

# **Concept for Development of Activities of the Czech Academy of Sciences**

(Approved at the LX CAS Academy Assembly on 13 December 2022)

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## I. INTRODUCTION

### **I.1 Position and Importance of the Czech Academy of Sciences in the System of Research, Development and Innovation in the Czech Republic and Its Internal Organisation**

The main mission of the Czech Academy of Sciences (hereinafter the “Czech Academy of Sciences”) and its institutes is to conduct high-quality scientific research at the frontier of knowledge that respects society’s current and anticipated needs. The Czech Academy of Sciences supports research in a wide range of fields, recognising that a significant socio-economic benefit can accrue in any scientific discipline as a result of research declared to be basic or applied, not only in targeted fashion, but also as a by-product. The Czech Academy of Sciences therefore places great emphasis on the freedom of scientific research, regardless of whether the research is motivated by a socio-economic benefit, the desire for knowledge or both.

As a leading, internationally established institution, the Czech Academy of Sciences clearly defines its role in the research environment. Here, research is financed primarily by public funds, which determines the focus of research efforts on topics and problems beyond the scope of industrial research motivated by short-term returns. Public support for research makes it possible to take on riskier projects for which a use will only be found in the more distant future. At the same time, the Czech Academy of Sciences accepts its role as far as concerns its direct influence on Czech society and culture, whether through the transfer of knowledge and technology into economic practice, by creating and disseminating expert opinions intended for decision-makers or developing educational activities for the general public through print and electronic platforms or public lectures and other forms of interaction with the public and various social stakeholders.

The Czech Academy of Sciences’ activities are governed by Act No. 283/1992 Coll., on the Czech Academy of Sciences, and the Articles of Association of the Czech Academy of Sciences approved by the government. The Czech Academy of Sciences is an organisational component of the state and performs research through its institutes, which it establishes on behalf of the Czech Republic as public research institutions under Act No. 341/2005 Coll. At the current time, the Czech Academy of Sciences is the founder of 54 institutes (52 scientific institutes and two institutes ensuring infrastructure for research). In accordance with the statutory definition, the institutes of the Czech Academy of Sciences:

- help increase the level of knowledge and education,
- contribute to the use of scientific research results,
- obtain, process and disseminate scientific information and provide scientific assessments, opinions and recommendations,
- run doctoral study programmes and train researchers in collaboration with universities,<sup>1</sup>
- develop international collaboration in scientific activity and technology development,
- perform their tasks in collaboration with other scientific and professional institutions; for this purpose, they may conclude association agreements with such institutions,

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<sup>1</sup> The whole text of the Concept for Development of Activities of the Czech Academy of Sciences is intended to be strictly gender neutral. Therefore, whenever a generic masculine or feminine form appears in this document, it is always meant in both senses. In this particular case, the text naturally concerns both female and male researchers, or however else the relevant persons define their gender.

- provide infrastructure for research, development and innovation (R&D&I).

As the most important non-university scientific institution in the Czech Republic, the Czech Academy of Sciences is continuing the tradition of the Emperor Franz Joseph Czech Academy for Science, Literature and Arts, founded in 1890, and its successor organisations that operated in the Czech lands in the 20th century. The current arrangement of the Czech Academy of Sciences—where an organisational component of the state coordinates its institutes' research activities—enables the effective operation of the institute system and is the main factor thanks to which the Czech Academy of Sciences has been the most productive scientific institution in the Czech Republic for a long time.

Research at the Czech Academy of Sciences covers a wide range of scientific fields, including mathematics, computer science, natural sciences such as engineering, chemistry and medicine, social sciences and the humanities; its character ranges from highly specialised to multidisciplinary, transcending the boundaries of individual scientific topics. In this sense, the Czech Academy of Sciences is a unique scientific institution in the Czech Republic that covers almost all field groups and most fields (according to the OECD). The Czech Academy of Sciences can therefore respond flexibly and rapidly to developments in scientific knowledge and society's needs across scientific fields. The Czech Academy of Sciences' institutes create stable, coordinated teams that work on long-term projects, build unique apparatus, ensure the qualified operation and maintenance of demanding facilities, and create and develop complex databases and documentation systems. The Czech Academy of Sciences' scientific institutes determine their research directions in accordance with current trends in global science and society's needs, and, in accordance with their focus, are organised into three scientific topics, which are further divided into nine sections.<sup>2</sup>

Important prerequisites for fulfilling the Czech Academy of Sciences' mission are a stable institutional arrangement and funding. The Czech Academy of Sciences is financed primarily from public funds pursuant to Act No. 130/2002 Coll., on support for research, experimental development and innovation, especially from its separate chapter of the Czech Republic's central budget; in addition to this institutional support, significant sources of funding for the Czech Academy of Sciences' institutes include purpose-tied support obtained in public competitions from domestic and foreign providers, as well as other own funds of the institutes, such as revenues from licenses, orders, etc.

When performing its mission, the Czech Academy of Sciences relies on the creative potential of its researchers, the continuity of its research teams and the effective use of continuously innovated (and in many cases unique) research infrastructure. At the end of 2021, the Czech Academy of Sciences employed more than 10,100 staff (FTE), of which almost 70% fell into the category of researchers and professional staff with university qualifications. This number represents approximately 16% of the Czech Republic's research base.

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<sup>2</sup> <https://www.avcr.cz/en/about-us/cas-structure/research-areas/>

## **I.2 Position of the Czech Academy of Sciences in the International Context**

Non-university research performing institutions are a standard component of research, development and innovation systems in most advanced countries and, like the Czech Academy of Sciences, they are financed primarily from public funds.

Among significant European partner institutions, four large German scientific institutions are particularly noteworthy: Max-Planck-Gesellschaft (MPG), Helmholtz-Gemeinschaft (HGF), Leibniz-Gemeinschaft (WGL), and Fraunhofer-Gesellschaft (FhG). These organisations have a clear focus: MPG specialises in basic research, HGF in the operation of large equipment, WGL in societally relevant basic, and applied research and FhG in applied research. In terms of its focus and organisational arrangement, the Czech Academy of Sciences is closest to WGL, however, to a certain extent, it fulfils a role in the Czech Republic similar to that of all four of the aforementioned institutions.

In Europe, non-university research performing institutions also play an important role in France, Italy, the Netherlands, Spain, Austria and most of the ‘new’ Member States (the EU-13). Non-university research should not be overlooked in the Anglo-Saxon world either—it includes research institutes funded by the seven thematically focused Research Councils UK in Great Britain and the national laboratories in the USA (Oak Ridge National Laboratory, Lawrence Livermore National Laboratory, Sandia National Laboratories and others). Non-university research performing institutions also have a long tradition in developed Asian countries, where several new organisations of this type have been established in recent decades. In almost all cases, the institutions are at the forefront of science and research in their countries.

## **I.3 Consistency with Strategic Documents of the European Union and the Czech Republic and other Conceptual Documents of the Czech Academy of Sciences**

The Czech Academy of Sciences actively helps create policies for research, development and innovation in both the Czech Republic and the European Union. Of the current strategic documents and policies of the European Union (EU), the most significant for the Czech Academy of Sciences are the *European Research Area Policy Agenda for 2022–2024*, *Europe’s Strategy for International Cooperation in a Changing World*, *the EU Cohesion Policy*, *the EU Framework Programme for Research and Innovation Horizon Europe (2021–2027)* and *the Green Deal for the EU and the Industry 5.0*. At the national level, the basic strategic framework comprises the *National Research, Development and Innovation Policy of the Czech Republic 2021+* and the *National RIS3 Strategy*. The important EU and Czech documents relevant to the Czech Academy of Sciences are listed in **Annex 1**.

In this context, this Concept for Development of Activities of the Czech Academy of Sciences follows on from its previous version approved by the Academy Assembly in December 2016 and other conceptual documents of the Czech Academy of Sciences, which are listed in **Annex 2**.

## **II. RESEARCH OBJECTIVES AND ENVIRONMENT**

The Czech Academy of Sciences' main long-term conceptual objectives are to, in particular:

- perform high-quality research at the level of similar organisations in advanced countries,
- help shape the profile of Czech and international science not only through its own research, but also through active conceptual activity in formulating national and EU science policies,
- help apply new scientific knowledge, introduce new technologies and support the use of research results in socially beneficial practice,
- use and provide research capacity for the preparation of source documents for informed political decision-making,
- help solve problems related to sustainable development and other social challenges,
- participate in the education of students in bachelor's, master's, and doctoral study programmes.

To achieve the aforementioned objectives, the Czech Academy of Sciences will continue to, in particular:

- regularly and comprehensively evaluate the quality of research and professional activities of individual institutes, teams and individuals,
- develop research in collaboration with scientific institutions abroad, especially as a part of the European Research Area (ERA), participate in their structures and projects, use their facilities and share the facilities of the Czech Academy of Sciences with them,
- build and operate large research facilities and enable their use by other research organisations, including foreign partners,
- perform research in effective cooperation with other research organisations.

The current tasks whose performance is largely within the capabilities of the Czech Academy of Sciences itself are to, in particular:

- increase the internationalisation of the Czech Academy of Sciences' research teams and institutes and their integration into international structures,
- develop the Czech Academy of Sciences' relationship with applied research organisations and the business sector, to seek direct links to users of research results and to effectively support the transfer of knowledge and technology,
- create systemic conditions to support teams achieving excellent research performance and to create new teams and institutes focused on new promising fields,
- to ensure the modernisation of existing and construction of new specialised institutes, and equip the Czech Academy of Sciences' institutes with modern, state-of-the-art facilities and instruments.

The Czech Academy of Sciences' individual areas and basic objectives are set out in more detail in the following chapters.

### III. COLLABORATION IN RESEARCH

#### III.1 International Collaboration

International collaboration is a natural attribute of scientific work that contributes to increasing the research quality. The *Concept for Support for International Collaboration of the Czech Academy of Sciences* (see **Annex 2**) reflects global challenges and changes taking place in the world, European and domestic scientific communities (including the creation of new research organisations and infrastructures). It is based on the principle of free movement of researchers, knowledge and ideas.

The main objective in this topic is to strengthen the international character and increase the quality of research institutes of the Czech Academy of Sciences and their teams, so that joint research centres and the international character of research institutes and projects are as frequently seen in the Czech Republic as they are in advanced countries abroad.

The Czech Academy of Sciences therefore supports the creation of international centres of excellence and laboratories with equipment and technical facilities that enable the best foreign scientists to be employed. It also supports the involvement of its researchers in research at similar institutes in advanced countries. In addition, it attaches great importance to the broad participation of leading foreign scientists and experts in the process for evaluation of the institutes and their work in institutes' advisory bodies.

The centre of gravity of international scientific collaboration will, of course, continue to consist of direct foreign contacts of the Czech Academy of Sciences' institutes and their international research projects. This will be facilitated by the following supported activities.

##### III.1.1 Collaboration and Activities Implemented with Central Support

The main long-term tasks in this topic are to strengthen bilateral collaboration with research performing institutions from countries with a high intensity and level of activity in research and development and to increase the involvement of the Czech Academy of Sciences' institutes and their teams in international collaboration projects. In order to achieve these objectives, the following will continue to be supported:

- (a) *Bilateral projects* with high added value from the viewpoint of international collaboration, proposals for which will be submitted and evaluated both by the Czech Academy of Sciences and by a foreign partner, unless specified otherwise.
- (b) *Multilateral projects* evaluated by international expert panels, which will enable the deepening of scientific collaboration on promising topics that are highly relevant from the Czech Academy of Sciences' viewpoint. Emphasis will be placed in particular on expanding the range of opportunities for collaboration with regions and countries outside the EU.
- (c) *International collaboration activities (expert workshops, etc.)* supporting the career development of researchers at the Czech Academy of Sciences' institutes, based on agreements with partner organisations.

In addition to the above, the Czech Academy of Sciences will continue to support the option of involving foreign research groups and organisations in AV21 Strategy research programmes (see part IV.7).

A separate category of support for international collaboration is the introduction of the Josef Dobrovský Fellowship, intended for young foreign researchers who need to study local conditions and sources in the Czech Republic for their scientific work.

The Czech Academy of Sciences also actively contributes to assistance for foreign researchers in need. In 2022, it approved and will continue to develop the Researchers at Risk Fellowship programme, which supports foreign scientists who have been forced to flee their home countries due to threats that endanger their life. The programme enables scientists to participate in research activities at the Czech Academy of Sciences' institutes or gives them the opportunity to continue with their own research in a safe environment.

International collaboration tools implemented with central support will be further strengthened where possible.

### **III.1.2 Integration into the European Research Area**

To support the process of integration into the European Research Area (ERA), the Czech Academy of Sciences will continue to:

- actively participate in the preparation of national opinions of the Czech Republic and prepare institutional opinions on EU plans and programmes in research and development,
- monitor the options for involving its scientists in EU programmes and initiatives in research, development and innovation and keep institutes informed about current opportunities,
- strive to strengthen the personnel involvement of its representatives in expert groups, evaluation panels and other expert committees of European institutions in the field of R&D&I,
- improve the quality of administrative support for applicants and investigators in EU projects through educational and networking activities,
- in collaboration with the relevant stakeholders, comprehensively support applicants for selected strategically important types of EU grants (in particular from the European Research Council (ERC)),
- strive to expand the forms of collaboration with the European Commission's Joint Research Centre (JRC).

For some fields, a crucial precondition for their development is the Czech Republic's membership of intergovernmental organisations such as CERN (European Organization for Nuclear Research), ESO (European Southern Observatory), ESA (European Space Agency), EMBL (European Molecular Biology Laboratory) and possibly others that operate—or will operate in the future—large infrastructures on which large international collaborations conduct or will conduct their research.

### **III.1.3 Participation in International Organisations**

The Czech Academy of Sciences considers it beneficial to participate in selected activities with international non-governmental organisations that focus on finding ways to solve pan-European and global research and development problems (in particular ALLEA, EASAC, IAP, and ENRIO). The Czech Academy of Sciences enables its researchers to participate in programmes and conferences arranged by such organisations and will participate in the organisation of meetings initiated and sponsored by them.

At the same time, the Czech Academy of Sciences considers it essential to support the freedom and autonomy of researchers, national academies and learned societies. The Czech Academy of Sciences will do so primarily through the aforementioned international organisations or existing networks. The Czech Academy of Sciences' own tool in this regard is the Researchers at Risk Fellowship programme (see part III.1.1).

The supported tools for international collaboration are described in more detail in the *Concept for Support for International Collaboration of the Czech Academy of Sciences (Annex 2)*.

#### **III.1.4 Security in International Research**

Given the growing internationalisation of its institutes, the Czech Academy of Sciences places and will continue to place emphasis on a high level of security and integrity in international relations and collaboration. The Czech Academy of Sciences' primary objective is to protect its institutes and their researchers from threats and risks that may be associated with this internationalisation in the form of influence from foreign powers and entities. To this end, the Czech Academy of Sciences ensures and will continue to ensure and develop a system of institutional resilience in close collaboration with other research performing institutions and the relevant ministries and administrative authorities.

### **III.2 Collaboration with Other Stakeholders in Research and Development in the Czech Republic and Use of Research Results in Practice**

The Czech Academy of Sciences' key partners are universities, departmental and private research organisations, applied research performing institutions, the business sector, and government and public administration authorities.

#### **III.2.1 Collaboration with Universities**

The Czech Academy of Sciences will continue to support and develop broad collaboration with universities, which are its natural and closest partners in both research and the education of future researchers.

The main forms of collaboration with universities in research and development will continue to be joint research projects and joint research workplaces. Thanks to their focus on research tasks, the Czech Academy of Sciences' institutes often have unique or expensive facilities or operate research infrastructures that can support the activities of collaborators from universities. In a number of fields, the Czech Academy of Sciences' institutes can be natural initiators of wide-ranging research projects, the organisation of which would be beyond the capabilities of individual university institutes.

One important form of collaboration is participation in project consortia, recently and in particular in the development of additional activities of new research centres built using funding from European Structural and Investment Funds (ESIF). The Czech Academy of Sciences will initiate other forms of collaboration, where possible.

The Czech Academy of Sciences considers the participation of university researchers in the Academy Assembly, the Science Council of the Czech Academy of Sciences, the boards of the Czech Academy of Sciences' institutes, and evaluator and assessment committees, as well as, conversely, the reciprocal representation of Czech Academy of Sciences' researchers in similar university bodies, to be another natural way of connecting to academia.



Part III.3 is about collaboration between the Czech Academy of Sciences and universities in education.

### **III.2.2 Socio-economic Relevance of Research, Knowledge and Technology Transfer**

#### **III.2.2.1 Motivation for Knowledge and Technology Transfer**

Macroeconomic indicators describing the impacts of investments in research show that effective knowledge and technology transfer and innovation are the only possible solution to fundamental problems and challenges facing our society. The Czech Academy of Sciences is aware of this fact and will therefore support the economic and social impact of science, for example specifically in accordance with the Lund Declaration 2015.

Socio-economic relevance is a significant motivational and driving force for research, as is the effort to push the boundaries of knowledge, with both motivations complementing each other synergistically. However, the complexity of today's science requires the scientific community to actively contribute to transfers of research results into practice.

It is evident that the application of new knowledge and technologies, as well as innovation, often influence economic and social changes. However, excessive preliminary caution and restrictive regulation can be an obstacle to finding new and effective solutions to social challenges. Therefore, while respecting the often unintended consequences of human action, the Czech Academy of Sciences also takes on the task of creating the knowledge base for innovation, as an opportunity to achieve technological progress and economic growth, as well as to support competitiveness in a global environment.

#### **III.2.2.2 Partnerships with Application Entities**

Based on its own experience, the width of its research, its complexity and the information available, the Czech Academy of Sciences is well aware of the limited validity of the 'linear' model of transferring research results into practice (basic research, applied research, development, innovation). In addition, practical experience shows that predictions of technical development and innovations repeatedly fail and the impacts of technological innovations are hard to predict.

Communication with application partners, current and future, is an important part of the efforts to transfer research results into practice. The Czech Academy of Sciences also presents itself to the corporate sector as a potential partner for collaboration and as a set of institutes conducting top-quality research with significant application potential. An important tool for this communication is the AV21 Strategy (see IV.7), which identifies socially significant topics and global challenges of today, flexibly responds to new problems and is an established platform for inter-sector and inter-disciplinary dialogue.

#### **III.2.2.3 Tools—Systematisation of Knowledge and Technology Transfer**

At the central level, the Czech Academy of Sciences identifies knowledge and technology transfer as one of its important priorities. The Czech Academy of Sciences' organisational structure, which brings together individual institutes with a large degree of autonomy, therefore requires that systemic support for knowledge and technology transfer corresponds to this structure. It is a combination of a centralised and distributed system with a transfer office at the centre and large or small teams, or individuals responsible for transfer at the institutes.

The determination of priorities and objectives, as well as the division of transfer tasks, is a response to current developments and to the needs and requirements of institutes and application entities. They are defined by the Czech Academy of Sciences' Knowledge and Technology Transfer Strategy approved by the Academy Council (see **Annex 2**). Systemic support for knowledge and technology transfer focuses on the use of research results in practice with a socio-economic impact in the broadest sense, including those that may not necessarily lead to a commercial effect, but are beneficial to society.

#### **III.2.2.4 Collaboration with Providers and Decision Makers**

The Czech Academy of Sciences will engage in dialogue and develop collaboration with decision makers in the interest of reaching a consensus in the view of support and funding of research and innovation. This primarily concerns providers of purpose-tied research support, as well as national and regional authorities whose competences include work related to research.

Equally important is dialogue with government and private research organisations and partner associations, in particular the Confederation of Industry of the Czech Republic and the Association of Research Organisations, as well as other organisations active in the use of research results and innovative enterprise. The Czech Academy of Sciences will therefore support the participation of its institutes in field platforms, such as clusters and field associations. As well as sharing information on competencies and establishing collaboration, the Czech Academy of Sciences' institutes will bring valuable expertise to these platforms, including from a long-term perspective.

#### **III.2.2.5 Outlook and Trends**

The Czech Academy of Sciences carefully follows developments and the latest trends in technology transfer abroad, in particular in the European Union, and actively participates in discussions on this topic as a part of the European Joint Research Centre and other bodies. Support for the creation of spin-offs and start-ups using the results of research by the Czech Academy of Sciences' institutes is still in its infancy. However, it is clear that this support is a very effective tool for transferring the results of independent research into practice (in addition to licensing, contract research and dissemination of knowledge in the social sciences and humanities, where the Czech Academy of Sciences has long-term experience and a strong position). Developing collaboration with investors and investment funds, linking public and private funding, actively collaborating to optimise the relevant legislation and systemic support for the management of spin-offs and start-ups are challenges for the Czech Academy of Sciences in the near future.

### **III.2.3 Collaboration with the State Administration and Local Government at the Level of Regions and Municipalities**

The Czech Academy of Sciences will continue to offer its research and expert capacities for:

- work in government advisory bodies and collaboration with them,
- preparation of strategic, political, legal and other documents for R&D&I at the national, regional and municipal levels,

- work in committees governing individual institutes and in advisory and coordination bodies with national jurisdiction, including expert advisory and other bodies providing support for R&D&I,
- evaluation of R&D&I organisations and results, as well as evaluation of R&D&I programmes and projects,
- expert, advisory and coordination activities for state administration and local government bodies (or entities authorised by them) to deal with current and long-term problems of public interest.

The state administration and local government are significant segments in terms of users of research results in many research topics. In the Regional Collaboration programme, the Czech Academy of Sciences helps Czech regions and municipalities to improve the quality of life and preserve cultural heritage through jointly funded research projects and their application. Pursuant to Act No. 20/1987 Coll., on government heritage care, the Czech Academy of Sciences exercises powers in archaeological research.

The Czech Academy of Sciences will continue to develop collaboration anchored in the *Memorandum on Mutual Support and Collaboration between the Czech Academy of Sciences and the Chamber of Deputies of the Parliament of the Czech Republic*, in the *Memorandum on Collaboration between the Czech Academy of Sciences and the Senate of the Parliament of the Czech Republic*, in agreements and memoranda on collaboration with ministries, cities and regions of the Czech Republic.

### **III.3 Participation of the Czech Academy of Sciences in Education and Preparation of New Researchers**

The education role is a significant part of the Czech Academy of Sciences' mission. It is based on the following principles:

- the expert capacities concentrated at the Czech Academy of Sciences' institutes must be used to train new scientists and researchers for the needs of its own institutes and for universities, as well as for employment outside academia,
- becoming familiar with the principles of scientific research in direct contact with experienced researchers is a significant stimulus for the development of the creative abilities of students at all levels of university studies,
- the Czech Academy of Sciences' educational activities, which are developed through the training of doctoral students at the Czech Academy of Sciences' institutes and thanks to the direct and wide-ranging teaching activities of its researchers at universities, are a fundamental prerequisite for the Czech Academy of Sciences' further development and represent the main form of linking the activities of the Czech Academy of Sciences and universities in education.

Scientific activity and long-term experience predetermine the Czech Academy of Sciences to be used primarily for the highest level of the education process, i.e. for doctoral study programmes. Doctoral study programmes will continue to take place pursuant to Act No. 111/1998 Coll., on universities, as amended, through institutional accreditations and based on contractual agreements between universities and the Czech Academy of Sciences. This concerns support for the wider-ranging involvement of the Czech Academy of Sciences in the education of doctoral students, as the current arrangement still does not allow the Czech Academy of Sciences' full potential to be used in this area.

An important form of support for collaboration between universities and the Czech Academy of Sciences' institutes could also be the establishment of joint doctoral schools, which are common abroad and whose potential has not yet been sufficiently used in the Czech Republic. The Czech Academy of Sciences will support the establishment of such schools and participate in providing for their activities.

The Czech Academy of Sciences will strive to further increase the number of students in doctoral study programmes whose supervisors are researchers with the Czech Academy of Sciences. This activity will be continuously monitored and will be one of the viewpoints for evaluating the activities of the Czech Academy of Sciences' institutes. The Czech Academy of Sciences will also support the involvement of its researchers in teaching in bachelor's and master's degree programmes (at the current time, almost half the university-educated staff at the Czech Academy of Sciences' institutes are involved in this), including the supervision of final dissertations and theses and their preparation at the Czech Academy of Sciences' institutes.

The Czech Academy of Sciences will continue to reach out to secondary school students and primary school pupils with the objective of supporting their interest in scientific work and disseminating scientifically-based knowledge in society. In addition to traditional internships in the successful Open Science programme, they are suitable ways to awaken the interest of talented young people in scientific work, as well as the regular Open Days at the Czech Academy of Sciences' institutes, professional collaboration in organising student science competitions and patronage of selected secondary schools.

## **IV. TOOLS**

### **IV.1 Legal Environment**

Pursuant to Act No. 341/2005 Coll., on public research institutions, the Czech Academy of Sciences establishes the institutes of the Czech Academy of Sciences as public research institutions. Through its elected bodies, the Czech Academy of Sciences will continue to formulate and implement a joint scientific and economic policy in order to maintain its cohesion. The most important tools of these policies are the systems for evaluation and funding of institutes.

The Czech Academy of Sciences' funding is based primarily on Act No. 218/2000 Coll., on budgetary rules, the related structure of the central government budget and Act No. 130/2002 Coll., on support for research, experimental development and innovation from public funds, as amended. The Czech Academy of Sciences will actively participate in the preparation of legislation and the formulation of policies and other conceptual documents concerning research and development.

### **IV.2 Evaluation System for Research and Professional Activity**

High-quality evaluation of research and professional activities of CAS institutes and their research teams is a necessary precondition for maintaining the Czech Academy of Sciences' position as the best-performing scientific institution in the Czech Republic. It is also a prerequisite for further improving the level of research at the Czech Academy of Sciences and the conditions for its implementation, as well as for the related verification of the importance of existing research topics and the formulation of new ones. The character of research at the Czech Academy of Sciences is therefore constantly directed through evaluation.

The Czech Academy of Sciences is a signatory of the Declaration on Research Assessment.<sup>3</sup> Since 1993, it has been performing evaluations at regular intervals using methodologies established in scientifically advanced countries, while continuously improving the evaluation system based on experience obtained, in order to be as effective as possible when distinguishing the actual quality and prospects of institutes' and their scientific teams' activities. The evaluation process should not place an undue administrative burden on institutes or evaluation experts.

The objective of an evaluation by the Czech Academy of Sciences is to obtain information that is independent, objective and as informative as possible about institutes and teams and to use this information in particular for:

- an overview of the level of research, research teams and institutes at the Czech Academy of Sciences in the context of scientifically advanced countries and the world level in the relevant fields,
- strategic management of the Czech Academy of Sciences as a whole, including the funding of institutes as an aspect of management,
- arranging feedback for the management of individual institutes and research teams of the Czech Academy of Sciences with a view to increasing their international competitiveness.

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<sup>3</sup> <https://sfdora.org>

The evaluation methodologies implemented in 2010–2019 verified that, in order for the above objectives to be met, the key elements of evaluation at the Czech Academy of Sciences must be based on:

- informed peer review of the outputs of scientific and professional activities,
- the largest possible number of evaluation experts from scientifically advanced countries or countries where the field has a high research quality, with an emphasis on objectivity of evaluation and the exclusion of conflicts of interest,
- carefully selected evaluation units in the form of institutes and their scientific teams,
- disciplinary scope, with respect for the specifics of disciplines,
- the formative aspect of evaluation for institutes and scientific teams (a focus on improvement and learning through feedback),
- appropriate separation of funding decisions from evaluation results,
- transparency, which ensures ongoing provision of information inside the Czech Academy of Sciences and is related to the publication of the conclusions of the evaluation,
- setting up an appropriate structure of (sufficiently detailed) evaluation criteria,
- understandable evaluation conclusions with the highest possible informative value about the units evaluated.

The Czech Academy of Sciences will continue to develop the evaluation system with the objective of further improving its quality and informative value and reflecting trends in the evaluation of research organisations in scientifically advanced countries. An important aspect of the evaluation system's development will be its relationship with the evaluation of research organisations at the national level—the Methodology for Evaluating Research Organisations and RD&I Purpose-tied Aid Programmes (known as the Methodology 17+). The internal evaluation methodology of the Czech Academy of Sciences and the Methodology 17+ have a number of common elements, although the evaluations differ in a number of aspects given their different missions, differences in the size of the units evaluated and the degree of internationalisation of the evaluation process.

### **IV.3 Financial Management**

The funding of the Czech Academy of Sciences and its institutes is of three types. Institutional funding intended for the development of research organisations and for ensuring the Czech Academy of Sciences' activities has accounted for less than 40% of total funding in recent years and comes exclusively from the budget chapter for the Czech Academy of Sciences. Purpose-tied support, accounting for a total of about 15%, is obtained in public research and development competitions announced by a number of national R&D support providers; another approximately 15% comes from operational programmes funded by ESIF, which are, however, only a temporary source of support. The third significant part, accounting for around 30%, is the institutes' own extra-budgetary resources. The most significant components are revenues from licenses, foreign grants and the sale of publications, goods and services.

Institutional funding is a necessary base for the financial security of the Czech Academy of Sciences' institutes and a prerequisite for their stable functioning and successful performance of long-term research tasks. The majority of them are allocated to individual Czech Academy of Sciences' institutes, taking into account evaluation results and other factors, such as the development of institutes in the previous period, their current status and development plans and prospects for the relevant fields. The Czech Academy of Sciences' institutes use most of

their institutional funding to cover the payroll costs of their permanent employees and part of their overhead costs. Approximately one quarter of the Czech Academy of Sciences' institutional funding is used to effectively ensure financially demanding projects, such as construction and instrumentation investments, costly maintenance, acquisition and maintenance of shared information resources, support for excellence and other activities common to the whole Czech Academy of Sciences. This funding also finances most of the activities of both infrastructure institutes of the Czech Academy of Sciences—the Library of the Czech Academy of Sciences (LCAS) and the Centre of Administration and Operations of the Czech Academy of Sciences (SAC).

The current composition of public funding, where most of the funding for own research comes from purpose-tied support provided by the Czech Science Foundation, the Technology Agency of the Czech Republic and certain ministries, leads to fragmentation of research and weakening of the role of institutes' management, thereby endangering the research quality and effectiveness. For these reasons (and with regard to the recommendations of an international audit based on foreign experience), the Czech Academy of Sciences will continue to strive to increase the share of institutional support in the funding of research and development from public funds. This is fully in accordance with the *Memorandum on Support for Research, Development and Innovation in the Czech Republic*.<sup>4</sup>

The Czech Academy of Sciences will also continue to seek and use appropriate tools that support the obtaining of funding from foreign sources, including the EU.

#### **IV.4 Social Responsibility and Ethics of Scientific Work**

Science and technology undoubtedly have a major positive impact on the quality of human life, although they are sometimes met with ambiguous acceptance, create new risks and ethical dilemmas, and ignite controversy. The scientific community, whose research is publicly funded, therefore has a moral obligation to consider the wider impacts of its work.

The principles of social responsibility of the scientific community are codified in several documents, in particular the European Code of Conduct for Research Integrity (ALLEA, 2017), Responsible Research and Innovation—Europe's ability to respond to societal challenges (European Commission, 2014) and the Code of Ethics for Researchers at the Czech Academy of Sciences (updated in 2022).

Specific ethical issues are of extraordinary importance in the sciences of medicine and biology, where basic ethical standards in the field are defined by laws, regulations and recommendations of varying legal strengths. At the Czech Academy of Sciences, research is conducted only in accordance with these standards. The Czech Academy of Sciences supports legal regulations that prevent the misuse of knowledge obtained, while also enabling research for therapeutic and other (e.g. agricultural) purposes, as recommended by international scientific societies. The Czech Academy of Sciences pays attention—with regard to the impact on public opinion and the atmosphere in society—to the correct and responsible presentation of research results to the wider public.

To address these issues and as a forum for discussing questions concerning the application of ethical principles in research, the Czech Academy of Sciences has the Scientific Integrity Committee of the CAS, which deals with cases of breaches of the Code of Ethics for

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<sup>4</sup> <https://www.avcr.cz/export/sites/avcr.cz/.content/galerie-souboru/spoluprace/Memorandum-VaVal.pdf>  
(In Czech)

Researchers at the Czech Academy of Sciences, containing specific and general principles of scientific ethics.

The wider concept of “responsible research and innovation” (RRI) deals with ethics, as well as issues such as Open Access (OA) and gender issues in research and development.

The Academy Council approved the Czech Academy of Sciences’ open access policy in 2010. Its main principle is to enable open access to the Czech Academy of Sciences’ research results (while complying with legal regulations and contractual agreements). An important part of this policy is the building of a central institutional repository of the Czech Academy of Sciences in the Library of the Czech Academy of Sciences. The Czech Academy of Sciences also endorsed the international Open Access 2020 initiative in December 2015.

The Czech Academy of Sciences places and will continue to place great emphasis on zero tolerance of any discrimination (based on gender, ethnicity, age, etc.) and will continue to comply with the principles of equal opportunities and equal pay, as well as the principles of gender-balanced research in the relevant fields.

The Czech Academy of Sciences naturally adheres to the principles of sustainable development. In addition to its institutes’ significant contribution to free research in a wide range of fields focused on various current aspects of sustainability, the Czech Academy of Sciences will, as far as possible, promote sustainable development on a purely practical level. For example, it will continue to support energy savings, the use of alternative energy sources (especially photovoltaic) and waste sorting at its institutes.

#### **IV.5 Relationship to the Public, Science Communication and Publishing Activity**

The main task of the Czech Academy of Sciences’ popularisation and promotional activities will continue to be to bring science and research and their significance for the development of society closer to the widest possible public, especially young people. By encouraging greater interest in scientific knowledge and a rational approach to new findings, the Czech Academy of Sciences helps raise the level of education and encourages talented young people to work in research and development area. Through fruitful dialogue with the public, the Czech Academy of Sciences has the ambition to change society and strengthen its resilience, while also guiding its activities through frequent feedback provided by this dialogue.

The Czech Academy of Sciences reaches out to the public in particular through lectures, making its facilities accessible and promoting its results in the public media, on the internet and on social networks. An indispensable means of presenting research results in both professional and popular science fields is the publishing activities of individual institutes and the works produced by the Nakladatelství Academia publishing house.

Through the Centre for Administration and Operations of the CAS, when coordinating activities in this topic the Czech Academy of Sciences uses all available communication strategies to popularise and disseminate information about its activities. The most important means by which it achieves this objective include the spring Science Fair and the autumn Week of the Czech Academy of Sciences, arranged annually in collaboration with many important partners, as well as the popular science magazines *A / Věda a výzkum* (*A / Science and Research*) and *AΩ / Věda pro každého* (*AΩ / Science for Everyone*).

However, individual institutes play a fundamental role in communicating research results. They reach out to the public through lectures and exhibitions, organising open days, citizen science projects, offering student internships, collaboration on student science competitions, etc. The



Czech Academy of Sciences supports the involvement of its experts in public discussions on specialised topics and other diverse and attractive forms of making scientific results accessible to the general public.

#### **IV.6 Development of Human Resources and Support for Excellence**

The Czech Academy of Sciences' tasks always include ensuring an appropriate quality and age structure among its researchers, ensuring perspective for research teams, obtaining talented students and early-career researchers, and obtaining high-quality researchers from abroad.

The Czech Academy of Sciences has introduced the following tools to perform this task:

- the Programme to Support Prospective Human Resources – Postdoctoral Fellows—postdoctoral researchers,
- the Otto Wichterle Award (intended for particularly successful and promising young researchers),
- the Prize of the Czech Academy of Sciences for Young Researchers for Excellent Research Results, Experimental Development and Innovations,

The tools for supporting excellence include the *Lumina Quaeruntur* fellowship, which is intended to recognise researchers of rare promise in the establishment of new scientific teams at the Czech Academy of Sciences' institutes. It enables them to develop a scientific programme focused on conceptually new topics that significantly shift the boundaries of knowledge or lead to socially important practical applications.

The most prestigious tool for supporting excellence is the Academic Premium (*Praemium Academiae*), which is comparable in terms of the amount of support and duration to grants made by the European Research Council (ERC). The premium's laureates are among the best of Czech and world science.

To support its personnel policy, the Czech Academy of Sciences has introduced career rules for university-educated researchers and development staff. Classification into qualification levels according to professional level verified by periodic attestations provides the option of faster salary growth even for early-career researchers.

The proceedings for granting the “Doctor of Sciences” (DSc.) scientific degree will continue to increase motivation for further scientific growth and as another tool to support excellence. The Science Council of the Czech Academy of Sciences decides on the awarding of the scientific degree solely based on a proposal of the Scientific Degree Commission and the results of the relevant proceedings. This takes place at the level of the standing commissions for the defences of dissertations for the award of the “Doctor of Sciences” scientific degree, where experts from the Czech Academy of Sciences and universities are widely represented.

The title “Doctor of Sciences” (the English-language equivalent of which is “Research Professor”, abbreviated to “Res. Prof.”) expresses a particularly high scientific qualification proven by the creation of significant, scientifically original work important for the development of science in a certain research field and characterising a leading figure. Its award is sought not only by researchers at the Czech Academy of Sciences' institutes, but also by university researchers. At the Czech Academy of Sciences, it also serves as one of the criteria for achieving the highest qualification degree according to the career rules.

Evaluation (discussed in more detail in part IV.2) is an evident and important mechanism for supporting excellence and enables the identification of quality teams and institutes. Evaluation

results are one of the important bases for the allocation of financial resources for the long-term development of research organisations at the Czech Academy of Sciences.

The Czech Academy of Sciences ensures that increased attention is paid to the selection of high-quality institute directors and that the management of institutes establishes and uses international advisory boards composed of top foreign experts.

The tools for supporting excellence will be further strengthened where possible.

#### **IV.7 AV21 Strategy**

For the further development of the Czech Academy of Sciences it is necessary that it is permanently able to identify important scientific questions, define issues in a well-founded manner and prepare solutions from the viewpoint of the current level of knowledge, as well as able to respond to current social issues. The Czech Academy of Sciences has a good chance of being able to operate in the near future as a part of world-class science and one of the centres of national culture, as well as an increasingly important stakeholder in the economy.

To address the complicated groups of contemporary problems that require broad interdisciplinary research, in 2014 the Czech Academy of Sciences prepared and approved the AV21 Strategy platform (see **Annex 2**) with the motto “Cutting-edge Research in the Public Interest”, which is based on a constantly changing set of coordinated research programmes. These programmes use interdisciplinary and inter-institutional synergies to identify today’s problems and challenges and coordinate the research efforts of the Czech Academy of Sciences’ institutes towards their solution. The system of research programmes is dynamic. It is open to partners from universities, the business sector and central and regional government institutions, as well as foreign research groups and organisations. The results achieved in the programmes are periodically evaluated and it is assumed that programmes dealing with new relevant topics will be added and existing programmes will be terminated or modified.

## V. RESEARCH INFRASTRUCTURE

Research infrastructure is a set of facilities, resources and services that enable research activities. It is a combination of the activities of individual institutes and joint activities. Joint procedures are and will be applied at the Czech Academy of Sciences, in particular when:

- ensuring those activities that, by their nature, may include multiple institutions,
- procuring and operating expensive facilities that cannot be funded or effectively used by one institution,
- obtaining quantity discounts and other benefits in bulk contracts with suppliers.

Based on the positive experience to date and the all-round advantages, the Czech Academy of Sciences will continue to coordinate the development of the infrastructure with other research and development institutions to the greatest extent possible.

In the long term, the basis for funding research infrastructure should be institutional funding, as this is the only way to ensure its long-term conceptual development. Given the current options, the institutes will also use other (albeit temporary) forms of support, in particular operational programmes from ESIF, large research infrastructure projects of the Ministry of Education, Youth and Sports, other departmental programmes, EU framework programmes and other international programmes.

### V.1 Information Infrastructure

The backbone of the Czech Academy of Sciences' information infrastructure is the CESNET network, operated by an association of the Czech Academy of Sciences and universities. Permanent attention has been and will be paid to further coordinated increases in the capacity and security of computer networks. The growing significance of information infrastructure for the collaboration of extensive, mostly international scientific teams is associated with the development of grid infrastructure.

The basic components of the Czech Academy of Sciences' information infrastructure are the **Library, the Masaryk Institute and Archives of the CAS**. The Czech Academy of Sciences will continue to support their development as institutes providing an information service to a wide community of researchers and development staff.

The Czech Academy of Sciences' Library provides researchers and development staff with access to, inter alia, a wide-ranging set of electronic information resources and databases in collaboration with university libraries, the National Technical Library and the National Library of the Czech Republic. It maintains a register of results of the Czech Academy of Sciences' institutes in the ASEP database, from which it exports the relevant data to the Register of Information on Results, part of the Research, Development and Innovation Information System. It will also continue to build the Czech Academy of Sciences' repository in open access mode.

The Masaryk Institute and Archives of the Czech Academy of Sciences will continue to receive, store and make available documents on the scientific, professional, organisational and economic activities of the Czech Academy of Sciences and its institutes, as well as on the activities of leading researchers. It will supervise the application of the relevant provisions of the Act on Archives and Records Service with special emphasis on the introduction of an electronic records service and the building of an electronic archival information system as

integral parts of the Czech Academy of Sciences' information infrastructure, connected to the information systems of domestic and international memory institutions.

In collaboration with universities, the Czech Academy of Sciences will strive to extend existing and conclude new contracts for the purchase and rental of software and for access to electronic information resources on favourable terms, including the use of the National Centre for Electronic Information Resources—CzechELib.

## **V.2 Scientific and Technical Infrastructure**

The Czech Academy of Sciences has always paid attention to the maintenance and development of modern infrastructure. These efforts have been enhanced over the past decade by the option of drawing funds from ESIF. In a number of cases, units with concentrated scientific and technical facilities have been created and fit into the scheme of large research infrastructures of the MoEYS, which enables the wider professional public to access advanced technologies. Currently, 30 institutes operate or participate in the operation of large domestic research infrastructures. Fifteen institutes are similarly involved in large research infrastructures of the “hub” type, which are an entry gateway to foreign research infrastructure, such as CERN, ESO, EES, etc.

The ELI Beamlines, a large research infrastructure built by the Institute of Physics of the Czech Academy of Sciences, has become part of the European Research Infrastructure Consortium ELI-ERIC, together with the similar Hungarian centre of ELI ALPS. EU Member States are members of the ERIC consortia, and the Czech Academy of Sciences, together with the Ministry of Education, Youth and Sports, has the status of a “representing entity” for the Czech Republic in ELI-ERIC. The Euro-BioImaging ERIC consortium includes the CzechBioImaging infrastructure, in which several institutes of the Czech Academy of Sciences are involved.

Smaller elements of the scientific-technical infrastructure distributed between individual Czech Academy of Sciences' institutes are also available across the Czech Academy of Sciences and, under certain conditions, to the wider scientific community. This use is boosted by a centrally managed instrument database.

However, the current state of the scientific-technical infrastructure obliges the Czech Academy of Sciences to ensure its maintenance, effective operation and continuous modernisation. Adequate funding conditions need to be ensured for this. The Czech Academy of Sciences also pays constant attention to investments in instruments, also using internal selection mechanisms, and annually determines and specifies the allocation of funds, in particular for expensive instruments.

## **V.3 Service Infrastructure**

The concentration of a number of activities into joint specialised units increases the efficiency and professional standard of services and, as a result, saves individual institutes of the Czech Academy of Sciences' human potential and financial resources. The Centre of Administration and Operations of the Czech Academy of Sciences plays a key role in providing for services infrastructure and handles a number of support activities. The main ones are:

- communication and promotion of science and research at the Czech Academy of Sciences' institutes—publishing journals, organising presentation events and producing audiovisual works,

- operation of the Technology Transfer Office (TTO) of the Czech Academy of Sciences (CETTAV), whose task is to assist in the socio-economic application of research results and ensure the protection of intellectual property,
- legal consultations and legal analyses relating to the assets of public research institutions,
- asset administration and engineering and construction activities required for the maintenance and modification of property and the construction of new buildings,
- construction, administration and innovation of the part of the CESNET information network used by the Czech Academy of Sciences and other information systems and communication technologies of the Czech Academy of Sciences,
- service activities when expanding international collaboration of the Czech Academy of Sciences and its institutes.

## VI. SUMMARY

The Czech Academy of Sciences' development is driven by a commitment to achieve and sustain a level of research comparable to that of leading non-university research performing institutions in the most advanced countries, thereby placing it at the forefront of research efforts to move the boundaries of human knowledge. The Czech Academy of Sciences wants to use its research results as effectively as possible in favour of society, thereby contributing to the Czech Republic's prosperity.

Significant steps in these efforts are the implementation of the AV21 Strategy, the evaluation of research teams and institutes using an advanced methodology in accordance with the practice in scientifically advanced countries, the development of tools to support excellence, the strengthening of strategic partnerships, and the transfer of effective knowledge and technology into practice.

To achieve the aforementioned objectives, the Czech Academy of Sciences primarily needs stability and predictability of funding that respects the development of the research base, high-quality legislation and an understanding that science and research support the development of creativity and curiosity, are integral parts of the general culture and play an irreplaceable role in the development of the country's economy.

## ANNEXES

- Annex 1:** Overview of Strategic Documents for Research and Development of the European Union and the Czech Republic
- Annex 2:** Overview of Conceptual Documents of the Czech Academy of Sciences

## **Overview of Strategic Documents for Research and Development of the European Union and the Czech Republic**

Of the current strategic documents, policies and trends at the level of the European Union (EU), the following are the most significant for the Czech Academy of Sciences' activity:

- *European Research Area (ERA) Policy Agenda 2022–2024*. The ERA Agenda sets out the first measures leading to the implementation of a new, reformed ERA. The activities are intended to contribute to the fulfilment of the priority areas defined in the Council Recommendation on the *Pact for Research and Innovation in Europe (Pact for R&I)* from 2021. EU Member States and countries affiliated to the Horizon Europe programme join individual ERA events on a voluntary basis.
- The 2021 *Global Approach to Research and Innovation – Europe's strategy for international cooperation in a changing world* sets out the EU's relations with third countries. The strategy's objective is to ensure the EU's leading position in international collaboration in research and innovation and to contribute to innovative solutions to support the green and digital transitions. The EU's ninth framework programme, Horizon Europe (2021–2027), plays a key role in the implementation of this approach.
- *The EU Framework Programme for Research and Innovation Horizon Europe* is the most important tool to support research, development and innovation activities at the EU level in the programming period of 2021–2027. The emphasis on excellent science remains the main guiding principle. Horizon Europe brings new tools to support innovation, pays greater attention to reducing the impacts of climate change, helps achieve the UN's sustainable development goals and promotes the EU's competitiveness and growth. The social benefit of science is further developed in the new framework programme through the concept of "missions", which define specific objectives that should be achieved within a defined timeframe.
- The *European Green Deal* is a reflection of the EU's attempts to actively resolve and mitigate the impacts of climate change on the environment. The Green Deal is an integral part of the EU's strategy to achieve the 2030 Agenda for Sustainable Development and the UN's Sustainable Development Goals (SDGs). The measures adopted should lead to a thorough transformation of the EU's economy, including the energy, transport and agriculture sectors. Research and innovation are playing a fundamental role in this process of ecological transformation.
- *ERA Industrial Technology Roadmap for Low-carbon Technologies in Energy-intensive Industries*. The first Industrial Technology Roadmap of the (new) ERA 2022 shows the current state of low-carbon technologies in EU energy-intensive industries, examines available support tools and points to possible research and innovation steps with the objective of accelerating the development and introduction of these technologies.
- The renewed vision of European industry, which is the result of the ongoing "fifth industrial revolution" (Industry 5.0), places priorities such as sustainability, resilience and an emphasis on social benefit at the forefront. Educational activities, in particular the development of digital skills, play a key role in this transition, as does strengthening investments in the research and innovation sector. These are intended to ensure

breakthrough research findings and lead to modern, extraordinary, eco-friendly and environmentally sustainable solutions to today's societal challenges.

- The *EU Cohesion Policy* focuses on strengthening EU cohesion through targeted support for countries and regions with lower economic performance. In addition to delegating European funds through ESIF to Member States, which, after consultation with the European Commission, create and further implement national operational programmes, part of the allocated budget is dedicated to the development of European territorial collaboration, which is implemented through "Interreg" type programmes.

At the national level, the basic strategic framework relevant for the Czech Academy of Sciences comprises the following, in particular:

- *National Research, Development and Innovation Policy of the Czech Republic 2021+* (approved by Government Resolution No. 759 of 20 July 2020), which is an overarching strategic document at the national level for the development of all components of research, development and innovation in the Czech Republic for the period of 2021–2027,
- *National Priorities for Oriented Research, Experimental Development and Innovation* (approved by Government Resolution No. 552 of 19 July 2012) valid for the period until 2030 with gradual implementation, which define six priority topics including 24 sub-topics with a total of 170 specific objectives,
- The *Implementation of National Priorities for Oriented Research, Experimental Development and Innovation* (approved by Government Resolution No. 569 of 31 July 2013),
- *National Research and Innovation Strategy for Intelligent Specialisation of the Czech Republic 2021–2027* (the National RIS3 strategy), approved by Government Resolution No. 66 of 25 January 2021.



**Summary of Conceptual Documents of the Czech Academy of Sciences**

(ordered chronologically from the newest to the oldest)

- (1) Long-term Strategy for Knowledge and Technology Transfer in the Environment of the Czech Academy of Sciences**  
(Approved by the Academy Council on 5 October 2021, it is of an internal nature.)
- (2) Communication Strategy Concept of the Czech Academy of Sciences**  
(Approved by the Academy Council on 29 September 2020, it is of an internal nature.)
- (3) AV21 Strategy**  
(Approved at the XLV Academy Assembly on 16 December 2014.)  
See <https://strategie.avcr.cz>
- (4) Concept for Support for International Collaboration of the Czech Academy of Sciences**  
(Approved by the Academy Council on 4 November 2014.)  
See [https://www.avcr.cz/export/sites/avcr.cz/.content/galerie-souboru/Koncepce\\_podpory\\_mezinarodni\\_spoluprace\\_AVCR.pdf](https://www.avcr.cz/export/sites/avcr.cz/.content/galerie-souboru/Koncepce_podpory_mezinarodni_spoluprace_AVCR.pdf) (In Czech)
- (5) Open Access Policy at the Czech Academy of Sciences**  
(Approved by the Academy Council on 14 October 2010.)  
See <https://www.avcr.cz/en/about-us/legal-regulations/open-science-principles-of-the-czech-academy-of-sciences/>