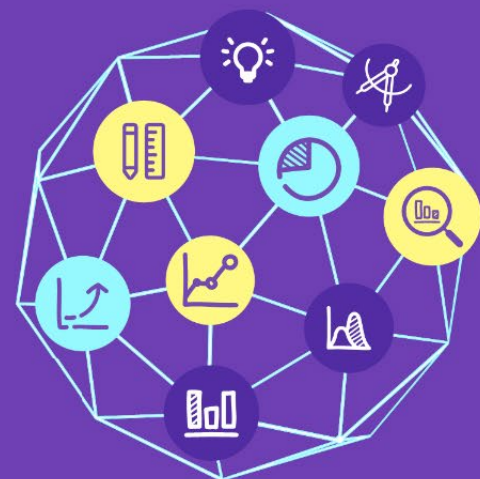# Building capacity for evidence-informed policymaking in governance and public administration in a post-pandemic Europe – Country analysis, policy recommendations and implementation roadmap Czech Republic

Petr, B., Čech, T., Frühauf, L., Jusić, M., Kreisinger, J., Reznikow, A., Veselý, A., Witz, P., Olajos-Szabo, A., Cannata, G.

2025

EU Science Hub
https://joint-research-centre.ec.europa.eu

Contents

1 Executive summary

This report is the result of the two-year long multi-country Technical Support Instrument project 'Building capacity for evidence-informed policymaking (EIPM) in governance and public administration in a post-pandemic Europe' conducted by the Joint Research Centre (JRC) and the OECD and funded by DG REFORM. The project's goal is to improve the effectiveness of the participating Member State's public administrations, through greater capacity for supply and uptake of scientific knowledge, evaluation and evidence in policymaking and thus to provide recommendations on reforms of the science-for-policy ecosystem in countries that requested support. The project was conducted in seven EU countries: Belgium, the Czech Republic, Estonia, Greece, Latvia, Lithuania and the Netherlands.

This Final report delivers findings gathered through common effort of all involved parties – local national experts, JRC experts in charge of this project, as well as the beneficiary organisations (BOs) and other stakeholders that worked on a common goal to improve the uptake of scientific research in policymaking. The key chapter of the Final report is the Roadmap that provides concrete recommendations on how to strengthen EIPM processes in governance and public administration, with a focus on governance structures, processes, and resources leading to design and implementation of public policies and on narrowing the competence gaps of scientists and policymakers.

This report is unique in its systemic approach to the topic of science-for-policy providing both deep analysis of the Czech EIPM ecosystem, mirroring it with international best practices as well as providing detailed and elaborated interventions for its reform. Furthermore, this report is unique in relation to the involvement of the stakeholders in the co-creation process and the production of the report. Especially some of the involved organisations significantly contributed to the report and helped to build up and strengthen the community around science-for-policy, which we hope will thrive further. Most of the participants closely collaborated and followed the project from the very beginning or joined in the course of the process. Their comments, and valuable insights helped to establish the consensus around this topic, which was established through various rounds of consultations with the BOs. This is an important strength that adds to this report's significance and creates strong ownership among the parties potentially involved in the implementation of the proposed interventions. Building on this strong consensual ground, with a strong support at political decision makers' level, the proposed interventions will lead to a well-functioning EIPM ecosystem in the Czech Republic that inevitably increases trust in the government.

The final report follows a chronological order of the analysis and is logically structured to three main chapters, each produced during the individual phases of the project: 1. The Diagnostic chapter that analyses the current Czech EIPM ecosystem; 2. The Needs and gaps Assessment chapter, highlighting the missing elements of the ecosystem; 3. The Roadmap that is proposing concrete actions for implementation based on the analytical background and the outcome of the co-creation process. All three reports were consulted with the JRC and the OECD as well as with the BOs in several rounds and consensus on the content was reached. The first two chapters of the report provide background information on the key issues and topics of science-for-policy institutions and current practices in the Czech Republic. The Roadmap, in the last chapter, is the central and most important part of this final report (as well as the project) as it provides clear recommendations that were recommended to be implemented to better support science-for-policy and evidence use throughout the policymaking cycle of the Czech Republic.

The first phase of the project was focusing on the diagnostic analysis of the EIPM ecosystem in the Czech Republic. The first chapter, the Diagnostic report is based on interviews and questionnaires harvesting insights and opinions of participating organisations. The findings were analysed using the theoretical framework of demand (e. i. policy makers in public administration) and supply (e. i. knowledge providers) side and the knowledge brokerage. The chapter describes the positive elements of the existing Czech ecosystem such as the growing willingness to use evidence in policymaking, ongoing development of analytical capacities at the demand side, and the rich spectrum of evidence providers at the supply side. Nevertheless, the report also identified several weaknesses of the ecosystem, among others, the cultural and institutional exchange between the policy makers and scientific institutions is underdeveloped, weak personal capacities at the level of public administration. This is to a large extent due to the fact that knowledge brokerage is limited in extent and consists mostly in ad hoc initiatives. On the supply side, there are still prevalent rigid criteria of career advancement that tend to disregard contribution to the science-for-policy transfer. Due to the underestimated role of science-for-policy activities, the scientists are not well-prepared to provide and present useful and timely research findings to the policymakers. Last, but not least, there is a lack of stable institutions with sufficient influence and authority to steer and moderate systemic reform of the science-for-policy ecosystem.

The second phase of the project was focusing on the needs and gaps of the current EIPM ecosystem with special attention to the needs of the BOs. This was a crucial phase that prepared the analytical ground for the Roadmap phase. Methodologically, this phase was based on focus groups organised with relevant stakeholders on key topics related to the issues identified in the diagnostic phase: There are five overarching topics in the second chapter of the report: research capacities and research funding, data accessibility, institutionalisation of scientific advice, modernisation of HR and training and cultural exchange and cooperation.

The Needs and Gaps Analysis, in the second chapter, provides an understanding of what needs to be changed in the current Czech ecosystem to improve the use of evidence in policymaking. Gaps and needs were identified in all three parts of the ecosystem – both demand and supply sides need to make their part in changing and enhancing the established structure. On the supply side, the lack of incentives to provide policy relevant results was identified. Related to that, it was revealed that scientists might lack understanding of various policymaking processes. On the demand side, there are difficulties with procuring evidence flexibly and quickly and there is insufficient understanding of the processes in research organisations. However, the crucial gaps in the ecosystem were identified in relation to the lack of institutionalised knowledge brokerage on any of the sides.

The Roadmap chapter provides a set of recommended interventions that are meant to provide possible solutions for most of the issues mentioned in the previous chapter. In total there are 6 "core" interventions covering the most pressing issues identified along the project and highlighted by the BOs. Furthermore, there are 9 "enabling" interventions, which are crucial for the functioning of the core interventions; nevertheless, they are mostly implemented by other actors of the ecosystem. Therefore, those interventions are less detailed.

The Final report is published with a clear intention to support EIPM efforts in the Czech Republic with the focus on science-for-policy. While being both analytically accurate as well as actionable, the Report is meant to be a guidebook for anyone interested in evidence informed policymaking. The main target group of the report are the Beneficiary Organisations, the relevant stakeholders of the Czech EIPM ecosystem and key decision makers who are best placed to decide on the implementation of the recommended interventions. The report also provides an action plan, a clear description of necessary steps in order to achieve the necessary changes. The Roadmap, being the focal part of the report, is meant to be a cookbook for everyone having a role in the implementation of the interventions. Whereas the roadmap itself is a relatively short chapter focusing on the key elements of the implementation process, additional information is included in the Annex of the report for the better understanding of the background.

This Final Report lays the groundwork for transformative reforms that will enhance the efficiency and evidence base of Czech policymaking and public administration. While some initial implementation steps are underway, the journey has only just begun. This report offers clear guidance for leaders and key stakeholders across the Office of the Government, ministries, and academia, serving as a roadmap to drive forward these vital interventions. The path ahead demands the enthusiasm and commitment of decision-makers, open collaboration with stakeholders, and the vision to inspire even those who may be still hesitant. Together, we have the opportunity to reshape public administration, anchoring it in evidence, innovation, and shared purpose for a brighter future.

2   Executive highlights: Preparing public administration for a complex future: a vision for a better use of scientific evidence, evaluation and data in policymaking

The COVID-19 pandemic, economic recovery, and climate crisis underscore the critical need for evidence in effective policymaking. Scientific knowledge and analytical insights equip policymakers with tools to design impactful policies that address contemporary challenges. Thus, supporting the uptake and integrating scientific knowledge into policymaking has become essential for government and public administration.

Evidence-informed policymaking (EIPM) became vital for the public administration to effectively and adequately address the most pressing challenges of today. In the Czech Republic and across Europe, efforts to build capacity in EIPM have intensified, elevating it on the policy agenda. To build capacity for EIPM means to create an environment where evidence, scientific input and data are routinely analysed, integrated and recognised throughout the policy cycle, from policy preparation to decision-making and implementation, across all government levels. Standardizing and institutionalising EIPM practices within policymaking processes is essential to address modern governance challenges.

To enhance EIPM, it is crucial to build a supportive science-for-policy (S4P) ecosystem that consists of organisations, skilled individuals, networks, and processes. In the Czech Republic, this implies intervening on the constitutive elements of the Czech ecosystem and their interactions to create the opportunities for science-for-policy to thrive (see Figure 1). The Czech S4P ecosystem, at present, suffers from many deficiencies. On the other hand, there are many opportunities for the EIPM principles to proliferate and a growing willingness of most relevant actors to support science-for-policy activities. However, there is also a tendency from parts of the public administration to adopt and use EIPM principles only 'performatively'. On the supply side the S4P ecosystem in the Czech Republic benefits from the input of a variety of actors and organisations, as indicated in figure 1., especially, a large number of public research-performing organisations such as the Czech Academy of Sciences, public universities, and ministerial research institutes. On the demand side, the ecosystem also presents some crucial weaknesses. It lacks sufficient capacity and skilled professionals that would be able to support EIPM from within. Furthermore, many of the existing processes (such as the RIA) are applied only formally and do not actually achieve the desired results. While there is a wide political support to evidence usage in policymaking, it does not translate into systemic support of EIPM and political ownership of the concept of science-for-policy.

Figure 1. Scheme of the Czech S4P ecosystem
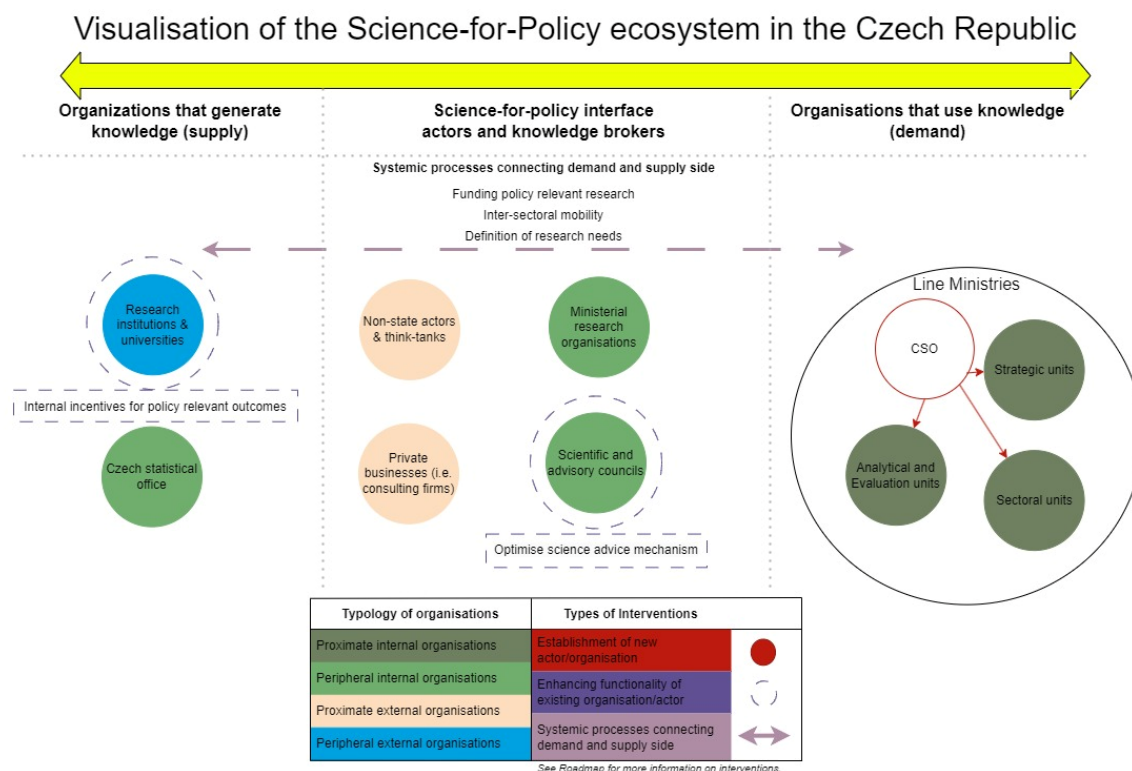
Source: Own elaboration

To build an effective S4P ecosystem, developing a skilled, systematically trained workforce is essential. Clear communication of expectations and institutionalizing roles, such as knowledge brokers, can ensure better coordination and collaboration. The key to harnessing the potential of the whole S4P ecosystem is creating meaningful and effective interactions between individual organisations that are currently affected by formalism, misunderstanding, and disinterest. This needs to be improved through developing institutionalised but not over-formalised relationships between various organisations, hence leaving room also for informal coordination. Furthermore, responsibility for developing working relationships between the two sides should be institutionalised, through acknowledging and consolidating the role of knowledge brokers and intermediaries. Overall, based on the mapping and analysis of the Czech ecosystem, this would imply strengthening institutionally some of the existing organisations, creating one coordinating actor of science-for-policy, and improving or bringing to existence three processes as outlined in the Figure 1.

Supporting the capacities of EIPM is a goal declared in recent non-legislative acts of the Czech public administration. For instance, the reform of public administration in the context of the National Recovery Plan (NRP) included initiatives to support EIPM principles. Component 4.4 of the Pillar on 'Institutions, regulation and support of entrepreneurship as a reaction to COVID-19 pandemic' intends to reform the public administration in order for it to improve efficiency, client-orientation and to apply principles of EIPM. Besides wider reforms, in the NRP, it is also suggested to create a central analytical unit at the Office of the Government. Whereas this initiative was successfully achieved, other steps are yet to be undertaken. The interventions suggested in this document are to be interpreted as a continuation of previous efforts to modernise public administration.

The political landscape of science-for-policy in Europe

The use of evidence and the need for an Evidence Informed Policy Making (EIPM) model has been prominent on the agenda on public administrations during the last years. The need to address multiple and overlapping crises at a global, European and national level and especially the experience of the COVID-19 pandemic, has increased awareness and support in science informed decisions, while also showing that Member States have confronted those challenges in very different – sometimes contrasting – ways. This has driven initiatives that foster closer cooperation among Member States in identifying the challenges and different paths to establish or strengthen evidence use in policymaking by redesigning the ecosystem that constitutes the complex interaction between supply and demand of evidence and scientific knowledge for policymaking.

While institutional and legislative frameworks as well as resource constraints among Member States vary and provide an uneven ground for one common approach on science-for-policy ecosystems, policymakers all over Europe face many similar or even the same challenges. Problems like climate change, biodiversity loss, or regulation of emerging technologies go beyond the borders and require a coordinated action. Member states call for the support of the European Commission in building their capacity to tackle these complex problems, to proceed to reforms in their public administration and ways of institutionalising the connection between science, evidence and policymaking.

The European Commission has implemented a set of practices in its legislative process institutionalised a broad range of through the Better Regulation Agenda, which has the goal to 'ensure that EU policymaking is based on evidence' and more specifically for '...establishing an accurate description of the problem, a real understanding of causality and therefore intervention logic; and to evaluate impact.'

Building on the promises of a new European Research Area in 2020 which refers to the 'need to exploit more effectively the potential of research, development, and innovation (RDI) for society' and the Council Conclusions in 2021 that recognises the increased role of RDI in addressing future challenges, the COMPET Council Conclusions focusing on 'Strengthening the role and impact of research and innovation in the policymaking process in the Union' were published on the 8th of December 2023. The Conclusions underline the importance of reliable, transparent, verifiable and interdisciplinary evidence as input in forming public policies that serve the interest of people and societies and the mutual reinforcing value between research, innovation and policymaking. The Conclusions, while acknowledging that the use of evidence varies across Member States, call for the Commission to develop actions and specific tools that can foster the establishment of a European science-for-policy ecosystem. The main purpose for the EU is to act as a facilitator and a bridge between different structures and training activities that improve the capacity of science-for-policy actors with an emphasis on intermediary organisations. This evolving political landscape vividly reflects a strong commitment and a progressive uptake of EIPM at a European level which is reinforced with a shared mentality that EIPM is the main conceptual and procedural path on which future reforms and changes in public administrations can be built. Building capacity on working with evidence as the main driving factors for public administration reforms, is clearly articulated and validated by the ComPAct Communication issued in November 2023 by DG Reform of the European Commission.

ComPAct issued by DG Reform of the European Commission, consists of a set of common values and actions with the purpose to 'Enhance European Administrative Space' and modernise public administration. One of the overarching values is 'Coherent, anticipatory, evidence-informed, participatory, digital-ready, and inclusive policymaking' as a principle that supports democratic governance, public trust and upholding of the rule of law. Furthermore, the 'Ghent Declaration' signed on the EUPAN (European Public Administration network) meeting on the 27th of February 2024, 29 countries have undertaken the commitment to build public administrations that are more representative of society and capable of implementing policies that are data driven. The aforementioned efforts constitute a major progress in the development of a European science-for-policy ecosystem. A European approach to ecosystems is built in 'unity within diversity' in which diversity constitutes an opportunity for a peer learning process, exchange of knowledge and best practices that can further nurture a pan-European Science for Policy ecosystem, of which the TSI project in the Czech Republic is a vital part of.

Overview of core interventions

The list of interventions is the key outcome of this project. The interventions were developed in close coordination with the relevant stakeholders during the final stage of the project to address the primary needs of the Czech S4P ecosystem. For better understanding and differentiation, two sets of interventions are suggested. Whereas the 'core interventions' aim to address the main needs and gaps identified in the assessment phases, the 'enabling interventions' are the ones that significantly shape the science-for-policy environment and sustain the implementation of core interventions.

The interventions are the culmination of a two-year project. After identifying the needs and gaps of the ecosystem, a long list of interventions aiming at addressing these needs was elaborated. In two rounds of consultation with all the involved stakeholders, this long list was restructured and key interventions were prioritised based on feasibility considerations and the preferences of involved stakeholders. The short-listed interventions were then further developed by the group of experts in cooperation with the BOs. The development of interventions involved gathering good practices from abroad and in-depth research on the Czech context, through many interviews, focus groups and co-creation workshops with key stakeholders. These interventions were detailed out in an action plan that should guide and enable their implementation. Below a short summary of each of the core interventions is provided.

Chief Science Officer (CSO)

The Chief Science Officer (CSO) intervention is designed to strengthen the science-for-policy culture within the line ministries, and to ensure the effective delivery, management and use of scientific knowledge to inform policymaking. The crucial components of this intervention are a definition of processes and topics that would fall under the CSO's remit, clarification of shared responsibilities (e.g. with scientific council, analytical departments, or the R&D department) and the ideal position of the CSO within the ministries' organisational structure. Given the complexity of this intervention, we propose various options to enable ministries to develop a CSO position at their own pace, without the immediate need to establish a complex network of CSOs across ministries (although this would be an ideal scenario). These options provide flexibility and scalability, ensuring that each ministry can adapt the CSO role to its unique needs and capacities, while gradually moving towards more integrated partnerships.

Research needs

The intervention aims to establish systematic and regular processes for collecting and communicating the research needs of ministries and ensuring alignment with policy priorities. The process involves appointing a dedicated coordinator to gather and prioritise research needs from ministerial departments, consolidating them into a comprehensive document shared with academics, and establishing platforms for regular seminars. These seminars will allow academics to present their research, fostering detailed discussions through round-table sessions. We suggest that the finalised research needs be communicated via a centralised web platform and updated regularly to ensure continuous engagement and alignment with rapidly evolving policy requirements.

Optimise science advice mechanism

The intervention pertaining to Science Advice Committees/Councils (SACs) is designed to allow ministries to procure sound scientific advice through the establishment of science advisory bodies, whose roles and responsibilities, as well as communication with relevant actors from within and outside of the ministry are clearly laid out. The main components of this intervention are a definition of the tasks and processes that would involve the SACs, and the clarification of their cooperation with other units within the ministry, as well as external stakeholders. Different options are proposed with regards to their agendas, depending on the current constellation of how science advice is procured within a ministry and the units/departments in place. The underlying need is, however, to establish relevant guidelines (such as a Code for Science Advice) to codify the important aspects of SAC operations.

Funding policy-relevant research

This intervention aims to simplify the process of obtaining policy-relevant research for policymakers by providing a clear decision tree of options (procurement, research funding programmes, ministerial research institutes) and streamlined procurement guidelines. It includes creating a schematic overview of existing research funding instruments and revising procurement guidelines to make procurement processes more understandable and quicker. The implementation involves mapping existing programmes, improving the procurement guidelines and facilitating officials' knowledge and access to these resources through various communication channels.

Incentives for policy-relevant research outputs

This intervention aims to make systemic changes to incentivise the knowledge supply side – research organisations and individual researchers – to take an active part in science-for-policy activities. It addresses the national system of science evaluation and the system of academic promotion and remuneration for policy-relevant outcomes.

Inter-sectoral mobility: Internship for researchers

Inter-sectoral mobility is a well-established scheme in many countries that might be viewed as role-models in EIPM. The need to implement a scheme in the Czech Republic to support scientists' engagement in policymaking has also emerged as part of this project and so far, there is no such scheme in the country. This intervention focuses on implementing medium-term internships for early-career researchers in public administration bodies. This variant is a concept that has been tested abroad and represents a feasible and beneficial intervention. To support the engagement of career scientists in policymaking processes, it is necessary to create rich opportunities for career and personal development. The intervention aims to provide both career researchers and public officers with opportunities to develop their skills, expertise and build stable and long-standing relationships between the academia and public administration.

Table 1. Overview of core interventions

Intervention	Lead implementing actors
Demand side	
CSO	Line ministries
Research needs	Line ministries
Optimise science advice mechanism	Line ministries
Funding policy-relevant research	Office of the Government, TA ČR, line ministries
Supply side	
Incentives for policy-relevant research outputs	Office of the Government, research organisations
Inter-sectoral mobility: Internship for researchers	Office of the Government, RVVI, TA ČR, research organisations

Source: Own elaboration.

Table 2: Overview of enabling interventions

Development of analytical units
Foresight institutionalisation
Improve recruitment and staff retention strategies
Reforming ministerial research institutes
Training courses in S4P
Industrial PhDs
Simplify the administrative burden of research funding systems
University programmes for Policy analysts

Access to public sector data

Table 3 shows the complexity of each of the intervention. The table presents all core interventions and needed resources. It is worth noting that none of the interventions requires significant changes in legislation; making the implementation easier.

Table 3: Implementation complexity overview

	Additional analysis needed	Senior authority approval	Change of law or subordinate legislation	Change of non-legislative acts	Expenditure of state budget	Personal capacities of relevant ministries	Capacity non-ministerial entities	IT or other technical support
Chief Science officer	XX	XXX	X	XX	XX	XXX	X	X
Research needs		X		XX	X	XX	XXX	XX
Optimise science advice mechanism	XX	XXX		XX	X	XX	X	X
Funding of policy relevant research and analyses	XX			XXX		X		
Internal incentives for policy relevant outcomes	XX	XXX	X	XXX			X	
Inter-sectoral mobility	XXX	XXX	X		XX	XX	XX	X

	not necessary
X	low / would help
XX	medium / would help significantly

XXX	high / necessary

Source: Own elaboration.

While each intervention may be implemented independently, implementing all interventions together shall bring significant benefits and synergical effects. Whereas, there are obvious synergies between the interventions on the demand side and interventions focused on the supply side. There are also important effects across these parts. For instance, it is expected that the interventions on 'Research needs' and 'Internal incentives for policy relevant outcomes' are implemented sequentially, as the former would provide key input for the latter. A similar synergic relationship is also foreseen between the interventions on 'Internal incentives for policy relevant outcomes' and 'Funding of policy relevant research and analyses'.

The suggested interventions aim to provide an action plan for the implementation. During the development, the practicality was strongly emphasised. In some cases (Research needs), a pilot was undertaken to test the potential application of the interventions. This proved the importance of testing the interventions with all relevant stakeholders. The lessons learnt were included also in the specific interventions. In case of other interventions, pilots are recommended as well to fine tune the parameters. The future of implementation is the responsibility of the organisations that asked for this support. It might still need more analysis, but in many cases the most important thing will be to secure the support of senior authorities within the ministries and other organisations. As it was emphasised before – this project's future and the future of science-for-policy is in the hands of the stakeholders from within the public administration bodies and the research organisations.

Table 4: 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 science, research, and innovation.
Ministry of Health	Line ministry for public health

Transfer Center of the Czech Academy of Sciences (CeTTAV)	Centre responsible for supporting scientists of the Czech Academy of Sciences in technology and knowledge 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.

3 Introduction: Developing policy recommendations and an implementation roadmap informed by an assessment of current state, needs and gaps of EIPM capacity

Policy reforms rarely happen on a 'greenfield'; they build upon existing structures and historical contexts. They are influenced by the current situation and the previous development – often decades into the past. Implementing Evidence-Informed Policymaking (EIPM) in the Czech Republic is no exception. Despite the 35 years since the fall of communism, this historical experience still influences the current landscape of science-for-policy (S4P) activities.

Before 1989 and even in the 1990s, there were a large number of ministerial research institutes in the Czech Republic directly linked to the central state administration. Among other things, they were often involved in data collection and proposals for practical policy measures. Although the effectiveness and real impact of these institutions was questionable, they represented an early link between science and political decision-making. Thus, elements of EIPM were not entirely foreign to the political culture of the Czech Republic.

After 1989, however, a prevailing view emerged that science and politics, having different operational logics, should remain separate. The influence of scientific knowledge and data on policymaking was associated with a desire for central control and planning. Therefore, any attempt to incorporate scientific knowledge into political decision-making was considered a 'fatal conceit'. On the other hand, science wanted to be completely free of any political interference. The interconnection between the worlds of politics and science was thus considered mutually undesirable. Politicians were careful not to be perceived as 'too academic', and scientists in turn were careful to ensure that their research was 'completely apolitical'.

This division began to soften in the late 1990s, when calls for a more strategic approach to policymaking gained traction. The result was a proliferation of various 'strategies', 'concepts' or 'action plans'. These were often, however, of dubious quality of elaboration and, even when valid on paper, they were not actually implemented. An unintended consequence of this development has been the gradual creation of personal capacities, in particular various strategic departments and units. Slowly but surely incorporation of data and data analysis into these documents followed. It became self-evident that for a real long-term positive change to happen, information on the actual subject matter of the regulation was necessary.

These gradual internal changes have also intersected with changes of the external environment – the spread of the concept of evidence-based policymaking (EBPM) and then with the emergence of policy labs. Most importantly, science itself has transformed. Behavioural economics, in particular, has challenged the established theoretical assumptions of classical economics. Above all, it has shown that science can have practical and directly observable impacts. Many academics have seen that they do not have to look for confirmation of their theoretical models in complex data models, but that it can be tested directly in practice.

In the 2010s, the concept of EBPM and subsequently EIPM began to enter the Czech discourse. However, the first public administration surveys already showed that for most public administration employees EIPM is just a formal concept, which was seldom applied in practice. Administrative and political documents, along with personal experience, continued to be the main source informing policymakers' work. Expert knowledge and scientific evidence, instead, were used only scarcely in their daily work. Their main, and partly justified, argument for this approach is that this expert knowledge is too incomprehensible and, above all, too remote from their knowledge needs.

Scientists, often unfamiliar with political dynamics after years of isolation, contributed to this disconnect. They did not fully grasp that while science offers expertise, policymaking must also weigh public interests and values, making it impossible to integrate scientific knowledge without adaptation.

Despite these challenges, efforts to bridge the science-policy divide have emerged in the past decade. Evaluation and analytical units within the government have gradually taken root. The problem of the lack of data and a solid evidence basis (and the analyses based on it) began to be more acknowledged. With the emergence of these issues, a small and active group of people with experience from both worlds - politics and academia – has been developing and promoting science-for-policy initiatives in the Czech Republic.

As the situation slowly began to improve, another challenge arose: the questioning of science and expertise as such. This is a global challenge linked to the rise of populism and increasing misinformation, which became a pivotal problem also for the Czech Republic. On the one hand, the COVID-19 pandemic crisis has shown that scientific knowledge and data are indispensable for effective policymaking. On the other hand, the very same pandemic has called into question the major divisions within the academic community on how to address the

crisis, which the public often interpreted as immaturity, and sparked a debate on the inability of science to address practical issues.

Thus, the TSI project 'Building capacity for evidence-informed policymaking in governance and public administration in a post-pandemic Europe' began being carried out in the Czech Republic at a time when these two strong trends are developing against each other. On the one hand, there is a growing awareness of the importance of EIPM and a growing (even though still relatively small) community of people who are able to successfully bridge the worlds of science and policymaking. On the other hand, there is a certain disillusionment with science, reinforced by the increasing distrust in governments and state institutions. More and more people are looking for alternatives outside both science and politics.

The EIPM project has underscored these contradictions but also revealed substantial potential and has also shown the growing capacity and interest in EIPM. The proposed interventions have great potential to contribute to making the EIPM no longer a mere 'buzzword', i.e. a concept frequently used, but still being purely virtual. For this to happen, the interventions must not be implemented solely mechanically, but in a way that transforms the culture of everyday life. implementation must go beyond technical processes, embedding EIPM in the day-to-day culture of policymaking. Success depends on individuals who champion this mission and push the agenda forward.

4 Diagnosis of strengths and weakness in capacity for EIPM in the Czech Republic

4.1 Introduction: Evidence-informed policymaking and the science-for-policy ecosystem in the Czech Republic

The following chapter is an introduction into the EIPM topic in the Czech Republic. This introduction does not aim to be a complete elaboration of the science-for-policy ecosystem; however, it should provide the reader with a thorough understanding of what is currently going on in the Czech Republic regarding science-for-policy. This diagnostic chapter complements and elaborates on documents such as the Public Governance Review (PGR) performed and published by OECD in March 2023. For example, PGR in chapter 3 deals with the challenges of introducing EIPM into the Czech policymaking process describing the political commitment as fragile and the demand for EIPM by decision-makers and senior civil servants as relatively weak. Another important document – Client-oriented Public Administration 2030 – by the Czech Ministry of Interior identified a number of risks potentially undermining or hampering the advancement of EIPM of which many proved to be really materialising in the period immediately preceding the finalisation of this report.

This introductory chapter has been conducted at the initial stage of the project with the purpose to describe the 'as-is' situation of the institutional capacity of beneficiary organisations (BOs) in public administration and the research sector to use evidence in policymaking processes better. The main questions addressed by this report are: How is EIPM being performed in the country? What specific problems and challenges related to using evidence to inform policymaking need to be addressed?

In terms of its scope, the introductory section provides an assessment of the overall situation of EIPM in the country. To visualise the science-for-policy ecosystem, a simplified visualisation was created (see figure 2). It is to be further expanded in the course of the project. It is structured in accordance with the project objectives for the Czech Republic, which have been identified during the previous discussions of the National Coordinating Group composed of DG Reform, the JRC and its group of national experts, the OECD, and the Czech BOs at different meetings between project representatives and BOs. These include providing recommendations for improving inter-ministerial coordination information exchange and promoting the formal institutionalisation of existing informal channels and networks; improving access to scientific expertise, engagement with scientific organisations and specific processes such as science advice and strategic foresight; and supporting the development of internal capacities (JRC 2023, p. 3).

Figure 2. Visualisation of the Science-for-Policy ecosystem in the Czech Republic
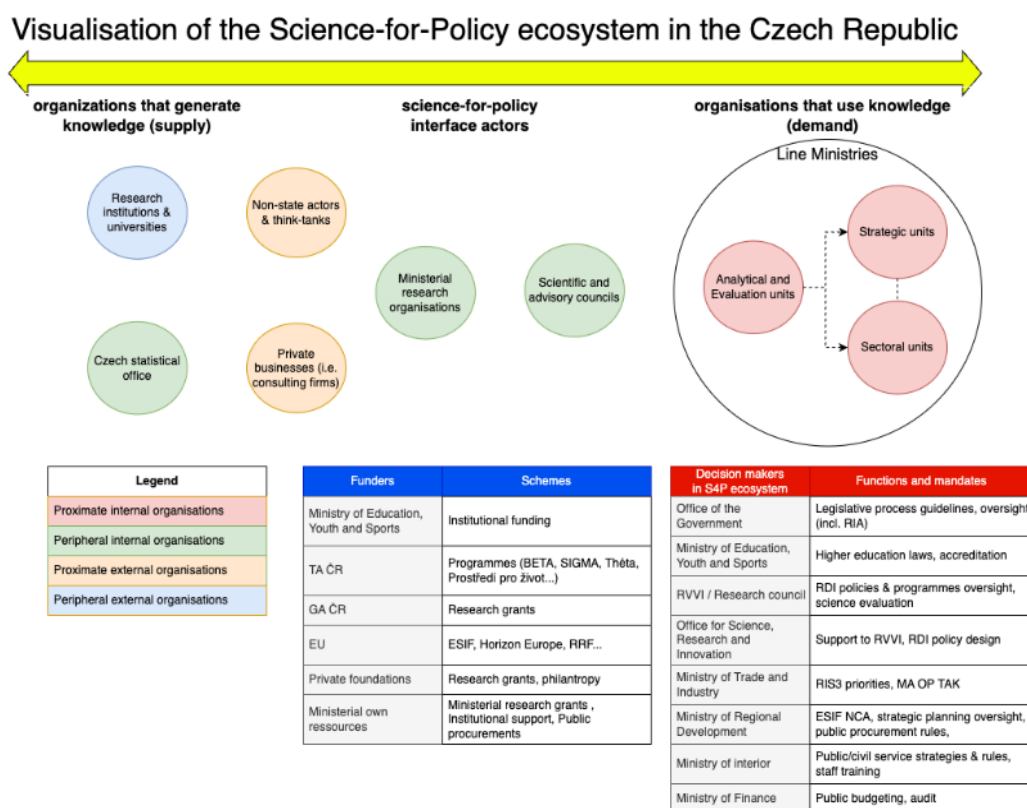
Source: Own elaboration.

Analytical framework

This section of the Final report is underpinned by the analytical framework for assessing EIPM capacities, developed in collaboration between the Organisation for Economic Co-operation and Development and the Joint Research Centre for the purposes of this project. The framework describes the EIPM environment in terms of supply and demand market mechanisms that, in theory, should drive a stable flow of evidence in the longer term. This model of demand and supply has been particularly influential in academic research on EIPM, drawing from Weiss (1979) and Caplan (1979) and their followers, including Stewart, Langer and Erasmus (2018). It helps identify 'market failures' that prevent supply from meeting demand or demand from being articulated clearly and picked up by the supply side.

That said, without developed, emancipated, and motivated knowledge providers (universities, research centres, etc.), policymakers and decision-makers are not able to make evidence-informed decisions. At the same time, without policymakers actively seeking evidence, the availability of evidence on the market is likely to be rather low. Clearly, demand and supply have different dynamics and respond to different incentives. Despite being part of the same administrative culture, their capabilities and organisational structures are used for different processes and timeframes. Specific interfaces are needed, yet still underdeveloped in most countries, for the exchange to work properly. As the interactions between demand and supply side may take various shapes and concern different places in a hierarchy, it is important to consider different levels of individual, organisational and inter-organisational capacities and incentives. This is also the general approach of this diagnostic section.

Methodology & data collection

The data collection and analysis have consisted of several steps. A high-level public kick-off meeting in Prague in March of 2023 served as an opportunity for identifying several challenges that the Czech Republic faces in the realm of EIPM, which were also further discussed at the meeting of the National Coordination Group after the public event.

Following the kick-off event, the JRC prepared five questionnaires for five different types of organisations/stakeholders in the science-for-policy ecosystem in the country, including the centre of government, line ministries, research ministries/councils, government networks and knowledge brokers, as well

as research-performing organisations. The questionnaires were designed based on the common analytical framework developed by the JRC and the OECD and compiled during June and July 2023. They were peer-reviewed by international experts and underwent two rounds of review by national experts to ensure contextualisation. They were subsequently translated into Czech and shared with the BOs, whose representatives provided substantive feedback. Revised questionnaires were disseminated via an online survey and filled out by 41 respondents from BOs and other relevant actors in the Czech science-for-policy ecosystem. The national expert team analysed the responses as part of research on EIPM in individual organisations.

A significant component of the data collection for the diagnostic part of the project included interviews with 47 representatives of BOs and other institutions and organisations that were identified as important actors who could contribute to a better understanding of EIPM in the country. These included representatives of all BOs and representatives of additional organisations (see Table 1). It is important to emphasise that multiple representatives of individual BOs (and other line ministries that are not BOs) were interviewed, usually coming from different units/departments within an organisation and working at varying levels of seniority and in different functions (e.g. public managers, advisers, researchers, analysts, etc.). However, 30 of the 47 interviewees occupy leading positions. The interviews, which took place in June-August 2023, were conducted in line with interview guides based on the project's analytical framework and were also informed by questionnaire responses and desk research.

Another source of data supporting the interviews and the analysis is the desk research conducted by the national experts on individual actors that are part of the broader science-for-policy ecosystem. Such desk research includes an overview of individual institutions or organisations' policies and practices in the realm of EIPM, as well as a review of the overall institutional and policy framework for EIPM and research, development, and innovation in the country. In addition, data on research projects and results has been used via the Starfos platform, maintained by the Technological Agency of the Czech Republic, and using the data of IS VaVaI (Informational System of RDI).

Due to time constraints, the analysis has primarily focused on BOs and several additional line ministries, such as the Ministry of Labour and Social Affairs, the Ministry of the Environment and the Ministry of Education, Youth and Sports, and the Czech Academy of Sciences. A limitation of the analysis contained in this part of the report is that, due to BOs predominantly belonging to the group of government institutions, the experts focused primarily on the demand side of the ecosystem; as a result, the supply side (scientific/research) was mostly desk-researched for this report.

This section is structured as follows: Chapter 4 is looking at the demand and use of EIPM and the capacities of government and public administration to that end; Chapter 5 includes the supply side of evidence and science for policymaking, including the capacities of organisations within and outside of government for EIPM; Chapter 6 then discusses where supply and demand meet, laying out the key organisations, processes and policies within government for EIPM. A concluding diagnosis is given in Chapter 7, discussing capacities, linkages, and policies on EIPM in the Czech Republic.

4.2 Demand and use of evidence and science for policy: capacity of government and public administrations for evidence-informed policymaking

This chapter[1] discusses the demand side of the science-for-policy ecosystem. It focuses significantly on the BOs that are part of the project. First, it introduces each BO and provides an overview of the policy fields within each BO's competence area. It then discusses how evidence is used, identifying points of interest concerning the capacities, practices, and policy frameworks in each BO.

The rest of the chapter provides a cross-cutting overview of the following themes: culture and attitudes, policy frameworks, internal capacity, and individual capacity. These latter sections draw on information from individual BOs and are supplemented by desk research and further sources available to the expert group from across the central public administration.

Insights on individual BOs are based primarily on personal semi-structured interviews and survey responses from civil servants and, in some cases, other actors who work inside ministries that play a role on the supply side of the evidence ecosystem.

---

[1] Information provided in this and following chapters is subject of change due to the dynamic situation of policymaking.

4.2.1 Stakeholder mapping: overview of the key actors for demand and use of evidence and science for policy

4.2.1.1 *The Office of the Government: a coordinating role on public governance, policy evaluation, and science.*

The Office of the Government is one of the central state administration authorities of the Czech Republic and has a complex structure. Its competencies are determined by Act No. 2/1969 Coll. The Act establishes the Office as a body that performs expert, organisational and technical tasks related to securing the activities of the Government. The Office's primary role is to manage and provide institutional support and full service for the meetings of the Government (cabinet members). In that sense, the Office of the Government (the Institution) and the Government (the Executive) are not the same. It also houses "ministers without portfolio", i.e. ministers who do not head their own institutionalised ministries, and their teams – currently the Minister for Science, Research and Innovation, the Minister for Legislation, and the Minister for European Affairs. Outside of this core competency, the Office of the Government's internal structure covers multidisciplinary, cross-cutting agendas and associated apparatus of its own, including but not limited to the section for European Affairs, the Department of Anti-Drug Policies, the Department for Gender Equality and the Department for Human Rights and Protection of Minorities, while also supporting line ministries with necessary expertise and coordination in their policymaking efforts.

The Office of the Government fulfils several crucial roles on both the demand and supply sides of the science-for-policy ecosystem through its central and coordinating activities. The bodies within the Office of the Government are responsible for the evaluation of research organisations and research policies through the cross-cutting agenda of the Minister for Science, Research and Innovation through the subordinated Section for Science, Research and Innovation. In addition, this section prepares materials and sources for the Research, Development and Innovation Council (RVVI) and covers other analytical, strategic and administrative tasks related to this agenda (see below). Furthermore, the responsibility, administration, and support for line ministries in the Regulatory Impact Assessment (RIA) process is also located within the Office of the Government (under the Minister for Legislation).

Due to its coordination role, there is a great variety of activities related to EIPM within the Government. In general, various units use mostly internal analytical capacities; however, they use the BETA2 programme1, with programme BETA3, in preparation for the next programme period until 2031. The Office of the Government's dedicated budget was doubled. The activities linked to EIPM are assessed very differently based on the role and position of the interviewees. Overall, the Office is exceptional in its great variety of topics it covers, which complicates the assessment of the EIPM activities. Various obstacles and problems within the processes of delivery and usage of (scientific) evidence in policymaking were identified: time constraints, limitations of the political cycle, abrupt changes in political priorities or data access. As in some other organisations, interactions with academia are rare, primarily informal and take place on an ad hoc basis.

4.2.1.2 *Ministry of the Interior: the main actor for strategic development and innovation in the public administration*

Like in most countries, the Ministry of Interior (MV) is responsible for internal security, border protection, police, and firefighter forces. In the Czech Republic, it also plays a coordinating role in the organisation and performance of public administration. This includes the central civil service and local governments, dealing with standard operational and administrative issues, strategic development, and innovations. It is within this institutional framework where overarching EIPM strategies are drafted, and qualitative changes to the general performance of the Czech public administration are devised. Until recently, the MV was also in charge of the digitisation agenda, but this has been transferred to a new body – the Digitalisation and Information Agency (de facto start of operation in April 2023) in the portfolio of the Vice-PM for Digitalisation. Despite this, 280 digitalisation tasks are still assigned to the MV as a part of the Right to Digital Services effort, enshrined in Act No. 12/2020. As per a pending legal change, from January 2026, the management of central civil service issues under the Chief State Secretary (the head of the civil service) is to be transferred from MV to the Government Office. It remains to be seen what effect this change, if implemented, would have.

The activities mentioned above are deemed to form a core of EIPM. They are mostly concentrated in the section of public administration from which the section of information technologies has recently been separated. In addition, several sections have a certain degree of demand for and production of various forms of evidence. There is a legislative section that oversees the complex agenda of administrative law, which permeates the

public administration on several levels. This section has recently embarked on a number of ambitious initiatives in relation to the digitalisation of the legislative process. The line ministry naturally also follows trends in the security field. For that particular purpose, the internal security section has a dedicated security research department.

MV faces many challenges and hurdles while advancing EIPM and achieving its goals. Fragmentation and separation of the line ministry (sometimes very physical) into various, sometimes incompatible, slightly overlapping, and indeed very much disconnected sections and departments makes communication and coordination across and outside the institution difficult. Lack of clarity regarding the separation of competencies within the line ministry and with the rest of the government leads to calls for changes in the Competence Act (Act No. 2/1969), which is seen as obsolete by some of our respondents. In addition, the absence of a clearly defined and empowered cadre of public administration analysts makes the roll-out of full-fledged EIPM difficult. However, steps have been taken to remedy this on an inter-departmental level. What, however, has been largely missing is the systemisation and institutionalisation of the knowledge transfer from academia and other sources of evidence, which is further exacerbated by low levels of trust in the willingness and ability of researchers to contribute to policymaking in any meaningful way selflessly. The flow of evidence thus remains largely unstable, ad hoc, and dependent on personal contacts between academia and policymakers. Despite being seen as helpful, programmes such as BETA1, run by the Technology Agency of the Czech Republic (TA ČR), have not fully reversed the trend so far. Unsolicited new research by not-so-well-connected researchers has only a tiny chance of penetrating the ministry. That said, the interviewed representatives of the Ministry of Interior claim to be open to piloting selected innovative proposals and employing young talents as junior civil servants. Nevertheless, without better institutionalisation and without offering a clear career path and more attractive benefits, the prospect is likely to stay unappealing for the potential candidates in the foreseeable future. Additionally, there is a genuine concern that the current fiscal situation will require cuts that may compromise the development of analytical skills within the public administration and the development of science-for-policy capabilities in general.

4.2.1.3 *Ministry of Regional Development: the main coordinating body for regional development and funding instruments*

The Ministry of Regional Development (MMR) is responsible for a diverse array of policy areas, most of which are linked to the regional level of public administration. Some of its responsibilities, however, are relatively minor or disconnected from others, which makes this line ministry quite complex in terms of structure and management, resulting in situations where some policy areas periodically slip away from the political radar.

Hence, actors inside the line ministry mainly act on the demand side within the evidence ecosystem with respect to their policy areas. However, parts of the line ministry shape the environment - especially for European funds (where a central evaluation unit coordinates evaluation policy across the state), the ability of public bodies to obtain evidence via public procurement (as the ministry sets the general rules of public procurement), or in social inclusion policy, where a dedicated body provides a de facto evidence service to local administrations.

MMR oversees the national regional policy and (most of the) funding instruments for its implementation. This takes the form of regional development strategies, as well as national and European funds aimed at supporting the development of the regions across policy areas. For EU funds, the line ministry plays the role of a funding body (Managing Authority of IROP and Cross-border Operational Programmes), as well as coordinator and standard-setter of the disbursement of EU funds across the state administration. This part of the line ministry has previously also been tasked with improving strategic planning across the government.

Relatedly, the line ministry sets the legal framework and guidance for spatial planning in regions and municipalities, as well as for construction and housing policy.

In addition, it houses the Agency for Social Inclusion. This body, formerly located in the Office of the Government, is tasked with analysing the degree of social exclusion nationally and especially in individual municipalities to support local policymaking and joined-up problem-solving tied to European or national subsidy programmes. It contains a dedicated analysis and evaluation unit, which acts as a field research and data service for individual municipalities.

A specific area where the line ministry affects the workings of public administration across levels and policy areas is public procurement, for which it sets legal rules and guidance, i.e., determining the feasibility of procuring evidence from outside sources.

Finally, MMR owns areas such as tourism and the travel industry (both inbound promotion and regulation of travel agencies) or regulation of the funeral industry.

In many of these areas – especially spatial planning, housing, construction policy, and public procurement – policymaking and implementation have long been governed by somewhat insular expert / legal communities with relatively little contact with scientific knowledge and empirical evidence. This is now changing, as senior leaders on both the political and civil service sides increasingly emphasise the importance of using data, including from external sources, as well as scientific evidence and improved ways of designing and evaluating policies. This is particularly the case for housing policy and procurement and construction policy. In housing policy, the ministry has significantly built up its analysis and strategy capacities over the last few years and an affordable housing law was also one of the first cases of an engagement between VAÚ and a ministerial unit.

A specific case is EU funds, where an internal evaluation unit has been in place since 2014, tasked with (a) evaluating EU-funded interventions at the national, strategic level and (b) improving the evaluation practice across EU-funded programmes implemented by other line ministries.

The line ministry has founded and sponsors a public research organisation – the Institute for Spatial Development – which has a somewhat limited capacity and output and focuses on spatial planning and construction policy, with minor capacity dedicated to other areas. To some extent, MMR makes use of the BETA programme provided by TA ČR, with a dedicated person (positioned relatively low in the organisational hierarchy) in charge of this interface. Beyond that, contacts with academic research are mostly ad hoc and based on personal contacts with academics in individual policy areas.

4.2.1.4 *Ministry of Industry and Trade: a key actor in RDI funding*

The Ministry of Industry and Trade (MPO) is responsible for economic, industrial and energy policies. In the domain of economic policies, agendas cover external trade, the domestic market and business regulations, support to SMEs and consumer protection. It is the Managing Authority for EU funds targeted at the business sector and industries, especially RDI. Industrial policies include natural resources management, industrial segment regulations, environmental regulations, strategic planning and industrial RDI. In the energy sector, the MPO is tasked with strategic planning and regulation, as well as with supervising the construction of energy facilities.

Given the diversity of policy domains, several types of evidence are demanded at the MPO. Economic and financial statistical data are widely used in all domains and external trade fields, where data is abundant. Academic research is required for environmental regulations in the manufacturing industry, natural resources management and energy policies. Other types of evidence stem directly from the field through stakeholder consultations and questionnaires, especially in industrial development, RDI, business regulations, or consumer protection. Finally, foresight and technology assessments are demanded in RDI and digitalisation policies.

The MPO has important prerogatives towards the supply side of the science ecosystem since it acts as a direct funder and managing authority for research programmes funded by the Technological Agency. MPO directly supports industrial RDI, providing financial backing to 12 private research organisations. These programmes are, however, not aimed primarily at providing evidence for decision-making. TA ČR administers programme TREND, which is managed by MPO, and aims to enhance international competitiveness by facilitating the application of product or process innovations, benefiting both enterprises and research organisations. From 2015 to 2023, these initiatives were allocated a total budget of 23 billion CZK, with approximately 14.5 billion CZK derived from public funds and the remaining from private sources. Notably, of the 1208 funded projects, around two-thirds (849) were spearheaded by private-sector companies, often (676 cases) collaborating with public research organisations or universities (source: IS VaVaI).

More policy-relevant research is produced via the TA ČR Théta programme, which concentrates on RDI within the energy sector. This programme allocated funds to 296 projects between 2018 and 2023, with an aggregate budget of around 5.5 billion CZK. Among these projects, almost half (135) were led by private companies, often collaborating with universities. The remaining projects within the Théta program were spearheaded by public research organisations (source: IS VaVaI).

MPO use of the programme BETA2 for funding policy-relevant research offers room for improved utilisation. A total of 20 projects received funding, amounting to approximately 84.5 million CZK, mainly in domains relating to vocational education and training, analysis of the business environment and natural resources management (especially in the mining industry). Interestingly, over half of these projects were executed by private-sector entities, with only one project involving collaboration with a university. Universities contributed to a third (6) of the projects (source: IS VaVaI).

Analytical work is performed mainly within the departments, with no central analytical unit. However, a small unit composed of 11 employees located in the economic policy section provides statistical analysis outputs on demand to other sector-specific departments. It produces quarterly reports with compilations of economic statistical indicators. In limited cases, the MPO cooperates with international organisations to produce policy-relevant analytical outputs. For example, the strategic framework for support to SMEs via EU Funds was informed by a study produced jointly with the World Bank via a Technical Support Instrument. Also, the JRC collaborates with the MPO on the Smart Specialisation Strategy (S3) (MPO, 2022). Except for the Czech Metrology Institute, the MPO does not sponsor research organisations that produce or deliver evidence for policymaking.

Analytical work is often outsourced via public procurement, especially evaluations and RIA. In the domain of RDI policy (S3), a framework agreement Stratin+ with both private and public research organisations allows for the delivery of analytical outputs such as technology assessments, bibliometric analysis and foresight studies. The MPO also often relies on more or less formal council bodies that inform decision-making on particular matters. It is, for example, the case in environmental policies in the manufacturing sector or in the EU funds section, for which a network of academics is frequently consulted. In other instances, such as industrial policies, energy policies, and business support, council bodies primarily comprise stakeholders, supplemented by a few academic researchers (see section 4.3 on science advice).

The MPO showcases a dedicated commitment to utilising data and evidence, aligning with its policy domains' data-driven nature, particularly economic and trade policies. The line ministry benefits from an analytical unit that not only generates on-demand statistical outputs but also actively participates in crucial policy processes such as strategic initiatives and impact assessments. The MPO's collaboration with entities like TA ČR, academic institutions, and international organisations like the World Bank underscores its proactive engagement with external expertise. However, several weaknesses hinder the line ministry's optimal interface. A considerable reliance on external expertise is due to limited internal capacity limitations, and the dependence on informal personal ties with academic researchers and experts complicates the formalisation of science advice processes. Furthermore, the MPO faces challenges in accessing reliable and current data that could be mobilised in policymaking, particularly in the domain of business, market and environmental regulations. Additionally, deficiencies in critical policymaking skills like policy design, evaluation, and strategic planning pose further limitations to the ministry's ability to mobilise evidence in key decisions.

4.2.1.5 *Other organisations*

4.2.1.5.1 Ministry of the Environment: an established tradition of using evidence

The Ministry of the Environment (MŽP) is the central state body responsible for safeguarding water resources, air quality, nature, and landscapes. It oversees geological services and ecological impact assessments and manages national parks' hunting, fishing, and forestry. In addition, it guides environmental, climate and sustainability policies, eco-labelling, and voluntary business environmental management programs (Act No. 2/1969 Coll.).

The MŽP has an established tradition of using evidence in the fields of strategic work (Strategic Framework ČR 2030, State Environmental Policy 2030, Strategy on Adaptation to Climate Change, among others), impact assessments (RIA and SEA), implementation of taxonomy and Do No Significant Harm principles, climate proofing and green budgeting (in collaboration with academia). In addition, each sectoral department is the recipient of scientific evidence in its domain of competence (e.g. air and water pollution, soil and landscape protection, biodiversity conservation, waste management, circular economy, etc.).

Analytical work at the MŽP is performed at the level of sectoral departments. Cross-cutting analytical work is performed in strategic departments in the Section for Climate Protection, specifically in the Department of Environmental Policies and Sustainable Development. In sector-specific departments, the uptake of evidence and strength of science-for-policy interlinkages are uneven. While domains such as water and air pollution, soil protection and biodiversity conservation are marked by strong ties with scientific expertise, other sectors benefit less from the uptake of evidence from the scientific community. According to interviewees, this can be explained by the lacking supply of evidence in domains like waste management or circular economy.

Of notice is the existence of a Minister's scientific council (Vědecká rada ministra) that primarily focuses on advisory activities related to significant conceptual initiatives, identifying emerging areas, supporting the creation of strategic documents in the realm of expertise and scientific research activities, and coordinating the environmental expertise and information base within the line ministry's jurisdiction. Also, a unit is dedicated to drafting long-term conceptions for research and innovation (Conceptual Document on Research, Development,

and Innovation of the Ministry of the Environment for the Years 2016 to 2035, with a 2050 Outlook) and to coordinate research and innovation programs that are funded via TA ČR.

Two programs funded via TA ČR aim at providing scientific expertise to the MŽP. The program "Prostředí pro život" (Environment for life) is specifically tailored to evidence needs at the MŽP and is managed by the MŽP. There have been 149 completed and ongoing research projects funded via this program for a budget of 3 billion CZK (out of a total allocation of almost 5 billion CZK). Most funded projects are in natural sciences (FORD 1 classification). More than half of the projects (98) were run by public research organisations and universities, and the remaining by private organisations (32). The six large consortia3 with long-term funding (around six years) are of particular interest. These consortia have been praised by interviewees for their capacity to provide incentives to researchers through long-term funding and being able to adopt interdisciplinary perspectives on policy problems (for example, through the interaction of social and natural sciences). In addition to the Prostředí pro život program, the MŽP has been the recipient of research outputs via the BETA programmes. A total of 79 projects have been funded for a total budget allocation of 229 million CZK, mainly in natural sciences. Approximately one-third (29) of the beneficiaries were private entities (although often in collaboration with public institutions), and the remaining (33) were public research organisations and universities (source: IS VaVaI).

The MŽP also supervises five organisations (3 contributory organisations and 2 public research organisations) whose functions are to generate or translate evidence and expertise. The Czech Environmental Information Agency (CENIA) is the maintainer and provider of statistical data relating to the environment and operates information systems as well as reporting systems. It is also the contact point of the European Environment Agency (EEA). The State Geological Survey gathers, stores, and interprets geological information. The Czech Hydrometeorological Institute is the central state office of the Czech Republic in the fields of air quality, meteorology, climatology and hydrology. The MŽP also supervises 2 public research organisations in the area of hydrology (the T. G. Masaryk Water Research Institute) and landscape architecture (the Silva Tarouca Research Institute for Landscape and Ornamental Horticulture).

4.2.1.5.2   Ministry of Labour and Social Affairs: a potential for more evidenced-informed social policies

The Ministry of Labour and Social Affairs (MPSV) is responsible for issues pertaining to social policy, social security, labour legislation, employment, occupational health and safety, equal opportunities for women and men, and other social policy and employment-related issues. It is also responsible for providing methodological guidance to several institutions in the domain of social policy and labour, such as the Czech Social Security Administration, the State Labor Inspection Office, public employment services, regional labour inspectorates, and the Office for the International Legal Protection of Children. It also runs institutions providing care to children and adults with disabilities.

Analytical functions within the Ministry are performed in various instances. A small analytical team staffed with three analysts, located In the Cabinet of the Minister (within the Department of Strategic Activities), prepares analytical briefs for the Minister, prepares research inputs for a commission dealing with migration, and provides analytical support to a department within the Ministry that does not have its analysts. Analysts are also employed within most departments of individual sections of the line ministry dealing with different agendas. However, the Ministry does not have a separate central analytical unit that would work across sections or analytical units that would be common to one section.

In the realm of research, MPSV supervises two government-funded public research organisations, the Research Institute for Labour and Social Affairs and the Occupational Safety Research Institute. These independent research organisations perform research and cooperate with the line ministry, whose individual departments agree on a research agenda with the institutes for a two-year period. Moreover, individual departments may submit their requests for specific research to be undertaken by the institutes. A unit supporting science and research within the Department of Labour keeps track of all research performed within the line ministry, including by the two government-funded research organisations.

A part of the Section of European Funds and International Cooperation within the line ministry is the evaluation unit, which is primarily responsible for conducting process and impact evaluations under the Operational Programme Employment and Employment+, and thus informing future policies within the line ministry. The evaluation unit sets, together with stakeholders (usually, other departments within the line ministry, but sometimes other organisations or ministries), the priorities for evaluation and the evaluation design. As this unit is well-staffed (for more, see Table 5 in section 3.2.1), most of the evaluations are conducted in-house by their own evaluators.

4.2.1.5.3   Ministry of Education, Youth and Sports: a coordinating body of actors in the science and innovation ecosystem

The Ministry of Education, Youth and Sports (MŠMT) is a central public body of the Czech Republic. Its competencies are determined by Act No. 2/1969 Coll., which specifies the role and responsibilities of central public administration organisations. The line ministry is responsible for pre-schools, school facilities, primary schools, secondary schools, and universities, for science policy, research and development, including international cooperation in this field, for scientific degrees and for state care for children, youth and physical education. Under the authority of the ministry, there are other institutions and organisations, e.g., the Czech School Inspectorate (ČŠI), the National Pedagogical Institute (NPI), The Centre for the Determination of Education Results (CERMAT), the University Sports Centre of the Ministry of Education, Youth and Sports or Centre for the Study of Higher Education (CSVŠ).

Generation, demand, and use of evidence at the ministry are concerned with various types of evidence, but there are also different approaches across the ministry. The entire Czech school system's management is divided into two ministerial sections: Sections 2 and 3. On the one hand, Section 2 deals with policy from the preschool to the secondary school level, with further fragmentation between the two departments. One department is focused on the preschool and primary level, and the other on secondary schools. On the other hand, Section 3 is focused on universities, science and research. This sensible divide leads to several challenges with regard to implementing evidence-informed policies. The lack of mutual information and coordination, as well as data interoperability between different sections, hinders the effectiveness of policies that address the whole students' curriculum (preschool, primary, secondary schools and universities). The ministry mainly uses statistical data about the school system.

Analytical work is performed somewhat within the departments (the amount differs between departments), and there is a newly established central analytical unit in Section 5 of the line ministry, which will be further discussed in Chapter 4.

4.2.2   Culture, attitudes and understanding of evidence-informed policymaking

Although the introduction of EIPM is one of the most visible trends in policymaking in recent decades, the role of research in policymaking in the Czech Republic is generally relatively low. As for the demand side, an article by Veselý et al. (2018) provides some insights into the case of the Czech Republic. Using a large-N survey with Czech ministerial officials and in-depth interviews with them, the article explores what public officials understand under the term 'evidence', what kind of evidence is used and preferred by public officials and why. It is shown that despite the long-established tradition of using research in policymaking in the country, the importance of research evidence in the Czech Republic is far from being taken for granted. On the contrary, the immediate and personal experience is often preferred over the research findings by public officials. The exceptions are census-like statistical data and comparative data published by international organisations.

Table 5. The use of evidence in the Czech Republic ministries

	Never	Sometimes	Often	Very often
Czech professional literature and scientific journals	15	46	26	13
Foreign professional literature and scientific journals	38	44	12	5
Technical and evaluation reports, briefing papers	19	36	30	15
Strategic and conceptual documents of the regions	69	25	4	2
Strategic and conceptual documents from the national or supranational level	24	43	24	9
Consultations with domestic (Czech) experts	12	44	33	11
Consultations with foreign experts	54	37	7	1

Consultations with colleagues from other departments or organisations of public administration	2	21	42	35
Information from the mass media (press, television and broadcast, internet news)	14	39	27	20
Budget data, information on expenditures and other financial indicators	27	38	22	13
Professional advice	62	31	5	2
Personal experience	1	12	30	56
Information from commercial sphere representatives	36	48	13	4
Information from non-profit organisations (service organisations, think tanks and the like)	41	45	11	3
Political parties documents	75	22	3	0
Legal norms (laws)	2	14	26	58
Directives, mandates, notices and methodical guidelines	1	10	26	62

Notes: N=1351; public officials interviewed in 2013. Entries are %. Ranked as originally in the questionnaire. Question: How often do you use the following sources of information in your work?

Source: Veselý Arnošt & Ochrana František & Nekola Martin, 2018. 'When Evidence is not Taken for Granted: The Use and Perception of "Evidence" in the Czech Republic Ministries,' NISPAcee Journal of Public Administration and Policy, 11(2), 219-234, December.

The respondents in our survey echo this to some extent, broadly indicating that scientific evidence should be used more frequently in policymaking alongside official statistics and administrative data.

Figure 3. Survey evaluation: Types of evidence
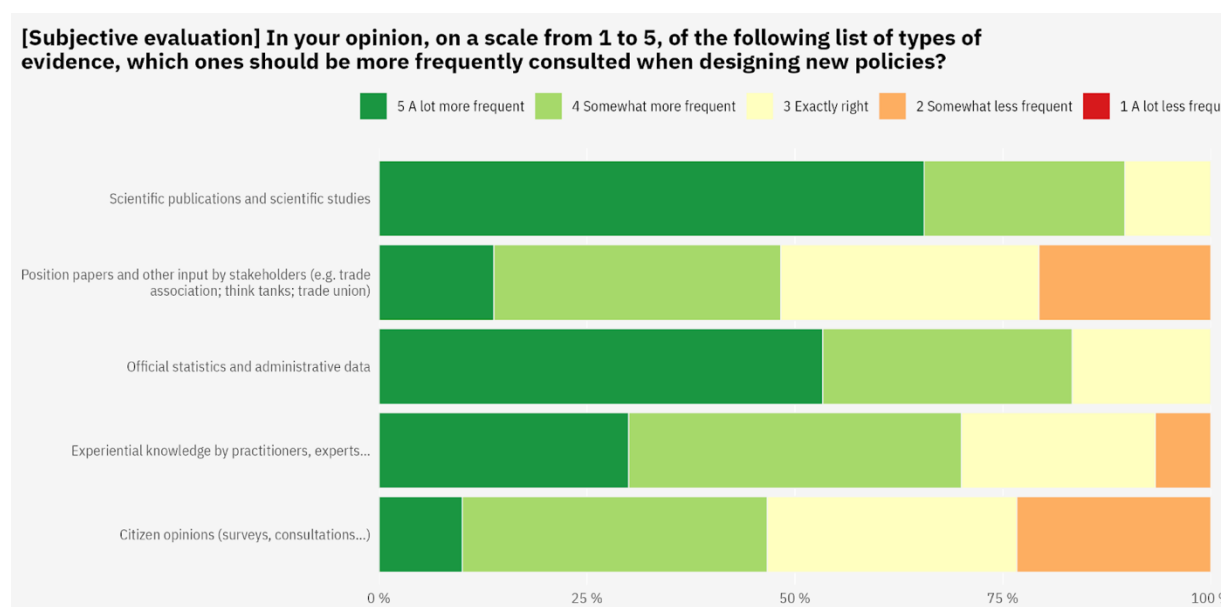
Source: Own data; N=41

Several recent initiatives mark a particular qualitative shift in approaching EIPM. Top management at the centre of government and line ministries has become more severe about backing its decisions with evidence. This is particularly true for policy areas where government departments and their agencies face opponents with a relatively solid evidence base and background, such as industrial companies. Some ministries have started to

bolster internal capacities by appointing special ministerial advisors, creating new strategy units, etc. Nevertheless, despite government departments having largely embraced the general ethos of making evidence-based decisions, the culture of using evidence remains uneven across policy areas and units. Several limitations stand out as significant inhibitors of further progress towards a working EIPM and, in particular, science-for-policy ecosystem.

Looking at survey responses (see chart below), the overall culture of using evidence in policymaking and awareness by policymakers are perceived as the most substantial barriers, alongside a lack of time and competencies regarding using evidence. The lack of incentives and recognition for researchers providing evidence are identified as the strongest barriers on the supply side.

Figure 4. Survey evaluation: Challenges for using scientific evidence

Source: Own data; N=39
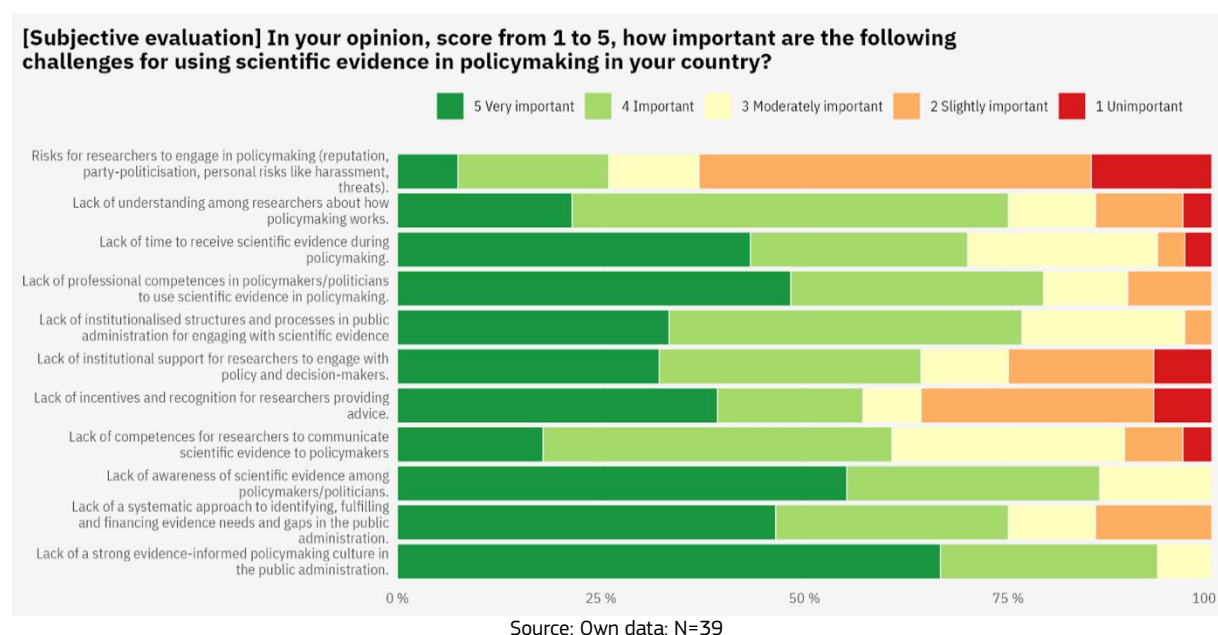
4.2.2.1 Science to confirm pre-existing opinions

Our findings – both regarding the culture and awareness from the survey as well as from the interviews – seem to confirm the conclusions of the recent OECD Public Governance Review: our respondents identified a relatively widespread understanding among the Czech policymakers of research and data analysis as a means to justify their pre-existing agendas – i.e., ideas from political manifestos, persuasions or possibly even prejudices. Such a misconception, of course, might lead to selective data collection, the narrowing of the scope or outright misrepresentation of evidence and manipulation or elimination of scientific methods or science as such from the policymaking process, as it could reveal inconvenient truths that are not consistent with desired outcomes from the point of view of particular political interests or ideological positions. Some of our respondents expressed their concern that evidence is only used for communication with the public, namely for presentation in the media, but this can be considered a minority view. This is also reflected in the survey responses, where stakeholders' views (see Figure 3), industry inputs and input from political advisors (see Figure 4) are among the sources of evidence that survey respondents would prefer to see less of.

4.2.2.2 In-house evidence production

'Going for scientists' advice is not "how things are done" at our office.' This quote by one of our interviewees illustrates a somewhat pervasive feature of governance in the Czech Republic, where involving science in policymaking is still far from automatic. The value of scientific findings for policymaking is often not recognised. First, a significant number of policymakers do not seem to hold science and scientists in high esteem. We have registered critical comments about scientists only being interested in additional funding but not showing a genuine interest and determination to help design better policies. Others see science as something rather impractical that should be done in separation from government and policymaking. Some policymakers see a space for employing science for specific tasks and are ready to a lesser or greater extent to allow the piloting

of new ideas stemming from research. But most policymakers stop well short of allowing science to co-create policy as an equal partner with an initiative of its own. Instead, evidence is still far too often reduced to data collected and interpreted primarily and predominantly by civil servants under the direct control of their superiors. Strategic documents deal more with internal analytical capabilities than sources of evidence and the actual system or mechanism of EIPM, including a science-for-policy transfer. A proper definition of the position of an analyst within the civil service is sought after, as well as financial and career prospects for those who should qualify as such by an inter-departmental working group within the Reform of Analytical Work (Reforma analytické práce) funded from the National Recovery Plan.

As survey responses indicate (see figure below), this weakness of internal evidence production capacities is recognized by our respondents as well: internal analytical centres are among the sources they would like to be consulted most frequently.

Figure 5. Survey evaluation: Producers/ sources of evidence

Source: Own data; N=38
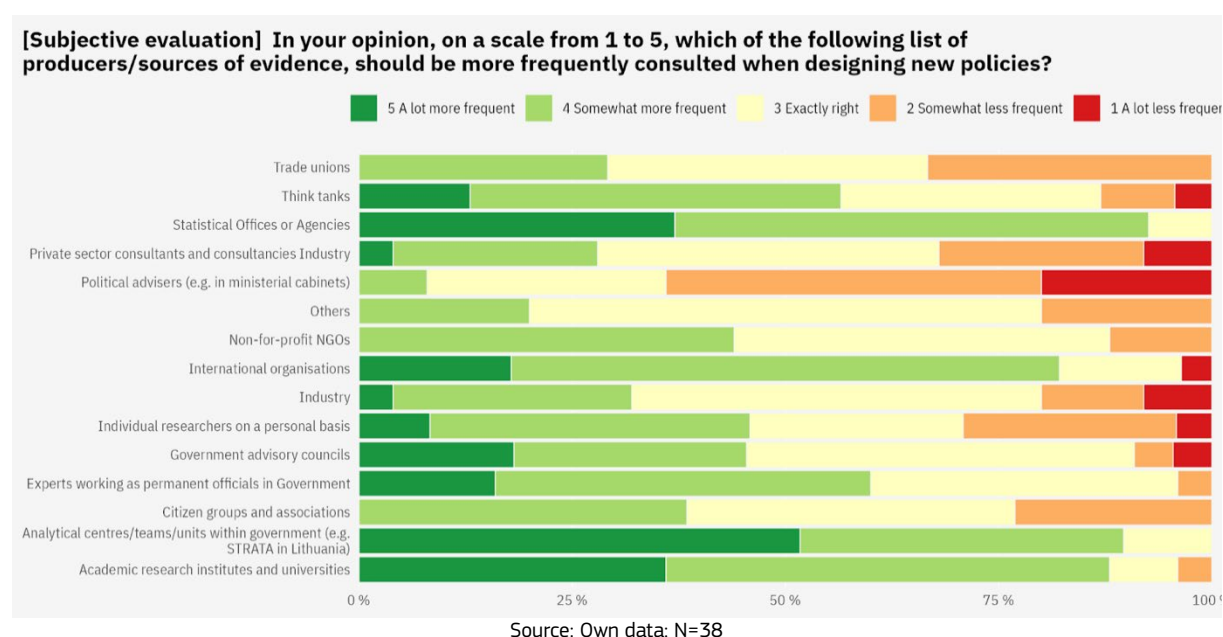
One of the offices that shape the attitudes and incentives of actors on the demand side is the Czech Republic Supreme Audit Office (NKÚ), which is established by the Czech Constitution and further governed by Act No. 166/1993 Coll., On NKÚ. The NKÚ is independent from other constitutional bodies. The overall task of NKÚ is to control the efficiency and effectiveness of the public. To manage its control actions, it creates a yearly plan of control activities, which is based mainly on suggestions from members of the Office. Other suggestions may come from the Chambers of Deputies, the Senate, their bodies, and the Government.

The NKÚ does not explicitly focus on topics related to EIPM. Nevertheless, it covers budget expenditures to RDI (see, e.g. audit report No. 20/06, 21/16) and published a yearly report on the annual state accounts. The NKÚ does not necessarily comment on whether evidence was used to support specific budget expenditures, but they use extensive evidence while auditing the particular budget expenditure. In some interviews, the NKÚ was criticized for a rigid approach to auditing expenditure, which significantly suppresses policymakers' incentive to innovate and take risks, including specifically innovating using evidence. On the other hand, the Office could serve to stimulate the usage of evidence in policymaking.

4.2.2.3 Underestimation of EIPM requirements

Many interviewees relayed their sense that senior management at ministries often has little understanding of costs and requirements and most practicalities involved in implementing EIPM. Their ideas of creating and employing evidence are thus frequently unrealistic, given the resources and capabilities that are available to them. The regular staff at ministries is mostly composed of civil servants lacking basic skills in data collection and analysis, and, despite recent efforts, training opportunities for staff are underdeveloped, with funding severely strained. On the demand side, we observe significant differences across the spectrum. On the one

hand, some of the more senior and older civil servants have little motivation and appetite to ask for more. Still, on the other hand, there is a drive for change typically among the younger policymakers.

4.2.3 Policy frameworks, guidelines and other practices

Over the past years, evidence-informed policymaking has become a significant part of the policy framework in the country. Recent reform efforts witness a stronger foothold of evidence-informed policymaking within the public administration. The Strategic Framework Czech Republic 2030, which is the basic framework for other strategic documents on national, regional and local levels, includes strategic objectives in relation to good governance (improved coherence of policies, taking account of their long-term impacts, evidence-informed policies, quality and accessible data and information). The fulfilment of these goals is monitored and periodically revised.

Moreover, according to the document 'Client-oriented public administration 2030' (KOVES), adopted by the government in 2020 and prepared by the Ministry of Interior with the support of EU funding, 'better use of evidence-informed policy and decision-making process' is part of objective 3, which aims towards more efficient public institutions. Support for evidence-informed decision-making includes several efforts, such as the creation of analytical teams within the state administration, an increase in analysts' professional competencies, and the creation of a platform where analyses could be shared. Thus, the document deals mainly with developing internal analytical capacities, less so with sources of evidence for decision-making and the relationship with scientific institutions.

The principles of 3E (Economy, Efficiency and Effectiveness) are a part of important legislation in the Czech Republic governing public expenditure, including the Act on Public Procurement, the Act on Financial Control and others. Moreover, regulatory impact assessments (RIA) have been a regular part of the legislative process in the country since 2007 (České priority, 2021) (further details on RIA are given in Section 4.6.). These processes are supported by several methodological guidelines, including the 'Methodology for Determining the Costs of Performing State Administration in Delegated Competence', developed by the Ministry of Interior in 2020 (replacing an earlier version of the document). This methodological document is obligatory for line ministries as part of the RIA process. It guides a preliminary calculation of new costs associated with performing state administration functions delegated to self-governing units as part of legislative documents that are being prepared. Other methodological guidelines to support RIA include the government's 2016 'Methodology for Assessing the Total costs of Fulfilling Obligations Resulting from Legislation' or the Ministry of Interior's 2009 'Methodology on Public Involvement in the Preparation of Government Documents', followed by a 2010 manual.

Methodological guidelines on evaluating EU funding as part of ESIF are prepared and regularly updated by the Ministry of Regional Development, the country's National Coordination Authority. Individual line ministries have their own documents and practices that further support such processes. For instance, the MMR ESIF evaluation unit provides formal and informal guidance on evaluation approaches, methods and practice. To that end, individual line ministries, such as MMR, receive some support from the Czech Evaluation Society (ČES), which acts as a standard-setter with respect to evaluation standards and evaluator code of ethics and also supports individual line ministries, e.g. by delegating experts into their evaluation steering groups (Ministry of Foreign Affairs) or consulting on evaluation Terms of Reference (Ministry of Health). MMR evaluators, MMR public procurement legal experts, and ČES have also developed guidelines for commissioning evaluations (Česká evaluační společnost, 2018).

Another essential document prepared by the Ministry of Regional Development is the Methodology for the Preparation of Public Strategies, adopted by the government in 2013 (updated in 2019), intended to be applied by line ministries. The methodology provides guidance with respect to the analysis and evidence required to define the problem when preparing strategic documents, as well as making projections, inter alia. Nevertheless, this document is provided to the line ministries, but it is not binding for them and is applied unevenly.

Individual line ministries have adopted their own conceptual documents for research, development and innovation, in line with the 2002 Act on RDI Support. An overarching and cross-sectoral document is also the National Research and Innovation Strategy for Intelligent Specialisation of the Czech Republic for the 2021-2027 period (RIS3 Strategy), whose development and implementation are ensured by the Ministry of Industry and Trade (further details are provided in Section 4.1.) and includes cross-cutting priorities relating to capacity building in EIPM for RDI policies.

Moreover, the 2022 Policy Statement of the government (revised in 2023) vows to increase the effectiveness of the transfer of knowledge to policymaking, stating that evidence should precede policymaking efforts, to introduce a modern version of public consultation in the legislative process, to strengthen cooperation between

the public sector and academic institutions to support the transfer of knowledge to policymaking, as well as to support smart governance, inter alia, through the creation of the Government Analytical Unit (VAÚ).

Indeed, the recent establishment of VAÚ at the centre of government (see 2.4 below) and the emergence of other analytical units or teams in line ministries (e.g. Ministry of Education; Ministry of Labor and Social Affairs) also signals a stronger institutionalisation of analytical work within the administration.

Nevertheless, despite several policies being adopted to support EIPM within the public administration, our interlocutors often raise the problem of applying such documents in practice. This is, for instance, the case with RIA, where there are rules in place on exemptions (this will be discussed further in section 4.6). One interlocutor raised the point that the strategies and conceptual documents relating to EIPM are monitored and evaluated according to activities (e.g., the number of staff that received training) rather than their outcomes (e.g. if new methods are applied after training). Moreover, the current documents in individual ministries may address only some segments of the science-for-policy interface. According to another interlocutor, the current policy framework does not sufficiently incentivise the use of evidence to support policymaking.

Table 6. Overview of Policy Framework for EIPM

Policy document	Institution in charge	Description
The Strategic Framework Czech Republic 2030	Ministry of the Environment	Contains strategic objectives in relation to good governance (improved coherence of policies, taking account of their long-term impacts, evidence-informed policies, quality and accessible data and information).
Client-oriented public administration 2030 (KOVES)	Ministry of Interior	Strives towards better use of evidence-informed policy and decision-making processes.
National Research and Innovation Strategy for Intelligent Specialisation of the Czech Republic for the 2021-2027 period (RIS3 Strategy)	Ministry of Industry and Trade	Includes cross-cutting priorities relating to capacity building in EIPM for RDI policies.
2022 Policy Statement of the government (revised in 2023)		Vows to increase the effectiveness of knowledge transfer in EIPM, introduce a modern version of public consultation in the legislative process, strengthen cooperation between the public sector and academic institutions, support smart governance, and establish VAÚ.
RIA methodological documents	Office of the Government of the Czech Republic, Ministry of Interior	Provide guidance on the implementation of RIA within public administration.
Methodology for the Preparation of Public Strategies (updated 2019)	Ministry of Regional Development (National Coordination Authority)	Unifies procedure for creating strategic documents; outlines strategy preparation process to support public institutions.
Methodological guidelines on the evaluation of EU funding as part of ESIF	Ministry of Regional Development (National Coordination Authority)	Provide guidance on the implementation of evaluations within the public administration.
RDI Concepts	Line ministries	Specify the RDI needs of individual institutions, priorities and plans.

Source: own elaboration.

4.2.4 Inter-organisational and organisational level: internal capacity for evidence-informed policymaking and engagement with scientific expertise across government

4.2.4.1 *A nascent effort to create centralised analytical units with coordination and delivery functions*

The VAÚ, located at the Office of Government, is a newly established cross-sectoral analytical unit that collaborates with various line ministries on RIA process design and management. They perform managerial functions in providing guidance in the RIA process and analytical functions by producing literature reviews, statistical modelling or facilitating discussions on policy analysis and design. Besides these core functions, the VAÚ promotes EIPM through training and acting as a role model. More information on VAÚ is written in chapter 3.2.

The Evaluation Unit of the National Coordination Authority (NCA) is another key actor in the EIPM ecosystem with cross-cutting functions. The function of the Evaluation Unit is to supervise and coordinate EU fund evaluations across all OPs and all line ministries, as well as manage public procurement of evaluations. They also produce evaluations for internal EU fund mechanisms, e.g. in the domain of staff training or IT systems. In the 2014-21 programme period, the Evaluation Unit oversaw a call for proposals, which allowed civil society partners to provide evidence by researching EU fund implementation on the ground in areas such as anti-corruption, equal opportunities and the environment. Currently, a similar call is open.

Beyond formal training, the NCA Evaluation Unit has played a key role, providing methodological guidance, supporting skill-sharing, and organising an annual conference open to everyone involved in EU fund evaluation, including private sector professionals and academics, all of whom can also attend training workshops free of charge. Some evaluation officers are in contact with their European peers through Commission-sponsored networks, which has enhanced learning, and some units have made use of EU-level mechanisms such as peer review and technical assistance for evaluation methodology. The structures and requirements introduced by EU legislation and in exchange with Commission Staff, as well as the presence of evaluation units, have resulted in mechanisms and practices around using evidence in the design of programmes and calls, such as the use of the theory of change frameworks or designing evaluations alongside programme development. While still not prevalent even across EU fund bodies, these approaches are rarely adopted in non-EU fund contexts.

4.2.4.2 *Uneven institutionalisation of analytical capacities*

Internal analytical capacities are unevenly institutionalised across line ministries and perform various functions. In some cases, a central analytical unit or analytical team serves other domain-specific departments or the cabinet, as in the case of the MPO or MPSV, respectively. In these two cases, their functions differ significantly, although they both work primarily on demand. The MPO analytical unit is the focal point for the statistical service and specialises in producing statistical analysis on demand (while also producing periodic reports). Interviewees at MPO stress their ambition to strengthen internal analytical capacity to reduce reliance on third-party providers and to strengthen knowledge retention in the organisation. However, the main barrier lies in personnel capacity more than in the lack of skills. The MPSV analytical team is located within the cabinet and provides analytical outputs directly to the minister. In this specific case, views are divergent on how to organise analytical units within the line ministry – whether to have a central or analytical team within each department. A central team would allow for more cross-sectoral analysis, whereas stronger analytical teams within departments would allow for stronger thematic expertise of analysts.

In other instances, analytical units are merged with strategic planning departments and outputs are used mainly internally within the department (at the MMR, for example). Across all line ministries, analytical work is often performed within domain-specific departments, and interviewees generally agreed that they lack the organisational capacity to perform their own analysis, so they rely on external sources of expertise via public procurements and TA ČR programmes, their research organisations, as well as more or less formalised expert consultations. Managers note that capacities for working with evidence have been underdeveloped in the long term. In some areas, a basic understanding of the sector has been missing, and new capacities have had to be built from the ground up to remedy these gaps.

Across central public administration, uncertainties around the role of evidence and analytical teams in policymaking are compounded by strong functional specialisation along profession lines and a silo

organisational logic with little culture of cross-silo project working. It is not routine for policy design to be done by cross-functional teams involving subject area experts, legal experts and analysts.

4.2.4.3 A strong reliance on external sources of expertise

Some line ministries have established research organisations at their arm's length to produce research applicable to their decision-making. However, not every line ministry has established such research organisations. When they do exist, their service role is not always being fulfilled. It can be explained by the mismatch between timeframes as well as the capacity and financial constraints on the side of the research organisations (see section 3.2.2 for more details). On the demand side, however, commissioning, reviewing and utilising evidence stemming from research organisations can be hindered by a lack of capacity, skills and culture of EIPM among policymakers.

TA ČR programmes, especially BETA1 and 2, are seen as an important component of the science-for-policy transfer. TA ČR BETA programmes (BETA1 2012-2016, BETA2 2017-2023, BETA3 in preparation) are public contract programmes where line ministries have pre-allocated funds that they can use to request research to respond to their evidence needs. TA ČR facilitates formulating the need into a call for proposals, which TA ČR then contracts out in a competitive procedure. At the same time, the line ministries play the role of a recipient of research outputs. In other programmes, ministries play a less proactive role but can also act as recipients of research outputs. In some cases, interviewees noted an internal drive to improve the process for generating, running and using TA ČR BETA research projects. Interviewees noted that there remain several caveats to commissioning research via the BETA programme. Processes and roles both for the commissioner and recipients are ill-defined and formally complex. There is only one liaison officer for BETA programs per line ministry who is often located at the lower levels of the hierarchy and thus has difficulties covering the entire institution when it comes to gathering research needs and disseminating outputs. MMR is now potentially expanding the role of the TA ČR liaison person to include outreach to individual departments across the entire ministry to detect and address evidence needs that could be handled by TA ČR BETA projects. Another shortfall is the long timeframe (at least 1 year) for commissioning a study via BETA, which does not necessarily match the need to obtain evidence in a shorter time frame. Some interviewees also noted that no research organisation has applied for their project. This situation may elucidate why, despite its potential, the TA ČR BETA programme is not being fully utilised by line ministries, as evidenced by the fact that only approx. 40 % of the total budget of the of 1.6 billion CZK has been committed to projects thus far in the current BETA2 programme. Moreover, some ministries have made full use of the budget allocation (and call for its increase), while others have not.

Figure 6. Sector of lead recipients by ministries in TA ČR BETA programme

Ministries vary widely in how they use TA ČR BETA
TA ČR BETA 1 & 2 (2012-2023) Applied Research Grants initiated by state administration project funds (mil. CZK) by sector of lead recipient
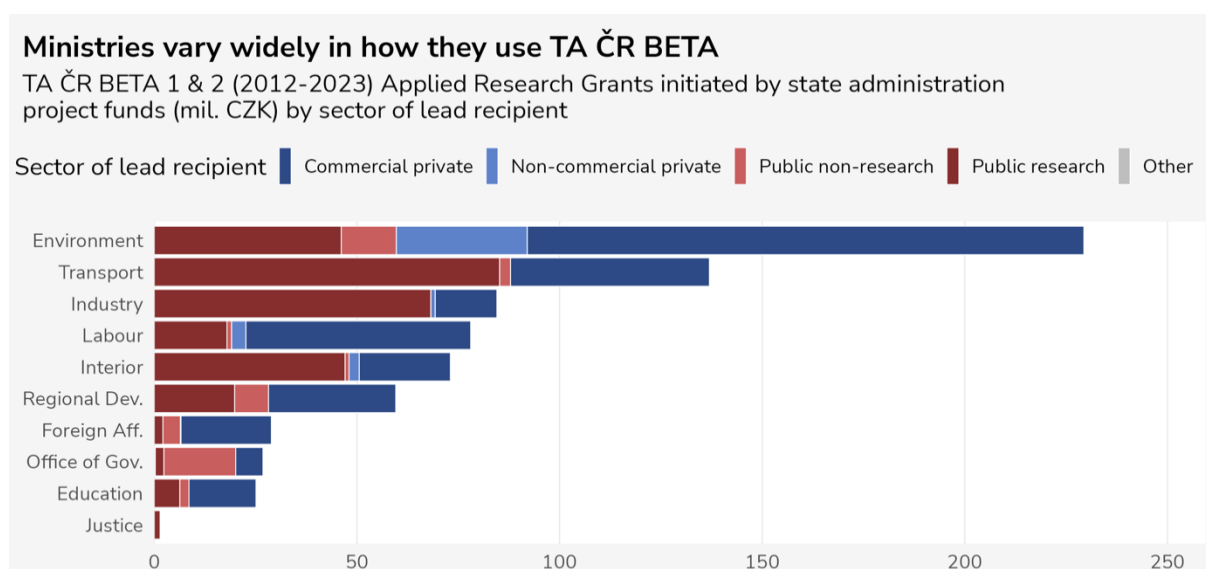
Source: Own analysis of STARFOS data (TA CR).

Figure 7. Allocation and spending in TA ČR BETA programme

Most ministries are on track to leave much of their BETA 2 allocations unspent

Million CZK, BETA 2, 2017-2023

Status ■ Spent ■ Unspent
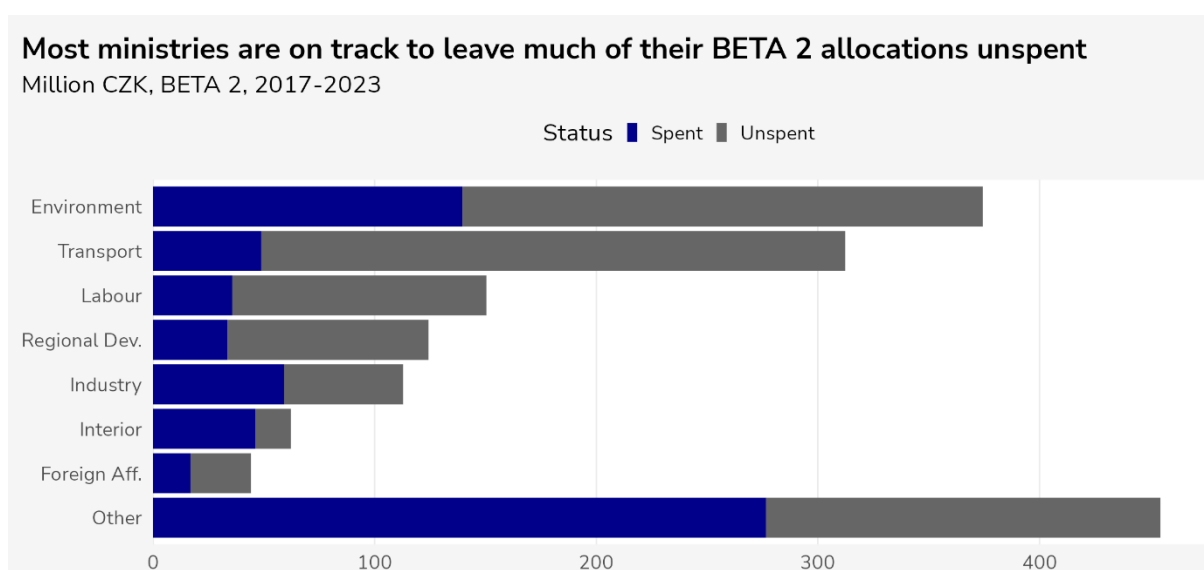
Source: Own analysis of STARFOS data.

4.2.4.4 Lacking central infrastructure and networks to support analytical activities

There is no central repository of government-commissioned studies. The absence of a central repository of studies commissioned by governmental bodies has been acknowledged, and a recent initiative funded via the Recovery and Resilience Facility as part of the Concept for Client-oriented public administration 2030 has aimed to address this issue, which is yet to yield results. Numerous respondents expressed difficulty accessing government-commissioned studies, including those funded by TA ČR. Nevertheless, such a repository is planned as part of MV's larger IT system currently in development using RRF funding. Another potentially helpful infrastructure currently absent is a database of experts similar to the one maintained by the European Commission.

However, there are specific repositories for EU fund evaluations (Knihovna evaluací) and for RIA statements. In the latter case, though, there is no search engine or consolidated catalogue with filters. Another repository (Databáze strategií) managed by the MMR centralises strategic and policy documents at international, national and local levels. It provides a clear view of the documents, their objectives and measures, responsibilities for implementation and indicators of success. Last but not least, a code repository is now used for software development but could also host code for data analysis. Due to weak capacity among the managers of the platform, awareness and usage of the code platform are low.

In the past years, a bottom-up initiative has aimed at establishing a network of analysts (PSSAÚ) who gather approximately every 2 months to share information on their current assignments and projects. In some cases, the meetings were thematically focused on foresight, for example. Also, members of this platform were consulted as part of the evaluation of the Strategic Framework Czech Republic 2030 in the domain of good governance.

4.2.5 Individual capacity: competence, training, and resources for government officers for evidence-informed policymaking

4.2.5.1 General overview

There are two main strands of individual capacity issues. First, a generally weak recognition of the need for cross-cutting skills for work with evidence among public officials; second, an inability to recruit, develop and retain 'niche' analysts. The general capacity to build individual competencies of government officials for evidence-informed policymaking varies widely depending on their line ministry and often even on their particular position at the particular ministry. There are several reasons for this phenomenon. Czech public administration does not recognize the analytical profession as a specific skill set that requires particular knowledge and

competencies. This is, among others, manifested in the content of the civil service exam, where no such knowledge is being tested. On the contrary, the civil service exam is focused on legal and administrative knowledge, usually pertaining to a specific policy area. This has a discouraging effect on those whose focus is on analytical skills. Therefore, recognising the needed competencies and skills for analytical work is often up to individual heads of units (or higher positions) instead of being an apparent part of the whole ecosystem. 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. The problem of the heterogeneity of the work of analysts, however, has been observed by researchers in multiple national settings (see e.g. Olejniczak et al. 2018).

Furthermore, it is hard to define what capacities and knowledge analysts should have and should be trained in. Although there will be different needs for skills and tools between ministries and their departments, there is a knowledge base that all analysts in the policy milieu need. The prevailing practice, however, still is for individuals to be offered courses in technical skills, predominantly Excel. This can address a real need, but the content is often irrelevant to them, and they quickly forget what they learned when they do not use it in their daily practice. The question is why such a miscommunication of learning opportunities and needed skills prevails and whether it is in the capacity of public service to recognize and supply specific learning needs – whether at the system or organisation level.

4.2.5.2 Capacities of public administration

These issues affect not only analysts but also implementation and delivery units at the line ministries, as they also need skills to inquire, assess and utilise the analytical inputs from their colleagues or external sources. Basic skills such as problem definition, strategic planning, theory of change, and policy design are often lacking in the Czech public administration, and only a few people have been trained in them. The civil service system does not recognise the need for cross-cutting skills for evidence work among public officials. The reason for that is defined areas of service (to which learning, examination and performance appraisals are tied) where professions (e.g. lawyers, HR officers) and thematic fields (e.g. energy, tourism) are mixed. This makes it hard to define specific skills and competence requirements, especially while analytical work is not among the fields of service. An example of good practice in teaching these cross-cutting skills is Strateduka (developed and offered by MMR), which is a hybrid training course aimed at developing competencies in strategic planning and management. It is a three-day interactive training programme that has three courses per year, all of which were fully filled in 2023 (approx. 20 people per course).

Generally, there is 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. In general, opportunities to learn are relatively easy to access and often well-communicated. This is however not always the case concerning people's learning needs related to working with evidence. What civil service already has, are capacities to identify skills gaps in general, with follow-up training offers, but identified skill gaps are primarily addressed through one-off training, typically procured from different companies that train workers everywhere else, i.e. without a link to a context of a person.

An instance of this approach is KOVES (Document for Client-oriented public administration 2030) (MV, 2019). So far, the implementation of KOVES focuses primarily on technical solutions, e.g., creating a database of analyses or evidence of attended training. What it does not pay as much attention to is that work with evidence is very broad and needs different skills based on context. Moreover, it may require various methods of learning.

In addition, the relatively decentralised nature of HR management makes it difficult to address these challenges, even if the role of the Chief State Secretary has grown somewhat in law and in practice. Currently, even existing professions recognised by the civil service framework do not have strong support in the form of development curricula and cross-institutional learning offers with an organisation or leader responsible for them; each ministry does this individually. For analysts, who are not recognised as a profession, the Ministry of Interior has provided the pilot training programme mentioned elsewhere in this report and communicates learning opportunities. However, the decentralisation of HR makes it difficult to mainstream these initiatives.

4.2.5.3 Missing skills and capacities

More generally, what is also missing in the public service is a conceptualisation of how to support the professional development of heads of analytical units. Moving to a management role is the only widely accessible way to progress professionally. Hence, managers tend to be recruited from the ranks of high-

performing officials who may have little predisposition or desire for management roles. This issue is currently subject to discussions among senior leaders across the civil service. Moreover, continuous development for new managers is not always available, and there are no specific learning offers for people whose job description is to manage analytical units.

Another area of skills that the public service currently does not develop is how to work with and alongside science – in other words, how to transfer scientific expertise to policy. In practice, the focus is on how to generate evidence rather than on how to understand, assess and utilise it.

Another skill still mainly ignored is the ability to develop a good story behind the analysis. In other words, when there are people capable of high-quality analysis, they rarely have the ability to present their findings and put them in context (especially in the context of the policy). While existing research shows that in the current conditions many analysts do in fact perform a range of roles, including in communicating analytical results (see Veselý & Nekola 2016), our interviewees identified evidence communication skills among analysts as a gap.

Similarly, the ability to properly commission research and analysis is often lacking and not developed in a targeted way. Our respondents generally agreed that this responsibility should not be imposed specifically either on policy- or on decision-makers (commissioners of analysis). However, they would appreciate development opportunities in this area. Instead, this ability should mainly be up to facilitators to elicit the proper request from the commissioners. As a facilitator or analyst, it is crucial to ask the right questions: What is the problem, why do you need evidence, what data do you already have, etc.

Additional impacts of not formally recognising analytical positions are the inability to provide adequate pay for specific positions to attract talent and a lack of time to do the required amount of work properly, mainly due to being overwhelmed by the number of requests or having to do 'non-analytical' work as well (often of administrative character).

4.2.5.4 *Examples of good practice*

One of the efforts to change this situation has been a recent training course targeted specifically at analysts from across the public administration provided by the Ministry of Interior. The course runs over three days and ranges from the broad themes of the role and purpose of evidence and analysis to specific skills in qualitative and quantitative methods, data analysis and communication and presentation. The first comprehensive course on evidence and analysis, it broadly matched demand when run as a pilot in 2022-23 (and was oversubscribed) but has struggled to respond to the broad range of participants it attracted (policy analysts, data analysts, managers, financial analysts, all across a range of contexts from ministries to municipalities). This again points to the weak recognition and understanding of the different skills needed for evidence-informed decision-making across roles and organisations. Still, it can also be a consequence of this course being the only comprehensive learning opportunity. The pilot was developed and run using external funding in conjunction with the Public Governance Review. It is yet to be determined whether it will be available in the future on a stable basis.

Another specific area where individual capacities have been developed in a targeted manner over the years are those of EU fund officials and particularly evaluators. Because of EU requirements – with respect to programme development, monitoring and evaluation, including ex-ante – more guidance was in place in this area earlier than was the case in non-EU fund areas. Along with this came professional development opportunities, driven by the need to upskill and retain key staff, but also by resources earmarked for capacity-building from the early 2000s up until the present day.

There is also a positive trend regarding analytical capacities in Czech public administration, specifically a momentum for establishing new analytical units across the government (Ministry of Education, Ministry of Labour and Social Affairs, The Office of the Government, Ministry of Interior). This trend addresses some of the issues mentioned above to some extent. On the other hand, this trend means that ministries are recruiting for similar roles with similar skills in quite a short period of time (since the beginning of 2023), competing for talent in an already tight labour market and, according to limited public sector pay scales. This places additional pressure on the line ministries that are trying to hire new analysts because when the position is not filled within a certain period, the position will disappear. The budget for it will be moved elsewhere.

4.2.6 Overview of strengths and weaknesses on the demand side

4.2.6.1 Strengths

Some line ministries have started to bolster internal capacities by appointing special ministerial advisors, creating new strategy units, etc. Encouraging strides have been taken to enhance organisational analytical capabilities, including establishing central analytical units such as VAÚ and EJ NOK4 and departmental analytical units.

The integration of evidence into policy has gained traction, becoming a more integral component of the policy framework. This evolution is reflected in instruments like the Strategic Framework of the Czech Republic 2030, which emphasises good governance and has been supported by frameworks such as Regulatory Impact Assessment (RIA) since 2007. Key principles like the 3E framework are enshrined within important legislation governing public expenditure.

Efforts are being directed towards refining processes for generating, conducting, and utilising research projects like TA ČR BETA.

Collaborations with international organisations and the existence of networks of analysts contribute to an enriched policy ecosystem.

Emerging efforts have been made to integrate skills related to EIDM into professional development frameworks and opportunities.

4.2.6.2 Weaknesses

The utilisation of evidence remains uneven across different policy areas and units, indicating a need for further alignment and normalisation of evidence-based practices.

While frameworks are in place, their consistent application is lacking, with instances where they are either underutilised or entirely neglected. The absence of outcome-focused indicators within these frameworks limits the ability to gauge their true impact.

Within the central public administration, analytical work often occurs within domain-specific departments, with interviewees acknowledging an organisational deficiency in conducting independent analyses.

Relying on external expertise through public procurement and TA ČR programs, along with the informal nature of expert consultations, underscores the need for enhanced in-house analytical capacities. Complexities and ambiguities in processes associated with the BETA program, including roles and responsibilities, hinder its potential effectiveness.

The absence of a centralised repository for government studies and challenges in accessing government-commissioned research inhibit the use of internally generated and commissioned evidence across silos.

The unmet need for cross-cutting skills in working with evidence among public officials and the inability to recruit, develop and retain specialised analysts highlight the importance of bolstering individual capacity on the demand side of the policy ecosystem.

4.3 Supply of evidence and science for policy: capacity of organisations within and outside government for evidence-informed policymaking

This chapter addresses the capacity of organisations both within and outside of government to generate, mobilise, integrate, translate, synthesise, and promote evidence and scientific knowledge in policymaking. In so doing, we focus on institutions with the explicit rationale to generate and provide scientific knowledge, emphasising institutions and networks directly involved in giving the ability for policy.

Because the diagnostic part of the project was based mainly on questionnaires and interviews with beneficiary organisations (rather than supply-side institutions), this chapter draws mainly on secondary sources, especially on the Czech scholarship on EBP/EIP (Konopásek et al., 2008; Sima, 2017; Štech, 2013a; Veselý et al., 2018). It also incorporates findings from a review of policy analysis in the Czech Republic (Veselý et al., 2016).

4.3.1 Classification of supply institutions

There is an overwhelming range of institutions generating knowledge for policy. To make this huge variety of supply institutions manageable for review, it is helpful to classify them into several types. Following the locational model (Halligan, 1995; Howlett & Walker, 2012; Vesely, 2013), we suggest classifying supply institutions according to two main dimensions. The first dimension is whether (or instead 'to what extent') the provider of advice is part of the government sector (the internal versus external dimension). The second dimension refers to the extent to which the political executive or elected politicians (i.e., cabinet ministers in parliamentary systems) can exercise direct control over the processing and the content of the advice. It is to be taken as a continuum where, on one side, there is a possibility of direct formal control from the central government on the way that advice is processed and delivered. On the other side of the continuum are autonomous providers of advice, which can provide totally independent advice, un-coerced by the will of the central government.

Table 7. Locational model of the policy advice system

		Government control	
		High	**Low**
Part of Government Sector	**Yes**	Proximate internal PAS[2] (e.g. Government Analytical Unit; evaluation units within ministries)	Peripheral internal PAS (e.g. Research Institute for Labour and Social Affairs, Institute for Spatial Development)
	No	Proximate external PAS *External actors with contracts* (e.g. consulting firms, think tanks like lDEA, Czech priorities, AMO)	Peripheral external PAS *External actors without contracts* (e.g. universities, Czech Academy of Sciences)

Source: Vesely (2013).

If we combine these two basic dimensions, we get four basic types. First, there are **proximate internal organisations** (in the typology of Howlett & Walker, this corresponds to "core actors"). This includes central public administration organisations such as ministries (and their units and departments) and other state institutions that are directly accountable to elected politicians. It can be assumed that decision-makers can request advice from people in these institutions directly and can legitimately expect to get it promptly.

Second, there are peripheral internal PAS. This type includes state or public institutions which work **at arm's length** from the central government5. They include various institutions of applied research, organisations gathering and analysing data and other agencies of various types. These institutions are semi-autonomous in that they are not directly governed by elected politicians. Politicians can indirectly influence these institutions' work, particularly by allocating funding or selecting the directors of these organisations. However, the day-to-day work of these institutions is relatively autonomous. They are, for instance, relatively free in choosing research topics or partners and are usually not expected to provide immediate advice 'on the spot'. Yet, they are still part of the public sector. They are supposed to help public administration and the government as part of their mission, and this help includes providing policy advice, usually without any additional compensation.

Third, some institutions outside the public sector generate and provide policy-related knowledge on a contractual basis: **proximate external organisations**. They include both for-profit and non-profit organisations outside the government. These institutions' mission, funding, scope and quality are very heterogeneous. What binds them together is the fact that they are not part of the government sector but are linked to it via legal obligations stated in a contract. Consultants and consultancy firms are of special importance here. Finally, there are peripheral external organisations. The common denominator of this group is that they provide advice voluntarily and cannot be compelled to provide policy-related knowledge if they do not wish to

---

[2] Provider of advice services.

do so. Also, the content and timing of the advice are solely at the discretion of these actors and cannot be influenced by the government.

Of course, any classification implies a certain degree of simplification. The locational model is not the only way to classify organisations producing, generating and promoting the use of scientific knowledge in policymaking. Organisations can also be classified based on their role, mission, activities, etc.

4.3.2 Stakeholder mapping: overview of the key actors for supply of evidence and science for policy

4.3.2.1 Proximate internal organisations – generation of policy knowledge in "core state"

This section provides an overview of internal analytical and evaluation units within the public administration. The list is not exhaustive; however, it aims to cover all key units that emerged, especially in recent months and years. The goal was to cover especially the units of BOs and other stakeholders that were interviewed during the diagnostic phase of the project. Besides units and departments dedicated to analytical work, there are also units focusing on evaluation.

Table 8: Overview of selected analytical units in the public administration

Name	Ministry/Organisation	Number of staff	Role
Government Analytical Unit (VAÚ)	Cabinet of the Minister for Legislation	13	Currently, analytical support for units within Ministries mostly working on RIA. The ambition is to create a high standard of analytical work within the public sector.
Department of economic analysis	Ministry of Industry and Trade	11	The MPO analytical unit is the focal point for statistical services and specialises in producing statistical analysis on demand (while also producing periodic reports).
Analytical team within the cabinet of the Minister of Labour and Social Affairs	Ministry of Labour and Social Affairs	3	The team prepares analytical briefs for the Minister, prepares research inputs for a commission dealing with migration, and provides analytical support to a department within the Ministry that does not have its own analysts.
Department of Educational Statistics and Analysis at Section V at the Ministry of Education, Youth and Sports	Ministry of Education, Youth and Sports	34	This project aims to increase the usage of available data about the school system to address the lack of a comprehensive database of available data sources in the field of education link them into a single database and address the absence of processes for evaluating the impact of the application of intervention tools. Furthermore, the project addresses the lack of staff capacity to work efficiently to provide analytical sources for informed decision-making at the line ministry.
Research and Evaluation Unit, Agency for Social Inclusion	Ministry of Regional Development	18	The unit provides research and evaluation mainly to municipalities as part of their cooperation with the Agency for Social Inclusion. These analyses provide the starting point for local strategies and interventions to support social inclusion. This evidence is also used to inform national policy. A related unit has been collating and synthesising evidence on social exclusion.
Housing Policy Analysis & Strategy Unit	Ministry of Regional Development	6	The newly established unit is building up the evidence base for housing policy, from the state of the housing sector to the range of interventions available to housing policy, in line with international experiences.

Source: Own Resources.

VAÚ

The Government Analytical Unit is a new cross-sectoral team of analysts in the Cabinet of the Minister for Legislation. Currently, the unit consists of 13 analysts. This team is one of the key recent reforms in the effort of the government to support EIPM. The team aims to attract the most qualified professionals experienced in policy analysis to match other countries' standards when it comes to similar bodies. One of the main goals is to create a high standard for impact evaluation within the public administration. Since the beginning, they have collaborated with various line ministries on RIA process design and management. The collaboration happens on demand from the side of the ministries. Nevertheless, this is not their only task: The VAÚ aims to help policymakers and analysts in ministries with various problems related to analysis for policymaking.

From the interviews, it follows that the actual tasks of the unit are both managerial and analytical. The VAÚ team helps to manage the analytical process of their partners and to define the suggested problem properly. Besides, they perform an analytical function by producing literature reviews, data analysis, statistical modelling or facilitating discussions on problem definitions. Occasionally, they get involved in ad hoc interactions with external experts (e.g., from SYRI, but more often from other institutions). Furthermore, there are ambitions that go beyond the current tasks demanded mainly through the line ministries. The goal is also to affect policy changes through evidence from different angles.

However, the role, functions and mandates of the VAÚ are not formalised. Collaboration with ministries is voluntary and can vary from ministry to ministry. Their input is also sought late in the legislative process, and although some methodological deficiencies are identified, it might be too late to fix them. The inputs by the VAÚ are deemed useful with respect to delivering literature reviews and facilitating discussions based on them. Also, it is worth noting that, compared to consultancy firms, the VAÚ can be mobilised in a much shorter timeframe and without additional expense.

Evaluation units of ministries

In line with ministries that manage and disburse EU funds (specifically ESIF in the 2014–20 period), a particular set of internal capacities has been established in the form of evaluation units and the related processes and personal capacities. There is overall evaluation guidance established by the National Coordination Authority hosted by the Ministry of Regional Development. It implements the EU fund regulations and, in some cases, goes further than is required by EU rules, requiring each Managing Authority to establish its own evaluation capacity (Kupiec et al., 2023). As a result, there is a national EU fund evaluation unit inside MMR and a set of evaluation units, some of which take the form of an organisational unit consisting of several evaluation officers. There is also a network of EU fund evaluators supporting coordination, capacity-building and knowledge sharing. However, the extent of evaluation activity and its impact varies widely across line ministries. For instance, the number of staff is generally not correlated with the resources allocated to each programme.

These units provide evidence for managing EU fund programmes, but because of the wide gamut of policy interventions financed by EU funds, in some cases, they have developed wide substantive and methodological expertise and broadened their remit beyond evaluation (taking, for instance, the role of supporting the development of programme strategies and funding calls). The structures have remained broadly unchanged in the current programme period. Still, some officials note that this capacity is still generally isolated from non-EU fund activities and teams inside ministries. Evaluators inside these units also note that while EU fund frameworks support evaluation activities and evaluation capacity-building, the reality of implementation – with pressure on spending money on time, hitting output targets, and with minimal risk – militates against using evidence effectively.

Table 9. Overview of EU funds evaluation units in Beneficiary Organisations

Unit	Ministry	Number of staff	Role
NCA Evaluation Unit	Ministry of Regional Development	4	Strategy (PA)-level evaluation; coordination; capacity building across the EU funds evaluation system

IROP Evaluation Unit	Ministry of Regional Development	2	Evaluators inside Monitoring & evaluation unit
Technical Assistance OP evaluator	Ministry of Regional Development	0.5	Part-time evaluator inside Inspections & Evaluation Unit
EU Funds Dept. Evaluation Unit	Ministry of the Environment	Unknown – evaluators mixed with monitoring function (6 total)	Covers OP Environment; evaluation not emphasised in OP Just Transformation
OP TAK Evaluation Unit	Ministry of Industry and Trade	Unknown – evaluators inside unit with broader remit (6 total)	
ESF Employment Evaluation Unit	Ministry of Labour and Social Affairs	9	
OP JAK Evaluation Unit	Ministry of Education, Youth and Sports	6	

Source: Own elaboration.

The Parliamentary Institute (PI)

The Parliamentary Institute is an analytical organisation of the Parliament of the Czech Republic. Besides their own advisers, members of Parliament turn to the PI for analysis on topics they are interested in. The PI performs the tasks of a scientific, information and educational centre for the Chamber of Deputies, its bodies, deputies and the Office of the Chamber of Deputies, for the Senate, its bodies, senators and the Office of the Senate.

It produces comparative and analytical studies prepared for members of the Parliament. As it follows from the interviews, the Parliamentary Institute supports lawmakers most importantly by delivering comparative legal studies. These studies are comparative and synthetic and are not based on primary research. It was reported that the staff is somewhat overstretched by the agenda as they do not have enough analysts. Often, members of Parliament request studies that support their views, but if the institute assesses that something is against the Constitution, then they will usually amend their proposal for new legislation.

The Parliamentary Institute also acts as a training centre for the Chamber of Deputies, its organs, officials and its Office, or for members or representatives of the Senate and its bodies, for whom it organises lectures and seminars. It delivers lectures and seminars either on its own initiative or upon request. A seminar or lecture may be requested by any Chamber or Senate body or by a group of at least four Deputies or Senators. Most seminars are conducted based on committee requests. Finally, the PI is responsible for allocating interns to individual Members of the Parliament.

4.3.2.2   *Peripheral internal organisations – policy knowledge at arm's length*

Ministerial research organisations generate evidence at line ministries' arm's length. There are currently approximately 17 public research organisations (v.v.i.) that have been founded by line ministries and are, to a different extent, managed by them. However, not every line ministry has established such an institution, and, in some cases, their capability to generate policy-relevant evidence is contested. Seven of these public research organisations were founded by the Ministry of Agriculture.

This project's beneficiary organisations are managing one or several ministerial research organisations (see below). Respondents and interviewees raised several challenges concerning their functioning and pointed out reasons why they do not systematically deliver policy-relevant research. In some interviews, it was mentioned that the cooperation between the line ministries and ministerial research organisations is troublesome and that these organisations often do not focus on important topics for the government. During the interviews, it was mentioned that these organisations exist without clear methodical guidance that causes problems in their management. These issues can be explained by their limited financial capacities but also because rigid long-

term planning does not allow for a more agile and reactive response to ministries' needs. Furthermore, one of the interviewees mentioned that the problem might be a lack of communication between the public research organisations and their ministries in some cases. One of the other issues is the system of evaluation of science that forces these institutes to publish their own research in scientific journals (see below). Indeed, a reform document from 2008 noted the unsatisfactory performance of some of these institutions, but no significant structural changes were made to rectify this 6

Ministry of Regional Development – Institute for Spatial Development (Ústav územního rozvoje)

The Institute for Spatial Development (ÚÚR) is an organisational unit of the state founded by the Ministry of Regional Development. It provides expert background and assistance in the fields of spatial planning, building regulations, spatial development and regional policy. The ISD generates research in the field of spatial development and manages a Geographical Information System (Mapový portál ÚÚR).

Ministry of Industry and Trade – Czech Invest

Czech Invest is a state contributory organisation founded by the Ministry of Industry and Trade, whose task is to support business and investments in the Czech Republic via a network of regional offices. As such, Czech Invest is not purely a research organisation; nevertheless, it collaborates with the line ministry in delivering analytical services (e.g. analysis of business environment, compilation of indicators at the regional level) to the line ministry as well as to municipalities.

Ministry of Labour and Social Affairs – Research Institute for Labour and Social Affairs (Výzkumný ústav práce a sociálních věcí)

The Research Institute for Labour and Social Affairs (VÚPSV) is a public research organisation (v.v.i) established by the Ministry of Labour and Social Affairs to produce research in different domains, including the labour market and employment, integration of foreigners, collective bargaining, social security, social work and family policy. In addition to research, the institute, inter alia, also provides advice and consultancy services in its realm of expertise.

Ministry of Labour and Social Affairs – Occupational Safety Research Institute

The Occupational Safety Research Institute (VÚBP) is another public research organisation established by the Ministry of Labour and Social Affairs. It carries out research in the realms of occupational safety and health, including research on the implementation of obligations stemming from ILO conventions, OHS legislation, and the requirements of EU-level bodies in this realm. It monitors the country's occupational health and safety situation (including issues such as standardisation, conformity assessment, certification, etc.) and collects data. It also provides consultancy services and scientific advice in the area of its work, organises training and educational activities, and performs certification and quality assessment of programmes and services.

Ministry of the Environment – Czech Environmental Information Agency (CENIA)

The Czech Environmental Information Agency (CENIA) is a contributory organisation founded by the Ministry of the Environment to collect, evaluate and interpret environmental information. CENIA develops and manages datasets on environmental information, mapping services and information systems. It also publishes its own research outputs on various environmental topics and yearly reports on the state of the environment, which are used in strategic work at the Ministry of the Environment.

Ministry of Interior – Fire Rescue Service – Population Protection Institute

MV has several public research organisations dealing mainly with population protection against crime and emergencies, including fire, other natural disasters and man-made crises. The Population Protection Institute of the Fire Rescue Service belongs to such organisations. It has a long tradition, having first been established in 1956 as the Research Institute for Civil Protection under the Ministry of National Defence. Since 2001, the institute has operated under the MV, becoming a major source of expertise in the field of crisis management norms, emergency planning, chemical analysis, standardisation of protection equipment and testing and safety certification of various tools. The institute is in charge of publishing a journal called Science for Population Protection that features the latest findings in the field of population protection and crisis management.

Ministry of Education, Youth and Sports – National Pedagogical Institute

The National Pedagogical Institute is a contributory organisation of the MŠMT. It ensures the transfer of educational innovations from the central conceptual level to school practice in the regions. It develops framework curricula for preschool, primary, primary art and secondary education. It provides methodological

support to schools and teachers and targeted training for teaching staff. It was established in 2020 through a merger of two other organisations of the MŠMT. The first organisation was the National Institute for Further Education (a facility for further education of teaching staff), abbreviated as NIDV, whose main mission was the further education of teaching staff. The second of the merged organisations was the National Institute for Education, abbreviated as NÚV, which focused on the development of general, vocational, art and language education and support to schools in the field of pedagogical-psychological, educational and career counselling. According to some of the respondents, this historical tendency in the Czech Republic to merge institutions and, through that process, cancel some of them and discontinue some of their agendas has led to the removal of certain capacities that have to be replaced by ad hoc contracts. NPI often receives data about the school system and produces aggregate data or analysis for MŠMT. There is a liaison person at the line ministry, almost always at Section 2 of the line ministry. The liaison person is appointed by the minister and might differ in time, not only personally but also where the person sits within the structure of the ministry. NPI changes its structure based on structural changes of the line ministry so that its activities copy the activities of the line ministry.

Ministry of Education, Youth and Sports – CERMAT

The Centre for the Determination of Education Results is a contributory organisation established and managed by the Ministry of Education, Youth and Sports in 2006. It is the successor of the similar Centre for the Reform of the Baccalaureate Examination (CERMAT) later the Centre for the Determination of Educational Results (CZVV). It is based in Prague, and its main task is the organisation and evaluation of the Baccalaureate Examination. Some of the challenges in the realm of data produced by this organisation include the usage of different codes for fields of study and schools so that the data CERMAT provides must be adjusted by the line ministry or by NPI. Many structural and process mistakes like these exist in the system that complicates the use and application of data. Furthermore, data is mostly already aggregated, and the line ministry often does not get individualised data. Access to data is, therefore, often dependent on individual acquaintances rather than being anchored between the institutions.

Czech Statistical Office (CZSO)

The Czech Statistical Office is one of the main producers and providers of economic, social, demographic and environmental information in the Czech Republic. Based on its statutory authorisation, it collects primary data, processes and transforms them into output data and information to provide an objective and comprehensive picture of the development of the Czech Republic and its individual parts. The CZSO's remit also includes ensuring the comparability of data and the fulfilment of international statistical obligations to which the country is bound. This is a comprehensive set of services financed from public funds, provided in the broadest public interest and serving the purpose of supporting decision-making processes at all levels, both nationally and internationally. The CZSO is a budgetary organisation, i.e. the expenses for collecting, processing and publishing statistical data are covered by the state budget. Therefore, standard products in electronic form are provided free of charge, as well as all other information published on the CZSO website. If the Office has to incur additional work or expenses (e.g. related to special collections, printing, copies, etc.), it requires payment from users, which is revenue from the state budget.

Within the Czech Republic, the CZSO coordinates the State Statistical Service and, where necessary, draws up methodological guidelines for the authorities that perform it. It fully ensures the protection of the confidentiality of obtained data. It collects statistical data exclusively for statistical purposes. The CZSO also performs state administration in the field of processing the results of all elections.

CZSO obtains its data in several ways, first, by completion of statistical returns (by registration number). Before the beginning of each calendar year, the CZSO issues a Programme of Statistical Surveys, which specifies the range of reporting units (legal entities, natural persons and other economic entities) for each statistical survey. The selected entities are obliged to complete and submit statistical returns for processing, which form the basis for the production of statistical information. Second, through individual statistical surveys carried out by ministries. Third, through household surveys, because throughout the year, CZSO interviewers visit thousands of randomly selected households across the country, talking to their members and completing questionnaires. Lastly, CZSO receives data through demographic reports, which include information on births, deaths, marriages and divorces.

4.3.2.3 *Proximate external organisations – policy knowledge on demand*

Internal versus external capacities might be partially inferred from the volume of contractual research for public administration (Veselý, 2012; Veselý et al., 2015). These studies have shown a link between internal and external capacities. 'Large' line ministries have relatively fewer expenses for the outsourcing of policy advice

than 'small' ministries. Line ministries that have their own workplaces available in their structure (i.e. in the form of their own scientific research workplaces) have lower than average expenses for the outsourcing of policy advice. This has important consequences for the structure of policy-related knowledge in the country. If in-house capacities are increasingly being externalised and outsourced, then the importance of external ad hoc contracts grows.

Figure 8. Sector of lead recipients by start date in TA ČR BETA programme
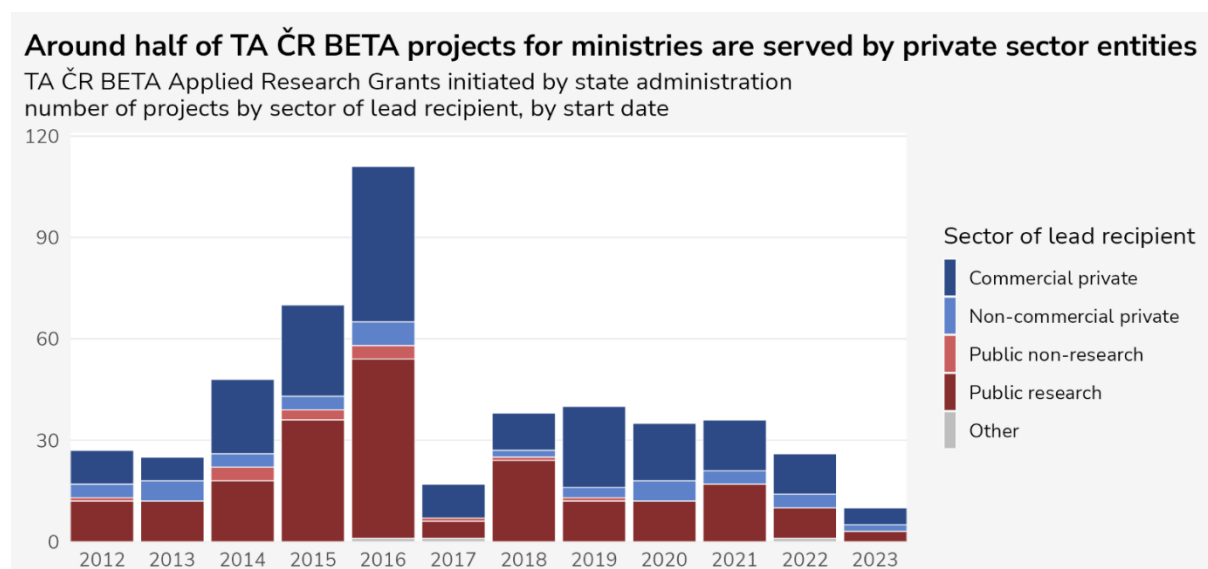
Source: own analysis of data from STARFOS (TA CR).

4.3.2.3.1 Big Four (Deloitte, EY, KPMG, PwC)

The Big Four is the name used worldwide for the four largest consulting firms: PricewaterhouseCoopers (PWC), Klynveld Peat Marwick Goerdeler (KPMG), Deloitte and Ernst & Young (EY). These firms dominate the global market for audit and advisory services and operate worldwide in most countries. In the Czech Republic, their services are used by the line ministries, mainly for consulting and the preparation of analyses for which they do not have the capacity. Their expertise is used especially for digital services. In the interviews, it was mentioned that the overall lowering capacity in some governmental bodies means there is a higher need to outsource analytical work. When comparing the value of Big Four's public contracts in the years 2022 and 2023, we see a dramatic increase. However, it needs to be noted that only a portion of the value of public contracts can be attributed to the state's expenses on EIPM.

Table 10. The Big Four. Contractual Partners in the public sector (19 September 2023). General contracts are not included.

Consultation firm	Value of contracts in 2022	Value of contracts in 2023	Main contractual partners
EY	CZK 0 M	CZK 2,7 M	Ministry of Labour and Social Affairs, Czech Post, s.p., Ministry of Finance and Ministry of the Interior
KPMG	CZK 15.9 M	CZK 809.7 M	Ministry of Labour and Social Affairs, Czech Post, s.p., National Agency for Communication and

			Information Technology, s.p., Ministry of Finance
Deloitte	CZK 70.3 M	CZK 448.5 M	Czech Post, s.p., Road and Motorway Directorate of the Czech Republic, Railway Administration, state organisation, Office for State Representation in Property Matters and Ministry of Labour and Social Affairs
PWC	CZK 48.9 M	CZK 22.7 M	Czech Post, s.p. and National Agency for Communication and Information Technology

Source: Register of Contracts via hlidacstatu.cz.

4.3.2.3.2 Think-tanks and other organisations

The following section provides an overview of think-tanks and NGOs that are to some extent involved in EIPM in different policy fields. The following list of think-tanks is however not exhaustive.

AMO **(Association for International Affairs)** is a non-governmental, non-profit organisation founded in 1997 for research and education in the field of international relations. AMO's core mission is to contribute to a deeper understanding of international affairs. AMO has approximately 60 analysts. The association's assets are mainly derived from donations, grants and contributions from public budgets and private sources, and membership fees. Its activities mainly consist of formulating and publishing studies and analyses which are based on studies from abroad, panel and survey data. The state is not a sponsor, nor does it collaborate on the recommendations that AMO provides, but it may draw on them. There are several AMO reports that address the public administration. AMO closely collaborates with the Ministry of the Environment on climate policies and one researcher is a member of the ministerial scientific advisory council.

IDEA **(Institute for Democracy and Economic Analysis)** is hosted by the Institute of Economics of the Czech Academy of Sciences. The current director of IDEA, Daniel Münich, is an advisor to the Prime Minister and a member of the advisory body NERV. It focuses on analysis, evaluation and customised public policy proposals. IDEA researchers are currently focusing on the following areas: reform of public budgets, tax reform, analysis of pension systems and their reform, the Czech Republic's entry into the Eurozone, the labour market and education reform.

Czech Priorities **(CP)** is a non-profit and independent think tank collaborating closely with the public administration to promote and build capacities in EIPM. The CP team has developed expertise in areas such as cost-benefit analysis, foresight and forecasting, and other related topics over the recent years. CP is funded by foreign and Czech research grants, philanthropic sources and public procurement. In recent years, CP has delivered numerous projects for its partners in public administration such as a foresight study to inform RDI policies8 for the Office of the Government. Besides, it is currently finalising the PANK project on supporting analytical capacities of the public administration.

EUROPEUM **Institute for European Policy** is a non-profit, non-political and independent think tank focusing on European integration and cohesion. EUROPEUM contributes to the strengthening of democracy, security, stability, freedom and solidarity across Europe and to the active participation of the Czech Republic in the EU. EUROPEUM conducts original research, organises public events and educational activities, and formulates new views and recommendations to improve domestic and European policies.

EUROPEUM's thematic focus encompasses a range of subjects, including EU policies and institutions, EU budget issues, the role of the Czech Republic and Central Europe in the EU, and the analysis of climate change impacts and mitigation policies, like the EU Green Deal.

PAQ Research is a sociological research organisation dedicated to providing research evidence for effective educational and social policies. They contribute to data-driven solutions, addressing societal issues, particularly in education, social policy, public health, and research methodology. For instance, their research includes detailed insights into the impact of inflation and energy prices, aiding vulnerable groups through targeted assistance, and recommendations for integrating Ukrainian refugees in areas like housing, education, and work. The founder of PAQ is a member of NERV.

The Institute of Empirical Research STEM was founded to support policymaking based on data and scientific evidence. However, their work is also directed towards the general public. It is a sociological think-tank involved in many projects. It is active in applied research, including TA ČR BETA, recently focusing on education. Notable projects include Specialised activities of teaching staff and non-teaching work or other activities in regional education: analysis of the situation and proposals for recommendations and Developing toolkits to identify regional education needs.

A scientific consortium called **SYRI (National Institute for Research on Socioeconomic Impacts of Diseases and Systemic Risks)** was founded in 2022. It is funded via the National Recovery and Resilience Plan through the programme EXCELES, which is focused on the effectiveness of public administration, medical care, and recovery of the economy. The purpose of the consortium, consisting of scientists from Masaryk University, Charles University and the Czech Academy of Sciences, is to research the socioeconomic impact of diseases and systemic risks. The goal of SYRI is to achieve the societal and political impact of scientific research. Their research regularly gains great coverage in the media and often triggers a public discussion on the researched topic.

4.3.2.4 Peripheral external organisations – incidental policy knowledge

There is rather a great capacity consisting of several universities and other academic institutions, especially the Czech Academy of Sciences. Overall, the landscape of academic institutions is very broad and diverse. Currently, there are 26 public universities, 2 state universities (University of Defence and Police Academy of the Czech Republic in Prague) and 30 private universities. There were 18,337 academic employees at public universities in 2019 (MŠMT, 2021).

Public universities receive a significant part of their funding from the budget chapter of the Ministry of Education. Through this, they received 11 billion CZK in 2021 (CZSO, 2021). Furthermore, public universities receive purpose-related funding from other sources as well – the Technological Agency (2,1 billion CZK), the Czech Science Foundation (1,9 billion CZK) and others (Ministry of Industry and Trade, Ministry of Health, and Ministry of Agriculture). Overall, ca. 16.7 billion CZK was provided to public universities from public resources (compared to 16.8 billion CZK in 2020).

The other key research organisation is the Czech Academy of Sciences (AV ČR, 2023a) consisting of 54 institutes that cover areas of natural sciences, engineering, social sciences, and humanities. The Academy is largely funded from its own chapter of the budget of the Czech Government. In 2022, the budget of the Academy was 19.23 billion CZK. The Academy expresses support for the transfer of knowledge and technology, which happens through the Transfer Center. Since the last year, it has been trying to develop activities related to knowledge valorisation and the Science-for-policy.

Besides occasional projects in the area of applied research, the Academy also publishes expert statements called 'AVex' on their own initiative (AV ČR, 2023b). This is a statement of one or more of the Academy's institutes on a publicly discussed topic. These statements are prepared primarily for bodies of the state and their political representatives; however, they are also available to a wider public.

Recently, higher education organisations have developed efforts to promote societal impact of research through strategies aimed at establishing stronger links between academia and public sector institutions. The significance of 'Knowledge-Transfer-Offices' increases. These are often organised on a platform called Transfera. The role of these Offices is to support interactions between scientists and external partners to support practical application of research results. Similar Offices can be great players also in the Science-for-policy ecosystem through the shift of their focus to societal impact. Centre for Knowledge and Technology Transfer is one of these offices at Charles University. At Charles University it implements newly adopted a strategic framework for intersectoral collaboration (Strategie mezisektorové spolupráce).

4.3.3 Evaluation of science and the significance of applied research for policymaking

The research sector in the Czech Republic has been expanding its scope of publishing in global and European scientific publication markets. A recent RVVI analysis of RDI for the year 2021 shows that in six groups of scientific disciplines, there has been an increase in the number of international journals that Czech authors publish in when looking at the articles indexed in the Web of Science (WoS). The largest number of publications indexed in WoS from the Czech Republic belong to the group of Natural Sciences, followed by Engineering and Technology and Medical and Health Sciences. Between 2017-2021, Social Sciences, Agricultural Sciences as well as Engineering and Technology have seen significant increases in their number of publications (RVVI, 2023, pp. 139-140).

To evaluate research outputs, the Czech government adopted Government Resolution No. 107 in 2017 on the Methodology for Evaluating Research Organisations and Research, Development and Innovation Purpose-Tied Aid Programmes (also known as Methodology 2017+ or M17+). RVVI evaluates financial instruments of public support to RDI as part of the evaluation of results of completed RDI programs, in line with M17+.

M17+, inter alia, defines the different categories of results that stem from research activities. These are generally divided into publication and non-publication results (Government of the Czech Republic, 2017). The former is usually the product of basic research (e.g., articles and books) and, to a lesser extent, applied research, while the latter results generally include patents, utility models, industrial designs and other types of results of applied and other research. The latter are usually expected to be used in practice (RVVI, 2023, p. 134). Relevant non-publication results for EIPM, according to M17+, fall under the category H, such as Hleg, where 'results are projected into legislation and standards'; Hnonleg results, where results are 'projected into guidelines and other non-legislative regulations that are mandatory under the relevant provider'; or Hstrat results, where results are 'projected into approved strategic and policy documents by state or public administration bodies' (Government of the Czech Republic, 2017, p. 11).

According to the RIV database, which stores information on research results obtained from RDI activities, H-type results represent a very small share of all research results in the country. For instance, the share of H results in all non-publication results in the applied research category (including types P, Z, F, G, H, N, R, S, V) was only 1.2% in 2022, 1.2% in 2021, and 0.9% in 2020. (RIV, 2023). The most dominant types of applied research results in the 2017-2021 period have been research reports (26%) and prototypes and functioning samples (26%) (RVVI, 2023, p. 137). The graph below shows the proportion of H-type results.

Figure 9. Numbers and proportions of research results

(P) patent
(Z) poloprovoz
(F) užitný vzor
(G) prototyp, funkční vzorek
(R) Software
(N) certifik. metodika, léčebný postup, specializovaná mapa
(V) výzkumná zpráva
(H, S, T, I) ostatní aplikované
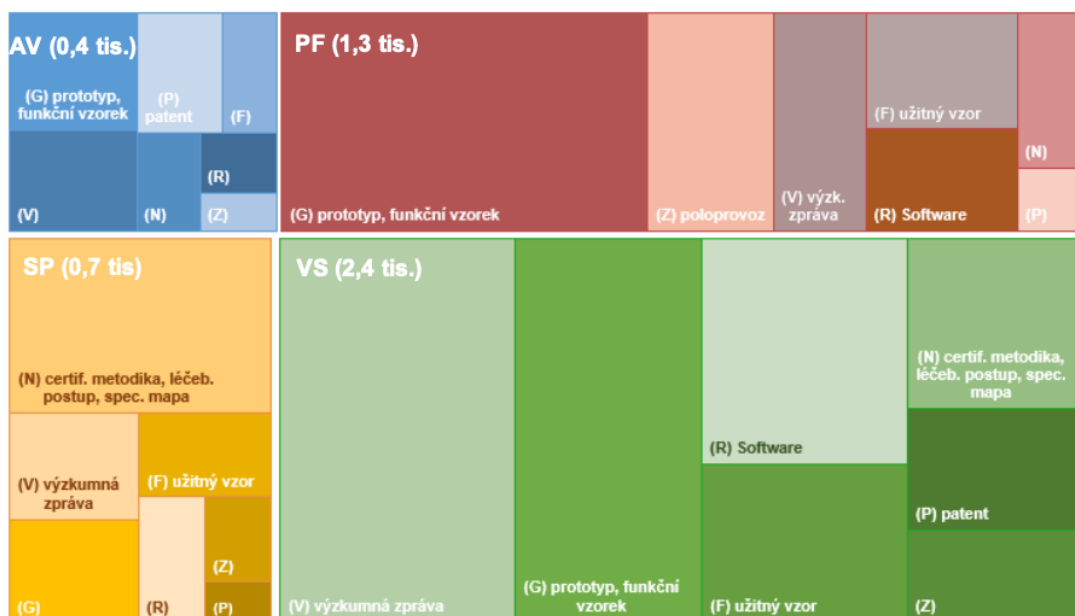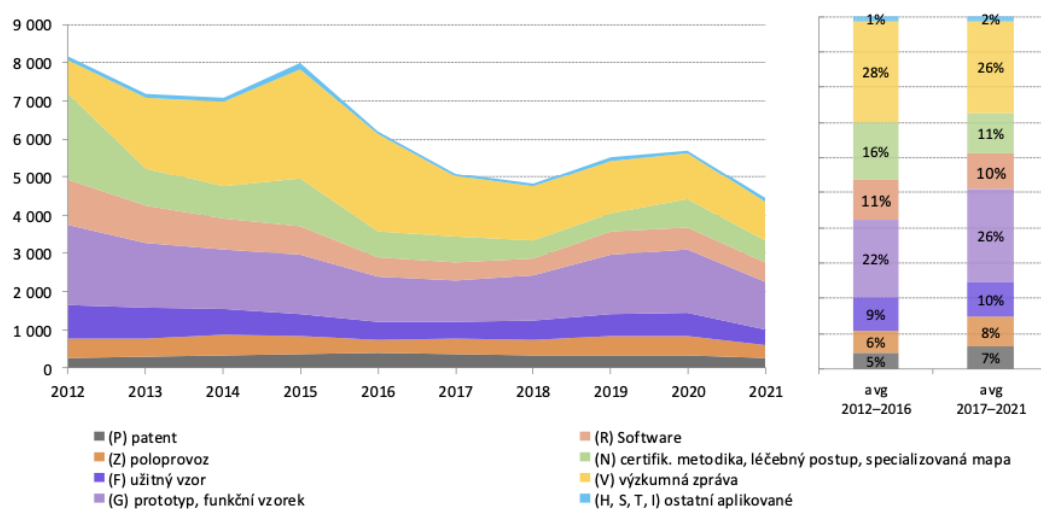
Source: RVVI, 2023, p. 137

Generally speaking, most research results fall into the publication category, which constituted some 76% of all research results in the 2017–2021 period. Both publication and non-publication results have witnessed a declining trend in their numbers in recent years, falling from around 65,000 in 2012 to some 48,000 in 2021 (the decline is mainly in the category D – papers in proceedings and the category of other non-publication results). According to the RVVI annual analysis of the RDI system in the country, this change in the trend can probably be attributed to the introduction of M17+, which places a stronger emphasis on the quality rather than the quantity of research results (RVVI, 2023, p. 135).

Table 11. Overview of frequent producers of H-type results (scientific results projected into legislation, non-legislative regulations, or strategic documents) since 2000 (first 7 producers)

Frequent producers of H-type result	Total amount of results
Faculty of Mechanical Engineering (Czech Technical University in Prague)	304 (20%)
Faculty of Civil Engineering in Prague (Czech Technical University in Prague)	157 (9%)

Technology Centre Prague	53 (3%)
The Crop Research Institute (CRI), v.v.i.	50 (3%)
Klokner's Institute (Czech Technical University in Prague)	48 (3%)
Ministry of the Interior / General Directorate of the Fire Service – Institute of Population Protection	46 (3%)
Research Institute of Forestry and Hunting, v.v.i.	42 (3%)

Source: RIV – Register of Information about Results, N=1339 H-type results

Table 12. Overview of FORD fields for H-Type results (top 7)

FIELDS OF RESEARCH AND DEVELOPMENT (FORD)	Number of H-type results
40106 – Agronomy, plant breeding and plant protection	51 (12%)
40102 – Forestry	35 (8%)
50602 – Public administration	25 (6%)
20101 – Civil engineering	25 (5%)
10511 – Environmental sciences (social aspects to be 5.7)	24 (5%)
20102 – Construction engineering, Municipal and structural engineering	23 (5%)
30304 – Public and environmental health	14 (3%)

Source: RIV – Register of Information about Results, N=441 H-type results classified according to FORD

Table 8 shows the most prolific producers of 'the most applied' type of result (H). The table only shows those institutions that produced more than 10 H-type results. The most frequent subtype of H-type result is Hleg – a result applied in regulation of a legislative type (778 out of 1338 results). H-type results are typically produced in technical and agricultural fields and are rare in social sciences and humanities. Most producers are either public universities, various institutes of the Czech Academy of Sciences or research organisations of individual line ministries. Most of the H-type results were produced between 2009 and 2015. After that, the annual number of H-type results stabilised at ca. 65 results a year. Despite not being the dominant type of result, it can be concluded that most of the H-type results are concentrated in a few scientific fields, especially engineering, agriculture, and political science (see Table 10). However, it again needs to be emphasised that the H-type result constitutes only a minority of all research results.

When it comes to the quality of research outputs, a recent analysis of articles in WoS shows that in all groups of scientific disciplines (except for Social Sciences), the share of journals which are internationally ranked as belonging to the first quartile (Q1), according to the Article Influence Score (AIS), has increased. Nevertheless, Czech journals have not seen a change in number in recent years, and most belong in the lower quartiles (Q3 and Q4) (RVVI, 2023, pp.139-140). In terms of the quality of articles in journals in WoS, measured by their actual citations internationally, the Czech Republic displays a positive trend (except for the Engineering and Technology group, where a decline in citations has recently been observed). However, the country is lagging behind the EU15 average with respect to the development of the normalised citation impact (NCI) for individual groups of scientific disciplines, except for the group of Medical and Health Sciences, where it exceeds the EU15 average (RVVI, 2023, pp. 131-132; p. 146).

The quality of results in the country is evaluated in line with the M17+ methodology. A sectoral bibliometric analysis is a part of the evaluation process, prepared by the Department for support to RVVI (as part of the Section for RDI within the Office of the Government) and reviewed by Expert Panels of the RVVI. Based on M17+,

and depending on their research outputs, different institutions and organisations performing research, such as the research organisations established by line ministries, receive an A-D grade.

As part of the M17+ methodology's Module 3 on social relevance, the evaluation considers the benefits of the research performed by the evaluated institutions or organisations. Nevertheless, according to our interlocutors, a challenge in the research evaluation process is that it is still not sufficiently focused on social impact, but rather on publishing output and impact. Changes to the M17+ are currently underway, as the methodology is "still evolving to best capture real quality and follow international trends" (RVVI, 2023, p. 5); according to one interlocutor, there should be a greater focus on social impact in the changed version of the M17+ document.

When evaluating applied research that it has financially supported, TA ČR emphasizes whether results have been applied by the so-called 'application guarantor,' the institution tasked with applying the results of the supported project, and in line with the 2002 RDI Support Act. This guarantor is usually listed in the project application and is also evaluated during the application process. The guarantor can be either internal to the project or external (an entity not involved in the project). There is a possibility to change the guarantor (TA ČR, 2022). However, if the guarantor does not apply the project results, this may result in the project being considered non-performing with respect to its objectives and results. Such a strict practice introduces risks to both sides – researchers and application guarantors – which may result in some worthwhile projects not applying for funding (for more on this topic, see Srholec, 2019).

Figure 10. Ministries as Application Guarantor in TA ČR projects

Ministries typically engage in applied research via the TA ČR ETA programme
Ministries acting as Application Guarantor in TA ČR projects
by programme, numbers of projects since 2018 (selected ministries only)

Programme: ZETA | THETA | Prostředí pro život | ETA | DOPRAVA 2020+
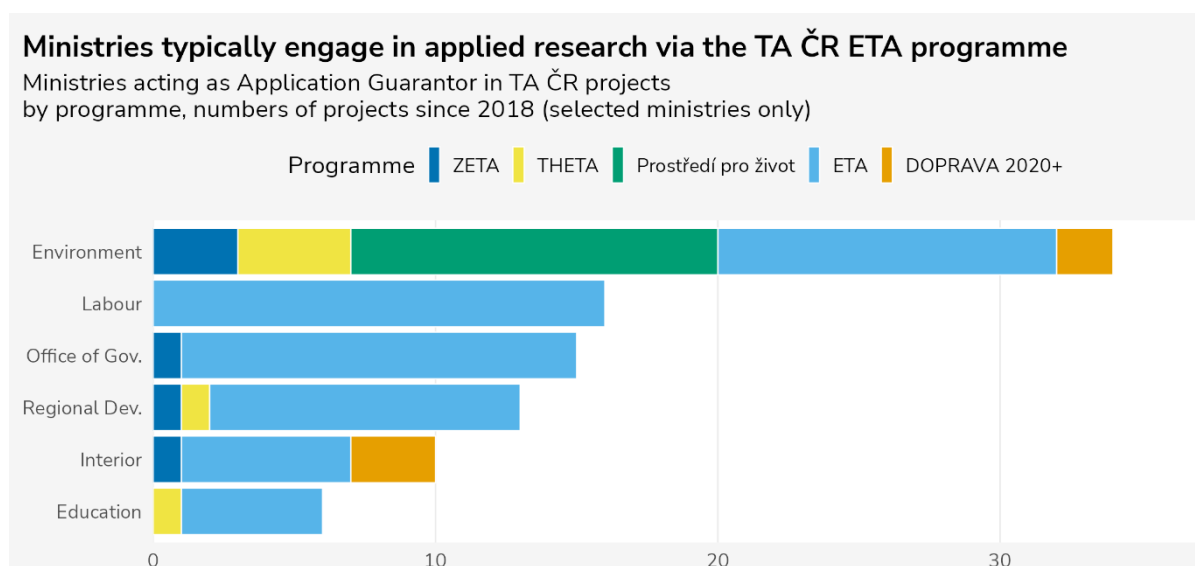
Source: own analysis of data (TA CR).

4.3.4 Culture, incentives, and attitudes inside supply institutions

The importance of evidence-informed policymaking (EIPM) is generally acknowledged by Czech academics (Mareš & Kebza, 2012; Mareš, 2009; Průcha, 2005; Štech, 2013b; Veselý et al., 2018). Several Czech scholars argued that evidence-based policy plays a minimal role in policymaking in the Czech Republic. For instance, Veselý, Ochrana and Nekola (2018) have found that the concept of "evidence" itself has several meanings in the Czech discourse and that EBP / EIP is virtually unknown in Czech practice. Other scholars (Konopásek et al.,2008; Sima, 2017; Štech, 2013a, 2020) also provided a critique of the low level of uptake of research in policymaking.

However, this literature concentrates almost exclusively on the demand side, i.e., on the incapacity of the public administration to seek, accept and incorporate research findings. Very rarely do academics critically examine problems on their (supply) side. Consequently, we are not aware of any systematic analysis of barriers in research organisations in terms of producing relevant knowledge for policymaking. This is rather surprising, given the fact that public officials in our interviews often complained about scholars' incapacity to provide them with policy-relevant knowledge.

In any event, the current academic environment is not conducive to providing policy-relevant knowledge. This is partly because the academic practice is strongly influenced (and sometimes almost determined) by research outputs that are considered legitimate and that have economic payoffs (both for a given institution and the respective academic; see the section on research outputs above). Related to that is the fact that, often, research output (including that for policymaking) is considered high quality only if it fulfils all formal aspects (e.g., index, abstract, etc.) and enough pages. It is also common to relate the number of allocated funds to the number and scope of research outputs (e.g., to count the ratio of pages submitted to funds allocated).

An even more crucial problem is that most cooperation between academia and public administration is contract-based. That is, it is based on time-constrained ad hoc projects defined by specific outputs to be delivered. Rarely do we find long-term established networks between people working in academia and public officials, or other institutions respectively. However, such contractual cooperation does not allow for building mutual trust and understanding.

4.3.5 Overview of strengths and weaknesses in the supply side

Based on a comprehensive diagnosis comprising desk research and interviews, a preliminary assessment of strengths and weaknesses on the supply side of the science-for-policy interface is outlined.

A prominent strength is the presence of a diverse array of research organisations generating potentially valuable knowledge for policymaking. A long-standing tradition of research organisations under ministries (ministerial research organisations) and substantial ongoing projects like SYRI contribute to the potential development of robust science-for-policy networks. Moreover, there is increasing recognition among public officials and politicians of the significance of evidence-informed policy. At the same time, the establishment of new analytical units or teams within ministerial cabinets (VAÚ, MŠMT, MPSV) augments this momentum.

The existence of fragmented research capacities poses a notable challenge. A dearth of internal analytical capabilities within individual departments has been highlighted in multiple interviews with government officials. The emergence of internal analytical units creates competition within the relatively small pool of policy analysts in the labour market. A trend towards externalising policy-related knowledge underscores weaknesses in the current system.

The involvement of scientists in policy-relevant research depends on the individual and is generally not promoted more systematically. Individual evaluation and promotion of researchers is predominantly based on outputs published in high-cited journals. Outputs directly relevant and usable in public administration (e.g. policy briefs) are not considered and encouraged). Basic research has higher prestige than applied research. When it comes to applied research, more tangible and immediately monetisable outcomes of technical and natural sciences receive a lot more emphasis and attention, while social sciences lag behind.

The quality of research that ministries are supplied with is very uneven between line ministries; some have institutes supplying them with knowledge, while others do not. Other issues include limited incentives for generating policy-relevant scientific knowledge. The preference for publishing in scientific journals over policy-relevant platforms, the absence of educational programs to facilitate the transfer of scientific outputs into public policy, and a lack of trust in and prejudices against academic institutions among certain policymakers who, in turn, are not approached or approached with suspicion by researchers.

4.4 Where supply and demand meet: established processes and policies within government for evidence-informed policymaking

This section introduces key stakeholders supporting evidence-informed policy (RVVI, TA ČR, and the Office of the Minister for Science, Research and Innovation) and their roles and activities. It reflects the role of domestic core policy processes (RIA, strategic foresight, science advice, etc.) together with some overarching European commitments and processes like structural funds, recovery and resilience plans, and others. Furthermore, this section describes the Czech public data ecosystem, highlighting its challenges and the good practices that could possibly be built upon.

4.4.1 Research policy frameworks, funding plans, and key stakeholders supporting evidence-informed policymaking

4.4.1.1 Legal and policy framework

The Czech Republic has a robust legal and institutional framework for research policy in place. A core 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). 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.

Another important policy document is the National Policy on RDI 2021+, which was adopted by the government in 2020 and sets the key aims that the country wants to achieve in the RDI realm in the upcoming period, and the Innovation Strategy of the Czech Republic 2019-2030 (Innovation Strategy 2019+), adopted by the government in 2019. In addition to these documents, sectoral or inter-sectoral concepts of RDI development have been or are in the process of being developed by various ministries and other institutions (these have been described in further detail in section 4.2).

Another important and overarching document developed to support the implementation of the National RDI Policy in the sphere of applied research is the National Research and Innovation Strategy for Smart Specialisation of the Czech Republic for the 2021-2027 period (RIS3 Strategy), whose development and implementation is ensured by the Ministry of Industry and Trade. This document is focused on supporting priority areas of oriented and applied RDI. Priorities set in the RIS3 strategy should be reflected in the Operational Programmes implemented by different ministries (especially MŠMT), national programs funded by TA ČR, and programs implemented by line ministries.

In the realm of research evaluation, an important document is the already mentioned M17+ methodology, which is overseen by the RVVI.

Some reforms of the current legal and policy framework are currently underway. The 2002 RDI Support Act will be replaced by a new law, which is currently being drafted. The new law aims to streamline the RDI management system, reducing administrative hurdles, improve the usage of funding and human resources within the system and improve the country's readiness in terms of addressing current challenges, as well as flexibility in reacting to changes (RVVI, 2023, p. 4). This is perceived as a welcome change as, according to one interlocutor, the law is rather restrictive with regards to how research-related applications and open competitions have to be processed, which in turn requires a lot of time and resources.

Another ongoing reform, prepared by the Office of the Minister for Science, Research and Innovation, is an amendment to the Act on Public Research Institutions. These changes are intended to have research organisations better respond to the research priorities and needs of their founders. Even though these legislative changes are at an early stage, there is a significant public debate in the scientific community following the leak of different versions of draft amendments, as well as media reports that the changes will significantly curb the independence of public research organisations by allowing founders to merge organisations without their workplace council's consent or have greater powers over the appointment of their directors and budget approval (for instance, see: Tomeš and Bartošová, 2023; Navrátil, 2023). A critique coming from the scientific community is that the debate on the amendments is not being held publicly and that the changes are to be a part of a non-standard legislative procedure (parliamentary act) that would circumvent consultations with key stakeholders as part of the government legislative procedure (Tomeš and Bartošová, 2023).

Given that the National Priorities document dates to 2012, the Office of the Minister for Science, Research and Innovation, together with the RVVI, is currently also working on a new set of priorities. The new document is, according to some interlocutors, bound to place a stronger emphasis on how RDI could address and support various societal challenges.

Moreover, as briefly mentioned in section 3.3, RVVI is currently working on evaluating research results more transparent and predictable to capture differences between different sectors and research results, as well as to better capture successful transfer (e.g. spin-offs, licence sales) (RVVI, 2023, p. 5).

The concept of knowledge valorisation is, as of recently, increasingly being supported within the EU. It shifts the focus of the application of research results from technology transfer to societal impact and denotes a: 'process of creating social and economic value from knowledge by linking different areas and sectors and by transforming data, know-how and research results into sustainable products, services, solutions and knowledge-based policies that benefit society' (EU Council, 2022, § 16). Further support for the development of knowledge valorisation is also included within the voluntary actions that are a part of the European Research Area Policy Agenda for the period 2022-2024. The Czech Republic currently does not have a strategy for knowledge valorisation. Nevertheless, some activities have recently taken place to promote its importance, such as the April 2023 kick-off conference organised by MŠMT in cooperation with TA ČR as part of the EU-wide awareness-raising campaign 'Tour des Capitales', facilitated by the EC Directorate-General for Research and Innovation. The aim was to promote the EU Council Recommendation on the Guiding Principles of Knowledge Valorisation, which had been negotiated during the Czech Presidency of the Council of the EU the year before and adopted by the EU Research Ministers in December 2022 (TA ČR, 2023).

A policy to support the inter-sectoral mobility of analysts and researchers or to support other policy engagement opportunities for researchers is currently also missing. Cases of such mobility or engagement currently depend on the motivation of individuals.

According to interlocutors, the current system can be characterised as fragmented, with a large number of actors with often conflicting priorities and overlapping competencies. Some interlocutors perceived that there is insufficient motivation on the part of knowledge creators to participate in policymaking due to a missing or sub-optimally set strategic framework.

This is also pointed out by the Minister for Science, Research and Innovation, who also presides over RVVI, in the organisation's most recent annual RDI analysis: 'The weak connection of the academic sphere with the business sphere and public administration and the low evaluation of the results of science is another persistent shortcoming of the Czech research area. It is also evident from the fact that coherent data on the transfer of knowledge and technology, including the sale of licences, academic spin-offs or inputs into the creation of public policies, are not available to the required extent.' (RVVI, 2023, p. 5)

Other challenges include ensuring the correct targeting of financial support for RDI. For instance, an interlocutor from TA ČR pointed out that, according to the current practice, the agency does not receive instructions from the government regarding what the research priorities – and expected results – are, which would shape the design of programmes and public competitions in accordance with defined goals and ways in which they are to be fulfilled. As a result, applications that are successful in the agency's public competitions may not necessarily be in line with what could be deemed as current public priorities. Furthermore, without defined priorities, public competitions are missing well-defined criteria, which leads to an excessive number of applications that TA ČR needs to process and evaluate, requiring significant time and resources. A related issue is that public institutions in the research realm often view project support as a part of institutional support and expect such support from the government.

Due to the current policy framework, ensuring a motivational effect for researchers to apply for applied research funding in the first place is another challenge, as is shortening the time from an idea to its implementation so that it is marketable, and reducing the administrative burden while maintaining sufficient key information on the implementation and use of public support.

Another issue that one interlocutor raised is that line ministries currently do not have staff in charge of promoting and coordinating science, such as chief scientists or the support of Knowledge-Transfer-Offices at the position of the supply side.

Last but not least, some interlocutors perceived a discrepancy between the results of research that informs policymaking and political decisions. According to one interlocutor, the two parts do not always meet and are sometimes the complete opposite. Despite the legislation and policies in place, this remains an unresolved issue.

4.4.1.2 Institutional framework

The competencies and activities of key institutions that are in charge of RDI policy have been determined by the 2002 RDI Support Act. This section provides an overview of the work of three BOs that form the core of the institutional framework for research in the role of research councils/funders. The Grant Agency of the Czech

Republic (GA ČR) is mentioned, but its role is not elaborated in further text, as the focus of this section is primarily on actors in the realm of applied rather than basic research.

RVVI

The **Research Development and Innovation Council (RVVI)** was established by the 2002 RDI Support Act as an advisory body of the Government in the area of research, development and innovation. The council consists of 17 members and is chaired by the Minister of Science, Research and Innovation. Its members come from academia and the industry.

Its main tasks include determining the priorities for applied RDI in the Czech Republic, proposing the overall amount of funding for RDI in chapters of the budget of the Czech Republic as well as their allocation, overseeing and preparing the Methodology for Evaluating Research Organisations and RDI Purpose-tied Aid Programs, preparing the national RDI policy together (most recently, the National RDI Policy 2021+) with MŠMT and overseeing its implementation, preparing annual analyses on RDI in the country and its international comparison, international cooperation with similar bodies in the EU, issuing opinions on materials submitted to the Government in the realm of RDI, and proposing members of the Presidium and the Chairman of TA ČR and GA ČR. In its work, it is supported by the Office of the Government's Section for Science, Research and Innovation, which provides the council with analytical and other inputs.

As such, the RVVI plays an important role in the science-for-policy ecosystem in the country, as it moderates debates among the main RDI actors in the country, identifies priorities for research, cooperates with different institutions working on RDI, and submits its opinions and reports on RDI. It promotes excellence in research through its involvement in research evaluation.

Office of the Minister for Science, Research and Innovation

The government created the position of Minister for Science, Research and Innovation and appointed Marek Ženíšek[3]. The Office of the Minister for Science, Research and Innovation, who is simultaneously the president of the RVVI, was also established. This reform aimed to improve the coordination in the 'greatly fragmented system for managing science and research' (RVVI, 2023, p. 3).

The Section for Science, Research and Innovation was established in the Office of the Minister. The section is tasked with coordination of the science, research and innovation ecosystem. Besides the role of coordination and support of the RVVI, it covers scientific diplomacy, analysis of the research, development and innovation systems, evaluation of research organisations, strategies and other related areas.

Recently, the section has been responsible for the broadly discussed Act on the Support of Research, Development, Innovation and Transfer of Knowledge, which is meant to support the transfer of knowledge to various parts of society. Furthermore, the office is preparing a change in management of the public research organisations (see above).

TA ČR

The Technology Agency of the Czech Republic (TA ČR) is an organisational unit of the state founded in 2009 by amendments to the 2002 Act on RDI support. It was established to intensify and support the cooperation between research organisations and the business sector, but it has further been developed to support cooperation between research organisations and the public sector as well. As part of its funding programs, TA ČR selects and finances applied research, development and innovation projects. TA ČR's organisational structure consists of a Board (5 members), a Research Council (12 members), a Review Board (10 members) and the office (around 160 employees).

As such, TA ČR performs multiple functions, not limited to preparing and implementing applied RDI programmes, public competitions in RDI to support projects and awarding public contracts; evaluating and selecting project proposals; providing targeted support for project solutions on the basis of contracts or decisions on the provision of support; and overseeing the implementation of contracts on the provision of support or decisions on support. It also evaluates and oversees the progress of solutions and the fulfilment of objectives of projects and oversight of their results and provides advice to project implementers and users of the results of applied RDI, especially with respect to legal, financial and intellectual property protection and preparing the organisation's budget proposal and annual reports. Through its work, it also facilitates communication between research

---

[3] At the time of writing this report, the Minister was Helena Langšádlová.

organisations and the private sector. It is also involved in negotiating with the competent authorities within the Czech Republic or the European Union concerning the assessment of the compatibility of provided support with the common market and cooperates with similar foreign agencies.

TA ČR's role in EIPM is dual. The first role is the knowledge that the office of TA ČR produces on its own or through external contracts. The second one is the knowledge that is produced by the programmes and their applied research projects. The main actors within the first role are analytical and evaluation departments, whereas the second role is not performed by TA ČR, but their role is to choose or support those projects that might have the biggest impact (within some programmes, projects are chosen by the ministries). Therefore, there are two main streams of knowledge transfer to policymaking done by TA ČR. The first one is based on what TA ČR knows about the science, research and innovation system in the Czech Republic, mainly through their in-house analysis of their programmes and through INKA (mapping of innovation capacities in the Czech Republic). The second one is through projects that are focused on supporting the public sector with knowledge (especially the BETA programme).

To fulfil the first role, TA ČR has two main types of capacities within the organisation: analytical and evaluation departments. The analytical Department acts as a service unit for the rest of the organisation, both through planned, repeated analysis and through ad hoc analysis. The evaluation department focuses on ex-ante, interim and ex-post evaluations of TA ČR programmes. These evaluations serve to reflect the meaningfulness of programmes, to evaluate and control the progress of solutions and the fulfilment of the objectives of programme projects and control of the results achieved by them, and to improve the creation of new programmes.

The second role relates to TA ČR's programmes. We can divide these into three main categories depending on the extent to which TA ČR is the 'owner' of the programme. Some programmes are purely under the responsibility of TA ČR (ÉTA, GAMA, ZÉTA, NCK, DELTA, BETA2, and the newly-established SIGMA); others are under the responsibility of TA ČR but defined sectorally, with significant involvement of a ministry (THÉTA 2); and finally, there are purely ministerial programmes where TA ČR acts as an administrator of a programme defined and financed by a ministry (Transport 2020+, Environment for Life, TREND). With regards to science-for-policy, the most relevant programmes are BETA2, NCK (National Centres of Competence), THÉTA 2 (sub-program 1 – Research in public interest), SIGMA (Sub-objective 3 – Promoting the innovative potential of the social sciences, humanities and arts and Sub-objective 5 – Cross-cutting support) and all three ministerial programmes. A notable practice regarding the management of programmes at TA ČR is their creation of so-called programme teams, where employees from different units of TA ČR create a team that is responsible for the management of a particular programme.

The main programme that has been created to support the direct research needs of public administration is BETA2, which has been running since 2017 and should end by 2024. A follow-up programme, BETA3, is being prepared at the moment and should put more emphasis on the analytical support of ministries. The budget of BETA2 for 2023 is set to 130. mil. CZK and the budget for the whole programme period was set to 1.6 billion CZK. To give an idea of the general budget, in 2022, the TA ČR budget for that year was 5.3 bil. CZK (this includes both the budgets of all programmes and for employees and contractors of TA ČR). The main difference to other TA ČR programmes is that BETA2 is based on public procurement, whereas other programmes are mainly based on public competitions. This fact implies some complications with the programme, mainly the fact that it must be in accordance with public procurement law and law on the support of research and development. That leads to bureaucratisation and complexity of the whole programme. Furthermore, programme BETA allows procuring both research and technological support of the ministries (e.g. building new information systems). These factors, together with many public servants having insufficient experience with research and with research proposals, make this programme difficult to use by the ministries. If this is addressed, the programme has a large potential to be impactful in the science-for-policy ecosystem in the Czech Republic.

According to our interlocutors, EIPM is supported throughout the organisation and applied within its culture. Moreover, ex-ante evaluations of programmes are conducted even when it is not a formal requirement. Nevertheless, personnel capacities are still seen as a challenge due to insufficient funding – both for the organisation's programmes and office. While interlocutors view the competencies of their analysts to be quite good, analysts are frequently seen to be overwhelmed with other tasks, such as ad hoc requests for analysis, which hampers their conceptual work and application of new methods, like foresight.

In the past, TA ČR has supported project PANK from the ETA program. It aims to support analytical capabilities within the public administration. Nevertheless, one interlocutor pointed out that the organisation is sometimes too inward-looking, seeking to improve the organisation and their capacities, whereas it could focus more on providing support with similar matters in line ministries. Moreover, the interlocutor raised the point that some

of their activities in the research realm (such as commissioned research on enterprises) have been perceived to go beyond their competencies by other line ministries and have led to disagreements. In general, there is a position among the interlocutors we spoke to that the research environment in the country is fragmented and that it would be welcome if all applied research was under TA ČR's roof; nevertheless, this is not a position that other line ministries supporting applied research agree with, as they would want to keep their own research.

4.4.1.3 Budget preparation and funding

4.4.1.3.1 The budgeting process in the Czech Republic

The budget preparation and approval process in the Czech Republic is governed by the Act on Budget Rules no. 2018/2000. Moreover, the Fiscal Responsibility Act no. 23/2017 was adopted to implement provisions of the EU Council Directive 2011/85 relating to fiscal policy rules. The Ministry of Finance (MF) is the state's central budget authority.

With the Czech Republic being a unitary state, the national budget covers almost all public spending; nevertheless, local governments have some revenue-raising capacities and are, in accordance with legislation, allowed to have budget surpluses or deficits (OECD 2019, 168).

The country follows a 3-year medium-term expenditure framework. The annual budget cycle commences in April, with a pre-budget fiscal policy statement and a budget circular in May. Negotiations with line ministries take place between February and September. The executive's budget proposal is prepared in September and Parliament votes on the budget in December. Monthly in-year budget execution reports, a mid-year implementation report, and a year-end financial statement are prepared by the MF. An audited financial report for the previous fiscal year is prepared and subsequently considered by Parliament. The budget approval process is aligned with the European Semester, as well as the surveillance procedures and the fiscal and structural policy coordination of the EU (OECD, 2019, p. 168).

The budgeting process follows the principles of performance-informed budgeting, with output targets incorporated in the budget document and with an annual performance report prepared. Nevertheless, the OECD points out that the performance report is not directly connected to an overarching performance framework or accountability mechanisms in the country (OECD, 2019, p.168).

Moreover, the Czech Republic has not had the practice of conducting spending reviews to systematically analyse existing expenditures and identify priorities. A pilot project carried out by the MF with the OECD, completed in 2022, identified barriers to the implementation of spending reviews (OECD, 2023, p.185). Following the project, a Spending Review Unit has been set up within the MF in 2023, tasked to undertake spending reviews.

Another general challenge in the country is that policy and financial planning are not linked systematically. While the MF comments on draft strategic and policy documents, especially during the interagency commenting procedure, and measures from such documents are thus costed, analysis by the OECD has pointed out a lack of cooperation between line ministries in the MF on costing the measures in earlier stages of document preparations, before they are submitted for comment, which would allow for more sustainable financing of strategies and policies. Moreover, the government's Policy Statement and annual work plans are also not backed by detailed financial assessments, which results in some measures being removed because of a lack of funding (OECD, 2023, p. 115-116).

4.4.1.3.2 Annual budget process for research, development and innovation

In line with the 2002 RDI Support Act, the RVVI ensures on an annual basis the proposal for total expenditures on RDI in individual chapters of the budget, as well as their medium-term outlook. The proposal of the RDI state budget expenditures takes into account the aims of the National Policy on RDI 2021+, as well as the aims of the Innovation Strategy 2019+. In the process of preparing the proposal, RVVI, in cooperation with the Ministry of Education as a central executive body responsible for RDI (except for areas RVVI is in charge of), has working meetings with representatives of individual chapters, where the amounts within individual chapters are negotiated.

In 2021, the majority of the funding is allocated in the chapter for the Ministry of Education (39% of the state budget for RDI), which disburses the funds to higher education institutions, followed by the Czech Academy of Sciences (18% of the RDI budget), TA ČR (13.5% of the RDI budget), GA ČR (11.7% of the RDI budget), Ministry of Health (4.8% of the RDI budget), Ministry of Industry and Trade (3.8% of the RDI budget), Ministry of Agriculture (3.1% of the RDI budget), Ministry of Interior (2% of the RDI budget) as well as six other ministries that receive smaller portions of the RDI budget. The line ministries act as sectoral providers of support for RDI

(RVVI, 2023, p. 33). Except for the Ministry of Education, which primarily finances higher education institutions (and, to a lesser extent, institutes of the Czech Academy of Sciences and enterprises) and the Ministry of Industry and Trade, which primarily supports enterprises (and, to some extent, also higher education institutions), other ministries mainly support those subjects that they have established (with some funding from some line ministries also allocated to higher education institutions).

The National Policy on RDI 2021+ contains specific aims related to RDI financing, including ensuring that an adequate ratio of the amount of institutional and special-purpose funding will be set to stabilise and streamline the research environment while maintaining at least the existing level of special-purpose support; creating mutually complementary schemes for financing the capacities of research organisations from funds dedicated towards their long-term conceptual development and those for large research infrastructures; as well as supporting domestic and international research and development synergies through financial instruments and strengthening areas that have synergic potential, increasing RDI support from state budget for RDI in essential and breakthrough areas or areas where the results of RDI can fundamentally help address major social challenges. The Innovation Strategy 2019+ seeks to strengthen the financing of RDI as a percentage of GDP to reach 3% of GDP by 2030. (RVVI, 2023, pp. 29-30).

Overall, funding for RDI from the state budget has increased from 26.6 billion CZK in 2012 to 37.47 billion CZK in 2021 (RVVI, 2023, p.30), a 40.7% increase over the course of these ten years. On the other hand, support for special-purpose support has slightly decreased in recent years.

Currently, a challenge with respect to the national budget for research is a reduction in funding to what was previously anticipated, given rising public debt. According to one interlocutor from the research sphere, there is currently an outcry coming from the scientific community regarding this issue.

4.4.1.3.3   National funding and types of support for RDI

The most recent analysis of the RDI system for the year 2021 shows that, in 2021, the country had reached for the first time the threshold of 2% of GDP with respect to total expenditures on research and innovation, including both public expenditure from local sources, public expenditure from international sources, and private sector expenditure (RVVI, 2023, p. 4). This is slightly below the EU average of 2.27% of GDP in 2021 (Eurostat, 2022). However, the gradual increase in funding for RDI was mainly driven by a rise in spending coming from the private sector (mainly the car industry and ICT sector), which in 2021 constituted some 60% of the total expenditure of 121.9 billion CZK. Expenditures on applied and experimental research are mainly situated in the private sector, while expenditure within the government and higher education sector is mainly focused on basic research activities (RVVI, 2023, p. 7). The private sector predominantly invests in its own RDI rather than in public research; while the public support to the private sector for RDI has increased to 7 billion CZK in 2021, the highest level in the last five years, the vast majority of public funds are supporting RDI in the public and higher education sector (34.7 billion CZK in 2021). In the private sector, the majority of funding on RDI was spent by internationally owned private enterprises (63%), while in the public sector, the majority of public expenditure went towards financing the Czech Academy of Sciences (74%), and higher education institutions (95%) (Ibid). Thus, the RVVI classifies, in its analysis, the RDI system within the country from the perspective of financing into four types of "power" organisations: internationally-owned enterprises, followed by higher education institutions, domestically-owned enterprises and (somewhat behind them in terms of funding) institutes of the Czech Academy of Sciences (Ibid).

National public funding for RDI is primarily drawn from the state budget for RDI, which was 37.47 billion CZK in 2021 and consists of 15 budget chapters (RVVI, 2023, pp. 23). In 2021, higher education institutions drew 16.1 billion CZK from the state budget, the Czech Academy of Sciences 8.6 billion CZK, private business some 5 billion CZK and other research organisations 4 billion CZK.

Institutional support for the long-term conceptual development of research organisations is mainly funded by chapters dedicated to the Ministry of Education and the Czech Academy of Sciences. In 2021, public and private schools of higher education received funding in the amount of almost 8 billion CZK for long-term conceptual development, while institutes of the Czech Academy of Sciences received 5 billion CZK.

Higher education institutions are also entitled to 'specific higher education research', a type of institutional support (amounting to 1.17 billion CZK in 2021), while institutes of the Czech Academy of Sciences have special support to cover the cost of their activities (1.75 billion CZK in 2021), which are mainly related to research. (RVVI, 2023, p. 28)

Targeted or special-purpose support is, on the other hand, mainly provided by the GA ČR (competitions are held mainly by schools of higher education and institutes of the Czech Academy of Sciences) and by TA ČR (used

mainly by businesses and schools of higher education). Some targeted support is also available from the chapter dedicated to the Ministry of Education. Targeted support is predominantly oriented towards natural and technical sciences (70 %), while support for other branches, including social sciences, is not as significant (RVVI, 2023, pp. 28-29). Targeted support for projects in the realm of engineering and technology is predominantly disbursed by TA ČR, and in the realm of natural sciences, predominantly by GA ČR.

RVVI's analysis shows that, in comparison to other countries within the EU, direct public budgetary allocations for RDI within the Czech Republic are significantly dominated by support to natural sciences, while support to other sectors, such as medical sectors or social sciences is, compared with some of the countries, up to two times lower (RVVI, 2023, p. 45).

4.4.1.3.4   EU funding and types of support for RDI

When it comes to EU funding, support for RDI in the Czech Republic comes from EU funds and EU framework programmes. The most significant sources of funding for Operational Programmes adopted at the national level are the European Fund for Regional Development and the European Social Fund. Since 2018, EU funding has constituted between 0.1% and 0.2% of the GDP annually (0.14% in 2021).

Operational Programmes, funded from EU funds and co-funded from the national budget, included in the 2014-2020 programme period the Operational Programme Research, Development and Education (OP VVV), governed by the Ministry of Education, and the Operational Programme Entrepreneurship and Innovation for Competitiveness (OP PIK), managed by the Ministry of Industry and Trade. In this period, the largest share of the support as part of OP VVV was used by higher education institutions (56%) and institutes of the Czech Academy of Sciences (32 %) (RVVI, 2023, p. 49). A significant part of this support (47 %) as part of OP VVV was allocated towards research infrastructure (Ibid). Moreover, more than 75 % of the funding was allocated towards projects in the realm of natural sciences and technology. On the other hand, 92% of support as part of OP PIK was received by private enterprises and mainly applied research, with 75% of the support allocated towards technology projects.

In the 2021-2027 period, the Czech Republic is implementing the Operational Programme Jan Amos Komensky (OP JAK), which builds on OP VVV, and the Operational Programme Technology and Application for Competitiveness (OP TAK), which builds on OP PIK (RVVI, 2023, p. 49). OP JAK is especially oriented towards RDI, which aims to find solutions to society-wide problems at the national and European levels, while OP TAK is focused on strengthening the activity of enterprises in the realm of RDI and their digital transformation (Ibid, p. 55-56).

Framework programmes for research and development, such as Horizon Europe, are another important pillar of EU support for RDI. However, even though the success rate of applications from the Czech Republic is seen to be relatively high, Czech research organisations are seen to have insufficiently participated in the Horizon 2020 programme in the previous programming period (RVVI, 2023, p. 4; pp. 58-59).

4.4.1.4 Sources of funding for analytical or policy support units

Policy support or analytical units within line ministries, where they are in place, are usually funded from line ministries' own resources. However, EU funding is currently being used to finance policy support units. For instance, with the support of funding from the OP JAK programme, implemented in the 2021-2027 programme period, an analytical unit within the Ministry of Education has recently been established, as mentioned in Chapter 2.

Moreover, TA ČR's BETA3 programmes, a follow-up to BETA2, which is currently in the process of preparation, are expected to place a greater emphasis on analytical support to line ministries.

4.4.2 Science advice

This subchapter presents an overview of various (scientific) advisory bodies involved in science advice to beneficiary organisations and other stakeholders. In general, there is a great variety of functions, institutional backgrounds and activities across advisory bodies. The Office of the Government has established several of them for various topics, while ministries can also rely on their own.

In general, advisory bodies consist mostly not only of scientists but a mixture of various stakeholders. Purely scientific advice bodies are very rare. Mostly, there are representatives of NGOs involved in the particular topic, representatives of the private sector, representatives of the public administration or politicians, and possibly scientists. This mixture is present across almost all discussed advisory bodies. This holds for government and

ministerial advisory bodies, as well as for bodies attached to a particular policy area or funding mechanism. For instance, consultation bodies for ESIF programmes and calls sometimes also include scientists.

Many advisory bodies exist through an ad hoc directive of the government or a particular line ministry. This may cause some advisory bodies to be rather unstable. For example, the National Economic Council (NERV) was established in 2009 to provide advice about the impacts of the Global Financial Crisis. Then, its activities ceased between 2013 and 2022, when it was re-established. Furthermore, the involvement of particular individuals is more often a political decision, and there are no specific requirements for expertise. Contrary to this example, the Czech Fiscal Council was established through Act No. 23/2017 Coll. This Council is independent from any other public body and consists of three academic economists. The Council assess the compliance of public bodies with fiscal rules determined by the law and other authoritative documents.

To some extent, there is also a lot of ad hoc involvement of individual scientists in expert advice. Nevertheless, these exchanges are rather rare. It follows from research for the purpose of this report that these exchanges are common at the Ministry of Labour and Social Affairs (Social Innovation Unit) and, to some extent, also at the Office of the Government (Government Analytical Unit). These types of cooperation might not be formalised, and they might be dependent on personal and informal relationships. Sometimes, these relations are formalised but take the form of a number of scientists working as part of a time-limited project (Ministry of Education, Ministry of Regional Development) or a single scientist in a stand-by capacity contracted by one part of a line ministry (Ministry of Regional Development).

Overall, it can be concluded that there are several significant limitations of established advisory bodies:

— A mixture of various stakeholders with equal positions within the advisory bodies (scientists, stakeholders, policy target groups, interest groups);

— The institutionalisation of these advisory processes is rather weak;

— Conditions for involvement, including for recruitment and selection and regulation of conflicts of interest of particular people, are unclear;

— Individual consultations with scientists are often not institutionalised and are dependent on personal relationships.

The following table contains a non-exhaustive list of advisory bodies where scientists are also involved.

Table 13 . Overview of advisory bodies

Name	Organisation	Members	Purpose
NERV (National Economic Council)	Office of Government	Researchers, academic economists, representatives of private sector	To initiate and suggest reforms of public systems that have a dominant effect on public finances, competitiveness of the Czech economy and transparency of the public sector
The Czech Fiscal Council	Independent	Three economists with academic background	An independent Council with its own Office and its own chapter in the state budget. The role is determined by the Act No. 23/2017 Coll. The Council is meant to evaluate the implementation of numerical fiscal rules, determine and announce the amount of the debt, prepare and submit a report on the long-term sustainability of public finances, and others. This is the only Council where all members have an exquisite academic career.
Government Legislative Council	Office of Government	Variety of government officials and academics	To assess legislative proposals, whether they are aligned with the Constitution, international agreements, laws of the European Union, whether they are complete and indispensable, understandable and whether RIA was performed.
Ethics Commission for Recognition of Participants in Anti-Communist Opposition and Resistance	Office of Government	Representatives of stakeholders and academic historical researchers.	Awards prizes to members of anti-communist resistance
Government Council for Human Rights	Office of Government	Representatives of NGOs, academic researchers, other relevant organisations of public administration	Covers the topic of human rights in CZ, prepares policies regarding human rights for the Government
Government Council for Gender Equality	Office of Government	Representatives of public administration, NGOs and experts in the field of Gender Studies	a) discusses and recommends to the Government basic policies for conceptual directions in the procedure of promoting equality of women and men; b) coordinates main directions of ministerial policies in the area of gender equality; c) sets a range of priorities for ministerial projects supporting equal opportunities for women and men; d) identifies current problems in society related to gender equality e) evaluates the effectiveness of measures taken towards the effectiveness of measures taken towards equality between women and men.
Government Council for National Minorities	Office of Government	Representatives of national minorities, public administration and experts in the topic.	Prepares reports, positions, and regulations regarding national minorities

Government Board for Persons with Disabilities	Office of Government	Mostly representatives of NGOs and public administration, and only one member of the scientific community.	Created to cover interdepartmental topics related to disabilities
National and Regional Innovation platforms (Entrepreneurial Discovery Process)	Ministry of Industry and Trade	Stakeholder platform - business, research and public spheres involved in the EDP process.	Main 'bottom-up' advisory bodies on Smart Specialisation Strategy (S3). Their main role is to identify the priority areas for smart specialisation and provide inputs and recommendations concerning cross-sectoral-specific measures and identify emerging opportunities and fields.
Entrepreneurs' council	Ministry of Industry and Trade	Representatives of the business sector	Consultation and advice for improving the business environment.
Expert council for reducing administrative burden	Ministry of Industry and Trade	Representatives for the business sector	Consultation and advice for reducing administrative burden in the business sector.
The Government Council for the Energy and Raw Materials Strategy of the Czech Republic	Ministry of Industry and Trade	Various stakeholders several working groups include representatives from research organisations and individual scientific experts.	Advisory council formed by representatives of the public and private sectors for strategic advice in the energy domain
Scientific council	Ministry of the Environment	Scientists from various fields, mostly relating to natural sciences	The Council delivers advice around important conceptual plans, identification of new areas, support in the development of strategic documents and coordinating the expertise and information base. (Not formally institutionalised by government decree)
The Government Council for Sustainable Development (Rada vlády pro udržitelný rozvoj)	Ministry of the Environment	Institutional stakeholders (ministries, Parliament, local authorities), representatives of research organisations and *ad personam* scientists	A permanent advisory, initiating and coordinating body of the Government in the areas of sustainable development, strategic management and long-term priorities of the state.

Source: Own Elaboration

4.4.3 Better regulation, regulatory impact assessments and policy evaluations

4.4.3.1 General overview

A system of evaluations and assessments of regulations and other public policies, funding schemes and programmes exists at multiple levels. There is a large variety in their formalisation and the degree to which they are adhered to. Also, the level of involvement of scientific findings in these evaluations varies. The main elements of this system include:

Strategic Environmental Assessment (SEA) applies to all strategies ('koncepce') that have a significant impact on the environment. This process is managed by the Ministry of the Environment. On the other hand, the EIA process applies to individual investment projects (as opposed to strategies in SEA).

Strategies developed by the public administration are also subject to evaluation. There is a mandatory methodical guideline that outlines the evaluation mechanisms for every strategy. This methodical guideline is developed and managed by the Ministry of Regional Development.

European Union funds (European Structural and Investment Funds – ESI Funds) are also subject to evaluations on four major levels: i) Horizontal evaluations regarding themes that go beyond one programme (managed by NOK); ii) Interventions of programmes or individual specific objectives or themes (managed by individual MAs – 'Řídící orgán'); iii) Individual projects mainly for large systemic projects or in pilot/highly innovative projects; iv) Results outside of ESI Funds (e.g. various strategies which expect to use the ESI Funds for some of their measures).

'Regulatory Impact Assessment' (RIA) has a prominent role in the system, as this is part of the broader formal legislative process of every new and amended law. The process is supervised by the Office of the Government, and the individual assessments are evaluated by the RIA Board (Komise). Due to its importance and the largest degree of use of scientific findings, this process is detailed in the following subchapter.

There are also several instances where ad-hoc evaluation of various policies and programmes happen – examples include the evaluation of Active Employment Policies by VÚPSV or a continuous evaluation of a programme transforming educational methods of History.

4.4.3.2 RIA

The foundation of the RIA process in the Czech Republic can be traced back to the amendment of the Rules of Procedure of the Government in 2000. This move was an effort to align its legislative procedures with EU standards and good governance practices. The RIA framework has since undergone numerous refinements and amendments, with the most pivotal being the Government Resolution No. 632/2004. This Resolution set the methodological guidelines for assessing the impacts of regulatory bills and also introduced the necessity to conduct RIA for primary and selected secondary regulations. In addition to that, there are guidelines on ex-post evaluations in place. Currently, these are still voluntary; however, there is a commitment to apply them more widely in the future.

The key player in the RIA process is the Government Legislative Council's RIA Board (Komise RIA), responsible for reviewing and commenting on RIAs. The actual development of an RIA report is usually the responsibility of the line ministry or government agency proposing the legislation. Additionally, other ministries, academia, the private sector, and civil society organisations shall play a role in providing input, conducting consultations, and sharing expertise.

The process was reviewed by the OECD in Towards a More Modern and Effective Public Administration (Chapter 3) (OECD, 2023) and in more detail in the OECD Regulatory Policy Country Profile (OECD, 2021). OECD ranks the Czech process as relatively high stressing, e.g. the independence of the RIA Board and the transparency of the process (all legislative drafts submitted to the government are published on a government portal accessible to the general public). Relative weaknesses are seen in the extent of stakeholder participation and the frequent lack of quantifications of impacts. On top of that, several reviews (Eršil, 2018; České priority, 2021) stress that the depth and quality of RIA reports vary significantly and also that there is a very high share of exceptions where RIA is not executed.

In the Czech RIA methodology, an emphasis is placed on an evidence-informed approach. The RIA guidelines stress the necessity for quantitative evidence. This often includes statistical analyses, econometric models, and data-driven projections to assess the potential impacts of proposed regulations. Besides quantitative metrics, qualitative data gathered from expert interviews, stakeholder consultations, and case studies play a crucial role

in understanding the potential societal, cultural, or sector-specific implications of regulations. The Czech RIA process also encourages benchmarking and comparison with other countries, especially EU member states. This is to ensure that proposed regulations are in line with international best practices. The RIA process also requires expert consultations, especially when potential impacts on the environment, public health, or economy are considered. Line ministries and agencies shall engage with research organisations or academia for a deeper understanding of specific sectors.

In summary, the methodological guidelines stipulate the need for a comprehensive collection and analysis of data when assessing the potential impacts of a proposed regulation. However, the reality is often very different, and the use of evidence, engagement with academia and the involvement of scientific expertise is limited.

The main drawback is consistency in evidence utilisation. While the methodological guidelines provide a robust framework for evidence use, there are inconsistencies in how different line ministries or agencies apply these guidelines. Some RIAs are extensively backed by evidence, while others lack the same depth or breadth in their evidence base. Another problem is a need for greater transparency in how decisions were derived from this evidence. Moreover, making RIA reports, along with their evidence base, easily accessible to the public can foster trust and allow for informed public feedback. An additional problem (beyond science for policy) that has often been cited is stakeholder engagement. Although the RIA process mandates consultations, there is room to broaden and deepen stakeholder engagement. More diverse perspectives, especially from traditionally underrepresented groups, can provide a richer evidence base and challenge potential biases in existing data.

The above-mentioned problems with the use of science and scientific findings trace back to several root causes: i) officials involved in the RIA process are usually not properly equipped to gather, interpret, and utilise evidence effectively; ii) poor availability of relevant data; iii) the lack of an evidence culture, non-existent relevant processes in line ministries, and political pressures.

4.4.4 Strategic foresight

Foresight studies in the Czech government have primarily influenced a limited set of policy domains, notably RDI, regional development and environmental policies. Within this context, several key actors have been engaged in utilising foresight methodologies. The Czech government engages with third-party actors, including private and public research organisations (e.g. TC Praha, COŽP), non-governmental organisations (e.g. České priority) or private consultancies (e.g. Moore advisory s.r.o.), for procuring foresight services. Additionally, the government solicits inputs from foreign foresight units, particularly from the European Commission's Joint Research Centre (JRC).

The Ministry of Industry and Trade employs foresight through its Research and Innovation Strategy for Smart Specialization (RIS3), facilitated by inputs from the Technology Centre Prague within the Stratin+ framework agreement. This collaboration involves technology assessments, horizon scanning, roadmapping, and Mutual Learning exercises. The Ministry of the Environment (MŽP) relies on the consortium Center for Socioeconomic Research on Environmental Policy Impact Assessment (SEEPIA) for modelling purposes and Futures workshop facilitation. In addition, the Czech Environmental Information Agency (CENIA) is the local contact point for the future-looking Eionet network.

The Technology Agency of the Czech Republic (TA ČR) and the Research, Development, and Innovation Council (RVVI) utilise megatrends analysis and Delphi methods for prioritisation and roadmapping. The Ministry for Regional Development (MMR) employs strategic management and planning support, often seeking advice from external parties.

While foresight is not a mandatory aspect of policymaking, its presence is acknowledged, particularly within methodological guidelines for strategic planning at both local and national levels. A cross-ministerial Unit for Strategic Planning and Analysis (meziresortní UVL) and a foresight sherpa have been established to coordinate foresight efforts. However, there is no central foresight unit within the government's core or line ministries. Foresight initiatives are largely decentralised, originating from individual efforts.

Challenges persist in the integration of foresight into policy formulation. A notable lack of foresight culture and limited financial resources hinder its comprehensive adoption. While there is an awareness of foresight methods, their usage remains non-mandatory. Coordination efforts are limited to a cross-ministerial level, with a need for more centralised oversight. Despite frequent engagement with non-state actors, such as think-tanks, NGOs, and research organisations, challenges related to resource allocation and fostering a conducive environment for foresight initiatives persist. The absence of a dedicated central unit and limited coordination across line ministries further contribute to the decentralised nature of foresight practices.

In conclusion, the Czech government's utilisation of foresight is concentrated in specific policy domains, particularly RDI and environmental policies, with involvement from various actors and tools. Past reforms have led to the establishment of coordination mechanisms, albeit with decentralised efforts. Challenges revolve around fostering a foresight culture, resource constraints, and limited centralisation. Addressing these challenges will be pivotal for a more comprehensive and effective integration of foresight in shaping the Czech government's future-oriented policy framework.

4.4.5 Data access and use in government

The Czech public data ecosystem is largely based on a 'process' approach, where individual data are governed within individual information systems and a set of 'basic registers' to support the provision of services and administrative procedures. Only as a second-order priority has data interchange and linkage been addressed over the recent years.

This has implications for data governance, management and accessibility for the purposes of research and analysis. Given that much data is generated and managed in individual systems focused on serving a particular service or process and that many of these systems were procured externally a long time ago, data discovery, linkage and usage for analysis is not straightforward. In addition, often over-eager and inconsistent interpretation of privacy law prevents the release of administrative data for research purposes or within the public administration.

As a result, the accessibility of administrative microdata is inconsistent and ad hoc. There is currently no regulation or guidance beyond the Freedom of Access to Information Act and GDPR. Nor is there a technical or administrative mechanism for requesting or accessing data outside of the FOI framework. As a result, data access inside and outside public administration often happens via personal contacts in various degrees of formal arrangement. In addition, since there is no overall framework for data management and the quality of documentation varies from one system to another, knowledge of individual data sets is often concentrated in single individuals. An information system that could hold at least some of the metadata on data held across government (the Register of Rights and Responsibilities) has not been kept up to date by public bodies, so it is of limited use. Data requests across line ministries include official letters from one director general to another; data requests from researchers require knowing the right person and hoping this person stays in their position.

However, the ecosystem is at the start of a transformation towards one with greater overall governance of data aimed at ensuring accessibility, interoperability and quality of data assets across the system. The groundwork for this has been laid by open data initiatives over the last decade. These have provided a legal framework (including the obligation to publish specific data sets), knowledge base and guidance, as well as the technical infrastructure (an open data catalogue) around open data. Together, these have enabled much aggregated and non-personal data to be published in open formats, but also for public bodies to start identifying, managing and publishing their data assets. Much data useful for research has been published, e.g. geospatial and meteorological data. In addition, over time, new concepts have been introduced in legislation and guidance – the linked data fund and the public data fund – to enable data linkage, accessibility, consistency and quality (i.e. for public bodies to use shared categorisations and taxonomies for recording data), though much of this has remained on paper so far.

Currently, early work is underway in DIA, the newly established Digital and Information Agency, to institute and implement data-management principles across the state administration. In parallel, a new law is in preparation that will open up access to linked microdata upon request to individuals who can prove a legitimate interest, e.g. research. It is unclear at the time of writing whether support for policy development by analysts inside government will be included in the list of legitimate grounds for accessing microdata. Other key parameters of this law, including the scope of public bodies whose data it will cover, are also subject to decisions. The law will also oblige certain public bodies to create and publish data catalogues and data models to make their data findable and discoverable.

In some areas, the landscape of who provides and maintains data is quite complicated. There are cases where a private or non-profit organisation has become the data provider of choice for a particular area by becoming an expert on re-using, enriching and making accessible public or semi-public data. Examples include some data on the education system (where PAQ Research provides processed data and analysis tools) and public contracts and procurement (where Hlídač státu and Datlab provide commercial and non-commercial access to different layers of data derived from public datasets). In other areas, data is collected by a private party on the basis of a policy mandate, but the requirement to provide it back to the public administration is not specified well enough to support effective use in policymaking (an example is the Chamber of Executors, which holds data on personal debt payment orders).

Statistics is governed separately by a law on the statistical service. The law provides for a partially decentralised statistical system, with the Czech Statistical Office playing a central role and line ministries playing sector-specific roles, providing data into the statistical system. This causes occasional frictions around standard-setting and data consistency (e.g. in the case of labour market data and statistics on waste management). Some ministries – Environment, Regional Development, and Health – maintain their own specialised organisations that collect and manage data statistics (CENIA, ÚÚR, ÚZIS). This division of responsibilities for statistics hinders orientation and findability for analysts and researchers. The Czech Statistical Office has been on a journey of improving their customer experience, including by providing data in consistent open data formats, but some products are still provided through a fragmented set of interfaces, databases and catalogues, and users inside and outside the government find it somewhat difficult to locate the right data sources. Moreover, much of the data is not official statistics that could be published by line ministries in researcher-friendly formats and is still only published in yearbooks, difficult-to-use interfaces, or obsolete formats, though this has been improving. Some interviewees also pointed out the relatively long lag times for official statistics.

There is also a growing trend of purchasing commercially provided aggregate data sets for policymaking purposes, e.g. data from mobile operators or retailers and payment platforms. On the other hand, there is no overarching framework to require data from publicly funded research projects to be made available, but a large ESIF-funded call for Open Science is underway, and sectoral initiatives do exist, e.g. the Social Science Data Archive maintained by the Czech Academy of Sciences.

For researchers, the CZSO has provided a Safe Room where researchers can request access to linked individual-level statistical data. However, the law on statistics does not allow access to individual-level data for analysts inside the state administration on the grounds that respondents' trust in the statistical system requires that executive bodies do not have access to individual-level statistical data.

4.4.6   European commitments

European commitments and engagements have had an influence on the use and promotion of evidence – primarily through European Structural and Investment Funds – both their regulatory and financial effects – and the Recovery and Resilience Facility has, to a large extent, continued this influence.

4.4.6.1   *European Structural and Investment Funds*

The presence of European Structural and Investment Funds has influenced the practice of evidence-informed policymaking through multiple channels. First, the standards and frameworks of policymaking and implementation of EU funds have brought with them an emphasis on different practices, including policy evaluation and strategic planning. Evaluation units inside managing authorities were, in many cases, significant beacons of analysis inside government; they also benefited from expanded development opportunities and could lean on legal requirements to perform evaluations. In some cases, this has had positive spillovers by, e.g. opening up mechanisms for using data. The growth of evaluation capacities across line ministries has enabled the emergence of a network of professions inside and beyond government. ESIF evaluators have also made some inroads in building up mechanisms for interfacing with academics, and ESIF governance is, by its structure (e.g. the partnership principle), more open to scientific input. ESIF was also one of only a few areas of public spending where an estimate of macroeconomic impact was made, specifically through a partnership between internal and academic economists.

Second, a number of internal analysis units have been funded via ESIF projects, including two teams at MMR, a newly established unit at MŠMT, and the S3 unit at MPO. The ESF-funded social innovation programme at MPSV has built up a practice of supporting experimental social innovation projects often accompanied by rigorous evaluation (one of which was a housing experiment which has fed into the housing policy initiatives now in-housed in MMR, with housing legislation also being the subject of one of the Country-Specific Recommendations in 2022 and 2023.)

Third, ESIF projects have funded some improvements to the evidence infrastructure, including the open data initiatives and strategic management guidance on the government side and have served as a funding source for much policy-relevant applied research. However, there have been no significant ESIF-funded projects aimed at strengthening the science-for-policy interface. In the current programming period, significant funding has been committed to supporting the implementation of open science principles in the research sector, which will presumably have positive effects on policy-relevant research as well.

4.4.6.2 Recovery and Resilience Facility

The National Recovery Plan contains a number of components, reforms and projects which, to a large extent, continue from the former support by ESIF for public administration reform. This includes support for evidence-related public infrastructure (e.g. data management and public data, run by DIA) and some work on strengthening the internal analytical capacity of central government (component managed by MV), including strengthening of coordination and knowledge sharing (via networks as well as a planned information system which should serve as a repository for analytical outputs across government) (MV, 2023).

The NRP 2023 update is likely to also support strengthening the analytical and strategic capacity for the management of the civil service.

Lastly, the NRP has served as the impetus and funding source for establishing SYRI as one of the first major science-for-policy initiatives (see subchapter 3.2.3).

4.4.6.3 European Semester

The last available National Reform Plan (ÚV, 2022) describes suggested measures in greater detail. These measures are mostly not supported by evidence but are explained through the pre-supposed state of things. Evidence is used especially in the analytical part and in chapters where the SDGs are tracked. Opinions of various social stakeholders were included to a larger extent.

Moreover, the Office of the Government organises a series of round tables around European Semester events.

4.4.6.4 TSI and SRSP

Czech institutions have made relatively broad use of SRSP and TSI support, including for tackling issues related to evidence-informed policymaking (ÚV, 2022). This has included projects related to housing policy (MMR), evidence around early-childhood education (MPSV), data use in education (MŠMT), spending reviews (Ministry of Finance) and evidence-based regulatory practice and policy coherence for implementing the 2030 Agenda for Sustainable Development (ÚV).

4.4.6.5 The 2022 Czech Council Presidency

The 2022 Czech Council Presidency was supported by a range of evidence inputs, which were funded via the TA ČR BETA programme and provided by a varied group of organisations, including STEM, Europeum (see above) and the Prague School of Economics. They provided inputs mainly on the communication and public opinion related to European affairs.

Noteworthy, in Brussels, the COMPET configuration of the Czech Council Presidency held a policy debate around the role of scientific advice for better policy results in December 2022, where EU-27 research ministers discussed the topic.

4.4.6.6 Green Transition

Commitments related to the green transition have contributed to the development of research consortia by MŽP, including SEEPIA, which focuses on the socioeconomic impacts of environmental policies. The Just Transition Operational Programme also includes an evidence-generating component.

4.4.6.7 European practices to promote culture change

Horizon Europe is one of the instruments that can contribute to promoting a culture change in the science-for-policy ecosystem in the Czech Republic. For instance, the preparation of TA ČR's SIGMA DC5 public competition was partly thematically linked to the mission of Horizon Europe.

Moreover, the principles of open science and open access to research results, as well as FAIR (Findable, Accessible, Interoperable and Re-usable) data principles, underpin the Horizon Europe programme. Researchers can make use of the European Open Science Cloud to store their research data; the research results supported as part of Horizon 2020, Horizon Europe and Euratom can be published by researchers on the Open Research Europe platform. These practices may provide an impetus to research organisations and organisations in the Czech Republic (especially those who are taking part in framework programmes, such as Horizon Europe) to promote the principles of open science.

4.5   Concluding diagnosis: capacity, linkages and policies

This diagnostic part has analysed in-depth the EIPM ecosystem in the Czech Republic. The data collection phase consisted of triangulating the findings from desk research, a questionnaire survey (41 respondents) and 46 interviews with policymakers and researchers were conducted. Survey respondents do not necessarily overlap with interviewees. Here, we present a summary of our most important findings.

Identification of patterns

The diagnosis has recorded some positive developments in demand for evidence, a growing willingness to use evidence for policymaking, but somewhat less of a common understanding among respective stakeholders of what evidence is, what it should look like, what purpose it should serve and where it should come from. At the same time, a culture and systematisation/institutionalisation of exchange (basic communication) between government and scientific institutions seem to be rather underdeveloped. In particular, a receptiveness to what the other side needs in order for the transfer of evidence to work smoothly is relatively low. Knowledge brokerage has been limited in extent, and, as a result, most of the science-for-policy transfer consists of ad hoc initiatives by individuals based largely on personal contacts. The flow of research-backed evidence from academia and other external providers to policymakers thus remains weak and unstable.

Challenges, strengths, and weaknesses of the demand side

The demand side has been preoccupied with building internal capacities for data analysis, which remain considerably underdeveloped but less open and ready to absorb external inputs from science. A low share of civil servants able to gather and process data is a long-standing issue, and so is the lack of definition of an analyst position in public administration. But from the perspective of a science-for-policy transfer, the principal hindrance seems to be, in fact, weak demand, i.e., a widespread conviction among policymakers that science does not offer practical and workable solutions to problems that the policymakers want to address. As a result of that, the process of governmental drafting of policies often tends to rely mainly on civil servants' personal experience. When it comes to evidence, there is a tendency among line ministries to try to be self-sufficient in their production or draw on evidence distilled from national statistics and reports by international organisations, such as the OECD. Academia and other external providers are only invited to share ideas on particular issues of policymakers' choice on specific occasions, but mostly on an ad hoc basis. Recent strategic documents have set out ambitious goals, potentially leading to positive changes in the science-for-policy transfer in the foreseeable future. The fulfilment of those goals is being regularly monitored and assessed. Nevertheless, their evaluation is focused on activities rather than outcomes.

Challenges, strengths and weaknesses of the supply side

There is a rich spectrum of academic institutions, advisory bodies, ministry-owned or sponsored institutes, think tanks and consultancies that provide an ample breeding ground for the EIPM ecosystem to flourish. At the same time, the existence of fragmented research capacities poses a notable challenge. A dearth of internal analytical capabilities within individual departments has been highlighted through multiple interviews with government officials. Optimisation of incentives for external organisations capable of providing scientific evidence for policymaking also remains an issue, as most scientists are bound to follow rigid criteria of career advancement that tend to disrespect any contribution to the science-for-policy transfer. In other words, there may be some short-term financial benefits from participation in science-for-policy activities, which, however, may negatively impact the overall career prospects of an individual who inevitably has less time for writing and publishing articles or getting their habilitation process done. The system of remuneration favours basic research, and engaging in applied research is perceived as far riskier and less rewarding. Academic institutions thus give ground to various private providers of knowledge whose quality varies.

The environment of mutual mistrust between policymakers and scientists can be seen as another drawback. On the one hand, policymakers lack confidence in scientists being able to provide timely and useful evidence. On the other hand, scientists fear their research is not valued enough or is in danger of being misinterpreted to serve policymakers' interests. In addition, policymakers are often seen as favouring applied research in technical and natural sciences that, in their view, produce more tangible and immediately monetisable outcomes than those conducted in social sciences and humanities.

Consequently, scientists are often put in a position of 'knowledge sellers' for which they are ill-prepared. They lack the motivation and skills to go and persuade policymakers that they have potentially useful findings that can support policy design. There is a lack of a formalised platform(s) where scientists could, without excessive amounts of energy and resources invested, meet policymakers, introduce their research and perhaps also

demand action. So far, the agenda has mainly been set by policymakers only, which may restrict novel, original and innovative ideas from being implemented.

Opportunities and threats about improving existing processes of where supply and demand meet

As indicated above, there is a lack of formalised/dedicated platforms designed for policymakers, analysts and scientists to meet, exchange views, and build collaborations. Consequently, the exchange is largely reliant upon personal contacts between policymakers and well-connected scientists. The potential for especially young scientists to penetrate the policymaking system with new ideas and initiatives is thus rather limited, although most universities feature centres for the transfer of knowledge that should actively engage with practitioners. Our findings indicate that the most significant interactions between policymaking and science take place through programmes of applied research funded and administered by TA ČR. TA ČR features relatively well-developed analytical and evaluative functions that enable it to produce evidence of its own. However, the diagnosis observes that this evidence has often not been fully picked up by TA ČR's partners. TA ČR would thus benefit from more attention and strategic instructions/directions from the government, in particular from RVVI and the Office of the Minister for Science, Research, and Innovation. While the programme BETA is entirely demand-driven – various government bodies procure their research needs through it – other programmes offer some space for initiative from the scientists' side. Inherently, BETA is best suited for tight schedules of the policy design process, while other programmes, such as ETA, provide an opportunity to work on longer-term strategies. BETA is, overall, seen as a useful tool whose potential has not been fully exploited by various government bodies that have struggled to formulate genuine research requirements. BETA3, in a phase of preparation at the moment, takes stock of experiences from previous rounds of the programme and the general demand coming from various corners of the Czech Republic administration. It is set to place a greater emphasis on analytical support to line ministries.

Synergies with ongoing or previous reform plans and reorganisation of certain institutions

Improvements in the science-for-policy transfer are consistent with the goals set out by the government's programme, several strategic documents, including the Strategic Framework Czech Republic 2030 and KOVES, and reform efforts such as the Reform of analytical work. The central analytical unit established at the government office is one of the manifestations of organisational changes, showing a tendency to centralise some of the key elements of EIPM. The intended transfer of the agenda of managing central civil service issues under the chief state secretary (head of the civil service) to the Government Office represents a move in a similar direction. It seems that the centre of government could be a decisive player in shaping the science-for-policy interface in the foreseeable future. Not all ministries are quite content with this development, but most agree that a clearer distribution of competencies, perhaps even in the form of amendment of the so-called competence law (Act No. 2/1969 Coll.), would be beneficial.

Main lessons learned

A combination of legislative, organisational, procedural, motivational and cultural attitude changes may be required to achieve the desired outcomes for our beneficiary organisations. First, the interest in using scientific evidence to formulate policies needs to be turned into a real, genuine and stable demand that should manifest itself in the willingness to regularly engage and meet all relevant evidence providers and be open to ideas that are not necessarily in line with pre-existing agendas. Those scientists who have potential and interest in producing evidence for policy should be freed to do so and relieved from some of the current requirements of the tenure track. A new format or platform should be devised to enable a free exchange of ideas, allowing scientists to develop and present their own agendas based on the findings from their research. Beneficiary organisations should map all potential sources of evidence and nominate dedicated science officers who could work as knowledge seekers, collectors and brokers for their organisations. These officers should be able to formulate the research needs of their organisations and, at the same time, inform the organisations of potential sources of evidence. They would also work as contact points for individual scientists or centres for knowledge transfer of respective academic institutions. Finally, there are sections of public administration that are open to piloting new ideas stemming from research. Sharing experiences from piloting across government departments may help to raise awareness about the potential benefits of the science-for-policy transfer and alleviate concerns and hesitation among policymakers.

5 Assessment of needs and gaps towards achieving the vision and capacity for EIPM in the Czech Republic

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

This chapter 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 part of the Final report, 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 (N&GA) chapter builds on the Diagnostic chapter created during the initial 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 chapter was slightly modified based on the findings of the diagnostic phase. Given the context of the Czech science-for-policy ecosystem, the approach of the Needs and gaps assessment chapter is based on key topics extracted from the Diagnostic report (Table 12). The Diagnostic phase identified 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.The data were analysed to identify specific needs and gaps that individual organisations could eventually cover to improve their activities and, by extension, the efficiency of the system as a whole.

In this chapter, 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 chapter 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 chapter, seven focus groups (see table 12) 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 whole report, as well as identify possible interventions that could tackle these issues.

The chapter 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 14: 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.

5.2 The need for enhancing research capacities and research funding

5.2.1 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 15: 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**	Include policy briefs, policy papers, and other formats as eligible scientific results in science evaluation frameworks. Require legislative change (130/2002 Sb.) Inside the research organisations recognise policy relevant outcomes (probably at the level of departments, not university) for the academic career Reflect policy relevant outcomes in the internal evaluation of scientists (how can we measure it?) Allocate more time to generate policy relevant scientific outcomes Decrease the administrative burden partially caused by the dominance of project-related funding Incentives policy relevant outcomes at the level of research performing organisations Guaranteed and widely advertised uptake of good quality (including unsolicited) evidence by policymakers
The need to be able to flexibly and quickly procure evidence	**All line ministries, MMR**	Innovative procurement methods (Innovative partnerships) Increase internal analytical capacities 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. Strengthen the ministerial institutes at the ministry level Introduce a model of public procurement documentation to incentivise academic institutions to apply
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**	Establishing capacities at the academia to be in charge of relationships between the academia and public administration Add policy labs as additional focal points for connecting policymaking with academia (Chief) Science adviser(s) - point of interaction at the ministry level Improve the planning of research priorities at the ministry level Support the role of projects of collaborative activities
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**	The process of formulating priorities should be a mix of 'top-down' and 'bottom-up' approaches (hierarchization, different time horizons) Improve the planning of research priorities at the ministry level Organise regular meeting and conferences to discuss these topics
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	**Office of the Government, 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).

Source: own elaboration.

5.2.2 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]; 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

5.2.3 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.

5.3 The need for data accessibility

5.3.1 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 16: 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.

5.3.2 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. 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 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 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.

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.

5.3.3   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).

5.4 The need to institutionalise scientific advisory bodies and cooperation

5.4.1 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 17: 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.

5.4.2 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 multidisciplinarity. 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 disincentives 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 the Czech Republic, 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 policymaking 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.

5.4.3   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 incentivise 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 policymakers 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).

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 require 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.

5.5 The need to modernise HR and better target training activities

5.5.1 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 18: 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,**	Quality management frameworks addressing specificities of EIPM Training of HR to specificities of public administration

	Ministry of Interior	
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.

5.5.2 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.

5.5.3   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.

5.6 The need to support cultural exchanges and cooperation

5.6.1 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 19: 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	**Office of the Government, Ministry of Interior, Other line**	New competence law Creation of 'pockets of trust' More frequent rotation of staff across

struggle	**ministries**	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.

5.6.2 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.

5.6.3   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 Transfer Center 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 kinds 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.

5.7 Conclusion

The Needs and gaps assessment builds upon the key findings from the preceding diagnostic phase 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 evidence providers. The Needs and Gaps assessment provides 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.

The needs and gaps identified in this chapter are clustered into five topics: research capacities and research funding, data accessibility, institutionalisation of science advice mechanism, modernisation of HR practices, and the topic of cultural aspects of science-for-policy. In individual topics, all relevant needs and gaps were identified and potential solutions aligned. Even though, the goal was to analyse the complexity of the issues, given the dynamic nature of public administration and academic environment, it is a non-exhaustive list. Some of the solutions were further developed in the Roadmap phase. This list can serve as an inspiration for further interventions aimed to develop the science-for-policy ecosystem.

During the focus group on research capacities and funding, the participants discussed the issues of public procurement and incentivization of scientists to deliver policy-relevant results. According to participants, one of the major issues is that policy-relevant results are not properly recognized in career tracks. Furthermore, according to public officers, public procurement laws are often too restrictive to effectively procure evidence. The production of policy-relevant research results is further constrained by ineffective or non-existent data management within public administration. Overall, it was suggested that data management be improved and that the data be made available to scientists to support the production of policy-relevant results. These issues are partially covered by the new Law on data management and controlled access to data that is currently being prepared. The science advice mechanism was another important topic. Despite many advisory bodies in public administration, the flow of scientific evidence is not as efficient as it should be due to the intransparent system of appointing members of advisory bodies and the problematic mixture of stakeholders and experts. One of the key issues for public administration is inadequate HR practices, which are linked to improperly defined positions of analysts and their career tracks. Last but not least, the issue involves cultural practices related to the science-for-policy ecosystem. The issue of informal relations and the different cultures in academia and public administration is an understandable but often problematic feature of the ecosystem. Whereas the goal cannot be the assimilation of one of the environments, it is crucial to increase understanding of both systems to create effective collaborative working relationships.

One of the key general 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. The N&GA discovered the need for a stronger leadership and clearer distribution of the agenda ownership to support the implementation of the EIPM principles in the public administration.

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.

6 Roadmap towards building capacity for evidence-informed policymaking in the Czech Republic: Policy recommendations and a plan for implementation

6.1 Introduction

The Roadmap chapter is the final and most important product of the project. This phase focused on bringing change to the Czech science-for-policy ecosystem and also on supporting previous and existing initiatives to promote public administration reforms for better uptake of evidence-informed policymaking (EIPM) practices through a set of 6 'core' interventions and 9 'enabling' interventions.

The basis for the development of the interventions was a year-and-half-long in-depth analysis of the Czech science-for-policy ecosystem that took place during the Diagnostic and Needs and Gaps Assessment phases. The list of potential interventions identified in this assessment phase was evaluated for feasibility and benefits, during two rounds of consultations with the beneficiary organisations (BOs). Based on this collaborative effort, the interventions were then prioritised and the list was restructured accordingly.

All of the interventions presented in the Roadmap have a two-fold nature. On the one hand, the individual interventions aim to standardise, institutionalise and formalise processes that reinforce the uptake of research in policymaking, both on the demand and supply side. However, there is always a risk that rules and standards might be applied merely as a formality, hence hindering the benefits of EIPM. Therefore, the second key goal of the interventions is a cultural change and mindset shift. The utmost goal is to cultivate a culture of science-for-policy in public administration, as well as to generate an active approach towards EIPM, both at the individual and institutional level. The interventions presented in this report are meant to become means for developing the EIPM culture in the Czech ecosystem. Indeed, a well-developed EIPM culture is key to making better policies.

There are two sets of interventions in this report, which were developed in cooperation with the BOs and other relevant stakeholders. The first set consists of **'core' interventions**, aiming to address the main needs and gaps identified in the assessment phases. During the roadmap phase, the interventions were developed to provide tailor-made solutions for the Czech ecosystem by researching good practices from abroad, as well as some additional features of the Czech science-for-policy ecosystem that were not explored in-depth during the previous phases. Furthermore, these interventions were refined through many iterations with a wide range of key stakeholders involved in this project. Therefore, these are the most important outcomes of this project. To ensure the success of the interventions, the team of experts focused on piloting some of the proposed actions, with the *Definition of research needs* being the most successful one. This intervention was piloted in early summer 2024 through a joint workshop with both researchers and public servants of the Ministry of Regional Development (see below). The set of core interventions encourages complex reforms of the science-for-policy ecosystem, including significant changes on the supply side. Even though these changes can be implemented individually, they complement each other in such a way that implementing all of them will bring significant synergic effects.

The **'enabling interventions'** are the second part of the Roadmap. These interventions are included because they significantly shape the science-for-policy environment and sustain the implementation of core interventions. The purpose of this subchapter of the Roadmap is to reinforce and highlight the synergies among this project and other ongoing actions to support science-for-policy. During the course of this project, a lot of effort was dedicated to support EIPM in some other areas, such as in relation to regulatory impact assessment procedures and foresight activities. Therefore, the description of enabling interventions that are essential for the success of the core intervention was also incorporated.

The final chapter of the report is structured in the following manner: In the first sub-chapter, the interventions including goals and implementation steps are presented. First, there are interventions aimed at the demand side, followed by those focused on the supply side. These short versions of core interventions provide a good basic understanding of their goals and logic. For better understanding and contextualisation, the Annex 3 presents detailed descriptions of each intervention with additional background information. The third sub-chapter contains the enabling interventions presented in a similar manner. All interventions have a standardised structure: background information (summary), goals of the interventions, suggested solution and implementation plan. The implementation plan is the key part of each of the interventions because it provides specific steps necessary for implementation. Necessary resources, timing, and relevant stakeholders are included. For each intervention, the stakeholders are identified based on research interviews conducted for the purpose of this report. The timeframe is grounded in the expected complexity of the implementation steps.

Nevertheless, it is dependent on the willingness and engagement of key stakeholders and the respective political representatives. At the formal level, the difference between core and enabling intervention consists in the absence of implementation plans for the latter.

6.2 Demand Side

6.2.1 Chief Science Officer (CSO)

The Chief Science Officer (CSO) intervention is designed to strengthen the science-for-policy culture within the line ministries, and to ensure the effective delivery, management and use of scientific knowledge to inform policymaking. The crucial components of this intervention are a definition of processes and topics that would fall under the CSO's remit, clarification of shared responsibilities (e.g. with scientific council, analytical departments, or the R&D department) and the ideal position of the CSO within the ministries' organisational structure. Given the complexity of this intervention, we propose various options to enable ministries to develop a CSO position at their own pace, without the immediate need to establish a complex network of CSOs across ministries (although this would be an ideal scenario). These options provide flexibility and scalability, ensuring that each ministry can adapt the CSO role to its unique needs and capacities, while gradually moving towards more integrated partnerships.

6.2.1.1 Goal

— **Centralise and enhance the integration** of scientific knowledge into the policy process at each ministry.

— **Ensure consistency and coherence** in the process of using scientific knowledge.

— **Avoid duplication and strengthen knowledge sharing processes** within the ministries and between them.

— Enabling control over the process of developing strategies for generating knowledge and using it for policy design; ensure their fulfilment.

6.2.1.2 Suggested Solution

— Identify the agendas and responsibilities of the CSO; the fundamental ones should generally be (see Table in Annex 4):

— Definition of research needs

— Evaluation and monitoring of research

— Support during research projects for the ministry departments

— Establish cooperation with crucial stakeholders

— Make a decision on the organisational placement of the CSO within line ministries. The main options are:

— Within the ministerial cabinet

— Within the state secretary department

— Under Public Service Law in a strategic/analytical department

— Identify the required profile for the CSO; consider these characteristics:

— Scientific expertise

— Policy experience

— Leadership and communication skills

— Networking ability

6.2.1.3 Implementation Plan (moderate resources required)

1. **Secure support within the particular ministry (mid 2025)**

Stakeholders: Minister of the line ministry, Cabinet of the Minister, State Secretary, Head of Analytical Unit, Head of Evaluation Unit, Heads of Other Relevant Ministerial Units, Head of Ministerial Research Organisation.

— Consult with key stakeholders, including policy departments, existing research organisations, and potential external partners (e.g., universities, the Czech Academy of Sciences research institutions, the Research, Development and Innovation Council – RVVI) to collect their concrete adjusting inputs concerning the potential role of the CSO.

— Conduct an internal review to identify the current distribution of responsibilities and agendas related to scientific research and knowledge management.

— Draft a detailed job description for the CSO position, outlining core responsibilities, required qualifications, and the hierarchical placement within the ministry.

— Secure support from the highest levels of the ministry (political deputies and the State Secretary), ideally led by the Minister.

2. Introduce the CSO within the ministry (end of 2025)

Stakeholders: Minister, Cabinet of the Minister, State Secretary.

— Recruit the CSO

— Establish the CSO's team

— Develop internal policies and procedures for the CSO's operations, including mechanisms for research prioritisation, project evaluation, and knowledge dissemination (for inspiration see Annex 3, Inspiration from abroad).

— Conduct an initial screening of ongoing and planned research activities.

— Begin identifying and articulating the ministry's scientific research needs (see chapter 6.2.3).

— Start building partnerships with the Office of the Government, other ministries, RVVI, universities, the Czech Academy of Sciences, other research institutions and any other important stakeholder of the ministry.

3. Ongoing operations and evaluation (2025+)

Stakeholders: Minister, Cabinet of the Minister, CSO and their team, Heads of Analytical and Evaluation Unit, Heads of Other Relevant Ministerial Units, Head of Ministerial Research Organisation.

— Organise regular workshops, seminars, and knowledge-sharing sessions to foster a culture of continuous learning and improvement.

— Develop mechanisms for ongoing monitoring and evaluation of the CSO's impact on policy outcomes. Focus on ex-post evaluation of the CSO role; follow with adjustments of the role and agendas.

— Regularly review the integration of scientific knowledge into policymaking and adjust strategies as needed.

6.2.2 Definition of Research Needs

The intervention aims to establish systematic and regular processes for collecting and communicating the research needs of ministries. The process involves appointing a dedicated coordinator to gather and prioritise research needs from ministerial departments, consolidating them into a comprehensive document shared with academics, and establishing platforms for regular seminars. These seminars will allow academics to present their research, fostering detailed discussions through round-table sessions. We suggest that the finalised research needs be communicated via a centralised web platform and updated regularly to ensure continuous engagement and alignment with rapidly evolving policy requirements.

6.2.2.1 Goal

— **Better align and create synergies** between research and demand for evidence.

— **Gather and communicate research needs** within each ministry in a systematic way.

— **Regularly conduct the process** of gathering of research needs within each ministry (in collaboration with analytical units as well as the Chief Science Officer).

— **Establish a forum for discussion** where policymakers and academics can discuss research needs, present relevant research projects and seek opportunities for further collaboration.

6.2.2.2 Suggested Solution

— **Research needs collection, prioritisation and consolidation should be a continuous process that is undertaken across all ministries in a coordinated way.**

— **Reach out to academics** who are involved in policy-relevant research, communicating the research needs and giving them the floor to present their own research projects and/or findings that would match those needs.

— **Organise regular in-person meetings** on specific topics, involving actors from both sides of the science-for-policy interface.

— **Regularly conduct the research needs gathering and communication** to adapt to changing needs. Follow-up should involve gathering feedback, refining research questions and setting up mechanisms for delivering policy-relevant research (e.g. via public procurement, grants, etc.).

6.2.2.3 Implementation plan (low resources required)

4. Appoint a person responsible for collecting research needs (beginning of 2025)

Relevant stakeholders: Line ministries, State Secretary, R&D Department, analytical units

— Create (or expand) a position with the task of coordinating, gathering and communicating research needs.

— This can be part of the agenda of Chief Science Officers, however the operations should be carried out by a dedicated owner. Members of ministerial R&D departments are suited, since they are in charge of administering TA ČR BETA projects. Other ministries would need to create such positions.

— Collaboration with analytical units is highly recommended. Science advice councils should (if present at the ministry) be engaged as well.

5. Develop and launch a centralised web platform (beginning of 2025)

Relevant stakeholders: Line ministries, Centre of Government

— A web platform should be developed to communicate research needs and provide information on upcoming seminars / meetings.

— This web platform can be maintained by each ministry, or can be centrally managed for all ministries, for example at the Office of the Government (ÚV).

6. Collect research ideas from the policy departments (beginning of 2025)

Relevant stakeholders: R&D department, Chief Science Officer, analytical units

— Organise meetings with ministerial departments to gather research needs.

— The process should also involve prioritising research needs along two main lines: political priorities and feasibility (complexity) / timeliness.

— Ministerial units should also map available evidence, as well as non-public data that can be shared with academics.

7. Organise a pilot seminar with researchers for the definition of research needs (beginning of 2025)

Relevant stakeholders: R&D department, analytical units, policy departments, academics

— Schedule annual seminars, bringing together academics and ministry representatives to present research needs and projects.

— Conduct smaller round-table discussions to explore specific topics in detail, fostering more focused and productive conversations.

— These meetings should also allow for a discussion of data (e.g. administrative, non-public) that can be made available to academics, which will create incentives for supplying evidence.

8. Establish relationships with researchers (beginning of 2025)

Relevant stakeholders: R&D department, analytical units, policy departments, academics

— Communicate the gathered research needs on a dedicated web platform.

— Create a forum where these research needs can be discussed and updated regularly.

— At this point, ministerial units should decide on pursuing a specific project and select appropriate channels for delivery (see the intervention 'Funding policy-relevant research')

9. Develop and implement an evaluation of the process (beginning 2025)

Relevant stakeholders: R&D department, analytical units

— Implement a mechanism for collecting feedback after each in-person session to understand participants' experiences and areas for improvement.

— Use feedback to refine the process, ensuring it remains effective and responsive to the needs of both policymakers and academics.

10. Monitor and Update Research Needs (beginning 2025)

Relevant stakeholders: R&D department, analytical units

— Set up a schedule for regular updates of research needs, allowing for flexibility to accommodate rapidly changing policy requirements.

— Ensure that the research needs document is regularly revised and communicated to both internal teams and external academics.

6.2.3 Optimising the science advice mechanism through advisory bodies

The intervention pertaining to Science Advice Committees/Councils (SACs) is designed to allow ministries to procure sound scientific advice through the establishment of science advisory bodies, whose roles and responsibilities, as well as communication with relevant actors from within and outside of the ministry are clearly laid out. The main components of this intervention are a definition of the tasks and processes that would involve the SACs, and the clarification of their cooperation with other units within the ministry, as well as external stakeholders. Different options are proposed with regards to their agendas, depending on the current constellation of how science advice is procured within a ministry and the units/departments in place. The underlying need is, however, to establish relevant guidelines (such as a Code for Science Advice) to codify the important aspects of SAC operations.

6.2.3.1 Goal

— **Create a blueprint** for ministries on how to procure sound science advice through the establishment of scientific advisory councils/committees (SACs).

— Provide **recommendations on SACs' respective roles** within a ministry, the administrative and analytical support they need, and relevant guidelines (such as a Code for Science Advice) that should be in place to codify important aspects of their operations.

6.2.3.2 Suggested solution

— Identify key agendas and responsibilities of the SACs and the interaction with other actors, depending on the needs of the ministry.

— In line with a Code for Science Advice, define in the statutes of SACs clear roles and responsibilities, mechanisms for exchanging information, nomination procedures, and other important aspects of their work.

— After the establishment of SACs, create a system of continuous cooperation with key actors inside and outside the ministry.

6.2.3.3 *Implementation Plan (moderate resources required)*

11. Preparation, planning and establishment (where SACs have not been established yet) (beginning of 2025)

Relevant stakeholders: Minister (and Cabinet), State Secretary, analytical unit, other relevant ministerial units, research organisations, external partners of ministry (research institutions, universities, RVVI, others) Secure support for the establishment of SAC by the Minister, political deputies and the state secretary.

— Conduct an internal screening to identify the current responsibilities and agendas related to scientific research and knowledge management within the ministry, including the role of other actors (e.g. CSO, analytical unit).

— Consult with key stakeholders, including sectoral policy departments, analytical units, existing research organisations, and potential external partners (e.g., universities, research institutions, RVVI).

12. Assigning and clarifying roles and responsibilities (beginning of 2025)

Stakeholders: Minister (and Cabinet), State Secretary

— Identify the key agendas and responsibilities that the SAC would be in charge of, and their interaction with other actors (see table), based on the Ministry's needs.

— Following a Code of Practice, that should be devised for all ministries, draft a detailed statute of the SAC that would include, inter alia, the following:

— Clearly defined roles and responsibilities of the SACs;

— Mechanisms of providing SACs with relevant and timely information by the Ministry;

— Clearly defined roles of SAC in relation to Minister and different departments;

— Clearly defined nomination procedures (including preconditions for becoming a member);

— Clearly defined role of SAC Chair (Vice-Chair) and relationship with members;

— Clearly defined role of a secretary and types of support provided by the secretary;

— Provisions concerning confidentiality (if relevant); impartiality; declaration of conflict of interest; and accountability of the SAC members for the advice they provide;

— Engagement with external stakeholders and other SACs;

— Documentation procedures concerning SAC proceedings.

13. Resource Allocation (beginning of 2025)

Stakeholders: Minister (and Cabinet), State Secretary

— Secure necessary resources, including budget allocations, to support the work of the SAC (also dependent on the extent of SAC involvement, in line with the different scenarios described in the Annex 1).

14. Nomination and allocation of administrative support (beginning of 2025)

Stakeholders: Minister (and Cabinet), State Secretary

— Where SACs are not established yet, the nominations of the members of the SAC will usually be done by the Minister.

— Secure the allocation of administrative support from a Secretary.

15. Implementation (mid 2025+)

Stakeholders: Minister (and Cabinet), analytical and evaluation units, other relevant ministerial units, research organisations, Office of the Government, RVVI, Czech Academy of Sciences

— Together with other actors within the Ministry (CSO, analytical unit, research department, sectoral departments, etc.) develop internal procedures for the timely involvement of the SAC in activities such as the formulation of research needs, the evaluation of strategies, research projects or other instances where science advice is needed (see Table 33 in the Annex 4).

— Establish regular communication with other actors within and outside of the ministry (e.g. CSO, analytical unit, research department, sectoral department, research organisations).

— Ensure that SACs have the opportunity of regular formal and informal meetings, to ensure an exchange of ideas on important matters among the members.

— To foster inter-sectoral cooperation between the social sciences, humanities and arts on one hand, and life sciences, on the other, and to avoid sectoral biases in science advice, continuous dialogue between ministerial scientific advisory bodies should be incentivised. This may take place through thematic conferences and other types of events, and with the support of important state-level stakeholders in the science-for-policy ecosystem, such as the Office of the Government, the RVVI and the Czech Academy of Sciences.

16. Ongoing Operations and Evaluation (end 2025+)

Stakeholders: Minister (and Cabinet), analytical and evaluation units, other relevant ministerial units

— Develop mechanisms for ongoing monitoring and evaluation of SAC operations in providing scientific advice and suggest improvements in its work (or responsibilities - in relation to other actors within the Ministry), in line with the findings.

6.2.4 Funding policy-relevant research

This intervention aims to simplify the process of obtaining policy-relevant research for policymakers by providing a clear decision tree of options (procurement, research funding programmes, ministerial research institutes) and streamlined procurement guidelines. It includes creating a schematic overview of existing research funding instruments and revising procurement guidelines to make procurement processes more understandable and quicker. The implementation involves mapping existing programmes, improving the procurement guidelines and facilitating officials' knowledge and access to these resources through various communication channels.

6.2.4.1 Goal

— Make the landscape of applied research funding **easier to navigate** for policy makers aiming to obtain research from outside sources; policy makers should be equipped with a clear 'decision tree' for resolving their research need, depending on its urgency, complexity, etc.

— Make **existing processes, including procurement** more understandable and quicker to use, for commissioning work from academics and researchers. Policy makers should be able to use the procurement process to obtain analysis/evidence, thanks to agreed and usable guidance that helps the commissioner navigate the process and resolve queries, and also provides certainty to procurement officials.

6.2.4.2 Suggested Solution

Help users **navigate funding options:**

— Provide a schematic overview of existing research funding instruments relevant for the science-for-policy interface.

Streamline existing processes (several paths):

— Revise and streamline existing guidelines for obtaining research via the public.

— Design and pilot a (set of) procurement documentation template(s) for one or a number of archetypal analysis/evidence needs that cannot be served via a research funding scheme.

— Codify good practice for using framework contracts and/or dynamic purchasing systems for analysis and evidence needs. These are used in some ministries, making more flexible procurement workable.

— Develop budgeting guidelines for establishing and using 'pots of money' that can be used for flexibly procuring evidence and analysis.

6.2.4.3 Implementation plan

17. Map existing programmes and develop overview (beginning of 2025)

Relevant stakeholders: MVVI, TA ČR

— Building on a preliminary overview prepared by the expert team, map existing programmes, taking account of the types of needs they address and the types of tasks they can support.

— Create a communication product (e.g. website, visual overview, online central information point, other depending on channel, see below) to be used as a decision aid by policy makers.

18. Promote/communicate overview (by mid 2025)

Relevant stakeholders: MVVI in collaboration with line ministries, Civil Service Section

— Identify channels of delivering the product to its target audience.

— Options include induction trainings, civil service supplementary training materials, or using one of the existing websites; work through existing communities of officials procuring research and analytical teams.

— Take into account the role of research officers and potentially emerging CSOs.

— Deliver the relevant products.

19. Identify gaps in procurement guidelines and amend guidelines (end of 2024)

Relevant stakeholders: Ministry of Regional Development with other line ministries

— Survey and/or interview users across line ministries to understand their awareness and use of the procurement guidelines, gaps and barriers to their use.

— This should include policymakers on the demand side as well as procurement officers.

20. Promote guidelines / raise awareness (mid 2025)

Relevant stakeholders: Ministry of Regional Development with other line ministries

— Target both users and procurement officials.

— Consider generalist and specialist channels (see above).

21. Develop guidelines for budgeting and managing dedicated pots for ad hoc research needs in departments (end of 2025)

Relevant stakeholders: Ministry of Regional Development

— Identify good practices in the use of instruments such as framework contracts, dynamic purchasing frameworks, and small-scale procurement.

— Capture these lessons in guidance documents.

— Consider providing template ToRs and contracts to cover research-specific aspects of procurement such as IP and data protection.

6.3   Supply Side

6.3.1   Incentives for policy-relevant research outputs

This intervention aims to make systemic changes to incentivise the supply side – research organisations and individual researchers – to take an active part in science-for-policy activities. It addresses the national system of science evaluation and the system of academic promotion and remuneration for policy-relevant outcomes.

6.3.1.1   Goal

— Recognition of relevant contributions of academics who are actively engaged in **evidence-production for policymaking** as valid career-advancing achievements equal to traditional academic outputs.

— **Excellence and impact streams converging** towards eventual integration.

6.3.1.2 Suggested Solution

— Change the rationale and set new standards with the help of adjustments to the National Evaluation Scheme:

— Equalise academic publications with societal impact by merging the 2nd (research) and 3d (community engagement) role of the university, i.e. merging Module 1 and 3 outputs in the evaluation scheme.

— Incentivise universities and other research organisations to modify their internal directives and guidelines:

— To lower the weight of and decrease overall quantitative publication requirements from academic promotion criteria in favour of qualitative criteria and alternative research output including S4P;

— To streamline funding for researchers and units specialising in S4P

— Create a new definition for a recognisable, policy-relevant output within the Methodology 17+

— Policy publication: HPub

6.3.1.3 Implementation Plan (high resources required)

22. Secure support within the MVVI/RVVI (Q1 2025)

— Conclude the process of discussion over the exact description and status of the HPub;

— Have the Methodology 17+ amended accordingly by an official decision of the government.

— **Make changes to the national-level science evaluation (2025+)**

— Start discussions within the RVVI on adjustments to Module 1 and Module 3 to better reflect the need to recognize policy-relevant research output;

— Have a concrete amendment submitted to the government;

— Official government approval.

— **Make changes to the promotion criteria at research organisations (2025+)**

— Develop mechanisms for better-quality assessment of science-for-policy outputs;

— Stimulate discussion within universities and other research organisations on replacing quantitative publication criteria with more qualitative criteria and a science-for-policy-respecting attitude;

— First pilots inspiring change in other universities.

6.3.2 Inter-sectoral Mobility: Internships for researchers

Inter-sectoral mobility is a well-established scheme in many countries that might be viewed as role-models in EIPM. The need to implement a scheme in the Czech Republic to support scientists' engagement in policymaking has also emerged as part of this project, and so far there is no such scheme in the country. There are many variations of inter-sectoral mobility, all of them listed in the Annex 3. However, this intervention focuses on implementing one of the variants (Ai.), **which consists of medium-term internships for early-career researchers in public administration bodies.** This variant is a concept that has been tested abroad and represents a relatively feasible and beneficial intervention. To support the engagement of career scientists in policymaking processes, it is necessary to create rich opportunities for career and personal development. The intervention aims to provide both career researchers and public officers with opportunities to develop their skills, expertise and build stable and long-standing relationships between the academia and public administration.

6.3.2.1 Goal

— Increase the level of collaboration between various parts of the S4P ecosystem.

— Improved **knowledge and skills-sharing** between related organisations.

— **Improve understanding and willingness to collaborate** between various actors of the science-for-policy ecosystem.

— Establishment of long-term relationships and strengthening of the communication of evidence towards policymakers.

6.3.2.2 Suggested Solution

— Create an internship scheme for junior PhD holders to participate in projects of public administration.

— Full-time involvement (or at least part-time involvement of more than 50 %) for at least several months.

— The researchers should be assigned to a team working on a single project (as opposed to an ongoing agenda).

— It is worth noting that the emergence of analytical teams in public administration creates opportunities for the integration of scientists into the public administration.

— E.g. RIA reports, strategies, long-term conceptions.

— The intervention needs to encourage career scientists to participate in policymaking processes.

6.3.2.3 Implementation plan (moderate resources required)

23. Decision on details of the scheme, budget, funding and implementing organisation (Mid 2025)

Stakeholders: RVVI, TA ČR, potentially Office of the Government (MVVI), and Ministry of Education

— The intervention has to be sponsored by a renowned organisation to support a sense of prestige.

— The sponsoring organisation does not have to be the implementing organisation itself.

— It is suggested to implement the scheme in cooperation with the RVVI and TA ČR. Nevertheless, more options are possible here.

— Funding needs to be secured:

— The overall costs are expected to be several million CZK (roughly between 2,500,000 to 4,500 000 – this amount includes approx. 3 fellows participating for 6 months, training costs, and other administrative and representation costs, price of a one-time evaluation report not included).

— Costs should be shared between the implementing organisations (i.e. from the research budget) and the line ministry, where the fellowship takes place. This will increase the ownership of the respective ministry, but still incentivises the ministry to actively use the scheme

— The budget for the scheme needs to be approved by the implementing organisations and ministries, **ensuring sufficient allocation of resources prior to the implementation of the scheme**. Similarly, appropriate personal capacities need to be authorised for the sponsoring/overseeing organisation prior to the preparation and implementation of the scheme.

24. Supportive reforms (End of 2025)

Stakeholders: Office of the Government (MVVI), universities, the Czech Academy of Sciences, Ministry of the Interior

— Both academia as well as the public administration need to create opportunities for relevant actors.

— On the side of academia, the main issue is the insufficient flexibility for post-docs to free themselves from their research and teaching duties for several months to work full-time in public administration. The supply side has to encourage junior researchers to interact with the public administration and create mechanisms to lower their workload for a period of time.

25. Establishment of a supportive administrative body and committee to review the candidates (2026)

Stakeholders: Office of the Government (MVVI), TA ČR

— Regular personnel capacities need to be secured and allocated to implement the process (does not need to be an independent body).

— A committee to review candidates has to be established:

— This should include senior members from academia, public administration, the implementing organisation, and the head of the team where the fellowship is to take place.

26. Establishment of the match-making process (2026)

Stakeholders: TA ČR, Office of the Government (MVVI), research organisations

— The matchmaking process shall ensure transparency through the definition of formal criteria and procedures, while at the same time allowing for informal exchanges of ideas, information, and mutual expectations between the hosting and prospective fellows.

— The process should include:

— A definition of (research) needs – transparent presentation of what the fellows might be working on;

— An informal match-making event, in cooperation with relevant academic institutions;

— An official open call for applications, announced on the relevant website and promoted towards research institutions.

27. Design of an initial training for fellows (2026)

Stakeholders: TA ČR, Office of the Government (MVVI), research organisations

— An initial training for fellows should be organised to manage their expectations and introduce them to the basic principles of policymaking.

6.4   The Roadmap: Enabling Interventions

This chapter contains the description of enabling interventions. They were prepared in a different mode from the core interventions. These interventions are largely developed also in other projects and the purpose of this chapter is to emphasise their role in development of the S4P ecosystem and highlight this synergical effort in the area of EIPM. For these reasons, the implementation plan is not included in the enabling interventions.

6.4.1   Development of analytical units

6.4.1.1   Description of the current state

— Analytical capacities in the public administration are often insufficient to address increasingly complex policy challenges. This issue was repeatedly emphasised by BOs from the side of public administration as well as in the Public Governance Review for the Czech Republic (OECD, 2023).

— A lack of analytical capacities is also visible during the **RIA process**, which is often conducted by civil servants lacking adequate skill sets, knowledge of methodologies, sufficient time and political support.

— Research objectives defined by the public administration may be imprecise or unclear. This is, according to participants of the focus group (organised within N&GA), the result of insufficient strategic work and analytical capacities within ministries (see N&GA).

— The Ministry of the Interior of the Czech Republic is currently working on a project – **Creation of an HR Action Plan** for civil service offices – which aims, *inter alia*, to **strengthen analytical capacities** and attract, retain, and develop talents in the state administration. A part of the project relates to the creation of a manual that supports the introduction of a **competency framework for the service offices** in the process of recruitment, development, and evaluation of employee competencies. These competency frameworks will be applied to specialists at service offices as part of a pilot project, and their use at all service offices will then be analysed.

RIA process and the Ex-post RIA evaluation

— Both the Centre of the Government and line ministry officials from BOs see great potential in the RIA process to improve the quality of regulation, strategies and policies, but point out the limited capacities that restrict the ministries in following the RIA process appropriately. Moreover, they suggest potential changes that would allow for a better evidence uptake during the process (see N&GA).

— Given the fact that RIA in the Czech Republic is, for the most part, seen as being a merely formal procedure, the **public administration is not using this tool to its advantage** to apply useful scientific evidence in the policymaking process. The main apparent reasons for that are a **lack of time, lack of competencies** and **little to no impact on the prepared proposal** (see N&GA).

— The ex-ante RIA is prepared only for a limited number of legal regulations. However, the **effectiveness of already adopted regulation is typically not examined** (ex-post RIA).

— Ex-post RIA will have a uniform form from 2025 onwards in the Czech Republic. It has the potential to become the basis for a systematic collection and sharing of data, as part of which different public administration bodies should cooperate.

— The obligation to integrate Ex-post RIA into legislative processes (more information can be accessed here, in the document RIA General Principles with highlighted regulatory review passages):

— The subject of the effectiveness of regulation review are laws and government regulations that have a final RIA report prepared, and if the authority submitting the material chooses so, also statutes and government regulations without a final RIA report.

— The review of regulation with a final RIA report is at the discretion of the authority submitting the report. Their evaluation can be combined with a review of the related statute.

6.4.1.2 Goal of the intervention

— Increase the analytical capacities at the ministries and at the Government Office, as these should have capacities and knowledge to ensure that policymaking, including legislation and strategies, is based on accurate data, scientific evidence and state-of-the-art knowledge. It is recommended to define formally and methodologically the ways in which analytical capacities are built and cooperate in order to ensure their quality and transparency.

6.4.1.3 Suggested solution

— **Support the long-term development of cross-departmental and inter-governmental analytics for strategic decision-making (see N&GA).**

— Build and/or enhance internal capacities for high-quality policy analytics at ministries, TA ČR and at the Office of the Government.

— Create an institutional framework defining the status of analytical teams, scope and standards of their operations both at the ministerial and inter-ministerial (governmental) level.

— **Identify and develop competencies and skills** (see intervention Improve recruitment strategy and staff retention strategies).

— **Support and train managers of analytical teams.**

— Identify what are the qualification requirements for a successful manager/team leader.

— Develop individual training plans for existing and aspiring managers/leaders.

— Identify measures to support and facilitate team management.

— **Formulating research priorities.**

— Strengthening strategic coordination through the placement of analytical teams, established within ministries and the Office of the Government, on the agenda.

— Institutionalising the way analytical (research) units operate:

— Creating a single methodological framework would contribute to quality standardisation of analytical operations (concerning hiring and other internal processes, activities and outputs, cross-departmental and inter-governmental cooperation, public consultation, knowledge management, etc.).

— To support a better implementation of ex-post RIA, it is suggested to **establish a partnership between industrial PhDs who specialise in policy analysis and ministries** to cooperate on this issue. This would help the establishment of high-quality evaluations, which can serve as a model for other ministries.

6.4.2 Foresight institutionalisation

6.4.2.1 Description of the current state

— In the Czech Republic, strategic foresight is now increasingly integrated into RDI (e.g. FUTURE-PRO, Stratin+) or environmental policymaking (e.g. SEEPIA). The Office of the Government coordinates a working group consisting of the ministries representatives and dedicated to strategic foresight at the European Union level, however, it does not play any role in facilitating foresight needs or experience and outcomes sharing. Institutionalising strategic foresight can strengthen the ties between the scientific community and policymakers. However, although formally recommended in strategic planning guidelines issued by the MMR, there is **potential for a more systematic, integrated and coordinated application in other policy domains** (for example health and social policies or regional development or foreign affairs).

— **Foresight capacities are fragmented** in the Czech ecosystem, some projects are done within the ministries or their research institutes, 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, policymakers and scientists.

— Scenario-planning, forecasting, horizon-scanning and other similar methods of analysing future trends and their implications are already being adopted in some institutions (e.g. actualisation of the Strategic Framework Czech Republic 2030 with an outlook to 2050 by the Ministry of the Environment).

— Developing a new strategic foresight project is not always necessary. It is possible to take advantage of existing foresight activities (e.g. the annual Strategic Foresight Report by the European Commission) and work with the possibility of downscaling it for specific needs.

6.4.2.2 Goal of the intervention

— Institutionalise strategic foresight for it to be more systematic, integrated and coordinated, and make foresight units more proactive in agenda-setting and reactive to policymakers' needs.

6.4.2.3 Suggested solution

— **Build central foresight capacities at the Office of the Government**

— These capacities should be established within the Central Analytical Unit. They should provide methodological guidance to units at the ministries. Central capacities should inform all stakeholders, including the public, about ongoing and planned foresight activities, provide up-to-date methodological support and practical help to ministerial teams, and coordinate and conduct or commission strategic, cross-sectoral foresight studies. Central capacities need to be in close contact with local foresight researchers and international practitioners.

— Additional 'Ministerial foresight teams' could be established

— To establish these teams, an initial intensive training in foresight should be provided and inter-ministerial working groups established in order to share information.

— Establish a 'Parliamentary Commission for the Future'

— Such a body should be composed of politicians across the political spectrum and transfer new foresight results from studies into legislative processes, suggest their own topics for foresight studies, decide on the funding allocations for foresight, and support education about the importance of foresight. The establishment of this Commission also specifically seems to increase promotion and systematic communication towards politicians on the significant benefits of foresight.

— Foresight itself should be a subject to research and evaluation.

— Academic institutions can also serve as a supplier of partial foresight contracts.

6.4.2.4 Inspiration from abroad

The variety of institutional arrangements is influenced by cultural, historical and institutional factors. For example, Portugal and 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 administration. European institutions have internal foresight units (e.g. the JRC Competence centre on foresight, the European Parliamentary Research Service or a unit within the European Environment Agency), but they all coordinate and collaborate at the inter-institutional level via the ESPAS network.

6.4.3 Improve recruitment and staff retention strategies

6.4.3.1 Description of the current state

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

— The Ministry of the Interior of the Czech Republic is undertaking a 3-year project which aims to **improve the HR practices in public offices**, strengthen administrative and analytical capacity, and attract, retain, and develop talents in the state administration. This project is a strategic response to the identified challenges and is designed to bring about significant improvements in the state administration.

— The project aims to **create an Action Plan** based on:

— Results of pilot projects in at least three public **offices implementing the recommendations** of the Client-Oriented Public Administration 2030 strategy.

— **OECD recommendations** on increasing the attractiveness and development of professional skills in the Czech public administration.

— **Results of an empirical study on the legal status of civil servants** and the framework within which the civil service operates.

— An **Implementation manual** was created in cooperation with Ernst & Young as a part of the project. The manual **supports the introduction of a competency framework in the public offices** in the process of recruitment, development and evaluation of employee competences (including analytics). These competency frameworks will be applied by specialists at public offices as part of a pilot project, which will be subject to analysis.

— The goal of the competency frameworks is the effective management of human resources at public offices. This includes the **1) selection and recruitment of employees, 2) support to continuous education and development,** 3) ensuring **transparency and objectivity** through standardised procedures and measurable criteria for evaluating employees, 4) **increasing the efficiency and quality of services** and 5) a **uniform procedure** across all service offices.

— It includes a competency framework with six key competency areas described in detail. Each competency is then described on three levels: strategic, tactical and operative. Thus, it includes employees at all levels.

— The **Byro** **platform** was developed to support the careers and initiatives of officials. Connecting officials with experienced leaders, primarily from the public administration, offering educational activities, mentoring and networking can also help when facing the above-mentioned obstacles.

6.4.3.2 Goal of the intervention

— To strengthen administrative and analytical capacities, not just as a matter of efficiency, but as a critical factor in the ability to create quality policy instruments and successfully implement public investment projects.

— Make the state administration more attractive: attract, retain and develop talented employees.

— Implement competency frameworks in the recruitment and development of employees at public offices. The intention is for public offices to have capable and qualified employees who can effectively fulfil tasks and contribute to the achievement of strategic goals.

6.4.3.3 Suggested solution

— **Attract highly qualified analysts to the public administration** (see N&GA)

— Provide financial incentives;

— Improve job advertisements (incl. training opportunities);

— Organise job fairs for public administration;

— Introduce a system of headhunting in the public administration;

— Increase the prestige of working for the public administration (e.g. reputation). This may 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 levels of seniority (OECD, 2023).

— **Extend the supply of learning programmes in the realm of analytical skills and competences, with different levels of proficiency** (see N&GA)

— Establish shorter executive programmes for the public service;

— Establish micro-certificates;

— Innovative public procurement (more quality-oriented) and training of HR offices;

— Train HR officers about what skills and capacities the public administration needs.

— **Increase the continuity of HR development strategies** (see N&GA)

— Quality management frameworks addressing the specificities of EIPM;

— Training of HR on the specificities of public administration.

— 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.

6.4.3.4 Inspiration from abroad

— Club of goodwill officials (KÚDV) in Slovakia is a platform that brings together officials to build solid and useful public administration institutions. They connect officials, support them in their growth and organise discussions, workshops and networking activities.

— KÚDV together with the support of various officials, experts and business representatives put together a short-term executive programme – the Public Leadership Academy. The programme aims to support effective and innovative public administration institutions in Slovakia.

6.4.4 Reforming ministerial research institutes

6.4.4.1 Description of the current state

— Proposals by the government's National Economic Council (NERV) also include the rationalisation of the structure and activities of departmental research institutes, described as follows:

— Many resorts lack the necessary research and analysis facilities to effectively perform their roles as regulators and public policymakers in their field.

— Those research institutes (MRI) that are established and financed by ministries often have not sufficiently defined or linked their research activities to the real research needs of their founder and are not coordinated with other research projects.

— Moreover, the current MRI thematic portfolio does not correspond to the structure of national needs in areas such as energy, finance and the national economy (these resorts have no established MRI).

— With the recent amendment (Law on Public Research Institutes (341/2005 Coll.) to the consolidation package, ministers now have more control over the head of ministerial research institutes. This increased control empowers them to play a significant role in shaping the topics of institutes' research.

— Ministerial research institutes often work without clear expected results from the authority (Martin Ťopek, 2024).

— The MVVI has offered the ministries methodical support, which led to some ministries reconsidering the purpose of some MRIs and proposing to merge them.

6.4.4.2   Goal of the intervention

— Strengthen the orientation of ministerial research institutions to address the research needs of the ministry (see also Transfer reform).

— Restructure the MRIs so that their work is aligned with the real needs of the ministries and also is more efficient in using funds.

— Underline the urgent need to strengthen the MRI portfolio in areas where there is currently a lack of sufficient capacity, as this is crucial for the progress of overall research and development.

6.4.4.3   Suggested solution

— Ministries must **clearly describe their research needs** (see the intervention on research needs).

— Ministries defined research needs should be thoroughly evaluated by external experts and the scientific community (NERV, p. 27).

— Subsequently (during the evaluation process), find out **how MRIs meet the needs of individual ministries** and whether the MRIs support their ministry sufficiently through their research and whether the research is of adequate quality (NERV, p. 27).

— Based on this information decide whether or not to **restructure the MRI** (NERV, p. 27).

— Simultaneously, consider commissioning some research services (contractually or as a part of institutional research support) by Universities or the Czech Academy of Sciences(NERV, p. 27) to potentially achieve higher efficiency or quality.

6.4.5   Training courses in S4P

6.4.5.1   Description of the current state

— **Czech scientific organisations have not put in place frameworks, funding schemes and training programmes to encourage scientists to engage in policymaking processes.** Academic career paths, including tenure tracks, are determined primarily by academic outputs. Even though researchers are encouraged to devote time to research communication, they receive no specific recognition for science-for-policy activities (see N&GA).

— On the other hand, there is also a **lack of training for policymakers in S4P.**

— There is a small amount of training offered in S4P in the Czech Republic. One was a **workshop on S4P held in SYRI,** which was organised mainly for mentees from the SYRI Mentoring programme. The training was led by two researchers who partook in the training-for-trainers in Brussels as part of this project.

— These workshops are helpful in:

— fostering a **closer understanding of how both sides work** and a better comprehension of their priorities.

— **gaining confidence as a researcher in communicating research**

— departing from a narrow research focus, perceiving the research from a more general perspective and developing the **ability to communicate it.**

— Some aspects of the science-for-policy training were also recently added to the syllabus of the course Research Methodology at the Department of Political Science at Masaryk University in Brno. Other researchers that have participated in the science-for-policy training-for-trainers have incorporated some aspects of it into their courses. To enhance the supply of science-for-policy training, it is crucial to **support the further dissemination of the teaching materials and training of other trainers.**

6.4.5.2   Goal of the intervention

— Strengthen the offer of training so that each research and public sector institution can provide training in science-for-policy to its employees (e.g. researchers and policymakers) to build a mutual understanding between academic and public sector contexts, as well as processes and styles of communication.

6.4.5.3   Suggested solution

— science-for-policy **should be a part of already established science communication workshops** that should focus on science-for-policy in addition to topics such as the popularisation of science and communication with the media.

— These courses should ideally address the topic of impact assessment of science-for-policy cooperation and explaining the benefits of it

— These courses should be organised by research organisations (universities and the Czech Academy of Sciences in close cooperation with individuals that completed the course as a part of this project

— It is important to equip scientists with knowledge on how to effectively provide scientific evidence to policymakers. That includes '*assessing science, understanding policymaking processes, and gaining insight into the interaction between the different paradigms in which scientists, policymakers, and politicians operate'* ([Training Material: 'Science for Policy'](#)).

— From the perspective of policymakers, it's important to focus on how to work with evidence. '*Learn methods to identify the evidence needs, interpret scientific information, network with experts, and collect relevant evidence to inform policy decisions'* ([Training for Policymakers to 'Work with Evidence'](#)).

6.4.5.4   Inspiration from abroad

— The JRC is a key provider at S4P education:

— In addition to a comprehensive [e-learning course](#), they **offer training for other S4P lecturers focusing on [scientists, policymakers](#) and knowledge brokers.** Thus, it provides training to all interested parties in S4P.

— All relevant materials for the training courses are available online, so that other lecturers can use them for future training.

— Another training in S4P is the study programme [Science Communication and Public Engagement](#) at the University of Edinburgh. The programme covers various science communication practices in different settings and with different actors. Possible career paths for its students include a policy and knowledge broker in higher education institutions, science centres or consulting organisations.

6.4.6   Industrial PhDs

6.4.6.1   Description of the current state

— Industrial PhDs are **vital to strengthening the links between academia and the private and the public sectors, respectively.** The intervention aims t**o support knowledge transfer.**

— Although the name industrial PhDs (in Czech, professional PhDs) might imply that they would only cover industrial fields, industrial PhDs may also include social science and humanities programmes. However, the amount of industrial PhDs in industry-focused fields currently prevails over social science and humanities programmes.

— So far, there is no (nationwide) formalisation of industrial PhDs. Until now, cooperation has only taken place on an individual basis between the student, the university, and a company or institution of the public sector. This collaboration is the result of well-established individual partnerships among individual actors.

— From a legislative perspective, there are no obstacles in formalising industrial PhDs.

— Some universities make individual steps towards industrial PhDs:

— For example, the Faculty of Mathematics and Physics at Charles University has adopted the **[Industrial Student Measure](#) to regulate the rules of study as part of Doctoral Studies**. It also defines internal and external industrial students. The Faculty of Mathematics and Physics also runs a partnership programme since 2015, which formalises their cooperation with their partners from business or policymaking. They cooperate in conducting research, lecturing classes, and offering master's and bachelor's theses topics.

6.4.6.2 Goal of the intervention

— Incentivise a greater number of institutions to combine doctoral studies with practical experience and work with their partners from business or policymaking. The industrial student is able to acquire both practical skills related to a particular sector and is educated in conducting academic research.

— Generate more employees equipped with important competencies to work in the public sector, support innovation and retain talented people.

— Develop industrial PhDs in social sciences and humanities and support their cooperation with institutions in the public sphere.

6.4.6.3 Suggested solution

— MVVI is currently preparing **advocacy material for industrial PhDs** with NAÚ, which should include **legal interpretation** regarding industrial PhDs, **basic guidelines** on how to approach industrial PhDs and case studies of best practices (MFF UK, VUT, VŠCHT). This material should support important actors in implementing industrial PhDs within their institution/organisation.

— Universities should encourage students to engage with the partners from business or policymaking.

— **Communicate benefits of industrial PhDs to all relevant stakeholders** – universities, the public sector and students – to increase interest in industrial PhDs.

— **Students**

— Take part in application-oriented R&I projects and acquire an attractive and competitive skills profile.

— Supervision is based at the university and at the institution. Students act as bridge-builders and contribute to new collaborations.

— Build a broad network (also) outside of the university sector.

— **Universities**

— Strengthen links with institutions and build new opportunities for people to get involved.

— Take part in the training of experts and employees in the public sector.

— Increase the attractiveness of study programmes and their institution for new students.

— **Public administration institutions**

— Gain experts in the field with competencies for high-quality research.

— Strengthen relationships with academia and build opportunities and partnerships for future collaboration.

— Improving the competitiveness of the institution by having highly qualified staff and partners.

— Support the creation of partnership agreements between the university and the company/institution.

6.4.6.4 Inspiration from abroad

⸺ The Spanish University Universitat Oberta de Catalunya has implemented the [Industrial doctorates plan](#), a Government of Catalonia programme that aims to foster the development of strategic research projects at companies and public institutions.

⸺ To measure the impact of the Industrial doctorates plan (between the years 2013-2018), an evaluation has shown that 75 % of industrial students continue to work at either private or public sector, 64 % of industrial students continue to work on tasks related to RDI, and 90 % of company tutors believe that having industrial PhDs has had a positive influence on the functioning and way of working in the company.

⸺ This programme also covers social sciences and humanities. The evaluation of the implementation of the [Industrial doctorates plan](#) found that 11 % of the PhD projects had a social sciences orientation. To compare, most (25 %) of the projects were from the realm of Information and Communication Technology.

6.4.7 Simplify the administrative burden of research funding systems

6.4.7.1 Description of current state

⸺ This enabling intervention is not directly related to science-for-policy; nevertheless, the unnecessary administrative burden of research funding remains a significant barrier for freeing the capacities of scientists to engage in other science-related activities.

⸺ The high administrative burden is influenced not only by the complexity of the project funding but also by other factors (see [the analysis by Ernst & Young (EY), 2022](#):

⸺ **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.

⸺ **Many entities are on the list of research organisations** (229 as of August 2024). These entities subsequently compete for the allocation of the project funding. The high number of entities, in turn, implies diminishing success rates, uncertainty in funding and the need to submit more projects, increasing the administrative burden once again.

⸺ **Fragmentation and variability of rules for project funding set by individual providers.**

⸺ As already mentioned in the N&GA, the administrative burden also affects the complexity of specific projects:

⸺ The administrative burden of BETA projects is high, because BETA projects are legally operated on the basis of the Public procurement law. Research tenders as part of the BETA programme are only suitable for some needs of the ministries relating to the generation of policy relevant knowledge due to protracted time limits required by the law.

⸺ The administrative burden in the European Structural and Investment Funds (in 2014-2020) is considerable, and the rules for operational programmes are demanding. The National Coordination Authority has developed rules that aim to unify procedures across operational programmes. Even so, the burden is still significant ([EY, 2022, p. 15](#)).

⸺ The Office of the Minister for Science, Research and Innovation has organised several meetings with the administrative staff of the project funding providers and are taking steps to reduce the administrative burden mainly through the unification of project documentation.

⸺ Lastly, the high demands on the proposal quality and the associated administrative complexity are barriers to entry into science, research and innovation for less experienced (yet talented) researchers, which means that the potential for innovation is not being fully exploited.

6.4.7.2 Goal of the intervention

Simplify the current great variation in the research funding system, including the timing of public procurement and the administrative burden. Decrease the administrative burden for scientists through the

unification of administrative procedures relating to funding calls (see N&GA). Free the capacities of scientists to devote time to (applied) research.

6.4.7.3 Suggested solution

— Consider increasing the amount of **institutional funding** at the cost of project-related funding.

— Formally **establish a coordinator for the unification of project funding across providers**, who could support them in preparing documentation and procedures and ensure communication between the providers and recipients, thus facilitating the transfer of feedback and iteration of procedures according to the needs of programme participants ([EY, 2022, p. 4](#)).

— **Analyse the extent of administrative burden for typical applications** to understand the complexity of the problem.

— Create a **uniform and clear information system linked to public registers and databases**, supporting individual actors (applicants, recipients and providers) throughout the project implementation cycle (EY, 2022, p. 4).

— Ensure **unified format and content of tender documentation**, e.g. its annexes, draft contracts and affidavits. Simplify relevant rules and procedures in line with the programmes that are best-rated for flexibility and a user-friendly format (EY, 2022, p. 3).

— Reconcile budget categories and financial reporting between programmes (EY, 2022, p. 4).

— **Project funding providers**:

— **Publish schedules or information** about the dates for the announcement of competitions **well in advance** (EY, 2022, p. 4).

— **Eliminate duplicate items in project proposals** and simplify project categories and classifications for applicants (EY, 2022, p. 4).

— **Link information systems with public registers and other information systems**, e. g. The simplified register of Ministry of Finance subsidies (EY, 2022, p. 4).

6.4.8 University programmes for Policy Analysts

6.4.8.1 Description of current state

— Provision of high-quality policy advice is impossible without experts that are not only specialists in substantive fields (e.g. environmental or health policy), but also in public policy. It is not enough to know and understand the substantive problems. One must also know how to come up with effective and realistic proposals on how the problems can be solved at the policy level. It assumes specific knowledge of policy processes and methods of how to translate expertise to policy relevant knowledge.

— Policy analysis is a well-established interdisciplinary field taught at the majority of the most prestigious universities worldwide. In contrast, there is only one full-fledged programme in public policy (including policy analysis) implemented in the Czech Republic. Consequently, the demand for experts is greater than the current supply (number of graduates). More programmes, including shorter non-degree training courses are needed.

— Ironically, the demand for these programmes from the prospective students is rather low. It is thus necessary to raise the attractiveness of these programmes. The current programmes in public policy are also often fragmented. It is thus necessary to promote the establishment of networks of policy scholars across Czech universities and establish more continuous and deeper partnerships with the public administration.

6.4.8.2 The current situation in the Czech Republic can be summarised as follows:

— Despite a relatively high demand for graduates from these programmes, there is a **scarcity of well-trained experts in public policy,** which is partly caused by the lack of professional training and study programmes in this area and also due to the relatively **low attractiveness of public policy study**

programmes (compared to well-established disciplines such as economics). It is caused, among other things, by the **low prestige of working for the public administration** and the unattractive labels of these programmes for prospective students.

⸺ Currently, there are several study programmes in the Czech Republic in the thematic area of public policy. To mention some of them:

⸺ [Master of Public and Social Policy](#) at FSV UK (MA)

⸺ [Political Science and Public Policy](#) at FSV UK (Bc)

⸺ [Master in Economics and Finance at FSV UK](#) (MA; a [Bc](#) programme is also available)

⸺ [Public and Social Policy and Human Resources](#) at Masaryk University (MA; [Bc](#) programme is also available)

⸺ [Master of Economic Research](#) programme at CERGE-EI (MA)

⸺ [Master of Economics and Public Policy](#) at Prague University of Economics and Business (MA)

⸺ [Applied Data Analytics and AI](#) at Prague University of Economics and Business (MA)

⸺ [Economics and Public Policy](#) at Masaryk University (Bc)

⸺ [Public Finance and Economics at Masaryk University](#) (MA)

⸺ [Public Administration and Social Policy](#) at Silesian University (MA)

⸺ From these programmes, only the first programme (VSP/PASP at FSV UK) is a full-fledged, long-established public policy programme with a long tradition of graduates actually joining public administration.

⸺ To ensure the relevance of public policy programmes, it is necessary to closely cooperate with the public administration. Even though these programmes seek (and some have) greater cooperation with public administration institutions (e.g. through lecturing, internships, bachelor's/master's theses) **public administration institutions are only marginally included in the preparation and implementation of these programmes.**

⸺ There is a **lack of short-term professional training programmes** (i.e., non-degree executive programmes). There is also no motivation for universities to implement such programmes. It could be assumed, however, that such shorter programmes could be more attractive for senior public officials (especially those who already have a master's degree). Also, master programmes usually last two years as compared with programmes abroad, which often require only one year.

⸺ Most of the programmes are mainly focused on courses covering economic and social disciplines. These programmes also partly cover public policy, methodology, statistics, law and management. However, no such programme in the Czech Republic merges the above-mentioned disciplines with data analysis.

6.4.8.3 Goal of the intervention

⸺ **Background**:

⸺ Support a quality education in public policy (and related) programmes which is a key factor in building sufficient personnel capacities for the demand side and developing a more robust network of competent experts.

⸺ It is crucial to **raise the attractiveness of the public policy study programmes** and improve their promotion, which goes hand in hand with the low motivation (of the graduates) to work in public administration institutions.

⸺ **Primary goal:**

⸺ Involve public administration more both in setting the parameters and in the implementation of these programmes (including e.g. thesis writing, practice, guest lectures).

⸺ Produce a greater number of well-trained graduates with expertise in science and policy programmes who will be able to carry out positions as skilled experts in the civil service.

⸺ **Secondary goals:**

— **Support mutual cooperation among policy programmes** on research topics, theses, student exchanges, joint courses, accreditations, awards, committees, grants and tender applications.

— Establish and maintain professional standards of high-quality policy analysis.

6.4.8.4 Suggested solution

— **Establish and support existing and emerging study programmes** orientated at public policy and **encourage their cooperation with the civil service sector** (e.g., through internships).

— **Establish a broader network** of individuals preparing and teaching in these programmes across universities (professional association).

— **Raise the visibility and the attractiveness** of these programmes for prospective students (incentives for public administration institutions)

— Increase brand exposure of public policy programmes through media coverage.

— Interact with high school students at University fairs.

— Provide incentives (e.g. via accreditation procedures) to make universities include modern topics such as behavioural public policy or data analysis for public policy.

— Cooperate with the public administration of enacting systemic changes towards making the civil service more appealing (e.g., scrapping the current nostrification system to incentivise students studying abroad to return back to the Czech Republic).

— Support and provide incentives for universities to implement short-term non-degree policy training programmes (more in the intervention Improve recruitment and staff retention strategies).

— Create new and a greater number of teaching tools, including case studies, and make them publicly accessible.

6.4.8.5 Inspiration from abroad

— There is a relatively widespread network of public policy programmes abroad. Public policy is an established field in many countries. The main focus of these programmes includes public policy, policy analysis, political science, economics, and law. To mention a few of them:

— Master of Public Policy at Hertie School is a two-year programme in Germany which stands out for its interdisciplinary approach and strong emphasis on practical skills and policy analysis. It also offers unique access to European and global policy networks, preparing students for leadership roles through hands-on projects, internships, and real-world policy labs.

— The nine-month programme, the Master of Public Policy at London School of Economics, offers a strong core curriculum focused on public policy analysis while also allowing room for specialization in areas of interest. Students build professional networks and learn from a diverse, experienced cohort, gaining the skills to critically engage with expert advice. The programme equips participants with a deep understanding of public management and the tools to reform and enhance public services.

— Master of Public Policy at Blavatnik School of Government (University of Oxford) is unique due to its immersive, interdisciplinary approach, combining insights from economics, law, philosophy, and political science. The one-year programme emphasizes real-world case studies, sharpening analytical and decision-making skills to address policy challenges at local, regional, and global levels. Students of this MPP highlight its applied focus and connection to experts from public administration institutions who are lecturing some seminars.

— The Master of Public Policy and Management at Corvinus University of Budapest is a two-year internationally recognized, EAPAA-accredited course. It equips students with essential analytical and leadership skills, along with a deep understanding of corporate, national, and international organizations. Graduates are prepared for careers in the public sector, consulting firms, ministries, and NGOs. The programme offers practical experiences, internships, and opportunities for international networking through a Double Degree with the University of Palermo.

— Relatively unique but on the rise are programmes that combine public policy with data science.

— University programme Master of Data Science for Public Policy at Hertie School in Germany offers seminars on policymaking, law, and governance, as well as education in technical skills such as mathematics for data science, machine learning, and natural language processing. It mainly focuses on developing technical skill sets but overlaps with the public policy area. It is also possible to study this programme together with MPP (Master of Public Policy) and gain a Double Degree.

— A similar programme can be found at the London School of Economics, which also includes a programming boot camp before the first semester.

— More relevant public policy programmes can be found here.

6.4.9 Access to public sector data

6.4.9.1 Description of the current state

— Currently, there is no usable legal title to reuse public sector data for research or analysis that is not releasable as open data or under freedom of information. Protected data (such as data containing personal information) cannot be linked between public sector bodies. Existing data sharing systems serve individual transactions, not analysis. Data linkage and reuse for analysis, even inside one organisation, is also hampered by inadequate data management and metadata. The inability to access micro data, in particular, results in the undersupply of policy-relevant research particularly on the effectiveness of public interventions and an inability to conduct proper ex ante and ex post policy evaluations.

— A draft law addressing these barriers has been drawn up by the Digital and Information Agency and is currently being negotiated between ministries, to be tabled to the cabinet in autumn 2024.

6.4.9.2 Goal of the intervention

— Enable reuse of public sector data for research that cannot currently be accessed as open data or via freedom information

— Enable linking such data between sources, systems and holders

— Allow access to such data and their linking for analysis purposes by public sector bodies

6.4.9.3 Suggested Solution

— Legal title (implementing the relevant parts of the Data Governance Act) to

— Enable secure controlled access to linked public sector data by researchers and government analysts

— Legal procedure to request data and for such requests to be assessed

— Legal obligation on public sector bodies to adhere to a minimum of data management standards

— Technical and administrative infrastructure (safe rooms etc.) to enable data anonymisation, protection and access

6.4.9.4 Implementation plan

— Pass the proposed law – DIA, MV, MVVI, by autumn 2025

— Design data management standards – DIA, by applicability of the law (2025)

— Design and build / procure IT systems to process data access requests and enable data access

— Develop guidelines and procedures for anonymisation and data release and protection – DIA and other designated bodies, by start of 2028

— Monitor the operation of the controlled access system

Inspiration from abroad

— Similar systems operate in most EU countries, though with different configurations of actors. Some of the Nordic countries' systems are the most developed but also structurally similar to the system proposed in

the current draft law (semi-centralised system based on researchers applying for data access to the central government).

— These lessons have been collected and considered as part of the drafting of the proposed law and the considerations are reported on in the impact assessment report.

— Likewise, extensive evidence on the benefits of making public sector data accessible has been collated as part of the impact assessment, from an estimate and illustration of the potential benefits in the Czech context, to an overview of specific cases where reuse of protected public sector data led to significant discoveries and/or policy-relevant research.

7   Conclusion: How the specific policy recommendation and implementation actions lead to increased system capacity

After the outline of where the Czech science-for-policy ecosystem should be developed to, it is necessary to discuss the necessary conditions of successful implementation of the interventions. One significant finding of the analysis and the project is the absence of a dedicated leader or champion for science-for-policy within the Czech ecosystem. Currently, the topic of science-for-policy is kept afloat by passionate individuals, **enthusiasts** from academia, think-tanks, and NGOs with relationships to the public administration or from within the public administration. There is chronically very **little political support** of science-for-policy in general or science-for-policy at the political level. The future of science-for-policy hinges on political prioritization and ownership of these interventions.

The experts in collaboration with all parties involved in the project and the JRC experts from other countries **charted a course for the desired change** in the form of proposed interventions. Now, it is ultimately up to the stakeholders to start implementing them. The path to success, we believe, hinges on two pillars: **Leadership** and **Collaboration**.

Transforming the ecosystem will be a demanding task and thus a great deal of **Leadership** is needed, not to control but to inspire. The leadership principle is not in contradiction to the high level of autonomy of evidence producers/providers, which is a strong feature of the Czech ecosystem. 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 ministries. The leadership should be assumed through collaboration of the VAU and the Office of the Minister for Science, Research and Innovation as these two organisations can provide the necessary outreach to both public administration and academia. Additionally, it is worth mentioning that the Office of the Government traditionally covers cross-cutting agendas; therefore, the Office of the Government is the most suitable to take on the leading role in the topic of science-for-policy and assume the role of instigators and coordinators.

However, leadership alone is not enough. Lasting change demands **collaboration** across all sectors involved. This 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 recognise science-for-policy 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. This means that no single actor can orchestrate an impactful and lasting change. Therefore, we propose to create a platform for EIPM in general to support collaboration among all partners willing to participate in promoting and institutionalising principles of modern governance in the Czech science-for-policy ecosystem. This platform should be designed to combine bottom-up and top-down approaches to support the flow of information as well as the actionability of the platform itself. The platform should be organised on principles of inclusivity and ability to communicate in combination with limited administrative burden. The members should meet regularly and there should be enough resources allocated to support the necessary activities and reforms in all stakeholders' organisations. We believe that creation of such an actionable body is in best interest not only of the agenda discussed in this report, but also of the quality of public administration of the Czech state.

The **Roadmap**, as the culmination of the project provides specific guidance on the interventions that need to be implemented. Let us stress once again, that all the interventions were developed jointly with the stakeholders. Thus, the Roadmap is a unique policy paper, resulting from a deliberative process conducted during the project. Even though not all public administration and academic organizations could be involved in creating the Roadmap it can and shall serve as a **common resource** for all those interested in enhancing the ecosystem. **Everyone is welcome to participate** in implementing the suggested interventions, other improvements and also share their experience and inspire others.

References

Alibašić, H., & Crawley, W. (2020). Applying Good Governance through Policy Labs Sustainable Solutions for Universities and Local Governments. International Journal of Social Sustainability in Economics, Social and Cultural Context, 17, 13. https://doi.org/10.18848/2325-1115/CGP/v17i01/13-25.

Bailey, J., & Lloyd, P. (2017). The introduction of design to policymaking: Policy Lab and the UK government. Annual Review of Policy Design, 5(1), Article 1. https://ojs.unbc.ca/index.php/design/article/view/1676.

Brock, K. L. (2021). Policy labs, partners and policy effectiveness in Canada. Policy Design and Practice, 4(2), 228–241. https://doi.org/10.1080/25741292.2021.1880063.

Česká evaluační společnost. (2018). Metodika Pro Zadávání Evaluací. https://czecheval.cz/Dokumenty%20-%20archiv/Metodika_na_web_FIN.pdf.

České priority. (2021). Informované vládnutí. https://www.informovanevladnuti.cz/.

Crato, N., & Paruolo, P. (Ed.). (2019). *Data-Driven Policy Impact Evaluation: How Access to Microdata is Transforming Policy Design*. Springer International Publishing. https://doi.org/10.1007/978-3-319-78461-8.

Czech Academy of Sciences (AV ČR). (2023a). Výroční zpráva o činnosti Akademie věd České republiky 2022, [Annual Report of the Czech Academy of Sciences], AV ČR. https://www.avcr.cz/export/sites/avcr.cz/.content/galerie-souboru/vyrocni-zpravy/VZ-AVCR-2022.pdf.

Czech Academy of Sciences (AV ČR). (2023b). Expertní stanovisko AVex, [Expert statement AVex], AV ČR. https://www.avcr.cz/cs/veda-a-vyzkum/avex/.

Czech Statistical Office (CZSO). (2022, December). Přímá veřejná podpora výzkumu a vývoje v České republice [Direct Public Support for Research and Development in the Czech Republic], 211001-22. https://www.czso.cz/documents/10180/164606720/21100122.pdf/fe326bfb-15ae-4194-9f09-c31e327fcc98?version=1.1.

Czech Statistical Office (CZSO). (2023, April). Peer review (přezkum) Národního statistického systému. [Peer review of the National system of statistics]. https://www.czso.cz/documents/10180/222009053/peer_review_report_czechia.pdf/44124aff-744b-4532-86b6-d572d2474b4b?version=1.0.

Ernst & Young, s.r.o. (2022), Analýza administrativní zátěže v oblasti výzkumu, vývoje a inovací. [Analysis of administrative burden in the area of Research, Development, and Innovation]. https://www.spcr.cz/images/pdf/2022_Analyza_administrativni_zateze_v_oblasti_VVI.pdf.

Eršil, L. (2018). Hodnocení dopadů regulace v legislativním procesu ČR [diplomové práce]. Univerzita J.E. Purkyně v Ústí nad Labem, Katedra ekonomie a managementu. https://portal.ujep.cz/StagPortletsJSR168/CleanUrl?urlid=prohlizeni-prace-detail&praceIdno=00179476

European Commission (2022), COMMISSION STAFF WORKING DOCUMENT Supporting and connecting policymaking in the Member States with scientific research, SWD(2022) 346 final, Brussels, Publication Office of the European Union., 25 Oct 2022, https://europa.eu/!8DwdnF.

Eurostat (2022). R&D Expenditure. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=R%26D_expenditure&oldid=551418#Gross_domestic_expenditure_on_R.26D.

EU Council (2022). Council Recommendation 2022/2415 of 2 December 2022 on the guiding principles for knowledge valorisation. Office Journal of the European Union. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H2415&qid=1680596557779&from=EN.

Evans, B., & Cheng, S. M. (2021). Canadian government policy innovation labs: An experimental turn in policy work? Canadian Public Administration, 64(4), 587–610. https://doi.org/10.1111/capa.12438.

Ferrarezi, E., Brandalise, I., & Lemos, J. (2021a). Evaluating experimentation in the public sector: Learning from a Brazilian innovation lab. Policy Design and Practice, 4(2), 292–308. https://doi.org/10.1080/25741292.2021.1930686.

Ferrarezi, E., Brandalise, I., & Lemos, J. (2021b). Evaluating experimentation in the public sector: Learning from a Brazilian innovation lab. Policy Design and Practice, 4(2), 292–308. https://doi.org/10.1080/25741292.2021.1930686.

Fleischer, J., & Carstens, N. (2022). Policy labs as arenas for boundary spanning: Inside the digital transformation in Germany. Public Management Review, 24(8), 1208–1225. https://doi.org/10.1080/14719037.2021.1893803.

Fuglsang, L., Hansen, A. V., Mergel, I., & Røhnebæk, M. T. (2021). Living Labs for Public Sector Innovation: An Integrative Literature Review. Administrative Sciences, 11(2), Article 2. https://doi.org/10.3390/admsci11020058.

Fuller, M., & Lochard, A. (2016, September 12). Public policy labs in European Union members states. JRC Publications Repository. https://doi.org/10.2788/799175

Gluckman et al. (2021). Brokerage at the science-policy interface: from conceptual framework to practical guidance. https://www.nature.com/articles/s41599-021-00756-3.

Gofen, A., & Golan, E. (2020). Laboratories of Design: A Catalog of Policy Innovation Labs in Europe (SSRN Scholarly Paper 3684515). https://doi.org/10.2139/ssrn.3684515.

Government of the Czech Republic. (2017). Definitions of types of results. https://www.vyzkum.cz/FrontClanek.aspx?idsekce=799796&ad=1&attid=998030.

Halligan, J. (1995). Policy advice and the public service. In B. G. Peters & D. J. Savoie (Ed.), Governance in a Changing Environment (s. 138–172). McGill-Queens' University Press and Canadian Centre for Management Development. ISBN-13: 9780773513211.

Hinrichs-Krapels, S., Bailey, J., Boulding, H., Duffy, B., Hesketh, R., Kinloch, E., Pollitt, A., Rawlings, S., van Rij, A., Wilkinson, B., Pow, R., & Grant, J. (2020). Using Policy Labs as a process to bring evidence closer to public policymaking: A guide to one approach. Palgrave Communications, 6(1), 1–9. https://doi.org/10.1057/s41599-020-0453-0.

Hlídač státu (2023a). Deloitte Advisory s.r.o. https://www.hlidacstatu.cz/subjekt/27582167.

Hlídač státu (2023b). Ernst & Young, s.r.o. https://www.hlidacstatu.cz/subjekt/26705338.

Hlídač státu (2023c). KPMG Česká republika s.r.o. https://www.hlidacstatu.cz/subjekt/00553115.

Hlídač státu (2023d). PricewaterhouseCoopers Česká republika, s.r.o. https://www.hlidacstatu.cz/subjekt/61063029.

Howlett, M., & Walker, R. M. (2012). Public Managers in the Policy Process: More Evidence on the Missing Variable? Policy Studies Journal, 40(2), 211–233. https://doi.org/10.1111/j.1541-0072.2012.00450.x.

Komatsu, T., Salgado, M., Deserti, A., & Rizzo, F. (2021). Policy labs challenges in the public sector: The value of design for more responsive organizations. Policy Design and Practice, 4(2), 271–291. https://doi.org/10.1080/25741292.2021.1917173.

Konopásek, Z., Stöckelová, T., & Zamykalová, L. (2008). Making pure science and pure politics: On the expertise of bypass and the bypass of expertise. Science, technology, & human values, 33(4), 529–553. https://doi.org/10.1177/0162243907306699.

Kupiec, T., Wojtowicz, D., & Olejniczak, K. (2023). Structures and functions of complex evaluation systems: comparison of six Central and Eastern European countries. International Review of Administrative Sciences, 89(1), 202-220. https://journals.sagepub.com/doi/10.1177/00208523211026964.

Labs, iTeams, Designers. (2016, March 29). Co-Creating Ireland. https://cocreatingireland.wordpress.com/2016/03/29/policy-labs/.

Lee, C., & Ma, L. (2020). The Role of Policy Labs in Policy Experiment and Knowledge Transfer: A Comparison across the UK, Denmark, and Singapore. Journal of Comparative Policy Analysis: Research and Practice, 22(4), 281–297. https://doi.org/10.1080/13876988.2019.1668657.

Lewis, J. M. (2021). The limits of policy labs: Characteristics, opportunities and constraints. Policy Design and Practice, 4(2), 242–251. https://doi.org/10.1080/25741292.2020.1859077.

Lindquist, E. A., & Buttazzoni, M. (2021). The ecology of open innovation units: Adhocracy and competing values in public service systems. Policy Design and Practice, 4(2), 212–227. https://doi.org/10.1080/25741292.2021.1941569.

Mareš, J., & Kebza, V. (2012). Psychologie založená na dukazech. Ceskoslovenská psychologie, 56(2),178–193. https://www.proquest.com/docview/1019445373/fulltextPDF/A3FBE242621481BPQ/1.

Mareš, J. (2009). Edukace založená na důkazech: Inspirace pro pedagogický výzkum i školní praxi. Pedagogika, 59(3), 232–258. https://pages.pedf.cuni.cz/pedagogika/?p=1012.

McGann, M., Blomkamp, E., & Lewis, J. M. (2018). The rise of public sector innovation labs: Experiments in design thinking for policy. Policy Sciences, 51(3), 249–267. https://doi.org/10.1007/s11077-018-9315-7.

Ministerstvo průmyslu a obchodu (MPO). (2021, March 11). Strategie podpory malých a středních podniků v ČR pro období 2021 – 2027. https://www.mpo.cz/assets/cz/podnikani/male-a-stredni-podnikani/studie-a-strategicke-dokumenty/2021/9/Strategy-to-support-SMEs-in-the-Czech-Republic-2021-2027.pdf.

Ministerstvo průmyslu a obchodu (MPO). (2022, January 3). National Research and Innovation Strategy for Smart Specialisation of the Czech Republic 2021-2027. https://mpo.cz/assets/en/business/ris3-strategy/2022/1/National-RIS3-Strategy_2.pdf.

Ministerstvo školství, mládeže a tělovýchovy (MŠMT). (2021). Monitorovací ukazatele 2021. https://www.msmt.cz/uploads/odbor_30/DH/Monitorovaci_ukazatele/Monitorovaci_ukazatele_2021_v_20210723.xlsx.

Ministerstvo vnitra (MV). (2019, September). Koncepce rozvoje veřejné správy na období let 2021–2030. Klientsky orientovaná veřejná správa 2030 – Ministerstvo vnitra České republiky. https://www.mvcr.cz/clanek/koncepce-klientsky-orientovana-verejna-sprava-2030.aspx.

Ministerstvo vnitra (MV). (2023). Národní plán obnovy: 4.4 Zvýšení efektivity výkonu veřejné správy.

Národní rozpočtová rada (NRR). (2023). Národní rozpočtová rada. https://www.rozpoctovarada.cz/.

Navrátil, P. (2023, August 14). Na cestě do Orbánova Maďarska. Jak chce Fialova vláda politicky ovládnout českou vědu. A2larm.cz.

OECD. (2019a). *Enhancing Access to and Sharing of Data: Reconciling Risks and Benefits for Data Re-use across Societies*. OECD. https://doi.org/10.1787/276aaca8-en.

OECD. (2019b). *The Path to Becoming a Data-Driven Public Sector* [Text]. OECD. https://www.oecd-ilibrary.org/governance/the-path-to-becoming-a-data-driven-public-sector_059814a7-en.

OECD (2019c). "Budgetary Governance in Practice: Czech Republic." Budgeting and Public Expenditures in OECD Countries. OECD: Paris. pp. 167-169. https://www.oecd.org/gov/budgeting/budgeting-and-public-expenditures-2019-czech-republic.pdf.

OECD. (2021). Czech Republic: Indicators of Regulatory Policy and Governance 2021 https://www.oecd.org/gov/regulatory-policy/czech-republic-country-profile-regulatory-policy-2021.pdf.

OECD. (2023). OECD Public Governance Reviews: Czech Republic: Towards a More Modern and Effective Public Administration. https://doi.org/10.1787/41fd9e5c-en.

Olejniczak, K., Borkowska-Waszak, S., Domaradzka-Widła, A., & Park, Y. (2020). Policy labs: The next frontier of policy design and evaluation? Policy & Politics, 48(1), 89–110. https://doi.org/10.1332/030557319X15579230420108.

Olejniczak, K., Śliwowski, P., & Trzciński, R. (2018). The Role of Analysts in Public Agencies: Toward an Empirically Grounded Typology. In X. Wu, M. Howlett, & M. Ramesh (Eds.), Policy Capacity and Governance: Assessing Governmental Competences and Capabilities in Theory and Practice (pp. 151–178). Springer International Publishing. https://doi.org/10.1007/978-3-319-54675-9_7.

Pedersen, D., Hvidtfeldt, R. (2021). The Danish Eco-system of Science for Policy. https://vbn.aau.dk/ws/portalfiles/portal/409665563/Pedersen_Hvidtfeldt_The_Danish_Eco_System_of_Science_for_Policy_2021_.pdf.

Policy Labs: The next frontier of policy design and evaluation. Implications for the EU Cohesion Policy—Strathprints. (n.d.). Retrieved 13 March 2024, from https://strathprints.strath.ac.uk/60480/.

Projekt Stratin+. Strategická inteligence pro výzkum a inovace. (n.d.). https://stratin.tc.cas.cz/#projekt.

Průcha, J. (2005). České a finské výsledky vzdělávání: Komparace nálezů mezinárodní evaluace PISA. Pedagogická orientace, 15(1), 2-9. https://journals.muni.cz/pedor/article/download/1386/1023.

Průcha, J. (2005). Český pedagogický výzkum: Problém využitelnosti produktů. 11–16. In J. Vašťátková (ed.), Pedagogický výzkum: Reflexe společenských potřeb a očekávání. Sborník z XIII. konference ČAPV.

Rada pro výzkum, vývoj a inovace (RVVI). (2023, January 20). Analýza stavu výzkumu, vývoje a inovací v České republice a jejich srovnání se zahraničím v roce 2021. https://www.vyzkum.cz/FrontClanek.aspx?idsekce=841&ad=1&attid=996202.

Reillon, V. (2015). Scientific advice for policy-makers in the European Union. https://www.europarl.europa.eu/EPRS/EPRS-Briefing-559512-Scientific-advice-for-policy-makers-in-the-EU-FINAL.pdf.

Romero-Frí-as, E., & Arroyo-Machado, W. (2018). Policy labs in Europe: Political innovation, structure and content analysis on Twitter. Profesional de La Información / Information Professional, 27(6), Article 6. https://doi.org/10.3145/epi.2018.nov.02.

Romero-Frías, E., Torres-Salinas, D., & Arroyo-Machado, W. (2023). Who influences policy labs in the European Union? A social network approach. Quantitative Science Studies, 4(2), 423–441. https://doi.org/10.1162/qss_a_00247.

Sima, K. (2017). Evidence in Czech research evaluation policy: Measured and contested. Evidence & Policy, 13(1), 81–95. http://dx.doi.org/10.1332/174426415X14467432784664.

Srholec, M. (2019). K čemu Vede Požadavek na aplikačního garanta v Programu éta TAČR?. Portál Nezávislé informace o vědě a výzkumu. https://vedavyzkum.cz/blogy-a-komentare/martin-srholec/k-cemu-vede-pozadavek-na-aplikacniho-garanta-v-programu-eta-tacr.

Štech, S. (2013a). Když je kurikulární reforma evidence-less. Pedagogická orientace, 23(5), 615–633. https://doi.org/10.5817/PedOr2013-5-615.

Štech, S. (2020). Trápení s užitečností pedagogického výzkumu: Jen ztraceni v překladu? Pedagogika, 70(1). https://www.ojs.cuni.cz/pedagogika/article/view/1652/1276.

Tomeš, M. & Bartošová, P. (2023, July 31). Langšádlová chystá revoluci ve výzkumných ústavech. Ty o změnách nevědí a bojí se o nezávislost. Deník N. https://denikn.cz/1201442/langsadlova-chysta-revoluci-ve-vyzkumnych-ustavech-ty-o-zmenach-nevedi-a-boji-se-o-nezavislost/?ref=inc.

Tõnurist, P., Kattel, R., & Lember, V. (2015). Discovering Innovation Labs in the Public Sector. The Other Canon Foundation and Tallinn University of Technology Working Papers in Technology Governance and Economic Dynamics, Article 61. https://ideas.repec.org/p/tth/wpaper/61.html.

Úřad vlády (ÚV). 2022. Národní program reforem České republiky. https://www.vlada.cz/assets/evropske-zalezitosti/aktualne/NPR2022.pdf.

Veselý, A., Nekola, M., & Hejzlarová, E. (2016). Policy Analysis in the Czech Republic. Policy Press. https://doi.org/10.51952/9781447318163.

Vesely, A., & Nekola, M. (2016). Policy analysis and policy work in the central public administration. In Policy Analysis in the Czech Republic (s. 107–123). Policy Press. https://doi.org/10.1332/policypress/9781447318149.003.0007.

Veselý, A., Ochrana, F., & Klazar, S. (2015). An analysis of expenses for the outsourcing of policy advice on the level of the ministries of the Czech Republic. Prague Economic Papers, 24(5), 581–601. https://doi.org/10.18267/j.pep.549.

Veselý, A., Ochrana, F., & Nekola, M. (2018). When Evidence is not Taken for Granted: The Use and Perception of "Evidence" in the Czech Republic Ministries. NISPAcee Journal of Public Administration, 253–271. https://doi.org/10.2478/nispa-2018-0020.

Veselý, A. (2012, July 8). Policy advisory system in the Czech Republic: From state monopoly to hollowing out? XXIInd World Congress of Political Science in Madrid, Madrid.

Vesely, A. (2013). Externalization of policy advice: Theory, methodology and evidence. Policy and Society, 32(3), 199–209. https://doi.org/10.1016/j.polsoc.2013.07.002.

Villa Alvarez, D. P., Auricchio, V., & Mortati, M. (2022). Mapping design activities and methods of public sector innovation units through the policy cycle model. Policy Sciences, 55(1), 89–136. https://doi.org/10.1007/s11077-022-09448-4.

Vinnova | What is Policy Lab? | Vinnova. (n.d.). Retrieved 20 March 2024, from https://www.vinnova.se/en/m/sustainable-built-environments/smart-policy-development/what-is-a-policy-lab/.

Wellstead, A. M., Gofen, A., & Carter, A. (2021a). Policy innovation lab scholarship: Past, present, and the future – Introduction to the special issue on policy innovation labs. Policy Design and Practice, 4(2), 193–211. https://doi.org/10.1080/25741292.2021.1940700.

Wellstead, A. M., & Howlett, M. (2022). (Re)Thinking think tanks in the age of policy labs: The rise of knowledge-based policy influence organisations. Australian Journal of Public Administration, 81(1), 224–232. https://doi.org/10.1111/1467-8500.12528.

Wellstead, A. M., Ottenhof, N., Evans, B., & Gofen, A. (2023). What's going on in there? Canadian government policy labs and public value management. Canadian Public Administration, 66(4), 514–532. https://doi.org/10.1111/capa.12548.

Whicher, A. (2021). Evolution of policy labs and use of design for policy in UK government. Policy Design and Practice, 4(2), 252–270. https://doi.org/10.1080/25741292.2021.1883834.

Zeigermann, U., & Ettelt, S. (2023). Spanning the boundaries between policy, politics and science to solve wicked problems: Policy pilots, deliberation fora and policy labs. Sustainability Science, 18(2), 809–821. https://doi.org/10.1007/s11625-022-01187-y.

List of abbreviations and definitions

Abbreviation / Zkratka	Czech / Česky	English / Anglicky
BO	příjemci podpory	beneficiary organisation
BETA (1, 2, 3)	TA ČR program	Demand driven TA ČR Programme for ministries to obtain evidence
CENIA	Česká informační agentura životního prostředí	Czech Environmental Information Agency
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
CERMAT	Centrum pro reformu maturitní zkoušky	Centre for the Reform of the Baccalaureate Examination
ČES	Česká evaluační společnost	Czech Evaluation Society
CETAV	Centrum technologií AV ČR	Transfer Center of the CAS
CIEMAT	Centrum pro energetický, enviromentální a technologický výzkum	Centre for Energy, Environmental and Technological Research
CNEAI	Národní komise pro posuzování výzkumných aktivit	National Commission for Assessment of Research Activity
CNRS	Národní centrum vědeckého výzkumu	French National Centre for Scientific Research
CPPT	Centrum pro přenos poznatků a technologií Univerzity Karlovy	The Centre for Knowledge and Technology Transfer of the Charles University
CSDA	Český sociálně-vědní datový archiv	Czech Social Science Data Archive
CSIC	Nejvyšší Rada vědeckých výzkumů	The Spanish National Research Council
ČŠI	Česká školní inspekce	Czech School Inspectorate
CSVŠ	Centrum pro studium vysokého školství	Centre for the Study of Higher Education
ČSÚ	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
EOSC	Evropský cloud otevřené vědy	European Open Science Cloud
ESIF	Fondy Evropské unie	European Structural and investment funds
GA ČR	Grantová agentura ČR	Czech Science Foundation
GSN	Vládní síť vědeckých poradců	Government science advisors' network
INRAE	Národní instutut zemědělského výzkumu	National Institute of Agricultural Research
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
MMR	Ministerstvo pro místní rozvoj	Ministry for Regional Development
MPO	Ministerstvo průmyslu a obchodu	Ministry of Industry and Trade
MRI		Ministerial research institute
MPSV	Ministerstvo práce a sociálních věcí	Ministry of Labour and Social Affairs
MŠMT	Ministerstvo školství, mládeže a tělovýchovy	Ministry of Education, Youth and Sports
MVVI	Ministr pro vědu, výzkum a inovace	Minister of Science, Research, and Innovation

MŽP	Ministerstvo životního prostředí	Ministry of the Environment
N&GA		Needs and Gaps Assessment
NERV	Národní ekonomická rada vlády	National Economic Council
NIDV	Národní institut pro další vzdělávání	National Institute for Further Education
NKÚ	Nejvyšší kontrolní úřad	Supreme Audit Office
NPI	Národní pedagogický institut	National Pedagogical Institute
NRP	Národní plán obnovy	National Recovery Plan
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
ODI	Institut pro rozvoj zámořských území	Overseas Development Institute
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
PAS	Posky	Provider of Advice Services
PSSAÚ	Pracovní skupina pro síťování analytických útvarů	Analytical Services Networking Working Group
PGR	Public Governance Report	Public Governance Report
RAPID	Oddělení výzkumu a politik v oblasti rozvoje	Research and Policy in Development Unit
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
SAC	Vědecké poradní orgány	Science advisory commitee
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
SRSP	Program na podporu strukturálních reforem	Structural Reform Support Programme
STEM	Ústav empirických výzkumů	Institute of Empirical Research
SYRI	Národní institut pro výzkum socioekonomických dopadů nemocí a systémových rizik (SYRI)	National Institute for Research on Socioeconomic Impacts of Diseases and Systemic Risks
TSI	Technický nástroj podpory	Technical Support Instrument
TA ČR	Technologická agentura ČR	Technology Agency of the Czech Republic
ÚV	Úřad vlády	Government Office
ÚZIS	Ústav zdravotnických informací a statistiky ČR	The Institute of Health Information and Statistics of the Czech Republic
VAÚ	Vládní analytický útvar	Government Analytical Unit

List of boxes

List of figures

List of tables

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	Incentivise scientists to generate policy-relevant research.	**All line ministries, CPPT, CeTTAV, SYRI, TAČR, Office**	Include policy briefs, policy papers, and other formats as eligible scientific results in science evaluation frameworks. Requires legislative change (130/2002 Sb.) Inside the research organisations recognise policy relevant outcomes (probably at the level of departments, not university) for the academic career

research funding		**of the Minister for Science, Research and Innovation**	Reflect policy relevant outcomes in the internal evaluation of scientists (how can we measure it?)
			Allocate more time to generate policy relevant scientific outcomes
			Decrease the administrative burden partially caused by the dominance of project-related funding
			Incentives policy relevant outcomes at the level of academic institutions
			Guaranteed and widely advertised uptake of good quality (including unsolicited) evidence by policymakers
	The need to be able to flexibly and quickly procure evidence	**All line ministries, MMR**	Innovative procurement methods (Innovative partnerships)
			Increase internal analytical capacities
			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
			Strengthen the ministerial institutes at the ministry level
	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**	Establishing capacities at the academia to be in charge of relationships between the academia and public administration
			Add policy labs as additional focal point for connecting with academia
			Chief Science advisor - point of interaction at the ministry level
			Improve the planning of research priorities at the ministry level
			Support the role of projects of collaborative activities
	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**	The process of formulating priorities should be a mix of 'top-down' and 'bottom-up' approaches (hierarchization, different time horizons)
			Improve the planning of research priorities at the ministry level
			Organise regular meeting and conferences to discuss these topics
	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**	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**	Identify what are requirements of a successful manager Develop internships, rotations, mentoring for managers of analytical units Create system of trainings for aspiring managers

		of Interior	
	The need for training scientists in science-for-policy	**Research organisations**	Training programmes for scientists Improve the narrative around science-for-policy activities
	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
The need to support cultural exchanges and cooperation	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).

Source: Own Elaboration

147

Annex 3. In Depth Overview of Interventions with Background Information

Chief Science Officer (Advisor)

Summary

The intervention of a Chief Science Officer (CSO) is designed to strengthen the science-for-policy culture within the line ministries, and to ensure the effective delivery, management and application of scientific knowledge. The crucial components of this intervention are a definition of processes and topics that would fall under the CSO, clarification of shared responsibilities (e.g. with scientific council, analytical departments, or the R&D department) or the ideal position of the CSO within the organisational structure. Given the complexity of this intervention, we propose various options to enable ministries to develop a CSO position at their own pace, without the immediate need to establish a complex network of CSOs across other ministries (although this would be a potentially ideal scenario). These options provide flexibility and scalability, ensuring that each ministry can adapt the CSO role to its unique needs and capacities while gradually moving to more integrated partnerships.

Description of the current state

Currently, the position of the CSO has not been established at any ministry in the Czech Republic. Some of the agendas intended for the CSO are distributed among various departments and public officers enhancing the systematic integration of scientific knowledge into policymaking, however this rather leads to unclear division of responsibilities and agendas.

There is a strong consensus among project partners that, despite its complexity, this intervention is crucial for improving the uptake of scientific knowledge in the Czech policy environment. Establishing the CSO position will provide clear responsibility and accountability for incorporating scientific insights into government and ministerial operations, ultimately strengthening the impact of scientific research on public policy.

Goal of the intervention

The primary goal of the intervention is to centralise and enhance the integration of scientific knowledge into government policy and operations within each ministry in the Czech Republic. Centralised scientific leadership would clarify responsibilities for overseeing and integrating scientific research. The CSO as a central figure would ensure consistency and coherence as well as strengthen the general narrative of using scientific knowledge. It is important to note that the CSO's role is not to be the one of the main analysts of the ministry, but rather a person that oversees the science-for-policy goals and strategies of the ministry and ensures the flow of evidence to tackle the needs of the ministry.

In its ideal state, the CSO position would be established at every line ministry, with a secretariat position also present at the Office of the Government, which would establish a network of CSOs and fulfil agendas relating to an effective existence of such a network. The Government Science Networker (GSN) would ensure the effective functioning of the network of CSOs across all ministries and the alignment of research priorities between the ministries and the Office of the Government. We recommend creating the Government Science Networker (GSN) position rather than a Government Chief Science Officer (GCSO), as seen in other countries (see below). The GCSO position typically serves as an expert role that, among other duties, advises the Prime Minister on scientific research. However, in the Czech context, we believe that establishing a GCSO would overlap with the functions already fulfilled by the RVVI. Therefore, the GSN role is more appropriate, focusing on coordinating the network of CSOs across ministries and ensuring effective collaboration and alignment of research priorities, rather than duplicating existing advisory functions.

Suggested solution

We propose that at every ministry, the CSO should be a high-ranking official that holds significant authority to ensure that scientific evidence is a cornerstone of the policymaking process. The CSO's primary responsibilities should include integrating scientific research into policies and initiatives, coordinating research activities across the ministry, and providing expert advisory support to the ministerial departments on complex scientific issues.

We strongly advise that every CSO is supported by a team of experts and administrators to allow for the fulfilment of all agendas that should fall under the CSO's authority. Adequate resources, including budget allocations and support from the minister and other high-ranked officials should be provided. If the CSO position is established as a public officer, it should be established through a paragraph in the Service Law. This would mean that the position would be independent of the current government, and it would increase the authority of

the CSO, as the law is generally an important source of authority for Czech public officials. Lastly, the CSO position should be a full-time position, not only to ensure fulfilment of all of the agendas, but also to prohibit the person from simultaneously pursuing a research career and potentially entering conflicts of interest.

The main agendas that should be considered for the CSO's (and their teams) at line ministries (where applicable, based on the situation within every ministry) are the following:

— **Definition of research needs:**

— Identify and articulate the scientific and research priorities that align with the ministry's strategic goals.

— **Collaboration with research organisations:**

— Work closely with the ministry's research organisations to address and fulfil the identified research needs.

— **Support for policy departments:**

— Assist policy departments in prioritising and allocating budgets for research.

— Oversee the implementation of research projects and ensure the integration of research results into policies.

— **Participation in research working groups:**

— Act as a member of working groups focusing on the ministry's research concepts and strategies.

— **Identify funding instruments**

— CSO might help policy makers identify the right funding instrument to fulfil their research needs.

— **Coordination of research activities:**

— Coordinate research activities across different departments within the ministry.

— Ensure alignment with national priorities and prevent duplication.

— Support the sharing of knowledge among different departments of the ministry.

— **Involvement in international projects:**

— Facilitate the ministry's involvement in international research projects with national participation.

— **Collaboration with universities and research institutions:**

— Establish and maintain partnerships with universities and other research institutions.

— **Strengthening science-for-policy (S4P) recognition:**

— Enhance the narrative of the science-for-policy approach within the ministry.

— **Skills identification and training:**

— Identify necessary skills for public officials related to science-for-policy processes.

— Collaborate with the HR department to develop or procure relevant training programmes.

— **Cooperation with evaluation departments:**

— Work with the evaluation department to develop mechanisms for monitoring and evaluating the impact of scientific input on policy outcomes.

— **Expert advisory support:**

— Provide expert scientific advisory support to the minister, offering guidance on complex issues.

— **Knowledge sharing:**

— Organise regular workshops and seminars to share knowledge and best practices across ministries and departments.

— **Communication strategy:**

- Develop and implement a strategy to effectively convey scientific findings and their policy implications to the public.

- Enhance transparency and trust through clear communication of how scientific evidence informs policies.

- **Stakeholder engagement:**

- Engage with various stakeholders, including the public, industry, and civil society, to ensure policies are well-informed and broadly supported.

Furthermore, the Government Science Networker would also fulfil these responsibilities:

- **Facilitation of knowledge exchange:**

- Regularly facilitates the exchange of knowledge with CSOs from various ministries. Organises bi-annual or annual meetings with TA ČR and the GA ČR to ensure continuous dialogue and collaboration.

- **Alignment of research priorities:**

- Reaches out to CSOs to ensure alignment between the government's overarching research priorities and the specific research agendas of the line ministries.

- **Strategic oversight:**

- Provides strategic oversight to ensure that research activities across ministries are coherent and support the national policy agenda.

- Coordinates with CSOs to avoid duplication of efforts and to promote synergy among research initiatives.

- **Support and guidance:**

- Offers support and guidance to CSOs in implementing research projects and integrating scientific knowledge into policymaking.

- Assists in identifying and addressing any challenges faced by CSOs in fulfilling their roles.

- **Promotion of best practices:**

- Promotes the sharing of best practices and successful strategies among CSOs to enhance the overall effectiveness of scientific integration in government policies.

- Encourages innovation and the adoption of new scientific methodologies across ministries.

In conclusion, the CSO at every Czech ministry is a pivotal figure with clear authority and responsibility, supported by a dedicated team and sufficient resources. The CSO ensures that scientific knowledge is systematically integrated into policymaking, fosters collaboration both within and outside the government, and maintains transparency and public engagement.

Given the complexities and existing structures within the Czech ministries and the Office of the Government, we propose two different variations for introducing the CSO position. This approach allows us to align with the current situation where responsibilities that could be managed by a CSO are presently handled by various officers or ministerial bodies, as indicated in Table 33 in Annex 4. The main reason for developing various scenarios for the development of the CSO position is that this is a complex systematic change that requires support from the highest places of the Government (ideally led by the Prime Minister). We expect that the most probable development will follow the example of analytical units, where specific ministries might establish the CSO position, and their team sooner than it will be demanded by the Government and the Prime Minister. Furthermore, we understand that ministries often have R&D departments, but those mostly fulfil administrative tasks and are not responsible for conceptual agendas related to science-for-policy, and when they are, it is not often officially required of them to do so.

In this bottom-up approach, where individual ministries start building the CSO capacity, it is important to note that at some point, the number of CSOs might exceed a critical number (at least 5 CSOs), where coordination between CSOs will be necessary. At such a moment, we recommend establishing a position of the GSN (as mentioned above) at the Office of the Government, to some extent following the example of the UK, whose role should be very much focused on the coordination of ministerial CSOs.

The introduction of the CSO position involves several key considerations that must be addressed to ensure its effective integration into the existing ministerial structures. Here are the main themes to consider:

Responsibilities of the CSO

The main question is what the role of the CSO will be. The CSO's responsibilities will vary based on the specific needs, as described above, and practices of each ministry. However, certain core functions should be emphasised to ensure a coherent and impactful role:

— **Definition of research needs**: Identifying and articulating the scientific and research priorities that align with the ministry's strategic goals and are based on dialogues with policy departments.

— **Evaluation and monitoring of research**: Overseeing the assessment of research projects and ensuring they meet the desired standards and objectives.

— **Support during research projects:** Providing guidance and resources to facilitate the smooth execution of research projects.

— **Establishing cooperation:** Building and maintaining partnerships with universities, the RVVI, research institutions, and other relevant entities to foster collaborative efforts and knowledge exchange.

These responsibilities form the crucial minimum for a sensible creation of the CSO position, providing a foundation that can be adapted to each ministry's unique context, for other potential agendas to consider, see Annex 4.

28. Placement within the Organisational Chart

Deciding where the CSO should reside within the organisational structure of the ministry is critical for ensuring their effectiveness and authority. Among other criteria, this decision might be based on where within the ministry the policy design process happens at the moment or where we want to establish it in the future. The main options are:

— **Within the ministerial cabinet:** Placing the CSO in the ministerial cabinet gives them direct access to the minister, facilitating high-level influence and integration of scientific advice into decision-making. However, such a position is in that case significantly influenced by the political cycle and by a change of the minister. It is also much harder to establish a team directly responsible to the CSO.

— **Within the department of the State Secretary:** Positioning the CSO within the state secretary department can help integrate scientific expertise with administrative and operational functions. But it is much more a matter of how a particular minister will trust and develop a relationship with the CSO, as they would not be appointed by the minister. It might be much more challenging to find a budget for the CSO and their team.

— **Under the Public Service Law in a strategic/analytical department:** Embedding the CSO within a department that handles strategic and analytical processes aligns the role with broader policy planning and evaluation activities, ensuring that scientific insights are central to these processes. But it is much more a matter of how a particular minister will trust and develop a relationship with the CSO, as they would not be appointed by the minister. Furthermore, the CSO would be positioned at a lower level of the organisational structure of the ministry (e.g. head of a unit) and for that reason might struggle to be taken seriously by other sections of the ministry.

29. Profile and Appointment of the CSO

The selection of the right individual for the CSO role is essential for its success as well. The ideal profile includes:

— **Scientific expertise:** A strong background in scientific research, ideally with a track record of published work and recognition in relevant fields.

— **Policy experience:** Understanding of governmental and policymaking processes to effectively translate scientific knowledge into actionable policy recommendations.

— **Leadership and communication skills:** Ability to lead a team, collaborate with various stakeholders, and communicate complex scientific concepts clearly to non-experts.

— **Networking ability:** Proven experience in building and maintaining relationships with academic institutions, research organisations, and other stakeholders.

The interviewees of this project specifically emphasised the importance of scientific expertise above the other types of expertise. The appointment process should be rigorous, ensuring that candidates meet these criteria and are capable of fulfilling the diverse responsibilities of the CSO role.

Implementation plan

Implementation Plan for Establishing a CSO in a Single Ministry (moderate resources required)

Phase 1: Preparation and Planning (mid 2025)

— **Stakeholder engagement:**

— Consult with key stakeholders, including policy departments, existing research organisations, and potential external partners (e.g., universities, research institutions, RVVI).

— **Needs assessment:**

— Conduct an internal review to identify the current distribution of responsibilities and agendas related to scientific research and knowledge management.

— **Role definition:**

— Draft a detailed job description for the CSO position, outlining core responsibilities, required qualifications, and the hierarchical placement within the ministry.

— Identify the key agendas and tasks that the CSO will manage, based on the ministry's needs.

— Develop a one-pager that outlines how the policy process will improve at the ministry by introducing the CSO position, ideally based on a concrete example of a completed policy process and show how it would take place differently. This can later be used to convince the minister and other representatives of the ministry.

— **Support and endorsement**

— Secure support from the highest levels of the ministry (political deputies and the State Secretary), ideally led by the Minister.

— **Resource allocation:**

— Secure necessary resources, including budget allocations. This is related to the position within the organisational structure of the ministry.

Phase 2: Establishment (end 2025)

— **Recruitment:**

— Initiate a recruitment process to identify a candidate with strong scientific expertise, policy experience, leadership, and communication skills. This would differ based on the organisational position of the CSO. In case the appointment is done by the Minister, the process will be much more streamlined and based on the Minister's judgement.

— **Team formation (if applicable):**

— Define roles and responsibilities within the team to ensure comprehensive support for the CSO.

— Establish a supporting team for the CSO, comprising experts and administrators with relevant backgrounds.

Phase 3: Implementation (2025+)

— **Integration in the organisational structure:**

— Officially integrate the CSO in the ministry's organisational chart and consider positives and negatives of different options.

— Clarify reporting lines and collaboration mechanisms with other departments and existing research entities.

— **Development of policies and procedures:**

— Develop internal policies and procedures for the CSO's operations, including mechanisms for research prioritisation, project evaluation, and knowledge dissemination.

— Establish regular interactions with policy departments and external research partners.

— **Initial activities:**

— Conduct an initial screening of ongoing and planned research activities.

— Begin identifying and articulating the ministry's scientific research needs.

— Start building partnerships with the Office of the Government, other ministries, universities, RVVI, other research institutions and any other important stakeholder of the ministry.

Phase 4: Ongoing operations and evaluation (2025+)

— **Monitoring and evaluation:**

— Develop mechanisms for ongoing monitoring and evaluation of the CSO's impact on policy outcomes. Focus on ex-post evaluation of the CSO role.

— Regularly review the integration of scientific knowledge into policymaking and adjust strategies as needed.

— **Continuous improvement:**

— Organise regular workshops, seminars, and knowledge-sharing sessions to foster a culture of continuous learning and improvement.

— Stay updated with best practices and innovations in the field of science-for-policy.

Implementation Plan for establishing a network of CSOs across ministries and a GSN position (high level of resources required)

Phase 1: Preparation and planning (end 2025)

— **Governmental support and endorsement:**

— Secure support from the highest levels of the government, ideally led by the Prime Minister.

— Form a high-level task force to oversee the implementation of the CSO network, including representatives from key ministries and the Office of the Government.

— **Stakeholder engagement:**

— Engage with key stakeholders across all relevant ministries to ensure alignment and buy-in.

— Conduct workshops and consultations to gather input and refine the implementation strategy.

— **Framework development:**

— Develop a standardised framework for the CSO role, including core responsibilities, qualifications, and hierarchical placement.

— Create a comprehensive plan outlining the stages of implementation for both individual ministry CSOs and the Government Science Networker (GSN).

— **Role definition:**

— Draft a detailed job description for the GSN position, outlining core responsibilities, required qualifications, and the hierarchical placement within the ministry.

— Identify the key agendas and tasks the GSN will manage.

— **Resource allocation:**

— Secure necessary resources, including budget allocations.

Phase 2: Establishment (2025+)

— **Pilot phase:**

— Select a few pilot ministries to establish the CSO position and test the framework with the GSN established at the Office of the Government at the same time.

— Monitor and evaluate the pilot phase to identify challenges and best practices.

— **Recruitment and team formation:**

— Conduct a coordinated recruitment process to appoint CSOs in the pilot ministries, followed by other ministries.

— Form dedicated teams for each CSO, ensuring they have the necessary expertise and administrative support.

— **Establishment of the GSN:**

— Appoint a GSN at the Office of the Government.

— Based on the agendas of the GSN, consider the number of team members needed to fulfil their agendas

Phase 3: Implementation (2025+)

— **Integration in the organisational structures:**

— Integrate CSOs in the organisational charts of their respective ministries and consider positives and negatives of different options.

— Establish regular communication channels between the GSN and CSOs.

— **Development of policies and procedures:**

— Standardise policies and procedures for the operation of CSOs across ministries.

— Develop protocols for inter-ministerial collaboration and knowledge exchange.

— **Initial activities and coordination:**

— Conduct initial assessments of research needs and priorities within each ministry.

— Begin coordinating research activities and sharing best practices through the network facilitated by the GSN.

Phase 4: Ongoing operations and evaluation (2025+)

— **Network coordination and support:**

— The GSN facilitates regular meetings and knowledge exchange sessions among CSOs from various ministries.

— GSN organises bi-annual or annual meetings with CSOs, TA ČR and GA ČR.

— **Monitoring and evaluation:**

— Develop and implement a robust monitoring and evaluation framework to assess the impact of the CSO network on policy outcomes. Focus on the ex-post evaluation of the network.

— Regularly review and refine strategies to enhance the effectiveness of the CSO network.

— **Continuous improvement and innovation:**

— Foster a culture of continuous improvement through regular workshops, seminars, and best-practice sharing.

— Encourage innovation and the adoption of new scientific methodologies across ministries.

Inspiration from abroad

There is a number of inspirational examples from abroad regarding the CSO position. Most notably, the UK has a robust scientific advisory system. The UK has established the position of a Chief Scientific Advisor at the Centre of the Government, who is the head of the Government Office for Science and coordinates the UK network of departmental Chief Science Advisers (CSAs) that support each other and resolve cross-departmental

problems ([here](#) is a visual map of the science advice system in the UK). For example, the network cooperates on defining research needs (for more details see [here](#)). While the process is managed at the departmental level, CSAs can consult the Government Office for Science at any stage of the process, which can also better coordinate departmental needs.

A similar position was also established in Australia. However, in this case, it is much less robust. The Australian government has established the [Office of the Chief Scientist](#), whose work is supported by the Office of the Chief Scientist. Apart from Australia and the UK, Canada is another notable country with an [Office of the CSA](#). In the case of Canada, the CSA is supported by the [Departmental Science Advisors Network](#), by the [Researchers-in-residence](#) (community research) and most notably the [Youth Council](#) to provide their views on policy issues. There are other inspiring examples from the USA, Estonia or Ireland. The aim of these international inspirations is to combine these examples in a manner that would be sensitive to the Czech ecosystem and provide a meaningful impact to satisfy the needs related to the science-for-policy realm, which are not being addressed at the moment.

Definition of research needs

Summary

The intervention aims to establish systematic and regular processes for collecting and communicating the research needs of ministries. The process involves appointing a dedicated coordinator to gather and prioritise research needs from ministerial departments, consolidating them into a comprehensive document shared with academics, and establishing platforms for regular seminars. These seminars will allow academics to present their research, fostering detailed discussions through round-table sessions. We suggest that the finalised research needs be communicated via a centralised web platform and updated regularly to ensure continuous engagement and alignment with rapidly evolving policy requirements.

Description of the current state

The current landscape of defining research needs within the science-for-policy ecosystem in the Czech Republic reveals significant mismatches between the demand for and supply of research. These mismatches, identified through the diagnostic and needs and gaps analyses, are characterised by discrepancies in timing, relevance, co-creation, and communication. The timing mismatch arises from the different timeframes in which policymakers and researchers operate. Policy needs evolve rapidly, while research strategies at ministries, formulated approximately every five years, lack the flexibility to address these changing needs promptly. Additionally, the relevance of research results to policy problems is often insufficient, stemming from a disconnect between the topics that researchers pursue and the pressing issues that policymakers face.

A critical factor contributing to these mismatches is the low level of co-creation in research projects. There is a notable absence of collaborative efforts between policymakers and researchers, which would otherwise enhance the alignment of research objectives with policy needs. This gap is exacerbated by a lack of structured communication channels and spaces for interaction between the two groups. The current processes for defining research needs are fragmented and limited in scope. While BETA projects allow for the annual collection of research needs, they are primarily aimed at public procurement for larger projects and do not cover unsolicited evidence or broader research requirements.

Beyond these structured processes, the identification and communication of research needs is sporadic and heavily reliant on ad hoc interactions and personal relationships. This lack of a systematic approach results in ministries occasionally endorsing projects that do not align well with their actual needs, or with the Government's programme, further limiting opportunities for co-creation. Additionally, there is a pervasive misunderstanding between policymakers and academics regarding research needs. Policymakers often assume that academics are aware of their needs, while academics may not have a clear understanding of the specific policy challenges. This mutual assumption hampers effective collaboration and the production of relevant research.

Goal of the intervention

The ideal state of the science-for-policy ecosystem in the Czech Republic envisions a well-aligned synergy between solicited and unsolicited evidence and the needs of the public administration. Unsolicited evidence extends beyond agenda-setting and can feed into other policy making processes, for example in developing and testing policy variants or evaluating outcomes. Simultaneously, solicited evidence through procurement and other formal channels would become more predictable, allowing academia to plan and adjust their capacities.

This predictability is crucial, given the time constraints and different priorities of academic research, which often do not prioritise policy-relevant studies.

The primary goal of this intervention is to systematise the process of gathering and communicating research needs of ministries to the academic community. This formalisation involves creating a clear ownership structure for the process within each ministry, appointing a dedicated facilitator who will assist ministerial teams in specifying their research needs (see the Chief Scientific Officer/Advisor intervention). This facilitator would act as a knowledge broker, possessing comprehensive information about ongoing research projects within academia and serving as a conduit to connect these projects with relevant ministerial units to fulfil their research needs.

Regularly updating research needs is a critical component of the process, which enables continuous and dynamic interactions between academics and policymakers. These needs would be communicated via both formal and informal in-person meetings, as well as publicised via seminars and web platforms. Such interactions would provide academics with the opportunity to present their research and discuss its relevance in the face of current policy challenges. By establishing a stable communication network, the intervention aims to address the rapidly changing needs of the public administration, ensuring that research efforts remain aligned with the evolving policy landscape.

Inspiration from abroad

A notable best practice can be observed in the United Kingdom, where a streamlined approach to defining and communicating areas of research needs has been implemented in an effective way. In the UK, each ministry utilises a centralised website to communicate its research needs (Areas of Research Interests). This website serves as a unified platform where all relevant information is accessible, eliminating the need for researchers to navigate multiple communication streams for each ministry. The centralised nature of this platform ensures transparency and simplicity in the communication process, significantly enhancing accessibility for researchers across various disciplines.

Each government department is asked to produce an ARI document that sets out the most important and current research topics, with the aim of facilitating the communication of research needs, as well as serving as a platform for engagement with different stakeholders and building dialogues both between the different departments and experts, research councils, industry and other organisations in the R&D landscape.

In practice, the ARI document is drafted according to specific guidelines and consists of: (i) an introduction, including the department's vision and objectives; (ii) a section outlining the department's research interests and connecting them to the objectives; and (iii) an annex for further supplementary materials. The ARI cycle, broadly speaking, consists of 8 steps:

— Chief Scientific Adviser's office drafts new research interests from department's objectives;

— The CSA consults government and analyst teams on relevance and context of ARIs;

— Consult policy and delivery teams on relevance of ARIs to policy issues;

— Consult academics on the framing of ARIs in the context of current research;

— Consult CSA for final sign-off on the department's ARIs;

— Publish ARI document and disseminate to external experts and the academic community;

— Organise evidence-gathering activities, such as workshops;

— Assess which evidence gaps for which ARIs have now been filled.

While the process is managed at the departmental level, CSAs can consult the Government Office for Science at any stage of the process, which can also better coordinate departmental needs. Writing an ARI document involves two different 'audiences': government scientists, analysts, and policy teams, and academics and their stakeholders.

Suggested solution

Key insights from the pilot at the Ministry of Regional Development (MMR) highlighted the need for full participation by ministry representatives, focusing on policy-relevant units, and maintaining a balance in the level of detail in research needs. The pilot also emphasised the importance of functional teams over hierarchical structures, timely updates, and clear communication regarding the use of evidence in policy processes. Establishing a dedicated communication platform and replicating the process in regional universities was

recommended by the participants to broaden engagement, ensuring the science-for-policy ecosystem becomes more robust, collaborative, and responsive to the needs of the public administration and academic research.

The pilot intervention revealed several vital insights:

— Streamlining the collection phase: Emphasising efficiency in the research needs collection phase is crucial. While this phase remains important, reducing its complexity ensures quicker and more effective gathering of relevant information.

— Ensuring participation: Full and focused participation from ministry representatives is vital. Some representatives were occasionally absent or distracted, highlighting the need for measures to secure their commitment and engagement.

— Balancing detail: Research needs should strike a balance between being too general and too detailed. Overly general needs can lead to ambiguous outcomes, while excessive detail may limit research possibilities.

— Functional teams over hierarchy: Anchoring the process to functional teams rather than hierarchical structures involves more individuals in discussions, fostering a more collaborative environment and allowing for more comprehensive input.

— Facilitation by delivery teams: Ministry delivery teams should convene sessions, ensuring structured and goal-oriented discussions. Their involvement provides necessary structure and focus.

— Emphasising mutual benefits: Clear communication of the process as mutually beneficial encourages active participation. Highlighting shared benefits fosters collaboration between policymakers and academics.

— Expanding to regional universities: Replicating the process in regional universities will broaden its scope and reach, engaging more institutions and researchers.

— Creating a communication platform: Establishing a dedicated platform for ongoing communication will ensure continuous engagement and accessibility of research needs.

The pilot intervention also highlighted several critical considerations and reflections:

— Challenges in collecting research needs: Collecting research needs is inherently challenging. It requires acknowledging gaps in knowledge, which not everyone is prepared to do.

— Rapidly changing needs: Research needs can change quickly, making timing crucial. The process must be flexible to accommodate these changes promptly.

— Focus on relevant units/teams: Not all units or teams have research needs. The focus should be on those with a real policy role, rather than administrative functions, to ensure relevance and impact.

— Academics' awareness of policy processes: Academics are not always familiar with policymaking processes. It is beneficial to remind and inform them about the expected activities, outputs, and results of civil servants.

— Clarifying the use of evidence: Clearly state and explain how evidence will be used in various processes, such as Regulatory Impact Assessments (RIA), evaluations, and crisis management. This transparency helps align research efforts with policy needs.

— Public procurement transparency: Care must be taken to adhere to public procurement transparency rules, particularly in the context of BETA projects.

— Feedback mechanism: Soliciting feedback after in-person sessions is vital. The feedback from the pilot was very positive, with academics praising MMR for its constructive approach towards science-for-policy.

In summary, the intervention seeks to create a structured, transparent, and dynamic system for defining and addressing research needs, fostering a collaborative environment where both solicited and unsolicited evidence can effectively contribute to the policymaking process. This system would enhance the relevance of academic research to public administration needs, streamline the procurement process, and facilitate ongoing dialogue and collaboration between researchers and policymakers.

The proposed solution involves a structured process for the collection, consolidation, and communication of research needs between ministries and academic institutions. This example follows the development of these processes at the MMR. It is important to note that other ministries will require major or minor adjustments. Here is a detailed description of the process:

— **Research needs collection, prioritisation and consolidation:**

— An appointed owner within the ministry communicates with various departments to gather their research needs. This owner ensures that the needs are prioritised and clearly defined to be shared with researchers.

— The information should balance detail with general themes to avoid being too vague or too specific.

— The owner helps sectoral units formulate relevant research questions or themes. They start with mapping agendas that the various teams work on, and also map the already available evidence (and available in-house data); these can be also communicated to academics.

— Processes for prioritisation must be set up on two levels. First, on a political level, it is crucial that the collected needs match political agendas and are supported by the political leadership. Second, on a practical level, prioritisation should take into account time-frames (when is the evidence supposed to be delivered) and complexity (how complex is the policy problem requiring evidence).

— All collected research needs are consolidated into a document that is shared with academics in advance.

— Each team designates a person responsible for their research agenda, who will collaborate closely with the ministry's research officer.

— **Reaching out to academics:**

— Begin with academics who have previously engaged with the ministry through various projects and use databases like STARFOS to identify them.

— Expand outreach to university departments by looking up recent projects that align with the ministry's needs.

— Contact Knowledge Transfer Offices to help identify suitable academics and departments.

— Send the consolidated document of research needs to these contacts.

— Academics prepare brief presentations (1-2 slides, max 5 minutes) on:

— Their research topics and interests.

— Relevant past or current projects.

— Future projects that could address the research needs.

— **Organise an in-person seminar:**

— Invite academics to a seminar along with representatives from various ministry departments.

— Both academics and ministry representatives prepare brief presentations on research needs and projects.

— Conduct smaller round-table discussions focused on specific topics for more detailed exploration of research needs and potential projects.

— **Follow-up:**

— Communicate the gathered research needs on a dedicated web platform.

— Create a forum where these research needs can be discussed and updated regularly.

— At this point, ministerial units should decide on pursuing a specific project and select appropriate channels for delivery (see the intervention on Funding policy-relevant research)

— **Annual review:**

— Repeat the process annually, identifying key milestones for review, such as new government terms or significant policy announcements.

Implementation plan

The implementation plan correlates with the pilot version of this intervention. Ideally, a similar process would be implemented in an as unified as possible way in all ministries and the ministries would communicate their research needs through a single website, like in the aforementioned example of the UK.

— **Formalise the role of the Research Needs Coordinator:**

— Appoint a dedicated coordinator within the ministry to manage the collection and prioritisation of research needs.

— Ensure this coordinator collaborates closely with the research officer and functional teams to gather detailed and relevant research questions.

— Collaboration with the Chief Science Officer as well as with analytical units is strongly encouraged.

— **Establish communication platforms:**

— Develop and launch a centralised web platform for publishing and updating research needs, ensuring it is easily accessible to all academics and stakeholders.

— Create an interactive forum on this platform to facilitate ongoing discussions and updates.

— **Organise regular in-person seminars and round-table discussions:**

— Schedule annual seminars bringing together academics and ministry representatives to present research needs and projects.

— Conduct smaller round-table discussions to explore specific topics in detail, fostering more focused and productive conversations.

— These meetings should also allow for discussing data (e.g. administrative, non-public) that can be made available to academics, which will create incentives for supplying evidence.

— **Expand to regional Universities:**

— Replicate the process in regional universities to broaden engagement and ensure wider participation.

— Utilise local knowledge transfer offices to identify and involve relevant academics and departments.

— **Continuous feedback and improvement:**

— Implement a mechanism for collecting feedback after each in-person session to understand participants' experiences and areas for improvement.

— Use feedback to refine the process, ensuring it remains effective and responsive to the needs of both policymakers and academics.

— **Promote mutual understanding of policy processes:**

— Regularly inform and remind academics about the policymaking processes, expected outputs and their use, and how their research can contribute.

— Clearly communicate the specific processes where evidence is utilised, such as Regulatory Impact Assessments (RIA), evaluations, or crisis management.

— **Adhere to public procurement rules:**

— Ensure all activities comply with public procurement transparency rules, especially concerning BETA projects.

— Provide training and guidelines to all involved parties to maintain transparency and accountability.

— **Monitor and update research needs:**

— Set up a schedule for regular updates of research needs, allowing for flexibility to accommodate for rapidly changing policy requirements.

— Ensure that the research needs document is regularly revised and communicated to both internal teams and external academics.

— **Build stronger functional teams:**

— Encourage the formation of functional teams rather than hierarchical structures within ministries to ensure broader and more inclusive discussions.

— Facilitate team-building activities and workshops to strengthen collaboration and communication within and between teams.

Table 20: Implementation plan for the Definition of research needs.

Implementation action	Time-frame and milestones	Lead implementing actor	Stakeholders
Formalise the role of the Research Needs Coordinator	01/2025	line ministries	State Secretary, R&D department, analytical department
Decision on a communication platform (if centralised website; see the line below)	02/2025	Research Needs Coordinators at the line ministries	IT department, R&D department, policy departments
Develop and launch a centralised web platform	09/2025	The Center of the Government	line ministries
Collect research ideas from policy departments	05/2025	Research Needs Coordinator at the line ministries	policy departments, analytical department
Organise a pilot seminar with researchers for a definition of research needs	06/2025	Research Needs Coordinator at the line ministries	R&D department, analytical department, policy departments
Establish relationships with researchers	06/2025	Research Needs Coordinator at the line ministries	R&D department, analytical department, policy department, scientific council
Develop and implement an evaluation of the process	05/2025	Research Needs Coordinator at the line ministries	evaluation department, scientific council
Monitor and update research needs	Every six months to a year	Research Needs Coordinator at the line ministries	R&D department, analytical department, policy departments

Source: Own elaboration.

Optimising the science advice mechanism by introducing science advice bodies

Summary

The intervention pertaining to Science Advice Committees/Councils (SACs) is designed to allow ministries to procure sound scientific advice through the establishment of science advisory bodies, whose roles and responsibilities, as well as communication with relevant actors from within and outside of the ministry are clearly laid out. The main components of this intervention are a definition of the tasks and processes that would involve the SACs, as well as the clarification of their cooperation with other units within the ministry, as well as stakeholders outside of it. Different options are proposed with regards to their agendas, depending on the current constellation of how science advice is procured within a ministry and the units/departments in place. The underlying need is, however, to establish relevant guidelines (such as a Code for Science Advice) to codify the important aspects of SACs operations.

Description of the current state

As indicated in the Diagnostic report, there is a wide variety of advisory bodies to the government and individual ministries. Pure scientific advice bodies are rare; rather, such bodies are made up of representatives of NGOs, the private sector, public administration, experts – and even politicians – active in specific sectors, which is the case both for government/ministerial advisory bodies as well as those linked to particular policy areas/funding mechanisms. Many advisory bodies are established through ad hoc directives of the government or ministry, which impacts their instability and composition. The Diagnostic Report stresses a number of limitations, such as the make-up of advisory bodies, unclear conditions of selection and regulation of conflict of interest.

Based on the N&GA, stakeholders in the Czech science-for-policy ecosystem participating in focus groups (October–December 2023) have identified a number of shortcomings of the current science advice mechanism in the country, such as difficulties in obtaining timely and relevant scientific advice that meets the criteria of quality, accountability, transparency (and multidisciplinarity, when relevant); weak institutionalisation of advisory processes; and a general disconnect between public administration and the scientific community. Priority areas identified by the N&GA included, inter alia, the need to build formal, quick, operational long-term relationships to improve the quality research outputs and ensure sound, relevant and timely advice; administrative support to advisory bodies (including scientific ones); as well as developing guidelines on how to provide science advice.

For the purpose of the intervention, an overview of SACs at the ministerial level was conducted. Table 1 shows such bodies established at a number of line ministries in the country.

Table 21. Overview of scientific advice councils / committees at ministries

Name	Ministry	Competences
Scientific Council of the Minister	Ministry of the Environment (MŽP)	Provides advice on important conceptual plans, identification of new areas, support in the development of strategic documents and coordinating the expertise and information base. Currently has 27 members.
Scientific Council of the Minister	Ministry of Health (MZ)	Provides the Minister with suggestions, documents and opinions concerning professional matters of providing health services and proposals for inter- departmental cooperation; gives its opinions on matters of development of medical and pharmaceutical sciences, as well as health research, on professionals matters concerning education for health professions. Made up of 30 members of the academic community.
Scientific Council, Ministry of Foreign Affairs	Ministry of Foreign Affairs (MZV)	Serves as an advisory body for sectoral research and for defining research goals and priorities. Its scope also relates to the conception of long-term development of the Institute of International Relations, founded and supported by the Ministry, and its contractual relations with the Ministry. Has 6 external members (including head of Institute of International Relations) and 17 internal members (heads of departments); chaired by the Minister.
Scientific Council of the Minister	Ministry of Transport (MD)	Mainly in charge of formulation of independent expert opinions on conceptual materials, current topics and challenges. Currently has 16 members.

Scientific Council for the Preservation of Monuments of the Ministry of Culture	Ministry of Culture (MK)	Includes scientists and representatives of owners of cultural monuments. Resolves expert questions, assists Ministry in determining conceptual considerations with respect to funding of monuments. Made up of 17 members (most recent information from 2021).
Scientific Council of the Ministry of Labour and Social Affairs [currently inactive]	Ministry of Labor and Social Affairs (MPSV)	Advisory body to the Minister to support the development of sectoral RDI. Defined research priorities in line with National RDI policy, facilitates improvement to sectoral RDI, and transfer of newest scientific findings from national and international levels to the Ministry; considered and offers solutions for sectoral RDI, formulates positions on conceptual and strategic documents related to research, evaluates the implementation of the RDI Concept of the Ministry. Had 15 members (mainly external members of the academic community).

Source: Own Elaboration

The members of the scientific advisory bodies are usually nominated by the Minister, and as such, these are usually ministerial bodies. In the case of the MŽP, proposals for members can also be given by deputy ministers and heads of sections, but the Minister makes the decision on appointments. Their members from academia are honorary and uncompensated.

Generally, ministerial SACs have, as part of their competences, the responsibility of providing advice and formulating positions on strategic documents regarding a Ministry's (usually longer-term) research priorities, on research programmes that the Ministries are participating in, but also may provide scientific advice on specific challenges that the Ministry may encounter. SACs can form working groups on specific topics. In the case of the MŽP, they are also acquainted not only with what is going on in the Ministry, but also with external matters, such as EU legislation, or research initiatives.

SACs also generally provide their opinions on the work of research institutes that the Ministries may have established. This is, for instance, the case with the SACs of MPSV, MZV or MŽP. The MŽP SAC is to consider any intentions of restructuring research institutions established by the Ministry as well as means of coordinating research among such institutions (MŽP SAC Statute, 2024). The MZV SAC considers the long-term development of the Institute of International Relations and can also discuss the evaluation of the institute, its framework agreement with the Ministry and other relevant documents relating to the institute (MZV SAC Statute, 2019). In the case of MPSV, the former Ministerial SAC did not recommend, at one of its sessions in 2021, the chosen candidate for the post of the director of the Research Institute for Labour and Social Affairs, because the candidate was deemed by the SAC not to fulfil the scientific and managerial preconditions for performing this function (MPSV SAC, 2021). Nevertheless, the candidate was chosen despite the opinion of the SAC.

For the most part, the SACs meet on a regular basis – but usually infrequently, once or twice a year (except for the MZ, where the SAC meets four times a year). Their sessions are usually not public. Meeting minutes may or may not be published (in short or longer form) on the official website, depending on the Ministry. External members may be invited to attend their meetings. However, they usually have to abide by confidentiality clauses. Statutes usually include provisions on confidentiality. In the case of MŽP, members (and invited persons) have to sign a Declaration of confidentiality and impartiality. The impartiality also relates to the responsibility to declare eventual conflict of interest (MŽP SAC Statute, 2024). In their work, SACs are supported by a secretary, who organises and attends the meetings, supplies members with inputs for the meetings, and keeps records of minutes. The secretary is usually an employee of the Ministry.

According to two representatives from relevant ministries with SACs, these bodies serve their role in providing relevant advice to the Minister. They usually have the role of legitimising certain ministerial decisions, as the role of expert opinion is perceived positively by the public administration (and in broader society) but are also seen as valued for the advice they provide. One interlocutor emphasised that a challenge may be a fact that they do not meet often, and thus have to discuss a number of broad issues in a very short period of time. The

fact that they are appointed by the Minister was perceived positively by both interlocutors, as they are seen as trustworthy bodies that the Minister can rely on for advice.

Recently, the Ministry of Labour and Social Affairs has instituted a different set-up for the provision of science advice, discontinuing the work of the SAC, and introducing an [Expert committee for the evaluation of research organisations](#) established by the Ministry, as an advisory body to the minister made up of scientists. The expert evaluation committee also works together with and informs a separate committee on the support to research and development of the Ministry (made up of heads of individual departments) of its results concerning the initial and ongoing evaluations of the long-term development concepts of the Ministry's research organisations.

Goal of the intervention/ideal state

The aim of the intervention is to offer a blueprint for ministries on how to procure sound science advice through the establishment of scientific advisory bodies, as well as to provide recommendations on their respective roles within a ministry, the administrative and analytical support they need, and relevant guidelines (such as a Code for Science) that should be in place to codify important aspects of their operations.

Inspiration from abroad

One of the ways through which science advice can be institutionalised is through science advisory structures, which can connect scientific communities with decision-makers. To that end, the advisory bodies relay scientific evidence in an accessible way to decision-makers. Such bodies can be external, such as academies, learned societies, research organisations, internal, consisting of internal research centres, departments, teams or scientific advisers providing on-demand knowledge, or mandated, such as advisory councils or committees providing expertise on a specific subject (ad-hoc or permanent) ([Reillon, 2015](#)).

Mandated bodies for scientific advice, either permanent or ad hoc, are usually tasked with providing expertise on specific topics. One prominent example is the [UK Council for Science and Technology (CST)](#), an expert committee which advises the UK Prime Minister on science and technology issues across government. The CST is supported by a secretariat in the Government Office for Science. In Greece, [the Council of Economic Experts (SOE)](#) collects and analyses financial data required for reporting obligations as part of the European Semester, and serves as a hub providing evidence to the General Secretariat of Coordination (GSC) and other government departments. The advisory expert body, composed of economists, provides expert advice during economic policy planning and budgeting. The council also serves as a central hub for the dissemination of expertise and evidence-informed proposals in the economic analysis realm.

In order to set a clear mandate for such bodies, some countries have also introduced special guidelines. For instance, the UK's [Code of Practice for Scientific Advisory Committees and Councils](#) (CoPSAC 2021), last updated in March 2024, provides guidance on the establishment, management and conduct of scientific advisory committees and councils (SACs) to the government. Such bodies are instituted to provide independent science advice for EIPM and advise government departments on the methods to conduct required analyses; they also help departments to 'access, interpret and understand scientific information, as well as to make judgements about its relevance, potential and applications' (UK Government, 2024). The Code provides extensive guidance with respect to all areas of provision of scientific advice by such bodies, including the roles and responsibilities of the chair of SAC and its members, roles and responsibilities of the secretariat providing support to the SAC, recruitment, remuneration, liability and indemnity of members, operations and working practices, as well as environmental, electoral and legal considerations with respect to SAC's work. The Code includes a number of annexes, including one on the principles of scientific advice to the government; guidance on nomination of members; or the terms of reference of SACs.

The importance of adequate administrative support is frequently stressed when it comes to scientific advisory bodies. In the UK, SACs are supported by secretariats, usually drawn from the sponsoring organisation (e.g. ministry department), which are in charge of drafting, maintaining and updating documents required by the SAC, and ensuring sound documentation of SAC decisions. The UK Code of Practice also outlines the detailed roles and responsibilities of the secretariat, not limited to impartial support, documentation, the documenting of SAC proceedings, and the relationship between the SAC secretariat and the sponsoring organisation and other stakeholders.

Suggested solution

Possible agendas of Ministerial SACs under different scenarios

Given differences between line ministries and their needs, the intervention proposes different scenarios for the agendas of the SACs within ministries. These agendas can be aligned with the responsibilities of other actors

within the ecosystem, including the role of a CSO, sectoral departments, research departments (where in place), analytical units and others, as indicated in the Table 33 in Annex 4, which maps their interactions with other parts of the science advice ecosystem.

30. Advisory function on strategic priorities and directions (status quo)

In this scenario, the SACs retain their generally more hands-off advisory role. They are informed by heads of departments of a Ministry's research strategies and (usually longer-term) research priorities and provide their advice or positions. They may provide their opinions on the annual work of the research institutions established by the Ministry. They may also provide scientific advice concerning challenges that the Ministry may be facing in some policy areas. They meet once or twice a year.

31. Advisory function with a stronger research oversight role

In this scenario, the SACs are more involved in operations of the Ministry. They could offer their advice on the prioritisation of annual or bi-annual research needs of the Ministry but could also be involved in providing advice on more short-term research efforts, for instance analyses commissioned by the Ministry or done in-house.

They could also have a stronger oversight role of ministerial research institutes, providing advice on their research plans and the research conducted by such bodies.

In addition, they may be at the disposal of the Minister to provide scientific inputs on concrete decisions (which currently appears to be mainly the practice of the SAC of MZ).

32. Advisory function with stronger involvement in research

In this scenario, possibly in addition to the agendas under (2), the SACs would be involved in supporting analysis prepared by or commissioned by the Ministry (e.g. providing advice on methodology), as well as offering their feedback on drafts or final versions of analyses. They may also choose to generate their own analyses or policy proposals.

The draw-back is that this option would require knowledge of potentially very specific research fields which members of the SACs may not have, and as such may not be an efficient option. This may also require a more professionalised role for the SAC members.

Irrespective of the extent of involvement of SACs in the work of the Ministry, it is important for Ministries to codify the work of such bodies in sufficient detail. To that end, a framework Code of Practice, similar to the one established in the UK, would be useful and could be used by Ministries to inform the formulation of the statutes of SACs.

Implementation plan (moderate resources required)

Preparation, planning and establishment (where SACs have not been established yet) (beginning of 2025)

Relevant stakeholders: Minister (and Cabinet), State Secretary, analytical unit, other relevant ministerial units, research organisations, external partners of ministry (research institutions, universities, RVVI, others)

— Secure support for the establishment of SAC by the Minister, political deputies and the State Secretary.

— Conduct an internal screening to identify the current responsibilities and agendas related to scientific research and knowledge management within the ministry, including the role of other actors (e.g. CSO, analytical unit).

— Consult with key stakeholders, including sectoral policy departments, analytical units, existing research organisations, and potential external partners (e.g., universities, research institutions, RVVI).

— **Assigning and clarifying roles and responsibilities (beginning of 2025)**

Stakeholders: Minister (and Cabinet), State Secretary

— Identify key SAC agendas and responsibilities and their interaction with other actors (see Table 13 in Annex 2), based on the Ministry's needs.

— Following a Code for Science Advice, that could be devised for all ministries, draft a detailed statute of the SAC that would include, inter alia, the following:

— Clearly defined roles and responsibilities of the SACs;

- Mechanisms of providing SACs with relevant and timely information by the Ministry;

- Clearly defined roles of SAC in relation to Minister and different departments;

- Clearly defined nomination procedures;

- Clearly defined role of SAC Chair (Vice-Chair) and relationship with members;

- Clearly defined role of Secretary and types of support provided by Secretary;

- Provisions concerning confidentiality (if relevant); impartiality; declaration of conflict of interest; and accountability of the SAC members for advice provided;

- Engagement with external stakeholders and other SACs

- Documentation procedures concerning SAC proceedings.

33. Resource Allocation (beginning of 2025)

Stakeholders: Minister (and Cabinet), State Secretary

Secure necessary resources, including budget allocations, to support the work of the SAC (also dependent on the extent of SAC involvement, in line with the different scenarios described above).

34. Nomination and allocation of administrative support (beginning of 2025)

Stakeholders: Minister (and Cabinet), State Secretary

- Where SACs are not established yet, the nominations of the members of the SAC will usually be done by the Minister.

- Secure the allocation of administrative support from a Secretary.

35. Implementation (mid 2025+)

Stakeholders: Minister (and Cabinet), analytical and evaluation units, other relevant ministerial units, research organisations, Office of the Government, RVVI, Czech Academy of Sciences

- Together with other actors within the Ministry (CSO, analytical unit, research department, sectoral departments, etc.) develop internal procedures for the timely involvement of the SAC in activities such as the formulation of research needs, the evaluation of strategies, research projects or other instances where science advice is needed (see Table 13 in Annex 2).

- Establish regular communication with other actors within and outside of the Ministry (e.g. CSO, analytical unit, research department, sectoral department, research organisations).

- Ensure that SACs have the opportunity of regular formal and informal meetings, to ensure an exchange of ideas on important matters among the members.

- To foster inter-sectoral cooperation between the social sciences, humanities and arts on one hand, and life sciences, on the other, and to avoid sectoral biases in science advice, continuous dialogue between ministerial scientific advisory bodies should be incentivised. This may take place through thematic conferences and other types of events, and with the support of important state-level stakeholders in the science-for-policy ecosystem, such as the Office of the Government, the RVVI and the Czech Academy of Sciences.

36. Ongoing Operations and Evaluation (end of 2025 onwards)

Stakeholders: Minister (and Cabinet), analytical and evaluation units, other relevant ministerial units

- Develop mechanisms for ongoing monitoring and evaluation of SAC operations in providing scientific advice and suggest improvements in its work (or responsibilities), in line with the findings.

Funding policy-relevant research

Summary

It is not straightforward for policy makers to find the right channel for funding policy-relevant applied research, analysis and evidence-related work. Policy makers need to understand both applied research funding and public

procurement processes, and for some needs no clear system for addressing them exists. This intervention aims to remedy this by making the funding landscape more intelligible to policy makers, identifying and addressing unmet needs, and by making it easier to navigate procurement processes for obtaining policy-relevant evidence.

Description of the current state

The landscape of instruments for funding policy-relevant research makes it difficult for researchers and policy makers to understand what work can be funded through what programme. This landscape includes a number of programmes run by TA ČR, some on behalf of ministries, and some run by the ministries themselves. The programmes and their particular calls vary in the role played by the demand side and in the basic parameters of the funded projects, such as how long they last and how long they take to get off the ground.

Additionally, some funding needs on the science-policy interface are not covered by any existing applied research programme. This is particularly the case for shorter, demand-driven projects.

Where research funding is not relevant or available (or it is unclear whether the task falls under the legal definition of research), standard procurement processes are also difficult to navigate and use. This stems partially from the lack of familiarity of some actors on the demand side with procurement rules and processes, and partially from how these rules are interpreted and used in government institutions with respect to procuring services and intangible deliverables. However, [guidelines for procuring analysis, research and evaluation](#) are in place and can be built upon.

Goal of the intervention/ideal state

This intervention aims to

— Make the landscape of applied research funding easier to navigate for policy makers aiming to obtain research from outside sources;

— Identify potential unmet needs to be covered by potential new funding programmes; and

— Make it easier to use existing processes, including procurement, for commissioning work from academics and researchers.

In the ideal state

— Policy makers will be equipped with a clear 'decision tree' for resolving their research needs, depending on its urgency, complexity, etc.

— Policy makers and researchers will have access to appropriate funding schemes

— Policy makers will be able to use the procurement process to obtain analysis/evidence, thanks to agreed and usable guidance that helps the commissioner navigate the process and resolve queries, and also provides certainty to procurement officials.

Suggested solution

Goal 1: Help users navigate funding options

— Provide a schematic overview of existing research funding instruments relevant for the science-for-policy interface.

— An input for this is an analysis of the types of calls and projects supported in existing applied research funding programmes.

— This is complementary with the CSO intervention, where the CSO could play an additional role in helping policy makers identify the right funding instrument for their need.

— In addition to the overview itself (as an information tool/artefact), this will need to be disseminated; again, the CSO can play a role, but other channels are possible (e.g. induction materials/training, staff networks).

Goal 2: Streamline existing processes – several options:

— Revise and streamline existing guidelines for obtaining research via the public procurement process.

— Identify gaps in the existing guidelines

— Address gaps by amending guidelines

— Support awareness of the guidelines

— Design and pilot a (set of) procurement documentation template(s) for one or a number of archetypal analysis/evidence needs that cannot be served via a research funding scheme.

— In the ideal end state, each ministry would have a set of templates that could be used off the shelf for rapidly procuring evidence/analysis.

— This could include template ToRs, contract, and accompanying guidance.

— The rationale is to avoid reinventing the wheel by standardising documentation, and to speed up the process by front-loading the decisions and negotiations between policy makers and procurement/legal professionals and making these decisions only once.

— Codify good practice for using framework contracts and/or dynamic purchasing systems for analysis and evidence needs. These are used in some ministries, making more flexible procurement workable.

— Develop budgeting guidelines for establishing and using "pots of money" that can be used for flexibly procuring evidence and analysis.

All options for Goal 2 are complementary but one or more may turn out to be of higher priority/workability depending on stakeholder input.

Table 22. Implementation plan for the Funding of policy-relevant research

What	Who	When	Other relevant stakeholders
Goal 1			
Map existing programmes	TA ČR + MVVI + experts	03/2025	Other ministries with applied research programmes
Develop overview (communication product e.g. web-based)	TA ČR + MVVI + experts	TBD	
Promote/communicate overview	TA ČR + MVVI	TBD	PSSAŮ network, VAU, Eval. network
Goal 2			
Identify gaps in procurement guidelines	MMR + experts	12/2024	Officials procuring research MMR – procurement policy team
Amend procurement guidelines	MMR	TBD	Officials procuring research MMR – procurement policy team

Promote guidelines / raise awareness	TBD	TBD	Analyst communities Procurement professionals
Identify good practices in using procurement tools (FCs, DPS)	MMR	TBD	Officials procuring research MMR – procurement policy team
Develop guidelines for budgeting and managing dedicated pots for ad hoc research needs in departments	TBD	TBD	

Source: Own elaboration.

Incentives for policy-relevant outputs

Summary

This intervention aims to make systemic changes to incentivise the supply side – research organisations and individual researchers – to take an active part in science-for-policy activities. It addresses the national system of science evaluation and the system of academic promotion and remuneration for policy-relevant outcomes.

Goal of the intervention/ideal state

— The intervention is meant to recognise contributions of academics who actively engage themselves in evidence production for policymaking as valid career advancing achievements. It is not to replace the traditional career path based on publishing journal articles, but it is to provide a feasible alternative to those who wish to devote more time to applied research.

— Ideally, members of academia who are inclined to be engaged in applied policy-relevant research should as a result of this intervention be able to do so without the fear of losing their job or career prospects. Production of policy relevant outcomes should qualify them for tenured positions just like articles in high impact journals.

Description of the current state

Science-for-policy – a tolerated rather than an encouraged activity

— Currently, science-for-policy activities are rather seen as a tolerated extra work of research-performing organisations, but also something that requires extra sources of funding should it take place, as it is rarely covered by the institutional financing model, which favours a distribution of funds based on publishing and teaching outputs.

Cascade effect of science evaluation principles

— Although the system as a whole is slowly warming up to the idea of recognising achievements in science for-policy research, they still carry less weight compared to academic publications. This is, despite certain recent recalibration efforts, still true for the national-level evaluation and trickles down to the level of individual research organisations. At the same time, scientific councils of individual faculties enjoy a lot of liberty in the interpretation of criteria that apply to potential promotion of faculty members. The promotion processes lack transparency and equality across the spectrum of universities. Promotion criteria are rarely codified in detail and scientific councils are left with a lot of discretion to decide who qualifies for a promotion and who doesn't. These bodies are not accountable to anybody and the outcome of their sessions often depend on how many and which members turn up, as they rarely meet in the same composition. As a result, internal politics, connections, friendships and other undesirable factors may come into play when promotion is considered.

Career tracks and quantitative requirements for publications

— Recently, there has been a trend at most universities to make conditions for promotions of faculty staff stricter, especially in terms of publications.

— Some faculties have introduced dual career tracks for staff who want to primarily focus on research (i.e. publications) and those who wish to concentrate on teaching; there is no alternative for those who wish to excel in research for policy.

— Basic research is inseparable from promotion criteria – it is considered a conditio sine qua non.

— Equally, standards on faculty staff remuneration are not unified, but tend to favour publications as well.

Difficulties with measuring science for policy output

— One of the key arguments for the preservation of the current status quo is the lack of consensus on metrics for applied research. This is particularly true for policy-relevant outcomes. The evaluation based on academic publications is deeply rooted and well-established.

— Academic publications are seen as a way to measure oneself against and connect to the international scene.

— Policymakers and other beneficiaries of science-for-policy outputs are not involved in the evaluation of their quality.

Academic ranks and capacities for science-for-policy activities

— Associate and full professors (see Table 23 and Figure 15) are the ones who are expected to take the lead in science-for-policy activities, but there are important limitations:

— Associate professors in particular, and full professors to a lesser extent, are overwhelmed with bureaucracy, formal guarantorships of study programmes, and scientific committees memberships.

— Associate and full professors have little incentive to engage in science-for-policy as they are remunerated more based on status than policy/socially-relevant outputs.

— First and foremost, they have been primarily trained in writing academic papers, not producing science-for-policy outputs, so they can hardly be expected to suddenly be able to actively practise science-for-policy.

Table 23. Researchers dispositions and limitations according to academic ranks

PhD	Associate Professor	Full Professor
Pressure on publication output: High	Pressure on publication output: Medium	Pressure on publication output: Low/varies
(On average at least 20 publications required with quarter of them in foreign journals for habilitation)	(depends on academic aspirations, but a journal article per year or at least one in two years is a norm)	(the pressure doesn't go away completely, but is no longer such a limiting factor)
Burden of committee memberships/guaranotorships: low to medium	Burden of committee memberships/guarantorships: medium to high	Burden of committee memberships/guarantorships: medium to high
Capacity for EIPM activities: low	Capacity for EIPM activities: medium	Capacity for EIPM activities: medium to high

Source: own elaboration.

Figure 11. Pressure on academic publishing according to stages in academic careers
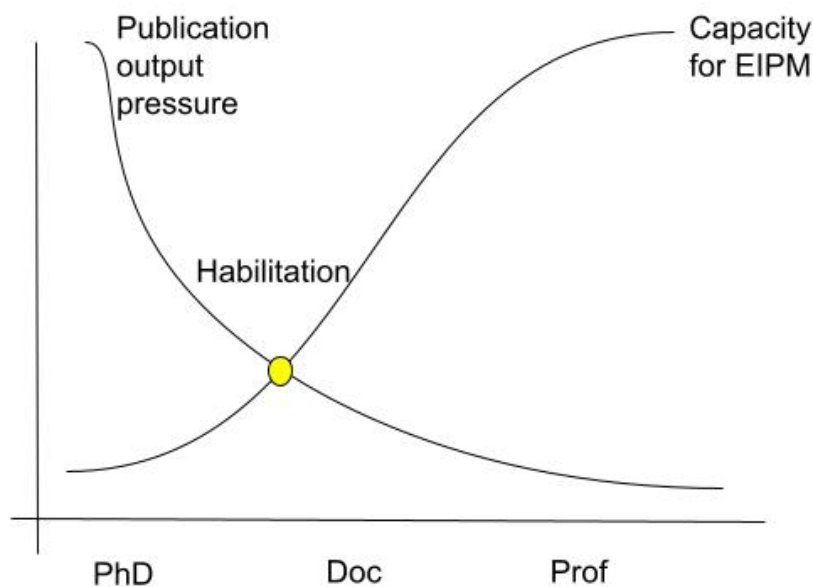
Source: Own elaboration

Inspiration from abroad

The DORA declaration on research assessment from 2013, hoping to reduce the weight of dubious bibliometrics in the evaluation of researchers, can be seen as the first recognition that research assessment requires substantial reform.

Since then, there have been a number of initiatives including the UK government's new 'resume for research and innovation' as an alternative to traditional CVs allowing researchers and innovators to highlight a broader set of contributions they have made to their field, going beyond journal metrics.

The European Research Council is also moving away from using the journal impact factor in their funding decisions. Research funding agencies in the open access advocacy group coalition S are also committed to evaluating projects based on their 'intrinsic merit', without taking into account the prestige of the publications the work has been published in.

The so called LERU universities have gone some of the way towards creating multidimensional academic career tracks. Nevertheless, more needs to be done to promote the policy and wider societal impact of research as a specific domain equal to academic publishing and teaching.

Following inspiration is adapted from the N&GA chapter:

— **The Coalition for Advancing Research Assessment (CoARA)** has pushed for 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 for 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 quality criteria. Masaryk University in particular has taken the initiative to reform its system of research evaluation, having recently established the [Centre for scientometric support and evaluation](#) and published the [Action plan](#).

— 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 from 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 from 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 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, and others are included.

— Some Western countries feature major foundations that support universities in [moving towards a research based on engaging wider communities](#) rather than being preoccupied with old schemes of inward-looking bibliometrics.

— 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.

— In relation to the topic, there are also a number of suggestions for possible metrics for measuring research impact on policy or a wider societal impact. In general, authors agree that a combination of methods and sources is needed to get the full picture of any given impact. As most research-based interventions take time to have an effect, it is advisable to schedule several measurements over the course of the intervention duration. [Siar (2023)](#) recognises 3 approaches to measuring a policy impact of research – pyramid, influencing, and results chain. 'The Pyramid and Results Chain offer a straightforward model for measuring policy influence. The Pyramid deals with indicators of awareness, influence, and impact, usually through citations and mentions of the research by its intended users. The Results Chain tracks policy influence by analysing the entire results chain from inputs and activities to outputs, outcomes, and impacts. The Influencing approach focuses on the interaction among the different actors of the policy process and the changes in their attitude, behaviour, and commitment and in the policy content and procedure attributed to the research, program, or intervention' (p. 181). The Influencing approach was elaborated by researchers of the Research and Policy in Development (RAPID) team of the Overseas Development Institute (ODI) in collaboration with the UK Department of International Development. Drawing from the works of Keck and Sikkink (1998) and Jones and Villar (2008), this approach organises policy impact into five categories: attitudinal change, behaviour change, procedural change, influencing the policy content, and encouraging discursive commitment from the government. Moreover, this approach recommends crafting a theory of change (TOC) at the outset as the overall framework for M&E of policy influence. There are different types of TOC, but the most common is the causal chain, which shows a series or chain of elements, namely, inputs, activities, outputs, outcomes, and impacts, and how each element leads to the next (Jones, 2011).

To produce policy impact, it proposes applying different tactics, including Evidence and Advice, Public Campaigns and Advocacy, and Lobbying and Negotiation (ibid.). The first and last tactics are considered 'inside-track approaches' or directly influencing the policymakers. The second tactic is an 'outside-track approach' seeking to influence and create change through indirect channels like the media and public meetings.

— Most research organisations from north-eastern Europe have introduced a somewhat more balanced approach to assessing research performance and selecting candidates for promotion focusing on three most important academic publications that need to be placed into the context of wider research relevance.

Suggested solution

Most of the measures we suggest within this intervention are listed below in Table 22.

Table 24. Summary of incentives-related measures leading to desired outcomes

Incentives	Current state	Measures	Desired state	Responsible body (suggested)
National-level funding flows and remuneration schemes favouring quality over quantity and equating publications with science-for-policy outputs	Institutional funding flows to universities based on a combination of publication output and softer societal impact and procedural criteria within the National evaluation (5 modules) Universities are free to spend institutional funding according to their own considerations	Change the rationale and set new standards also with the help of adjustments to the National evaluation scheme – equalise academic publications with societal impact by merging 2nd (research) and 3d (community engagement) role of university, i.e. merging Module 1 and 3 outputs; or have substantial programme/departmental budgets providing funding to projects with policy impact (e.g. following the example of NWA calls)	Policy-relevant outputs equal in weight to traditional academic publications Quantitative requirements on publications replaced with focus on quality and impact	**MVVI/RVVI**
University-level funding distribution	Internal university funding following the logic of the national evaluation of scientific outputs as well as standards for international comparisons still favours publications over other outcomes	Changes to internal directives and guidelines	Funding available for units engaged in policy-relevant research based on their impact/ free of quantitative requirements for publications	**Rectors in collaboration with deans and chairs of scientific councils**
Promotion criteria and HR policy	Quantitative requirements for academic publications within	Modifications to internal habilitation regulations and rector's directives	Academic promotion and alternative career tracks for S4P	**Rectors in collaboration with deans and**

	research organisations still in place and often getting stricter	New guidance and trainings for members of scientific councils	researchers – instead of 25 + publications, list of just 3-4 that made the biggest difference and had a real impact (not just IF) + list of alternative outputs including policy briefs, software, outcomes of action research, citizen science initiatives, etc.	**chairs of scientific councils**
	Requirements for promotion differ university from university and also within universities across faculties	Universities shifting to the system of functional positions (funkční místa) for associate and full professors, where the role and tasks of the academics are clearly defined in detail and remuneration can be more linked to performance and impact rather than status	(Dutch model, LERU framework)	
	Requirements often not very transparent			
	Scientific councils and their members are not accountable for their decisions on promotions		Associate and full professors more incentivised to engage in science-for-policy	
	Rigid rules for habilitation thesis non-inclusive or undervaluing policy-relevant outcomes			
	Some awards of associate and full professorships are questionable			
	Associate and full professors lack incentives to be actively engaged in policy-relevant research as they are remunerated based on status rather than output			
Recognition of policy-relevant outcomes in accreditation criteria	Requirements for accreditations of full and associate professorships are rather vague as there are no unified rules (each university/faculty takes care of its	Modifications to the Methodology 2017 (definitions of relevant science-for-policy outcomes) MŠMT submitting legislation correcting	Group/shared guarantorships of study programmes	**Government, MVVI/RVVI, MŠMT, NAÚ**

	unique system of promotions)	rules for guarantorships of programmes and core courses shifting from formal guarantorships by full professors/associate professors to group guarantorships		
	Accreditation rules push for only full and associate professors to be guarantors of study programmes (at least formally), and primarily recognise publications as a sign of activity within the given discipline			
	There is an option to recognise other outcomes of creative activity but these are limited to categories defined by the Methodology 2017 and most academics fear to submit outcomes other than academic publications			
Formalisation of policy-relevant outcomes in existing classifications	Definitions of research outcomes results according to Methodology 2017 not taking into account the diversity of policy-relevant outcomes	Change accreditation criteria and RIV categories so that they reflect to a greater extent other types of academic output and accommodate better science-for-policy activities – for example recognise policy briefs and interventions other than amendments of a law or formally adopted new guidelines.	New output Hpub officially recognised	**Government, MVVI/RVVI**

New metric/process for assessing policy-relevant outputs	Bibliometric indicators considered most reliable for evaluation of scientific output Policymakers not taking part in evaluation of scientific output	New metric/process based on feedback from panels of evidence recipients incl. science advisors and their team at resp. government departments.	Bibliometric indicators to be equal to other dimensions of scientific activity, including science-for-policy that is evaluated based on feedback from policymakers/other stakeholders-research users (REF UK, CoARA)	Government, ministries in collaboration with rectors and scientific councils

Source: own elaboration

Implementation plan

— **Secure support within the MVVI/RVVI (end of 2024)**

— Finish the process of discussions over the exact description and status of the HPub;

— Have the Methodology 17+ amended by an official decision of the government.

— **Make changes to the national-level science evaluation (2025+)**

— Start discussions within the RVVI on how to merge Module 1 and Module 3 results into one category;

— Have a concrete amendment submitted to the government;

— Official government approval.

— **Make changes to the promotion criteria at research organisations (2025+)**

— Develop mechanisms for better-quality assessment of S4P outputs;

— Stimulate discussion within universities and other research organisations on replacing quantitative publication criteria with more qualitative criteria and a S4P-respecting attitude;

— First pilots inspiring change in other universities.

Table 25. Key activities & timing

What	Who	When	Other relevant stakeholders
Mapping the potential for modifications of internal guidelines and systems for academic promotions	Representatives of key universities + experts	07/2024	MVVI, other research organisations such as Academy of Sciences
Discussion of potential changes and amendments to definitions of scientific outputs	MVVI/RVVI	TBD	
Discussion of potential changes and amendments to the national system of science evaluation	MVVI	TBD	Research organisations

Presentation of the intervention to the NAÚ board and discussion of changes to accreditation assessment practices with evaluators	NAÚ+experts	TBD	MVVI
Check progress on amendments of the law 111/1998 concerning accreditations	MŠMT + experts	TBD	MVVI

Source: Own elaboration

Inter-sectoral mobility: Internship for researchers

Summary

Inter-sectoral mobility is a well-established scheme in many countries that might be viewed as role-models in EIPM for the Czech Republic. The need to implement a scheme in the country to support scientists to engage in policymaking has also emerged as part of this project. There are many variations of inter-sectoral mobility, all of them listed below. However, the recommendation focuses on implementing one of the variants (Ai), which consists of **medium-term internships for early-career researchers in public administration bodies**. This variant is a concept that has been tested abroad and represents a relatively feasible and beneficial intervention. To support the engagement of career scientists in policymaking processes, it is necessary to create rich opportunities for career and personal development. The intervention aims to provide both career researchers and public officers with opportunities to develop their skills, expertise and build stable and long-standing relationships between the academia and public administration.

Description of the current state

Currently, there is no policy or scheme for inter-sectoral mobility in any form. Nevertheless, there are some cases of ad hoc interactions, as is the case of the Stratin+ project (see below), for example, or student internships at the Ministry of Health.

Despite the lack of an established intersectoral mobility scheme, an increased willingness to establish and maintain an inter-sectoral mobility scheme was identified among public servants as well as career researchers. For this reason, it is strongly recommended to work on establishing one of the suggested schemes (see below), preferably on the scheme favoured by the BOs.

Even though the willingness of key stakeholders is crucial for implementing this intervention, it is necessary to keep in mind (potential) barriers in implementation. These consists of but are not limited to:

— A lack of available personnel capacities at relevant units at the public administration;

— An insufficient focus on applied policy-relevant research as a relevant career option;

— Lack of motivation to cooperate/participate.

Goal of the intervention

The intervention aims to increase the level of collaboration between various parts of the science-for-policy ecosystem. The goal is twofold – practical and cultural. On a more practical level, this intervention improves **knowledge and skills-sharing** between related institutions through closer interactions between the two sides. On a cultural level, the intervention will **improve understanding and willingness to collaborate** between various actors of the science-for-policy ecosystem. More specifically, it is expected that the career scientists will gain a better understanding of policymaking processes and the functioning of public administration bodies with a focus on science-for-policy processes. Furthermore, scientists will have the opportunity to establish long-term relationships and strengthen the communication of knowledge towards policymakers. The policymakers will receive access to the most recent scientific knowledge on relevant topics. Besides, they will learn to apply scientific knowledge in policymaking processes and also become acquainted with the cultural and organisational differences in research organisations.

Suggested solution

Due to the fact that in the Czech Republic, there is no such institutionalised scheme, a list of possible solutions is presented below. This list contains seven potential variants; nevertheless, it is not expected that all of them are to be established. However, the suggested options are not mutually exclusive but might be complementary.

Nonetheless, from the interviews with relevant stakeholders and following the needs of the Czech science-for-policy ecosystem, it is strongly suggested to implement option Ai (see below). This option represents the best combination of costs and gains and is elaborated on in the implementation plan. The implementation plan can be easily adjusted to other variants included in the list.

Generally, it should be emphasised that there are several preconditions. These are somewhat related to the above-mentioned barriers. First, the gains for the participating organisations and individuals need to be clearly communicated with the stakeholders. The demand side can be motivated by an improved access to highly-qualified individuals to work on their projects. The supply side can be motivated by increased cooperation with a public administration institution that may use the knowledge produced by the involved organisation and individual. This scheme will be especially appealing for research organisations interested in knowledge transfer and in increasing their impact. It is worth noting that the scheme has to enable the career researchers to continue with their career and should not be limited to researchers interested in a career change, even though a career change might be a welcome product of the mobility scheme.

For the intervention to work as planned, it is further strongly recommended:

37. Increase personnel's capacities in public administration bodies (especially Analytical units).

38. Improve planning of work in the public administration.

39. Improve communication between the supply and demand side (e.g. establish the CSO, implement other relevant interventions).

40. The research organisation needs to support researchers in producing policy-relevant research results (see intervention on Incentives for policy-relevant outputs)

41. The research organisations need to ease the conditions for a sabbatical to include an inter-mobility scheme as a part of researchers' career.

42. To support mobility from the demand side to the supply side, it is necessary to ease conditions for a 'public officials' sabbatical' and other types of leaves (see below).

43. Furthermore, the public administration should incorporate the 'job sharing' scheme to create a window of opportunity for the scheme to be established.

Ai. Preferred variant

Table 26. Preferred variant of inter-sectoral mobility scheme

Sub-variant	Who	Where	Topic(s)	Formalisation	Length	Benefits	Potential barriers	Examples
Ai.	Researchers	Analytical teams, sectoral units	RIA, Strategies, Long-term concepts, analytical support for CSO	Sabbatical, implementing organisation, external funding	Several month (6+), full time or close to full-time	Better policies, skills and expertise – sharing, increased cooperation and mutual understanding	Formal cooperation required, potential conflict of interest due to participation in public competition	[Mimshak](), [Blue book traineeship]()

Source: Own elaboration.

It is strongly recommended to focus on the Ai variant in implementing the inter-sectoral mobility scheme. This represents a reasonable combination of costs and benefits, with potentially limited negative effects with regards to the above-mentioned barriers. Most of the stakeholders expressed their support for this variant of the intervention, where the time frame allows for a fruitful project-related collaboration.

Implementation plan

Potentially relevant stakeholders cover most of the existing research institutions (universities, the CAS, etc.) and all public administration bodies. It is recommended that this intervention is implemented by the Office of the Government. Nevertheless, there are also other options, as individual research organisations or line ministries can develop their own mobility schemes to support their transfer efforts or the uptake of scientific knowledge.

Below, the recommended implementation plan, structured along individual steps, is shown. Similar schemes need to operate in regular cycles. Therefore, a recommendation on this kind of cycle has also been included.

Implementation essentials

The implementation requires creation of a **match-making process** to match researchers with relevant units within the public administration. This also presupposes publishing of relevant and specific areas of cooperation (see table above). This might be fine-tuned in relation to the intervention on the definition of research needs that is also a part of this project. The match-making process needs to combine both formal and informal aspects to be both transparent and efficient. It is advised to organise the process by the Office of the Government. Formalisation of the process is required due to expected limited capacities.

Capacities required

— **A small administrative team** to take care of the whole process and an authority to sponsor the scheme.

— **A committee** to choose among the applicants needs to be established. It is strongly recommended to support applicants with **mentors** from the public administration.

— Preparing an initial **training for participants** to make their collaboration with teams easier.

— Ensuring **capacities to evaluate the process** on a regular basis, as parametric fine-tuning might be needed.

— **Funding** the stipends of the participants.

Furthermore, both sides of the science-for-policy ecosystem have to work on creating potential windows of opportunities for individuals to participate. The participation must be actively supported at the organisational level as well as by the heads of teams. In case of this variant of the scheme, the windows of opportunity should be supported especially on the supply side, potentially in the form of a sabbatical. A sabbatical is regulated by each academic institution. The goal is to support research, career development, or study abroad. The fellowship, or involvement with the public administration, should be encouraged as well. Typically, a sabbatical is allowed only after several years of full-time employment and is expected to last 6-12 months.

Implementation steps

Stakeholders are identified based on research interviews conducted for purposes of this report. The timeframe is based on expected complexity of the implementation steps. It is dependent on the willingness and involvement of key stakeholders and respective political representation. The intervention can be realistically realised in circa 12-18 months, or later.

44. Decision on details of the scheme, budget, funding and implementing organisation (Mid 2025)

Stakeholders: RVVI, TA ČR, potentially Office of the Government (MVVI), and Ministry of Education

— The intervention has to be sponsored by a renowned organisation to support a sense of prestige.

— The sponsoring organisation does not have to be the implementing organisation itself.

— It is suggested to implement the scheme in cooperation with the RVVI and TA ČR. Nevertheless, more options are possible here.

— Funding needs to be secured:

— The overall costs are expected to be several million CZK (roughly between 2,500,000 to 4,500 000, depending on the number of fellows per year and other variables), excluding the price of a one-time evaluation report.

— Costs should be shared between the implementing organisations (i.e. from the research budget) and the line ministry, where the fellowship takes place. This will increase the ownership of the respective ministry, but still incentivises the ministry to actively use the scheme.

— The budget for the scheme needs to be approved by the implementing organisations and ministries, ensuring sufficient allocation of resources prior to the implementation of the scheme. Similarly, appropriate personal capacities need to be authorised for the sponsoring/overseeing organisation prior to the preparation and implementation of the scheme.

45. Supportive reforms (End of 2025)

Stakeholders: Office of the Government (MVVI), universities, the Czech Academy of Sciences (AV ČR), Ministry of the Interior

— Both academia as well as the public administration need to create a window of opportunity for relevant actors.

— On the side of academia, the main issue is the insufficient flexibility for post-docs to free themselves from their research and teaching duties for several months to work full-time in public administration. The supply side has to encourage junior researchers to interact with the public administration and create mechanisms to lower their workload for a period of time.

46. Establishment of a supportive administrative body and committee to review the candidates (2026)

Stakeholders: Office of the Government, TA ČR

— Regular personnel capacities need to be found and allocated to implement the process (does not need to be an independent body).

— A committee to review candidates has to be established:

— This should include senior members from academia, public administration, the implementing organisation, and the head of the team where the fellowship is to take place.

47. Establishment of the match-making process (2026)

Stakeholders: TA ČR, Office of the Government (MVVI), research organisations

— The matchmaking process needs to be both formal to ensure transparency, and informal to create a welcoming environment and an effective exchange of ideas, information and intentions.

— The process should include:

— A definition of (research) needs – transparent presentation of what the fellows might be working on;

— An informal match-making event, in cooperation with relevant academic institutions;

— An official open call for applications, announced on the relevant website and promoted towards research institutions.

48. Design of an initial training for fellows (2026)

Stakeholders: TA ČR, Office of the Government (MVVI), research organisations

— An initial training for fellows should be organised to manage their expectations and introduce them to the basic principles of policymaking.

49. Establishment of mentoring programme (2026)

Stakeholders: Office of the Government, TA ČR, relevant line ministries

— Each fellow should be assigned to a senior policymaker as their mentor.

50. Open call for applications and beginning of the process (2026)

Stakeholders: Office of the Government, TA ČR, relevant line ministries

— The process, which starts with the selection of suitable candidates, needs to include training, mentoring, initial and closing events, as well as an annual alumni event to build the community around the fellowship scheme.

51. Evaluation of the scheme (2029)

— An independent evaluation after a period of time to finetune the mechanism and the various aspects of the scheme has to be undertaken and planned from the very beginning.

The suggested timeline for an inter-sectoral mobility scheme is shown below.

Table 27: Mobility scheme cycle

Action	When (month)
Areas of interest published	March
Informal networking event	May
Call for applications	August
Applications accepted/rejected	October
Fellows matched with their mentors	January
Fellow training in policymaking processes and S4P	January

Fellows start participating in their units	January
Fellows finish their work	June
Final event for this year's fellows	July
Alumni event	September

Source: Own elaboration

Other potential variants

Table 28: Aii – Public officers in research institutions

Who	Where	Topic(s)	Formalisation	Length	Benefits	Potential barriers	Examples
Semi-senior public officers	Research institutions	Applied research project cooperation, teaching activities	MoC, external funding	Several months (6+), full time	Better understanding of research processes, increased cooperation, building necessary capacities	Lack of needed expertise, formal cooperation needed, length of typical research projects	N/A

Source: Own elaboration

This variant mirrors the previous preferred one. The core of this possible scheme is the internship of semi-senior public officers in research institutions. This type of intervention should not aim at neither very senior, nor very junior public officers, as it requires some dedication of capacities as well as a better understanding of some of the aspects of science-for-policy mechanisms. It is expected that the most problematic aspect might be the matter of cooperation, as research activities might require some very specific knowledge and skills. Furthermore, similarly to the previous intervention, some enabling reforms should be undertaken here as well. These include:

— 'Sabbatical' (demand side)

— Law on public service

— § 110

— The public official can be allowed to study (and increase qualifications)

— They will still receive their salary as public officials

— They are obliged to remain in the public service for a period of time related to the expenses that the public administration body incurred because of their study

— § 69

— The public official can be freed from service up to 12 months to study or to go for an internship

— This is possible only after 5 years of service

— They cannot receive any salary in the meantime

- They are not obliged to stay in the public service afterwards

- § 105

- The public official can ask for unpaid leave for any period of time for any reason

- They are not obliged to stay in the public service afterwards

- Job sharing ('sdílené pracovní místo' according to Labour Law No. 262/2006, Coll. § 317a)

- At the moment not relevant for the public service

Table 29. B – Low-cost variant

Sub-variant	Who	Where	Topic(s)	Formalisation	Length	Benefits	Potential barriers	Examples
Bi.	Analytical teams, other teams in public administration (PA)	Analytical teams, other teams in PA	Individual, skills-sharing, consultation	Informal	2 days/ week in month	Increased cooperatio, skills and knowledge-sharing	Capacities, subject of collaboration difficult to define	[Mercator Science-Policy Fellowship-programme](#) [Leibniz im Bundestag](#)
Bii.	Analytical teams, other teams in PA	Research institutions	Individual, skills-sharing, consultation	Informal, Memorandum of understanding	2 days/ week in month	Increased cooperation, skills and knowledge-sharing, understanding of scientific method, processes of research projects	Capacities, subject of collaboration difficult to define	[STRATIN +](#) [Mercator Science-Policy Fellowship-programme](#) [Leibniz im Bundestag](#)
Biii.	Research institutions (junior researchers)	Analytical teams, other teams in PA	Individual/ skills sharing	Informal/Memorandum of understanding	2 days/ week in month	Increased cooperation, skills and knowledge-sharing, understa	Subject of collaboration difficult to define	[Mercator Science-Policy Fellowship-programme](#)

| | | | | | | nding of policyma king processes, alternativ e career option | | [Leibniz im Bundest ag](...) |

Source: Own elaboration.

This intervention is a low-cost variant, to some extent already implemented in the Czech context as a part of the STRATIN+ project. It is a variant that does not require any specific institutional structure but is solely dependent on the willingness of parties involved. The main potential limitation is the limited scope of the scheme, which potentially creates problems in developing the subject of collaboration. Therefore, this variant is assessed as having a risky cost-benefit ratio. Nevertheless, in some specific cases, it is still worth examining this option for organisations involved. It is recommended for this variant to become an informal part of the recommended intervention.

STRATIN+ Case

Stratin+ is a joint action project implemented by a consortium of research organisations. The project is focused on providing services of strategic intelligence to the public administration. Two public officials from the Section for Science, Research and Innovation at the Office of the Government have participated in an internship at the Technology Centre Prague. The interns were invited to the Technology Centre to focus on topics from their daily tasks, in order to improve the results of their work. So that their regular work duties were not interrupted, the officers joined their colleagues from the Stratin+ project for only a few days during a two-week period. This ensured they could still fulfil their daily duties at the office as well as participate in the internship. This was carried out without compensation from either side taking part in the project, and was legally covered by the labour law.

Both sides agreed on the effectiveness and fruitfulness of their collaboration. For employees of the Technology Centre Prague, the internship enabled them to understand the way that analysis and research is used by the R&D Section. According to the public officials, this was especially beneficial for broadening their perspectives on the topic of R&D. Both parties also welcomed the possibility of networking.

Table 30: C – Long-term internship

Who	Where	Topic(s)	Formalisation	Length	Benefits	Potential Barriers	Examples
Senior Researchers	Analytical units	Project cooperation	Additional funding – foundation, state budget, private philanthropists, responsible organisation	1-2 full years, full time	Alternative career path, increased cooperation, skills-sharing, increased expertise and capacities, better policies	Lack of motivation, insufficient focus on policy research career path, lack of infrastructure, lack of actual demand, extra training needed	[Canadian Science Policy Fellowship](...), [UKRI Policy Fellowships programme](...), [Science and technology policy fellowships](...)

Source: Own elaboration

This variant is very similar to the recommended one. The difference is that this option is typically more suitable for senior researchers, who are seeking a change in their careers. Furthermore, it requires increased and better preparation and planning. It is possible to have this scheme as a follow-up of the recommended Aii variant. At the moment, it seems that its success is not guaranteed as there is a lack of interest. Also, it seems highly difficult to align it with researchers' careers.

Table 31: D – Pairing scheme

Who	Where	Topic(s)	Formalisation	Length	Benefits	Potential barriers	Examples
Members of Parliament / public officials	Research institutions	Shadowing the activities of the partner	MoC/Informal/Institutional	Few days in each institutions	Increased understanding, networking, knowledge-sharing	Capacities, extra costs, risk of becoming overloaded	Royal Society pairing schemes

Source: Own elaboration

This is another low-cost variant that still requires some planning. However, similarly to previous variants, this can easily be an intervention implemented by one of the stakeholders (the CAS, any of the universities, SYRI), as it is common abroad. The focus here is on matching relevant senior researchers and policymakers (potentially MPs) for a transfer of knowledge and networking opportunities. Even though this intervention can easily have great benefits, it has presumably lesser impact due to the fact that many of the senior policymakers and MPs are already matched to relevant researchers and a non-institutionalised exchange exists.

Good case practices

Science and Technology policy fellow

This programme focuses on attracting scientists and engineers to public administration topics. The mission is to improve scientists' understanding of government and policymaking. Throughout a 12-month period, scientists are meant to prepare, develop and execute solutions on acute policy issues. The STP fellowship is a model for similar fellowships around the globe. It is highly prestigious and rewarded by an attractive stipend. As part of the fellowship, scientists participate in training and workshops. For many of the fellows, it is a key impulse for their further career development. This fellowship has influenced many regulations in the USA and it is highly praised for delivering additional scientific expertise to policymaking. Furthermore, it has helped to create standards for similar programmes abroad (SFI public service fellowship, Canadian Science Policy Fellowship, ESRC Policy Fellowships 2021 (UK)).

Programme Mimshak (Israel)

This programme is one of the global models of internships for researchers. This programme focuses on developing environmental policies in Israel and is based on integrating scientists in governmental bodies for a one year to base decision-making processes on science in order to create optimal solutions. Fellows are supported by a monthly stipend and receive information and training in policymaking processes.

Royal society pairing schemes

This is a UK pairing scheme that focuses on matching scientists with senior policymakers or MPs. Pairing follows the preferences of the participants and consists of shadowing their partners in their domestic institutions. Similarly, the Leibniz im Bundestag scheme is built on F2F interviews with MPs from the Bundestag and scientists from the Leibniz Institute, who offer individual and current topics to discuss with them.

Policy centres

Goal of the intervention/ideal state

⸺ The intervention aims to establish policy centres within academic institutions to enhance the delivery of policy-relevant evidence in the Czech Republic. The ultimate goal is for the public administration to

collaborate systematically with external entities, including academic, non-profit, and business sectors, to procure evidence and actively participate in the policymaking process.

— These policy centres will serve as dynamic hubs for policy-relevant research, fostering continuous collaboration between the public administration and the academic sector. By establishing these centres, the Czech Republic aims to create a robust and adaptive infrastructure for evidence-based policymaking, ensuring that policies are informed by the latest research and effectively address public needs.

Policy centre's functions:

— **Evidence generation and synthesis:** Policy centres will generate and synthesise evidence both on demand and through their own initiatives. This dual approach ensures a responsive and proactive stance in addressing policy needs.

— **Participation in policy processes:** These centres will be integrated into various stages of the policymaking process, including problem analysis, exploring solutions, policy design, testing, and evaluation. Their involvement throughout these stages will ensure that policies are evidence-based and thoroughly vetted.

— **Stakeholder and end-user involvement:** Policy centres will create spaces for participative design methods, ensuring the involvement of stakeholders and end-users. This participatory approach will help tailor policies to the needs and perspectives of those affected by them.

— **Advanced methodological approaches:** The centres will employ advanced methodologies in policy analysis, such as statistical modelling, to provide rigorous and reliable evidence. These sophisticated techniques will enhance the robustness and credibility of the evidence provided.

— **Agility and autonomy:** While policy centres will be responsive to the changing research needs of public administrations, they will maintain autonomy and have the capability to set their own research agendas. This balance will allow them to remain innovative and independent while also policy relevant.

Description of the current state

— The internal analytical capacities of the public administration in the Czech Republic are currently limited by financial constraints and a lack of skills and capacities, with these capacities unevenly distributed across institutions. Not all line ministries have established institutions at arm's length to meet their evidence needs, and in some cases, the capacity of these institutions to generate policy-relevant evidence is contested. Consequently, the public administration often relies on external expertise through various formal and informal processes.

— These processes include employment contracts with individual researchers, collaborations with NGOs or think-tanks, partnerships with academic teams, public procurement (including the BETA program), and unsolicited research results obtained through grants and programs such as TA ČR and Horizon. Despite these mechanisms, the vast majority of respondents surveyed during the diagnostics phase indicated that academic research institutes and universities should be consulted more frequently when designing new policies.

— Higher education organisations have recently intensified efforts to promote the societal impact of research through strategies aimed at establishing stronger links between academia and public sector institutions. However, the complexity and duration of public procurement processes remain significant barriers to procuring evidence swiftly and in a timely manner. Advisory bodies typically consist of a mix of various stakeholders, with purely scientific advisory bodies being very rare.

— While the Regulatory Impact Assessment guidelines emphasise stakeholder engagement, there is considerable room for broadening and deepening this engagement to ensure more comprehensive and inclusive policy development.

Inspiration from abroad

— The recent proliferation of 'policy labs' represents a significant trend in global governance, reflecting a shift towards innovative, scientific, and experimental methods in policy development. Wellstead et al. (2021) describe this as a 'abification' phenomenon, where the drive for innovative policy solutions is being structured similarly to scientific experiments. These labs, variably termed as 'public innovation labs', 'government innovation labs', 'organisational innovation labs', among others, focus on a variety of sectors

and issues, ranging from healthcare to education, and can operate under different levels of government influence (Hinrichs-Krapels et al., 2020; Wellstead et al., 2021; Wellstead & Howlett, 2022; Whicher, 2021).

⸺ Policy labs are essentially collaborative platforms where dedicated teams or entities utilise innovative methods to design public policies with the involvement of all relevant stakeholders (Fuller & Lochard, 2016). They are characterised by their ability to tackle complex societal challenges through creative and user-oriented approaches, experimenting with and proposing new public services and policies. Their work often leads to transformative changes in governmental operations, aiming for both incremental and systematic changes (Tõnurist et al., 2015). Fuller and Lochard (2016) further highlight that these labs not only develop programmes that address immediate problems, but also focus on training leaders and creating tools that enhance public service efficacy through innovative practices. The integration of policy labs within government entities underscores their role in shaping and implementing public policies, reinforcing their connections with the public sector, academia, and civil society (Fuller & Lochard, 2016; Olejniczak et al., 2020).

⸺ The organisational characteristics and ownership of policy labs demonstrate significant diversity across different regions and governance levels. Approximately half of the policy labs surveyed are entirely owned by public sector entities, with every lab in the Asia and Australia region falling under public sector ownership, highlighting a strong governmental influence in these areas. The ages of these labs range widely from newly-established entities such as the Philadelphian GOVLabPHL, launched in 2016, to those that have been operational for over two decades, with some having transformed from other types of organisations into policy labs. Notably, the oldest lab named as such is Mindlab, established between 1995 and 2002, during an era when many of the long-standing labs were founded. The recent surge in the creation of policy labs, particularly evident in the Americas and Asia, shows that most are relatively new, with the majority being less than seven years old (Lewis, 2021).

⸺ In terms of structural attributes, there is no standard size or optimal location for policy labs, which vary from very small teams to those employing over 80 staff members across multiple offices. The flexibility in their operational design is more critical than their size, allowing them to adapt to the varying needs of their projects. Many operate with a core group of permanent staff augmented by temporary, project-specific contracts. This adaptability is essential, given the labs' roles within the broader public sector, where they remain relatively small compared to traditional government departments (Lewis, 2021; McGann et al., 2018). This structural diversity supports a wide range of functions and allows labs to respond dynamically to the changing demands of public policy development and implementation.

Suggested solution

⸺ Support the creation of several policy centres within academic institutions (Czech Academy of Science and Universities) and/or private sector institutions (think-tanks, NGOs, private companies); establish framework for cooperation between them and Line ministries.

Implementation plan

Table 32. Implementation plan for Policy centres

Implementation action	Time frame and Milestones	Lead implementing actor	Stakeholders
Identify relevant units / teams within research organisations	01/2025	line ministries	R&D departments, analytical department, knowledge transfer offices
Communicate research needs of line ministries and discuss possibilities for providing policy-relevant research	01/2025	line ministries	Research organisations, R&D departments, analytical department, knowledge transfer offices

Agree on a framework for collaboration, including time-frames	03/2025	line ministries	Research organisations (units, teams), R&D departments, analytical department, knowledge transfer offices
Define the scope and depth of expected research outputs	04/2025	line ministries	Research organisations (units, teams), R&D departments, analytical department, knowledge transfer offices

Source: Own Elaboration

Annex 4: Table on Demand Side: Science-for-policy Agendas

Abbreviations in table:
SC: Scientific council
WG: Working groups
CSO/CSA: Chief Science Officer / Advisor
RD: Research department
CM: Cabinet of Minister
SD: Sectoral department
OG: Office of the Government
EU: Evaluation unit
EC: External evaluators / committees
PD: Policy / strategic department
RI: Research institute

Table 33: S4P Agendas

Area	Agendas / Activities	Details	SC	WG	CSO/ CSA	RD	CM	AU	SD	RVVI	OG	EU	EC	PD	RI
Sector–specific strategies (and policy proposals – RIA)	Proposal / definition	WGs in charge, process supported by the PD; CSO would be available to support the process of obtaining relevant advice (e.g. commission external analysis, see agenda under analysis and research – external). Relevant SD cooperates with PD.		x	x				x					x	
	Approval	The head of SD approves the final version; CM adopts; SC recommends.	x				x		x						
	Evaluation & actualization	The RD will lead the process; engage EU (or external evaluators); results would be communicated by relevant SD to the CM.				x	x					x			
M & E	Definition of needs	Depending on projects/policies that need monitoring (whether under the auspices of the European Union or not, for which specific rules are in place), the Evaluation Unit (EU) cooperates with SDs on defining evaluations. For projects / policies that do not fall under the European Union agenda, the CSO involvement would be required, working together with EU and SDs to define the scope and form of the evaluations needed (or scope, form and frequency of monitoring).			x				x			x			
	Prioritisation / budget allocation	For non–EU related M&E, CSOs cooperate with RD, relevant SDs and EU to design a plan for M&E; the main responsibility for the scope and form of the M&E lies with the EU.			x	x			x			x			
	Commissioning	RD administering M&E needs by procuring them externally; or, done internally in case of capacity, by Evaluation Unit.				x						x			
	Use of M & E, systematisation and archiving	SDs are primarily in charge of taking into account the results of M&E, archiving them in the relevant ministerial database							x						

			C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
Strategies (Research concepts of Ministries)	**Proposal / definition**	WGs in charge, process supported by RD; CSO would be in WG; someone from each department, incl. AU (if exists); + reps of scientific community	x	x	x		x					
	Approval	CM adopts; SC recommends (but doesn't adopt); RVVI formally recommends	(x)			x			(x)			
	Evaluation & actualization	RD will lead the process; engage EU (or external evaluators); CSO would observe the process, communicate results to CM	x	x	x					x		
Analysis and research (externally commissioned)	**Definition of needs**	CSO owns the agenda but involves AU; involves all SDs; RD [who is in charge of this now] can formally communicate the needs for the Ministry once they are defined (e.g. BETA), but do not have to be in charge of the need collection.		x	x		x	x				
	Prioritisation / budget allocation	CSO in cooperation with SDs (+AU); SC considers it and provides its own opinion; sent to the CM for approval	x	x		x						
	Commissioning	Administering research needs by formally entering them into different competitions – RD; compilation of research projects and evaluation of their proposals – SD is charge, and may employ outside bodies (such es evaluation committees, or external evaluators for the quality of the projects)			x		x				(x)	
	Cooperation and oversight during implementation	RD would formally check all the legal provisions; CSO would be monitoring the research results (they would be 'ZOG'), also communicating with the relevant SDs; AU should be informed about the implementation / research results (it could be useful for their work); SC can be informed about research results and would also have the possibility to provide their opinions on it. Potentially, if the SC had a strong mandate, it could offer methodological suggestions and provide feedback on drafts.		x	x			(x)				

	Evaluation from scientific perspective	CSO would primarily monitor the quality of the research; SC could also provide their opinions on the research results and discuss whether they find the research scientifically sound / valid. If especially high-stakes research is done, a special PS (or sub-committee) could be established to monitor the research results (maybe under SC); it can also be an external evaluation committee or evaluators.	x	(x)	x									(x)		
	Implementation of results	Relevant SDs are in charge of implementing research results.		x	x		x	x								
	Systematization and archiving of results	SDs make sure that the research findings are stored in the relevant database; CSO and RD are automatically notified of this.							x							
Analysis and research (internally produced); direct ad-hoc advice [may include opinion pieces, conclusions, other shorter analyses]	**Definition of needs**	CSO + AU + SD (AU would be service units for SD to understand what the need is); CSO would decide if it is possible to internally fulfill this need or if it needs to be commissioned from outside (external / or RI)		x			x	x								
	Implementation	AU would fulfil the need; CSO would monitor the process (or members of their team); potentially, if quick advice is needed, the CSO (in communication with the Minister, if very important) can also reach out to the SC and ask for opinion	(x)	x			x									(x)
	Implementation of results	Relevant SDs are in charge of implementing research results.							x							
	Systematization and archiving of results	SDs ensure that research findings are stored in the relevant database; CSO and RD are automatically notified of this.							x							
	Nominating the leadership	In case of institutes founded by Ministry, the Ministry announces the call for new management, nominates the members of the selection committee.				x	x									

Management of RIs and RI research	**Appointment of leadership**	In case of institutes founded by the Ministry, the director is named by the Ministry; intent to name the Director is discussed by the Council of the institution and the Supervisory board. The SC can provide its recommendations to the CM.	(x)				x								x
	Strategies / DKRVO	The RI should cooperate with the Ministry SDs and the CSO when defining their DKRVO. The RD can administratively facilitate the process. The SC should be informed about the Strategy / DKRVO and can offer its recommendations.	x		x		x			x		(x)			x
	Commissioning of research	CSO should suggest what research could be done by the RI; the RI can consider it and assess whether they have the capacity to do it.			x										x
	Implementation of research / of research results	CSO would monitor the quality of research: SC could provide their opinions on the research results, and discuss whether they find it scientifically sound / valid. The research results would be implemented by SDs.	x		x					x					x
	Continuous evaluation of DKRVO fulfilment / budget allocation + final evaluation (5 years)	Implemented by the founder (in case of RIs established by Ministry), for external through external evaluation committees (Module 3,4 and 5 according to M17+) and RVVI (module 1,2). The results of the evaluation are in that case discussed by RD, RVVI and external experts (evaluation committee)					x			x			x			
Other	**Guarantee of involvement in international projects with national participation**	CSO as the main focal point that involves the ministry in international projects, oversees the process and attempts to co-guarantee the quality of such projects. CSO should inform the SC of these initiatives.	x		x					x					

Activity	Description															
Cooperation with academies and other research organisations	CSO guarantees formal and informal relationships, keeps in contact with relevant stakeholders			x												
Strengthening of S4P narrative within Ministry	CSO as a champion of S4P practices at the ministry, formal requirements, but also introducing good practices etc.			x												
Identification of educational needs	CSO in co-operation with HR/state secretary define educational needs that relate to improving S4P capacities and skills of ministry employees			x												
Inter-ministerial cooperation	CSO facilitates the exchange of knowledge with CSOs from other Ministries on a regular basis (+TA ČR/GA ČR on a bi-annual basis)															
Cooperation and coordination with the government	The Government Office reaches out to CSOs to ensure that the government's research priorities (per resort) are met			x						x						

Source: Own Elaboration

Getting in touch with the EU

In person

All over the European Union there are hundreds of Europe Direct centres. You can find the address of the centre nearest you online (european-union.europa.eu/contact-eu/meet-us_en).

On the phone or in writing

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

— by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),

— at the following standard number: +32 22999696,

— via the following form: european-union.europa.eu/contact-eu/write-us_en.

Finding information about the EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website (european-union.europa.eu).

EU publications

You can view or order EU publications at op.europa.eu/en/publications. Multiple copies of free publications can be obtained by contacting Europe Direct or your local documentation centre (european-union.europa.eu/contact-eu/meet-us_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex (eur-lex.europa.eu).

EU open data

The portal data.europa.eu provides access to open datasets from the EU institutions, bodies and agencies. These can be downloaded and reused for free, for both commercial and non-commercial purposes. The portal also provides access to a wealth of datasets from European countries.

Science for policy

The Joint Research Centre (JRC) provides independent, evidence-based knowledge and science, supporting EU policies to positively impact society

EU Science Hub
Joint-research-centre.ec.europa.eu

Publications Office
of the European Union