

May 2015

R&D Evaluation Methodology and Funding Principles

Background report 4: Detailed evaluation cost framework



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

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1. Introduction

This document is a background report to the Final report 1 – *The R&D Evaluation Methodology*. It sets out the detailed cost framework for the implementation of the National Evaluation of Research Organisations – NERO.

The Terms of Reference for the study required us “to design the evaluation in a way that the total cost of its implementation (direct and indirect costs, costs incurred by research organizations (ROs), evaluation organizers and providers) does not exceed 1.0 percent of public institutional funding for R&D for a five-year period (i.e. estimated according to SB and 2012 prices, ca CZK 677 million).”

These cost limits were a factor that we took into consideration throughout the entire process of the evaluation methodology design. Our objective was to develop a robust evaluation methodology that would ensure a fair evaluation, while guaranteeing cost efficiency for its implementation, within the limits required. We therefore designed the operational set-up for the evaluation, bearing in mind the need for cost and time efficiency, for all actors involved.

We estimated the costs of a full-scale evaluation using an activity-based cost approach. We took into consideration all costs, both the ‘direct’ ones for the organisation of the evaluation, the handling of the process, and the evaluation panels, and the indirect ones, i.e. the costs related to the time that the evaluated organisations will need to invest in their self-assessments.

This background report is structured as follows:

It starts with setting out the context for the cost framework. Section 2 provides a brief description of the elements in the evaluation methodology design that influence the costs of the evaluation implementation. This regards the roles and tasks of the actors involved in the evaluation implementation, i.e. the Evaluation Management Team, the Evaluated Units, the IT staff in charge of the RD&I Information System, and the evaluation panels ().

In Section 3 we report on the estimated costs of a full-scale evaluation implementing the EM, covering both the direct and the indirect costs.

An excel file with the detailed cost framework calculations has been delivered to the IPN team.

The roles and tasks of the actors involved in the NERO implementation as well as the process and timelines are described in detail in the *Evaluation Handbook* (Background report 5).

2. Background: the roles and tasks of the actors involved

In this chapter we describe the role and tasks of the evaluation management structure (Section 2.1), the Evaluated Units participating in the evaluation (Section 2.2), the evaluation panels (Section 2.3). In the final section, we cover the role of the RD&I Information System (Section 2.4).

2.1 The evaluation management structure

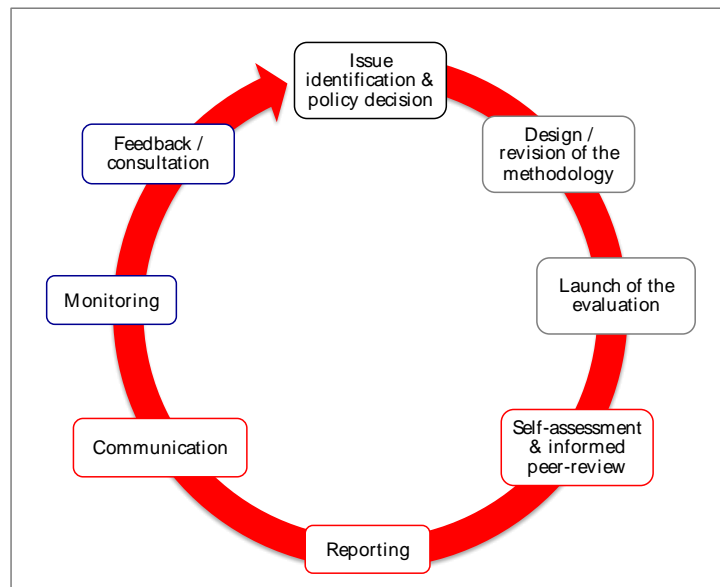
2.1.1 The components of the evaluation management structure

We defined the entities responsible for the management of the National Evaluation of Research Organisations (NERO) implementation as follows:

- The Evaluation Management Board, acting as overall governance and supervisory body
- The Evaluation Management Team, responsible for the operational management of evaluation

The tasks of the evaluation management structure, and in particular the evaluation management team, are not limited to the management of a specific run of NERO but should be seen in a broader and longer-term perspective. In fact, the implementation of NERO is part of an **evaluation cycle** (Exhibit 1). In this study we have designed an evaluation and funding system that is intended to constitute an integral part of the R&D policy cycle in the Czech Republic. Especially because the evaluation results will inform the performance-based research-funding component of the institutional funding system, NERO needs to be considered as a policy intervention. As a consequence, to a certain extent the evaluation methodology will be 'dynamic', i.e. acting upon and reflecting changing policy needs. As for any other policy intervention, its effects also need to be monitored, both the intended and unintended ones, so that the methodology can be adjusted if needed in the next run of the evaluation.

Exhibit 1 The evaluation cycle



The evaluation cycle can be divided in three main phases:

- The *preparation phase* during which the evaluation methodology is revised (if necessary) and the evaluation is launched with the publication of the Evaluation Protocol
- The *NERO implementation phase* during which the self-assessment and panel assessments will take place and the results of the evaluation reported and communicated
- The *follow-up phase* during which the effects of the evaluation outcomes on the RD&I system will be monitored and analysed, including a consultation of the RD&I community and policymakers

Central to this evaluation cycle stands the policy decision for future revision of the evaluation methodology, based upon the analysis performed in the follow-up phase and taking into consideration the RD&I policy priorities.

A **stable** structure for the evaluation management is needed in order to ensure not only a professional implementation of NERO but also the effective take-up of the follow-up tasks, i.e. collecting the needed evidence for the policy decisions to be taken for the next run of NERO. One should envisage also that this evaluation structure will be in charge of the implementation of programme evaluation in the Czech RD&I governance system.

This implies that the Evaluation Management Team should consist of a core team that will include a number of directors and office staff members, complemented with temporary staff for each specific run of NERO. For the cost estimate we counted with

- A core team of 10 staff members, i.e. 3 staff members at director level and 7 staff members of the Evaluation Secretariat including evaluation experts, an IT expert, and administrative staff
- 15 additional staff members (FTE) that will support the core team during the time of peak activity
- 9 additional staff members (FTE) that will constitute the panel secretariats

These numbers are based on international experience, taking into account the size of the RD&I system - and therefore the workload for the evaluation management. For example, the core team for the UK RAE in 2018 consisted of in total 19 staff members and HEFCE employed approximately 40 additional temporary staff for the duration of the RAE 2018 exercise (i.e. 2 years).

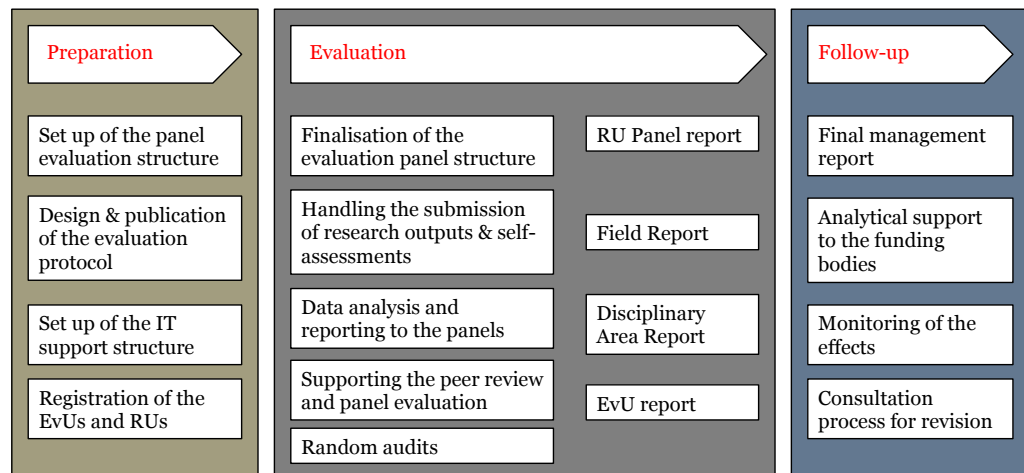
An Evaluation Management Board will supervise the activities of the Evaluation Management Team and carry the ultimate responsibility. In the Final report 1 - *The R&D Evaluation Methodology* we mention that in order to reach the maximum level of legitimisation, this body should be composed of representatives of the R&D governing bodies (funding ministries and ministries with responsibilities for research institutes, the Academy and the agencies), chaired by a representative of the Government Office. We count on a board of 6 members and a Chair, nominated for the duration of the entire evaluation process, i.e. the preparation and the implementation phase.

2.1.2 Overview of the tasks for the Evaluation Management Team

Exhibit 2 lists the main tasks of the evaluation management team in the different phases of the evaluation cycle.

Detailed evaluation cost framework

Exhibit 2 Main tasks of the evaluation management team



Specifically, in the **preparation phase**, the main management tasks are:

- *The set up of the panel evaluation structure* – this includes the drafting of confidentiality and conflict of interest statements; the construction or update of an international experts database; and the identification and selection of the Main panel chairs and members
- *The design and publication of the evaluation protocol* – this stands for the finalisation of the evaluation methodology, including the eventual update of eligibility criteria (thresholds, outputs, etc), assessment criteria and indicators; the set-up of the self-assessment reports; the drafting of the bibliometric data reports; the design and development of the guidelines for the panels and the participating research organisations; the drafting of the panel report templates; the planning of the evaluation process and establishment of deadlines; the drafting of the evaluation protocol itself; and the launch of the evaluation
- *The set-up of the IT support structure* – this regards the development of the platforms for the submission of the selected research outputs, and the self-assessment reports as well as for the workflow management of the panels' and reviewers' work
- *The management of the registration of Evaluation Units and Research Units* – this includes the delivery of data support to the Evaluated Units through an analysis of the data stored in the RD&I Information System; the set-up of a help desk for the Evaluated Units; and the eligibility and quality check of the registrations

Main management tasks in the **evaluation phase** are:

- *Finalisation of the panel evaluation structure* – this stands for the definition of the Subject panels; the identification, selection and contracting of the Subject panel chairs and members and the referees; the management of the decision-making on cross-referrals and Inter-disciplinary Research Units; and the contracting of the panel secretariats
- *Handling the submission of the research outputs and self-assessments* – relevant management tasks include the helpdesk for the Evaluated Units; the delivery of data support to the Evaluated Units; the eligibility and quality check as well as

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control on confidentiality issues; management of the panels' workflow and the transfer of submitted outputs and self-assessments.

- *Data analysis and reporting to the panels* – this includes the collection and analysis of bibliometric data - at the level of disciplinary areas, fields, and Research Units; and the drafting of the bibliometric data reports¹
- *Supporting the peer review and panel evaluation* – this includes a broad range of support activities to the Subject panels, Main panels and referees, ranging from the support during the remote reviews and assessments and the Subject panel meetings (the panel secretariats) to workflow management, progress monitoring, and reporting to the Evaluation Management Board (management reports)
- *Performing random audits of the submissions by RUs* - A first type of audit concerns a request for proof regarding, for example, the number of researchers, PhD graduates, and strategic partnerships and the volume of grants and contract research. In the interest of proportionality, the first type of audits is done for around 5% of EvU submissions. A second type of audit is the confrontation of submitted information with information in databases about, for example, staff and revenues of research organisations, dissertations, grants and service contracts. In the interest of proportionality, the second type of audits is done for around 10% of EvU submissions. They will also perform targeted audits in case of concerns raised by Main or Subject panel members and Referees. As much as possible, random audits are spread across different research organisations.

Main tasks for the final steps in the evaluation phase are:

- The *coordination of the finalisation of the Panel Reports* at the Research Unit, Field and Disciplinary Area level, including the final meetings of the Subject panel chairs with the Main panel chairs
- The *drafting of the conclusive analytical reports* at the Evaluated Unit level
- The *publication of the evaluation results* and the transfer of structured information to the R&D governance bodies, including information for funding purposes

Main tasks in the **finalisation phase** can be divided in short-term and mid-term activities. Main follow-up tasks in the shorter term include:

- In a first instance, this regards the *reporting on the evaluation management process*, for the sake of transparency but also as part of a broad and shared learning process. In contrast to the other (internal) management reports and minutes of the management board and team meetings, the final management report this report should be made public. The main purpose of this final management report is an open communication on the process for the evaluation implementation and the criteria used for decision making; the challenges encountered and solutions found; the lessons learned for future evaluation exercises; and the details of the direct costs – and if possible an estimate of the indirect costs.
- Another main task is the *delivery of analytical support to the R&D governance bodies*. As is described in the Final report 2 - *The Institutional Funding Principles*, the evaluation results will constitute important information for the R&D governance bodies in their management of the Research Organisations of their competence - and more specifically the performance agreements. The evaluation

¹ The structure of the self-assessment template is defined such that there is no need for statistical data analysis or additional drafting of 'comprehensive data reports' as it was done in the Small Pilot Evaluation (see Background report 10: *The Small Pilot Evaluation-feedback and results*)

results will constitute strategic information also the broader R&D policy-making activities of the R&D governance bodies, such as the design of policy interventions or programmes

Mid-term follow-up activities are centred on the monitoring of the effects of the evaluation and funding system. This should have both a backward and forward-looking function, i.e. assessing whether and to what extent the objectives have been reached and identifying the elements that should be modified in order better to reach the objectives or to avoid the unintended negative effects. They will include data collection and analysis activities and in the last steps, a proper stakeholder consultation process in support of the decision-making for an eventually revised evaluation methodology.

We describe the tasks of the evaluation management team in detail in the *Evaluation Handbook* (Background report 5).

2.1.3 Timeline of the evaluation process

It maps out an indicative timeline for the main milestones in the evaluation process. This gantt chart accounts for a full-scale evaluation and takes into account the needed lapse times for the involvement of the panel experts and the submissions by the participating Research Units, as well as the time needed for the evaluation management team to handle the different activities, seeing the workload involved and especially, the number of experts to be nominated.

We have estimated that the entire evaluation process, i.e. from the preparation of the evaluation to the publication of the reports, will need three years. Roughly, each of the three steps, i.e. the preparation, evaluation and finalisation, will take a year each.

While three years may seem an exaggeratedly long time, it is in the norm of international practice. A more complex evaluation system for a bigger country like the UK, for example, takes approximately five years (the preparatory phase for the RAE2008 in the UK started in 2004, with the results published in 2009).²

Nevertheless, one should consider that the time needed for the evaluation process is determined by a number of key factors, i.e.

- The need for *revision of the evaluation methodology and its tools*, determining the time needed for the preparation phase
- The *volume of the work*, i.e. the number of Evaluated Units and Research Units, which influences the workload for the panels
- The *need for a lapse time* between the time of nomination of the panel experts and their active involvement – the golden rule is at least 3 months
- The *need for a lapse time* between the launch of the evaluation (with the publication of the evaluation protocol) and the submission of the Research Units' research outputs and self-assessments. The Research Units need to be given the needed time to collect their data, select the research outputs to submit and run their internal self-assessment process. Three months need to be considered as an absolute minimum

A more detailed indicative timeline is shown and described in the *Evaluation Handbook* (Background report 5).

² Source: RAE2008, RAE Manager's Report, April 2009

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Exhibit 3 Indicative time-line of the evaluation process

	Year 1				Year 2				Year 3				
	Preparatory phase			Evaluation phase							Finalisation		
Task	Mth 1-3	Mth 4-6	Mth 7-9	Mth 10-12	Mth 1-3	Mth 4-6	Mth 7-9	Mth 10-12	Mth 1-3	Mth 4-6	Mth 7-9	Mth 10-12	
Set-up	█												
Launch of the evaluation		█											
Registration of the EvUs – indicating the RUs			█										
Kick-off meetings of Main panels				█									
Submission of the research outputs for review				█	█								
Submission of the self-assessment forms				█	█								
Kick-off meeting of the Subject panels						█							
Remote review & assessments							█	█					
Subject panel evaluation meetings									█				
RU Panel reports - finalisation & approval										█			
Analytical reports at EvU, Field & Disciplinary Area level											█		
Publication results on the website												█	

2.2 Roles and tasks of the Evaluated Units (EvUs)

A core objective of the evaluation is the improvement of research and research management. To meet this objective, the evaluation system entails a self-assessment and an expert panel review. Input for the expert panel evaluation is, therefore, not only a set of data and information submitted by the participating Research Organisations, but also and foremost the participants' self-reflections on their performance. The final outcome of the evaluation system will be an assessment of past performance but will also have a forward-looking component, as a result of both the self-assessment and the panel evaluation.

2.2.1 Tasks in the evaluation process

Specific tasks of the participating Research Organisations in the evaluation process are:

- To identify and register the researchers forming the Research Unit(s)
- To coordinate the collection of information in order to justify recommendations for cross-referrals and/or the application for the registration of an Interdisciplinary Research Unit, if appropriate
- To set up the criteria and processes for the selection of the Research Units' most outstanding research outputs for review
- To coordinate the collection of the required data and information, controlling and guaranteeing their completeness and correctness
- To set up an internal self-assessment system, focusing on the identification of the Research Units' competitive positioning in the national and international environment
- To conclude the self-assessment process with a SWOT analysis, based on the data and information collected for the panels combined with the outcomes of the self-assessment, and define areas and actions for improvement

For this purpose, the Research Organisations and their Evaluated Units (EvU) will need to set up a structure, i.e. 'committees', at the level of the EvU and for each Research Unit.

These committees should include the relevant representatives of the research organisation's management as well as lead researchers in the different fields (Research Units). Their task is to coordinate the evaluation process within the institution, including the management of the self-assessment. Ideally, the latter will include all researchers forming the specific RU(s).

2.2.2 Data and information required

Quantitative data are asked in the form of time series, i.e. covering the 4 or 5 years (depending on the evaluation frequency) prior to the evaluation year (i.e. the 'evaluated period'). Break-off date is December 31 of the previous year.

Quantitative data is asked for the following:

- *Research and support staff* and the researchers' profile, at Evaluated Unit and Research Unit(s) level
- *PhD students* - enrolled, awarded, 'recruited' or trained by researchers in the Research Unit (only for Research Units teaching or training PhD students)
- *Total institutional funding*, at Evaluated Unit and (estimates) at Research Unit(s) level
- *External competitive and contract research funding*, at Research Unit(s) level

Qualitative information is requested for the following topics:

- Background information on the Evaluated Unit and the Research Unit(s) (organisational structure, scientific focus, history)
- Human resources management, for all researchers and for PhD students and postdoctoral fellows (the latter only for universities and university hospitals), at the Evaluated Unit and the Research Unit(s) level
- Research infrastructure, available and used by the Research Unit
- Research strategy and plans for the Research Unit
- National and international collaborations and esteem measures
- Knowledge and technology transfer activities to non-academic actors in society

For this qualitative information, word limits are given. These need to be considered (also) as an indication for the level of detail in the description that is required.

Results of the **self-assessment** should be reported regarding

- The adequacy of the research infrastructure in the Evaluated Unit for research in the field
- Key value and relevance of the RU activities for research and development
- The RU competitive positioning in the national and international context
- Societal value of the RU activities and research
- The final SWOT analysis and conclusions

The input for assessment required from the participating Evaluated Units as well as the process for the submission of the information is described in detail in the *Evaluation Handbook* (Background report 5).

2.3 Roles and tasks of the evaluation panels

The role of the **main panel** is to moderate. It has an auditing function and provides a bridge between the Evaluation Management Team and the panels.

The main panel chairs (international experts) are key in the evaluation process in their decision-making role in any sensitive matters. They guide and support the Subject panel Chairs and most important, ensure consistency in the Subject panels' approach to evaluation, thus guaranteeing a fair evaluation for all. They are also in charge of the conclusive analytical report at the Disciplinary Area level.

The main panel members (national experts) constitute an additional 'auditing' element to the panel review, advise on matters relating to insufficient or unclear information in the RUs' submissions, and support the Main panel Chair, amongst others by providing information on the national context whenever required.

The **subject panels** have the primary function of conducting the performance assessment.

Subject panel chairs will report to the main panels on the progress and on how the working methods are implemented, guarantee the quality of the evaluation process and its outcomes, and be in charge of drafting a conclusive analytical report on the state of research in their field(s) of discipline.

The **referees** will have the exclusive role of assessing the excellence of a set of submitted research outputs. There will be two Referees for each submitted research output: a First and a Second reader. The First reader has the core responsibility for the Review report and acts as 'lead' referee. They will work in remote to keep costs down.

We describe the tasks and role of the different panels and referees in detail in the *Evaluation Handbook* (Background report 5)

2.4 The role of the RD&I Information System (IS VaVaI)

The Small Pilot Evaluation (SPE) enabled us to test to what extent the RD&I Information System was a useful and credible source of information and could provide support to the participating EvU for the collection of data as well as support the evaluation management in the collection and processing of the data on research outputs. There were some teething problems in the whole SPE process (see the report *The Small Pilot Evaluation: Feedback and Results – Background report 10*), but the high value of using the RD&I Information System as much as possible in the evaluation process was apparent to most of the actors involved.

The value of the RD&I Information Society is in a first instance related to the richness of the information it holds on the research outputs, but also the data on funding and researchers etc. However, also its capacity to create an interlinking and integration of these data, internally and to external datasets such as Web of Sciences and Scopus, is of high relevance in the context of evaluation.

The RD&I Information System proved its use in reducing the burden on the Research Organisations during the Small Pilot Evaluation. Valuable support can be delivered through

- The transfer of the lists of researchers, registered in the system against the Evaluated Units, from which to choose the ones 'belonging' to the Research Units
- The use of the unique identifiers of these researchers in the system to extract and transfer to the Evaluated Units the lists of research outputs in the system and their field allocation, among which the choose the ones to submit for review
- The same list forms also the basis for the analysis of the Research Units' publication profile, complementing the information from the international bibliometric datasets
- The analysis of the research outputs registered in the system at the level of fields and disciplinary areas, again complementing the information from the international bibliometric datasets
- The delivery of the lists of all publications by the Research Units to the evaluation panels, complete with links for access to the abstracts stored in the system

In order fully to support the evaluation process and exploit the IS VaVaI to its best potential, the system needs to be optimised. We describe the potential extensions to the system in the report *The RD&I Information System as an information tool for evaluation* (Background report 9).

3. Detailed cost framework

We estimated the costs of a full-scale evaluation using an activity-based cost approach. We took into consideration all costs, both the ‘direct’ ones for the organisation of the evaluation, the handling of the process, and the evaluation panels, and the indirect ones, i.e. the costs related to the time that the evaluated organisations will need to invest in their self-assessments.

Our estimate is based on our experience, the outcomes of the Small Pilot Evaluation, and international experience.

Information on the full costs of national evaluations is hard to find: only a few countries look into the indirect costs of these exercises. Through literature review and interviews, we collected sufficiently useful data on the UK RAE 2009 and the Italian VQR (Exhibit 4).

Exhibit 4 Costs of PRFS in other countries

	UK RAE 2008	IT VQR	NZ QE 2006
Direct costs (staff & panels) (k€)	€ 15,120	€ 10,570	
Indirect costs (k€)	€ 74,340	€ 54,029	
Total direct & indirect costs (k€)	€ 89,460	€ 64,600	€ 46,960
Indirect costs % total costs	83%	84%	
<i>Nr FTE researchers</i>	<i>68,563</i>	<i>61,822</i>	<i>8,671</i>
Total costs per researcher	€ 1,305	€ 1,045	€ 5,416

Source: Technopolis calculation on multiple sources³

While the evaluations in Italy and New Zealand are based on the UK system, which acts as the model for PRFS worldwide, the three evaluation systems show some significant differences that influence their overall costs⁴:

- The UK RAE/REF is a mature system that has gone through many steps of improvement and enhancement (i.e. after each evaluation round) in response to the comments from the research community and policy needs. It has become every time more complex – and costly, some say outrageously.⁵ It is an expert panel-based system and covers universities only, who select the best of their researchers for the competition. It runs every 6 years covering a five-year period
- Italy has run three national peer review-based evaluations so far, the VTR in 2006 and the VQR 2004-2010 in 2013. Both are inspired by the UK system, but the VQR has a strong element of bibliometrics (for cost-saving reasons) while

³ Main sources of information were: On the RAE: RAE 2008 Manager Report (2009); RAE (2008) Accountability Review, PA Consulting, 2009; On the VQR: Geuna, A., Piolatto, M., *The development of research assessment in the UK and Italy: costly and difficult, but probably worth (for a while)*, Department of Economics and Statistics “Cognetti de Martiis”, Università degli Studi di Torino, Italy: 2014

⁴ We compare the features of PRFS internationally in the Final report 1 – *The R&D Evaluation Methodology* and cover them in detail in the Background report 1 - *Evaluation systems in international practice*

⁵ Martin, B., *The Research Excellence Framework and the ‘impact agenda’: are we creating a Frankenstein monster?*, Research Evaluation, 20(3), September 2011, pages 247–254

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bibliometrics is only marginal in the UK system (even in the latest REF) due to opposition in the research community. All universities and some interuniversity research institutes are covered and all researchers participate, submitting a minimum number of publications (6 per researcher). The assessment is done predominantly through bibliometrics for the ‘hard’ sciences and peer review for the other. It is meant to run every 3 years

- We included New Zealand in Exhibit 4, above, as it is the only evaluation system that we know off where the panel-based evaluation includes also onsite visits. It covers all universities and all researchers. As can be noticed, this leads to huge costs. The evaluation runs every 6 years

In the next section (Section 3.1) we show the results of our calculations, i.e. the cost estimate for a full-scale implementation of the Evaluation Methodology (EM).

We then break these costs down in

- Estimates of the costs for the evaluation panels (Section 3.2)
- Estimates of the costs for the evaluation management (Section 3.3), including the evaluation management team, the bibliometric data analyses, and the IT services and use/extensions of the RD&I Information System
- Estimates of the indirect costs (Section 3.3)

3.1 Cost estimate for a full-scale evaluation based on the Evaluation Methodology

As mentioned in the introduction to this report, the target maximum budget for the EM was set on “1.0 percent of public institutional funding for R&D for a five-year period”, estimated at CZK 677 million.” This estimate refers to the total of the national R&D institutional funding expenditure budget, of which Institutional funding for Research Organisations is one of the budget lines.

Considering both the total institutional funding for R&D budget and the ‘specific’ one, Exhibit 5, below, shows that the maximum cost accounts for a cost per researcher of €1,336 and €876, respectively.

In other words, the 1% limit calculated against the total institutional funding for R&D budget would imply that the evaluation system is more expensive than the UK and the Italian ones, while the one based on the ‘specific’ budget line indicates more cost efficiency than the UK RAE but only slightly so compared to the IT VQR (Exhibit 4, above).

Exhibit 5 Maximum total costs of the new evaluation system

	R&D Institutional funding expenditure - total	Institutional funding for conceptual development of ROs*
2012 budget (m CZK)	13,536 Kč	8,874 Kč
Total for 5 years based on 2012 budget (m CZK)	67,680 Kč	44,370 Kč
1% limit (m CZK)	676.8 Kč	443.7 Kč
1 % limit (k €)	€ 24,611	€ 16,135
<i>Nr FTE researchers</i>	18,422	18,422
Maximum total costs per researcher	€ 1,336	€ 876

Notes: *includes research intentions

Taking into consideration the comparison with the cost rates in the other countries, we designed the evaluation methodology counting on a cost limit 1% of the institutional funding for the conceptual development of ROs budget line, i.e. **16,135€**.

This sum was, from our perspective, the absolute maximum possible. A key principle for our design of the Evaluation Methodology was that the cost and burden of the evaluation should be the *minimum possible* to deliver a *robust and defensible evaluation* process. The sum of 16,135€, therefore, did **not** constitute a target budget, but a limit.

In this context we took into consideration that, as in any other country, the evaluation system is bound to become more complex and sophisticated in response to the needs and comments from the research community. This is especially the case when evaluation results are linked to institutional funding, as the experiences in, e.g., the UK with the RAE and the Czech Republic with the Metodika show. Our approach was therefore to design an evaluation system that would set the **basis** for these future enhancements, keeping it as simple as possible and ensuring methodological robustness while adequately responding to the needs of the Czech RD&I community and policy makers.

We have estimated the total costs of a full-scale evaluation at **12,929 k€** (Exhibit 6), i.e. approximately 3,000 k€ under the limit.

This implies a total cost per researcher of €702; the indirect costs that will need to be carried by the RD&I community represent 48% of the total. For both parameters, the EM therefore constitutes a cost efficient evaluation system internationally.

The cost estimates are based on an evaluation running every six years, covering a five-year period.

Exhibit 6 Cost estimate for a full-scale evaluation

	Total - in k€
Total direct costs	€ 6,672
Evaluation panels	€ 3,905
Evaluation management	€ 2,767
Total indirect costs	€ 6,257
Estimated overall costs for a full-scale evaluation	€ 12,929
Indirect costs % of total costs	48%
Nr FTE researchers	18,422
Total costs per researcher	€ 702

The costs for the evaluation panels are based on the set-up of 26 Subject panels and a maximum of 20 days involvement for each expert, of which 5 days in the Czech Republic. The Evaluation management costs include 5 year salaries of the core staff in the evaluation management team seeing their on-going involvement in the evaluation cycle; 3 years salaries for the evaluation management board members (approximately one FTE/year in total); additional staff for 1 year (24 FTE/year); costs for external bibliometric analysis support and the costs for the RD&I Information System use and updates (cumulative essential and recommended updates). The indirect costs envisage the involvement of 10 researchers and 1 administrative staff per Research Unit.

We detail this further down in the next sections.

3.2 Detailed estimates of the costs for the evaluation panels (direct costs)

The use of evaluation panels is costly, especially when international experts are involved. The requirement to have a 100% international profile of the evaluating experts constitutes therefore a high risk factor in terms of cost efficiency of the evaluation exercise.

During the design of the evaluation methodology we have focused on developing a robust evaluation system while taking into account the need for an as high as possible cost efficiency.

Detailed evaluation cost framework

One of the key factors that influence the achievement of this objective is the capacity of the evaluation management team to identify and contract the international evaluation experts that have the required profile.

The '*review fatigue*' in the international research community, with many researchers involved in peer review appraisals of project proposals and various evaluation exercises requiring external experts, implies that the identification and nomination of evaluation experts is not an obvious task. The important role that these experts play in the evaluation requires, therefore, attention for their needs and expectations.

This regards in a first instance their limits of *availability*. Experience tells us that especially the time that the experts are requested to spend in the country is critical. Rule of thumb is that international experts should spend only 5 days in the country for their meetings at a time, for preferably 1 maximum 2 meetings. A maximum (realistic) expected time investment is to be set at around 20 mandays in total, especially for the Chairs.

In order to reach these parameters, we have

- Set a strong focus on the remote preparatory work for the final assessment (i.e. remote assessment and remote review), which will need to be as complete as possible and of the needed quality level to allow for short meetings
- Foreseen as many Subject panels as the budget allowed for in order to allow for the distribution of the workload (RU assessment) to as many Subject panel members as possible
- Spread the tasks over Subject panel members, Subject panel chairs, and Main panel Chairs
- Assigned wherever possible preparatory work and report drafting work to the Evaluation Management Team
- Ruled out onsite visits

Second, a day-rate that reflects the level of expertise required from the experts needs to be foreseen.

We took all of these factors into account in the design of the evaluation methodology and the drafting of the cost estimate set out below.

We took the approach of Activity Based Cost modelling for the cost estimates. Our calculations are, therefore, centred on the total number of days needed to implement specific activities and tasks.

Elements that influence the costs of an evaluation panel and set the 'baseline' for the calculation of the costs are

- The volume of the workload that can be expected, and closely related to this:
- The number of experts required
- The number of meetings and days needed for the remote assessment/review

3.2.1 Volume of the workload

The volume of the workload depends on the number of eligible Research Units (RU) and Evaluated Units (EvU) and for the latter, how many EvU cover more than 1 RU. Also an estimate of the number of submitted outputs is needed to identify the peer review workload. As we defined the number of research outputs that can be submitted

in terms of a range, the number of submitted outputs for review can only be an estimate.

Based on the analysis of data on research outputs in the RD&I Information System related to the period 2009-2013⁶, we can establish the base for the cost calculations in terms of *volume* as follows:

Exhibit 7 Estimated volume of the workload

	Number
Total nr eligible EvU (above minimum threshold)	300
Total nr eligible RU (above minimum threshold)	780
Total nr EvU with more than 1 RU	170
Estimate total submitted research outputs min	2889
Estimate total submitted research outputs max	3467
Average estimate submitted outputs	3178

3.2.2 The number of panel experts required

A second item that constitutes the baseline is the number of panel experts involved. We count on the establishment of 6 Main panels and 26 Subject panels, covering the 36 fields – as advised by our international experts. There are therefore an average of 4 Subject panels per Main panel.

Each Main panel will have 4 experts: 1 international (the Chair) and 3 national (the members); each Subject panel will have in average 7 experts (1 Chair and 6 members).

As shown in Exhibit 8, a full-scale evaluation can be expected to involve 206 experts.

We make a distinction between panel chairs and members as well as between international and national experts, envisaging different day rates. Higher day rates need to be foreseen for panel chairs because of the higher level of expertise that is required from them.

Exhibit 8 Number of experts involved

	Number
Total nr main panel chairs (foreign)	6
Total nr main panel members (local) (3 per Main panel)	18
Total nr subject panel experts (foreign)	182
Total nr Subject panel chairs	26
Total nr Subject panel members (average of 6 per panel)	156
Total number of panel experts	206

Next to the panel members, we have foreseen also the involvement of **Specialist Advisors**. These experts will have a limited involvement in the process: they will have

⁶ See the report *Typology of the Research Organisations and the Effects of the EM Thresholds* (Background report 2)

Detailed evaluation cost framework

an advisory function only and will be called in by the Subject panels in order to complement their expertise in a specific field or interdisciplinary research (the international advisors) or their knowledge of the research in the national context (the local advisors). We counted on a maximum 2 international Specialist Advisors and 2 national ones per panel.

	Number
Nr foreign specialist advisors (2 per panel)	52
Nr local specialist advisor (2 per panel)	52
Total nr specialist advisors (local) (4 per panel)	104

The number of **referees** cannot be estimated because that depends on the number of sub-fields for which the RUs will submit outputs. We estimated the total number of days required instead (see the next section).

3.2.3 The number of meetings and days needed for remote assessment/review

We defined the number of meetings for the different panels and the average workload taken up per manday (which influences the number of days needed per panel) as shown in Exhibit 9. This is based on our expertise and international practice, and considers the process for the evaluation and the tasks that the experts need to cover.

We considered that in one day of remote assessment, the experts will be able to assess *in average* 2 Research Units. This takes account of the fact that assessment of large Research Units may be more complex than the assessment of small ones. Data related to the period 2009-2013 suggest that the number of 'large' Research Units (more than 500 research outputs in 5 years) will account for approximately 20% of the registered Research Units.

The estimate of decisions taken on 6 Research Units (in average) during the final Subject panel meeting is based on the expectation that the experts responsible for the remote assessment of the RUs (2 per RU) will have developed the draft RU report prior to the meeting. As a result, the panel will need to have in-depth discussions only for those cases where the two experts had different opinions.

We estimated that the referees will assess in average 10 submitted research outputs a day. This estimate seems more than appropriate when set in the international context. In the Italian VQR 2014, the reviewers were expected to do 15 to 20 reads a day; in the Swedish FOKUS (to be implemented in 2016), the research council budget counts on 15 reads a day (which is similar to the estimates by the Academy of Sciences for the 2015 evaluation).

Exhibit 9 Number of panel meetings and number of days needed per panel

	Number
Main panels	
Total nr Main panel meetings - per panel	3
Days per Main panel meeting	2
Subject panels	
Remote assessment: nr RU assessed per remote assessment day (includes reporting)	2
Nr RU assessed per panel meeting day	6
Mandays for First panel meeting - per panel	3
Mandays for assessment meeting - per panel	5
Total mandays for Subject panel meetings - per panel	8
Total nr Subject panel meetings - per panel	2

Referees	
Remote reviews per manday referee (includes reporting)	10

3.2.4 Total number of mandays needed

Based on this baseline per panel and taking into consideration the volume of the workload and the number of experts involved, we come to the total number of mandays needed for the experts' involvement.

The different panels and experts in those panels have different tasks, so we calculate the total mandays for each of them separately (Exhibit 10).

Exhibit 10 Total number of mandays needed per type of expert

Main panel chairs

	Number of days
Days for main panel meetings per Chair	6
Total mandays for Main panel meetings	36
Days for meetings with subject panels (per subject panel)	2
Coordination of subject panels (per subject panel)	1
Total mandays for coordination of subject panels (1d per subject p)	78
Days for assessment of IRU - per panel Chair	1
Total mandays for assessment of IRU	6
Analytical report: mandays per Area report	1
Total Area reporting mandays	6
Total mandays tasks for Main panel chairs	126

Main panel members

	Number of days
Average days per main panel meeting	2
Total nr main panel meetings - per panel	2
Days for main panel meetings per member	4
Total days for main panel meetings	24
Days for support to main panel Chair - per member	4
Total mandays support to Main panel chair	72
Days for support to Subject panels - per member	4
Total mandays support to Subject panels	113
Total mandays tasks for Main panel members	213

Subject panel chairs

	Number of days
Total nr Subject panel meetings - per panel	2
Total mandays for Launch meeting (3 days per meeting)	78
Total nr subject panel meeting days for assessment - per panel	5
Total mandays for assessmt meetings	130
Total nr meetings with Main panel chair	2
Mandays per meeting	1
Mandays for meetings with Main panel Chair	52
Analytical report: EvU reports per manday	2
Total EvU reporting mandays	85
Total number fields	36
Analytical report: Mandays per Field report / margin	4
Total Field reporting mandays	144
Total mandays tasks for Subject panel Chairs	489

Subject panel members

	Number of days
Total mandays for First panel meetings (3 days per meeting)	468
Remote assessment: nr RU assessed per remote assessment day	2
Nr RU for remote assessment (2 panel members per RU)	1560
Total mandays for remote assessment	780
Mandays for assessment meeting - per panel	5
Total mandays for assessment meetings	780
Support for Field reports: mandays per panel member	1
Total mandays support for Field reports	156
Support for Cross-referrals / IRU: mandays per panel member / margin	4
Total mandays support for cross-referrals/IRU	624
Total mandays tasks for Subject panel members	2808

Referees

	Number of days
Estimate submitted outputs	3178
Referees per output	2
Total outputs for review	6356
Remote reviews per manday referee (includes reporting)	10
Total remote review mandays for Referees	636

Specialist Advisors

	Number of days
Average mandays involvement of Specialist advisors per advisor	2
Total days involvement of Foreign specialist advisors	104
Total days involvement of Local specialist advisors	104
Total mandays tasks for Specialist Advisors	208

Exhibit 11 shows the breakdown and the number of days of involvement per expert

Exhibit 11 Time investment required per expert

	Number	Mandays per expert
Main panel chairs (foreign)	6	21
Main panel members (local)	18	12
Subject panel chairs	26	19
Subject panel members	156	18
Foreign specialist advisors (2 per panel)	52	2*
Local specialist advisor (2 per panel)	52	2*
Total nr experts involved	310	

*In average

3.2.5 Day rate per type of expert

The next step is the translation of the number of mandays into costs, based on a **day rate per type of expert**. In the preceding section we mentioned the ‘review fatigue’ in the international research community and its implications for the difficulties in identifying and nominating international experts. Apart of the time investment required, also the envisaged day rates play an (obvious) role, in particular in relation to the needed competence profiles of the experts.

In 2014, appropriate day rates for international experts range between a maximum of €1000 and a minimum of €500.

We are well aware that this is considerably higher than the EC standard rate of €450 a day. However, one should consider that these rates are for the delivery of specialist support to the Commission. There are multiple reasons why people are willing to take up the task even at such low rate (for Western European standards), the most important one being the prestige of supporting the Commission and the importance for networking and future contracts.

In the context of this evaluation, we consider a day rate of €450 to be unrealistic. Especially when one wishes to have a *geographical spread* of the involved experts (which should, indeed, be an objective) and when setting high requirements for the competence profile of the experts in order to guarantee a *quality evaluation*, the budget should count on paying out higher rates.

Exhibit 12 shows the range of day rates that we defined for the different experts.

Exhibit 12 Day rate per type of expert

	Day rate
Foreign experts	
Main panel & panel chair	€ 1,000
Subject panel members	€ 800
Specialist advisors	€ 800
Referees	€ 500
Local experts	
Main panel members (local)	€ 500
Specialist advisor	€ 500

3.2.6 Total costs for the panel experts' work

Based on these day rates and the total number of mandays needed, the total costs for the panel experts' work is shown in Exhibit 13.

Exhibit 13 Total manday costs per type of expert and overall

	Total manday costs
For main panel chairs	€ 126,000
For main panel members	€ 106,333
For subject panel chairs	€ 489,000
For subject panel members	€ 2,246,400
For referees	€ 317,800
For foreign specialist advisors	€ 83,200
For local specialist advisors	€ 52,000
Grand total manday costs for the panel experts	€ 3,420,733

3.2.7 Travel, hotel and subsistence costs

The involvement of international experts and their meetings in the Czech republic implies that also travel, hotel and subsistence costs are to be counted in. We calculated these only for the foreign experts. We established the standard costs as shown in Exhibit 14.

Exhibit 14 Standard travel and hotel & subsistence costs

	In €
Travel expenses (per trip)	€ 300
Hotel & subsistence (per day)	€ 150

The level of these costs obviously depends on the number of trips needed for the meetings and days per meeting. Again, this depends on the type of expert in line with his/her tasks (Exhibit 15).

Exhibit 15 Trips and hotel days per type of panel expert

Meetings main panel chairs

Total nr trips for main panel meetings	18
Trip for meeting with subject panels	12
Total nr trips	30
Hotel days for Main panel meetings	36
Hotel days for meeting with subject panels	12
Total hotel days (panel mtgs & coordination subject panels)	48

Meetings subject panel chairs

Total nr trips - all panel meetings	52
Total nr trips for meetings with Main panel chair	52
Total nr trips - all meetings	104
Hotel days for Launch meeting (3 days per meeting)	78
Hotel days for assessment meetings	780
Hotel days for meetings with Main panel chair	52
Total hotel days	832

Meetings subject panels

Total nr trips - all panel meetings	312
Total hotel days for First panel meetings (3 days per meeting)	468
Total mandays for assessment meetings	780
Total hotel days	1248

Specialist advisors (foreign)

Total nr trips (1 trip per advisor)	52
Hotel days	104

Multiplied with the standard costs for trips and hotel & subsistence, we come at a total of €484,200 for travel and hotel & subsistence (Exhibit 16).

Exhibit 16 Total travel and hotel & subsistence costs

	Total cost
Main panel chairs	
Travel costs	€ 9,000
Hotel & subsistence	€ 7,200
Subject panel chairs	
Travel costs	€ 31,200
Hotel & subsistence	€ 124,800
Subject panel members	
Travel costs	€ 93,600
Hotel & subsistence	€ 187,200
Specialist advisors (foreign)	
Travel costs	€ 15,600
Hotel & subsistence	€ 15,600
Overall	
Travel costs	€ 149,400
Hotel & subsistence	€ 334,800
Grand total travel & hotel/subsistence costs	€ 484,200

3.2.8 Total costs for the evaluation panels

The combination of the total manday costs and travel/hotel costs brings us at a total cost for the evaluation panels of €3,904,933 (Exhibit 17).

Exhibit 17 Total costs for the evaluation panels

	Total cost
Grand total manday costs for the panel experts	€ 3,420,733
Grand total travel & hotel/subsistence costs	€ 484,200
Total costs for the evaluation panels	€3,904,933

3.3 Detailed estimates of the costs for the evaluation management (direct costs)

This section covers the costs related to the evaluation management, i.e. the activities of the Evaluation Management Team and the support by external experts for the drafting of the bibliometric reports (to inform the panels) and the delivery of IT services including the use of the RD&I Information System.

3.3.1 The Evaluation Management Team

The evaluation management team comprises a core team that will be responsible for the longer-term design and management of evaluation, an Evaluation Management Board, additional temporary staff and the panel secretariats. We took account of different salary levels for the members involved (Exhibit 18), applying salary rates that are standard in public administration in the Czech Republic.

Exhibit 18 Standard salary rates per staff level

Gross yearly salaries incl. health and social insurance paid by employers in CZK	In CzK	In €
Deputy Minister level	1,244,500 Kč	€ 45,255
Head of Department level	786,000 Kč	€ 28,582
Head of Unit level	550,200 Kč	€ 20,007
Second level	419,200 Kč	€ 15,244
Secretaries	314,400 Kč	€ 11,433

The Evaluation Management Team will consist of a core team that will be responsible for evaluation, including the implementation of the evaluation exercise but not only. We estimated their costs on 5 years of activity, taking into consideration the whole evaluation cycle.

Based on international experience while taking into account the size of the RD&I system in the Czech Republic, we counted on 3 staff members for the Evaluation Directorate and 7 staff members for the Evaluation Secretariat⁷

An Evaluation Management Board will supervise the activities of the Evaluation Management Team and carry the ultimate responsibility. They will be nominated for the duration of the evaluation process, i.e. three years. There will be 6 board members and a Chair and they will be involved in average for 2 days a month.

A number of additional temporary staff members will support the core team during the time of peak activity (the submission phase and assessment phase - Section 2.1.1, above). As is shown in Exhibit 2, above, above, this will take approximately 1 year so we counted on 15 additional staff members (FTE) for 1 year.

Exhibit 19, below, lists the tasks of the panel secretariats and the estimate of the total number of needed mandays. The assessment phase will ask for the involvement of panel secretariats to assist the panels before, during and after their meetings. Experience teaches that this will require approximately 20 days per panel for the secretariat staff.

This is a support that is critical for the panels – and for the efficiency of the panel evaluation process as such. Two secretariat staff members per panel are needed and they should have sufficient knowledge on the matter adequately to support the panels.

Support staff members are needed also to support the panels during the reporting phase. Ideally, these will be the same members of the Panel secretariats. They will support the panels in writing the RU, Field and Area analytical reports. They will also draft the analytical reports at the EvU level, in order to limit the level of time investment required from the Subject panel chairs. We calculated that these reporting support activities would require 4 days per EvU in average, for 170 EvUs; 3 days in average per field, for 36 fields; 3 days in average per area, for 6 areas. We also counted in an additional 2 days per panel.

As a result, we counted on 9 additional staff members (FTE) for 1 year to fulfil these tasks.

⁷ According to our calculations and based on the RAE 2009 management reports, HEFCE employed a core team of 19 members and approximately 40 additional temporary staff for the duration of 2 years

Detailed evaluation cost framework

Exhibit 19 Tasks and mandays for the panel secretariat

	Total days
Panel secretariat - 26 panels, 20 days per panel, 2 staff per panel	1040
Drafting analytical report EvU level (170 EvU - 4 days per EvU)	680
Support for panel reporting field level (36 fields - 3 days)	108
Support for panel reporting area level (6 areas - 3 days)	18
Additional coordination tasks / margin (26 panels - 2 days)	52
Total mandays	1898
Days in FTE years (220 working d)	9

Exhibit 20, below, shows our estimate of the total costs for the Evaluation Management Team activities.

Exhibit 20 Total costs for the Evaluation Management Team activities

Evaluation Management Board	Nr FTE days	Total costs
Deputy Minister level	36	€ 7,405
Head of Department level	180	€ 23,385
Total cost Evaluation Management Board	216	€ 30,790

Core evaluation team - in place for 5 years	Nr FTE year	Total costs
Evaluation Directorate (Head of Department level) - 1 FTE for 5 years	5	€ 142,909
Evaluation Directorate (Head of Unit level) - 2 FTE for 5 years	10	€ 200,073
Evaluation Secretariat (Second level) - 4 FTE for 5 years	15	€ 228,655
Evaluation Secretariat (Secretary level) - 3 FTE for 5 years	15	€ 171,491
Total cost core evaluation team	45	€ 743,127

Additional staff per evaluation	Nr FTE year	Total costs
Additional staff members - 15 FTE for 1 year (secretary level)	15	€ 171,491
Panel secretariat / report drafting - 1 year (Second level)	9	€ 137,193
Total costs additional staff per evaluation	24	€ 308,684

3.3.2 The drafting of the bibliometric reports (to inform the panels)

Bibliometric analyses require specific expertise and IT support, which will require the contracting of external experts. The tasks that need to be implemented and expertise needed as well as the estimated day rates are shown in the table below.

Task	Expertise	Day rate
Definition of indicators, professional communication with evaluation management	Bibliometrician(s)	500€
Project architecture set-up and workflow management	IT analyst, Software architect	500€
Output environment coding	Software coder	300€
Handling, distribution, communication	Clerical	300€

Exhibit 21, below, shows the total estimated costs for this external support, based upon the experience gained in the Small Pilot Evaluation. The estimate assumes the highest possible degree of automation (IS VaVaI linkage to commercial databases etc.).

Exhibit 21 Breakdown of the costs for the drafting of the bibliometric reports (to inform the panels)

Expert	Mandays	Costs
Bibliometrician(s)	20	€ 10,000
IT analyst, Software architect	20	€ 10,000
Software coder	80	€ 24,000
Clerical support staff	40	€ 12,000
Total costs bibliometric reports	160	€ 56,000

3.3.3 IT services, including the use of and extensions to the RD&I Information System

As explained in Section 2.4, above, the RD&I Information System (IS VaVaI) is an important component for a cost efficient implementation of the evaluation – both for the Evaluation Management Team and the participating Research Organisations.

The report *The RD&I Information System as an information tool for evaluation* (Background Report 9) holds a detailed cost estimate for the support services to the evaluation process that the RD&I IS can provide. These include the costs for services that are directly related to the evaluation and the support for its implementation, as well as other costs related to the enhancement of the technical features of the RD&I Information System in order better to serve the RD&I communities.

The report makes a distinction between costs related to activities that are considered

1. Essential for the implementation of the evaluation methodology as it is currently foreseen
2. Recommended extensions because they will bring important benefits for the quality of the underlying data and/or the smoothness of the evaluation process.

The estimates include all the associated project management, quality assurance, and other overhead at a standard rate of 500 €/man-day. Where extensive manual processing is required, the rate is lowered to 300 €/man-day.

Detailed evaluation cost framework

The following three types of costs are calculated:

- Initial set-up costs,
- Costs per evaluation campaign,
- Running costs per year.

These types of costs are then combined into an **aggregated cost** figure that includes one half of the initial set-up costs (counting on the set-up costs to amortize over the first two evaluation campaigns), the per-evaluation costs, and the running costs for the period between the evaluations (six years in our estimates).

We counted in into our overall evaluation cost estimates the direct EM costs per evaluation period for both the essential and recommended services and extensions.

Necessity level	Essential	Recommended	Essential + Recommended
Initial set-up costs	365,500 €	417,500 €	783,000 €
Each evaluation run costs	114,000 €	51,500 €	165,500 €
Running costs / yr	205,300 €	130,400 €	335,700 €
Total costs per eval period	1,528,550 €	1,042,650 €	2,571,200 €
Direct EM costs per eval period	1,018,360 €	609,765 €	1,628,125 €

Exhibit 22 shows the **total evaluation management costs**, adding up the costs for the evaluation management team, the bibliometric analyses, and the IT services/use and extensions of the RD&I Information System

Exhibit 22 Total evaluation management costs

Evaluation Management Team	€ 1,082,601
Bibliometric reports	€ 56,000
External IT support & RD&I IS	€ 1,628,125
Total evaluation management costs	€ 2,766,726

3.4 Detailed estimates of the indirect costs

In this last section we cover the indirect costs, i.e. the costs related to the investment of time and staff members for the submission of the self-assessment reports and the selection of the publications to submit for review.

Our estimates are in a first instance based on the experience gained during the Small Pilot Evaluation (SPE). The Research Organisations that participated in the SPE indicated that an investment of time and human resources as shown in Exhibit 23, below.

In average, a Research Unit (RU) spent 30,967 CZK for its participation in the Small Pilot Evaluation. This sum is calculated on the basis of a 300 k CZK yearly salary for administrative staff and a 500 k CZK yearly salary for researchers, which is the average of the salary indications given by the participating RU.

Exhibit 23 Time and HR investment in the SPE (average per RU)

	Time spent (days)	Nr of people involved (FTE)
Administrative staff	7.2	0.9
Researchers	9.2	1.2

We made the following considerations:

- The revision of the Evaluation Methodology after the Small Pilot Evaluation put a stronger emphasis on self-assessment, so more time investment by researchers will be required
- The evaluation panels in the SPE indicated that often the qualitative information in the submitted self-assessments was of limited quality and value. In fact, as is shown also in Exhibit 23, above, the impression was that in most cases only 1 researcher rather than a group of researchers had been involved. This will not be possible with the final version of the EM (where a SWOT analysis is required), nor this practice in line with the intentions of the evaluation, i.e. to create an opportunity for 'self-assessment' in the Research Organisations. In other words, more time will need to be invested and more researchers involved
- The RUs that participated in the SPE were relatively small, while a full-scale evaluation will involve also (very) large RUs, so more time investment will be required in average. Again, this will regard in particular the researchers. For the administrative staff, the investment in an improved support through the use of the RD&I Information System should compensate

As a result of these considerations, we kept the number of mandays for the administrative staff as appeared from the SPE (i.e. an average of 7.2 days per RU). For the researchers, we counted on an average involvement per RU of 10 researchers for the same number of days as indicated against the SPE.

We therefore estimated the indirect costs as shown in Exhibit 24, below, calculated using the average salary indications given by the research organisations participating in the Small Pilot Evaluation

Exhibit 24 Breakdown of the indirect costs

	Total Mandays	Total Costs
Administrative staff	5,614	€ 334,039
Researchers	107,502	€ 5,922,995
Total Indirect costs	113,116	€ 6,257,033

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