

Building capacity for evidence-informed policymaking in governance and public administration in a post-pandemic Europe

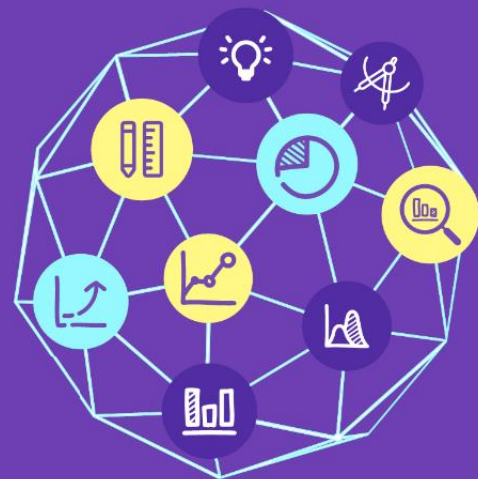
Needs and gaps assessment report

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Executive summary

This report features the needs and gaps assessment of the Czech science-for-policy ecosystem. The report is a deliverable of the project “Building capacity for evidence-informed policymaking in governance and public administration in a post-pandemic Europe”. Whereas the previous report aimed to describe the situation as is, the goal of this report is to describe the ideal state - where the beneficiary organisations aim to go. Consequently, this report serves as a starting point for the last report - the Roadmap outlining the necessary steps to achieve the identified goals. To collect data for this report, seven focus groups were organised from October to December 2023.

Overall, the needs and gaps assessment phase of the project managed to bring various actors to one table and enabled exchanges that have happened for the first time in Czech context. After this round of consultations, it can be restated that the participants are highly motivated to make a change in applying EIPM principles in Czechia. The engagement of the beneficiary organisations is confirmed besides others also through emerging analytical units across various line ministries. Nevertheless, moving on towards the Roadmap phase, it needs to be emphasised that the country analysis the team of experts is conducting will have to be accompanied by concrete actions from the side of the beneficiary organisations to bring the desired state of things further.

For the purposes of the Needs and gaps assessment, the broad topic of EIPM was approached thematically. Five broader topics of needs were identified:

The need for effective incentives for policy research and knowledge need identification in ministries

One of the topics discussed were research capacities and research funding. The participants mentioned that the processes of policy research funding disincentivises the researchers from participating. Issues such as administrative burden, low attractiveness of such opportunities for high-profile researchers and inadequate timing of funding opportunities were mentioned. Many of the participants suggested that a framework of closer institutional cooperation should be developed. Nevertheless, the informal relationships should be also included in the mixture of interventions.

Furthermore, the system of scientific results in the Methodology for Evaluating Research Organisations and RDI Purpose-tied Aid Programmes (hereafter: Methodology 17+) **should reflect policy-relevant results, such as policy papers and policy briefs including a proper assessment of the Module 3 (Societal Relevance)**. However, in the near future, policy briefs will also be introduced as legitimate scientific results. Other forms of knowledge exchange, such as co-creation and stakeholder dialogues, should also be subject of further consideration.

Moreover, the research priorities which shape the funding systems seem not to reflect the actual needs of ministries. Instead of simply a top-down approach defining national priorities on a national level, it was suggested to introduce both top-down and bottom-up approaches in formulating research priorities.

Regarding research capacities, the beneficiary organisations (BOs) once again stressed the importance of increasing analytical capacities at the line ministries. Participants also suggested securing a part of the internal budget of ministries specifically for one-off small research projects. With relation to this issue, also the role of public research organisations (v.v.i.) appears as key topic¹. Whereas there is a wide agreement that these organisations need to better align their activities with the research needs of the ministries, there is no consensus on how this should be achieved.

The need for data access and quality

There are multiple problems related to data management in the public administration; however, the availability of administrative data for policymaking stands out significantly. Data held by ministries is often difficult to find, access and connect. The unavailability of some data significantly complicates strategy planning, evaluation and policymaking. Furthermore the data quality might not be high. To deal with this situation, the creation of a central catalogue was suggested. Additionally, conducting joint exercises of ministries and scientists to identify data needs would be welcomed. To increase the openness for sharing data, it is crucial to further develop the capabilities for data anonymisation and related techniques.

¹ There are two types of v.v.i. - one established by the Czech Academy of Sciences, and the other one by ministries. This report focuses mostly on the latter.

Some major changes in this realm are currently underway. A new data management bill is supposed to solve some of the above-mentioned issues. These changes also include the recent creation of the Digital and Information Agency (DIA), which is supposed to bring many of the data-related activities under one umbrella.

The need for knowledge brokers: increasing the interconnectivity of the ecosystem

It was often noted that the system requires stronger connections between the various groups active in EIPM. The need for greater interconnectivity may be addressed by a working knowledge broker system. A knowledge broker is a role within the science-for-policy ecosystem that facilitates communication and interaction between the supply and demand sides. The lack of dedicated staff in public administration and public sphere in general focusing solely on this topic is one of the major problems and reasons why the exchange is largely ad hoc and informal. Supporting this role in the ecosystem would be welcomed with dedicated and specialist staff both on the supply as well as on the demand sides. However, especially at the demand side, these roles need to be further supported by analytical teams which are still to a large extent missing at the ministries.

These knowledge brokers are essential elements in working science-for-policy ecosystems. One possible solution is the formal creation of a network of science advisers or chief science advisers appointed to each or several ministries. The idea of (chief) science advisers was generally appraised but a few potential issues were mentioned such as the image and legitimacy of science in Czechia, budget issues, the definition of responsibilities, and a lack of potential candidates.

In academia, there are established Technology Transfer Offices (TTOs), which are being transformed into Knowledge Transfer Offices (KTOs) and abandon their former focus on technologies, and widening their transfer activity beyond between academia and industry to potentially also public administrations. These offices represent a potential for a further strengthening their role as knowledge brokers in the ecosystem from the supply side.

The need for attracting and maintaining analysts within the public administration

The attractiveness of public administration as a career option is one of the major topics. Public administration struggles to create attractive workplace conditions also due to low prestige. Some specific (analytical, managerial) positions are poorly defined, which further decreases the attractiveness of these positions. To support the appeal of working for public administration, joint programmes between academia and public institutions, professional doctorates, and similar interventions dedicated to promote inter-sectoral mobility were suggested.

Public administration should be enabled to fully take advantage of all existing possibilities (contained in the Civil Service Act) and move towards more modern HR practices to support part-time employment and introduce an attractive system of benefits, as well as creating new learning programmes responding to the needs of the public administration. This change also requires the creation and adoption of competence frameworks. To further support solutions to these issues, focus group participants mentioned that managerial responsibilities could be divided between different individuals with managerial skills, subject-matter expertise and analytical skills.

The need of bridging different cultures

One of the major and frequently discussed issues were different cultural aspects within the public administration and academia such as timing, accountability, relationship with uncertainty, etc. Specifically in the Czech language context, it is often suggested that the difficulty of easily translating concepts such as policy or policymaker is part of the problem. Participants agreed that collaboration should be welcomed from an early stage of the policy cycle. Also, policymakers should be involved in design of policy relevant research from the outset to understand the challenges such projects consist of. To address the over-cautiousness to some extent, it was agreed to allow for smaller-scale pilots and greater experimentation to explore possibilities at the interface of these distinct professional groups. To nurture mutual understanding and collaboration, one of the suggestions was to develop interactive forms of cooperation on policies rather than simply procuring policies. However, it was also suggested that semi-formal relationships should be established as the problem of different cultures can create barriers for initiation of cooperation.

Conclusion

This document provides a detailed overview of these five areas of needs or intervention in the Czech Republic. Despite dividing the overall topic of EIPM into five different areas, all of them are closely interconnected. Whereas some of the issues oscillate more on an operative level (e.g. data accessibility), others cover more

general issues (cultural topics). Nevertheless, it cannot be overemphasized that the improvement of the EIPM system needs to coordinate changes and reforms in all of the suggested areas. It may be concluded that despite great opportunities in all of the areas of EIPM; however, the overarching topic is the need for **systemic (and institutional) cooperation and support for science-for-policy exchange** in all of the suggested topics. So far, many of the initiatives and success are one of a kind and they are not replicated in other areas of the public administration or research institutions respectively.

1 Introduction: Needs and gaps of the Czech science-for-policy ecosystem

This Needs and gaps assessment report has been prepared as a part of the TSI project “Building capacity for evidence-informed policymaking in governance and public administration in a post-pandemic Europe”. The project is financially supported by the European Commission’s Directorate-General for Structural Reform Support (DG Reform). It is implemented by the Joint Research Centre (JRC) of the European Commission and the Organisation for Economic Co-operation and Development (OECD) in cooperation with the main beneficiary organisations (BOs). In the case of the Czech Republic, the Office of the Government is the main beneficiary among a total of seven beneficiary organisations and eight key stakeholders (Table 1). To support the JRC in the country analysis in the Czech Republic, a group of national experts from Ceske Priority and Charles University coordinated different focus groups, consultation dialogues and interviews.

This report aims to cover the “needs and gaps” of the BOs and of the Czech science-for-policy ecosystem as a whole. During focus groups and further consultations for the purposes of this study, the goal was to help representatives of the beneficiary organisations define ideal circumstances at different dimensions: individual, organisation, inter-organisational and system level. This follows the overall logic of the project, where the Needs and gaps assessment report builds on the Diagnostic report created in the previous phase of the project and prepares the ground for the next round of discussions on how to achieve set goals.

The overall analytical framework of this report was slightly modified based on the findings of the diagnostic report. Given the context of the Czech science-for-policy ecosystem, the approach of the Needs and gaps assessment report is based on key topics extracted from the Diagnostic report (Table 2). The Diagnostic report served to identify individual challenges of the science-for-policy ecosystem (see Annex 1), which were clustered into five topics covering various areas. These topics provided a structure for the round of focus groups. During these focus groups, it became clear that these topics are strongly interconnected and mentioned topics are related to each other. The participants tended to express their opinions on various topics during the focus groups. Nevertheless, the data were analysed to identify specific needs and gaps that individual organisations could eventually cover to improve its activities and, by extension, the efficiency of the system as a whole.

In this report, the concept of needs and gaps does not refer solely to the “problems”, as it may suggest, but rather to the unrealised potential of the system or an organisation. The concept is used to operationalise the ideal situation, towards which the organisations would like to be heading. This was achieved during seven focus groups and several group and individual interviews. The report does not only contain the thorough description of the ideal situations, but also individual suggestions for the next stage of the project, namely the Roadmap.

For the purpose of writing the report, seven focus groups (Table 2) were organised with a total of 56 participants. The focus groups were thematically divided into six topics partially extracted from the Diagnostic report and also based on the requirements of the project. Five of them were conducted in Czech and two of them in English.

From the diagnostic report, 35 initial needs and gaps (see list in Annex 1) were gathered and later confirmed by the representatives of beneficiary organisations during a kick-off meeting for the needs and gaps phase in early October. The initial needs and gaps were categorised into five topics and served as a guidance for preparation of the focus groups from October to December 2023.

Conversations during all the focus groups were noted down and recorded. The recordings were later transcribed using OpenAI’s general-purpose speech recognition model Whisper. These inputs were then analysed in order to identify needs and gaps and place them in the context of the diagnostic report, as well as identify possible interventions that could tackle these issues.

The report is organised following the structure of the focus groups: section 2 covers the topic of research capacities and research funding for the purposes of the policymaking; section 3 tackles the topic of data accessibility, especially in relation to administrative data access; section 4 covers the topic of science advice; section 5 discusses the needs and gaps related to human resources and training of public servants and policymakers; and section 6 discusses the fascinating, yet complicated topic of culture, attitudes and practices within the science-for-policy ecosystem. At the beginning of each section, a short overview of the needs and gaps is provided, which can be also found in Annex 2.

Table 1: Overview of Beneficiary Organisations and other stakeholders

Beneficiary organisation	Role in the Czech science-for-policy ecosystem
Office of the Government (ÚV)	Central coordination role in public governance, legislation, policy evaluation, and science.
Ministry of Interior (MV)	Strategic development and innovation in the public administration.
Ministry of Regional Development (MMR)	Coordinating body for regional development and funding instruments.
Ministry of Industry and Trade (MPO)	Responsibility for economic and RDI policies.
Office of the Minister for Science, Research and Innovation	Coordination of RDI policies.
Technology Agency of the Czech Republic (TA ČR)	Funding and implementation of applied research programmes.
Research, Development and Innovation Council (RVVI)	Advice and decision-making in the field of RDI policies.
Other organisations (involved in discussions at varying levels)	
Ministry of Labour and Social Affairs (MPSV)	Line ministry for social protection and labour policies
Ministry of the Environment (MŽP)	Line ministry for environmental protection
Ministry of Education, Youth and Sports (MŠMT)	Line ministry is responsible besides others for educational policies, research funding and the management of research infrastructure and administration, closely collaborating especially with the RVVI and Office of the Minister for SRI.
Ministry of Health	Line ministry for public health
Centre of Technology Transfer of the Czech Academy of Sciences (CeTTAV)	Centre responsible for supporting scientists of the Czech Academy of Sciences in technology transfer
Czech statistical office (ČSÚ)	Czech statistical office
Centre for knowledge and technology transfer (CPPT) at the Charles University	CPPT provides services and consulting to support the technology and knowledge transfer.
Consortium SYRI	Research consortium on socioeconomic impact of diseases and systemic risks (Masaryk University, Charles University, Czech Academy of Sciences).
Parliamentary Institute	Parliamentary internal research organisation
Prague University of Economics and Business	Public university
Charles University	Public university
National Cyber and Information Security Agency (NÚKIB)	Central administrative body for protection of classified information. The agency provides professional education in cyber security also for public servants.
Center for Economic Research and Graduate Education – Economics Institute (CERGE-EI)	Joint research and education centre of Charles University and the CAS.
Czexpats in Science	An organisation building a community of Czech scientists abroad.

Source: Own elaboration.

Table 2: List of focus groups conducted

Date in 2023	Topic	Number of participants
24 October	Research capacities and research funding	6
27 October	Data accessibility	5
30 October	Institutionalising scientific advisory bodies and cooperation	12
13 November	Human Resources and training	10
7 November	Culture, attitudes and practice	9
4 December	Focus group on trainings for scientists	6
6 December	Research capacities and research funding #2	8

Source: Own elaboration.

2 The need for enhancing research capacities and research funding

2.1 Problem statement

Research capacities (both inside and outside government) as well as appropriate research funding constitutes one of the crucial prerequisites of an effective science-for-policy ecosystem - without generating usable policy knowledge, any attempts to make policymaking more evidence-informed will be futile. The science-for-policy ecosystem is thus closely related (though not equated) to the research system and funding in each country.

The Czech Republic has a robust legal and institutional framework for research policy in place. A key law in this realm is Act No. 130/2002 on the Support of Research, Experimental Development and Innovation, adopted in 2002, which outlines the core standards, processes and institutions in the realm of RDI (hereafter: RDI Support Act). The reform of the aforementioned act is currently underway. Another important piece of legislation is Act No. 341/2005 on Public Research Institutions, which sets out the framework for the functioning and support of institutions established by the Czech Academy of Sciences and line ministries.

Beyond the RDI Support Act, the National Priorities for Oriented Research, Experimental Development and Innovation were adopted by the government in 2011. This document sets six priority areas to support the key needs of the development of the Czech society through public funding of RDI together with system-level measures, including the cooperation between academic research, universities, applied research and application sphere. Furthermore, the topic is shaped by National Policy on RDI 2021+ and the Innovation Strategy of the Czech Republic 2019-2030 (Innovation Strategy 2019+). Another key stakeholder in this topic is the Ministry of Industry and Trade, which developed and is implementing the National Research and Innovation Strategy for Smart Specialisation of the Czech Republic for the 2021-2027 period (RIS3 Strategy). Priorities set in the RIS3 strategy should be reflected in the Operational Programmes implemented by different ministries (especially MŠMT), national programmes funded by TA ČR, and programmes implemented by line ministries.

In general, there is a rich spectrum of academic institutions, advisory bodies, ministry-owned or sponsored institutes, think tanks and consultancies. These provide a potentially strong supply of usable policy knowledge. Policy research, however, is very much fragmented. There are also many more needs and gaps tentatively identified during the preparation of a diagnostic report (see Annex 1). During the focus groups, these issues have been further discussed and elaborated. Many other related problems have been raised and are organised into several subtopics below.

Table 3: Needs and gaps related to the topic Research capacities and research funding.

Need/Gap - description	Relevant BOs	Potential solution (where relevant)
Incentivise scientists to generate policy-relevant research.	All line ministries, CPPT, CeTTAV, SYRI, TAČR, Office of the Minister for Science, Research and Innovation	<p>Include policy briefs, policy papers, and other formats as eligible scientific results in science evaluation frameworks. Require legislative change (130/2002 Sb.)</p> <p>Inside the research organisations recognise policy relevant outcomes (probably at the level of departments, not university) for the academic career</p> <p>Reflect policy relevant outcomes in the internal evaluation of scientists (how can we measure it?)</p> <p>Allocate more time to generate policy relevant scientific outcomes</p> <p>Decrease the administrative burden partially caused by the dominance of project-related funding.</p> <p>Incentives policy relevant outcomes at the level of research performing organisations.</p> <p>Guaranteed and widely advertised uptake of good quality (including unsolicited) evidence by policymakers</p>
The need to be able to flexibly and quickly procure evidence	All line ministries, MMR	<p>Innovative procurement methods (Innovative partnerships)</p> <p>Increase internal analytical capacities</p> <p>Internal funds for one-off small projects possibly used for call for evidence scheme. They would be fully at the discretion of the ministry and could only be used for science-for-policy research.</p> <p>Strengthen the ministerial institutes at the ministry level</p> <p>Introduce a model of public procurement documentation to incentivise academic institutions to apply</p>
The need to stabilise and increase continuity, certainty and better navigate the two sides of the science-for-policy ecosystem	CPPT, CeTTAV, All line ministries, SYRI	<p>Establishing capacities at the academia to be in charge of relationships between the academia and public administration</p> <p>Add policy labs as additional focal points for connecting policymaking with academia</p> <p>(Chief) Science adviser(s) - point of interaction at the ministry level</p> <p>Improve the planning of research priorities at the ministry level</p> <p>Support the role of projects of collaborative activities</p>
Make the formulation of research priorities at the national and ministerial level more open to relevant stakeholders	All line ministries, Office of the Minister for Science, Research and Innovation, RVVI	<p>The process of formulating priorities should be a mix of "top-down" and "bottom-up" approaches (hierarchization, different time horizons)</p> <p>Improve the planning of research priorities at the ministry level</p> <p>Organise regular meeting and conferences to discuss these topics</p>
To support establishment of expertise in some policy areas	All line ministries, TAČR, CPPT, SYRI	<p>Defining the research needs (see above)</p> <p>Cooperation between academia and public sector announcing research topics for master theses and dissertations</p>

Research funding - timing of public procurement, administrative burden	All line ministries, TA ČR, Office of the Minister for Science, Research and Innovation, RVVI	<p>Include policy briefs, policy papers, etc. as relevant scientific results and pilot wider research assessment frameworks</p> <p>Improve system of science management</p> <p>Decrease administrative burden for scientists and simplify great variety of research funding systems</p>
Support the long-term development of strategic intelligence capacities for public policy	Office of the Government, All line ministries, TA ČR, Office of the Minister for Science, Research and Innovation, RVVI	<p>Build and/or enhance internal strategic analytical capacities at ministries.</p> <p>Create institutional framework defining the status of analytical units both at the ministerial and inter-ministerial (governmental) level.</p> <p>Increased use of Joint Action Projects (system projects) to build long-term research and analytical capacity for public policy (e.g. STRATIN+ project, which provides strategic intelligence for research and innovation policies).</p>

Source: own elaboration.

2.2 Needs and gaps

The first problem concerns **the formulation of research priorities**. According to participants, there are too many "priorities" for applied research. Ministries often formulate "research needs" not based on what is needed regarding new knowledge, but to provide additional funds for government-funded research institutes to let them survive. Also, the priorities often include not advancing knowledge but simply data gathering. In any event, one of our respondents argued that ministries are now much more capable in terms of identification of research needs than was previously the case. This can be attributed, at least partially, to the creation of internal analytical units, and increasing internal capacity in research assessment.

It has been argued that priorities should be formulated at different levels and with different levels of specificity. While the formulation of national priorities (at the whole government level) might be relatively general, ministries should have more precise priorities. It was also stressed that formulation is rigid in terms of the time frame. The three-year time perspective does not correspond to the reality of public policymaking when the research needs often arise unexpectedly. On the other hand, the positive side is that during the COVID-19 period, public administration was able to reformulate research priorities very quickly. It was done not by changing the overall general research priorities, but by adjusting the current priority framework to new – and previously inconceivable – challenges.

Respondents agreed that the process of formulating priorities should be a mix of "top-down" and "bottom-up" approaches. It means that it should follow both national priorities (politically formulated) and individual interests of researchers and deal with competitiveness embedded in the current science system, which in some cases can undermine the ability to find consensus on what the evidence for policymaking actually is. Some respondents argued that the role of researchers is, in some cases, too strong. This might be at the expense of including the voice of practitioners. However, there was no strong voice for a more "top-down" approach (or vice versa). The current balance between the two is mainly reflected as unproblematic. Not surprisingly, it has been argued that there is a need to balance academic freedom with political priorities.

Nevertheless, it was noted that informal channels for priority setting often do not work. In other words, it has been argued that the process of prioritising research is often too formal and limited to powerful policy actors. It has also been argued that priorities currently do not reflect regional disparities. On the other hand, as a positive example, the Ministry of Environment's practice has been praised. It rests on public officials following various research conferences. It enables public officers to be updated on the most recent academic knowledge, but also to pick out the most relevant policy issues as well as be in personal touch with experts in their fields.

The topic of research priorities is also related to the controversial issue of the public research organisations (v.v.i.). established by the ministries. There is a general agreement among our respondents that the expected role is often not fulfilled. In some of the consultations, it was mentioned that in ideal case the ministerial research organisations should play the prime role in formulating and suggesting research priorities and fulfilling the research needs. However, this is often not the case. According to some interlocutors the problem might be the

lack of interest and capacity in developing a working relationship with the public research organisation as well as lack of understanding what their role might be. Some participants also mentioned that there needs to be established continuation and capacities for communicating with these organisations. There are different opinions on how this should be dealt with. Some respondents suggested strengthening control of ministries over their funded research organisations. Others preferred to increase the incentives to collaborate with the ministry through more subtle measures. In any case, this is a highly discussed topic that is yet to be dealt with.

Box 1. Formulation of knowledge needs and research priorities in other countries

Some countries have an elaborated process to identify knowledge needs in government departments in a deliberative process involving policymakers, scientific community, industry and other interest groups. These knowledge needs are then published annually by each government department and the scientific community may apply for funding and/or base their scientific research on the policy needs and priorities. This process does not replace the multi-annual national strategy for research, development, and innovation. Instead, it offers additional venues for projects in science for policy.

Under the light of the needs and gaps assessment in the Czech Republic, ministries could explore a similar way to institutionalise a process to identify knowledge needs and research priorities for more regular and closer collaboration with the scientific community.

Areas of Research Interest, United Kingdom.

The Areas of Research Interest (ARI) – articulated research interests of the government – are a response to the call for a more strategic approach for research and development programmes including research needs by the government of the United Kingdom (UK). Starting in 2015, government departments were asked to compile their current, most important research questions they are facing. This is meant to highlight the departments' shortcomings in terms of evidence and knowledge and ensures that the need to inform policymaking and to improve government performance can be addressed. The compiled documents serve as a platform of engagement for different stakeholders and build dialogues both between the different departments and experts, research councils, industry and other organisations in the R&D landscape. It also gives academic experts the opportunity supporting the government to address their research needs.

The development of ARIs has several benefits:

- The development of ARIs can foster cross-governmental and cross-sectoral work. ARIs help to communicate departmental research interest across the government departments and promote collaboration. Furthermore, they facilitate dialogue and exchange between experts in academia, private sector and from other stakeholders to address research needs and gather evidence.
- Research based on ARIs is directly addressing all stages of the policy cycle and thereby contributing to evidenced-informed decision making. The impact can be generated via insights of experts as well as via experts participating in advisory committees and working groups.
- By clearly outlining departmental research interests, ARIs create an environment that encourages the use of research and innovation within the government. This fosters a culture of valuing research and its active use within policy development and decision-making.
- In conclusion, by promoting collaboration, communication, and investment in research, ARIs can contribute to the advancement of evidence-based policymaking and the development of effective policies not only in the UK but beyond and could, therefore, be integrated in the science for policy efforts of other European countries as well.

Reference material

Government Office for Science (2022): Writing and using Areas of Research Interest. Retrieved from: [https://www.gov.uk/government/publications/writing-and-using-areas-of-research-interest/writing-and-using-areas-of-research-interest\[15.12.2023\]](https://www.gov.uk/government/publications/writing-and-using-areas-of-research-interest/writing-and-using-areas-of-research-interest[15.12.2023]); [ARI Database](#) | Search, browse or analyse Areas of Research Interest (ARIs) from UK governmental bodies.

Learning Agendas, US

The Foundations for Evidence-based Policymaking Act of 2018 established the requirement of all US agencies to develop a “learning agenda” which consists of systematic plans to address policy-relevant questions relevant to the programme and strategy of the respective agency. Through the Learning Agenda, or strategic evidence-building plans, the agencies are meant to pay systematic attention to gaps and needs of evidence to solve their problems as well as to how to address them. Apart from the questions, the agencies also have to include which types of evidence, data, methods and analytical approaches will be used as evidence in policymaking. The process of identifying the priority research question involves a collaborative process by engaging with internal staff as well as external stakeholders. The Learning Agenda serves as a basis for developing evidence-building activities to produce evidence meeting the agency’s needs and questions. An annual review ensures that the Learning Agenda is flexible and iterative which captures changing priorities and needs.

The Learning Agendas have the benefit of promoting the exchange of ideas and perspectives of different stakeholders which brings the most relevant questions to the attention as well as it provides understanding to the reciprocal impact of an agency’s policies for its recipients. Furthermore, the process of developing the Learning Agenda can shape individual behaviours and organizational culture towards evidence-informed policymaking. Lastly, by providing a structured set of questions, planned activities and products, learning agendas guide the collection and analysis of information, allowing for more informed decision-making and, thereby, contribute to the science for policy efforts within the US.

Reference material

[Department of State Learning Agenda 2022-2026](#); [2022-2026 Agency Learning Agenda | Evaluation | U.S. Agency for International Development \(usaid.gov\)](#); [Evidence Toolkit: Learning Agendas \(urban.org\)](#); [The Promise of Evidence-Based Policymaking: Report of the Commission on Evidence-Based Policymaking \(census.gov\)](#); [learning_agenda_tip_sheet_final.pdf \(usaidlearninglab.org\)](#)

The second cluster of issues related to **legitimate outputs of applied research**. In most cases, only results labelled as “H” are accepted in national assessment of R&D. “H” type results are reflected either in legislative, non-legislative, or strategic/conceptual documents. In other cases, results of the “O” (“ostatní”, meaning “various”) type are also acknowledged. Type “O” includes results such as research reports. However, these results do not have a high standing among academics and do not support academic career progression in the research assessment frameworks. The respondents debated to what extent a “research article” can be counted as a legitimate output. It was argued by some respondents that, especially in cases where it is written in accessible language, it might provide a useful source and inspiration for policy practice. It would be very helpful if policy papers and policy briefs were included as important and fully legitimate scientific outputs for policy and that research articles could be translated and adapted into such policy outputs for bigger impact. According to a focus group participant, the policy brief is currently being reviewed to be included as a legitimate output according to updated TA ČR Methodic-12 (“Specifikace požadavků poskytovatele na výsledky VaV”). This could significantly facilitate formal acknowledgment of science-for-policy research. It should be noted that TAČR Methodic-12 is derived from the official definitions of the types of results listed in the Annex to the Methodology 17+ and so it would be necessary to change these definitions.

The quality of research outputs obviously ranges from excellent to poor. Yet, representatives displayed predominant satisfaction with the results. In most cases, in their view, the commissioned research fulfils the project’s aims. Regular meetings between researchers and public officials are seen as particularly helpful in delivering high-quality and relevant results. Mixed opinion, however, has been voiced in terms of the actual implementation of results into the policy process. Some respondents pointed out that they are often provided with contradictory evidence and recommendations from researchers. Others stressed that results attained under different grant schemes are not shared. Most visible, it seems, is the non-formalized cooperation between GA ČR and TA ČR agencies. Although GA ČR focuses on basic research, it often generates research that might be possibly relevant for policy practice. Although TA ČR and GA ČR are developing informal cooperation, there is no systematic path or support for doing so.

Regarding the quality of research outputs, it was mentioned by one participant that there needs to be a more nuanced system of evaluation. Whereas there is a national top-down system of evaluation (Metodika17+), there is a lack of pressure for the methodologies to trickle down and to support internal evaluation of researchers within the research organisations themselves.

The third set of needs and gaps is related to the **available expertise** themselves. It has been mentioned that available expertise differs substantially across policy topics. There is no systematic support to build expertise on crucial topics. It is often assumed that the expertise is unlimited, but this is not the case. For example, it seems that there are very few experts on circular economics, while there is no lack of expertise in biodiversity. One expert mentioned how often she is surprised by the lack of previous research on some important topic. The current research capacities are not fully utilised. Very rarely, for instance, are master’s and dissertation theses

written on policy-relevant topics. In this respect, the cooperation between public administration and academia is almost lacking.

Much of the discussion centred around fragmentation of research among many institutions and research funders (one respondent noted that there are about 16 different providers of research funds). Consequently, not only research capacities but also cooperation between public institutions and academia is very much fragmented and mostly ad hoc. It still depends on personal relationships rather than institutionalised networks. There is thus no continuity in communication with research teams, and after staff changes, it is necessary to start again.

The fourth problem is concerned with **research tenders**. Much of the critique concerned BETA projects, in accordance with findings from the diagnostic report. The administrative burden of these projects is high, because BETA projects are legally operated on the basis of the public procurement law. Research tenders in BETA programme are only suitable for some needs of the ministries concerning generating policy relevant knowledge due to protracted time limits required by the law. Timing of research from the point of view of researchers is problematic as well. It takes time before the projects are officially announced, and the timing is often not aligned with the academic year (for instance, during the examination period).

In any event, it has been stressed that the BETA scheme is far from being the only financial source of policy-relevant research. It is not only the funding scheme itself that might be problematic, but also the general level of funding of research as such. It leads to the fifth set of issues – **funding**. First, most of the research funding is based on time-based competitive contracts. It is time-consuming on both sides and not very conducive to long-term cooperation. The low level of institutional funding also leads to situations where people from academia apply for projects out of necessity and not because of their general interest and competence in the given policy problem.

The issue of funding is also related to the problem of a large number of funding providers with very diverse administrative processes and requirements. At the moment there are 15 providers, which means an increase of 25 % in 10 years. The analysis made by EY (2022) implies that the large number of providers with different administrative systems significantly increases the administrative burden of research funding. This causes unnecessary barriers and burden for the evidence providers, who are consequently pushed to allocate more time on dealing with administration and less on actual research. The decrease of administrative burden could increase time, researchers could use for other research related activities.

Some respondents argued that it would be very beneficial for ministries to have certain internal funds for one-off small projects. These would be fully at the discretion of the ministry and could only be used for science-for-policy research. It has also been observed that substantially important results – e.g., the establishment of new relationships and policy networks – are never formally part of the research projects. In fact, they are not even formally reported, because they cannot be accepted as a legitimate result. One participant acknowledged that personal ties and trust with researchers are crucial, especially in situations where time for expertise is very limited.

It has been noted during focus groups that research should not be equated with analytical support. Currently, there is emphasis on building analytical support (including data analysis), but it is not long-term research following previously defined research needs. The research differs from analytical work, among other things, in that it carefully builds upon the knowledge of others. In this respect, it was mentioned by one participant that public officials do not have at their disposal a summary and synthesis of the current knowledge on relevant issues. This aspect links to the need for knowledge brokers inside public administration that will be covered in one of the next sections, as well as to a structured process to identify research or knowledge needs in governmental departments (see Box 1).

Nevertheless, it should be noted that analytical capacities in public administration are still scarce. This issue was repeatedly emphasised by BOs from the side of public administration as well as in the Public Administration Review (OECD, 2023). This is visible especially during the RIA process, which is often conducted by people lacking the necessary skill set composed of: understanding of the EIPM, obtaining evidence, assessing evidence, use and application of evidence in policymaking, getting stakeholders involved into the policymaking process, and evaluation of results of the EIPM process. Therefore, there is a need for an increase of number of analytical staff and greater concentration of analytical competencies together with further training in analytical competencies (see below). The increase in the number of these positions would also increase the robustness of the science-for-Policy ecosystem.

Much of the debate concentrated on the low motivation of scientists to engage in science-for-policy activities. As already mentioned in the diagnostic report, applied research is systematically disadvantaged compared to basic research. Researchers who engage in science-for-policy transfer risk losing out in competition with 'standard' tenure-tracked scholars who devote themselves to fulfilling academic criteria linked to remuneration and promotion – particularly mass-publishing in prestigious scientific journals. As noted by one respondent, generation of relevant policy knowledge also means for many to have to leave their "comfort zone". These issues were also covered in later focus groups on science advice and culture, attitudes and practices.

As noted by one respondent, the system for research assessment is quite complex and works at different levels. While evaluation at the national level can put more pressure on policy relevant results, evaluation at the individual level is fully in the hands of academic institutions. Given the focus of academic institutions as well as other evaluation frameworks (e.g. accreditation of study programmes), it is unlikely that they could change it dramatically. There is no clear consensus that the significance of research activities for public administration should increase at the expense of academic publications, even at the level of RVVI. Followingly, the first step is reaching consensus on the significance of the science-for-policy activities and its gradual inclusion into the evaluation system at all levels.

Box 2. Research assessment frameworks for researchers and research performing organisations

The **Coalition for Advancing Research Assessment (CoARA)** has pushed an Agreement on Reforming Research Assessment that sets a shared direction for changes in assessment practices for research, researchers and research performing organisations, with the overarching goal to maximise the quality and impact of research. The vision is that the assessment of research, researchers and research organisations recognises the diverse outputs, practices and activities that maximise the quality and impact of research.

Considering the needs and gaps assessment conducted in the Czech Republic, there is a need to widen the evaluation criteria of researchers and research performing organisations. As of 23 November 2023, CoARA has 583 member organisations, including 10 Czech organisations such as Charles University, Masaryk University, Czech Academy of Sciences, among others. This offers an opportunity to promote changes in research assessment for both researchers and research performing organisations, where engagement in science-for-policy activities and production of policy outputs (policy briefs, policy reports, etc.) can be used as a quality criteria.

In the case of researcher assessment, Spain has piloted a **Sexenio de Transferencia (Six-Year Transfer)** to assess the activity in knowledge and innovation transfer of researchers in universities and public research organisations. This was covered by the Resolution of 14th November 2018 of the National Commission for Assessment of Research Activity (CNEAI) and published in the Official State Gazette (BOE de 26 de noviembre). The evaluation was conducted by a Transfer Advisory Committee, composed of 10 experts (chair and 9 members) from all branches of knowledge, whose responsibility was to define and specify the criteria for evaluating the transfer merits and to evaluate the applications. For this task, the Committee was supported and advised by 156 academic specialists in the different areas of research and development.

In the case of research performing organisations, the **Research Excellence Framework (REF)** is the UK's system for assessing the quality of research in UK higher education institutions that started in 2014 and is conducted every seven years. The REF aims to (i) provide accountability for public investment in research and produce evidence of the benefits of this investment, (ii) provide benchmarking information and establish reputational yardsticks, for use in the higher education sector and for public information; and (iii) inform the selective allocation of funding for research. The evaluation is conducted by assessment panels and among the criteria there are aspects such as scientific excellence, academic outputs, patents, societal and policy impact, equality and diversity, having specific career development programmes for staff and early-career researchers, etc.

Lastly, the **Council of the European Union** has reached a political agreement to keep, attract, and retain research, innovation and entrepreneurial talents in Europe to support diverse research careers in the European Research Area (ERA), updating the R1-R4 profiles for researchers, introduced in 2011, and introducing the European Charter for Researchers, which is a revision of the 2005 European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. Among the recommendations, the promotion of inter-sectoral mobility and the significance of careers for research technicians and research managers to ensure higher levels of research and innovation.

Reference material

[CoARA](#); [Six-Year Transfer](#); [UK REF](#); [The Council Proposal for a Council Recommendation on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe](#).

2.3 Potential Intervention

Several interventions were suggested on this topic and also further discussed in follow-up meetings. These are either described above or included in Table 3 at the beginning of this chapter.

Regarding the need to incentivise scientists to generate policy-relevant research, especially the topic of research evaluation seems rather important. By many respondents, it was suggested to **strengthen and better apply the Module 3 of the Metodika17+ evaluation**. Possible intervention for this need extends even to **internal evaluation scientists in regard to policy impact and recognition of policy relevant outcomes for career progress**.

The need to flexibly and quickly procure evidence could be solved by **improving the procurement process and including internal funds for one-of small projects**. Possibly also the **role of ministerial public research institutions might be strengthened in this regard**. Not only this issue could be also improved by **strengthening science management and decreasing administrative burden of research funding systems**, which is in the Czech Republic unnecessary high.

Furthermore, intervention such as **policy labs and (chief) science advisors** might be included in the mix. These roles would strengthen the interface between science and policymaking. Additionally, science advisors could help to **improve the system of formulating research priorities of ministries to also include a bottom-up approach**.

These potential interventions are well aligned with those present in the Public Governance Review created by the OECD:

The PGR pointed out that the Strategic Framework Czech Republic 2030 can be used as a basis for increased hiring and training of civil servant analysts, as well as reinforcing the role of various analytical units across the administration. This finding is in agreement with the findings from interviews and focus groups, where the necessity to **strengthen the analytical capacities within the line ministries** was mentioned many times. Key stakeholders should, furthermore, bolster political and institutional commitment to EIPM principles and intensify inter-ministerial cooperation (OECD, 2023).

The need to support the analytical capacities relates to some extent also to the issue of formulating research priorities. One of the possible solutions here might include strengthening strategic coordination through **establishing a permanent strategic unit within the Office of the Government**. Its role would primarily be to steer and coordinate government strategic planning and research priorities while also providing analytical support to key stakeholders and relevant ministries (OECD, 2023).

Moreover, strategic unit could potentially conduct **an audit of existing research strategies** to consolidate and guarantee the consistency and compatibility of both policy goals and methodological standards, ensuring a more streamlined and effective approach to achieving government objectives (OECD, 2023). A permanent strategic unit might serve also as a basis for better prioritization and budgeting for the key policy goals.

3 The need for data accessibility

3.1 Problem statement

Access to usable data is a key prerequisite both for policymaking and for scientific research and science advice (OECD, 2019a). More specifically, due to methodological advances and the drive to make causal inferences in research both research and policy contexts, access to well-managed administrative micro-data is needed (Crato and Paruolo, 2019) and public sector data is increasingly seen as an asset to be managed (OECD, 2019b).

In the Czech context, the diagnostic report identified these themes as relevant to actors who are active in the evidence ecosystem, broadly resonating the recent public governance review, where the OECD noted that “challenges [spanning the data lifecycle] hamper Czech policymakers’ ability to provide evidence to improve decision-making in the country” (OECD, 2022). The needs and gaps assessment followed this up by focusing on specific areas of interest with a broader range of actors. The assessment has shown that needs and gaps exist along the range of factors contributing to the usability of data for policy making and policy-relevant research – from data-management issues such as documentation, findability and reusability to cross-cutting factors of skills, capabilities and system-wide roles responsibilities for driving the data agenda.

The analysis has also identified good practices in the ecosystem that could be scaled up or adapted for broader application. Additionally, the identified areas of need broadly follow those addressed by other countries and covered by research into international good practices.

This section clusters the issues emerging from the needs and gaps analysis into five themes: (i) Data users’ needs and understanding, (ii) Findability and documentation, (iii) Accessibility and interoperability, (iv) Skills and capabilities, and (v) Institutional roles and information flows.

These thematic clusters follow from the analysis in the diagnostic report, but are enriched following the focus group discussion which included actors from across the ecosystem – internal and external (academic) data users as well as the Czech Statistical Office (ČSÚ).

Table 4: Needs and gaps related to Data accessibility.

Need/Gap - description	Relevant BOs and stakeholders	Potential solution (where relevant)
Involve a broader range of users in identifying data needs	Digital and Information Agency (DIA), ČSÚ	Conduct regular (joint) exercises to gather data needs from a broader range of users
Improve data findability incl. for administrative data; create and provide documentation for administrative data	Line ministries, DIA	Data cataloguing and documentation as foreseen by draft legislation, supported by capability building
Make administrative data available for research and analysis, incl. linked between sources	Line ministries, DIA, TA ČR	Controlled access to data as foreseen by draft legislation, supported by capability building
Strengthen capabilities for data management and governance	Line ministries, DIA, ČSÚ, TA ČR	Support capacity in DIA - already underway Monitor and maintain capabilities inside ministries and relevant agencies (TA ČR) for data management Develop capabilities for data anonymisation and related techniques (DIA, ČSÚ)
Establish and clarify roles in the data ecosystem, across and inside institutions	ČSÚ, DIA, Office of the Minister for Science, Research and Innovation	Generally: joint communication/info point by DIA and ČSÚ towards data users Inside ministries: designated data-related roles Across ecosystem: bring together DIA, ČSÚ and other data holders (CSDA, EOSC)

Source: Own elaboration.

3.2 Needs and Gaps

Data users' needs and understanding

In the diagnostic phase, some respondents pointed out that sometimes, statistical data were not available with the required timing or granularity. For statistical data collection, there is currently a defined process for identifying needs. This is an official comment procedure triggered annually by the proposal of a government decree on statistical surveys, which lists the surveys to be done in the given year; institutions with access to the process – mainly public bodies and some associations – can comment. However, this is a formal process that does not reach many non-state users of statistics.² This is also noted in the recent Peer Review of the Czech Statistical System (ČSÚ, 2023). The ČSÚ complements this by analysing the user support requests it has served and by organising regular user satisfaction surveys.

With respect to data outside the statistical system, there has been some user needs research around open data and a one-off consultation is underway to accompany the drafting of the data management bill under the auspices of the Digital and Information Agency (DIA). Overall, however, the public data landscape is not easy to navigate for external and sometimes even internal users.

Findability and documentation

The first theme revolves around a gap that focus group participants identified as the lack of catalogues that would make it possible to identify existing data held by ministries. Participants identified this as a major barrier to data sharing across ministries, and even inside them. They proposed that either a central catalogue or per-institution catalogues should exist. The ČSÚ catalogue was mentioned as a potential inspiration. The catalogues should provide an inventory of all data that each public institution holds in structured form.

The existing data catalogues in the Czech Republic are as follows:

- The [National Open Data Catalogue](#) provides a “flat” interface with navigation via search, publisher and tags. It also allows advanced users to query the metadata knowledge graph.
- [ČSÚ Catalogue](https://www.czso.cz/csu/czso/katalog-produktu)<https://www.czso.cz/csu/czso/katalog-produktu> allows users to navigate to data products based on type, date of release, theme, spatial and temporal granularity and other criteria. ČSÚ also provides a way to [search for indicators](#). While these interfaces are somewhat dated and hampered by the overall user experience of the website (which is due to be replaced soon), they allow navigation to the relevant data products and are only possible thanks to effective metadata management.
- Similarly, the ČSDA provides a [catalogue of research data](#) – like ČSÚ's, its interface is somewhat dated but likewise it is based on well-structured metadata based (based on the Dublin Core standard) and can be searched as such.

Moreover, in a recent internal survey among data users conducted by public authorities alongside the design of the data management bill, and followed up by a consultative roundtable, it became clear that missing documentation is a key gap also for researchers interested in reusing data for scientific purposes. The lack of a catalogue is not in itself the topmost barrier for these researchers (most of whom were relatively well-informed about the availability of administrative data, which may not be typical in the research community). The lack of metadata, in contrast, specifically on which variables different IT systems hold, is perceived as a major barrier and often blends with the notionally different issue of data quality (i.e. when data is not documented, it becomes difficult to judge its quality and it becomes less usable; moreover, data quality should in itself be documented, which aids reuse). Missing metadata could become a major issue especially if the controlled data access system foreseen by the data management bill (see below) is designed as more restrictive, i.e. if researchers have to specify ex ante precisely which variables they require in data they are requesting under controlled access.

The needs identified by the focus group participants as well as by potential data users in the survey mentioned above can to a large extent be addressed by the data management bill that is being drafted. The law will oblige some public data holders to catalogue and document some of their data assets. However, reactions by data holders in the previous stages of this process indicate that there are significant limitations to what data holders

² Programme of Statistical Surveys, e.g. for 2024 vyhláška č. 316/2023 sb., o programu statistických zjišťování na rok 2024 at <https://www.e-sbirka.cz/sb/2023/316/2024-01-01>

will be able to achieve with respect to data cataloguing and documentation. The main limitations pertain to the personnel capacities and the time they expect to have to dedicate to building data documentation. There also is a risk that these obligations will be perceived as an imposed burden rather than something that would also bring benefits to the data holders themselves. These risks becoming a dead-letter law in the same way that some of the previous obligations related to data inventories did (mainly in the law on public administration information systems³). However, DIA is working to develop the relevant standards in collaboration with data holders and will be providing expert support. An engaged attitude by ČSÚ would also be helpful (ČSÚ has collaborated on standards for data dictionaries and provides the dictionaries as open data, does not have the capacity to support the use of these dictionaries by data providers, which would aid interoperability).

Accessibility, interoperability, sharing and reuse of data

Participants in focus groups as well as respondents in the DIA-run survey identified a need for making available research data that currently cannot be accessed. This means mostly administrative data and mostly individual-level data. This is a long-identified barrier to research as well as policy analysis.

The recent survey among data users found that access to administrative data and, crucially, data linkage between different sources and data holders, would enable significant benefits in terms of excellent research as well as the ability to design and evaluate public policies. Areas of data that are important to data users include social security, tax, the labour market, schools and health – data that is mostly held by central state institutions in officially recognised information systems. Similarly, data on subsidies to companies needs to be linked with other firm-level data, as some of our focus group participants identified.

The current inability to access and link administrative data has been identified as a barrier by both government analysts and researchers. Consultation with data holders has also highlighted the legal and practical uncertainty that data holders face with respect to data protection.

These barriers are to be addressed by a forthcoming data management bill. The proposed law, in addition to providing and mandating a data management standard, would provide the procedure, legal enablement and specify an architecture for controlled access to data that currently cannot be accessed or cannot be linked. In this system, as currently conceived, DIA is likely to play the role of a central contact point for data users and, alongside other bodies, will provide technical, expert and legal support for data holders. An expert committee would provide advice on evaluating data requests.

Skills and capabilities

During the interactions with participants, it became clear that the degree of understanding about what data is needed for policymaking varies. For instance, it is not always clear that line ministries, as policymaking bodies and data holders, consistently understand the need for the use of microdata for policy design and evaluation, nor do they always have a good view of the state of data quality and availability across the range of policy areas in which they operate.

Similarly, there is an uneven degree of capability for managing data assets across the central government. This combines with varying arrangements regards to how much flexibility ministries have vis-a-vis contractors developing or maintaining their IT systems, resulting in variable degrees of effective knowledge of data assets, including documentation and metadata generally.

This applies not only to core IT units, but also individual policy and analysis units, where standards and skills for data management are generally not expected.

Finally, and in relation to the issue of enabling access to data for research and analysis purposes, there does not appear to be expert capacity anywhere in the system – with the partial exception of ČSÚ – for anonymising data and using other, more recent data protection techniques.

Ecosystem: institutional roles and information flows

A theme running through the needs and gaps discussed above is the fragmentation of the data system within the Czech science-for-policy ecosystem.

³ Law 365/2000 Coll., <https://www.e-sbirka.cz/sb/2000/365>

Participants in the interviews and focus groups agreed that currently there does not seem to be any central actor responsible for overseeing, coordinating and pushing forward the data agenda in public administration. This to some extent reflects the formal delineation of responsibilities: the Czech Statistical Office (ČSÚ) takes responsibility for the statistical system but is not able to expand its role into broader data stewardship, though it does manage some of the core data dictionaries used across the public sector. The Digital and Information Agency (DIA) is a nascent body that is currently scaling up its role in improving data management and use across the public sector, but it has yet to develop many capabilities to become a central contact point for data, and it also has yet to develop a track record in this area to gain the trust of other institutions to e.g. handle their data with respect to data reuse arrangements. Additionally, some aspects of data-related policy (esp. the interface with EU rules) reside at MPO while the Czech Telecommunications Agency and the privacy regulator play their roles.

This is likely to also impact the data management bill, where the current proposal foresees that DIA will play the role of the central point of contact for controlled access to data for research and analysis purposes, a role that in many countries is played by the statistics agency and for which DIA will have to build up professional and technical capacities and infrastructure (which ČSÚ would also have to build, as its current capacities are not sufficient for such activity).

This issue is replicated inside central institutions, where statistics units rarely play the role of a data steward for the institution. In some cases, the data stewardship role for a whole sector has been spun out into a specialised body, e.g. ÚZIS for health and CENIA for environment, which helps build loci of expertise but creates distance from policy making. Nor do ministries have dedicated senior roles charged with data governance and management responsibilities, so there is no point of accountability and no high-level network of data professionals across government that would hold the agenda, ensure coordination and visibility. These organisational and individual needs manifest inside ministries, where skills, knowledge and practices around issues such as data management, but also data analysis skills, vary widely even inside one institution. There is also uneven understanding among data holders about the value of access to administrative microdata for analysis and research purposes.

Finally, there seems to be insufficient coordination between complementary efforts in different sectors and communities. There is relatively little contact between the professional communities in statistics, research data management, and data management as it relates to public sector data. As a result, for instance, experts who have worked on open data frameworks have relatively little knowledge of the research data management community.

To some extent this reflects different needs and approaches in the different sectors and communities, but there seems to be potential for more cross-fertilisation between them. There are areas where the different actors could learn from each other, including with respect to technical and legal arrangements related to data management and reuse. In all these communities and related institutions, long-standing efforts have been underway to improve data findability (ČSÚ catalogue, the national open data catalogue, CSDA catalogue), documentation (ČSÚ metadata system, Open Formal Norms in the open data context, and the usage of DDI frameworks in the research data archive). There are also several systems either in use or in development for controlled access to microdata (CSDA archive, EOCS, DIA based on data management bill; TA CR access to some firm-level survey data).

A more fluid communication environment between the different actors in the ecosystem (the statistical system/ČSÚ, academics, administrative data holders and official users, and perhaps academic data stewards) could also enable the identification of user needs with respect to statistical data collections and publication as well as administrative data access.

It is, however, not clear who could currently play a stronger role as a convenor of information exchanges in this space.

3.3 Potential interventions

With respect to **the needs of data users**, some participants identified a need to strengthen contacts between data users and data producers, but it is not clear who could guide efforts in this area so that it would cover the different aspects of the data landscape (statistical and administrative data and open data, as well as research data). To some extent, the issue would be remedied by **cataloguing data and signalling ownership and**

responsibility for individual data assets (see below), but there remains a need for communication between users and producers esp. around user needs.

Gaps identified around **data findability and documentation** are largely a matter of capacity and priority rather than analysis or knowledge. The way forward should include steps to prioritise data cataloguing and documentation efforts with a view to the needs of external as well as internal data users and to secure buy-in of data holders, while **avoiding creating blanket legal obligations that would risk demotivating or overburdening data holders**.

There are existing initiatives and systems that can be extended or learned from, including the metadata standards and systems developed around open data; the ČSÚ metadata infrastructure and knowledge; and the experience of other data stewards (e.g. the Czech Sociological Data Archive – CSDA, and the emerging data management and data governance practices of individual institutions, including TA ČR).

Data sharing and reuse would be aided by legal enablement by the proposed law on data management. At the same time, the operation of the proposed data access system is premised, first, on data cataloguing and documentation (see above); second, on data holders' attitudes and behaviour changing with respect to providing data access; and third, on the specialist and technical capacities to make judgments about making data accessible and to technically enable access while safeguarding privacy and confidentiality. This latter area includes **the design and implementation of data access infrastructure, including safe rooms, and developing procedures of making data accessible through the use of modern data protection techniques**, many of which are not in general use in the public sector, e.g. the use of synthetic data, differential privacy, k-anonymity and remote code execution.

All these changes could be facilitated by **two additional system-wide changes**: an **increase in capabilities for data management**, data governance and related activities across organisations, and a **clarification and strengthening of roles across the data ecosystem**. With respect to capabilities, stable capacities are needed to support the emerging data management agenda (to be laid out in a data strategy currently being drafted by DIA). This should include consistent support capacity inside DIA, as well as core capacities in line ministries and other data holders in central government.

Regarding roles, our participants did not propose specific actions, but from the interventions we did observe it is plausible that at least **more coordinated messaging towards data users from DIA and ČSÚ** would be helpful in areas where the statistical and administrative data domains intersect. With respect to responsibility for the data agenda, a solution seen in a number of countries is the creation of Chief Data Officer roles for individual departments or for the government as a whole (e.g. OECD 2019b).

4 The need to institutionalise scientific advisory bodies and cooperation

4.1 Problem statement

Following the findings from the diagnostic report, the expert team identified one of the priority areas for this report to be the institutionalisation of scientific advisory bodies and cooperation between policymakers and academics. In the Czech Republic, there is a broad spectrum of academic institutions, advisory bodies, ministry-owned or sponsored institutes, think-tanks and consultancies. These provide an ample breeding ground for the Czech science-for-policy ecosystem to flourish. At the same time, the existence of fragmented internal and external research capacities that are of varying quality poses a notable challenge for policy makers in terms of finding reliable partners in the scientific realm that could support EIPM. The interactions between the demand and supply side are often not sufficiently institutionalised. An essential part of this ecosystem is based on informal and personal relationships. As mentioned in one of the focus groups, the system to support evidence use in the Czech Republic is already there, but there is a need to change how this system is used and make it more transparent and efficient.

This section aims to describe in more detail the different challenges in terms of obtaining or providing science advice. These challenges are followed by an outline of the desired pathways by the beneficiary organisations and other key stakeholders. Lastly, the section will provide suggestions of some possible solutions to these challenges, supported by examples of good practices from the Czech Republic and abroad.

Table 5: Needs and gaps related to the topic institutionalising scientific advisory bodies and cooperation.

Need/Gap - description	Relevant BOs and stakeholders	Potential solution (where relevant)
The need for transparent and efficient advisory bodies	Office of the Government, All line ministries, Official scientific advisory boards, CeTTAV, CPPT	Build formal, quick and operational relationships Code for science advice Establish administrative support Incentivise the scientists to participate Proper mixture of professionals, academics and managers of science
Need to increase quality and actionability of recommendation issued by advisory bodies	Office of the Government, All line ministries and TA ČR, CeTTAV, CPPT	Increasing quality and relevance of recommendation of advisory bodies Training on how to communicate recommendations to policymakers Recognition from side of policymakers Improve guidelines on how to provide science advice
The need to improve the cooperation between academia and public administration	Office of the Government, All line ministries, CeTTAV, CPPT	Build and further develop analytical units Institutionalise and strengthen a role of knowledge brokers, ensure KTOs widen their transfer activity beyond technology transfer and focuses on knowledge valorisation Chief science advisors (+ network of science advisors) Policy labs „Innovation scouts” as a contact point for public administration Regular conferences, meetings
The need to institutionalise the way analytical (research) units operate	Office of the Government, All line ministries	Update and modernise the legislative and methodological framework to standardise research/analytical operations (the processes, outputs, internal and external cooperation, knowledge management, etc.)

Source: Own elaboration.

4.2 Needs and gaps

Informal and personal connections between policymakers and academics are a natural enabler for trustful cooperation, but it needs to be complemented with efficient formal and institutional relations to ensure levels of quality standards, transparency, accountability, and multidisciplinary. Building institutionalised solutions is therefore an obvious path to strengthen the Czech science-for-policy ecosystem and ensure a better integration of EIPM processes inside public administration.

The participants of the focus group outlined several challenges in relation to science advice and cooperation. They agreed that it is difficult to obtain timely and concrete policy advice in the Czech science-for-policy ecosystem. They explained that different types of analysis are necessary for different policy work. These may range from quick, ad hoc advice, to more in-depth knowledge that requires more time for preparation. The former may be especially difficult to obtain.

That feeds into the broader issue of what participants perceive to be a general disconnect between the public administration on one side, and the scientific community on the other. The public administration side does not necessarily always understand that the scientists or researchers are not devoting their time to actively studying or becoming acquainted with concrete and ongoing policies and agendas. On the other hand, scientists do not always understand the policy instruments that the public administration has at its disposal. From participants' own experience, the longer the cooperation between the two sides and exposure to each other, the more such a disconnect is reduced. One participant also emphasised that if researchers are involved on an ad hoc basis, for shorter periods of time, a guarantee of quality is missing, which would not be the case if more formal, longer-term cooperation was in place.

Such a disconnect is also fuelled by the institutional contexts, capacities and incentives. For instance, some focus group participants mentioned that for many researchers, the motivation to become involved in policy advice may not be sufficient. Although this depends on the particular context, generally speaking, academic careers and financing of research projects take priority over participating in more applied, policy-relevant research. Moreover, in this type of work, long-term dedication is crucial (if one is to generate something other than very general advice).

Contributing to a lack of motivation may also be the feedback from the side of the public administration. Some participants stated that the public administration often expects the deliverable under time pressure and does not provide positive or negative feedback to evidence provided by scientists. Rather, working with the administration can be tedious for scientists, especially when it comes to having their recommendations or proposals declined. Their frustration may further be fuelled in cases where the public administrators in charge of applied research change or leave, and there is nobody within a department or agency to implement the results of their research. Even worse, when the research is unsupported by the newly appointed public officials, months or years of work may end up being unused.

To add to that, as previously also addressed in Section 2, ministries are limited by complex public procurement legislation, which disincentivises academic institutions to apply. This places ministries in a position where they often have to select among offers that are of a lesser quality; a particular example mentioned was in the area of policy evaluation, as it was pointed out that ministries sometimes struggle to find a reliable supplier of evaluations. Some participants emphasised that this problem could potentially be addressed by having ministries inform in advance of their plan to address a need in the research/evaluation realm to give sufficient time for the preparation of adequate offers. Evaluation Plans in EU funds can serve as a partial inspiration here, as it is the only publicly available free known repository of analyses/evaluations.

Another obvious reason for the disconnect is that the inputs or instructions that scientists receive from the public administration may be imprecise or unclear. This is, according to participants, the result of insufficient analytical capacities within ministry departments. Officials working for departments may not know what kind of analyses they already have at their disposal. If their capacities are insufficient, the instructions they write and communicate to scientists will also be unclear. Another challenge are issues with knowledge management within some ministries and analytical units, where they may not have mechanisms in place to transfer and disseminate the knowledge that has been generated further within the administration to avoid the duplication of scientific or analytical work.

One of the tools that the public administration has at its disposal to strengthen scientific cooperation is the use of regulatory impact assessments (RIA), which should - at least in an ideal situation - generate the scientific evidence base necessary to inform decision-making surrounding a new policy proposal, and could be adjusted

over time irrespective of the stage of the policymaking process. However, given the fact that RIA in the Czech Republic is, for the most part, seen as being only formally implemented, the public administration is not using this tool to its advantage to generate useful science advice. The main apparent reasons for that are lack of time, lack of competencies and little to no impact on the implemented proposal.

Other tools similar to RIA could be introduced, if there were sufficient analytical (research) capacity in the central government bodies: such as spending reviews, investment analyses, SIAs (sustainability impact assessments), environmental-climate impact predictions, performance benchmarks, etc. These analytical procedures should be used not only in the preparation of legislation, but also in strategy development and policymaking, as well as in retrospective evaluation of their actual impacts. As a result, the application of these tools at this scale could lead to a significant strengthening of long-term scientific cooperation. Today, however, it is hampered by the absence of a legislative obligation for ministries to carry out the above types of analysis. There is no uniform methodological framework for ad-hoc drafted analyses that would standardise the relevant operations and the quality of their outputs.

Institutionalising strategic foresight can also strengthen the ties between the scientific community and policymakers. In Czechia, strategic foresight is now increasingly integrated into RDI (e.g. <https://stratin.tc.cas.cz/>) or environmental policy making (e.g. [SEEPIA](#)). However, although formally recommended in strategic planning [guidelines issued by the MMR](#), there remains a potential for a more systematic, integrated and coordinated application in other policy domains (for example health and social policies or regional development). Foresight capacities are fragmented in the Czech ecosystem, some projects are done in-house, others are procured from academic institutions, think-tanks or private consultancies. Therefore, there is a need to strengthen the coordination of these various actors and build networks of foresight practitioners, policy makers and scientists.

Another possible direction for cultivating policy-relevant knowledge involves collaborating with already established and actively supported projects. The National Centres of Competence programme, supported by TA ČR is an illustrative case. The National Centres of Competence are substantial projects, spanning a diverse array of contemporary research topics and serving as crucial points that foster collaboration between researchers and corporations, following a comprehensive agenda. The wealth of knowledge emanating from these centres could provide a valuable resource for informing and shaping policy making. Similarly, some other programmes implemented by TA ČR and their relevant sub programmes can generate policy-relevant knowledge (especially SIGMA, Theta, Environment for Life.) Of course, harnessing knowledge from research teams in these programmes' projects will require systematic cooperation and concentration of effort concerning translating the knowledge into inputs that are useful for a policy-making process.

When it comes to formal advisory bodies, participants agreed that they often take on a formal role. Often, they consist of a mixture of various actors with different relationships to the public administration. Therefore, committees are also perceived as often not being 'scientific enough', because they are made up of stakeholders of different backgrounds (business, NGOs), research managers, practitioners, administrators or even politicians. Formally they can have different advisory roles; among others also suggesting and criticising policies, supervision of the activities of the public administration, or exercising other specific tasks. Alternatively, sometimes members of advisory councils coming from academia seem to be too distant from the need's existent in the public administration. Rarely do such bodies serve as knowledge brokers, and they mostly do not engage with the demand and supply side in the role of 'translators'. Informally, they might be used by various stakeholders to express opinions concerning a specific agenda or policies of the Office of the Government or other public bodies. In fact, in mature science-for-policy ecosystems, government advisory councils are used as deliberative platforms between government, experts and interest groups to help shape governmental and/or ministerial policies, and their role as knowledge brokers would vary and sometimes other actors in the ecosystem such as science advisers play more proactively such a brokerage role (Gluckman, 2021; Pedersen and Hvidtfeldt, 2021).

Last, but not least, the challenge mentioned by some participants was that for specific topics, scientific knowledge or expertise in the Czech Republic does not exist. In such cases, the state has to create its own knowledge, sometimes by reaching out to institutions or researchers abroad. In this regard, there might be a potential for the CZExpats organisation and also other national learned societies to play a mediator role in getting researchers abroad more engaged with the Czech science-for-policy ecosystem.

4.3 Potential interventions

The aim of this subsection is to outline the objectives that beneficiary organisations and key stakeholders have raised in the context of the above-described challenges. Some objectives might be interpreted as the end goals, or the desired situations.

One of the most common remarks is that many functioning relationships between science and policy are based on informal relationships. The general desire in this context is to **build relationships that are formal, but quick and operational**. The “ideal” state would be one where all line ministries and the centre of the government would have long-term relationships with scientists through their cabinets. As outlined before, this would improve the quality of the relationships in many ways - the quality of research outputs would increase, policymakers would have an easier time asking for advice and would better understand when to ask for advice, scientists would be better prepared when asked for advice, as well as know how quickly they need to prepare an answer, etc. One participant described the need in the following manner: “Science advice often needs to be a ready-to-cook meal, when the politicians ask me a question, I have the meal (the study) already prepared, and I just need to warm it up for the decision-maker.” Furthermore, with regards to understanding the research needs of the policymakers, **the proposed solution could be to have every head of department of the ministries present an annual reflection of their department’s knowledge needs**, which links to needs already mentioned in the section 2 of this report.

An important example of already institutionalised scientific advice is the RIA process. As described in the diagnostic report, this process is, in the context of the Czech Republic, often done pro forma and often after the actual decision has been made, to meet administrative demands. A point that was raised during the focus group was that currently, most line ministries do not have sufficient long-term capacity to operate the RIA process. The main question then is how to make the best out of the RIA process. Our participants have stressed that, if done as intended, it has clear benefits. It is worth pointing out that even if a law is not introduced in the end, the scientific knowledge that has been generated remains and can be used in the future or for other purposes. **The RIA process is one of the archetypes of knowledge demand: the process is proactive, formal and long-term.** Therefore, the process is aligned with the idea of building long-term relationships with the scientific community, while being based on formal relationships. Another aspect for RIA is how to ensure that the RIA process has the desired impact. It was noted by one of the participants that it would be beneficial if **RIA was written early in the legislative process together with an emphasis on various solutions to a problem**. Through this adjustment, it would be possible to avoid RIA being only a formal description of “how it worked out in the end”. Instead, RIA would be an entry point for thinking about a variety of policy options. Some representatives of BOs raised the idea of introducing the RIA draft already into the plan of legislative planning. The idea is that if, **even just in the form of a literature review, RIA would be demanded this early in the legislative process, it would incentivize writing RIA in a less formal and a more useful way**. To summarise, both the Centre of the Government and the line ministry officials from beneficiary organisations see great potential in the RIA process but point to the limited capacities that ministries have to do the process appropriately, as well as see potential changes in the process that would allow evidence to be more prominent throughout it.

Having said this, the RIA process, although very useful when done as intended, is only a partial segment of the whole science-for-policy milieu. In the opinion of the participants, building an institution similar to the JRC at a government level would drastically help to support science for policy in the country. It is important to note that the Czech Republic has different government funded-public research organisations available at arm’s length of different ministries (see diagnostic report), which could potentially produce state-of-the-art research to meet knowledge needs in government departments, and thus play an advisory role in sectoral policies to the Czech government. However, participants in the focus group often referred to a mismatch of expectations between government departments and their public research organisations at arm’s length and a lack of coordination between actors. **Closer alignment of scientific programmes to meet political priorities and formal interactions** would be welcomed (see Box 3). The reform of the law on the Support of Research, Experimental Development and Innovation currently in discussion opens a venue for improving this collaboration.

Box 3. The Joint Research Centre (JRC) and other government-funded public research organisations

The European Commission's **Joint Research Centre (JRC)** is the science and knowledge service of the European Commission. The JRC provides independent, evidence-based knowledge and science, supporting EU policies to positively impact society. It thus plays a key role at multiple stages of the EU policy cycle and contributes to the overall objective of [Horizon Europe](#).

The JRC works closely with research and policy organisations in the Member States, with the European institutions and agencies, and with scientific partners in Europe and internationally, including within the United Nations system.

As per the revitalised [JRC Strategy 2030](#), its core strengths are anticipation (what is coming, beyond the latest crisis, and being able to provide the scientific underpinning for future policy initiatives), integration (enhancing our ability to build links between the different scientific and policy areas inside the Commission and beyond, since the challenges we face are so complex that one single area of science can rarely provide all the necessary answers) and impact (assisting policymakers to track and assess the impact of their policies).

The JRC was originally established under the Euratom Treaty, a proportion of its work is in the nuclear field, but it also offers scientific expertise and competences from a very wide range of disciplines in support of almost all EU policy areas. It has almost 3000 staff divided in 33 cross-cutting portfolios to better integrate its work across scientific and policy domains to provide coordinated support.

Lastly, the JRC is a directorate-general of the European Commission and is embedded in the European policymaking machinery to ensure European policies benefit from the latest scientific input.

Government-funded public research organisations operate in many European Member States with varying levels of engagement and collaboration with their specific government departments or ministry. These organisations can cover either all scientific disciplines such as CSIC in Spain, CNRS in France or CNR in Italy, or thematic such as energy, environment and technology in CIEMAT in Spain; veterinary, agrochemistry, and public health in Sciensano in Belgium, or agriculture, food and environment in INRAE in France. Noteworthy, some of these organisations have established departments for science for policy and foresight and have reinforced their activities in the field of science for policy to make better connections between their scientific staff and policymakers, to produce policy outputs, and to train academic staff in communicating science for policy.

Another issue that BOs agreed on is that most analyses that are provided to them at the moment are too broad and give very general recommendations. One of the interlocutors estimated that maybe around 10% of all analyses they receive entail applicable and useful recommendations that can be fairly easily adapted. This concerns different actors in the Czech science-for-policy ecosystem: academia, NGOs, consultancy firms and official advisory bodies. This again relates to the topic of long-term relationships and understanding of what the policy side actually needs and can do. The participants expressed the need to have a continuous dialogue between public officials and scientists to make sure that the needs and the means of their fulfilment are well-communicated. All participants agreed that **it is crucially important to build analytical capacities in the ministries and at the Government Office**, as these should have capacities and knowledge to ensure that the analyses will entail useful and applicable information. The way how analytical capacities are built and how they co-operate needs to be framed legally and methodologically to ensure their quality and transparency.

An issue that was also raised is that the ministries are sometimes not aware of what is already happening within their institutions in terms of research and what analysis they have already obtained. Ministries often already have the knowledge, but may not know about its existence, or may be asking the wrong research questions. As one of the interlocutors elaborately said:

*"You need to define and specify the terms of reference well and you cannot do that unless the civil service has a team that is capable of putting those objectives together. The scientists need a partner on the government side. **There should be someone sitting there who understands all sides. A knowledge broker, someone who connects these parties and translates between them. The analytical capacity of ministries must be strengthened. A mix of people is definitely needed. We have scientists who are great and good and those who know the system. A translational role is essential, someone who connects both worlds. These types of people should not only be part of analytical units of the ministries, but also sit in different advisory bodies. It cannot just be the top oncologists in the advisory body, we also need those who know how the insurance system works, how the medical system works and those that know how the policy world operates and what their needs are.**"*

Box 4. Methodology for building analytical capacities in public administration

Slovakia has adopted its [strategic document](#) for building analytical capacities in public administration in 2023. This document establishes unified approach and quality standards for building analytical units (referred to as "AJ") within the public administration in Slovakia. It addresses the diverse nature, types, sizes and quality of existing AJ, aiming to define consistent standards for their establishment, development, output evaluation, and quality assurance processes.

The primary recipients of the document are existing and aspiring AJ, aiming to provide them with a shared set of rules and procedures to adopt during the establishment process. Adherence to these standards is expected to result in the creation of comparably high-quality AJ within the Slovak public administration. The document is overseen by the Steering Committee for Analytical Units, responsible for evaluating the quality of AJ according to the standards criteria outlined in the methodology. It also holds the authority to amend existing standards and adopt a new one.

Key aspects of the document include defining parameters for AJ concerning organizational, managerial, and qualification criteria. It distinguishes between small, medium and large AJ based on the number of analytical staff, outlines their organizational and managerial scopes, and emphasizes the importance of staff qualifications and skills, as well as their competences. Lastly, the document categorizes analytical positions into experts, seniors, and juniors, outlining their respective roles, responsibilities, and skill requirements, while also distinguishing between analytical focuses such as mathematical/statistical, sector-specific, or process-oriented analyses.

The recruitment process for analytical staff follows legal guidelines like other departments within the public administration but additionally incorporates multiple testing stages to select the most qualified candidates. Candidates for analytical positions undergo standardized testing consisting of analytical thinking test, professional test, language proficiency test, information technology test, case study and final interview. Following standardized testing procedures ensures fair and transparent recruitment for analytical positions, maintaining high quality standards across the public administration.

AJs vary in the scope of their competences, activities, and tasks. Much depends on the size of the analytical unit and its political framework. AJs should primarily prepare materials and documents that respond to the needs of the department and help achieve its policy objectives. It is expected that they will produce outputs that influence departmental policies and enhance their value for money. This primarily includes common analytical outputs such as analyses, commentaries, and manuals, as well as specific outputs such as reforms and strategic documents.

The way seven scientific consortiums at the Ministry of the Environment have been set up and operate are seen as a case of good practice by a number of stakeholders. The consortia operate as an interface between civil servants, scientists, and managers of science. They are financed through the programme of the Ministry of the Environment named Prostředí pro život (Environment for Life) which is administrated by TA ČR. Every consortium has its researchers from academia and other research institutes and their user and project guarantor represented by the ministry. The role of this guarantor is to connect the findings of the consortium with the rest of the ministry. Although it has taken some time for civil servants to appreciate and see the value of these consortia, many agree that nowadays, this is the case. Thus, **the key challenge here is how to successfully copy and adjust these practices for other ministries.**

In the context of TA ČR programmes, one of their objectives is to build programmes in a way to better support science-for-policy. **One of the pathways TA ČR would welcome in this matter is sectorial, technological and trend foresight.** TA ČR designs and manages programmes in different sectors and industries, but given their limited financial and organisational capacity, they are not able to have their own expert capacities in all these areas. **To establish more evidence generation about these different industries would significantly improve their capacity to design impactful programmes and public tenders.** Foresight, horizon scanning and other similar methods of studying the future are already being adapted in some institutions (e.g. actualization of Strategic Framework Czech Republic 2030 with a view to 2050 by the Ministry of the Environment). One of the participants raised a point that these methods are already often more beneficial than official advice bodies, as there are rather managers of science appointed than scientists themselves.

Strengthening the foresight ecosystem to deliver timely and relevant advice requires building capacity on both sides of the science-for-policy interface together with a strong inter-institutional coordination. **Trainings and methodological guidelines increase the capacity of civil servants in analytical and/or strategic planning positions to generate or procure forward-looking insights. Establishing competence centres on foresight both in-house and at arm's length (potentially also in the private sector)** is also regarded by respondents as a possible solution, thus leading to a more decentralised ecosystem. For nurturing the demand, **it is also crucial to raise awareness among senior policy makers on the benefits (as well as the limits) of foresight.** Last but not least, **a central coordination body at the level of the Office of the Government is suitable to ensure that foresight activities are not overlapping,** but also to foster collaboration and networks between foresight practitioners, domain experts and policy makers.

With regards to foresight, but generally in relation to science-for-policy, the point was raised that when discussing it, we should not put aside the fact that private companies often have their own foresight and scientific capacities. In other words, not all scientists pursue an academic career. Therefore, there is a need to include a mix of academics and professionals (especially those with scientific knowledge/background) in scientific advisory bodies.

When discussing the topic of scientists enthusiastically entering the science-for-policy interface, one of the main challenges is **to have a system that rewards them for these types of activities.** In the Czech Republic, a research evaluation methodology known as Metodika17+ is in place. As part of this methodology, which includes five modules, scientists and institutions can be evaluated within Module 3 on scientific relevance. According to one of our interlocutors, what we are missing are the success stories of academics that have achieved an impactful career progression through government advice. In this case, the institutionalisation of science advice has already happened, as the methodology offers that. What is missing is a change of behaviour of scientists on an impactful scale to create such success stories and **motivate other scientists to view government advice as a sensible path for achieving progress in their careers.**

Another option that was mentioned to increase the involvement of scientists in public administration advice is the idea of **discussion papers.** The basic idea is that academics **would be incentivized to publish these papers, with the main aim of initiating topics and debates on important issues that are not addressed by public administration.** The dynamic of the “typical” roles of supply and demand would in this case be altered, as it would be the scientists who would “demand” a reaction from the public administration.

A type of example of this practice is AVex, which is an independent expert opinion prepared by the Czech Academy of Sciences for state bodies and its representatives, usually published four times a year, as a source of expert knowledge support in matters of public affairs. The expert guarantor of the opinion is the relevant institute (public research institution) of the Czech Academy of Sciences. AVex is a proactive, scientific and formal way of providing science advice. Members of the beneficiary organisations knew about AVex and agreed that **such practice should be developed further,** although the policy impacts of AVex are not known as of now. One of the suggested developments would be to create sectoral AVex issues instead of one that deals with “any” sector and its current topics. The main advantage participants of the focus group saw in AVex is that policy makers can always come back to the particular expert opinion and use it to support their work.

Scientific committees are generally formal, reactive and long-term. In the Czech Republic there is a wide range of them. There is also a tradition of board committees that are politically oriented. Examples are Pačes’ energy committee or permanent coal committee. These committees are generally not sufficiently scientific, even when they have a high impact on policy making. One of the needs raised by our interlocutors was related to the fact that these committees tend to generate very broad recommendations that are challenging to implement. The main idea would be **to have a much closer working relationship between committees and ministerial departments that are subjected to their recommendations.** That way, the committee could get feedback from the departments on the design of these recommendations.

The creation of roles of (chief) science advisers was also discussed. The idea is that **for every ministry, a (chief) science adviser would be assigned, whose main role would be to connect their ministry with scientific expertise, help the ministry better identify knowledge needs, bring closer the work of advisory councils and expert committees, and nurture better working relationships with the scientific community at large** (both industry and academia). This role is typically less formal, reactive, short-term and translational (Reillon, 2016). This potential role strongly relates to the aforementioned need for knowledge brokers and may also vary depending on the desired profiles. Our interlocutors agreed with the idea of introducing such a role. It needs to

be emphasised that such a role has to be accompanied by an analytical team that would be able to process the obtained evidence for policymakers. However, many of the participants were surprised to hear that the Czech Republic has a vacant position of the Chief science adviser within the Office of the Government, which was also occupied by the current Prime Minister Petr Fiala in the past. In their view every ministry would ideally have their own (chief) science advisor. Another worry was connected to defining the responsibilities and the specific modality of this institution. Such a position would also have to be well-rewarded financially, as the demand for the skills needed to fulfil the role would be quite high. On the other hand, in other countries (e.g. United Kingdom) the position of chief science adviser can be made as a part-time job, which would allow for more flexibility and potentially draw in more candidates.

Box 5. (Chief) Science Advisers at ministries and their inter-ministerial networks

In the UK, the first cross-government Chief Scientific Adviser (CSA) was appointed in 1964 and since 2002, additional science advisers have been appointed to every government department in the UK. Currently, [the UK has a Government Chief Scientific Adviser with over 20 Departmental CSAs](#) who are also supported in each department by science officials. Their role is to actively provide advice to ministers and promote evidence-informed policymaking, discuss and facilitate implementation of policy on science, technology, engineering and mathematics including the support of design of the Areas of Research Interest (see Box 1), and facilitate communication between government and key stakeholders on particular high profile STEM-related issues and those posing new challenges for government. They all work as a formal network supported by the **Government Office for Science (GOS)** that promotes inter-ministerial coordination and offers weekly meetings with CSAs to discuss departmental science priorities and policy topics of relevance to the provision of evidence. A [Guidance for CSA and their supporting teams of CSA Officials](#) offers information on the role, responsibilities, codes of conduct, and how the network is embedded in the wider UK science-for-policy ecosystem. Lastly, CSAs tend to be mid to senior-level career academics or industry professionals who are seconded or hired on a full-time or part-time basis. Similar arrangements and networks can be found in US, Canada, India, New Zealand, among others.

In Estonia, the [Science Adviser Network](#) was co-created by the Ministry of Education and Research and the Estonian Research Council (ETAG) as part of the Estonian for State R&D Programme 2017-2023, with the support of European Regional Development Funds: the RITA programme for Support for Sectoral R&D. Currently, over ten science advisers have the task to advise ministries on matters related to R&D, plan and coordinate R&D cooperation at the national and international level, develop research plans for the Ministry's area of governing and implement them in cooperation with different stakeholders, and represent Estonia in international initiatives for R&D cooperation. Initially, these positions were co-funded by ETAG and the respective government department, but these advisers have now become fully funded by their department. ETAG still holds responsibilities to sustain the informal network as a platform to share good practices, offer capacity building, promote inter-ministerial cooperation, set common goals and build synergies, and keep institutional memory.

Lithuania's **Research and Innovation Adviser (R&IA) network** is a new initiative, a component of the "New Generation Lithuania" plan under the "Next Generation EU" instrument, which seeks to fortify the advisory role of the Research Council of Lithuania (RCL). More specifically, the R&IA network aims to enhance evidence-informed policymaking and collaboration between academia and decision-makers. The network envisions 15 advisers strategically placed in Lithuanian ministries, guided by criteria emphasising expertise in governance and building networks between science and policy. Set to officially launch in late 2023, the initiative anticipates broad political support and aspires to improve evidence take up in policymaking, with tailored activities aligning with each institution's needs.

Interestingly, the Czech Republic has had the role of the Prime Minister's Chief Science Advisor in the past. In fact, between September 2011 and May 2012, current Prime Minister [Petr Fiala](#) used to hold the post of Chief Science Advisor. The post has also been held by [Rudolf Haňka](#) in 2013. However, the post was only attached to the Prime Minister, lacking any inter-ministerial dimension, and somehow very much linked to the Research, Development and Innovation Council (RVVI).

Box 6: Good practices in institutionalising foresight

Institutionalising foresight activities has proven to be challenging in other countries (see [School of International Futures, 2021](#)). The variety of institutional arrangements is influenced by cultural, historical and institutional factors. For example, Portugal or Finland, have foresight units located at the heart of government. Lithuania has recently established a governmental think-tank (Strata) at arm's length. In the UK, foresight capacities are developed both inside and outside public administrations. European institutions have internal foresight units (e.g. the JRC Competence centre on foresight, the European Parliamentary Research Service or at the EEA), but they all coordinate and collaborate at the inter-institutional level via the [ESPAS network](#). Drawing from the experience of these countries, some good practices are nonetheless applicable in the Czech context. Foresight units should be both proactive in agenda setting and reactive to policy makers' needs. This requires a degree of freedom to be able to propose new topics that are not on the agenda, as well as to ensure that pluralistic perspectives are considered. At the same time, it is important to adapt formats, language and depth to the needs of the final users and to be able to react to unexpected developments and pressing needs. The need to modernise HR and better target training activities.

5 The need to modernise HR and better target training activities

5.1 Problem statement

The diagnostic report shed light on three sets of interrelated problems concerning the ability to attract, train and retain skilled and competent policy analysts within public administration. The common denominator to these three issues is the lack of definition and recognition of policy analyst positions both in terms of content for recruitment and in terms of skills and competencies for skill development and training.

Czech public administration does not recognise the analytical profession as a specific skill set that requires particular knowledge and competencies. The current lack of recognition of the analytical profession, consequently, means that there is no established community in which an exchange of experiences, mutual learning, professional development and identity can occur. Furthermore, it is difficult to define what capacities and knowledge analysts should have and should be trained in. Generally, there are no mechanisms to help ensure the basic skills needed for working with evidence, data and knowledge for a broader range of civil servants. This lack of support and incentives to develop these skills is present in recruitment, continuous education and assessment.

Similarly, the Czech scientific organisations have not established frameworks, funding schemes and training programmes to encourage scientists to engage in policy making cycles. Academic career paths, including tenure tracks, are determined primarily by academic outputs. Researchers are encouraged to devote time to research communication, but without specific provision on science advice. Research evaluation schemes (especially module 3 devoted to societal relevance) struggle to fully acknowledge impact and formalised collaborations with the public sector. Professional PhDs are primarily targeted at industrial RDI (hence their official title: “Industrial PhD”), although MVVI is currently developing efforts to promote professional PhDs in public institutions. To date, there are no learning programs for scientists to acquire relevant skills in EIPM (for e.g. drafting of recommendations). This is currently being addressed by the Charles University Knowledge Transfer Centre (CPPT UK) who aims at developing training schemes for post docs.

Table 6: Needs and gaps related to the topic HR and training.

Need/Gap - description	Relevant BOs	Potential solution (where relevant)
The need to attract highly qualified analysts into the public administration	Line Ministries, Ministry of Interior, TA ČR	Provide financial incentives Improve job advertisement (incl. training opportunities) Organise job fairs for public administration Introduce system of headhunting into public administration Increase prestige of working in the public administration (e.g. reputation)
Increase continuity in HR development strategies	Line Ministries, Ministry of Interior	Quality management frameworks addressing specificities of EIPM Training of HR to specificities of public administration
Improve transfer of knowledge and best practices between different administrative bodies	Ministry of Interior	Expand the https://www.sdilenapraxe.cz/ portal to cover EIPM Formalise interactions to share knowledge Organise conferences on HR practices in public administration Transfer through informal interactions
Extend the supply of learning programmes in analytical skills and competences with different levels of proficiency	Ministry of Interior, Ministry of Regional Development	Develop joint programmes between academia and public administration Establish micro-certificates Innovative public procurement (more quality oriented) and training of HR offices Train HR officers about what skills and capacities public administration needs
Identify and develop competencies and skills on both sides of the interface	Ministry of Interior	Draft a competence framework potentially inspired by the JRC models Define a competency model for each type of analytical position in the strategic analytical (research) units at the Government Office and ministries Develop individual training plans for analysts in strategic analytical units at the Government Office and ministries.
Support and train managers of analytical units	Line Ministries, Ministry of Interior	Identify what are requirements of a successful manager Develop internships, rotations, mentoring for managers of analytical units Create system of trainings for aspiring managers

Source: Own elaboration.

5.2 Needs and gaps

The following encapsulates the findings from a focus group session concentrated on human resource development and learning in the Czech public administration, with a specific focus on strengthening capacity for evidence-informed policymaking.

Attraction and recruitment

A significant lack of attractiveness of analyst positions in the Czech civil service was the main leitmotif of discussions in a subgroup dealing with recruitment issues. Participants shared the opinion, that highly qualified candidates are unlikely to apply for analyst positions as long as they were to be covered by the provisions of the civil service act. The provisions of the act and the current practice of their interpretation allegedly do not allow for an adequate remuneration of employees that can hardly deviate from fixed amounts set by individual pay grades that apply across the civil service. In addition, the civil service act requires all civil servants pass demanding exams that are seen to serve little to no purpose.

As a result, civil service loses out to not only the corporate sector but also to organisations of local and regional government such as city halls and regional authorities. Both local government and companies beat the civil service when it comes to creating attractive workplace environments and offering conditions such as part-time jobs and facilities and amenities favourable to parents of young children (e.g. one third of central administrations

do not offer flexible and off-site (online) work contracts, according to a [survey](#) of the Ministry of Interior). The civil service HR teams have little to offer to young graduates, yet they fail to target talents among high school students and older generations with specific needs.

The civil service job adverts remain rather formalistic, long, confusing, dull and uninspiring, failing to sell and explain how potential candidates will get to work on exciting tasks and contribute to public good, thus making a real difference. In effect, offers remain unappealing to a wider pool of potential candidates, which sometimes leads to a very non-competitive hiring process.

In addition, in some instances managers are not included in selection committees and boards and do not get to choose members of their team. Managerial competencies in general are poorly defined and trained in the civil service often leaving teams without appropriate professional leadership.

Career development

One of the primary challenges identified is the mindset of upper management, particularly among state secretaries. There appears to be a significant resistance or lack of engagement with modern human resource practices and the principles of evidence-informed policymaking. This attitude poses a substantial barrier to the adoption and implementation of innovative and effective strategies in public administration.

Another notable concern is the lack of continuity, especially evident with the frequent rotation of ministers. This turnover leads to discontinuities in policies and practices, disrupting the strategic development of human resources and undermining the stability and progress of ongoing projects and initiatives. This gap underscores the need for a more stable and consistent leadership approach within the public administration.

To address this issue, line ministries have adopted [Quality Management frameworks](#) following guidelines provided by the Ministry of Interior. This sets the objective, among others, of “creating a system of personnel processes that will support the efficient use of the professional and vocational capacities of existing employees, their full awareness, and further professional development, and that will identify the service office as an attractive employer for potential employees according to the needs and goals of the office”. The most recent [interim report](#) stresses that most governmental offices have created a separate internal regulation for the formal establishment of human resources policy. However, no specific provisions address the specific domain of EIPM and analytical capacities.

The focus group also highlighted the inadequate transfer of knowledge and best practices between different administrative bodies and HR officers. This deficiency limits the overall improvement and evolution of HR practices across the administration and hinders the ability to learn from successes and failures within different departments or ministries. This issue was partially addressed in the Quality Management framework, with the establishment of a web portal aimed at sharing good practices (<https://www.sdilenapraxe.cz/>).

Regarding learning programmes, the group identified several limitations. Current programmes are often too general and fail to focus specifically on analytical skills and competencies that are crucial for evidence-informed policymaking. Furthermore, there is an uneven quality of these programmes, coupled with a lack of resources. In addition, restrictive public procurement rules limit the ability to select high-quality, effective learning programmes. Another area that is often overlooked is the development of soft skills, which is crucial for a more holistic approach to learning and development in public administration.

Two learning programmes stand out and have been praised by interviewees for their quality. The first is carried out by the Ministry of Regional Development as part of a project to increase the quality of strategic planning (Strateduka), the second focuses on Data literacy and is implemented by the Ministry of Interior. However, the demand for these learning programmes greatly outpaces the capacity, partly due to the broad target groups they address. This highlights the need to establish clear competence frameworks in order to identify key skills and competencies and address a narrower range of potential candidates.

Box 7. Competence frameworks for policymakers and researchers

The [JRC competence model for innovative policymaking](#) is addressing cross-cutting competences (skills, knowledge and attitudes) relevant for policymakers throughout the policy cycle and roles in the process. It sets out a future oriented perspective for policymaking and describes how these competences manifest. The framework consists of a total of 36 competences divided into 7 clusters of competences: Advise the political level, Innovate, Work with evidence, Be futures literate, Engage with citizens and stakeholders, Collaborate, and Communicate, all enabling innovative policymaking.

The JRC ‘Science for Policy’ competence framework outlines the collective set of competences (skills, knowledge and attitudes) desired for researchers and research organisations working at the science-for-policy interface. The continuous development of primary research competencies are outside the scope of this framework. The framework consists of 27 competences divided into 5 clusters of competences: Understanding policy, Participating in policymaking, Communication, Engage with citizens and stakeholders, and Collaborate.

For a wider assessment of all research competences, including those of science for policy, the European Commission has developed **ResearchComp**, in close consultation with relevant stakeholders, delivering on the new European Research Area and the Skills Agenda, and contributing to the European Year of Skills. [ResearchComp](#) is the first competence framework aligned with the European Skills, Competences, and Occupations classification (ESCO), with a focus on transversal and transferable skills necessary for effective and successful careers in all relevant sectors of the society, including academia, industry, the public administration and the non-profit sector.

Resources: Schwendinger, F., Topp, L., Kovacs, V. Competences for Policymaking — Competence Frameworks for Policymakers and Researchers working on Public Policy, EUR 31115 EN, Publications Office of the European Union, Luxembourg, 2022, doi:10.2760/642121, JRC129623.

Management

A significant gap identified is the lack of adequate training for managers, particularly those leading analytical teams. This deficiency is compounded by the absence of robust support systems for these managers, leaving them ill-equipped to effectively oversee and nurture their teams.

Additionally, there is a concerning trend of recruiting the lowest managerial levels from the most technically proficient teams. This practice underscores a fundamental misunderstanding: technical expertise does not equate to managerial competence. As a result, there is a mismatch in skills, with managers potentially lacking the necessary experience or the ability to effectively manage people and workflows.

5.3 Potential interventions

Attraction and recruitment

Multiple quick fixes and longer-term interventions were proposed by participants in the group. There was a consensus that the civil service act requires amendments increasing its flexibility vis-a-vis highly qualified or talented analysts. Equally, **catalogues of service and labour activities are in need of a fundamental review**, adapting them to contemporary realities and situations on the labour market.

Another stream of interventions sets out an ambition to increase prestige of work in the civil service. This is seen as a task to be shared by civil servants and politicians alike. It requires among other things **a stable support by politicians for the civil service and its development instead of calls for cuts and savings**. According to participants, politicians should realise that without professional and skilled civil service, their political intentions and dreams may never materialise.

Finally, due attention should be paid to reforming HR practices at ministries through **better training of staff and introducing as standards modern procedures and techniques** that have been in use in the private sector for years. HR awards should be systematically handed out to the most welcoming and attractive civil service organisations that introduce most innovative elements into their recruitment strategies.

The topic of HR and recruitment is also covered in the Public Governance Report. Similarly, this report proposes to improve the general reputation of the civil service as an attractive and reliable employer. This can be achieved through various means, including but not limited to **highlighting civil service values and accomplishments through active and targeted communication campaigns and providing competitive salaries for high-level management and analysts at various level of seniority** (OECD, 2023).

The strengths of the civil service can be identified through comprehensive consultations, including staff surveys, focus groups, and interviews with current civil servants across diverse ministries and institutions. Part of improving the whole HR experience and onboarding might include **phasing-out paperwork and eliminating**

unnecessary bureaucratic burdens put on new applicants and newly hired civil servants (OECD, 2023). Additionally, the streamlining of HR practices could be improved by simplifying job descriptions and focusing rather on specific job skills and requirements.

Career development

To address these gaps, the participants formulated several needs. There is a pressing need for the development of joint programmes between academia and public institutions that clearly articulate the required competencies and skills. Such programmes should include **collaborations with higher education institutions and focus on practical applications in the public administration context**. Both sides of the interface should be engaged to achieve this. Civil servants could for example allocate a few days each year (which could be part of the employee benefit scheme that encompass voluntary activities) to deliver courses in universities. Academics should also be incentivised to reach out to public servants in order to deliver lectures as external guests.

This also relates to the lack of mapped out core skills and capabilities among existing civil servants. Therefore, **comprehensive needs analysis across ministries would help in identifying required core skills and existing capability gaps among existing civil servants**. Subsequently, an upgraded competency framework for the CZ Public Administration can address these needs through tailored training programs, career development plans for various levels of analysts and managers. These measures could be further improved by **exchange programmes for civil servants at state ministries, EU institutions and research organisations** (OECD, 2023).

Regarding training for scientists and academics, participants suggested building on existing (though isolated) initiatives, which would require mapping them out, then secure funding and capacities. **The Charles University Knowledge Transfer Centre (CPPT UK) is also introducing micro degrees for civil servants who would participate in the joint programmes**. Funding opportunities exist both from national (e.g. regional innovation platforms) and EU sources (e.g. OP Technical Support).

Finally, as new initiatives are launched, **establishing networks to connect individuals and facilitate the exchange of ideas, best practices, and collaborative problem-solving is vital**. This networking would foster a culture of continuous learning and improvement within the public administration. The creation of a hub for public administration was also suggested as a pivotal need. This hub would serve as a centre for developing competencies, leading joint practices, and facilitating shared academic projects. This includes the idea of thesis supervision and professional doctorates, which could bridge the gap between academic research and practical application in public administration.

In conclusion, the focus group session has revealed significant gaps and corresponding needs in human resource learning and development within the Czech public administration. Addressing these challenges and fulfilling these needs are crucial for enhancing the capacity for evidence-informed policymaking. Achieving this will require a cultural shift in management, continuous development of policies and practices, enhanced inter-administrative collaboration, and a focused approach to learning and development. The successful implementation of these changes **will demand strategic planning, adequate resource allocation, and a strong commitment from leadership**.

Management

Participants emphasised the need for a systemic recognition and effective management of analytical work in organisations, which include a manager's skill set. This gap highlights the need for a **competency framework that could guide the development of these skills**, potentially leading to more effective management.

The development of managerial skills is posited to occur not just through training, but through various other learning methods such as internships, rotations, mentoring, and reflective practice. This approach acknowledges that managerial skills are often not acquired in training settings alone. There is a strong emphasis on cultivating these skills internally within the organisation to ensure that they can be identified and nurtured, both internally and externally. According to the PGR, establishing tailored learning and educational materials designed specifically for senior leadership personnel could lead to more effective management practices across the whole public administration (OECD, 2023). **The use of head-hunters and other external recruitment methods is also mentioned as a strategy to fill these roles**, posing the question of what the ideal model for this might be. Moreover, **introducing a near-miss engagement strategy (aimed at recruiting strong candidates who were not previously selected) and enhancing external recruitment efforts for senior leaders with previous experience in the private sector** will diversify management practices and offer a broader (helicopter) view on the challenges facing public administration and public policies (OECD, 2023).

There is a suggestion to **divide managerial responsibilities between individuals with different skill sets – managerial skills, subject-matter expertise, and analytical abilities**. This could lead to considering outsourcing some functions. Successful examples are cited, such as the Ministry of Industry and Trade and the Ministry of Health, where internal talent pools and slow but effective competence-building strategies have been implemented.

6 The need to support cultural exchanges and cooperation

6.1 Problem statement

Another widely discussed topic was the issue of cultural determinants of the science-policy interface. The diagnostic report identified several instances when certain conventional ways in which people tend to *think* and *act* impede a more efficient practice of science-for-policy. These customary mindset-related challenges could not be easily attributed to or subsumed under better delimited and defined categories of financing, structural, organisational, data sharing or HR arrangements but appear to form and represent a category of its own that is perhaps less tangible but equally if not eventually even more important than the previous themes. The challenges that were tabled for discussion by the participants include:

- Insufficient willingness to use scientific findings (evidence) for policymaking
- Decision-making processes that ignore or selectively exclude inconvenient knowledge (especially at the highest levels of political leadership)
- Lack of motivation to apply EIPM in the career system of civil servants, especially senior ones
- Strategies are not routinely evaluated for their impact
- Insufficient willingness to produce evidence for policymaking
- Power and tribal patterns of behaviour
- Established patterns within the academy ostracising applied research
- Cultural divergence
- Low levels of mutual understanding and trust between the academy and policymakers

The individual challenges were illustrated by concrete statements or paraphrases recorded directly or deduced during the diagnostic phase. It is obvious that the aforementioned barriers to more profound use of evidence for policymaking have a lot to do with factors such as motivation, trust, perception, affinity and deep-rooted patterns of behaviour. It is equally clear that there is a scarcity of quick fixes for such deeply ingrained habits, relationships and dogmas. Although a complete change of a cultural mindset may take years, taking concrete actions to enable and/or speed up such a cultural change should be a priority. When confronted with a table created based on Sinkiewicz and Mair (2020) capturing differences between the policymaking and academic cultures, participants largely confirmed the underlying assumptions adding several important caveats.

First, the term ‘policymaker’ is somewhat difficult to translate into Czech as essentially, there is the exact same word for policy and politics that are only to be distinguished based on the context. One should also appreciate the difference between the roles of politicians and civil servants in the policymaking process. The political and administrative cultures may differ significantly.

Second, the participants came up with their own dimensions where the differences between the academic/scientific and policymaking world are palpable, namely when it comes to evaluation/assessment criteria, timelines in terms of discontinuity of policymaking caused by political changes and relative continuity of academic research, and different levels of caution/certainty not only concerning results and conclusions of research/policy analysis, but in terms of value bases.

Representatives of two ministries noted that there are a number of dimensions where, on the contrary, academic and policymaking cultures overlap, bearing very similar characteristics, with both behaving as administrative structures of some sort featuring divides and certain competition (departmentalism) and relatively straightforward career paths. At the same time, there is a significant number of academics working within government and vice versa.

Table 7: Needs and gaps related to the topic Culture, attitudes and practice.

Need/Gap - description	Relevant BOs	Potential solution (where relevant)
Bridge the gaps caused by departmentalism and power struggle	Office of the Government, Ministry of Interior, Other line ministries	New competence law Creation of 'pockets of trust' More frequent rotation of staff across ministries and departments and secondments to EU institutions
Build mutual understanding between scientists and public servants	All line ministries, CeTTAV, CPPT, Office of the Government, Office of the Minister of Science, Research, and Innovation	Building long-term relationships Establish study programmes in science and policy, science in public policy, policy analysis Promote inter-sectoral mobility programmes Create "breakfast meeting" schemes to support semi-formal interactions between policymakers and scientists
Turn tensions between natural and social sciences (natural sciences domination) into a more balanced relationship	RVVI, CeTTAV, Universities, TA ČR, CPPT	Mutual projects between social and natural sciences Stronger demonstration of social sciences' impact. Emphasising the societal impact of research activities including the impact on public policy.
Decrease policy-science detachment	Office of the Government, RVVI, CeTTAV, CPPT	More interactive forms of working together on policies rather than simply procuring evidence Inter-sectoral mobility schemes while ensuring the independence of scientific advice and policymaking Guaranteed uptake of quality (including unsolicited) evidence by policymakers
Tackle overcautiousness and excessive risk aversion	Office of the Government, Line ministries, CPPT, CeTTAV	Incorporation of smaller scale pilots and experiments as a routine practice where mistakes and failures are not punished but rather used as a basis for better calibration of policies
Change mindset of political representatives and top officials	Office of the Government, Line ministries	Implementation of communication activities to explain the potential of EIPM to increase the quality and efficiency of policies (legislation, strategies)

Source: Own elaboration.

6.2 Needs and gaps

When it comes to willingness to use scientific findings in policymaking, there appears to be a variety of attitudes and absorption capacities across ministries and departments. At the same time, participants, including representatives of academia and civil service, have observed a significant generational shift that produces a certain schism, where younger generations on both sides (academia and policymakers) are somewhat more willing and therefore more likely to engage in the science-policy exchange than older generations. Another ministry representative stated that there are progressive people (irrespective of their age) willing to bring about a positive change at most departments, highlighting that while a generational shift is important, the experienced staff is needed to steer and moderate processes in an appropriate formal manner. One participant asked for a more collaborative and interactive approach to science for policy than what he has observed so far - i.e. policymakers expecting to get a ready-made product without participating in the process of its drafting.

On selectivity in policymaking, most participants confirmed that such a phenomenon is quite common but not necessarily purely negative. They named time pressure and understaffing as being among determinants of selectivity, as well as political orientation and interests of individual parties. It was claimed that while conscious preference of convenient (and elimination of inconvenient) evidence by politicians is not ideal, it is better than

nothing, i.e. no evidence at all. Selection bias in politicians for specific sources of evidence (monetised evidence) or by scientific disciplines (economists for right-wing politicians and sociologists for left-wing ones) was also seen as an additional challenge.

Based on the discussion, we have aggregated the following desired goals - coveted end-states:

- The political and official leadership of ministries understanding the key role of evidence in the policymaking and decision-making process, guaranteeing the excellence and independence of analytical teams (units) dedicated to strategic evaluation and analysis and supporting their external collaboration with the scientific and expert ecosystem.
- Transforming the power struggle and commentary battles between ministries into creative energy and an ethos of working together from early stages of the policy cycle towards a common goal
- Policymaking that works better with stakeholder risk aversion - more experimentation and greater tolerance for potential mistakes and failures
 - Overcautiousness has been identified as a general problem both on the part of civil service and academia. More frequent use of pilots, experiments, and randomised-control trials were put forward as a potential remedy.
- A widely shared "what works" mentality without ideological or personal biases and animosities
- More interactive and intensive confrontation and exchange between policymakers and the research community in policymaking
- A more flexible staffing mix between the academy, the civil service and across government, where movement between departments will not be seen as taboo but as an opportunity for enrichment and career development.

6.3 Potential interventions

Creation of conditions for more frequent and intensive interactions and exchanges across the public administration-academia, natural-social sciences, older and younger generations divides and boundaries can be considered the top intervention for mindset change. To modify patterns of behaviours, it would be good **to foster opportunities to raise mutual understanding, build competencies across sectors, and nurture collaboration**. The promotion of inter-sectoral mobility schemes as well as normalising and systemising staff exchanges/rotations and secondments seems like a needed intervention. Another option are policy fellowships, as part of which academics would spend time as policy analysts in the civil service and shared PhD programmes preparing future experts in policymaking, who already during their studies are assigned policy issues as topics of their PhD thesis (following the model of so-called 'industrial' PhDs).

Box 8. Inter-sectoral mobility schemes from academia to public administration

Around the world, there are different ways to promote inter-sectoral mobility between academia and public administration such as secondments, details, rotations, fellowships, and internships. Academic researchers, who already hold positions of civil servants as university staff or principal investigators in public research organisations, can be easily seconded or detailed either to government departments in many countries (France, Spain...) or even international organisations (For instance, seconded National Experts in the European institutions).

Fellowship schemes: to target early to mid-level career academics, who hold a PhD but do not necessarily have a tenured position, some countries have deployed inter-sectoral mobility fellowships between academia and public administration. Through these programmes, scientists and engineers get to acquire hands-on policy experience, develop new skills, promote evidence-informed policymaking, and expand their career options. For instance, the [AAAS Science and Technology Policy Fellowships \(SPTF\)](#) in the US appoints up to 175 scientists and engineers to serve yearlong assignments in the executive, legislative and judicial branches of the federal government in Washington. In Canada, the Mitacs Canadian Science Policy Fellowship has usually appointed over 10 scientists in government host offices. In the UK, following a successful pilot run by the Economic and Social Research Council (ESRC) in 2021, the [UK Research and Innovation \(UKRI\) Policy Fellowship programme](#) has appointed 44 academic fellows to work in 21 government departments and five What Works Centres across the UK. In Ireland, Science Foundation Ireland has recently launched the [SFI Public Service Fellowship Programme](#) and has partnered with 18 Government departments and agencies on 42 different projects requiring STEM and non-STEM expertise.

Internships: in the EU, the Blue Book traineeship programme and the Schuman Traineeship programme fund 5-month internships at the European Commission and the European Parliament respectively. However, internships may not be the best model to target PhD holders, only 6% of Blue Book trainees hold a PhD certificate according to the European Commission ([European Commission 2022](#)).

For the Czech Republic, it may be interesting to explore some fellowship schemes or internships to further support the role of policy analysts in government departments and advance evidence-informed policymaking.

Enhanced training of both scientists and policymakers (including the higher and middle management) is another example of an intervention that could deliver a real impact. Both sides can prepare shorter courses and training sessions for setting the right expectations on both ends. For instance, doctoral schools and research performing organisations could offer their staff formal training in science-for-policy as part of the wider learning and development programmes already covering aspects such as scientific grant proposal writings, science communications and others. This could also be a practice to be further explored by specific units or departments in these organisations, such as the CPPT of Charles University or the Knowledge Transfer department of the Czech Academy of Sciences. Participants also suggested **trainings for the relatively recently established National Centres of Competence formed thanks to the support from TA ČR**. As stated above, the institutionalised confrontation of the two worlds (policymaking and science) is crucial - while policymakers may learn about current trends and important topics they should not overlook, scientists may get an opportunity to explore the specific rules and habits of the civil service. Finally, to alleviate scepticism and hesitation among members of academia, **good quality and timely evidence – examples of which should be widely shared – may receive guarantees it would actually be taken up by policymakers**.

Box 9. Policy impact units at universities and research performing organisations

A growing trend in universities and research performing organisations is to professionalise research management to improve knowledge transfer to industry (Knowledge transfer units), society (science communication units or communication departments) and also to public administrations with the establishment of policy impact units. These units aim to serve as “one stop shop” for policy professionals and public administration looking to engage with researchers at these organisations, to organise knowledge exchange events with all interested stakeholders around policy issues, and to support academic staff by delivering training, supporting the production and sustaining follow-up of policy outputs (policy reports, briefs, etc), and informing about government calls for evidence and funding opportunities for research needs in governments. The [UK Universities Policy Engagement Network](#) (UPEN) is a community of UK universities and policy professionals committed to increasing the impact of research on public policy, with [the Centre for Science and Policy](#) at the University of Cambridge or [the Policy Impact Unit](#) at University College London as examples of outreach and knowledge brokerage. Sometimes, these units may be specialised on a specific policy topic or region such as the [Stockholm University Baltic Sea Centre](#) aiming to bring together researchers, environmental analysts and communicators to increase knowledge about the sea support marine management of various environmental challenges, or to provide proactive advice to international organisations such as the [SDG Bergen](#) strategic initiative of the University of Bergen to engage with the United Nations about the 2030 Agenda.

In the Czech Republic, there is a room for wider development of these units for knowledge exchange between academia and public administration. The recent reorganisation of the CPPT of the Charles University and a similar unit at the Czech Academy of Sciences (CeTTAV) may offer venues for exactly these kind of interactions.

The involvement in EIPM should become much more rewarding for all parties. **RVVI and academic institutions should make sure that the existing science quality evaluation criteria that already can reflect achievements in applied research to some extent are duly respected by the members of scientific councils**. Both scientists and policymakers should get a sense that taking part in science-for-policy can enhance their career prospects in the same, if not better manner than following traditional rigid promotion criteria and career paths.

The scare of potential failure and the resulting risk aversion can be mitigated by **introducing quasi-experimental pilots and policy randomised-control trials** where mistakes and failures are not punished but rather used as a basis for better calibration of policies. When assessing and evaluating measures and interventions based on their cost/benefit ratio, the Value for Money Unit of the Slovak ministry of finance can serve as an inspiration and role model.

Besides strengthening formal interactions that might support cultural exchange, it was also emphasised that less formal (or semi-formal) types of interactions are crucial. Among others, especially “breakfast meetings” were discussed. **Breakfast meetings are typically being conducted in the Parliament or at other representative bodies to foster exchange between politicians and scientists**. Whereas the focus group participants were sceptical about this specific arrangement, they thought they would welcome a similar session in their units.

RIA/comprehensive literature review should become a firm and routine part of the legislative process. According to participants, the money is there at most ministries to pay for RIA-related expertise and services.

7 Conclusion

The Needs and gaps assessment report builds upon the key findings from the preceding diagnostic report and helps to further establish and specify the key issues that need to be addressed. These changes are needed should science-for-policy in the Czech Republic become not only a formally prescribed norm but a popular and preferred practice among both policymakers and knowledge/evidence providers. Crucially, it confirmed that more intensive and wide-spread use of evidence when new laws and other policy measures are drafted is desired by all beneficiary organisations, which in itself is a positive sign for the next stages of the project. A strong determination by all parties involved will be required, for the sheer number of identified gaps cannot be filled without a common and coordinated effort. The Needs and Gaps assessment makes the undertaking easier by providing a concise and easy to navigate overview of all categories of deficiencies registered during the series of in-depth focus groups, where representatives of the individual BOs were encouraged to think and speak about the existing barriers to a more extensive science-policy exchange.

One of the key takeaways from the needs and gaps analysis is that the fragmentation of actors and responsibility for regulation of evidence production/provision and evidence uptake makes it difficult to launch an initiative that would inevitably be followed by others. Even though institutions declare their willingness to participate in bringing about a positive change, no one seems to be in the position of sufficient authority and power to steer and moderate such a change. A stronger leadership and clearer distribution of the agenda ownership is in the best interest of the project.

While the experts in collaboration with all parties involved can indicate a direction of the desirable change, it is ultimately up to the BOs to deliver it. Despite the high level of autonomy of evidence producers/providers, the Office of the Government should not resign on its irreplaceable role of instigators and coordinators. There is no one better placed to start the process of change, as it has been shown by their leading role in setting up the Government Analytical Unit (VAU) which is bringing positive impact in RIA and policy evaluation across departments. Other practices such as promoting a network of ministerial science advisers or setting up a foresight office could be promoted and led by the Office of the Government similarly. That is not to say that the Office of the Government should somehow usurp the agenda-setting in the science-for-policy ecosystem - rather the contrary - it should inspire and motivate other stakeholders to recognize EIPM activities as a valid and valuable scientific contribution to society and enable, empower and encourage all capable partners to come up with their own initiatives in this respect.

The responsibility of the Office of the Government is even greater now when it has become more evident that the change will not take place without touching the codified and uncoded rules - be it procurement law, science evaluation criteria, civil service act or data protection rules - whose current shape and constellation do not seem to be conducive to a further emancipation of EIPM efforts. Until recently, there has been little appetite to take the hard steps towards a radical regulation revamp but without this, any shift towards a genuine EIPM ecosystem would only be incomplete and half-hearted. The reform of the RDI Support Act as well as activities around the new data protection bill can be seen as steps in the right direction. Further modifications of the civil service act and an act reshaping the relationship between the state and research organisations may be next on the agenda.

Clearly, rules are not almighty, and they do not work as a panacea to science-for-policy issues as they must always respect and leave room for the actors' free will and creativity. The focus groups pointed to a need for a gradual shift in the mindset and patterns of behaviour of all people involved in the science-for-policy environment. Cultivating the environment will not only take declarations from the Office of the Government - however important the instructive and inspiring words are in the transformational process - but it should also involve more extensive training for both policymakers (including middle and higher managerial positions) and scientists, smarter recruitment and inter-generational collaboration. Departmentalism should also be tackled both in the policymaking and academic spheres and replaced with an ethos of working together towards a common goal, for which the use of formal networks of policy analysts, data analysts and/or science advisers can be a good solution as it would promote inter-ministerial coordination and cooperation.

In this line, most BOs support the idea of organisational change involving the creation of science advisers at individual ministries controlling budgets dedicated to procurement of evidence and scientific expertise. The office of science advisor would act as a counterpart to the individual centres of knowledge transfer within the individual research organisations and specialised policy labs that scientists under the auspices of the office of the minister of science should start to form around the individual policy-relevant topics. Concerns were raised about how to secure sufficient funding for this kind of arrangement, as well as appropriate influence and impact of the

science advice. This relates to the uptake of ‘inconvenient’ findings that are not in line with the government’s persuasion/manifesto.

The needs and gaps identified by this report may seem complex and sometimes perhaps a bit hard to handle. Nevertheless, the challenge of bringing about positive change to the science-for-policy ecosystem is not insurmountable. Most of the problems presented in the assessment are not unique to the Czech Republic and have been successfully overcome elsewhere. The utmost dedication of the Czech BOs and other strengths of the Czech system give a good hope that major improvements can be achieved by the end of this project. This document precedes a roadmap setting out a clear path towards the desired outcome, but throughout the needs and gaps assessment one can observe the path already taking shape.

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List of abbreviations and definitions

Abbreviation / Zkratka	Czech / Česky	English / Anglicky
BO	příjemci podpory	beneficiary organisation
CERGE-EI	Centrum pro ekonomický výzkum a doktorské studium Univerzity Karlovy a Národohospodářského ústavu AV ČR	Center for Economic Research and Graduate Education – Economics Institute
ČES	Česká evaluační společnost	Czech Evaluation Society
CeTTAV	Centrum transferu technologií AV ČR	Centre of Technology Transfer of the CAS
CPPT	Centrum pro přenos poznatků a technologií Univerzity Karlovy	The Centre for Knowledge and Technology Transfer of the Charles University
ČŠI	Česká školní inspekce	Czech School Inspectorate
CSVŠ	Centrum pro studium vysokého školství	Centre for the Study of Higher Education
CSÚ	Český statistický úřad	Czech Statistical Office
CZVV (formerly known as CERMAT)	Centrum pro zjišťování výsledků vzdělávání	Centre for the Determination of Education Results
DIA	Digitální a informační agentura	Digital and Information Agency
EIPM	Vytváření veřejných politik založených na poznatcích	evidence-informed policymaking
EJ NOK	Evaluační jednotka Národního orgánu pro koordinaci	Evaluation unit of the National Coordination Authority
JRC	Společné výzkumné středisko	Joint Research Centre
KOVES	Klientsky orientované veřejné správy 2030	Client-oriented public administrations 2030
M17+	Metodika hodnocení výzkumných organizací a programů účelové podpory výzkumu, vývoje a inovací	Methodology for the evaluation of research organisations and programmes of targeted support for research, development and innovation
MPO	Ministerstvo průmyslu a obchodu	Ministry of Industry and Trade
MPSV	Ministerstvo práce a sociálních věcí	Ministry of Labour and Social Affairs
MŠMT	Ministerstvo školství, mládeže a tělovýchovy	Ministry of Education, Youth and Sports
MŽP	Ministerstvo životního prostředí	Ministry of the Environment
NIDV	Národní institut pro další vzdělávání	National Institute for Further Education
NPI	Národní pedagogický institut	National Pedagogical Institute

NÚKIB	Národní úřad pro kybernetickou a informační bezpečnost	National Cyber and Information Security Agency
NÚV	Národní ústav pro vzdělávání, školské poradenské zařízení a zařízení pro další vzdělávání pedagogických pracovníků	National Institute for Education, school counselling facilities and facilities for further education of teaching staff
OECD	Organizace pro hospodářskou spolupráci a rozvoj	Organisation for Economic Co-operation and Development
OP JAK	Operační program Jan Ámos Komenský	Johannes Amos Comenius Programme
PSSAÚ	Pracovní skupina pro síťování analytických útvarů	Analytical Services Networking Working Group
PGR	Public Governance Report	Public Governance Report
RDI	výzkum, vývoj a inovace	research, development and innovation
RIA	Hodnocení dopadů regulace	Regulatory Impact Assessment
RIS3 / S3	Národní výzkumná a inovační strategie pro inteligentní specializaci České republiky	Research and Innovation Strategy for Smart Specialisation of the Czech Republic / Smart Specialisation Strategy
RVVI	Rada pro výzkum, vývoj a inovace	Research, Development and Innovation Council
SEA	Posuzování vlivů na životní prostředí	Strategic Environmental Assessment
SEEPIA	Centrum socio-ekonomického výzkumu dopadů environmentálních politik	Center for Socio-Economic Research on Environmental Policy Impact Assessment
SYRI	Národní institut pro výzkum socioekonomických dopadů nemocí a systémových rizik (SYRI)	National Institute for Research on Socioeconomic Impacts of Diseases and Systemic Risks
TA ČR	Technologická agentura ČR	Technology Agency of the Czech Republic
VAÚ	Vládní analytický útvar	Government Analytical Unit

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Annexes

Annex 1. Original list of challenges extracted from the Diagnostic report per topic

Topic 1 – Research capacities and research funding	Topic 2 – Data Accessibility	Topic 3 – Institutionalising science advice and cooperation
Undefined priorities of applied research	Unavailability of data	Missing strategy of knowledge valorisation
Fragmentation of applied research funding	Weak connectivity of data between various database managers	Missing strategy and funding to support inter-sectoral mobility of analytics and researchers
Weak motivation of researchers to focus on applied research	Data not available timely	Missing yellow pages of experts with respect to specific research topics
Inadequate system of reporting the results of applied research	Weak findability of administrative data for requesting, connectivity, and usability	Relative absence of exclusively science advice bodies with a formal mandate to provide science advice to the government and Parliament.
Barriers for young/starting researchers to participate in science-for-policy		Unstable and purely ad hoc networks of public servants and academics
Inability to submit research directly to research organisations in public contracts (outside BETA)		
Absence of clear research needs		
Unclear rules regarding exemptions from RIA		
Lack of information about commissioned research via TA ČR		
Lack of interest in BETA projects		
Long terms (minimum one year) for entering a study via BETA		
Results of BETA are not utilised		
Incongruent competencies at the Office of Government in BETA tenders given the fragmentation of the agenda		
Problematic cooperation between ministries and their research institutes at arms' length		
Topic 4 – Human resources and training	Topic 5 – Culture, attitudes and practices	

Rigid remuneration, equipment, benefits and home-office policies	Missing motivation for application of EIPM in the public servant's career system (especially for seniors)	
Missing network of professional analysts	Low willingness to implement principles of EIPM at the highest political level	
Inadequate personal capacities for in-house analytical and evaluative tasks	Low level of mutual understanding and trust among academia and policymakers	
Inadequate training for management staff meant to lead analytical teams	Decision-making processes ignore or selectively exclude inconvenient evidence	
Analytical positions are not officially recognised and also linked competencies are missing in the public servant law	Impact of strategies is often not evaluated	
Missing systemic training of public servants and lack of basic skills such as problem definition, theory of change, and strategic planning		
Public servant exam is focused solely at legal and administrative knowledge		

Source: Own elaboration

Annex 2. List of needs and gaps expressed by BOs during the round of consultations.

Topic	Need/Gap - description	Relevant BOs	Potential solution (where relevant)
The need for enhancing research capacities and research funding	Incentivise scientists to generate policy-relevant research.	All line ministries, CPPT, CeTTAV, SYRI, TAČR, Office of the Minister for Science, Research and Innovation	<p>Include policy briefs, policy papers, and other formats as eligible scientific results in science evaluation frameworks. Requires legislative change (130/2002 Sb.)</p> <p>Inside the research organisations recognise policy relevant outcomes (probably at the level of departments, not university) for the academic career</p> <p>Reflect policy relevant outcomes in the internal evaluation of scientists (how can we measure it?)</p> <p>Allocate more time to generate policy relevant scientific outcomes</p> <p>Decrease the administrative burden partially caused by the dominance of project-related funding</p> <p>Incentives policy relevant outcomes at the level of academic institutions</p> <p>Guaranteed and widely advertised uptake of good quality (including unsolicited) evidence by policymakers</p>
	The need to be able to flexibly and quickly procure evidence	All line ministries, MMR	<p>Innovative procurement methods (Innovative partnerships)</p> <p>Increase internal analytical capacities</p> <p>Internal funds for one-off small projects possibly used for call for evidence scheme. They would be fully at the discretion of the ministry and could only be used for science-for-policy research</p> <p>Strengthen the ministerial institutes at the ministry level</p>
	The need to stabilise and increase continuity, certainty and better navigate the two sides of the science-for-policy ecosystem	CPPT, CeTTAV, All line ministries, SYRI	<p>Establishing capacities at the academia to be in charge of relationships between the academia and public administration</p> <p>Add policy labs as additional focal point for connecting with academia</p> <p>Chief Science advisor - point of interaction at the ministry level</p> <p>Improve the planning of research priorities at the ministry level</p> <p>Support the role of projects of collaborative activities</p>
	Make the formulation of research priorities at the national and ministerial level more open to relevant stakeholders	All line ministries, Office of the Minister for Science, Research and Innovation, RVVI	<p>The process of formulating priorities should be a mix of "top-down" and "bottom-up" approaches (hierarchization, different time horizons)</p> <p>Improve the planning of research priorities at the ministry level</p> <p>Organise regular meeting and conferences to discuss these topics</p>

	To support establishment of expertise in some policy areas	All line ministries, TA ČR, CPPT, SYRI	Defining the research needs (see above) Cooperation between academia and public sector announcing research topics for master theses and dissertations
	Research funding - timing of public procurement, administrative burden	All line ministries, TA ČR, Office of the Minister for Science, Research and Innovation, RVVI	Include policy briefs, policy papers, etc. as relevant scientific results and pilot wider research assessment frameworks Improve system of science management Decrease administrative burden for scientists and simplify great variety of research funding systems
	Support the long-term development of strategic intelligence capacities for public policy	All line ministries TA ČR, Office of the Minister for Science, Research and Innovation, RVVI	Build and/or enhance internal strategic analytical capacities at ministries Create institutional framework defining the status of analytical units both at the ministerial and inter-ministerial (governmental) level. Increased use of Joint Action Projects (system projects) to build long-term research and analytical capacity for public policy (e.g. STRATIN+ project, which provides strategic intelligence for research and innovation policies).
The need for data accessibility	Involve a broader range of users in identifying data needs	Digital and Information Agency (DIA), Czech Statistical Office (ČSÚ)	Conduct regular (joint) exercises to gather data needs from a broader range of users
	Improve data findability incl. for administrative data; create and provide documentation for administrative data	Line ministries, DIA	Data cataloguing and documentation as foreseen by draft legislation, supported by capability building
	Make administrative data available for research and analysis, incl. linked between sources	Line ministries, DIA	Controlled access to data as foreseen by draft legislation, supported by capability building
	Strengthen capabilities for data management and governance	Line ministries, DIA, ČSÚ	Support capacity in DIA - already underway Monitor and maintain capabilities inside ministries for data management Develop capabilities for data anonymisation and related techniques (DIA, ČSÚ)

	Establish and clarify roles in the data ecosystem, across and inside institutions	ČSÚ, DIA, Office of the Minister for Science, Research and Innovation	Generally: joint communication/info point by DIA and ČSÚ towards data users Inside ministries: designated data-related roles Across ecosystem: bring together DIA, ČSÚ and other data holders (CSDA, EOSC)
The need to institutionalise scientific advisory bodies and cooperation	The need for transparent and efficient advisory bodies	Office of the Government, all line ministries, Official scientific advisory boards, CeTTAV, CPPT	Build formal, quick and operational relationships Code for science advice Establish administrative support Incentivise the scientists to participate Proper mixture of professionals, academics and managers of science
	Need to increase quality and actionability of recommendation issued by advisory bodies	Office of the Government, all line ministries and TA ČR, CeTTAV, CPPT	Increasing quality and relevance of recommendation of advisory bodies Training on how to communicate recommendations to policymakers Recognition from side of policymakers Improve guidelines on how to provide science advice
	The need to improve the cooperation between academia and public administration	Office of the Government, all line ministries, CeTTAV, CPPT	Build and further develop analytical units Institutionalise and strengthen a role of knowledge brokers, ensure KTOs widen their transfer activity beyond technology transfer and focuses on knowledge valorisation Chief science advisors (+ network of science advisors) Policy labs „Innovation scouts” as a contact point for public administration Regular conferences, meetings
	The need to institutionalise the way analytical (research) units operate	Office of the Government, all line ministries	Update and modernise the legislative and methodological framework to standardise research/analytical operations (the processes, outputs, internal and external cooperation, knowledge management, etc.)

The need to modernise HR and better target training activities	The need to attract highly qualified analysts into the public administration	Line Ministries, Ministry of Interior, TA ČR	<p>Provide financial incentives</p> <p>Improve job advertisement (incl. training opportunities)</p> <p>Organise job fairs for public administration</p> <p>Introduce system of headhunting into public administration</p> <p>Increase prestige of working in the public administration (e.g. reputation)</p>
	Increase continuity in HR development strategies	Line Ministries, Ministry of Interior	<p>Quality management frameworks addressing specificities of EIPM</p> <p>Training of HR to specificities of public administration</p>
	Improve transfer of knowledge and best practices between different administrative bodies	Ministry of Interior	<p>Expand the https://www.sdilenapraxe.cz/ portal to cover EIPM</p> <p>Formalise interactions to share knowledge</p> <p>Organise conferences on HR practices in public administration</p> <p>Transfer through informal interactions</p>
	Extend the supply of learning programmes in analytical skills and competences with different levels of proficiency	Ministry of Interior, Ministry of Regional Development	<p>Develop joint programmes between academia and public administration</p> <p>Establish micro-certificates</p> <p>Innovative public procurement (more quality oriented) and training of HR offices</p> <p>Train HR officers about what skills and capacities public administration needs</p>
	Identify and develop competencies and skills on both sides of the interface	Ministry of Interior	<p>Draft a competence framework potentially inspired by the JRC models</p> <p>Define a competency model for each type of analytical position in the strategic analytical (research) units at the Government Office and ministries</p> <p>Develop individual training plans for analysts in strategic analytical units at the Government Office and ministries.</p>
	Support and train managers of analytical units	Line Ministries, Ministry of Interior	<p>Identify what are requirements of a successful manager</p> <p>Develop internships, rotations, mentoring for managers of analytical units</p> <p>Create system of trainings for aspiring managers</p>
	The need for training scientists in science-for-policy	Research organisations	<p>Training programmes for scientists</p> <p>Improve the narrative around science-for-policy activities</p>

The need to support cultural exchanges and cooperation	Bridge the gaps caused by departmentalism and power struggle	Office of the Government, Ministry of Interior, other line ministries	New competence law Creation of 'pockets of trust' More frequent rotation of staff across ministries and departments and secondments to EU institutions
	Build mutual understanding between scientists and public servants	All line ministries, CeTTAV, CPPT, Office of the Government, Office of the Ministry of Science	Building long-term relationships Establish study programmes in science and policy, science in public policy, policy analysis Promote inter-sectoral mobility programmes Create "breakfast meetings" schemes to support semi-formal interactions between policymakers and scientists
	Turn tensions between natural and social sciences (natural sciences domination) into a more balanced relationship	RVVI, CeTTAV, Universities, TA ČR, CPPT	Mutual projects between social and natural sciences Stronger demonstration of social sciences' relevance for policymaking. Emphasising the societal impact of research activities including the impact on public policy
	Decrease policy-science detachment	Office of the Government, RVVI, CeTTAV, CPPT	More interactive forms of working together on policies rather than simply procuring evidence Inter-sectoral mobility schemes while ensuring the independence of scientific advice and policymaking Guaranteed and widely advertised uptake of good quality (including unsolicited) evidence by policymakers
	Tackle overcautiousness and excessive risk aversion	Office of the Government, line ministries, CPPT, CeTTAV	Incorporation of smaller scale pilots and experiments as a routine practice where mistakes and failures are not punished but rather used as a basis for better calibration of policies
	Change mindset of political representatives and top officials	Office of the Government, line ministries	Implementation of communication activities to explain the potential of EIPM to increase the quality and efficiency of policies (legislation, strategies)

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