	23	4	464	441	6.1	History and Archaeology	AVCR_USD_61
								6.3	Philosophy, Ethics and Religion	AVCR_USD_63
	The National Technical Museum	NatRes	16	16	0	167	159	6.1	History and Archaeology	NTM_61
	The National Archives	NatRes	43	9	0	177	168	1.4	Chemical Sciences	NA_14
								6.1	History and Archaeology	NA_61

(1) Number of Core Researchers in 2014, source self-assessment report of RU Q009-Q011

(2) When determining FTE devoted to research activities for teaching personnel of HEI the physical FTE was divided by 2

(3) PhD trained in 2014, source self-assessment report of RU, Q020 or Q024

(4) Total outputs for period 2009-2013 as registered in the National RD&I IS

(5) Books, Chapters, Article in reviewed proceedings and Journals for period 2009-2013 as registered in the National RD&I IS

## Annexe III.: Research units in main disciplinary areas and subject fields

Disciplinary area	Subject field	Name EvU	Type of RO	Code RU	Researchers HC <sup>(1)</sup>	Researchers FTE <sup>(2)</sup>	PhD trained <sup>(3)</sup>	Total outputs <sup>(4)</sup>	Scholarly outputs <sup>(5)</sup>
1 Natural Sciences	1.4 Chemical Sciences	University of Chemistry and Technology Prague - Faculty of Chemical Technology	ScRO-HEI	VSCHT_FCHT_14	67	31	100	614	542
		University of Chemistry and Technology Prague - Faculty of Food and Biochemical Technology	ScRO-HEI	VSCHT_FPBT_14	43	19	61	489	433
		University of Chemistry and Technology Prague - Faculty of Chemical Engineering	ScRO-HEI	VSCHT_FCHI_14	77	28	20	642	619
		Brno University of Technology - Faculty of Chemistry	ScRO-HEI	VUT_FCH_14	22	12	39	519	319
		J. Heyrovský Institute of Physical Chemistry of the AS CR	ScRO-ASCR	AVCR_UFCH_14	119	94	45	1147	1142
		The Institute of Chemical Process Fundamentals of the AS CR	ScRO-ASCR	AVCR_UCHP_14	14	12	7	153	146
		The Research Institute of Inorganic Chemistry, Inc.	IBRO-RTO	VUANCH_14	65	52	17	209	119
		Centre for Organic Chemistry Ltd.	IBRO-RTO	COCH_14	9	8	0	42	21
		The National Archives	NatRes	NA_14	7	2	0	31	28
	1.6 Biological Sciences	University of Chemistry and Technology Prague - Faculty of Food and Biochemical Technology	ScRO-HEI	VSCHT_FPBT_16	51	27	62	401	383
		Brno University of Technology - Faculty of Chemistry	ScRO-HEI	VUT_FCH_16	14	6	14	421	193
2 Engineering and Technology	2.4 Chemical Engineering	University of Chemistry and Technology Prague - Faculty of Environmental Technology	ScRO-HEI	VSCHT_FTOP_24	37	18	75	495	433
		University of Chemistry and Technology Prague - Faculty of Chemical Engineering	ScRO-HEI	VSCHT_FCHI_24	96	41	20	1193	1059
		The Institute of Chemical Process Fundamentals of the AS CR	ScRO-ASCR	AVCR_UCHP_24	29	21	14	230	194
	2.5 Materials Engineering	University of Chemistry and Technology Prague - Faculty of Chemical Technology	ScRO-HEI	VSCHT_FCHT_25	108	50	115	1394	1270
		Brno University of Technology - Faculty of Chemistry	ScRO-HEI	VUT_FCH_25	24	13	17	465	265
		The Institute of Chemical Process Fundamentals of the AS CR	ScRO-ASCR	AVCR_UCHP_25	16	12	6	209	192
	2.7 Environmental Engineering	University of Chemistry and Technology Prague - Faculty of Environmental Technology	ScRO-HEI	VSCHT_FTOP_27	41	17	74	665	591
		Brno University of Technology - Faculty of Chemistry	ScRO-HEI	VUT_FCH_27	17	5	20	398	201
		The Institute of Chemical Process Fundamentals of the AS CR	ScRO-ASCR	AVCR_UCHP_27	23	21	14	341	307
	2.9 Industrial Biotechnology	University of Chemistry and Technology Prague - Faculty of Food and Biochemical Technology	ScRO-HEI	VSCHT_FPBT_29	60	25	81	871	802
6 Humanities	6.1 History and Archaeology	The University of South Bohemia in České Budějovice - Faculty of Philosophy	ScRO-HEI	JU_FF_61	20	14	13	375	375
		The University of Pardubice - Faculty of Arts and Philosophy	ScRO-HEI	UP_FF_61	24	13	55	292	280
		The Institute of History of the AS CR	ScRO-ASCR	AVCR_HU_61	46	46	4	754	710
		The Institute for Contemporary History of the AS CR	ScRO-ASCR	AVCR_USD_61	27	16	2	292	280
		The National Technical Museum	NatRes	NTM_61	16	16	0	167	159
		The National Archives	NatRes	NA_61	37	7	0	147	140
	6.2 Languages and Literature	The University of South Bohemia in České Budějovice - Faculty of Philosophy	ScRO-HEI	JU_FF_62	39	19	29	260	251
		The University of Pardubice - Faculty of Arts and Philosophy	ScRO-HEI	UP_FF_62	41	21	0	185	175
	6.3 Philosophy, Ethics and Religion	The University of Pardubice - Faculty of Arts and Philosophy	ScRO-HEI	UP_FF_63	18	10	27	109	99
		The Institute for Contemporary History of the AS CR	ScRO-ASCR	AVCR_USD_63	9	7	2	167	161

(1) Number of Core Researchers in 2014, source self-assessment report of RU Q009-Q011

(2) When determining FTE devoted to research activities for teaching personnel of HEI the physical FTE was divided by 2

(3) PhD trained in 2014, source self-assessment report of RU, Q020 or Q024

(4) Total outputs for period 2009-2013 as registered in the National RD&I IS

(5) Books, Chapters, Article in reviewed proceedings and Journals for period 2009-2013 as registered in the National RD&I IS

# Annexe IVa.: Research output profiles of RUs in scientific fields of disciplinary area Natural Sciences as registered in the National RD&I IS (2009-2013)

	Chemical Sciences									Biological Sciences	
	VSCHT_FCHT_14	VSCHT_FPBT_14	VSCHT_FCHI_14	VUT_FCH_14	AVCR_UFCH_14	AVCR_UCHP_14	VUANCH_14	COCH_14	NA_14	VSCHT_FPBT_16	VUT_FCH_16
<b>Total outputs</b>	<b>614</b>	<b>489</b>	<b>642</b>	<b>519</b>	<b>1147</b>	<b>153</b>	<b>209</b>	<b>42</b>	<b>31</b>	<b>401</b>	<b>421</b>
<b>Scholarly outputs</b>	<b>542</b>	<b>433</b>	<b>619</b>	<b>319</b>	<b>1124</b>	<b>146</b>	<b>119</b>	<b>21</b>	<b>28</b>	<b>383</b>	<b>193</b>
<b>Type of Outputs</b>											
Article in a periodical (J)	326	274	568	122	937	118	56	11	6	246	98
Monographs and books (B)	3	5	5	0	7	0	0	0	0	3	1
Book chapter (C)	14	13	16	8	42	2	5	1	14	22	9
Conference proceedings / Article in proceedings (D)	199	141	30	189	138	26	58	9	8	112	85
Results used by the funding provider (H)	0	0	0	0	0	0	0	0	0	0	0
Research report containing classified infor. (V)	0	0	0	0	0	0	0	0	0	0	0
Certified methodol., specialized map works (N)	0	7	0	1	0	0	0	0	0	0	0
Pilot plant (Zpilot)	0	0	0	0	1	0	0	3	0	0	0
Verified technology (Ztech)	13	19	0	0	0	0	20	1	0	1	0
Software (R)	7	1	11	1	2	0	1	0	0	1	0
Prototypes, Function examples (G)	3	0	6	0	5	1	27	4	0	5	0
Audiovisual production, electronic documents (A)	2	1	1	0	0	0	0	0	0	0	1
Conference organization(M)	5	11	0	0	3	0	0	0	0	2	0
Workshop organization (W)	4	6	0	0	0	0	0	0	0	2	0
Exhibition organization (E)	0	0	0	0	1	0	0	0	0	0	0
Other results (O)	0	0	1	197	8	2	3	0	3	0	223
Patent (P)	6	8	4	0	2	3	23	8	0	5	1
Utility model, Industrial design (F)	32	3		1	1	1	16	5	0	2	3
Plant variety (Zodru)	0	0	0	0	0	0	0	0	0	0	0
Animal breed (Zplem)	0	0	0	0	0	0	0	0	0	0	0

Note: Colours reflect different typology of ROs in correspondece with Annexe II.

## Annexe IVb.: Research output profiles of RUs in scientific fields Engineering and Technol. as registered in the National RD&I IS (2009-2013)

	Chemical Engineering			Materials Engineering			Environmental Engineering			Ind. Biotech.
	VSCHT_FTOP_24	VSCHT_FCHI_24	AVCR_UCHP_24	VSCHT_FCHT_25	VUT_FCH_25	AVCR_UCHP_25	VSCHT_FTOP_27	VUT_FCH_27	AVCR_UCHP_27	VSCHT_FPBT_29
<b>Total outputs</b>	<b>495</b>	<b>1193</b>	<b>230</b>	<b>1394</b>	<b>465</b>	<b>209</b>	<b>665</b>	<b>398</b>	<b>341</b>	<b>871</b>
<b>Scholarly outputs</b>	<b>433</b>	<b>1059</b>	<b>194</b>	<b>1270</b>	<b>265</b>	<b>192</b>	<b>591</b>	<b>201</b>	<b>307</b>	<b>802</b>
<b>Type of output</b>										
Article in a periodical (J)	222	413	125	770	144	140	180	86	175	391
Monographs and books (B)	0	7	1	6	0	1	3	2	1	3
Book chapter (C)	7	27	11	40	12	6	4	4	9	46
Conference proceedings / Article in proceedings (D)	204	612	57	454	109	45	404	109	122	362
Results used by the funding provider (H)	0	0	0	5	0	0	6	0	0	0
Research report containing classified infor. (V)	0	0	0	0	0	0	0	0	0	0
Certified methodol., specialized map works (N)	0	0	0	0	0	0	0	0	0	6
Pilot plant (Zpilot)	20	0	0	4	0	0	10	0	0	1
Verified technology (Ztech)	8	9	1	8	2	2	1	14	1	21
Software (R)	0	72	2	3	0	0	0	1	0	1
Prototypes, Function examples (G)	2	49	0	9	19	2	2	33	0	3
Audiovisual production, electronic documents(A)	3	0	0	20	1	0	21	3	0	2
Conference organization(M)	8	1	2	15	0	1	11	0	5	12
Workshop organization (W)	1	0	1	3	0	0	6	0	0	3
Exhibition organization (E)	0	0	0	0	0	0	0	0	0	0
Other results (O)	0	0	24	4	168	3	9	144	8	1
Patent (P)	16	0	4	26	3	7	7	0	15	8
Utility model, Industrial design (F)	4	3	2	27	7	2	1	2	5	11
Plant variety (Zodru)	0	0	0	0	0	0	0	0	0	0
Animal breed (Zplem)	0	0	0	0	0	0	0	0	0	0

Note: Colours reflect different typology of ROs in correspondece with Annexe II.

## Annexe IVc.: Research output profiles of RUs in scientific fields Humanities as registered in the National RD&I IS (2009-2013)

	History and Archaeology						Languages and Literature		Philosophy, Ethics and Relig.	
	JU_FF_61	UP_FF_61	AVCR_HU_61	AVCR_USD_61	NTM_61	NA_61	JU_FF_62	UP_FF_62	UP_FF_63	AVCR_USD_63
<b>Total outputs</b>	<b>375</b>	<b>292</b>	<b>745</b>	<b>292</b>	<b>167</b>	<b>147</b>	<b>260</b>	<b>185</b>	<b>109</b>	<b>172</b>
<b>Scholarly outputs</b>	<b>375</b>	<b>280</b>	<b>710</b>	<b>280</b>	<b>159</b>	<b>140</b>	<b>251</b>	<b>175</b>	<b>99</b>	<b>161</b>
<b>Type of output</b>										
Article in a periodical (J)	186	102	222	69	34	80	83	71	62	74
Monographs and books (B)	42	38	125	47	12	23	30	12	7	13
Book chapter (C)	93	100	329	156	104	28	96	68	24	66
Conference proceedings / Article in proceedings (D)	54	40	34	8	9	9	42	24	6	8
Results used by the funding provider (H)	0	0	0	0	0	0	0	0	0	0
Research report containing classified infor. (V)	0	0	0	0	0	0	0	0	0	0
Certified methodol., specialized map works (N)	0	0	0	0	0	0	0	0	4	0
Pilot plant (Zpilot)	0	0	0	0	0	1	0	0	0	0
Verified technology (Ztech)	0	0	0	0	0	0	0	0	0	0
Software (R)	0	0	0	0	1	2	0	0	0	0
Prototypes, Function examples (G)	0	0	0	0	0	0	0	0	0	0
Audiovisual production, electronic documents(A)	0	0	6	6	1	1	0	1	0	2
Conference organization(M)	0	10	17	2	2	0	0	5	2	4
Workshop organization (W)	0	2	2	0	0	2	0	2	3	2
Exhibition organization (E)	0	0	1	0	0	0	0	0	0	0
Other results (O)	0	0	9	4	4	1	9	2	1	3
Patent (P)	0	0	0	0	0	0	0	0	0	0
Utility model, Industrial design (F)	0	0	0	0	0	0	0	0	0	0
Plant variety (Zodru)	0	0	0	0	0	0	0	0	0	0
Animal breed (Zplem)	0	0	0	0	0	0	0	0	0	0

*Note: Colours reflect different typology of ROs in correspondce with Annexe II.*

## Annexe V.: Guidelines for referees

A **pilot testing** of the proposed Methodology for evaluating **Research Units** (RU) in the Czech Republic (project of the Ministry of Education, Youth and Sports) is currently under way. This pilot testing is aimed at examining all procedures of the proposed Methodology on a limited number of selected Evaluated Units performing exclusively or partly research in chemistry or history. The selected Evaluated Units cover institutions of several typologies: faculties of public universities, public research institutes of the Czech Academy of Sciences, private research and technology organizations, and national resources. Each Evaluated Unit is composed of one to four scientific field specific RUs that are the main object of assessment. The Scientific Research Excellence is one of the five criteria against which each RU is evaluated by a subject panel of international experts. In this context RUs were asked to submit for evaluation their “best” research outputs for the period 2009 – 2013 corresponding to 1 to 2 per cent of the overall scientific productions over these five years.

Each output should be ideally examined by two independent Referees based professionally outside the Czech Republic, without conflict of interest regarding the Czech co-author(s) of the assessed output. During the pilot testing only the scholarly outputs (journal articles, communications in refereed proceedings, book chapters and books) are evaluated by referees, other types of outputs such as patents, licences, software etc. will be directly examined by the corresponding subject panel with the assistance of Czech advisors.

The key terms ‘**originality**’, ‘**significance**’ and ‘**rigour**’ are at the core of the assessment of the submitted research output. The assignment of the quality level from A (outstanding) to E (poor) accompanied with a short narrative explaining the score is the result of the evaluation by a referee. The quality level scores for individual outputs will be taken into account by the Subject panel members in their process for the definition of a final score of the RU against the criterion Scientific Research Excellence. For more detailed description of Assessment criteria of Scientific Research Excellence see the table below.

Important guidance for the documents listed in Web of Science (Thomson Reuters), such as articles in journals and in proceedings, namely for “hard sciences”, are three bibliometric indicators regarding citations of the output and two regarding the journal where the output was published. They are available to the referee and their definitions are as follows:

**Number of citations** as available in WoS including self-citations

**Category Expected Citation Rate**-expected citation rate for an article in a Web of Science category, published in the same year, and of the same document type (based on the cite count through the end of the most recent full year). If the document belongs to more than one WoS category, this is the average expected value.

**Citation Percentile**<sup>1</sup> – Percentile in which the paper falls in its WoS category based on total citations indicating that the paper is in the top n% of papers in that category in that publication year - if the document belongs to more than one WoS category, this is the percentile from the best performing category. Therefore for highly cited articles the percentile is low while for an article that was not cited it is 100%.

**Impact factor of journal for year 2013**

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1 While the number of citations and category expected citation rate are of April 2015, the citation percentile is of the fall 2014. Therefore for the most recent papers (published in 2012 and 2013) the number of citations might be in some cases higher than the expected citation rate yet the citation percentile can be high (even 100 per cent) meaning that the paper was cited only quite recently. This indicator should be therefore considered with caution.

**Journal Percentile** - Percentile in which the source journal falls in its WoS category based on Journal Impact Factor in the latest (2013) edition of Journal Citation Reports. Indicates that the journal is in the top n% of journals in that category in that publication year - if the journal belongs to more than one WoS category, this is the average value. The lower the journal percentile is the higher is its impact factor in a given category.

The outputs are accessible on line as PDF format file, in exceptional cases of some books where a pdf version is not available a hard copy will be sent to the referee by mail. A template is provided for inserting the score and its explanation. *i)* An effort of 1 hour is expected to examine a document of less than 50 pages, these are mainly journal articles where in most cases bibliometric indicators are listed. Here a score explaining narrative of 50 to 100 words is requested. *ii)* An effort of 2 hours is expected for longer documents, such as books and chapters, where no bibliometric indicators exist. Here a score explaining narrative of 100 to 200 words is requested.

### Assessment criteria of Scientific Research Excellence

Quality level	Definition	Description
<b>A</b>	<b>Outstanding</b>	<b>The output is internationally outstanding meeting the highest standards</b> In terms of <b>originality, significance and rigour</b> , this research output is comparable with outstanding work internationally in the field. The research possesses the requisite quality to meet the highest international standards of excellence. Work at this level can be a key international reference point in the field.
<b>B</b>	<b>Very good</b>	<b>The output meets excellent international standards</b> In terms of <b>originality, significance and rigour</b> , this research output is comparable with very good work internationally. The research nonetheless does not yet meet the highest standards of excellence. Work at this level can arouse serious interest in the international academic community.
<b>C</b>	<b>Good level</b>	<b>The output meets high international standards</b> In terms of <b>originality, significance and rigour</b> , this research output is comparable with good work internationally. The research possesses the requisite quality to meet high international standards. Internationally recognized publishers or journals publish work of this level.
<b>D</b>	<b>Adequate</b>	<b>The output meets to some extent international standards</b> In terms of <b>originality, significance and rigour</b> , this research output is comparable with work published internationally. However, the research possesses the requisite quality to meet international standards only to a certain extent.
<b>E</b>	<b>Poor</b>	<b>The output does not meet international standards</b> In terms of <b>originality, significance and rigour</b> , this research output falls below the international quality standards.
<b>Unclassified</b>		Not original research

Each output has its matching **template** for assessment in **XLS** format with the same name differing only in suffix TEMP (as example for the output *VSCHT\_FCHI\_14\_VopickaJ*, the corresponding template is *VSCHT\_FCHI\_14\_VopickaJ\_Temp*).

## Instructions how to fill the Template

Open the Template and then click on **EDIT WORKBOOK** (upper left side corner), choose **Edit in Excel Web App** in scroll down menu.

Once the editable version opens enter your name and surname, put the score and insert your narrative in the fields indicated below by red arrows. Prepare the “**explanation for the score**” elsewhere (notepad, word) as a plain text and then copy + paste it **using Ctrl+C, Ctrl+V** in the corresponding window (editing directly in the system is possible but not user friendly).

After all work is done please click on the menu **FILE**, choose **EXIT** in scroll down menu and all changes will be saved automatically. **Please do not use a Back arrow to return to main page** (no changes will be saved).

Template for a remote review (WoS registered sources)

Panel	2.7	OECD	Environmental engineering
Code of output	AVCR_UOHP_27_Glytsoa_J		
Type of output	Journal article		
Full Reference of the output	Glytsoa, T.; Ondráček, Jakub; Ondráčková, Lucie; Kopanakis, I.; Lazardis, M.: Characterization of Particulate Matter Concentrations during Controlled Indoor Activities. Atmospheric Environment 44 (12), 1539-1549 (2010).		
Bibliometry citations	22.9/99, 17.6% (number of citations, expected citation rate, percentile)		
Bibliometry journal	3,11-51,7% (impact factor of journal and its percentile)		
Name of the reviewer			

Assessment

Quality level	Please provide an explanation for the score (50-100 words for outputs up to 50 pages; 100 to 200 words for more extended outputs like books etc)

Assessment criteria of Scientific Research Excellence

Quality level	Definition	Description
A	Outstanding	The output is internationally outstanding meeting the highest standards in terms of <b>originality, significance and rigour</b> ; this research output is comparable with outstanding work internationally in the field. The research

## Annexe VI.: The Research Unit evaluation report

### Code of the RU:

Name of panel member:

### Introduction

Short description of the RU (field focus, positioning in the EvU, competitive positioning nationally and internationally, research strategy) **200 to 400 words**

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### Results of the panel evaluation

Overview of the quality levels reached by the RU:

Criterion number	Quality criteria	Quality level reached
I	Research environment and potential	
II	Membership of the national and global research community	
III	Scientific research excellence	
IV	Overall research performance	
V	Societal relevance	

### Criterion I Research environment and potential

Please highlight the final score as shown below

Quality level	Definition	Description
A	Outstanding	<b>The RU is a Global Leader</b> In terms of the quality of the research strategy and management, the Unit's research environment is fully comparable to that of global leaders in the field. It can attract the highest quality international researchers
B	Very good	<b>The RU is a Strong International Player</b> The Unit is able to provide an internationally comparable excellent research environment to high-level international researchers in the given field
C	Good level	<b>The RU is a Strong National Player</b> The Unit is able to provide a research environment that is comparable with internationally recognised research organisations in the field
D	Adequate	<b>The RU is a Satisfactory National Player</b> The Unit's research environment is still evolving to achieve a level that is expected in the international research community of a respected research organisation in the field
E	Poor	<b>The RU is a Poor National Player</b> The Unit is still only in the process of creating an internationally comparable research environment
Unclassified		N/A

*In this criterion, 'global', 'international' and 'national' refer to quality standards. They do not refer to the geographical scope of the strategy or management activities*

Explanatory text for the quality level – 100 to 200 words

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**Criterion II Membership of the national and global research community**

Quality level	Definition	Description
A	Outstanding	<b>The RU is a Global Leader</b> The Unit participates and is recognised in excellent international networks involving global leaders in the field.
B	Very good	<b>The RU is a Strong International Player</b> The Unit participates and is recognised in international networks in the field.
C	Good level	<b>The RU is a Strong National Player</b> The Unit participates and is recognised in excellent national networks involving national leaders in the field.
D	Adequate	<b>The RU is a Satisfactory National Player</b> The Unit participates and is recognised in national networks in the field.
E	Poor	<b>The RU is a Poor National Player</b> The Unit has little to no substantive collaboration.
Unclassified		N/A

Explanatory text for the quality level – 100 to 200 words

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### Criterion III Scientific research excellence

Quality level	Definition	Description
A	Outstanding	<p><b>The RU is a Global Leader</b></p> <p>In terms of <u>originality, significance and rigour</u>, the Unit's research output is comparable with outstanding work internationally in the field. The research possesses the requisite quality to meet the highest international standards of excellence. Work at this level can be a key international reference point in the field. The RU output profile is comparable to the one of the best international research organisations in the field.</p>
B	Very good	<p><b>The RU is a Strong International Player</b></p> <p>In terms of originality, significance and rigour, the Unit's research output is comparable with excellent work internationally. The research nonetheless does not yet meet the highest standards of excellence. Work at this level can arouse serious interest in the international academic community. The RU output profile is comparable to the one of very good international research organisations in the field.</p>
C	Good level	<p><b>The RU is a Good International Player</b></p> <p>In terms of originality, significance and rigour, the Unit's research output is comparable with the best work internationally. The research possesses the requisite quality to meet high international standards. Internationally recognized publishers or journals could publish work of this level. The RU output profile is comparable to the one of good international research organisations in the field.</p>
D	Adequate	<p><b>The RU is a Good National Player with Some International Recognition</b></p> <p>In terms of originality, significance and rigour, the Unit's research output is comparable with good work internationally. The research possesses the requisite quality to meet international standards only to a certain extent. The RU output profile is comparable to the one of modest international research organisations in the field.</p>
E	Poor	<p><b>The RU is a Poor National Player</b></p> <p>In terms of originality, significance and rigour, the Unit's research output falls below the international quality standards. The RU output profile is not comparable to the one of modest international research organisations in the field.</p>
Unclassified		N/A

*In this criterion, 'Global', 'International' and 'National' refer to quality standards. They do not refer to the geographical scope of the research outputs and/or publication channels.*

Explanatory text for the quality level – 100 to 200 words

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#### **Criterion IV Overall research performance**

<b>Quality level</b>	<b>Definition</b>	<b>Description</b>
A	Outstanding	<b>The RU is a Global Leader</b> In terms of research output and competitiveness, the Unit's overall research performance is internationally excellent, i.e. at the level of the best international research organisations in the field.
B	Very good	<b>The RU is a Strong International Player</b> In terms of research output and competitiveness, the Unit's overall research performance is optimal, i.e. at the level of very good international research organisations in the field.
C	Good level	<b>The RU is a Strong National Player</b> In terms of research output and competitiveness, the Unit's overall research performance is at a good standard.
D	Adequate	<b>The RU is a Satisfactory National Player</b> In terms of research output and competitiveness, the Unit's overall research performance is at an acceptable standard.
E	Poor	<b>The RU is a Poor National Player</b> In terms of research output and competitiveness, the Unit's overall research performance is poor.
Unclassified		N/A

*In this criterion, 'global', 'international' and 'national' refer to quality standards. They do not refer to the geographical scope of the research activities.*

**Explanatory text for the quality level – 100 to 200 words**

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### Criterion V Societal relevance

Quality level	Definition	Description
A	Outstanding	<b>Work in the RU has a Very High Potential for Societal Impacts</b> In terms of <u>reach and significance</u> , the RU is an important driver of societal development. The RU's collaborations and/or interactions with non-academics (i.e. business, policy-makers, the public) stand out in terms of their extensive and dynamic nature.
B	Very good	<b>Work in the RU has a High Potential for Societal Impacts</b> In terms of reach and significance, the RU strongly contributes to societal development. The RU's collaborations and/or interactions with non-academics (i.e. business, policy-makers, the public) are at a very high level.
C	Good level	<b>Work in the RU has a Good Potential for Societal Impacts</b> In terms of reach and significance, the RU contributes well to societal development. The RU's collaborations and/or interactions with non-academics (i.e. business, policy-makers, the public) are at a good level.
D	Adequate	<b>Work in the RU has a Low Potential for Societal Impacts</b> In terms of reach and significance, the RU contributes to societal development. The RU has some collaborations and/or interactions with non-academics (i.e. business, policy-makers, the public).
E	Poor	<b>Work in the RU has Little to No Potential for Societal Impacts</b> In terms of reach and significance, the RU makes little to no contributions to societal development. The RU does not collaborate and/or interact with non-academics (i.e. business, policy-makers, the public).
Unclassified		N/A

*'Societal' impacts refer to impacts on the economy and social welfare, the latter including health, environment, culture, social inclusion, education and gender.*

Explanatory text for the quality level – 100 to 200 words

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### Conclusions and recommendations

Target: 100 to 200 words

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## Annexe VII.: The consolidated report at Evaluated Unit level

Note: Reports at Evaluated Unit level will be written only for EvU that registered more than one Research Unit for evaluation.

### 1. Covers

#### Front cover:

Title: Conclusive Analytical Report for the Evaluated Unit: [name]

Authors:

[Name] [Function]

Date: [xxx]

#### Internal cover:

This report has been approved by the Subject Panel Chairs for fields xx]: [name] [affiliation] [country]

### 2. Report

#### Background to the report

This section sets out the profile of the EvU. It gives an overview of its historical background, current positioning in the RD&I system, organigram, and lists the RUs that the EvU registered for evaluation.

Target: **500 words**

#### Main elements of strength in the performance of EvU

Target: **200 words**

#### Main elements of weakness in the performance of the EvU

Target: **200 words**

#### Main opportunities for future development and performance of EvU

Target: **200 words**

#### Main threats for the future development and performance of EvU

Target: **200 words**

## Conclusions

Target: **200 to 400 words**

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## Recommendations

Target: **200 to 400 words**

--

**Pilotní ověření návrhu nové metodiky hodnocení výzkumných organizací**  
**Samostatný doplňující dokument 6**  
***Průvodce pro členy panelů***

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Vydává Ministerstvo školství, mládeže a tělovýchovy, Karmelitská 7, Praha 1  
Individuální projekt národní pro oblast terciárního vzdělávání, výzkumu a vývoje:  
Efektivní systém hodnocení a financování výzkumu, vývoje a inovací (IPN Metodika)  
[www.metodika.reformy-msmt.cz](http://www.metodika.reformy-msmt.cz)

Praha 2015