

DG REFORM

Integrated policymaking in the area of RDI

Call for tenders under REFORM/2021/OP/0006 Lot 1

RFS ID: TSIC-RoC-19598

19 December 2024 – D4 Gap analysis report

Technical Support Instrument

Supporting reforms in 27 Member States



Funded by
the European Union



This document was produced with the financial assistance of the European Union. Its content is the sole responsibility of the author(s). The views expressed herein can in no way be taken to reflect the official opinion of the European Union.

The project is funded by the European Union via the Technical Support Instrument, managed by the European Commission Directorate-General for Structural Reform Support.

This report was delivered in [December 2024](#), under EC Contract No. [TSIC-RoC-19598](#). It has been delivered as part of the project "[Integrated policymaking in the area of RDI](#)".



The Commission's reuse policy is implemented by Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39 – <https://eur-lex.europa.eu/eli/dec/2011/833/oj>).

Unless otherwise noted, the reuse of this document is authorised under the Creative Commons Attribution 4.0 International (CC BY 4.0) licence (<https://creativecommons.org/licenses/by/4.0/>). This means that reuse is allowed, provided that appropriate credit is given and any changes are indicated.

Directorate-General for Structural Reform Support

REFORM@ec.europa.eu
+32 2 299 11 11 (Commission switchboard)
European Commission
Rue de la Loi 170 / Wetstraat 170
1049 Brussels, Belgium

CONTENTS

List of Acronyms.....	5
List of Tables.....	6
List of Figures	7
1. Introduction	8
1.1. Purpose	8
1.2. Methodology	8
1.2.1. Methodological approach to AS-IS analysis.....	9
1.2.2. Methodological approach to TO-BE situation.....	9
1.2.3. Stakeholders involved.....	10
2. AS-IS analysis.....	11
2.1. Human resources	11
2.1.1. Number of positions and staff.....	11
2.1.2. Education and training	13
2.1.3. Employee Turnover	14
2.1.4. Main challenges.....	14
2.1.5. Conclusions	15
2.2. Structures.....	17
2.2.1. Link to policy objectives and priorities.....	17
2.2.2. Main tasks in the design of industrial strategies.....	18
2.2.3. Main tasks in implementing industrial strategies.....	20
2.2.4. Stakeholder and partner involvement	21
2.2.5. Communication and information exchange.....	24
2.2.6. Flexibility	25
2.2.7. Main challenges.....	25
2.2.8. Conclusions	26
2.3. Systems and Tools.....	28
2.3.1. Tools used in designing and implementing industrial strategies	28
2.3.2. Methods used in designing and implementing industrial strategies	28
2.3.3. Main data sources	29
2.3.4. External expertise.....	30
2.3.5. Coordination, management and communication	30
2.3.6. Monitoring and evaluation.....	31
2.3.7. Main challenges.....	31
2.4. External factors.....	33
2.4.1. Legal framework	33
2.4.2. Financial resources.....	34
2.4.3. Transparency and inclusiveness	35
2.4.4. Objectives of industrial strategies	36
2.4.5. Other external factors.....	36
2.4.6. Conclusions	38
2.5. SWOT analyses.....	39
2.6. Interrelations.....	43

2.7.	Main findings of the AS-IS analysis by organisational unit	44
2.7.1.	VAIA – Research and Innovation Policy Department	44
2.7.2.	VAIA Priorities Department.....	45
2.7.3.	Department of Industrial Policy of the MoE	46
2.7.4.	Innovation Department of MoE	47
2.7.5.	Institute of Economic Analyses of MoE.....	48
2.7.6.	Slovak Innovation and Energy Agency	49
3.	TO-BE situation	50
3.1.	Human Resources	50
3.1.1.	Priorities for human resources	50
3.1.2.	Overview of the proposed measures for human resources.....	50
3.1.3.	Description of human resources measures.....	51
3.2.	Structures.....	63
3.2.1.	Priorities for structure.....	63
3.2.2.	Overview of the proposed measures for the area of structure.....	63
3.2.3.	Description of measures for the structure area	64
3.3.	Systems and tools.....	76
3.3.1.	Priorities for Systems and Tools.....	76
3.3.2.	Overview of the proposed actions for "Systems and tools"	76
3.4.	External factors.....	84
3.4.1.	Priorities for externalities.....	84
3.4.2.	Overview of the proposed measures for the externalities area.....	85
3.5.	Principles of change management	92

List of Acronyms

ACRONYM	
AO	Antimonopoly Office of the Slovak Republic
BR	Business Register of the Slovak Republic
CREPA	Central register of evidence of publishing activity
DIP	Department of Industrial Policy, MoE
DISRDP	Department for the Implementation of State R&D Policy, MoERDY
EDIH	European Digital Innovation Hubs
EPO	European Patent Organisation
ESIF	European Structural and Investment Funds
FPI	Financial Policy Institute, MoF
GPO	General Prosecutor's Office of the Slovak Republic
IEA	Institute of Economic Analyses, MoE
IS SEMP	The central register - the Information system for recording and monitoring aid
ID	Innovation Department, MoE
MIRDI	Ministry of Investments, Regional Development and Informatization of the Slovak Republic
MLE	Maximum Likelihood Estimates method
MoE	Ministry of Economy of the Slovak Republic
MoERDY	Ministry of Education, Research, Development and Youth of the Slovak Republic
MoF	Ministry of Finance of the Slovak Republic
MOOC	Massive Open Online Course
NGO	Non-governmental organization
NICA	National Implementing and Coordinating Authority
NSRDI	National Strategy for Research, Development and Innovation 2030
PRI	Public Research Institution
R&D	Research and development
RDI	Research, development and innovation
RIPD	Research and Innovation Policy Department, VAIA
RIS3	Research and Innovation Strategy for Smart Specialisation of Slovakia
RRP	Recovery and Resilience Plan of the Slovak Republic
SARIO	Slovak Agency for Investment and Trade Development
SAS	Slovak Academy of Sciences
SBA	Slovak Business Agency
SIEA	Slovak Innovation and Energy Agency
SCSTI	Slovak Centre of Scientific and Technical Information
SRDA	Slovak Research and Development Agency
SWOT	Strengths, Weaknesses, Opportunities, and Threats
VAIA	Research and Innovation Authority
VMU	Value for Money Unit, MoF
WIPO	World Intellectual Property Organization

List of Tables

Table 1: Number of positions, number of employees and number of organisational unit staff involved in the development and implementation of industrial strategies and action plans	12
Table 2: Proportion of annual working time (%) devoted by the involved staff listed in table 1 above to the performance of activities related to the development and implementation of industrial strategies and action plans.....	12
Table 3: Proportion (%) of staff time of the unit devoted to industrial strategies and action plans, broken down into development (of strategies), investment design and implementation.....	13
Table 4: Main tasks performed in design of industrial strategies	19
Table 5: Main tasks performed in implementing industrial strategies.....	20
Table 6: Main data sources	29
Table 7: SWOT analysis – human resources	39
Table 8: SWOT analysis – structures	40
Table 9: SWOT analysis --system and tools.....	41
Table 10: SWOT analysis – external factors	42
Table 11: Overview of interrelations / interdependencies	43
Table 12: Priorities and proposed measures for Human Resources	50
Table 13: Priorities and proposed measures for Structures	63
Table 14: Priorities and proposed measures for System and Tools	76
Table 15: Priorities and proposed measures for External Factors.....	85

List of Figures

Figure 1: Scope of the Gap report.....	8
Figure 2: Methodology for elaboration of the AS-IS analysis	9

1. Introduction

1.1. Purpose

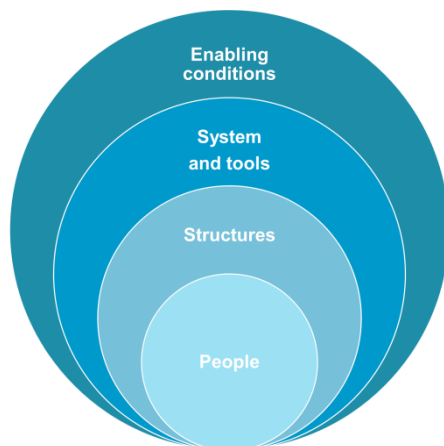
This report is being prepared under the DG REFORM call for tender REFORM/2021/OP/0006 Lot 1 “Integrated policymaking in the area of RDI” project under Deliverable 4 – Gap analysis report of the administrative capacity for implementing industrial strategies (AS-IS analysis vs. TO-BE situation). The first part of the report provides an assessment of the administrative capacities in central administration institutions and agencies to effectively deliver industrial policies. The second part of the report offers the priorities and measures to address the main gaps in the administrative capacities.

The capacity of Slovak public institutions to effectively design, finance and implement industrial strategies (policies) is vital for the overall competitiveness of the country. The effects of public investments depend strongly on how well public policies and industrial strategies are governed at the national level. Gap analysis identifies the main areas for improvement and provides specific interventions to be adopted and implemented by stakeholders.

1.2. Methodology

The following factors of the administrative capacity are addressed in the Gap report: i) human resources, ii) structures, iii) systems and tools and iv) enabling conditions. These factors determine the overall capacity of the institutions to effectively design and implement public policies / strategies.

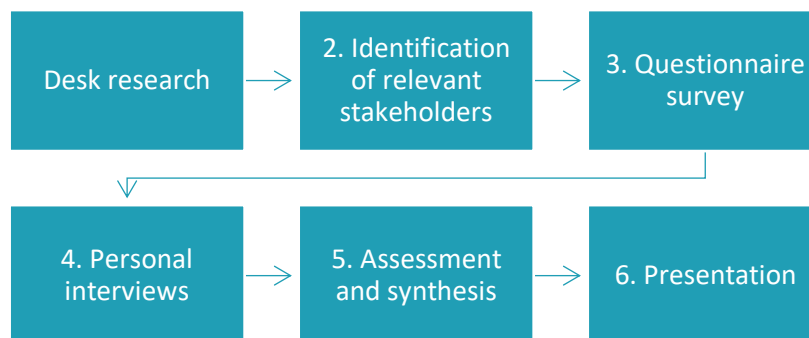
FIGURE 1. SCOPE OF THE GAP REPORT



Source: OECD (2021), *Administrative capacity building roadmaps*, adopted by the project team.

1.2.1. Methodological approach to AS-IS analysis

FIGURE 2. METHODOLOGY FOR ELABORATION OF THE AS-IS ANALYSIS



1. **Desk research** – collection and processing of relevant documentation on institutions involved in industrial strategies design and implementation in Slovakia.
2. **Identification of relevant stakeholders** – selection of relevant organisational units responsible for designing and implementing industrial strategies to be included in the analysis.
3. **Questionnaire survey** – designed to collect information on the main factors of the administrative capacities. The questionnaires were distributed to respondents electronically (by email).
4. **Personal interviews** – allowed addressing information gaps and clarification of answers from collected through the questionnaire survey.
5. **Assessment and synthesis** – expert team conducted assessment, synthesis and interpretation of the data gathered. For each factor, SWOT analysis was elaborated.
6. **Presentation** – preliminary findings of the AS-IS analysis were presented and discussed with stakeholders.

Note: AS-IS analysis does not include comparison with other countries as there are no relevant data available on administrative capacities for industrial strategies.

1.2.2. Methodological approach to TO-BE situation

The aim of the TO-BE analysis was to define the measures / actions to be taken in order to bring administrative capacities to the level needed for sound implementation of industrial strategies. The priorities for interventions reflected on the main conclusions of the AS-IS analysis, requirements stemming from the methodology developed under Deliverable 2 (experience from the implementation of pilots for sectoral and horizontal industrial strategies) and wider public administration context in the country. The TO-BE situation makes clear the links between deficiencies / needs – measures / actions to address them – and positive changes in the administrative capacity.

To illustrate the problems and their relations, the problem tree method was applied. It allows showing the connections, conflicts and interdependences among problems, helps pinpoint what the organisation can and cannot influence, and helps to set priorities. Once the problem trees were established, the gaps against the desired situation were identified and transformed positively in the intervention logic. Causal chains between key problems, measures / actions to be taken and expected results were developed. The proposals for actions to improve the administrative capacities were discussed with

relevant stakeholders. The aim was to provide a wider set of interventions that address key deficiencies in the administrative capacities to implement industrial strategies while remaining feasible. A specific chapter is dedicated to key principles to be applied in change management in the organisation's units.

1.2.3. Stakeholders involved

The following institutions and organisational units were actively involved in the Gap report:

- Department of Research and Innovation Policies, VAIA
- Department of Priorities, VAIA
- Department of Innovations, Ministry of Economy of the Slovak Republic
- Department of Industrial Policy, Ministry of Economy of the Slovak Republic
- Institute of Economic Analyses, Ministry of Economy of the Slovak Republic
- Department of Implementation of State Research and Development Policy, Ministry of Education, Research, Development and Youth of the Slovak Republic
- Slovak Innovation and Energy Agency

2. AS-IS analysis

2.1. Human resources

Human resources in organisations, such as ministries and agencies, responsible for developing and implementing industrial strategies, have a major impact on the success of these strategies. A thorough analysis of these human resources is essential for several reasons. Effective management and coordination of activities across different sectors and levels of government is key to the successful implementation of comprehensive industrial strategies. Quality human resources ensure that the relevant agendas are managed in an efficient and coordinated manner.

Human resources analysis used a methodology that focused on a set of key questions to provide a comprehensive picture of staff in organisations who were responsible for developing and implementing industrial strategies. The analysis included identifying the number of positions available and the total number of employees to determine the size of the workforce in these organisations. Particular attention was paid to the number of staff directly involved in industrial strategies and the human resources involved in the design, investment proposals and implementation of these strategies. Furthermore, the level of staff education and training was examined to assess the extent to which skills upgrading management is methodologically structured and to identify further training and development needs. The analysis also included tracking staff turnover, which helps to understand the stability of the workforce and identify areas where working conditions or incentive strategies need to be improved. Finally, the main challenges were analysed from a human resources perspective for the design and implementation of industrial strategies.

When analysing human resources, it is necessary to consider the heterogeneity of the analysed sample of organisational units, the diversity of positions, the variability in strategic focus and the varying degree of involvement of individual units in the preparation and implementation of industrial strategies. Different organisational units have different mandates, responsibilities and specific tasks, leading to variability in their organisational structures and job roles. Some units may be more focused on policy and strategy development, while others may focus more on investment proposals and implementation or provide only analytical support for design and implementation. This diversity calls for tailored approaches to human resource management. Specific recommendations need to take into account the individual needs and capacities of each organisational unit in order to achieve maximum efficiency and effectiveness in the preparation and implementation of industrial strategies. In making recommendations, it is, therefore, essential to take a unit-specific approach, taking into account the unique characteristics and roles of each business unit within the overall strategic framework.

2.1.1. Number of positions and staff

The analysis focuses on the period from 2021 to June 2024 and examines the number of positions and employees in the different business units responsible for industrial strategies. The number of positions and staff varied across these units based on historical trends and agendas that were frequently subject to change during the years examined. In some business units, there were staff reductions or vacant positions due to restrictive employment policies. This trend has been particularly evident in recent years.

TABLE 1. NUMBER OF POSITIONS, NUMBER OF EMPLOYEES AND NUMBER OF ORGANISATIONAL UNIT STAFF INVOLVED IN THE DEVELOPMENT AND IMPLEMENTATION OF INDUSTRIAL STRATEGIES AND ACTION PLANS

ORGANISATIONAL UNIT	NUMBER OF JOBS	NUMBER OF EMPLOYEES	NUMBER OF EMPLOYEES INVOLVED
VAIA, R&I Policy Department	10	10	10
VAIA, Priorities Department	7	6	6
MoERDY, Department of State R&D Policy Implementation	6	5	1
MoE, Innovation Department	6	5	2
MoE, Department of Industrial Policy	7	7	4
MoE, Institute of Economic Analyses	8	8	1
SIEA, Innovation Section	20	18	0

Note: As of June 2024.

Except for the specifically targeted departments within VAIA, where all staff are dedicated to industrial policy full-time or nearly full-time, in the other organisational units only a part of the staff, including the Head of Unit, is dedicated to industrial policy. On average, this is 20-40% of the unit's staff, and their time devoted to policy design and implementation issues is limited to an average of 50% of their working time.

TABLE 2. PROPORTION OF ANNUAL WORKING TIME (%) DEVOTED BY THE INVOLVED STAFF LISTED IN TABLE 1 ABOVE TO THE PERFORMANCE OF ACTIVITIES RELATED TO THE DEVELOPMENT AND IMPLEMENTATION OF INDUSTRIAL STRATEGIES AND ACTION PLANS

ORGANISATIONAL UNIT	SHARE OF WORKING TIME (%)
VAIA, R&I Policy Department	100%
VAIA, Priorities Department	80%
MoERDY, Department of State R&D Policy Implementation	100%
MoE, Innovation Department	70%
MoE, Department of Industrial Policy	NA
MoE, Institute of Economic Analyses	25%
SIEA, Innovation Section	0

Note: As of June 2024. NA - data not available.

Involvement of staff in strategy development, investment design and strategy implementation was analysed. With the exception of the Institute of Economic Analysis of the Ministry of Economy, which provides analytical support only for the area of formulation and implementation, and the Innovation Department of the Ministry of Economy, where the agenda has shifted from formulation to implementation support, staff are usually involved in all phases of the process. This broad involvement

thus creates pressure for a high level of competence and effective coordination between the different departments to ensure successful implementation of industrial strategies.

TABLE 3. PROPORTION (%) OF STAFF TIME OF THE UNIT DEVOTED TO INDUSTRIAL STRATEGIES AND ACTION PLANS, BROKEN DOWN INTO DEVELOPMENT (OF STRATEGIES), INVESTMENT DESIGN AND IMPLEMENTATION

ORGANISATIONAL UNIT	CREATION (%)	INVESTMENT PROPOSAL (%)	IMPLEMENTATION (%)
VAIA, Policy Department	NA	NA	NA
VAIA, Priorities Department	45%	45%	10%
MoERDY, Department of State R&D Policy Implementation	30%	30%	40%
MoE, Innovation Department	0%	0%	100%
MoE, Department of Industrial Policy	33%	33%	33%
MoE, Institute of Economic Analyses	50%	0%	50%
SIEA, Innovation Section	NA	NA	NA

Period: June 2024. Source: Survey. NA = data not available/irrelevant.

2.1.2. Education and training

An analysis of the focus of the university studies of employees in the different organisational units involved in the design and implementation of industrial policies shows, there is wide range of educational background. The education of the staff includes fields such as econometrics, law, international relations, hotel management, chemical sciences, innovation policy, economics, analytical chemistry, demography, agriculture, engineering, natural sciences, management and others. This diversity of academic backgrounds provides a wealth of expertise and different perspectives, which can be an advantage in complex industrial policy challenges.

The relevance of the focus of undergraduate staff studies to the agenda of industrial policymaking and implementation is considerable. Disciplines such as law, economics and innovation policy contribute directly to the ability of organisations to develop the legal frameworks and economic analyses needed for effective policies. Technical and science education provides the expertise needed for technical aspects and innovation projects, while management and international relations support effective project management and international cooperation. Diversity in academic disciplines also enables a better understanding of complex problems and the development of multidisciplinary solutions.

The relevant **work experience of the staff of the analysed units** shows a wide range of expertise and practical experience that is key to the formulation and implementation of industrial policies, including work on research, development and innovation projects, including collaboration with international organisations and scientific activities. This experience provides the deep expertise and skills needed for analytical support and strategic planning in the field of industrial policies. Other relevant experience includes drafting public policies and strategy documents, defining tools for the implementation of public policies, networking and management of actors in RDI as well as long experience in government administration. Employees have also experience in the preparation and development of economic strategies, the implementation of state aid schemes and calls, and industrial strategies.

The results of the analysis showed different results in the units interviewed, reflecting the different approaches and capacities of the different organisational units. The existence of historical memory,

which includes experience and knowledge from strategic activities in previous periods, emerged as an important factor influencing effectiveness and continuity in the design and implementation of industrial policies. These differences point to the need for tailored solutions for individual departments, given their focus and role in policy formulation and implementation. The issues identified during the analysis, including the constraints and challenges faced by these organisational units, will be analysed in detail in the 'Challenges' section of this analysis.

The analysis showed considerable variation in the approach of the different organisational units to the **provision of staff training**. There are three main approaches:

- a) some departments do not organise training at all,
- b) employees individually select training according to their needs,
- c) training programme for staff is in place, but it is organised at the level of the whole organisation and not at the level of a specific unit.

Training topics can be divided into two main groups:

- a) "Soft skills", such as public speaking training, public leadership academies and effective meeting management.
- b) "Expert training", covering topics such as data science, the RDI system, state aid, the provision of public resources and financial control. This training is crucial for developing the necessary competencies of staff and contributes to improving their ability to deal effectively with industrial policy tasks.

The form of training also varies from unit to unit. In some cases, staff received training organised either internally or externally, and the training is paid for without financial constraints and includes language training. Other units allow staff to attend training courses and conferences on their own initiative, mostly one-day and in-person. Some services also organise international study visits and training courses on specific areas such as antitrust assistance and programme implementation.

2.1.3. Employee Turnover

An analysis of staff turnover in the organisational units under review shows different levels of turnover and its impact on performance in the field. In most cases, changes in the number and structure of staff have not affected the quality and performance of the units. However, in some cases, turnover had a negative impact on the historical memory of the organisations, weakening their capacity for continuous improvement and adaptation in the areas studied. This phenomenon can be particularly problematic in the context of industrial policymaking and implementation, where historical knowledge and experience are crucial for effective planning and implementation of strategies.

The negative impact of policy changes on the structure and qualifications of the workforce is a significant factor affecting turnover. Changes in policy orientations initiated by new governments often lead to changes in the agenda and focus of departments, causing instability in staffing. This risk is particularly pronounced with political changes, which can threaten the stability and continuity of teams and lead to increased turnover.

2.1.4. Main challenges

The analysis revealed a number of key issues and needs in the interviewed departments that are important for the effective design and implementation of industrial policies. Main challenges include:

- Lack of experts and the need to expand the team with experts in project management and data analysis, as well as to strengthen administrative support for coordinators who are overloaded with administrative tasks.
- Insufficient human resource capacity, leading to limited ability to specialise and requiring a wide range of competencies from existing staff.
- Lack of analytical capacity, which limits the ability of departments to carry out deeper analysis and provide the necessary data for strategic decision-making.
- Difficulty in attracting quality professionals, as low salary levels in public organisations make it difficult to attract and retain qualified professionals, which negatively affects the ability of departments to perform their tasks effectively.
- The lack of a strategic approach, marked by frequent changes in priorities and the absence of a long-term strategy, creates uncertainty among staff, leading to instability and reducing work efficiency.
- There is a strong need for further specialisation and skills development of staff to better address the complex challenges of industrial policies.
- Restrictions on recruitment of new staff due to restrictive measures in the public administration that limit the ability of departments to recruit the necessary new staff, leading to overloading of existing staff and reducing overall efficiency.
- Lack of a strategy or systematic approach to human resources management at the departmental level.
- The negative impact of policy changes on the structure and skills of the workforce is another major concern. Changes in political priorities and government policy statements often lead to reorganisations and staff turnover, which can jeopardise the stability and continuity of teams. This process reduces the efficiency and quality of work, as new staff require time for training and adaptation.

2.1.5. Conclusions

The analysis of the current state of human resources in organisations responsible for the preparation and implementation of industrial strategies in Slovakia allows a number of conclusions to be formulated. Human resources play an essential role in the success of industrial strategies. Effective management and coordination are necessary preconditions to achieve strategic objectives.

The analysis showed that the number of positions and staff vary between the different organisational units, which is a result of historical development and a changing agenda. Some units have experienced staff reductions or vacancies due to restrictive employment policies, which have negatively affected their capacity.

An important aspect is the diversity of the academic background of the staff, which provides a wealth of expertise and different perspectives. Despite this advantage, it is clear that more specialised education and training are needed to enable staff to deal effectively with complex tasks. The analysis also revealed differences in the approach to training, where some departments do not organise training at all, while others allow staff to choose training on an individual basis or have organisation-wide training programmes in place. This diversity of approaches suggests the need for a systematic approach to staff training and development.

Staff turnover has proved to be a problem in some organisational units, particularly where political changes have caused instability and increased turnover. These changes harm continuity and quality of work, as new staff require time for training and adaptation. The shortage of specialists and the need to

expand teams with experts in project management and data analysis, as well as to strengthen administrative support, are other challenges that were analysed in the interviews.

The analysis also showed that there is a need for a strategic approach to human resource management, as current approaches are often reactive and unplanned. The lack of a long-term strategy and frequent changes in priorities create uncertainty among staff, which can impact work effectiveness. The diversity of organisational units and their mandates requires a coordinated and synergistic approach in the design and implementation of industrial strategies to achieve maximum efficiency and effectiveness.

In conclusion, to improve the effectiveness of human resources, it is necessary to increase coordination mechanisms, increase staff capacity and specialisation, introduce a systematic approach to training and development, improve working conditions and motivational strategies, and ensure the stability of teams despite political changes.

2.2. Structures

2.2.1. Link to policy objectives and priorities

The structures of the analysed organisational units in Slovakia are closely linked to policy objectives and priorities at national and European level. The Ministry of Economy of the Slovak Republic, the Ministry of Education, Research, Development and Youth of the Slovak Republic, the Research and Innovation Authority and the Slovak Innovation and Energy Agency are working on the implementation and support of various industrial strategies aimed at improving Slovakia's competitiveness, promoting innovation, research and development.

1. Research and Innovation Authority

The Research and Innovation Policy Unit (RIPU) is responsible for developing and coordinating research and innovation policies. RIPU focuses on the implementation of national strategies such as the National Strategy for Research, Development and Innovation 2030, while ensuring that these strategies are in line with European priorities. RIPU plays an important role in facilitating coordination between different ministries and institutions, thereby ensuring efficient use of resources and the achievement of R&I objectives.

The Priorities Department is responsible for identifying and prioritising areas of research and innovation that are key to Slovakia's development. The Department focuses on updating Slovakia's Research and Innovation Strategy for Smart Specialisation (RIS3) and ensures that resources are allocated to areas with the greatest potential for development. VAIA, through this Department, contributes to ensuring that Slovakia can respond effectively to changing conditions in the global economy while meeting its commitments to the EU.

2. Ministry Of Economy of the Slovak Republic

The Department of Industrial Policy is a key player in shaping Slovakia's industrial policy. It focuses on supporting various sectors of the economy, with a particular focus on the automotive, chemical, electrical, energy and battery industries. The DIP ensures that national strategies are in line with European policies such as the Green Deal and other initiatives that promote green and digital transformation. One of the main tasks of the DIP is to translate European policies into national strategy documents and regulations, which requires close cooperation with other ministries and institutions.

The Innovation Department (ID) is tasked with supporting innovation processes in small and medium-sized enterprises, including start-ups and clusters. ID helps to increase the competitiveness of the Slovak economy by promoting new technologies, including hydrogen technologies and also focuses on family business, vocational training and skills. The Department works closely with institutions such as SIEA and SARIO to ensure effective implementation of policies and strategies that are aligned with the Government's programme priorities.

The Institute of Economic Analysis is a specialised unit that provides analytical support for the design and implementation of economic policies and strategies. IEA focuses on conducting economic and economic analyses that inform strategic decision-making within the Ministry. The Institute also produces forecasts of economic trends that help identify opportunities and risks for Slovak industry. IEA's role is to ensure that decisions taken in the Ministry are based on analytical foundations and that strategies are prepared with Slovakia's long-term economic objectives in mind.

3. Ministry Of Education, Research, Development and Youth of the Slovak Republic

The Department for the Implementation of State R&D Policy is responsible for the implementation of policies in the field of research, development and innovation. This Department plays a major role in implementing the National Strategy for Research, Development and Innovation 2030. DISRDP ensures that R&D priorities are reflected in the national strategies and also monitors the achievement of R&D objectives. The unit focuses on systematic support to R&D and is often faced with challenges related to a lack of staff capacity, which affects its ability to fulfil all the tasks entrusted to it.

4. Slovak Innovation and Energy Agency

SIEA plays an important role in implementing policies aimed at promoting innovation and energy efficiency in Slovakia. As an intermediary body for the EU Structural Funds, SIEA focuses on collecting and analysing data on energy efficiency and the use of renewable energy sources, as well as supporting technological development. The Agency supports innovation through various programmes and initiatives, including technology strategies, which contribute to increasing the competitiveness of the Slovak economy. SIEA works closely with the Ministry of Economy to implement national and European policies and ensures that these policies are implemented effectively and in line with national priorities.

Overall, all the services analysed are closely linked to national and European policy priorities and play a key role in their implementation. Each of these departments contributes to developing and strengthening the industrial environment in Slovakia, which is essential for maintaining the country's competitiveness at the global level. At the same time, however, these departments face challenges related to the effective implementation of the strategies, such as a lack of staff capacity and the need for better inter-institutional coordination. These challenges need to be urgently addressed for Slovakia to realise its full potential in the field of innovation and technological development.

2.2.2. Main tasks in the design of industrial strategies

In practice, there is often a gap between what is set out in organisational charters and how these processes work in reality. Although the institutional charters set out clear and structured procedures for the development of industrial strategies, the reality presents many challenges, particularly in terms of resources and coordination at institutional, departmental and inter-ministerial levels. These challenges include human resource problems, lack of inter-departmental communication and complexity of coordination, which often leads to delays and inefficiencies in the implementation of these strategies.

TABLE 4. MAIN TASKS PERFORMED IN DESIGN OF INDUSTRIAL STRATEGIES

INSTITUTION	UNIT	MAIN TASKS IN THE DESIGN OF INDUSTRIAL STRATEGIES
VAIA	Department for Research and Innovation Policies	<ul style="list-style-type: none"> ▪ Preparation of national strategies such as NSRDI. ▪ Creation of action plans. ▪ Preparation of analytical documents and consultations with the ministries and the ecosystem.
	Department of Priorities	<ul style="list-style-type: none"> ▪ Identification and prioritisation of research and innovation areas. ▪ Update of RIS3. ▪ Cooperation with partners from academia and industry.
MoE	Department for Industrial Policy	<ul style="list-style-type: none"> ▪ Transforming EU policies and adapting them to national circumstances. ▪ Preparation of the Economic Policy Strategy of the Slovak Republic until 2030 (EPS 2030) and the Action Plan. ▪ Coordination and communication with external entities.
	Department of Innovation	<ul style="list-style-type: none"> ▪ Formulation of public policies and strategies for innovation and SME development. ▪ Working with the promoter (VAIA or MIRDI) to nominate representatives to the working groups. ▪ Preparation and commenting on materials.
	Institute of Economic Analysis	<ul style="list-style-type: none"> ▪ Providing analytical input for the development of industrial strategies. ▪ Conducting economic and economic analyses to support the decision-making process. ▪ Forecasting economic trends and their impact on industry.
MoERDY	Department for Implementation of State R&D Policy	<ul style="list-style-type: none"> ▪ Creation and implementation of trans-ministerial R&D strategies. ▪ Cooperation with representatives of central authorities, associations, unions, SAS and universities. ▪ Organisation of expert working groups.
SIEA	Innovation Section	<ul style="list-style-type: none"> ▪ Developing policies and strategies to improve energy efficiency and promote innovation. ▪ Cooperation with the MoE on the implementation of national and European policies. ▪ Using analytical tools and expertise to develop effective measures.

Each of the analysed departments thus has clearly defined roles and responsibilities in developing industrial strategies, but the practical implementation of these roles is often complicated by resource

constraints, the complexity of coordination and the need to respond flexibly to changing conditions. Effective cooperation and capacity strengthening of these services are key to the successful implementation of industrial strategies in Slovakia.

2.2.3. Main tasks in implementing industrial strategies

In the implementation of the industrial strategies, the participating services focus on monitoring and evaluating the implementation of the actions set out in the action plans. This process includes regular reporting to the Government as well as ongoing cooperation with other departments and institutions.

TABLE 5. MAIN TASKS PERFORMED IN IMPLEMENTING INDUSTRIAL STRATEGIES

INSTITUTION	UNIT	MAIN TASKS IN THE IMPLEMENTATION OF INDUSTRIAL STRATEGIES
VAIA	Department for Research and Innovation Policies	<ul style="list-style-type: none"> ▪ Coordinating the implementation of national strategies through implementation plans. ▪ Monitoring progress and regular reporting on targets. ▪ Preparation of reports and evaluations for the Government of the Slovak Republic.
	Department of Priorities	<ul style="list-style-type: none"> ▪ Overseeing the implementation of priority areas for research and innovation. ▪ Coordination with implementing partners. ▪ Ensuring effective use of allocated resources for the implementation of strategies.
MoE	Department for Industrial Policy	<ul style="list-style-type: none"> ▪ Organisation of working groups during the implementation of the strategies. ▪ Evaluation of the implementation of the measures and identification of problems. ▪ Regular deductions for the Government of the Slovak Republic.
	Department of Innovation	<ul style="list-style-type: none"> ▪ Working with VAIA and MIRDI to implement the measures. ▪ Regular reporting on the implementation of the measures to the promoter. ▪ Monitoring progress in the implementation of innovation projects.
	Institute of Economic Analysis	<ul style="list-style-type: none"> ▪ Providing analytical support for the implementation of strategies. ▪ Monitoring economic indicators and evaluating the impact of implemented measures. ▪ Preparation of assessments for the Government of the Slovak Republic.
MoERDY	Department for Implementation	<ul style="list-style-type: none"> ▪ Use of implementing institutions such as SRDA for the implementation of R&D projects.

	of State R&D Policy	<ul style="list-style-type: none"> ▪ Reporting on progress through regular readouts to the Government. ▪ Monitoring and evaluating the effectiveness of implemented strategies.
SIEA	Innovation Section	<ul style="list-style-type: none"> ▪ Implementing measures to improve energy efficiency and promote innovation. ▪ Monitoring and evaluating the effectiveness of the implemented measures. ▪ Coordination with the MoE in implementing energy and innovation strategies.

2.2.4. Stakeholder and partner involvement

The involvement of relevant social and economic partners is a key aspect of the process of developing and implementing industrial strategies in Slovakia. Institutions involved in designing and implementing these strategies use various platforms, working groups and advisory bodies to ensure active cooperation and consultation with partners from both the public and private sectors. These platforms allow for the exchange of views, sharing of expertise and coordination of activities to achieve optimal results in designing and implementing industrial policies.

1. Research and Innovation Authority

Research and Innovation Policy Department: VAIA actively uses platforms and working groups to coordinate industrial policies and to ensure that the needs and views of all relevant actors are included in their design and implementation. VAIA has processes in place to promote effective collaboration between the public and private sectors.

- **Working Group for the forthcoming Research, Development and Innovation Act:** VAIA is involved in preparing this key law, which is intended to improve the legal framework for promoting research and innovation in Slovakia.

Priorities Department: Priorities Department within VAIA has a similarly important role in ensuring effective collaboration and consultation with partners through working groups and other platforms.

- **Working groups on the update of the Research and Innovation Strategy for Smart Specialisation of Slovakia (RIS3):** VAIA cooperates with partners on preparing and updating RIS3, focusing on the identification and prioritisation of areas that are key for the development of industrial sectors in Slovakia.
- **Council of the Government of the Slovak Republic for Science, Technology and Innovation:** VAIA coordinates the activities of this Council to ensure the effective formulation of policies and strategies to support research, development and innovation in cooperation with other ministries and other relevant actors.
- **Coordination Platform** aims to continuously and consistently support the development of the science, research and innovation environment and to create a space for information exchange and discussion among relevant stakeholders. Among its activities, the platform: monitors the implementation of the NSPRI and its Action Plan; comments on the intentions of calls from the Slovakia Programme, the Recovery and Resilience Plan, the state budget, or other sources in terms of their contribution to and consistency with the objectives of the NSRDI and RIS3;

comments on the Preliminary Financing Plan; comments on draft laws in the field of science, research and innovation in the Slovak Republic and other legislative regulations prior to their publication in the inter-ministerial comment procedure / submission to the Government of the Slovak Republic; monitors the status of the integration of Slovak science into the European Research Area; monitors the status of investments in public research and scientific infrastructure to ensure the effectiveness of the spent funds; proposes tools for stimulating cooperation between research institutions, universities and the private sector in order to transfer technology and knowledge across the ecosystem; supports the implementation of the National Strategy for Open Science 2021-2028 and its action plans; communicates information and new trends in the field of research, development and innovation within the scope of competence of the individual members of the Coordination Platform.

VAIA is also represented in the Advisory Committee for Social Innovation; the Monitoring Committee (MC) of the Slovakia Programme; the Commission to the MC for Priority Axis 1; and the Working Group on the Preliminary Financing Plan.

2. Ministry of Economy of the Slovak Republic

DIP uses various platforms to engage stakeholders in developing and implementing industrial strategies. These platforms include working groups, roundtables and external consultations with industry associations, academia and other relevant actors. All these activities are aimed at ensuring that strategies and action plans reflect the needs and expectations of industry.

- **Competitiveness Council (COMPET) at the EU level:** the DIP is actively involved in negotiations and coordination with other EU Member States through this Council, where Slovakia's national interests are promoted, such as the inclusion of nuclear technologies among EU priorities.
- **Electromobility Task Force:** This task force includes representatives from ministries, industry associations, academia, as well as industry representatives such as SEVA and the 500 Club. The working group is involved in preparing measures related to the development of electromobility, including legislative changes and implementation plans.

Other platforms in which the DIP is represented are the Working Groups on Semiconductors and Ecodesign at EU level; the Government Council Working Group on the Circular Economy; and others.

The Innovation Department also actively involves social and economic partners in developing and implementing industrial strategies. Working groups are a key tool for obtaining feedback and ensuring that strategies are relevant and effective.

- **Hydrogen Legislation Working Group:** this working group focuses on preparing legislation and strategies for the development of hydrogen technologies in Slovakia. It is also involved in coordination with other ministries and relevant industry players.
- **Digital Transformation Task Force:** focused on supporting and coordinating digital innovations and projects at the national level, in cooperation with VAIA and MIRRI (Ministry of Investment, Regional Development and Informatization of the Slovak Republic).

Other platforms in which the OI is represented are the WG on the preparation of the Law on RDI; the Working Groups on RIS3; the Working Groups on NSPRI.

The Institute of Economic Analysis uses various analytical platforms and tools to engage relevant partners in the process of developing and implementing industrial strategies. IEA regularly collaborates with academic institutions, research centres, and other professional organizations to

ensure that economic and economic analyses are based on relevant data. These analyses serve as the basis for strategic decisions and help identify potential risks and opportunities in economic policy. IEA also organises roundtables and expert seminars to discuss current economic challenges and how they can be addressed in the context of Slovakia's industrial strategies. IEA is represented in the following platforms: the NECP (National Integrated Energy and Climate Plan); Industry for the 21st Century; Utilisation of Geothermal Energy; Productivity and Competitiveness Council.

3. Ministry Of Education, Research, Development and Youth of the Slovak Republic

DISRDP uses platforms and working groups to involve relevant partners in developing and implementing industrial strategies. This approach is based on the creation of expert working groups and participation in inter-institutional platforms, which ensure that all relevant actors are included in the process. The DISRDP is represented in these platforms:

- **Council of the Slovak Government for Science, Technology and Innovation:** this advisory body of the Slovak Government is responsible for coordinating and promoting science, technology and innovation in Slovakia. DISRDP is involved in developing and implementing national R&D strategies through its membership in this council.
- **Working Group on Electromobility:** The MoERDY is represented in this group in cooperation with the MoE and other partners, contributing expert input from the field of research and development.
- **Coordination Platform of the Slovak Government Council for Technology and Innovation of the Slovak Republic:** this platform ensures coordination and communication between different ministries and institutions focused on promoting technology and innovation.

Representatives of the unit are also members of the working groups of the MoE SR in the field of climate change.

4. Slovak Innovation and Energy Agency

Innovation Section: SIEA actively cooperates with various partners through working groups and international projects. These activities are aimed at promoting innovation and technological development, using different platforms to improve efficiency and coordination in policy implementation.

- **Cluster and Digitalisation Support Working Groups:** SIEA contributes to the development and implementation of policies to support clusters and digitalisation through the European Digital Innovation Hub (EDIH) and other platforms aimed at fostering innovation and technological development.

These platforms play a key role in ensuring the broad involvement of relevant stakeholders in developing and implementing industrial strategies. They ensure that industrial strategies are not only formally adopted but also practically implementable and adapted to current needs and challenges. The need for active involvement of all relevant actors in innovation policy and industrial strategy-making is particularly important in the context of constantly changing global economic and technological conditions. The industrial environment in Slovakia faces many challenges, such as digitalisation, green transformation or increasing competition in international markets. For Slovakia to successfully respond to these challenges and at the same time seize the opportunities that these changes bring, it is necessary for all stakeholders to actively contribute their expertise and experience to the strategy development process.

The active participation of representatives of industry, academia, research institutions and other relevant partners ensures that the proposed policies and strategies will reflect the real needs and opportunities of Slovak industry. It also allows to better anticipation of, and adaptation to potential risks, thus reducing the risk of implementation failure. Effective cooperation between these actors also facilitates the creation of synergies, resulting in the integration of innovations into industrial processes, which increases the competitiveness of Slovak firms in the global market.

2.2.5. Communication and information exchange

Effective communication and regular exchange of information between the different actors involved in the development and implementation of industrial strategies are key contributors to achieving the set objectives. At the level of individual institutions as well as within the established coordination platforms, communication takes place in the form of regular debriefings and working meetings, which are essential to ensure consistency between the various activities and processes as well as ongoing monitoring of the tasks and responsibilities assigned.

At the level of the national government, progress reports are mandatory and often relate to the implementation of measures under the implemented strategies and action plans. These reports are regularly discussed at platforms such as the Government Council for Science, Technology and Innovation, which monitors progress in research and innovation, or the Government Council for Competitiveness and Productivity, which monitors the implementation of measures aimed at improving competition and productivity. These platforms provide the Government with an overview of the state of implementation of the strategies, identify obstacles and propose solutions to overcome them. Regular working meetings between the institutions and their departments allow for a rapid exchange of information, updating of data and coordination of activities, which contributes to the streamlining of the overall implementation process.

Internal communication within and between institutions often takes place through both formal and informal mechanisms. Formal mechanisms include, for example, the organisation of working group meetings to discuss current challenges and progress in the implementation of strategies. These meetings allow representatives from different disciplines and sections to share information and experiences, leading to better understanding and coherence across institutions. Informal communication mechanisms include ad hoc consultations and discussions between staff of the institutions that focus on solving specific problems or providing rapid feedback. This type of communication is often quicker and more flexible, allowing for faster information transfer and more effective decision-making.

Other examples of communication and information exchange include the organisation of expert seminars and conferences where representatives from different sectors come together to discuss the latest trends, challenges and opportunities in industrial strategy and innovation. These events provide a platform for exchanging ideas, sharing best practices and building partnerships that are key to successful policy implementation.

Ensuring effective communication and information exchange between relevant institutions is essential to achieving the stated objectives of industrial strategies. These processes promote transparency, coordination and cooperation, leading to better implementation of the strategies and contributing to the long-term development of a competitive industrial environment in Slovakia.

2.2.6. Flexibility

The flexibility of services to respond to changes, whether political, economic or legislative, is limited mainly by a lack of staff capacity. However, some institutions, such as VAIA, can adapt their activities to current needs and priorities, as well as provide adequate staff capacity as required. Other institutions, such as the MoERDY, face greater constraints due to overstretched staff and the inability to increase staff capacity adequately.

1. The Research and Innovation Authority

VAIA can fully adapt to current conditions, with priority given to meeting the priorities of the NSPRI and the Recovery Plan. Changes in government have not had a significant impact on VAIA's agenda. However, flexibility is to some extent dependent on the stability of the political environment and continuity in strategic direction at the national level. VAIA also faces challenges in coordination between different ministries and actors in the innovation ecosystem, which may limit its ability to respond quickly and effectively to new challenges and changes in the external environment.

2. Ministry Of Economy of the Slovak Republic

The Department of Industrial Policy demonstrates the ability to react quickly to change, for example in crises such as the ongoing crisis in Ukraine. The Innovation Department has limited flexibility given the stage of preparation of strategies and plans. The Institute of Economic Analysis has a degree of flexibility, in particular in adapting analytical tools and methodologies to assess economic and industrial trends.

3. Ministry Of Education, Research, Development and Youth of the Slovak Republic

DISRDP has considerably low flexibility to respond to changes due to the large agenda under the responsibility of the department, limited staff and the impossibility of adequately increasing staff capacity at least to the necessary minimum.

4. Slovak Innovation and Energy Agency

SIEA is characterised by its flexibility in implementing programmes and projects focused on energy efficiency and innovation. The Agency can adapt its activities to current market needs and requirements from the European and national levels. Although SIEA is able to respond to new initiatives and changes, its flexibility is largely limited by administrative procedures and the need for coordination with several ministries.

2.2.7. Main challenges

The particular challenges faced by the analysed organisational units are: insufficient staff capacity, limited flexibility and the need for better inter-ministerial coordination. Improving communication and coordination mechanisms to enable more effective development and implementation of industrial strategies is also an important challenge.

1. The Research and Innovation Authority

VAIA faces several challenges arising from its role as coordinator of national research, development and innovation policies and strategies, as well as from its role as coordinator of the implementation of

the Recovery and Resilience Plan. Key challenges include ensuring effective inter-agency cooperation and communication, which is crucial for the successful implementation of complex policies and strategies. Maintaining continuity in policy priorities and funding for outreach activities is also important. Another challenge is the ability to adapt to dynamically changing external conditions such as technological innovation and global trends, which require a rapid and flexible response.

2. Ministry Of Economy of the Slovak Republic

The Department of Industrial Policy and the Department of Innovation face challenges related to inter-ministerial coordination and a lack of staff to implement strategies effectively. The Institute of Economic Analysis faces particular challenges in ensuring up-to-date and quality data needed to produce accurate and relevant economic analysis, as well as a lack of sophisticated IT tools. The various departments also face human resource challenges where they need to maintain, strengthen and develop staff capacity at a high professional level.

3. Ministry Of Education, Research, Development and Youth of the Slovak Republic

MoERDY faces several major challenges that affect its ability to effectively implement its research, development and innovation strategies. The main problem of the State R&D Policy Implementation Department is the significantly undersized staff capacity, which often hinders the Ministry's ability to respond quickly and effectively to emerging challenges and to implement state R&D policies in full and in optimal form.

4. Slovak Innovation and Energy Agency

SIEA faces some challenges in implementing its programmes, including the need to ensure effective coordination between different actors at both national and European levels. This coordination is crucial for the successful implementation of energy efficiency and innovation policies. Another area is the need to simplify administrative processes, which often slow down project implementation. In addition, SIEA is faced with the challenges of ensuring sufficient staff resources and technical support to carry out the tasks under the Agency's responsibility.

The analysis of the functioning of the different services has shown that, despite clearly defined processes and a strong orientation towards policy objectives in the field of industrial strategies, there are significant obstacles that may limit the effectiveness of these institutions. The main challenges include a lack of resources, the need to improve coordination between institutions, and ensuring sufficient flexibility and adaptability to changing conditions. To overcome these challenges, institutions must continue to strengthen their capacities, improve internal processes and increase the level of cooperation between all relevant actors.

2.2.8. Conclusions

The organisational structures of the different departments of the institutions analysed show a strong link to policy priorities and strategic objectives, which is crucial for the successful implementation of industrial strategies and action plans. The institutions concerned play a central role in promoting research, development and innovation, improving the competitiveness of Slovak enterprises and adapting European policies to national conditions.

Despite the positive setting and the linkages with policy objectives, there are a number of persistent challenges that prevent the full effectiveness of these institutions. In particular, the main challenges are

a lack of staff capacity, limited flexibility to respond to change and the need to improve inter-institutional and inter-ministerial coordination. These factors affect the ability of institutions to respond quickly and effectively to changes in the external environment and to implement industrial strategies according to the planned timetable.

To streamline the processes of developing and implementing industrial strategies, the following starting points need to be considered from the perspective of organisational structures:

- **Increasing staff capacity:** the lack of qualified staff is a major obstacle to the effective functioning of the relevant departments of the institutions analysed. There is a need not only to increase the number of staff in selected units (in particular in the case of the State R&D Policy Implementation Department of the Ministry of Education) but also to improve their expertise, especially in areas such as analytics, strategic planning and implementation of industrial policies.
- **Improve coordination:** coordination gaps between departments and ministries lead to duplication of work and delays in formulating and implementing individual measures. Formal channels of communication need to be strengthened and the work of the working groups established needs to be coordinated with clear roles and responsibilities defined for those involved.
- **Enhancing flexibility:** institutions must be able to respond quickly to new challenges and adapt their strategies and plans to current needs. This requires flexible processes and improved staff capacity to adapt to new situations.
- **Efficient use of resources:** effective planning and use of financial resources, both national and European, and a clear allocation to individual priorities are essential for the successful development and implementation of strategies. It is also necessary to ensure that the necessary infrastructure and sophisticated support tools are in place to carry out the tasks that are the responsibility of each department.

At the national level, a coordinated government initiative is therefore needed to strengthen professional capacity in public administration, improve inter-institutional coordination and create more flexible legislative conditions for faster approval of changes. At the institutional level, internal capacities should be regularly assessed, working conditions improved and innovative internal policies that promote rapid adaptation and efficient use of resources introduced.

The Slovak Republic has long faced a lack of quality administrative capacity of state and public institutions responsible for the development and implementation of industrial strategies. It is therefore essential that measures to improve the current situation are implemented as soon as possible. Measures should be aimed at strengthening the efficiency of the public administration and improving its ability to respond quickly and effectively to new challenges. This will ensure that we can meet our ambitious objectives in the areas of research, development, innovation, industrial development and competitiveness. The implementation of these measures will help to create a modern and flexible system that will effectively meet the expectations of all stakeholders and support the sustainable economic growth and development of Slovakia.

2.3. Systems and Tools

The chapter on Systems and tools describes the availability of instruments, methods, guidelines, manuals, systems, and procedures in organisational units participating in the design and implementation of industrial policies. These tools enable the institutions to work and deliver effectively. At the same time, they make institutions less vulnerable to staff turnover, miscommunication and overall underperformance.

2.3.1. Tools used in designing and implementing industrial strategies

The objective of the subchapter is to assess the use of methodologies / guides in processes related to industrial strategies. All organisational units involved confirmed that they do not currently have a specific methodological tool for developing and implementing sectoral or cross-cutting industrial strategies. One of the main outputs of the ongoing project, in which an AS-IS analysis was carried out, is a methodological guide for elaborating industrial strategies (D2). This is based on the experience and lessons learned from the pilot and horizontal strategy development process in close cooperation with VAIA and other actors.

On the other hand, the institutions involved in the AS-IS analysis most often referred to the "Methodology and Institutional Framework for the Development of Public Strategies" as a reference document (MoE, MoERDY). This document was developed by the Office of the Deputy Prime Minister for Investment and Informatisation (currently the Ministry of Investment, Regional Development and Informatisation of the Slovak Republic) in 2018. It contains the basic principles for the development of public strategies at the level of the central government and the stages of processing strategic documents. At the coordination level (VAIA), other existing tools are applied in developing strategic documents – the standards for processing analyses developed by the VMU/FPI. The contribution of the above tools to improving the quality of industrial strategies is limited due to their general nature.

Additionally, respondents mentioned use of the following tools:

- models for data analysis
- model for energy (PRIMES)
- methodologies and guidelines for EU financial instruments (POO, EU cohesion policy)
- internal tools for analysis and forecasting.

2.3.2. Methods used in designing and implementing industrial strategies

In the next part, we focused on the use of methods in developing and implementing industrial strategies in Slovakia. Data collected through a questionnaire survey and personal interviews indicate the use of a wide range of methods. The methods in question are mainly associated with the preparatory phase of industrial policies and can be considered as standard methods in the context of public administration.

Most methods are applied at the coordination level, i.e. they are applied by the Priorities and Research and Innovation Policies Division of VAIA. These include:

- data analysis
- value for money
- key performance indicators (KPIs)

- AS-IS/TO-BE analysis
- Maximum likelihood estimation (MLE).

VAIA is systematically increasing its capacity in the field of foresight as a suitable method for selecting prospective sectors / sectors for public support in Slovakia. A number of activities have been implemented in this area; however, VAIA organisational units do not yet have sufficient internal capacity to perform foresight.

At the executive level, MoERDY carries out the primary assessment of selected impacts of industrial strategies. The current methodology for assessing selected impacts requires the assessment of strategic documents on i) the public budget, ii) the business environment, iii) the social situation, iv) the environment, v) information, and vi) the impact of the public service on the citizen. MoE (IEA) lists the main methods used in developing an industrial strategy as: statistical methods, econometrics and cost-benefit analysis.

2.3.3. Main data sources

The availability of data for designing and implementing industrial policies determines the use of methods and the overall quality of policy documents. The information obtained shows the use of a wide range of data, mainly from domestic sources. The relevant organisational units make use of public access to databases to a large extent and use specific approaches to a lesser extent.

TABLE 6. MAIN DATA SOURCES

INSTITUTION	UNIT	MAIN DATA SOURCES
VAIA	Department for Research and Innovation Policies	<ul style="list-style-type: none"> ▪ Horizon, Finstat, Supercomputing, Eurostat, Statistical Office of the Slovak Republic, questionnaire surveys, CREPA, Web of Science, Elsevier (SCOPUS), Web scraping, databases/accesses via SCSTI
	Department of Priorities	<ul style="list-style-type: none"> ▪ Horizon, Finstat, Supercomputing, Eurostat, Statistical Office of the Slovak Republic, questionnaire surveys, CREPA, Web of Science, Elsevier (SCOPUS), Web scraping, databases/accesses via SCSTI
MoE	Department for Industrial Policy	<ul style="list-style-type: none"> ▪ Commercial Register, Trade Register, Register of Legal Entities, Entrepreneurs and Public Authorities, OverSi web, IS SEMP, Register of Public Sector Partners, Register of Financial Statements, EDES (Early Detection of Risk and Exclusion System) Database, Finstat, Register of Bankrupts, GPO, Central Register of Executions, ARACHNE Database, State Aid (Recovery), Stations Database (https://nabijame.sk/), Delegates portal
	Department of Innovation	<ul style="list-style-type: none"> ▪ statistical data, strategic materials at EU level, Eurostat (including rankings and comparisons), data and studies of subordinate agencies (SIEA, SBA)

	Institute of Economic Analysis	<ul style="list-style-type: none"> Register of accounts, social security assessment bases, tax returns, family accounts, energy consumption data at company level
MoERDY	Department for Implementation of State R&D Policy	<ul style="list-style-type: none"> SK Cris, Statistical Office of the Slovak Republic, In Cities, Eurostat, BR
SIEA	Innovation Section	<ul style="list-style-type: none"> own resources from completed projects

One problem in obtaining relevant data for industrial policies at the coordination level is paid access to some databases. In particular, access to patent databases (EPO/WIPO) is lacking. Another obstacle to effectively using these data (using APIs) is currently limited staff capacity. In some cases, there are delays in the provision of data from public institutions. This negatively affects the preparation and implementation of strategies.

2.3.4. External expertise

The next area of analysis of the current state of administrative capacity focused on the intensity and use of external experts in industrial strategies. Based on the data obtained, it can be concluded that most of the relevant organisational units use external expertise primarily in developing industrial strategies. Involvement of experts in working groups involved in preparing strategy documents or direct consultation has become standard. While the participation of representatives of the private sector, academia and civil society ensures the application of the partnership principle in public policies, it also allows the mobilisation of expertise that is not available in the organisational units responsible for drawing up strategies. Cooperation with external experts allows the transfer of knowledge and experience in developing industrial strategies, which has a positive impact on the quality of the documents produced and the effectiveness of their implementation in practice. The involvement of external experts in the implementation phase is minimal.

In cases where the responsible institutions (and organisational units) are tasked with developing strategic material for a specific thematic area in which they do not have sufficient expertise, they use the paid services of external experts. This type of cooperation is used to a limited extent (e.g. RIS3 for agriculture, health, hydrogen strategy). The form of employment (agreement / contract) depends on the scope and complexity of the assignment. VAIA has experience in cooperating with both Slovak and foreign experts.

2.3.5. Coordination, management and communication

The tasks in the area of development and implementation of industrial strategies (action plans) are based on long-term strategic documents at the national level or the political priorities of the government. Strategies are prepared in cooperation with representatives of government authorities, the business sector and academia in the framework of established expert working groups. Once a draft is prepared, the material is submitted for internal comment and approval to the management of the responsible institution. This is followed by a preliminary commenting procedure, an inter-ministerial commenting procedure and submission for further commenting by relevant platforms (e.g.

Government Council for Science, Technology and Innovation, Economic and Social Council). Finally, the material is submitted to the Government of the Slovak Republic.

In the implementation phase, the focal point coordinates the work of the institutions and organisational units involved. During the implementation process, they communicate continuously with the relevant partners. Working groups normally meet on a monthly basis to report on progress and identify risks. Information on progress is presented to the management of the Task Force and, where appropriate, at Cabinet meetings. Ongoing communication includes electronic mail (email), online communication platforms (MS Teams) and a portal for comments on materials. Some actors see room for increased cross-sectoral coordination in the implementation phase.

There are no specific information systems for coordinating and managing industrial policies. In the preparatory phase, the exchange of information between the actors involved takes place through established working groups and other platforms. In the implementation phase, communication focuses on monitoring progress towards the objectives. Specific information systems are used when industrial strategy measures are financed by EU funds (ISPO, ITMS).

2.3.6. Monitoring and evaluation

The following section assesses the use of monitoring and evaluation tools to support the strategic management of industrial policies in Slovakia. Based on the responses received, it can be noted that the main focus is on monitoring progress in implementation and achievement of the set objectives. The organisational units report on the implementation of the measures in which they act as promoters. Information is collected and evaluated at regular intervals by the institutions (departments) responsible for the overall strategy. The current alignment of competencies and limited inter-sectoral cooperation are obstacles to taking effective corrective action when deviations from milestones and targets are identified.

The Department of Implementation of the State Research and Development Policy of the Ministry of Education and Science of the Slovak Republic states that it prepares an interim and final analytical report beyond the monitoring. This approach is seen as a step towards evaluation, which primarily serves to improve implementation or to gain insights from implementation.

On the negative side, there is currently a complete absence of systematic evaluation in the implementation of industrial policies. In other words, evaluation is not part of the strategic management of industrial policies in Slovakia. This ultimately means that we prepare, finance and implement industrial strategies without knowing the effectiveness and efficiency of interventions supported by public funds. Without evaluation, the responsible institutions have no feedback on whether the activities they have carried out and the support they have provided have produced the desired effects (benefits) for the target groups. If the level of use of evaluation reflects the quality of management of a public policy / strategy, then the absence of this tool in industrial policies indicates that the level of implementation is not at the desired level. The lack of evaluation evidence goes some way to explaining the absence of measures to systematically capitalise on lessons learned from the implementation of domestic strategies and experiences from abroad (knowledge building).

2.3.7. Main challenges

The majority of the participating organisational units consider the lack of internal capacity to be a major challenge. This means that the lack of staff with the required professional skills makes institutions unable to fully use available data sources (e.g. patent databases) and apply more sophisticated methods

for processing them. This has a direct impact on the ability to develop and implement modern industrial strategies, including through the introduction of innovative solutions/approaches.

At the coordination level (VAIA), the lack of human resources is perceived as an obstacle to activities aimed at capitalising on the experience of preparing for Mission Health. The intention is to develop a case study on how to effectively design public policies in Slovakia.

2.4. External factors

2.4.1. Legal framework

Legislation is an **important external factor** that influences both **the design** and **implementation** of industrial strategies. The most important aspects of legislation in terms of potential impacts are as follows:

- Change in legislation when political circumstances change (in particular the competence law)
- Expectations, process and pace of drafting important laws from a research and innovation perspective (in particular the Research and Innovation Act)
- Degree of compliance with relevant European and Slovak legislation

Changes in legislation have an impact on the position of relevant government departments in preparing and implementing industrial strategies and thus have a largely negative impact on capacity in terms of availability and readiness of staff resources. They also have an impact on turnover, this aspect is often solved by the transition of key staff to relevant positions in other public administration institutions – we have seen staff transitions, e.g. between MoE and SIEA, but this is not always ideal in terms of increase in know-how, training of new members of the services and planning. On the contrary, it often facilitates personal communication as relevant key employees know each other.

Expectations, process and pace of drafting important laws – this aspect is particularly important because of the absence of a law on research and innovation. The view of its preparation is different – for some participants too fast – with insufficient space for incorporating important comments, for some too slow in terms of need (especially the innovation community).

The degree of consistency between relevant European and Slovak legislation is particularly important from the perspective of European Green Deal policies impacting industrial sectors – here the composition and distribution of forces among the factions of the European Parliament after this year's elections will have a decisive influence.

The specific laws of the Slovak Republic that have been mentioned as relevant in terms of their impact on the issue at hand are:

Amendment to Act No. 575/2001 Coll. on the Organisation of Government Activities and the Organisation of the Central State Administration; Amendment to Act No. 523/2004 Coll. on the Budget Rules of the Public Administration and Amendments and Additions to Certain Acts; Act No. 243/2017 Coll. on the Public Research Institution and Amendments and Additions to Certain Acts.

The most important aspects of the impact of the legislation from the point of view of the services surveyed are:

- MoE, Innovation Department –Competence Act, which has changed competences in RDI in recent years, Government Programme Statement.
- MoE, Department of Industrial Policy – RRP, EU Green Deal policies (European Parliament change) – these have an impact on industrial policies especially in terms of sectors – energy, mobility, and manufacturing.
- IEA – given IEA's position as a data analytics processor, the Data Act is important to them to streamline operations and make the preparation of analytic inputs for strategies faster and more efficient. A hindrance at present is the lengthy administrative process of accessing data sources.

- For SIEA, the most important is the impact of the forthcoming Research and Innovation Act, which, according to the staff, is being prepared too quickly and the deadlines are being shortened, which reduces the quality of the commenting procedure.
- MoERDY, Department for Implementation of State R&D Policy – like SIEA, sees an important impact of the forthcoming Research and Innovation Act and sees a risk in the lack of readiness to incorporate relevant comments of the affected parties. At the same time, the Department does not have sufficient capacity to give due attention to the different parts of this forthcoming law.
- The impact of the expected Research and Innovation Act is as important for VAIA's Policy Department as it is for the Priorities Department. In addition to this, it is also a competence law that will determine the position of both VAIA and the disciplines concerned in developing strategies.

2.4.2. Financial resources

Financial resources as an external factor are as **important for the preparation of** industrial and innovation strategies **as they are for their implementation**. The most important aspects of the assessment of financial resources in terms of their impact on industrial innovation strategies are

- Availability
- Organisational availability
- Time aspect
- Dependence on EU resources

In terms of **availability**, the views of the services surveyed were mixed. According to some, there is a shortage of funds, while others believe that the problem lies more in the efficiency of their distribution. In general, there is a lack of resources for the preparation of industrial and innovation strategies, which makes the acquisition of external expertise impossible. This reduces the quality of the strategies prepared, as there is insufficient participation of the expert community on a voluntary basis. The lack of financial resources also limits the number of in-house professional staff allocated to participate in the strategy development process. As regards the availability of resources for the implementation of the strategies, this is taken into account in preparing the strategies, but in terms of needs and impacts, an increase in resources is necessary.

The organisational availability of financial resources is insufficient as currently and recently implemented strategies and action plans have not been guaranteed by the MoF. This has often led to revisions and a lack of coverage of interest. The administration of disbursement of funds is also often complicated.

The timing of the use of financial resources is constrained by budgetary rules. The annual financial planning horizon is insufficient for action plans, which complicates their long-term implementation. There is a need to set rules for the use of funds and to address the problem of transition between budget years.

Dependence on EU resources (ESIF and RRP) results in insufficient consideration of the specific interests and needs of the Slovak Republic.

The most important aspects of the impact of financial resources from the point of view of the services surveyed are:

- MoE, Innovation Department – considers the number of public resources allocated to industrial strategies and action plans to be insufficient. It recommends that measures should be fewer in number and adopted with clear financial backing, which is the task of the Ministry of Finance of the Slovak Republic. It is essential to involve the Ministry of Finance during the preparation of strategy documents to avoid contradictions. It also considers that there are insufficient resources for the preparation of strategies and action plans so only internal capacities are used.
- MoE, Department of Industrial Policy – considers the availability of resources to be low, and positively assesses the resources of the RRP. However, it does not consider money to be the most important thing – it attaches equal importance to legislation and conditions.
- SIEA sees in particular the need to secure budget and financial coverage, as we are currently dependent on the European Structural and Investment Funds (ESIF). The annual planning horizon for finances is considered insufficient for action plans, which complicates their long-term implementation. It proposes setting rules for the use of funds and addressing the problem of the transition between budget years.
- VAIA – The Policy Department assesses the overall level of available resources as sufficient; the key factor appears to be the efficiency of the system as a whole. It is positive that the government is committed to systematically increasing public resources in line with the RDI strategy, which we see as a significant step.
- VAIA – The Priorities Department considers the number of resources to be limited due to the high level of administration. The volume of resources for the VII is considered sufficient

2.4.3. Transparency and inclusiveness

Transparency and inclusion as an external factor influencing industrial and innovation strategies need to be assessed from two perspectives. One is the **legislative and organisational possibility to enter into the process of developing** industrial and innovation strategies or to obtain information on its objectives, status and implementation. The second is the **active acquisition and offer of the professional or concerned public** to enter the preparation process and thus increase the effectiveness of the measures.

In terms of legislative and organisational capacity, the process of preparing industrial strategies is **sound**. The process is participatory and creates sufficient scope for input from the expert and affected public through participation in working groups or in commenting procedures.

In terms of active feedback acquisition, the process of developing industrial strategies is **insufficient**. There is a need to promote openness in communication, cross-sector cooperation, involving more actors in the innovation ecosystem: involving universities, academies and clusters, and encouraging and inviting industry associations to actively represent their members in the process.

The **most important aspects** of transparency and inclusiveness:

- The MoE, Strategy, Innovation and Industrial Policy Departments all rate transparency and inclusion as sufficient, with opportunities for stakeholder input through participation in working groups.
- SIEA stresses the need to clean up competencies and promote openness in communication, leaving behind resortism, to include more actors in the innovation ecosystem: involvement of universities, academies and clusters (currently there are 36 clusters in Slovakia) – it can be based, for example, on the basis of the innoverse platform. Industry federations do not sufficiently represent their members in the preparation process.
- The Ministry of Education and Science of the Slovak Republic, Department of Implementation of State R&D Policy sees the possibility of greater involvement of relevant entities in the

creative process of preparing the material in the form of creating expert working groups, the possibility of involvement in the form of the function of commenting on the material in the internal commenting procedure, preliminary commenting procedure and inter-ministerial commenting procedure. It recommends that the material be discussed in the relevant expert councils.

- VAIA – Policy Department and Priorities Department rate transparency and inclusion as sufficient with opportunities for stakeholders to enter into comment procedures and participate in working groups.

2.4.4. Objectives of industrial strategies

From the perspective of the current preparation process, **the objectives of the strategies do not appear to be an external factor**. Rather, they are defined (whether general or specific) on an internal basis. They are based on hierarchically higher documents, such as analyses and strategic documents of the European Union. They are most often formulated as an effort to achieve a quantitative shift in areas where analytics show Slovakia lagging behind the EU average. They are formulated to be measurable and deductible. The performance countdown is public, but there is a proactive approach to disclosure, particularly in areas where results are positive.

The individual departments interviewed perceive target setting as an external factor as follows:

- MoE, Innovation Department – The main objectives of industrial strategies and action plans are formulated on the basis of strategic documents and analyses at European Union level. The objectives are conceived as a quantitative shift, which means that they are expressed in concrete numerical values and positions in international rankings.
- MoE, Department of Industrial Policy – considers the countdown system and its publication to be important. Press releases / PR /web – trying to report on progress. Other important activities are – information in the regions, participation in expert panels, and communication with companies with the participation of MoE SR representatives.
- IEA – perceives an economic policy strategy where the objectives are formulated in very general terms, the possibility of interpreting KPIs corresponds to this.
- VAIA – The Policy Department sees the goals formulated so that they can be measurable and deductible. Specific measures are then assigned to them. The fulfilment of the individual measures should, in aggregate, also lead to the fulfilment of the broader objective. Monitoring of implementation and reporting on progress is provided for each measure on an individual basis. Depending on the type of measure – if it is a call for proposals to support a specific thematic area, it is monitored whether the call is launched on time, whether it is evaluated on time and whether funding is subsequently allocated.

2.4.5. Other external factors

Other external factors that influence the preparation of industrial and innovation strategies are mainly political cycles and events that have a significant impact on the economy (pandemics, military conflicts, energy crises, climate change, etc.). Other minor factors mentioned by the services interviewed are the state of the national budget, the absorption of EU funds, etc., but these have already been partly mentioned in the previous subchapters.

The following additional external factors were identified by the various departments interviewed:

- MoE, Innovation Department – Policy cycles, state of implementation of the ESIF, state of the state budget, EU policies

- MoE, Department of Industrial Policy – Politics, pandemic, war conflict, energy crisis (major impact),
- IEA – Political cycles that can affect available time (often quick queries from management will change the nature of the work - depending on what the senior departments need)
- Ministry of Education and Science of the Slovak Republic Department of State R&D Policy Implementation)- Finance, Policy Cycles, Human Resources
- VAIA - Policy Department – political cycles, staff changes in partner organisations, changes in legislation, economic conditions – in times of crisis there may be a temporary reduction in funding to the VA (economic crisis, COVID-19, military conflict, energy crisis)
- VAIA – Department of Priorities – political cycles, staff changes in partner organisations, changes in legislation, economic conditions

2.4.6. Conclusions

As a result of the survey of relevant external factors of the AS-IS by asking the key services for the preparation of industrial and innovation strategies, the following three important areas have been identified as having a major impact on the quality, feasibility, results and impacts of the prepared industrial and innovation strategies, action plans and the measures resulting from them. Intense activity to improve the situation in the above areas is critical to the effectiveness of the impacts.

Finance – the availability of financial resources is essential for the quality and impact of industrial and innovation strategies. Sufficient resources for preparation are needed to ensure that experts and the professional public are involved in the activities and that internal staff of the services have sufficient space for quality input, acquisition of feedback and verification of information. Resources for preparation are only a fraction of the resources for implementation, saving or underestimating this area makes no sense as good quality strategy preparation has a decisive impact on the effectiveness of spending on implementation. The resources for the implementation itself must of course take into account the financial possibilities of the Slovak Republic and the available EU resources. However, a clearly defined financial envelope in advance will significantly increase the effectiveness and results of the measures. At the same time, the administration must not restrict the timely deployment of funds and their use within a reasonable timeframe according to the nature of the measures. At the same time, bureaucratic pressure on beneficiaries needs to be reduced.

Competences – the stability of competencies, and the comprehensive coverage of staffing needs related to the development and implementation of industrial and innovation strategies are essential for their quality. At present, the frequent transition of competencies causes turnover and the transfer of staff from one department to another. This has an impact on continuity and the lack of taking into account the experience of the implementation of previous strategies in preparing new ones. In general, it is essential to preserve the know-how and experience of implementing strategies, and this is what the frequent transition of competencies makes impossible. Staff turnover also has a negative impact on teams, redistribution and the effectiveness of work within them. At the same time, useful contacts with the external environment are often lost.

Inclusion – sufficient involvement of external experts, the professional public and those affected by the measures to be prepared is essential for the success of the strategies to be prepared. Passive creation of opportunities for inclusion is insufficient. It is necessary to increase the active acquisition of input and feedback both in the preparation process – through greater involvement in commenting procedures and working groups – and in evaluation and presentation of the impact of strategies. Experts, academia, industry associations, the business environment, the start-up community, regions and groups affected by the measures should be consulted. Permanent channels of communication need to be established with these groups. To be inclusive, it is essential to sufficiently present positive results.

2.5. SWOT analyses

TABLE 7. SWOT ANALYSIS – HUMAN RESOURCES

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> ▪ Qualified staff with expertise. ▪ Wide range of work experience. ▪ Existence of historical memory and continuity. ▪ High employee engagement in strategy development and implementation. ▪ Employee flexibility and adaptability. ▪ Internal and external learning and development opportunities. ▪ Access to international projects, networking and examples of good practice. 	<ul style="list-style-type: none"> ▪ Shortage of qualified professionals. ▪ Low salary level. ▪ Lack of strategic approach, synergy and coordination. ▪ Lack of specialisation. ▪ Overload of administrative tasks. ▪ Turnover of key staff. ▪ Lack of analytical capacity. ▪ Frequent changes in policy priorities, agenda and departmental focus. ▪ Restrictions on recruitment. ▪ Uncertainty and instability in teams.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ▪ Developing a strategic approach and coordination. ▪ Increase in salary levels for professionals in the civil service. ▪ Expansion of teams to include experts in strategic areas. ▪ Effective use of cooperation with external organisations. ▪ Strengthening analytical capacity ▪ Transfer of know-how, incl. international stays. 	<ul style="list-style-type: none"> ▪ Political change and uncertainty. ▪ Limited access to finance. ▪ Shortage of new qualified staff. ▪ Fragmentation of the RDI system and policy-making. ▪ Low motivation and overloading of existing staff. ▪ Lack of continuity in teams. ▪ Impact of restrictive measures

TABLE 8. SWOT ANALYSIS – STRUCTURES

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> ▪ Close alignment with political priorities and national strategies. ▪ Involving a wide range of partners in the design and implementation process. ▪ Regular communication and reporting on task progress, which increases transparency. ▪ Relatively high level of expertise and specialisation of departments. ▪ Access to European funds and programmes, which can also be used to purchase the necessary infrastructure, tools and build staff capacity. 	<ul style="list-style-type: none"> ▪ Insufficient staff capacity and staff overload, which hampers the effectiveness of implementation. ▪ Complicated and slow inter-institutional coordination, often leading to delays and communication problems. ▪ Limited flexibility to respond to change, mainly due to a lack of resources and capacity.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ▪ Improving inter-ministerial cooperation through better coordination mechanisms and increased transparency of processes. ▪ Strengthening staff capacity and expertise through targeted HR policies and training programmes. ▪ Using experience from international projects to increase efficiency and innovation in the development and implementation of industrial strategies. 	<ul style="list-style-type: none"> ▪ The persistent lack of resources and staff may lead to ineffective implementation of strategies, which could undermine Slovakia's competitiveness. ▪ The inability to respond flexibly to rapidly changing external factors such as political and economic changes can jeopardise the success of the implementation of strategies. ▪ Risk of policy changes that could affect the continuity of industrial strategies and jeopardise long-term objectives.

TABLE 9. SWOT ANALYSIS --SYSTEM AND TOOLS

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> ▪ Framework methodology for the development of public strategies. ▪ Access to and use of public databases. ▪ External experts are involved in the development and implementation of strategies. ▪ Standardised process for managing and coordinating strategies. 	<ul style="list-style-type: none"> ▪ Unavailability of some tools and data for the design and implementation of industrial policies. ▪ Limited options if corrective action is needed. ▪ Delays in collecting progress data. ▪ Absence of systematic evaluation.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ▪ Introduction of a specific methodology for industrial policymaking. ▪ Strengthening capacities to make effective use of new data sources. ▪ Strengthening capacities in the use of foresight. ▪ Capitalizing on experience and knowledge. ▪ International cooperation to improve the design and implementation of industrial policies. 	<ul style="list-style-type: none"> ▪ Insufficient capacity to improve the quality of strategy development and implementation. ▪ Reduced availability of external experts due to financial constraints. ▪ Lack of feedback can lead to continued ineffective implementation.

TABLE 10. SWOT ANALYSIS – EXTERNAL FACTORS

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> ▪ Sufficient transparency and inclusion. ▪ Ability to retain key staff despite the impact of political cycles and changing competencies. ▪ Flexibility of institutions to respond to external factors. ▪ Existing links to the external environment - experts, industry, academia. 	<ul style="list-style-type: none"> ▪ Lack of public participation in the process. ▪ Lack of involvement of external expertise in the process. ▪ Frequent changes of competences. ▪ Insufficient funding for the preparation process. ▪ Too much dependence on EU funding for implementation.
OPTIONS	THREATS
<ul style="list-style-type: none"> ▪ Increase participation of the professional and affected public in the development process. ▪ Stable distribution of competencies between relevant departments. ▪ Increase in the number of staff. ▪ Acquisition of external expertise. ▪ Pre-defined financial coverage of the measures, confirmed by the MoF. ▪ Increased visibility of the delivery of strategies, results and impacts. 	<ul style="list-style-type: none"> ▪ Lack of financial resources from the SR. ▪ Reduction of EU funding. ▪ Loss of key staff due to transfer of competencies. ▪ Loss of confidence of the professional and affected public due to too formal definition of objectives and measures. ▪ Lack of inclusion impacting on quality and implementability.

2.6. Interrelations

In this chapter, the main interrelations/interdependencies across the main factors of administrative capacities are identified.

TABLE 11. OVERVIEW OF INTERRELATIONS/INTERDEPENDENCIES

AS-IS situation	Impact
<ul style="list-style-type: none"> ▪ Shortage of qualified human resources 	<ul style="list-style-type: none"> ▪ Limited opportunities for further specialisation and capacity building. ▪ Insufficient capacities to effectively implement strategies and deliver political priorities. ▪ Lack of innovative approaches, methods and data used in design of industrial policies. ▪ Limited capacity to enhance cross-sector coordination and communication. ▪ Lower flexibility to adapt to fast changing environment.
<ul style="list-style-type: none"> ▪ Improper legal framework for design and delivery of industrial policies 	<ul style="list-style-type: none"> ▪ Unclear competences and responsibilities of relevant actors. ▪ Limited capacity to enhance cross-sector coordination and communication. ▪ Lack of instruments to effectively implement strategies and deliver political priorities. ▪ Uncertainty of relevant institutions and organisational units involved in industrial strategies.
<ul style="list-style-type: none"> ▪ Short-term planning 	<ul style="list-style-type: none"> ▪ In conflict with medium-term implementation and financial cycle. ▪ Undermines the transparency and predictability of use of public financial resources. ▪ Emphasis placed on absorption of EU funding, not on effectiveness of support. ▪ Changes in political priorities and implementation reduce the willingness of partners to actively participate.

2.7. Main findings of the AS-IS analysis by organisational unit

2.7.1. VAIA – Research and Innovation Policy Department

Human Resources

- The number of staff is continuously increasing, and today the Department has 10 staff members who are primarily dedicated to coordinating, collecting and processing data, and monitoring progress in implementing the National Strategy for Research Science and Innovation.
 - There is sufficient space within the institution for high-quality adaptation and competence training according to individual needs.
 - The process of developing a human resource management strategy at the VAIA level is underway, responding to the number of staff and the need to manage them effectively.
 - Need to expand the team with a project management and data analytics expert.
-

Structures

- The unit is responsible for the development and coordination of research and innovation policies at the national level (National Strategy, Recovery and Resilience Plan) and ensures their alignment with European priorities.
 - Processes for policy / strategy development and coordination are well established, but organisational and coordination mechanisms need to be improved to ensure timely delivery.
 - A specific challenge is the complex inter-ministerial issue, which sometimes slow down the implementation of particular measures, an improvement could be brought by the forthcoming law on PRI or the competence law.
-

Systems and tools

- The Department has not developed its methodological tools to support the development and implementation of industrial strategies; existing standards for analysis (FPI/VMU) are applied.
 - Active use of a wide range of registries / databases and methods, but access to some patent databases is still lacking, mainly for capacity reasons.
 - External experts are involved in developing strategies through participation in working groups and consultations, and paid expertise is used for specific areas.
 - Standardised process for progress monitoring and reporting (debriefing), no systematic evaluation as part of strategic management of industrial strategies.
-

External factors

- The preparation of a new law on the PRI and the change of the law on competencies are perceived as important changes in the legislative environment.
 - The number of public resources to support industrial strategies (and innovation) is sufficient, but the critical factor is the efficiency of the whole system.
 - Space created for the involvement of relevant actors in the development and implementation of strategies.
 - The challenge of preparing for global influences that significantly change economic conditions.
-

2.7.2. VAIA Priorities Department

Human Resources

- The department currently has 7 employees, with 80% of their time devoted to developing and implementing industrial strategies.
 - Capacity constraints are a barrier to further specialisation of staff, and up to 40% of their working time is devoted to administrative activities.
 - Staff expertise includes: drafting public policies and strategic documents, defining tools for implementing public policies, networking and stakeholder management.
 - Created space for adaptation and competence training of employees.
-

Structures

- The Department is responsible for identifying and prioritising areas of research and innovation that are key to the development of the Slovak Republic.
 - It coordinates the involvement of relevant stakeholders in developing and implementing industrial strategies and action plans through several platforms.
 - Flexibility in adapting priorities is limited due to complicated inter-ministerial coordination mechanisms.
 - There is a lack of clear tools and procedures for effective monitoring and evaluation of the implementation of priorities by stakeholders, leading to delays in the achievement of objectives.
-

Systems and tools

- They are not currently actively using methodological tools for developing and implementing industrial strategies.
 - Existing access to registries / databases, they apply several standard methods within their agenda (trying to build capacity for foresight).
 - External experts are also part of the industrial strategy development and implementation processes, although their activity is not at the desired level.
 - Established a framework for monitoring the achievement of the National Strategy (RIS3) objectives, evaluation is not planned to be carried out.
-

External factors

- They see the forthcoming law on research and innovation as key to improving the functioning of the whole system.
 - Insufficient provision for the administrative side of the preparation and administration of the strategies appears to be an obstacle.
 - Standard tools are used to ensure transparency and inclusiveness: comment procedures, public consultations and working groups.
 - Political cycles, legislative changes and staff changes in partner institutions have a significant impact on operations.
-

2.7.3. Department of Industrial Policy of the MoE

Human Resources

- The organisational unit has increased the number of staff from 3 to 10 since 2020, but the number of officers available for the industrial strategy agenda is limited, which has a negative impact on the workload.
 - Employees have continuing education opportunities (NICA, AO), and participation in training activities is voluntary.
 - Since 2021, the human resources of the department have stabilised; previously, operations were affected by high turnover.
 - Increasing the capacity of the Department would allow for further specialisation needed in the context of industrial policy/strategy development and implementation.
-

Structures

- The Department plays a key role in shaping Slovakia's industrial policy and supporting various sectors of the economy.
 - It ensures the translation of European policies into national policy documents and regulations, which requires close cooperation with other ministries and institutions.
 - However, coordination with other ministries and between institutions is largely limited, leading to duplication of tasks and unnecessary administrative bottlenecks.
 - The professional public, including socio-economic partners, is involved from the very beginning of the preparation of strategic documents, with working groups primarily serving this purpose.
-

Systems and tools

- Currently they do not have any methodological document for industrial policies / strategies, they use the Methodology and Institutional Framework for the development of public strategies.
 - They mainly use a wide range of domestic registers/databases and foreign information sources in the process of industrial policy / strategy formulation.
 - External experts are involved in the processes mainly through working groups and consultations; the use of fee-based services is minimal.
 - A standardised process for monitoring and reporting on implementation progress.
-

External factors

- The available financial resources are considered insufficient, the measures taken are mainly financed from EU sources (RRP/ESIF).
 - An important factor influencing industrial policy / strategies is policy developments at the EU level (Green deal, energy crisis).
 - Under current conditions, the measures to ensure transparency and inclusiveness are sufficient.
 - Other important external factors are global influences, especially related to the environment, war conflict, and energy crisis.
-

2.7.4. Innovation Department of MoE

Human Resources

- Limited number of staff in the organisational unit, each working on a separate agenda.
 - The need for an increase in staff as currently there is only 1 staff member and the Director of the Department working on the Industrial Strategies agenda.
 - Staff members design their training according to their training needs, attending approximately five training sessions per year.
 - Significant turnover in 2022 when the departure of two key staff members threatened the continuity of the work of the unit.
 - Recruitment of new staff is currently suspended.
-

Structures

- The role of the Unit is to support innovation processes in SMEs, including start-ups and clusters.
 - The Innovation Department actively involves social and economic partners in developing and implementing industrial strategies, in particular through working groups (e.g. WG on hydrogen legislation, WG on digital transformation).
 - The Unit faces challenges related to inter-ministerial coordination and a lack of qualified staff to effectively implement strategies.
-

Systems and tools

- The Department follows the available manuals that are designed for the use of EU funding (RRP/ESIF). The Methodology and Institutional Framework for the Development of Public Strategies is not currently used.
 - The main sources of information include statistical data, international comparisons, strategic documents of the EU and Slovakia, and studies of line agencies (SBA, SIEA).
 - External experts are involved in the processes through participation in working groups and, in exceptional cases, through performance contracts.
 - There is a lack of innovative approaches and tools for developing and implementing industrial strategies.
-

External factors

- The available resources allocated to industrial strategies and action plans are considered insufficient.
 - A number of measures are approved without financial coverage; therefore, it is necessary to include the MoF in elaborating strategic documents.
 - Financial resources for preparing strategies are considered insufficient
 - The need to involve the professional public beyond the comment procedures, which will require an increase in resources.
-

2.7.5. Institute of Economic Analyses of MoE

Human Resources

- Out of a total of eight employees, one employee devotes approximately 25% of their working time to industrial strategies.
 - The Department primarily provides analytical support, without directly developing investment proposals.
 - Specific training aimed at developing staff competencies is not provided.
 - The turnover of human resources is minimal, and the composition of the team is stable.
 - The Unit does not have a specific strategy/approach to human resource management but primarily focuses on human resources with the skills needed for the Institute's activities.
-

Structures

- The IEA provides analytical support for the design and implementation of economic policies and strategies, for which it needs to be provided with sufficient professional capacity with adequate skills (statistics, programming).
 - The Unit uses various analytical platforms and tools to engage relevant partners in developing and implementing industrial strategies. It organises roundtables and expert seminars to discuss current economic challenges and how they can be addressed in the context of Slovakia's industrial strategies.
 - The IEA's role is to ensure that decisions taken at the Ministry are based on analytical foundations and that strategies are prepared with Slovakia's long-term economic objectives in mind.
-

Systems and tools

- IEA does not have specific methodological tools to support the development and implementation of industrial strategies.
 - It uses domestic registries / databases and a tailored set of methods for their processing or analysis.
 - The Analytical Institute's tasks do not require the involvement of external experts.
 - The Unit is involved in monitoring and reporting on progress in implementing strategies and meeting targets.
-

External factors

- The adoption of a data law to improve access to data is important for the fulfilment of the Institute's stated objectives.
 - The objectives of the economic policy strategy are formulated in general terms, which corresponds to the possibility of monitoring and interpreting the progress achieved.
 - A significant external factor is political cycles, changing demands on the outputs of the Unit.
-

2.7.6. Slovak Innovation and Energy Agency

Human Resources

- Lack of systematic staff training, training support is ad hoc.
 - Turnover is low, but political changes can cause problems with staff stability.
 - SIEA does not have a systematic training system for its employees. Staff have the opportunity to travel within projects and, if there is a serious demand for training, it is supported on an ad hoc basis.
 - Major training needs include presentation and communication skills, which should have an institutional basis.
-

Structures

- SIEA plays an important role in implementing policies aimed at promoting innovation and energy efficiency in Slovakia. It uses various analytical tools and expertise to develop effective measures.
 - It actively cooperates with various partners through working groups and international projects in the field of cluster and digitalisation support (EDIH).
 - Although the Agency can respond to new initiatives and changes, its flexibility is largely limited by administrative procedures and the need for coordination with several institutions and ministries.
-

Systems and tools

- Primarily works and evaluates own data, and participates in international projects.
 - The preparation phase requires more attention and resources to avoid problems during implementation.
 - The implementation processes are not sufficiently coordinated and there is currently no tool for mutual coordination and communication.
-

External factors

- High dependence on EU resources, weakened additionality principle.
 - Transition of measures between budget years is problematic
 - They consider the drafting of the Research and Innovation Act to be critical
 - In inclusion, promote openness in communication, abandoning resortism
 - Promote the involvement of academia and clusters in the development of strategies
 - They would look for an opportunity to increase the activities of industrial unions
-

3. TO-BE situation

3.1. Human Resources

3.1.1. Priorities for human resources

1. Increasing the number of qualified experts and strengthening staff capacity

Attracting and retaining skilled professionals in key positions is a priority to ensure sufficient staff capacity to develop and implement industrial policies effectively. Increasing the competitiveness of the public sector through better pay conditions, flexible work benefits, and career opportunities is essential to prevent an outflow of professionals into the private sector. Simplifying and speeding up recruitment processes and introducing new methodologies to attract young talent are also part of this priority, enabling organisations to respond more quickly to staffing needs and avoid overloading existing staff.

2. Developing staff expertise and specialisation

Ensuring the continuous professional development of staff is a critical priority for building their specialisation and ability to tackle complex tasks. A long-term career development and training programme that reflects technological and industry trends must be implemented to achieve this. Special attention should be paid to raising competencies in digitalisation and innovative technologies. This will reduce the risk of outdated skills, increase work efficiency, and encourage employees to adopt innovative approaches to tackle new challenges.

3. Strengthening administrative support and streamlining internal processes

Strengthening administrative support and optimising internal processes are essential for successfully implementing industrial policies. This priority includes reducing the administrative overload on professional staff, allowing them to concentrate on their core tasks. Under this priority, coordination between organisational units needs to be improved, more efficient management processes must be implemented, and unnecessary duplication must be eliminated. This approach will result in higher productivity and better quality outputs, as well as ensure that deadlines are met.

3.1.2. Overview of the proposed measures for human resources

TABLE 12. PRIORITIES AND PROPOSED MEASURES FOR HUMAN RESOURCES

PRIORITIES	PROPOSED MEASURES
Increasing the number of qualified experts and strengthening staff capacity	<ol style="list-style-type: none"> 1. Optimising the acquisition and management of human resources 2. Capacity enhancement through cooperation with external actors
Developing staff expertise and specialisation	<ol style="list-style-type: none"> 3. Staff training and specialisation 4. Networking and partnerships for professional capacity development

Strengthening administrative support and streamlining internal processes	<ul style="list-style-type: none"> 5. Restructuring of administrative conditions 6. Trans-ministerial coordination of administrative activities
--	---

3.1.3. Description of human resources measures

Priority: Increasing the number of qualified professionals and strengthening staff capacity

Measure number: 1

Name of the measure:	Optimising the acquisition and management of human resources
Background:	<p>Optimising the acquisition and management of human resources responds to the challenges of limited staff capacity, low flexibility in staff management and recruitment constraints. Many business units face an overstretch of existing staff, negatively affecting their efficiency and ability to address strategic tasks. Staff redeployment and matrix organisational structures can increase flexibility and efficient capacity use.</p> <p>The implementation of some of the instruments of this measure is essential as it contributes to addressing the skills shortage without the need for costly external recruitment. This will ensure that existing staff are used effectively on key projects, improving the organisation's ability to perform its tasks even under restrictive recruitment conditions.</p>
Description of measure:	<p>The measure includes internal workforce restructuring, redeployment of staff from lower priority units to critical project teams and introduction of a matrix organisational structure¹, allowing staff to work across different projects according to current needs. An efficient recruitment process will be supported by shortening administrative steps and introducing a dedicated recruitment team, improving recruitment availability and quality.</p> <p>The intervention logic is that improving internal management and redeploying staff within existing resources will increase the availability of skilled professionals for essential tasks, thereby ensuring greater organisational effectiveness. Flexible working conditions and benefits contribute to improving employee motivation and reducing attrition.</p> <p>Draft action steps:</p> <ol style="list-style-type: none"> 1. Capacity analysis and identification of lower priority services.

¹ A matrix organisational structure is a management system that combines functional (in formal organisational charts) and project (ad hoc temporary or topical) lines, allowing employees to work on tasks across different departments and manage projects more flexibly. In a matrix model, employees are often managed by two supervisors: a functional manager within their department and a project manager for a specific project. Implementing a matrix structure in the relevant departments that focus on designing and implementing strategies provides the organisation with the necessary flexibility to reallocate resources quickly and make effective use of specialist capacity.

	<ol style="list-style-type: none"> 2. Transfer of staff to project teams based on needs analysis. 3. Implementation of matrix organisational structures. 4. Establishing a dedicated recruitment team and streamlining recruitment steps. 5. Introduction of flexible working conditions and non-financial benefits. <p>The measure aims to better use the human resources of the organisational units concerned, increasing its capacity to respond to current challenges. Staff will work more efficiently and be more motivated, leading to improved quality of outputs and reduced overload on teams.</p>
Alternative solutions:	<ul style="list-style-type: none"> • Introduction of temporary labour contracts for specific projects. • Outsourcing administrative tasks to relieve internal resources. • Sharing of experts between organisations through inter-agency agreements.
Prerequisites:	<p>Successful measure implementation requires management support, transparent communication between departments and staff, and sufficient technical equipment to implement the matrix structures. Training managers and staff to manage effectively and adapt to the new working models is also essential.</p>
Recipients:	<p>All analysed departments involved in design and implementation of industrial strategies.</p>
Responsibility:	<p>All the services analysed are involved in designing and implementing industrial strategies in collaboration with the service offices.</p>
Schedule:	<p>The measure is planned as a medium-term task with a timeframe of 6 to 12 months, with phasing after that:</p> <ol style="list-style-type: none"> 1. Analysis and proposal of staff redeployment (first 3 months), 2. Implementation of matrix structures and restructuring of the employee portfolio (4-6 months) 3. Introduction of flexible working conditions (up to 12 months).
Outputs and indicators:	<ul style="list-style-type: none"> • Increase in the number of staff redeployed to key projects. • Reducing the administrative burden on staff. • Increased efficiency of work as measured by improved project deadlines. • Increase in employee satisfaction with working conditions.
Financial resources:	<p>This measure requires minimal financial costs as it focuses on the redeployment of existing staff and adjusting working conditions within existing resources.</p>

Priority: Increasing the number of qualified professionals and strengthening staff capacity

Measure number: 2

Name of the measure:	Capacity enhancement through cooperation with external actors
Background:	<p>The measure responds to recruitment constraints and lack of staff capacity in organisations responsible for designing and implementing strategies. As workloads increase and specialised knowledge becomes necessary, it is essential to have flexible solutions to engage external resources and experts. Securing temporary support from external actors is key to maintaining efficiency and quality of outputs without a long-term commitment to increase staffing.</p> <p>Implementing the measure allows organisations to adapt to changing needs and focus internal resources on key strategic tasks. The use of external experts and trainees from universities provides the necessary flexibility. It encourages collaboration with the academic sector, thereby broadening the knowledge base and increasing the efficiency of project solutions.</p>
Description of measure:	<p>This measure includes establishing a system to involve external experts on a project basis and using external consultation to support strategic activities. Collaboration with universities will allow access to the latest research findings and the involvement of trainees in short-term projects, thus supporting the development of their practical experience while easing the burden on permanent staff. Introducing a hybrid workforce model, combining a core team with external partners and contract staff, will allow for efficient workload management.</p> <p>The intervention logic is that by extending cooperation with external partners, sufficient capacity and specialisation will be ensured for implementing key projects, thereby strengthening the efficiency of internal teams. This model allows organisations to respond flexibly to current needs without permanently increasing staff numbers.</p> <p>Main steps for implementing the measure:</p> <ol style="list-style-type: none"> 1. Identify needs for external support. 2. Establish partnerships with universities and professional organisations. 3. Create a database of external consultants and partners. 4. Establish a system to involve trainees in short-term projects. 5. Implement a hybrid working model. <p>Successful implementation of the measure will increase the availability of professional capacities to address specific tasks and projects, leading to more effective implementation of strategies and higher-quality outputs. This will ensure flexible support to teams and expand the professional potential of the organisation.</p>
Alternative solutions:	<ul style="list-style-type: none"> • Sharing of experts between organisations through inter-agency agreements. • Using grant programmes to fund project work.

	<ul style="list-style-type: none"> • Strengthening cooperation with NGOs and institutes.
Prerequisites:	To successfully implement the measure, it is essential to have clearly defined contractual conditions for cooperation with external experts and academic bodies and establish an internal system for coordinating these collaborations. Ensuring transparency in selecting external actors and effective communication between them and internal teams are also key.
Recipients:	All analysed departments involved in design and implementation of industrial strategies.
Responsibility:	All the services analysed involved in designing and implementing industrial strategies in collaboration with the service offices.
Schedule:	<p>The measure is planned as a short to medium-term task with a 6 to 12-month implementation horizon:</p> <ol style="list-style-type: none"> 1. Needs analysis and partnership building (months 1-3). 2. Pilot engagement of external experts (3-6 months). 3. Implement the hybrid working model (months 5-12).
Outputs and indicators:	<ul style="list-style-type: none"> • Number of external experts involved in projects. • Number of trainees from universities involved in short-term projects. • Increased efficiency of work as measured by improved delivery of project deadlines. • Increase in internal staff satisfaction with workload. Success will be assessed through staff surveys and evaluation of the achievement of target indicators.
Financial resources:	Estimated costs for engaging external experts and implementing collaborations with universities can range from units to tens of thousands of euros per year, depending on the scale of the projects.

Priority: Developing staff expertise and specialisation

Measure number: 3

Name of the measure:	Staff training and specialisation
Background:	<p>The measure responds to the identified problems of skills shortages and staff specialisation, leading to lower efficiency and limited delivery of strategic tasks. The current situation points to the need for continuous training and specialisation of staff to enable them to perform effectively the functions related to the design and implementation of industrial strategies and to respond to the dynamic changes in the industrial sector.</p> <p>It is essential to implement this measure because strengthening the expertise and skills of staff will improve the quality and speed of the tasks performed. Continuous training will ensure the adaptability of staff to new technological trends and increase their ability to handle complex projects, strengthening the organisation's overall expert value.</p>
Description of measure:	<p>The measure includes the establishment of a continuous training programme for staff of institutions and organisational units involved in the development and implementation of industrial policies. This programme will be regularly updated according to current trends and the organisation's needs.</p> <p>Staff will have the opportunity to participate in cross-training, in which staff are trained to perform multiple tasks or roles outside their primary job role, enabling them to develop various professional competencies and increase their flexibility.</p> <p>Basic implementation steps of the measure:</p> <ol style="list-style-type: none"> 1. Educational Needs Analysis. 2. Design and approval of a continuing education programme. 3. Establish a regular appraisal and reward system. 4. Implementation of cross-training. 5. Monitoring and feedback from employees. <p>To support staff continuity and professional development, the programme will focus on regular training activities and contributions to professional courses, with the competency-based training plan being evaluated annually. The programme will introduce mentoring programmes that link experienced staff with new team members, contributing to a smooth knowledge transfer, improving the adaptation process and strengthening organisational continuity.</p> <p>The measure also includes creating a structured succession plan for key positions, which will ensure the preparation of potential successors through targeted training and job rotations. At the same time, incentive measures will be applied, in line with the provisions on retention after funded training, to ensure stability and the long-term development of professional skills in the organisation.</p> <p>It is expected that the expertise and adaptability of staff will increase, leading to higher quality and efficiency in their work. The organisation</p>

	will be better prepared to cope with change, and staff will be more motivated and involved in the organisation's development.
Alternative solutions:	<ul style="list-style-type: none"> • Use of external training and certifications from professional institutions. • Partnerships with universities to provide specific courses and seminars. • Internal mentoring programmes between experienced employees and newcomers.
Prerequisites:	To successfully implement the measure, management support and sufficient coordination between the services involved in the training organisation must be ensured. The availability of experts to conduct the training and modern training materials are also important. Clearly defined evaluation criteria and incentive schemes are needed.
Recipients:	All the services analysed involved in designing and implementing industrial strategies.
Responsibility:	<p>All analysed departments involved in the design and implementation of industrial strategies.</p> <p>VAIA: Coordinates the role, including designing and delivering training relevant to staff in directly coordinated organisational units, to build synergies and an even distribution of competencies across units.</p>
Schedule:	<p>The measure is planned as a medium-term task with implementation over a period of 6 to 18 months in 2 phases:</p> <ol style="list-style-type: none"> 1. Needs analysis and training programme design – can be completed within 3 months, 2. Training and assessments will be implemented over the next 12 months.
Outputs and indicators:	<ul style="list-style-type: none"> • Number of employees participating in training. • Improved professional skills (as measured by post-training evaluations). • Increase in employee satisfaction with professional development opportunities. • Number of cross-training sessions conducted annually. <p>Success should be assessed through regular staff surveys and a comparison of pre- and post-measure evaluations.</p>
Financial resources:	The financial resources needed to implement the training programme are estimated to be in the units and tens of thousands of euros per year, depending on the scope and number of trainings.

Priority: Developing staff expertise and specialisation

Measure number: 4

Name of the measure:	Networking and partnerships with professional capacity development organisations
Background:	<p>The measure responds to the need to broaden and deepen the expertise of staff involved in designing and implementing industrial strategies. Organisations often face constraints in accessing up-to-date knowledge and innovative approaches, which hampers their ability to respond effectively to change and new challenges. Learning and specialisation through networking and partnerships with professional organisations can help to bridge this gap.</p> <p>Implementing this measure is essential as it will enable staff to access the latest knowledge, trends and best practices through collaboration with professional institutions and organisations. This will improve their professional readiness, strengthening the organisation's ability to design and implement effective industrial strategies.</p>
Description of measure:	<p>The measure includes the development of partnerships with specialised technical institutions, professional chambers and private bodies to transfer know-how. These collaborations may consist of exchanges of knowledge and experience, consultations with an expert on specific topics and joint projects aimed at transferring know-how.</p> <p>Organisations can also actively participate in national and international projects on industrial strategies, strengthening international cooperation and gaining access to innovative methods for designing and implementing strategies.</p> <p>Strengthening cooperation with specialised organisations improves access to the latest knowledge and supports staff development, leading to better implementation of strategies. Joint projects and partnerships enable staff to develop and apply specific professional skills in practice.</p> <p>The sequence of steps and their interconnection:</p> <ol style="list-style-type: none"> 1. Identification of relevant partners and organisations. 2. Conclusion of cooperation agreements. 3. Designing and planning joint activities and projects. 4. Ongoing evaluation of results and benefits <p>Staff expertise and ability to apply new knowledge in practice are expected to increase. Partnerships will bring access to specialised expertise and improve the overall readiness of staff to implement complex projects.</p>
Alternative solutions:	<ul style="list-style-type: none"> • In-house training using employees with years of experience. • Online learning platforms for self-study (including MOOCs). • Collaboration with multinational or non-profit organisations to provide professional training.
Prerequisites:	<p>For successful implementation, there needs to be a willingness and support from management to enter into partnerships. In addition,</p>

	sufficient capacity to organise and coordinate projects, as well as to ensure communication and cooperation between internal teams and external partners, is essential.
Recipients:	All analysed departments involved in design and implementation of industrial strategies.
Responsibility:	All the services analysed are involved in designing and implementing industrial strategies in collaboration with the service offices. VAIA: Coordination role, including implementing joint activities, cooperation agreements and participation in projects, which will also involve coordinated organisations (e.g. in the form of project advisory groups).
Schedule:	The measure is planned as a medium-term task with a timeframe of 6 to 18 months. <ol style="list-style-type: none"> 1. Identification of partners and conclusion of agreements (within 6-12 months). 2. Implementation of training programmes and projects over the next 12 months, considering the timeframe for calls and project implementation.
Outputs and indicators:	<ul style="list-style-type: none"> • Number of partnerships with professional organisations. • Number of staff undergoing specialised training and certification. • Increase in staff expertise and specialisation. • Staff participation in national and international projects.
Financial resources:	The measure does not require significant additional resources. On the contrary, in the case of projects, the latter is the vehicle for external funding that can help implement activities and even attract additional resources for other areas of human capacity development.

Priority: Strengthening administrative support and streamlining internal processes

Measure number: 5

Name of the measure:	Restructuring of administrative conditions
Background:	<p>The measure responds to the overload of professional staff forced to spend a significant part of their time on administrative tasks, reducing their efficiency in performing key tasks. Existing processes are often inflexible and inefficiently distributed, leading to project delays and lower productivity. Challenges related to administrative workload limit staff development and specialisation opportunities.</p> <p>Implementing the measure is necessary as it will allow professional staff to concentrate on their primary tasks, thereby improving the quality and efficiency of their work. Creating administrative support teams and outsourcing routine activities will reduce the workload and ensure better use of existing resources.</p>
Description of measure:	<p>The measure consists of reorganising administrative tasks so that they are efficiently redistributed between professional staff and specialised administrative teams. This will allow experts to devote more time to analytical and strategic activities.</p> <p>The measure also includes outsourcing minor and routine functions such as document processing and record keeping, thus freeing up internal resources.</p> <p>Restructuring administrative conditions increases the productivity of professional staff and improves internal processes. The result is more efficient use of staff time and higher quality outputs.</p> <p>Implementing the measure aims to partially relieve the professional staff from routine administrative tasks, leading to more efficient work and higher commitment to strategic tasks. Administrative processes will be more optimised and supported by dedicated teams, increasing the organisation's overall efficiency.</p> <p>Restructuring should be implemented in the following steps:</p> <ol style="list-style-type: none"> 1. Analysis of the current state of administrative tasks. 2. Identification of tasks suitable for outsourcing. 3. Design and establishment of administrative support teams. 4. Pilot implementation of the reorganisation in selected departments. 5. Introduction of new procedures to the whole organisation or organisational unit.
Alternative solutions:	<ul style="list-style-type: none"> • Streamlining processes through digitalisation without outsourcing. • Retrain existing staff to perform administrative tasks more efficiently. • Simplification of administrative tasks through optimisation of internal rules.

Prerequisites:	It is essential to secure the support of the organisation's leadership to actively promote change and allocate resources to create supportive administrative teams. Furthermore, existing staff must be thoroughly retrained and transparent criteria for outsourcing tasks must be developed. Communication with staff on the benefits and objectives of the measure is also important.
Recipients:	All analysed departments involved in designing and implementing industrial strategies.
Responsibility:	All the services analysed are involved in the design and implementation of industrial strategies in collaboration with the service offices.
Schedule:	<p>The measure is recommended as a short to medium-term task to be implemented over a 6 to 12-month timeframe in the following sequence:</p> <ol style="list-style-type: none"> 1. Analysis and proposal of changes (by month 3). 2. Implementation of the pilot project and its evaluation (within 6 months). 3. Implementing changes across the organisation or organisational unit (up to 12 months).
Outputs and indicators:	<ul style="list-style-type: none"> • Number of staff relieved of routine tasks. • Reduction of time spent on administrative tasks. • Improving the productivity of professional staff. • Number of administrative support teams established.
Financial resources:	<p>The measure does not require significant additional resources in the case of internal rationalisation of structures.</p> <p>If the measure is implemented through tools such as training, administrative equipment and outsourcing contracts, a budget allocation of units to tens of thousands of EUR is required depending on the scope and complexity of the tools deployed.</p>

Priority: Strengthening administrative support and streamlining internal processes

Measure number: 6

Name of the measure:	Trans-ministerial coordination of administrative activities
Background:	<p>The measure responds to the lack of coordination and cooperation between line departments and agencies, which leads to duplication of work, inefficient use of resources and low sharing of expertise. The lack of a centralised approach to training and information exchange reduces efficiency and contributes to administrative bottlenecks in designing and implementing industrial strategies.</p> <p>Implementing the measure is necessary to increase the flexibility and efficiency of administrative processes by strengthening inter-ministerial cooperation. Centralised coordination will allow for better sharing of expertise, which will contribute to staff development and better use of existing capacities, which is crucial for effectively implementing industrial strategies.</p>
Description of measure:	<p>The measure is designed as a support mechanism to increase efficiency and unify procedures between line departments, emphasising coordination and cooperation. It combines the formal powers and competencies of the different departments, which are defined in the Competence Act and which have statutory duties and responsibilities in the implementation of industrial strategies, and informal measures that aim to foster a culture of cooperation and voluntary sharing of resources and expertise between departments and agencies. A collaborative culture can be key to effectively linking formal and informal coordination, ensuring that organisations achieve shared goals without interfering with formal competency structures.</p> <p>The measure includes the introduction of trans-ministerial coordination, which a centralised coordination unit will support. This unit will share expertise and coordinate administrative activities between departments and agencies.</p> <p>A key part of the measure will be establishing a centralised training system for all departments, focusing on the core competencies needed for effective administrative management.</p> <p>Another element will be a staff rotation programme to share experience and increase the adaptability of staff across departments.</p> <p>Cross-departmental coordination will improve cooperation between organisational units, increase work efficiency and strengthen staff expertise through joint training and knowledge-sharing. This will enable better preparation and implementation of industrial strategies and efficient handling of administrative challenges.</p> <p>The sequence of steps and their interconnection:</p> <ol style="list-style-type: none"> 1. Creation of a coordination unit. 2. Establishment of a centralised training system. 3. Introduction of a staff rotation programme. 4. Implementation of joint training and mentoring programmes.

	<p>5. Creating and managing a shared database of experts.</p> <p>The proposed action will translate into improved efficiency and coherence between departmental services, leading to increased productivity and better policy implementation. Staff will be better prepared for their tasks and have access to the necessary resources and expertise, thereby improving their professional skills and efficiency.</p>
Alternative solutions:	<ul style="list-style-type: none"> • Decentralised training at the departmental level. • Establish regular working meetings without creating a new coordination unit. • External partnerships with professional institutions on an ad hoc basis.
Prerequisites:	<p>For successful implementation, it is necessary to secure the support of the leadership of all participating ministries and agencies. Furthermore, it is essential to have the technical tools to manage shared databases and learning systems, as well as a methodology to organise staff rotation. A clear definition of the competencies and responsibilities of the coordination unit is crucial for the successful management of this action.</p>
Recipients:	<p>All analysed departments involved in designing and implementing industrial strategies.</p>
Responsibility:	<p>VAIA: Coordination role, operation of the coordination unit and implementation of joint activities and programmes</p>
Schedule:	<p>The measure is planned as a medium-term task with a timeframe of 12 to 24 months in the following sequence:</p> <ol style="list-style-type: none"> 1. Establishment of a coordination unit and preparation of a training programme (month 1-6), 2. Implementation of the rotation programme and launch of joint training initiatives (month 7-24).
Outputs and indicators:	<ul style="list-style-type: none"> • Number of ministries involved in trans-ministerial cooperation. • Number of staff involved in the rotation and training programme. • Improved efficiency of administrative processes (as measured by internal evaluations). • Number of experts accessible in the shared database
Financial resources:	<p>The funding needed to implement the measure is estimated at tens of thousands of euros per year, including the establishment of training and database systems and the cost of organisational support.</p>

3.2. Structures

3.2.1. Priorities for structure

1. Improving inter-departmental and inter-institutional coordination

Lack of inter-ministerial and inter-departmental cooperation leads to unnecessary duplication and complications in implementing industrial policies and strategies. Coordination is key to achieving harmonisation of objectives between departments.

2. Clear definition of competencies and responsibilities

Outdated or ambiguous organisation charts and workflows often cause tasks to overlap, leading to delays in decision-making and creative processes. There is a need to ensure that internal rules clearly define the competencies and responsibilities of the different departments and staff.

3. Simplifying and streamlining processes

Complex and bureaucratic processes slow down the performance of institutions and reduce efficiency in developing and implementing industrial strategies. Optimising processes will help to speed up work, increase productivity, and thus contribute to the satisfaction of employees and external partners.

4. Increased flexibility of organisational structures

Institutions must react quickly and effectively to changes in the external environment, technological advances, changing market conditions or political changes. This means that they must be able to adapt their processes, team composition and decision-making mechanisms to cope with new challenges without negatively affecting the duration and quality of the implementation of the tasks entrusted to them. The solution is to allocate resources more efficiently and decentralise decision-making powers.

3.2.2. Overview of the proposed measures for the area of structure

TABLE 13. PRIORITIES AND PROPOSED MEASURES FOR STRUCTURES

PRIORITIES	PROPOSED MEASURES
Improving inter-departmental and inter-institutional coordination	1. Creation of a central digital platform for information sharing and recording of task performance
Clear definition of competencies and responsibilities	2. Establishment of coordination teams for shared competencies and inter-ministerial activities 3. Creation and continuous updating of competence maps at the inter-ministerial level
Simplifying and streamlining processes	4. Introduction of standardised procedures for key processes 5. Digitisation of approval processes
Increased flexibility of organisational structures	6. Decentralisation of decision-making powers

3.2.3. Description of measures for the structure area

Priority: Improving inter-departmental and inter-institutional coordination

Measure number: 1

Name of the measure:	Creation of a central digital platform for information sharing and recording of task performance
Background:	<p>The problems identified are related to the lack of coordination and communication between departments and institutions, which leads to duplication of work, delays, and lack of clarity in executing tasks. The creation of a central digital platform would significantly improve transparency, task tracking and coordination between the different institutions and services. The platform will enable centralised information sharing, monitoring of task progress and related documentation, minimising inefficient processes and enhancing communication and practical cooperation between the departments and institutions concerned.</p>
Description of measure:	<p>The measure consists of the design and implementation of a digital platform that will serve as a central point for recording the execution of tasks, sharing information and overview of ongoing projects.</p> <p>Main steps:</p> <ul style="list-style-type: none"> • Requirements Analysis: Identify the specific needs and functionality that the platform must provide, including document access, task logging, scheduling, and interdepartmental communication tools. • Select and implement a software solution: select the appropriate software based on the needs or develop a custom solution to provide the required functionality. • Setting access rights and security rules: each department will have access to relevant information and documents, while the platform will be secured against unauthorised access. • Staff training: training should be provided for all departments to use the platform and learn its features. • Testing and launching the platform: once the platform has been deployed, ensure that it is piloted to test all features and make any necessary adjustments. <p>Thanks to the platform, all institutions and departments will be able to clearly track the status of ongoing projects and share documents and information without duplication of work. It will be clear who is responsible for each task and the deadlines.</p>
Alternative solutions:	<p>Use of existing cloud solutions for collaboration and task recording (e.g. MS Teams, Google Workspace, Trello, Monday...), which would be faster and cheaper to deploy and use, but only with standard functionalities unlikely to meet the specific needs to achieve the desired state.</p>
Prerequisites:	<ul style="list-style-type: none"> • Successful procurement and implementation of the solution.

	<ul style="list-style-type: none"> • The support of the leadership of individual institutions and the willingness of staff to actively use new digital tools. • Ensuring data protection and setting access rights in accordance with the security policies of the institutions involved.
Recipients:	All departments involved in industrial strategy development and implementation processes.
Responsibility:	MoE, Department of Industrial Policy, in cooperation with VAIA
Schedule:	<p>Medium-term challenge:</p> <p>M1-M12: Analysis and specification of requirements, procurement of software solution.</p> <p>M12 M18: Development and deployment of the platform for pilot operation, setting access rights, and training of staff.</p> <p>M18-24: Launch the platform into the entire operation and continuously optimise it according to current needs and user feedback.</p>
Outputs and indicators:	<p>Number of departments and staff involved: The aim is for all departments concerned to actively use the platform.</p> <p>Reducing duplication of tasks: measuring the reduction of duplication of work between departments and reducing the time to complete tasks.</p> <p>Employee Satisfaction: feedback from employees on the functionality and value-added of the platform to deliver quality tasks.</p>
Financial resources:	<p>Estimated costs for software (licenses), technical support, including staff training and ongoing optimisation of the solution:</p> <p>Approx. EUR 1 000 per year.</p>

Priority: Clear definition of competencies and responsibilities

Measure number: 2

Name of the measure:	Establishment of coordination teams for shared competencies and inter-ministerial activities
Background:	<p>There is often an overlap of responsibilities within the departments and institutions involved, leading to duplication of work, inconsistencies in the implementation of activities and delays in the completion of tasks. Inter-ministerial activities in developing and implementing industrial strategies require continuous managed cooperation between the departments concerned, but this is often hindered by confusion over competencies and responsibilities. Establishing coordination teams will foster practical cooperation, improve inter-departmental coordination, and increase clarity when dealing with projects involving multiple departments and shared competencies.</p>
Description of measure:	<p>The measure consists of the establishment of coordination teams that will serve as the primary communication and coordination mechanism for the different shared competencies and inter-ministerial activities. These teams will meet on a regular basis, monitor progress in implementing activities and ensure effective communication between the departments involved.</p> <p>Main steps:</p> <ul style="list-style-type: none"> • Identify areas of shared competencies: identify competencies and areas that are most shared between departments (e.g. energy, industrial innovation). • Create coordination teams: create coordination teams composed of representatives of the different departments and institutions that are competently linked to the task or area. • Establish the objectives and rules of cooperation: define the rules of communication, the timing of meetings and the mechanism for sharing information and results. • Regular meetings and monitoring: Coordination teams should meet on a regular basis (e.g. monthly) to assess progress, address potential obstacles and adjust strategies to the current state of play. <p>Teamwork will ensure regular information exchange and coordination that minimises duplication and speeds up problem-solving. Clear rules of cooperation will encourage the sharing of resources and results, while team meetings and monitoring will ensure that projects proceed smoothly without significant setbacks.</p> <p>Increased efficiency and transparency in the implementation of inter-ministerial activities, clearly defined competencies and responsibilities, and minimisation of conflicts within shared projects.</p>
Alternative solutions:	<ul style="list-style-type: none"> • Establish a matrix management structure for key projects, where each task or area of overlapping responsibilities has one responsible manager with authority to coordinate departments across departments.

	<ul style="list-style-type: none"> • Delegate responsibility for specific shared competencies to one selected unit, which will be responsible for implementing and coordinating activities within the area.
Prerequisites:	<ul style="list-style-type: none"> • Support from the institutions concerned for the establishment and functioning of coordination teams. • Develop clear guidelines and rules for the work of the coordination teams, including access rights to information. • Provide tools for monitoring and sharing information, for example, in the form of a digital platform.
Recipients:	Departments responsible for developing, implementing and coordinating industrial strategies with shared competencies.
Responsibility:	MoE, Department of Industrial Policy in cooperation with VAIA.
Schedule:	<p>Short-term task:</p> <p>M1-M3: Identify key activities, areas and shared competencies for which coordination teams will be established.</p> <p>M3-M6: Set rules for operation, cooperation, information exchange and the creation of coordination teams.</p> <p>M6-M12: Regular team meetings, evaluation of results, evaluation of the effectiveness of the measure and decision to continue / not to continue its implementation.</p>
Outputs and indicators:	<p>Number of coordination teams established: Achievement of the target number of coordination teams in inter-ministerial tasks.</p> <p>Regular meetings: regularity of meetings and attendance of all participating members.</p> <p>Reducing task duplication: measuring the reduction of task overlap and more efficient use of resources.</p> <p>Speed of problem-solving: reducing the time needed to resolve problems and obstacles in inter-agency activities.</p>
Financial resources:	Minimal costs associated with regular meetings and management of coordination teams made up of existing staff from the institutions concerned.

Priority: Clear definition of competencies and responsibilities

Measure number: 3

Name of the measure:	Creation and continuous updating of competence maps at the inter-ministerial level
Background:	Unclear competencies between departments and institutions lead to a lack of coordination, duplication and possibly conflicts in the execution of tasks. Competence maps will help to identify which departments are responsible for specific areas and what tasks they have, thus ensuring more effective cooperation and minimising overlapping competencies. The measure will bring clarity to competency relationships between institutions and promote more efficient use of resources.
Description of measure:	<p>The measure consists of the introduction of competence maps at the inter-ministerial level, which will contain an overview of the competencies, responsibilities and tasks of individual departments and institutions. The competence maps will be updated regularly on the basis of changes in legislation, organisational structures or programme priorities.</p> <p>Main steps:</p> <ul style="list-style-type: none"> • Identification of key competencies and responsibilities: in cooperation with the various ministries and departments, map out all relevant competencies and responsibilities in the framework of inter-ministerial projects and tasks. • Design and creation of competency maps: based on the data collected, create visual competency maps that clearly display the competencies and responsibilities of each unit. The maps will include information on management structures, inter-departmental linkages and contact persons. • Set up a system for continuous updating: define intervals for updating the competency maps (e.g. every 6 months) and determine a procedure for adding new competencies or responsibilities as needed. • Implementation and publication of the maps: publish the competency maps on internal platforms accessible to all relevant institutions and ensure that all staff have access to up-to-date information. <p>Competence maps will provide an overview of competencies and responsibilities, allowing for better coordination and elimination of conflicts and duplication. Regular updating will ensure that the information is always up-to-date and will support the efficient performance of tasks.</p> <p>Thanks to the competence maps, everyone involved will know which institutions are responsible for what, reducing duplication and improving communication flows between departments. Staff will have a clear overview of the responsibilities of other departments, which will contribute to more effective cooperation.</p>

Alternative solutions:	<ul style="list-style-type: none"> • Use existing internal documents and adapt them into simplified competency maps. • Create a centralised competency database containing information on the competencies and responsibilities of the departments concerned.
Prerequisites:	<ul style="list-style-type: none"> • Inter-departmental cooperation and open access to information on departmental responsibilities. • Allocation of responsible persons for the continuous updating and management of the competence maps. • Availability of a repository where competency maps will be published and accessible to interested staff.
Recipients:	Departments responsible for development, implementation and coordination of industrial strategies with shared competencies.
Responsibility:	MoE, Department of Industrial Policy in cooperation with VAIA.
Schedule:	<p>Short-term task:</p> <p>M1-M2: Identify competencies and responsibilities, design the format of competence maps.</p> <p>M3-M5: Create competency maps and publish them for internal use.</p> <p>M6: Set up the update system and update the maps regularly.</p>
Outputs and indicators:	<p>Competency maps for relevant areas created.</p> <p>Regular updating of competency maps.</p> <p>Improved coordination, reduced duplication, and conflicts in shared responsibilities eliminated.</p>
Financial resources:	No additional direct costs provided the measure is implemented with existing professional capacities and using currently available tools.

Priority: Simplifying and streamlining processes

Measure number: 4

Name of the measure:	Introduction of standardised procedures for key processes
Background:	Different procedures in the development and implementation of industrial strategies within the institutions and ministries involved lead to inconsistencies, duplication and delays in implementing individual activities. The introduction of standardised procedures for key processes will allow for efficient management and mutual alignment of the implemented activities. The measure will bring clarity to the implementation of processes and promote more effective inter-departmental cooperation, thereby minimising conflicts and improving performance.
Description of measure:	<p>The measure consists of the introduction of standardised procedures for key processes, which will be uniform for all relevant institutions and services. The procedures will be formally documented, published and regularly updated in line with legislative and organisational changes.</p> <p>Main steps:</p> <ul style="list-style-type: none"> • Analysis of current processes: map existing procedures for key processes and identify differences and barriers to implementation across institutions. • Development of standardised procedures: Based on the analysis, unified procedures for key processes are developed. These procedures will include step-by-step instructions, the responsibilities of each participant, and recommended timelines. • Implementation and staff training: put standardised procedures into practice and ensure staff are trained to know how to apply the new procedures correctly. • Set up a system for ongoing evaluation and updating: establish a mechanism to regularly evaluate the effectiveness of standardised procedures and to update them on an ongoing basis based on changes or feedback. <p>Intervention logic: Standardised procedures minimise variability in the implementation of processes, thereby increasing the efficiency and clarity of the activities implemented. Uniform procedures contribute to the simplification of processes and improve inter-ministerial coordination, thus ensuring quality delivery of tasks within set timeframes.</p> <p>Expected outcome: the implementation of uniform procedures for key processes will bring greater efficiency, reduce the likelihood of errors and conflicts and improve the clarity of work. Employees will have clearly defined procedures, which will increase the quality of outputs and reduce the time needed to complete tasks.</p>
Alternative solutions:	Create manuals of successful examples (best practices) for individual processes to serve as reference guides for staff.

Prerequisites:	<ul style="list-style-type: none"> • Detailed mapping of current processes and active inter-departmental cooperation to develop standardised procedures. • The commitment of the institutions concerned and their staff to implement and comply with the new procedures. • Staff training and access to information platforms where standardised procedures will be available.
Recipients:	Departments and institutions responsible for developing and implementing industrial strategies.
Responsibility:	Departments and institutions responsible for developing and implementing industrial strategies under the coordination of the Ministry of Economy, Department of Industrial Policy and VAIA.
Schedule:	<p>Short-term task:</p> <p>M1-M3: Mapping of existing practices and identification of areas in need of standardisation.</p> <p>M3-M6 months: the creation of standardised procedures, their accessibility and training of the staff concerned.</p> <p>M6: Regular evaluation of the effectiveness of procedures and their continuous updating.</p>
Outputs and indicators:	<p>Number of standardised procedures in place for selected key processes.</p> <p>Level of use of standardised procedures by the institutions concerned.</p> <p>Increased efficiency in process performance and reduced errors in process execution.</p> <p>Feedback from affected staff on the usefulness of standardised procedures.</p>
Financial resources:	No direct additional costs are required if the measure is implemented by the existing internal capacities of the institutions concerned.

Priority: Simplifying and streamlining processes

Measure number: 5

Name of the measure:	Digitisation of approval processes
Background:	Manual (physical) approval processes are often lengthy and error-prone and lead to unnecessary delays, slowing down the overall running of institutions. Digitising approval processes will speed them up, give better control over the steps, and increase transparency in decisions. The measure will contribute to the efficient management of documentation, reduce approval times and improve the overview of the approval process.
Description of measure:	<p>The measure includes the implementation of a software solution for the digitisation of the approval processes, which will allow for quick and easy approval of documentation in electronic form, thus significantly increasing efficiency and eliminating delays.</p> <p>Main steps:</p> <ul style="list-style-type: none"> • Analysis of current approval processes: identify and analyse existing manual approval processes that are time-consuming or inefficient and identify areas suitable for digitisation. • Selection and implementation of a digital solution: select the appropriate software or online platform for digital approval (e.g. MS SharePoint, SAP Workflow Management) that supports electronic signatures and automatic tracking of approval steps. • Set up a structure for approval processes: create a digital process with clearly defined steps, approval levels and access rights rules. Each process will have assigned responsible persons and deadlines for approval. • Staff training and pilot testing: provide staff with training on how to use the new system and implement a pilot project to test the effectiveness of the digitised processes. • Continuous monitoring and optimisation: after the successful launch of digital approval, monitor the effectiveness, get feedback from users and continuously adjust the system as needed. <p>Intervention logic: digitising approval processes will enable faster and more efficient implementation of decisions, increase process clarity and minimise the risk of lost documents or delays due to manual intervention.</p> <p>Expected outcome: the complete digitisation of the approval processes will result in faster approval of documents, transparency throughout the process and better control over the progress and status of individual applications.</p>
Alternative solutions:	<ul style="list-style-type: none"> • Introduce a hybrid digital and paper approval system. • Centralise approval processes in one department that would coordinate and verify all approvals.

Prerequisites:	<ul style="list-style-type: none"> • Availability of digital approval software and funding for its licensing. • Support institutional management and staff in adapting to new digital processes. • Readiness to change workflows and approval rules.
Recipients:	The different institutions responsible for developing and implementing industrial strategies.
Responsibility:	The management of the institutions concerned.
Schedule:	<p>Medium-term challenge:</p> <p>M1-M12: Analysis of current approval processes, selection and procurement of a suitable digital solution.</p> <p>M12-M20: Software implementation, structure and process setup.</p> <p>M21: Complete implementation of digital approval, monitoring and optimisation of the process.</p>
Outputs and indicators:	<p>Number of approval processes in place that have been fully digitised.</p> <p>Reduction of the average time required to approve documents before and after the digitisation of approval processes.</p> <p>Feedback from institutional management and staff on the effectiveness and clarity of digital approval.</p>
Financial resources:	The cost of implementing the measure will depend on the size of the institution, the scope of the digitised approval processes and the software solution chosen.

Priority: Increasing the flexibility of organisational structures

Measure number: 6

Name of the measure:	Decentralisation of decision-making powers
Background:	Current decision-making processes in most of the institutions analysed are too centralised, slowing down responses to new challenges. Allowing decentralised decision-making within the units responsible for developing and implementing industrial strategies, as well as at the level of specific executive teams, will improve flexibility and efficiency in meeting strategic objectives without the need to directly increase staff numbers.
Description of measure:	Decentralisation of decision-making powers at the level of the institutions and the organisational units concerned consists of devolving a certain degree of decision-making to lower levels of management (e.g. heads of units and teams). Main steps: <ul style="list-style-type: none"> • Define the decision-making powers that can be delegated (e.g. minor changes to the description of support areas, proposals to transfer financial allocations, etc.). • Set clear rules in the form of internal rules / guidelines for implementing decentralised decisions, including assigning responsibilities and ensuring their control. • Train the heads of departments / teams to take responsibility for making decisions within a compressed timeframe. Increased flexibility in decision-making (simplification of decision-making processes), streamlining the development and implementation of strategies, and reducing bureaucratic obstacles in the performance of related tasks.
Alternative solutions:	<ul style="list-style-type: none"> • Implement the principles of the matrix management structure, i.e. the division of decision-making powers into functional and project powers. • Introduce decision-making powers according to the level (size, importance) of the agenda – minor decisions taken at lower levels.
Prerequisites:	Review existing decision-making processes and identify areas suitable for decentralisation. Clearly define responsibilities and transparent monitoring of decision-making.
Recipients:	Departments and institutions responsible for developing and implementing industrial strategies.
Responsibility:	The management of the institutions and the directors of the departments concerned.
Schedule:	Short-term task:

	<p>M1-M6: Review processes and select areas for decentralisation of decision-making powers.</p> <p>M6-M18: Implement decentralisation and monitoring of results.</p>
<p>Outputs and indicators:</p>	<p>Expected outcomes:</p> <ul style="list-style-type: none"> • Reduction in the time required for internal decision-making processes. • Increased autonomy and accountability of the heads of the organisational units concerned. <p>Indicators to monitor the success of the implementation of the measure:</p> <ul style="list-style-type: none"> • Time needed to implement decisions • Number of changes (improvements) implemented on the basis of decentralised decisions in a reduced timeframe
<p>Financial resources:</p>	<p>The implementation of the measure does not require the allocation of additional resources; it can be implemented within the standard management of the institution and the departments concerned.</p>

3.3. Systems and tools

3.3.1. Priorities for Systems and Tools

1. Development of a methodological tool for industrial policy-making

A methodological tool will be made available to the relevant institutions for the preparation of sectoral and horizontal industrial strategies. The content of the document will include the use of innovative approaches to data collection, analysis, and processing to better identify needs and design solutions. The new tool should contribute to improving the quality and addressability of industrial strategies developed in Slovakia.

2. Exploiting the full potential of available data and methods

In the short term, the organisational units involved in the development of industrial strategies will provide access to the new registers / databases. The elaboration of new or updating of existing industrial strategies will make full use of relevant information sources, including those not yet available. The availability of new data and the application of innovative processing methods will contribute to improving the quality of the analytical parts of the industrial strategies and the objectives set.

3. Evaluating knowledge on industry promotion and development

A functional system for evaluating industrial strategies will be established at the national level. Evaluation should become a natural part of the strategic management of public industrial policies and strategies. The knowledge gained through planned and conducted evaluations will contribute to improving the quality of implementation and the use of public resources. Systematic evaluation will be an important element in building a system of knowledge valorisation in support of industry as an important factor for economic growth.

3.3.2. Overview of the proposed actions for "Systems and tools"

TABLE 14. PRIORITIES AND PROPOSED MEASURES FOR SYSTEM AND TOOLS

PRIORITIES	PROPOSED MEASURES
Development of a methodological tool for the development of industrial strategies	<ol style="list-style-type: none"> 1. Application of the methodological guide for the development of sectoral and horizontal industrial strategies 2. Review of existing strategic documents for industrial development
Exploiting the full potential of available data and methods	<ol style="list-style-type: none"> 3. Capacity development plan for the use of new information resources for modern industrial strategies
Capitalising on knowledge of industry promotion and development	<ol style="list-style-type: none"> 4. Introduction of evaluation as a tool to support the strategic management of industrial strategies

Priority: Development of a methodological tool for the development of industrial strategies**Measure number: 1**

Name of the measure:	Application of the methodological guide for the development of sectoral and horizontal industrial strategies
Background:	Institutions responsible for industrial strategies in Slovakia use a general methodology for developing public strategies, which does not sufficiently take into account the specificities of the preparation of modern industrial strategies.
Description of measure:	<p>The main output of the ongoing VAIA project supported by DG REFORM is the elaboration of a methodological guide for the development of sectoral and horizontal industrial strategies.</p> <p>The guide describes the approaches to data collection and processing that were applied in developing the pilot sector strategy (automotive) and the horizontal strategy (robotics). The data are used to assess the performance of the industries and the possibility of comparing them with other countries on the basis of selected indicators. The document contains methodological approaches to extract insights from megatrends analysis, foresight, and expert validation to set relevant strategic priorities for public support. It also addresses approaches to defining the monitoring and evaluation framework, communication, partner involvement and risk management.</p> <p>Once the project is completed, the key actors will ensure that the methodological manual is regularly updated to meet the requirements of practice. The aim is to create common methodological starting points and standards for the development of modern industrial strategies in Slovakia while responding to innovative approaches. This includes raising the awareness of the wider professional public and engaging them in the debate on the benefits of applying new approaches to the development (and implementation) of industrial strategies in Slovakia. New sectoral and horizontal strategies will be developed in accordance with the procedures defined in the methodological guide.</p>
Alternative solutions:	Approval of the methodological manual as a binding document for relevant actors.
Prerequisites:	<p>Cooperation between institutions (organisational units) responsible for the development and implementation of industrial strategies.</p> <p>Readiness and involvement of the wider professional community in the debate on standards for the development of modern industrial strategies.</p>
Recipients:	All departments responsible for designing and implementing industrial strategies.
Responsibility:	VAIA, Research and Innovation Policy Unit.

	MoE, Department of Industrial Policy.
Schedule:	The first update of the methodological manual is a short-term task (up to 6 months).
Outputs and indicators:	Number of new industrial strategies developed according to the methodological guide. Number of updates of the methodological manual for the elaboration of sectoral and horizontal industrial strategies.
Financial resources:	n/a

Priority: Development of a methodological tool for the development of industrial strategies**Measure number: 2**

Name of the measure:	Review of existing strategic documents for industrial development
Background:	There are a large number of sectoral and cross-cutting industrial strategies (strategic documents) in Slovakia. The chosen priorities, objectives and forms of support are in many cases already outdated and do not reflect the real needs of industry.
Description of measure:	<p>The measure follows the VAIA initiative aimed at reducing the number of priorities for the development of Slovak industry in the framework of the implementation of RIS3 (priority areas of Domain 1 Innovative Industry for the 21st Century). It includes the identification of existing industrial strategies or development documents for industry, including the entities responsible for implementation.</p> <p>Based on a set of selected criteria, VAIA in cooperation with the ministries (partners) will assess the relevance of strategic documents and selected priorities for the development of industry in Slovakia. The aim is to focus capacity and public resources on a meaningful number of priorities (sectors / areas) that are essential to ensure the country's competitiveness.</p> <p>This step requires a review of existing and the formulation of new priorities for the industry, or the cancellation of outdated strategies and the elaboration of new ones. The starting point for updating priorities is the methodological guide for the development of sectoral and cross-cutting industrial strategies developed in the framework of the ongoing DG REFORM project.</p> <p>The distribution of tasks in the implementation process will take into account the administrative capacity of the relevant actors.</p>
Alternative solutions:	Develop a set of new industrial strategies (strategy documents) in the context of the preparation of the new RIS3 for the period 2027+
Prerequisites:	<p>Cooperation between institutions (organisational units) responsible for the development and implementation of industrial strategies.</p> <p>Institutions' internal capacity to undertake a review of industrial strategies and roles.</p>
Recipients:	All departments responsible for designing and implementing industrial strategies.
Responsibility:	<p>VAIA, Department of Priorities.</p> <p>MoE, Department of Industrial Policy.</p>
Schedule:	This is a medium-term task (6-12 months).
Outputs and indicators:	Number of revised industrial strategies (strategy papers).
Financial resources:	n/a

Priority: Exploiting the full potential of available data and methods**Measure number: 3**

Name of the measure:	Capacity development plan for the use of new information resources for modern industrial strategies
Background:	The methodological guide for developing sectoral and horizontal industrial strategies emphasises the collection and processing of new data (information sources) that have not been systematically used so far in the context of industrial strategies in Slovakia.
Description of measure:	<p>The methodological guide describes a wide range of data and information sources. A significant number of these sources have not been systematically used by Slovak institutions involved in preparing and implementing industrial strategies.</p> <p>For this reason, the proposed measure focuses on a closer analysis of information sources in terms of the scope, quality and relevance of the data provided for processing industrial strategies in Slovakia, or the possibility of comparison with other countries. The measure includes the elaboration of information on the conditions for obtaining and making full use of data sources. On the basis of the analysis, the relevant institutions will jointly proceed to identifying priority information sources for the development, management and implementation of industrial strategies.</p> <p>The next step focuses on assessing the intensity of the use of priority information sources and a capacity development plan for the full use of new information sources for developing and monitoring industrial strategies. The capacity development plan will respond on the one hand to the competences and roles in the context of industrial strategies, and at the same time to the capacity capabilities of the organisational units. The aim is to carry out the collection and processing of new data in the most appropriate location (organisational unit) that can cover the needs of other key partners. The responsible institutions will allocate the necessary funds to obtain the accesses and ensure the capacity (technical and professional) to make effective use of the new data and information sources.</p> <p>The expected outcome of the use of new information resources is to increase the relevance and quality of new industrial strategies and public support.</p>
Alternative solutions:	Ensuring that new data is accessed, collected and processed separately within each institution.
Prerequisites:	<p>Cooperation between institutions (organisational units) responsible for developing and implementing industrial strategies.</p> <p>Internal capacity of institutions to analyse new information sources and define priorities.</p> <p>Financial resources for gaining access to new information resources.</p>

Recipients:	All departments responsible for designing and implementing industrial strategies.
Responsibility:	MoE, Institute of Economic Analyses. MoE, Department of Industrial Policy. VAIA, Research and Innovation Policy Unit.
Schedule:	This is a short-term assignment (0-6 months).
Outputs and indicators:	Percentage of analysed information sources listed in the methodological guide. Number of priority data and information sources accessed.
Financial resources:	n/a

Priority: Capitalising on knowledge on industry promotion and development**Measure number: 4**

Name of the measure:	Introducing evaluation as a strategic management tool for industrial strategies
Background:	Publicly funded industrial strategies have long been prepared without knowledge of the real benefits of the strategies implemented. The absence of systematic evaluation means that the actors involved do not have the knowledge needed to improve the quality of implementation and the effectiveness of public support.
Description of measure:	<p>The proposed action consists of raising awareness of the role of evaluation in the context of the management of public interventions and the possibilities for practical application in designing and implementing industrial strategies. Relevant actors will be informed about the links between monitoring and evaluation, or the specific purpose, possibilities and limits of the processes in question.</p> <p>In the next step, the responsible actors will proceed to elaborating an assessment plan for the existing industrial strategies. The terms of reference for specific evaluations will be the result of the cooperation of the relevant actors. The aim is that the terms of reference for the evaluation respond to the real information needs of the institutions (organisational units) for better management of implementation and to gain insights into the benefits of public support. The information needs are expressed through the main evaluation questions. The evaluation of industrial strategies will be carried out by designated internal staff or external evaluators.</p> <p>Industrial strategies prepared in the future will include a separate chapter on assessment (and monitoring). Minimum information in relation to evaluation activities:</p> <ul style="list-style-type: none"> • subject of evaluation • evaluation questions • information resources • responsible institutions (organisational units) • indicative timetable <p>The outputs of the industrial strategy assessment are presented to the broader professional community.</p>
Alternative solutions:	The responsible institutions shall develop methodological guidance on the evaluation of industrial (and innovation) strategies.
Prerequisites:	<p>Interest in improving the efficiency of public investment and information on the use of evaluation in the context of public policy/strategy management.</p> <p>Capacities for conducting assessments and practical use of knowledge in guiding the development and implementation of industrial strategies.</p>

Recipients:	All departments responsible for designing and implementing industrial strategies.
Responsibility:	MoE, Department of Industrial Policy. VAIA, Research and Innovation Policy Unit.
Schedule:	This is a short-term assignment (completion within 6 months).
Outputs and indicators:	A plan for assessing key industrial strategies has been developed. Number of industrial strategy assessments carried out.
Financial resources:	Financial resources required in case of external collaborators: EUR 10 000.

3.4. External factors

3.4.1. Priorities for externalities

1. Increase efficiency in the use of financial resources

It is clear that the amount of funding for preparing and implementing industrial strategies has a major impact on their quality and impact, but in the view of this paper, it is an external factor. What can be influenced, however, is the effectiveness of their use. Efficiency can be influenced by allocating funds in an amount appropriate to the needs of the specific activity or measure. Equally important is medium-term financial planning within a reasonable timeframe to enable the activity or measure to be implemented in a way that delivers the expected impacts. Adequate funding should also be provided for planning and preparing industrial and innovation strategies.

2. Improving the legislative framework

Within the capabilities and scope of the departments concerned, sufficient attention must be paid to the completion of legislation, in particular, the Research and Innovation Act. The quality of this legislation will ensure the stability of competencies and the long-term stability of the strategy development system. In addition to quality, the speed with which this law is prepared is also important, as its absence has negative consequences. The relevant departments and institutions should provide sufficient and competent feedback on the drafting of the legislation and seek room for intervention.

3. Strengthening cooperation and involvement of partners

Increasing inclusiveness – the participation of professional and affected publics and experts – beyond the commenting procedures is essential to ensure the quality and feasibility of industrial (and innovation) strategies. It is necessary to create a pool of experts, manage this pool on an ongoing basis, and ensure adequate funding for their participation in the preparation and implementation. In addition to involvement in the preparation, it is essential to inform the public about the results and the positive impacts sufficiently and to motivate them to give feedback.

4. Ability to respond to global challenges

Global and political influences are external factors that we cannot control from the position of this material. However, we can prepare the system for possible events, build on experience to create flexibility to cope with these influences and absorb possible negative impacts.

3.4.2. Overview of the proposed measures for the externalities area

TABLE 15. PRIORITIES AND PROPOSED MEASURES FOR EXTERNAL FACTORS

PRIORITIES	PROPOSED MEASURES
Increasing efficiency in the use of financial resources	1. Allocation of sufficient financial resources
Improving the legislative framework	2. Active participation in the legislative process
Strengthening cooperation and involvement of partners	3. Strengthening cooperation with industry federations, clusters and associations 4. Providing sufficient feedback to the professional public
Ability to respond to global influences	5. Development of risk assessment methodology and mitigation strategy

Priority: Increasing the efficiency of the use of financial resources

Measure number: 1

Name of the measure:	Allocation of sufficient financial resources
Background:	The measure responds to the lack and inefficient use of financial resources in preparing and implementing innovation and industrial strategies. Given the current state of the economy and the drive to consolidate public finances, financial policy is highly restrictive. Despite this, it is essential to devote sufficient attention and resources to industrial development activities as an important source of the country's competitiveness.
Description of measure:	<p>The measure will be methodological and legislative in nature and will consist of the following steps:</p> <ul style="list-style-type: none"> • Analysis of the current status of negotiating funding for the implementation of individual activities. • Strengthening the position of the institution responsible for preparing industrial (and innovation) strategies (VAIA and MoH SR) in the state budget process. • Supporting the negotiating position and securing resources in the (Research and Innovation) Act. • Methodological anchoring of the allocation of funds to the different activities of the industrial strategies. <p>The measure aims to ensure sufficient financial resources for preparing and implementing the measures to deliver the expected benefits.</p> <p>It is very important to anchor the negotiating position in the law and methodological guidance that will be respected and used not only by the recipient but also by the provider of funds (MoF SR). Once the measure has been implemented, each strategy will contain information</p>

	on the fixed amount of funding for implementation. In case of uncertainty or lack of funds, it is possible to implement several tranches for the implementation of the planned activities.
Alternative solutions:	<ul style="list-style-type: none"> • Financial reserve • Identification of priority activities for funding and priority allocation of funds
Prerequisites:	Completion of the Research and Development Act with the inclusion of the principle of a fixed allocation of funds for each of the activities supported by the Act.
Recipients:	All departments responsible for designing and implementing industrial strategies.
Responsibility:	MoE Department of Industrial Policy. VAIA, Research and Innovation Policy Unit.
Schedule:	This is a medium-term task (6-12 months).
Outputs and indicators:	Specification of the resources allocated to the different activities of the innovation and industrial strategies.
Financial resources:	No additional resources required.

Priority: Improving the legislative framework

Measure number: 2

Name of the measure:	Active participation in the legislative process
Background:	In addition to the anticipated Research and Innovation Act, other laws, notably the Competence Act, are entering the research and innovation management system. In the absence of opportunities and activity in entering the legislative process, it is common for new laws to have a negative impact on the system in question.
Description of measure:	<p>The measure is of a methodological and educational nature. It aims to ensure a proactive approach to the development of relevant legislation and to create knowledge prerequisites for the responsible staff and sufficient communication in the development of laws that affect the functioning of the system. The measure will be implemented in the following steps:</p> <ul style="list-style-type: none"> • Identification of staff entering the legislative process. • Provided methodological guidance to subject staff on the objectives, needs, and potential impacts of the new laws on the system. • Monitoring legislation. • Regular communication on pending laws at relevant levels of R&D management. <p>The ultimate aim of the measure is to create a systematic and proactive approach to lawmaking through competent staff.</p>
Alternative solutions:	<p>Regular monitoring of the development of new legislation and organisation of ad hoc meetings.</p> <p>Establish a group of staff with expertise in the R&D management system to coordinate input to the legislative process.</p>
Prerequisites:	Ensuring competence to enter the legislative process.
Recipients:	All departments responsible for design and implementation of industrial strategies.
Responsibility:	MoE, Department of Industrial Policy. VAIA, Research and Innovation Policy Unit.
Schedule:	Long-term task.
Outputs and indicators:	<p>Availability of competencies and expertise to intervene in the legislative process.</p> <p>Permanent authorisation of staff.</p> <p>Methodological guidance for entering into the legislative process and the corresponding communication of the process.</p>
Financial resources:	No additional resources required.

Priority: Strengthening cooperation and involvement of partners**Measure number: 3**

Name of the measure:	Strengthening cooperation with industry federations, clusters and associations
Background:	The lack of involvement of the professional public is reflected in particular in the lower participation in preparing industrial and innovation strategies and in assessing their impact.
Description of measure:	<p>The aim of the measure is to increase the participation of representatives of clusters, industrial unions, and associations through more active communication not only in the preparation process but also in the evaluation and presentation of the results of the implemented activities.</p> <p>The measure will be implemented in the following steps:</p> <ul style="list-style-type: none"> • Creation of an organisational position with responsibility for communication with relevant clusters, associations and unions. • Creation of a contact database by linking the databases of all relevant departments. • Adding missing contacts to the database and updating it regularly. • Active communication with focal points to increase their participation in upcoming industrial and innovation strategies. • Active communication taking into account the interests of the members of the individual clusters, unions and associations. • Informing contacts in the database about the results and impacts of the actions of the activities. <p>This measure will motivate the representatives of clusters, unions and associations and will create conditions for more effective implementation of activities and measures of individual strategies.</p>
Alternative solutions:	<p>Retaining a distributed contact system.</p> <p>Informing contacts via a regular newsletter.</p>
Prerequisites:	Review of existing contacts.
Recipients:	All departments responsible for designing and implementing industrial strategies.
Responsibility:	MoE, Department of Industrial Policy. VAIA, Research and Innovation Policy Unit.
Schedule:	Medium-term task.
Outputs and indicators:	<p>Improving the quality of industrial strategies.</p> <p>Taking into account the interests of cluster members, industry federations and associations.</p>
Financial resources:	n/a

Priority: Strengthening cooperation and involvement of partners

Measure number: 2

Name of the measure:	Providing sufficient feedback to the professional public
Background:	The professional public is gradually losing interest in participating in the development of industrial strategies, and there is a growing distrust of the current system.
Description of measure:	<p>The measure will be of an organisational and marketing nature. Its aim is to increase the interest of the wider professional public in participating in the implementation and impact assessment of industrial strategies. This will be done by creating a common marketing strategy for specific target groups. The measure will consist of the following steps:</p> <ul style="list-style-type: none"> • Reviewing the current means of presenting the results of the impacts and effects of activities and actions. • Creating a marketing strategy with consideration of input from an expert organisation or using an existing one. • Informing the professional and affected public through identified channels. • Evaluation of marketing activities and their benefits. <p>The measure will result in an increase in the interest of the professional and affected public, their greater involvement in implementing industrial strategies, as well as in the preparation and evaluation of the impacts.</p>
Alternative solutions:	<p>Use of existing marketing channels.</p> <p>Ad hoc presentation of individual outputs.</p> <p>Publishing and distribution of newsletters.</p>
Prerequisites:	Review and assessment of the state of play.
Recipients:	All departments responsible for designing and implementing industrial strategies.
Responsibility:	<p>MoE, Department of Industrial Policy.</p> <p>VAIA, Research and Innovation Policy Unit.</p>
Schedule:	This is a medium-term task (6-12 months)
Outputs and indicators:	Increase in the interest of the professional and affected public, improvement in the reputation of the R&D support system, and increased participation of the affected public involvement in implementing strategies.
Financial resources:	n/a

Priority: Responsiveness to global impacts

Measure number: 5

Name of the measure:	Development of risk assessment methodology and mitigation strategy
Background:	The measure responds to the need to increase the flexibility of the system to respond to global and political influences. As these are external influences where it is not possible to systematically influence the causes, the intervention logic will focus on the system's ability to respond to new conditions and to adapt public support to the new situation in industry.
Description of measure:	<p>The measure will be methodological in nature and will be linked to human resources development measures. The implementation of the measure will consist of the following steps:</p> <ul style="list-style-type: none"> • Analysis of existing possible approaches to risk assessment by experts. • Analysis of existing approaches to mitigate the effects of externalities. • Preparation of a risk assessment methodology and mitigation strategy so that it is a solid part of the preparation and industrial strategies. • Preparation of training for staff of relevant organisational units. <p>The measure aims to prepare the system for possible global and political impacts so that the individual measures of the industrial strategies deliver the expected results or come as close to them as possible despite the implications in question.</p> <p>An analytical part of the measure will be developed by taking into account existing experience, in particular, from external experts. On the basis of the analytical part, a methodology will be developed. The methodology will be implemented as a solid part of the preparation of industrial strategies. The know-how will be transferred to the relevant staff in the form of a description of the methodology and training. After the implementation of the measure, each industrial strategy will include an external risk assessment and a mitigation strategy.</p>
Alternative solutions:	<p>Use of external expertise in risk assessment.</p> <p>Ensuring a financial buffer for additional costs caused by global and political influences.</p>
Prerequisites:	Exploration and acquisition expertise.
Recipients:	All departments responsible for designing and implementing industrial strategies (depending on the outputs of the organisational part)
Responsibility:	<p>MoE, Department of Industrial Policy</p> <p>VAIA, Research and Innovation Policy Unit</p>

Schedule:	Medium-term task (6 12 months)
Outputs and indicators:	New industrial strategies developed with a rigorous risk assessment and mitigation strategy.
Financial resources:	EUR 15 000.

3.5. Principles of change management

Implementing the interventions to enhance administrative capacities for designing and delivering industrial strategies should respect the main principles for change management in the public sector.

- **Clear vision and goals:** defining a clear, ambitious and realistic vision is a critical first step. This vision must be clear to all stakeholders and linked to their long-term goals. Cascading goals to the different levels of the organisation is important, thus ensuring that each employee understands their role in the change process. Creating a detailed plan with clearly defined milestones and deadlines helps keep the change process on track. The process should be closely linked with the RIS3 / National Strategy implementation.
- **Strong leadership and commitment:** successful change management requires strong and committed leadership. "Change agents" are actively championing change, communicating its benefits and leading by example. A platform that brings together key leaders (change managers) in relevant institutions / organisational units can improve coordination, synergy and exchange of information. in the change implementation process. In the national context, it is important to strengthen the capacity of change managers in public administration through targeted training.
- **Communication and transparency:** open, transparent and targeted communication is critical to building trust and gaining the engagement of all stakeholders. It is important to communicate not only 'what' is changing, but also 'why' change is needed and what benefits it will bring. The communication in the institutions participating in the design and implementation of industrial strategies should target decision-makers (top management level) as well as the wider professional public.
- **Participatory approach:** involving relevant stakeholders in the change planning and implementation process increases acceptance, minimises resistance and maximises synergy. Suitable platforms for dialogue, feedback and idea sharing should be created. Consider using digital tools for participation, such as online consultations, forums and collaborative platforms.
- **Systematic monitoring:** is essential to identify problems, take timely corrective action and ensure efficient use of resources. Implement a system of KPIs to measure progress towards goals. Conduct regular "pulse checks" – short surveys of employee and other stakeholders' satisfaction and perceptions of change.
- **Flexibility and adaptability:** the change management process should be flexible and adaptable to changing circumstances. In the dynamic environment of the public sector, it is important to be prepared for unforeseen situations and to be able to respond quickly to new challenges. Use agile project management methods that allow you to adapt plans flexibly and react quickly to change.
- **Risk management:** identifying, analysing and managing the potential risks associated with change is essential to minimise negative impacts and ensure successful implementation. In the context of the Slovak Republic, it is important to consider risks associated with the implementation of European policies and global competition.

PPMi

Part of the
Verian Group



**Funded by
the European Union**

Visit our website:



Find out more
about the Technical
Support Instrument:

