SAS 2020:
The Long-Term Development Plan of the Slovak Academy of Sciences

In line with its mission statement for the 2013–2017 term and taking into account the current situation and needs for future development, the Presidium of the Slovak Academy of Sciences (SAS) hereby presents the Long-Term Development Plan of the Slovak Academy of Sciences, which contains the academy's strategic goals, their implementation to the year 2020 and the methods of their fulfilment.

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I. PREAMBULE

Science is a key strategic factor of development in modern societies, and every country in the developed world reaches its state of advanced development by supporting scientific research. The social significance and economic impact of investing in scientific inquiry is evident in a country's international competitiveness and in the level of the living standards and cultural enrichment of its citizens.

Every country in the modern world contributes to global science in accordance with its available resources, which are fundamentally determined by the decisions of politicians and state bodies. First and foremost, scientific research is a matter of public interest. It is traditionally undertaken with state support in two basic institutionalized forms: university and non-university research. Non-university research is a standard form of research which has been made necessary by the development of modern societies. The SAS is the authoritative public institution undertaking academic non-university research in Slovakia.[1] Public support for scientific investigations which are in the interests of the development of all of society is a core principle stemming from the universal nature of science itself. Of course, this does not rule out support from private sources, without which scientific development would be impossible in the present day. The involvement of market mechanisms and private investment can bring significant impulses to the development of science. However, this does not mean that science

[1] Non-university public research institutions exist all over the developed world and are not some "post-communist relic" peculiar to Central and Eastern Europe. Such institutions have the same social "licence" to undertake academic research as public universities. The core specific character of academic research at a non-university institution is in it meeting the long-term (strategic) knowledge needs of society (core research), which are not primarily tied to educational goals as would be the case with research undertaken at universities. The second function of non-university research is the fulfilment of selected current needs of social and economic development (applied research), which, however, are to a large degree met by sectoral and company research (development and innovation).

only serves private interests. Science is essentially a public good; therefore, investment in science – be it from the public or private sector – will ultimately benefit society.

II. THE MISSION OF THE SAS

The SAS is a national institution which undertakes scientific research in Slovakia as an autonomous non-university research institution which is primarily funded from public finances. This sort of research has not only a tradition in Slovakia; but its existence is justified because of the research's highly systematic and concentrated character, which allows it to be connected to global trends in the development of human knowledge. The perspectives gained from research undertaken at the SAS are based on the results that are qualitatively comparable to research undertaken abroad.

The SAS is an autonomous science and research body established under law. Its aim is to undertake basic research in the natural, technical, medical and social sciences as well as in the humanities in areas which are innovative, demanding in terms of personnel and research infrastructure, and which develop innovative technology and diagnostics. Its primary purpose is to enhance knowledge for the development of Slovakia and its citizens. The values of the academy are grounded in the principles of independent scientific inquiry (without any political affiliation), critical thinking, excellent knowledge, a high level of expertise and specialization, effective competitiveness and interdisciplinary cooperation.

The activities of the SAS build on the historical traditions of scholarly and scientific societies in Slovakia, starting with the projects of Matthias Bel (1735) and Andrej Kmeť (1892) and the activity of the scientific branches of Matica slovenská (1863) through to the first institutionalized scientific research undertaken at the Slovak Academy of Sciences and Arts (1942). From its establishment in 1953, the SAS initially existed as an independent institution, and subsequently within the Czechoslovak Academy of Sciences (1960–1992). Since 1989 the academy has undergone gradual modernization in its organizational structure and in its overall research focus.

In addition to its proportionate role in enhancing knowledge through international cooperation in scientific endeavour, the academy fulfils its social mission through the development of progressive technologies, patents, innovations, expertise and the transfer of knowledge to many areas of practical implementation. The academy has an established research infrastructure which meets international requirements. Its employees constitute a unique and irreplaceable amount of intellectual wealth, which is concentrated in its excellent scientific personalities and research teams. Without the valuable work of these people, it would not be possible to develop Slovakia's national and cultural identity. The SAS is an institution which has great potential to develop Slovakia's economy, technology sector, society and security. With these interests in mind, the academy cooperates with non-academic entities in the public and private sectors, providing them with scientific information to help in solving problems and development tasks.

The SAS cooperates with universities in many ways and takes part in their scientific research. The SAS also plays an indispensable role in the training of university students, especially in the training of doctoral students as well as experts in key and highly specialized (rare) areas which are not taught or studied at universities.

The academy develops its research activities through its own scientific organizations, which as a rule are involved in national and international projects which are funded from grants. Within this framework, the academy undertakes research focused on current global issues (e.g. climate change; the renewal and maintenance of the quality of water, soil and the air; managing environmental risks; protecting biodiversity; biotechnology and the health of populations), social issues (e.g. growing inequality and the issue of social solidarity, social exclusion and

marginalization, ageing, migration and security), the protection and development of cultural heritage (the Slovak National Corpus, the Dictionary of Contemporary Slovak Language, the Library of Slovak Literature and *Encyclopaedia Beliana*) and detailed regional research. The academy also undertakes systematic research into the state-building elements of the Slovak Republic (its social, economic, legal and educational systems), offering critical insights in light of global developmental trends, and it is building a unique array of documentation and archival sources in this regard.

III. THE CURRENT SITUATION AT THE SAS

Every year the SAS summarizes and evaluates the results of its research in annual reports. Based on the results of recent years, the current state of the SAS is summarized below.

A. The most important research results at the SAS

In the scientific area of physical, space, earth and engineering sciences (Scientific Section 1) the SAS has held a strong international position in the material sciences (superconductive materials, metastable metal alloys for application in electrical engineering, light alloys for use in mechanical engineering, new ceramic materials, nanomaterials and nanofilms for targeted applications), the geosciences (critical raw materials, seismic activity/threats and flood prognoses), astronomy (asteroids and comets) and information technology (the processing of speech and image). The SAS has received significant international praise in the area of theoretical disciplines, specifically in quantum information science, quantum chemistry and mathematical sciences.

In the area of life, chemical, medical and environmental sciences (Scientific Section 2) much good work has been achieved in the areas of polymer research (biodegradable polymers and microcapsules for the treatment of diabetes), biomedical research (stress and neurodegenerative diseases, and original techniques in the diagnosis and therapy of oncological diseases) and ecological research (a scientist from the SAS was a UNESCO committee chairman).

In the social sciences, humanities, arts and culture (Scientific Section 3), some of the most significant results have come from unique findings about Slovakia's past (a prince's tomb in Poprad, findings in Bojná related to the history of early Christianity in Central Europe, and the Camadolese Bible) and a wide range of knowledge about current social processes (social identity, economic decision-making, marginalized groups and civic participation).

Upon the basis of the research results achieved by the SAS, Slovakia's Academic Ranking and Rating Agency (ARRA) has identified a number of excellent research teams and individual scientists whose published work is truly world-class.[2]

B. Other important facts about the activities of the SAS

The indispensability of the SAS in other areas is proven by the fact that it has established and now administers a nationwide seismic network for the monitoring of earthquakes, and has maintained and developed the arboretum at Mlyňany. The SAS also operates the Slovak Infrastructure for High-Performance Computing.

(a) Patents

In 2013 the organizations of the SAS applied for 15 patents, of which two were submitted under the Patent Cooperation Treaty. Four patents were granted, two of these in Austria.

(b) The participation of the SAS in the European Research Area

The SAS participates in a range of multilateral projects (EUREKA, ESPRIT, NATO,

[2] The methodology and results of the ARRA evaluation can be found at: http://www.urad.sav.sk/downloads/arra/.

UNESCO, CERN, IAEA, ESF and others), and was involved in a total of 162 projects in 2013.

From a total of 31 networks in the European Research Area (the ERA-NET scheme), Slovakia joined nine consortia; in six of these the SAS was the sole Slovak participant. The SAS supports the participation of its successful research teams in ERA-NET projects from its own budget. In addition, the SAS has concluded agreements with MOST (Taiwan), JST (Japan) and TÜBİTAK (Turkey) on supporting common research projects.

As a part of FP7 (EU) the SAS completed 103 projects and was the most successful Slovak institution in acquiring FP7 projects. In the first year of Horizon 2020, the new EU framework programme, teams from the SAS joined 67 project proposals and were coordinators in five of them. It also needs to be pointed out that the only grant awarded to a Slovak institution by the European Research Council was awarded to a scientist at the Institute of Chemistry at the SAS.

The SAS was successful in the H2020-WIDESPREAD-2014-1-FPA (Teaming) call for proposals with its "Building-up Centre of Excellence for Advanced Materials Application" (CEMEA) project. The project partners are the VTT Technical Research Centre and the University of Helsinki in Finland.

The SAS has created mechanisms to attract talented researchers from the whole world. These are:

(1) the Štefan Schwarz Post-Doctorate Scholarship, established in 2004 (so far there have been approximately 180 scholarships awarded)
(2) the SASPRO Marie Curie COFUND programme (an FP7 project), operating since 2014 and focusing on attracting talented foreign researchers as well as Slovak researchers based abroad

(c) Projects supported by EU Structural Funds and infrastructure development

The SAS implements projects supported by EU Structural Funds to the value of more than 500 million euros (including partnerships with universities and private companies). To date the SAS has run 23 research and development projects where the applicant is a private company. In the 2007–2014 programme period the SAS established a number of world-class laboratories. The "big" SAS projects include:

- the University Science Park for Biomedicine in Bratislava
- research centre – the Centre for Applied Research of New Materials and Technology Transfer in Bratislava
- research centre – Promatech Košice
- research centre – the Centre of Research and Development of Immunologically Active Substances, Šarišské Michaľany
- the Allegro Research Centre in Trnava

In addition to the above, the SAS implements the SIVVP project, which makes infrastructure available for high-performance computing (two supercomputers and six powerful computational clusters joined in a grid) for scientists and researchers in Slovakia.

(d) The implementation of research knowledge in the economic sector

In 2013 the SAS had 23 centres working in cooperation with economic entities. Research teams cooperated with more than 100 domestic and foreign business partners.

(e) Expertise for the public sector

For many years the SAS has prepared dozens of expert reports for Slovakia's public sector and executive bodies from the local and regional levels right up to the national and European levels. In this way the SAS has systematically contributed to the rationalization and improved cultivation of the administration of public life.

C. Selected data on the financing of the SAS

(a) Financing per employee from the state budget: a comparison with the Czech Academy of Sciences (CAS)

In 2013 18,721 euros was allocated from the Slovak state budget for each employee (FTE) at the SAS in comparison to the equivalent of 29,163 euros from the Czech state budget for each employee at the CAS. The average monthly wage of an employee at the SAS in 2013 was around 1000 euros (all sources) and at the CAS it was 1300 euros (all sources).

(b) Financial indicators of publication outputs

One of the forms of evaluating the effectiveness of the financing of science is looking at the cost of each Current Contents (CC) publication and Web of Science (WOS) citation. Table 1 presents a comparison between the SAS and the CAS for the years 2009 to 2014. The data for this table was provided by the Slovak Centre of Scientific and Technical Information.

Table 1: *A comparison between the SAS and the CAS of costs for each CC publication and citation (data for 2010–2014, WOS)*

Year	Cost of CC publication SAS (euros)	Cost of CC publication CAS (euros)	Cost of citation SAS (euros)	Cost of citation CAS (euros)	Citation average SAS	Citation average CAS
2009	46,926	58,597	5591	5039	8.39	11.6
2010	44,409	54,330	5983	5034	7.42	10.8
2011	42,628	57,297	6492	6688	6.57	8,6
2012	37,738	57,911	5244	8509	7.20	6,8
2013	40,455	62,464	13,057	18,988	3.10	3.3
2014	38,699	53,829	80,100	85,362	0.48	0.63

Methodology: The cost of each publication was determined by working out the share of funding each institution received from the respective state budget and the total number of CC publications; the cost of each citation was worked out in a similar way. Citations for works published in the relevant year in the period to the end of 2014 were taken into consideration, which is why the cost per citation is significantly higher in the first two years following publication than it is subsequently. The biggest difference can be seen in the average number of citations per work in the first year following publication. The figure of 0.63 citations per publication for the CAS is a significantly better one than 0.48 for the SAS, which illustrates the lower visibility of SAS research results in the first year after publication. This sort of comparison is worthwhile so long as the levels of financing for each year are similar. This is why we evaluated the period from 2009.

From this perspective, and when considering the number of WOS/Scopus publications per year for the SAS (approx. 1500) and the CAS (approx. 3800) for the last five years, it appears that the publication activity of the SAS is not very different to that of the CAS in spite of the lower costs the SAS incurs per employee. However, a challenge presents itself for the SAS in terms of increasing the international influence of its publications by improving their quality, which, among other things, can be measured by the number of citations per publication. Achieving a notable increase in output quality is closely linked to stable institutional funding for the SAS and support for programmes which increase excellence in research (e.g. through the Slovak Research and Development Agency).

D. Current issues

Publications and citations

Even though it only employs 11 % of all research workers in Slovakia (FTE), the SAS accounts

for 31 % of Slovakia's publication outputs and 39 % of its citation outputs. The quality of SAS outputs has been evaluated in the Scimago Institutions Rankings and the Excellence Rate parameter, which is the percentage of a given institution's outputs which are classified as being in the top 10 % of cited papers in the relevant scientific field on an international scale. In 2014 the SAS had a value of 17.82 in this indicator when compared to the best organization in the world from among more than 4800 listed institutions, which had a value of 100. The best result within Slovakia in this regard was achieved by Comenius University, which had a value of 20.3. The CAS had a value of 23.28. When comparing the total outputs of an organization (the total number of publications and the Output indicator in the Scimago evaluation) the SAS in 2014 had a figure of 3.42, compared to 2.2 for Comenius University and 9.42 for the CAS. Therefore, in absolute terms the SAS has the most papers in the top 10 % of cited works in their relevant scientific fields among Slovak institutions.

While in terms of its research outputs the SAS can be evaluated as being the best among Slovak institutions, its position among the Visegrad Group nations and in the Central and Eastern European region in general is less than satisfactory. Among other things, this is the result of the significantly inadequate financing of science and research in Slovakia from state sources. According to the Scimago Institutions Rankings, Slovakia is lagging behind Hungary and the Czech Republic primarily in terms of the excellence parameters mentioned above.

The standard international evaluation (ranking) of an institution is based on its publications in journals (WOS and Scopus databases) and on citations (SCI and WOS/Scopus databases). The role of the SAS is to forge a presence in the international research environment, which is why it must focus on publishing in prestigious international journals with a high impact factor. Most scientific disciplines have a spectrum of journals with a defined impact factor.

A problem with this approach is that as yet such a clear comparison does not exist for books (monographs) or chapters in monographs. Monographs published in Slovak are undoubtedly an important contribution to the development of culture and the cultivation of public discourse and public education in its broadest sense in a number of scientific disciplines. However, making an impact on the international scene requires the publication of such works in languages with a global reach and with international publishers.

IV. THE BACKGROUND AND FRAMEWORKS FOR THE SAS DEVELOPMENT STRATEGY

This section presents selected social factors which currently determine the development of science as well as key strategic EU and Slovak documents (Europe 2020, Horizon 2020, RIS3 and the National Reform Programme for 2015).

A. International frameworks

(a) Global issues:

- the sustainability of living standards and the environment
- the protection of biodiversity
- man and the landscape
- energy sustainability
- economic efficiency
- civilizational diseases and maintaining health
- the existential risks of global changes
- global security
- food safety and security
- social cohesion, solidarity and trust

- man, lifestyle, education and values
- culture and creativity

(b) The dynamics of civilizational changes:

- the growth in complexity of social changes
- the rapid growth in scientific information
- the boom in new scientific disciplines and technologies
- the growing emphasis on research flexibility
- the growing conflict between the long-term character of scientific work and the expectation of results in the short term

(c) The financial requirements of science in the present day:

- worldwide growth in investment in science and research
- an emphasis on the assessment of research results
- an orientation of available resources towards aims benefiting society as a whole
- a growing emphasis on the relationship between the social relevance of research and funding
- the growing significance of education for economic prosperity
- an effective system of social organization for science and research with stable funding – one of the main factors behind a country's higher competitiveness and innovative success

(d) The Europe 2020 economic programme:

- intelligent growth – an economy based on knowledge and innovation
- sustainable growth – a green and competitive economy which uses resources more efficiently
- inclusive growth – an economy with a high level of employment which contributes to economic, social and territorial cohesion

B. National frameworks

(a) The RIS3 economic programme

Areas of economic specialization:

- the automotive industry and mechanical engineering
- consumer electronics and electrical devices
- information and communication products and services
- the manufacture and processing of iron and steel

Areas of specialization in terms of available scientific and research capacity:

- materials research and nanotechnology
- information and communications technology
- biotechnology and biomedicine
- agriculture and the environment, including modern chemical technologies which are friendly to the environment
- sustainable energy and power

(b) Social challenges:

- critical research into Slovak social reality and present trends
- research into cultural heritage and cultural memory, incorporated into a European and worldwide context
- the formation of a new image of social and economic development linked to present and future reforms in the European Union

C. Requirements for the research and development sector

- a reorganization of the universities

- the transformation of the SAS and sectoral research institutes into public research institutions
- an increase in the amount of research and innovation funding from private sources and the setting up of a system which by 2020 will secure statistically registered expenditure on research and development at a ratio of 1 to 2 (public sources : private sources)
- an increase in the efficiency of agencies in the area of research and innovation
- further legislative changes
- the introduction of a binding indicator for the support of research and development for use when preparing the state budget of the Slovak Republic, which will define a share of expenditure on research and development as a percentage of GDP

V. THE STRATEGIC GOALS OF THE SAS

These are long-term goals which will have a long-term effect:

1. Form a modern, dynamic and successful SAS with a better position in the European Research Area and directly linked to RIS3, while preserving its integrity and its stable and foreseeable funding requirements.

The methods and resources to reach this goal:

- transform the SAS organizations into public research institutions
- stabilize institutionalized funding
- secure funding from multiple sources
- increase financial support for competitive funding from the state grant system
- introduce a system of performance-based funding in the area of competitive funding

2. Increase the contribution of research to social and economic development through global excellence and local relevance

The methods and resources to reach this goal:

- provide the necessary infrastructure for research and development
- connect the academy with universities, research institutes and partners from industrial and public sectors through projects
- support and stimulate international cooperation in science and technology
- support applied and result-oriented research and research into socially relevant issues
- maintain a dynamic balance between support for excellent basic and applied research and innovative and development activity
- create an environment for effective inter- and multidisciplinary research
- provide programmes for anticipatory research in the social sciences and humanities
- increase the Europe-wide circulation of knowledge gained from research activities in Slovakia
- support projects with a creative and innovative potential for effectiveness and broad social usefulness

3. Define strategic research programmes (responsibility of the SAS)

The methods and resources to reach this goal:

- define the key research areas where the SAS has an important position in the European Research Area
- propose a programme (in cooperation with universities) on research into global

challenges

4. Define strategic research programmes (proposals for the Ministry of Education, Science, Research and Sport of the Slovak Republic and the Ministry of Finance of the Slovak Republic)

The methods and resources to reach this goal:

- propose a programme of research excellence in Slovakia
- propose a strategic programme in line with science and research priorities and RIS3
- increase the amount of competitive funding on a national level
- increase support for research and development in proportion to economic growth, and by 2020 achieve statistically registered expenditure on research and development to a total amount of at least 1.2 % of GDP
- introduce a common and regular system of evaluation of research at the SAS, universities and other research entities, and project these results into the funding model

5. The legislative and human resources area (proposals for the Ministry of Education, Science, Research and Sport of the Slovak Republic and the Ministry of Finance of the Slovak Republic)

The methods and resources to reach this goal:

- amend the current law on universities – abolish study fees for doctoral students from countries outside the EU and introduce scholarships for them which are the same as for EU students
- grant visas to postdoctoral researchers from countries outside the EU for scientific purposes in an accelerated fashion and free of charge
- determine the wages of doctoral students and postdoctoral researchers by limits set by SRDA and Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic for the Structural Funds of the EU (ASFEU) projects
- establish doctoral scholarships at the level of Slovakia's national average wage

VI. THE MID-TERM GOALS OF THE SAS TO 2020

These are goals which will be effectively achieved in the medium term (by the year 2020):

(a) Publication outputs:

- strengthen the focus on the quality of SAS outputs – establish and apply a motivational norm for researchers to publish in prestigious international journals (WOS and Scopus)
- maintain the regular certification of the evaluation of those working in research organizations and introduce motivational tools for the best performing researchers which are dependent on the quality of research results
- create and apply motivational tools for publishing in journals with a high impact factor, and introduce a bonus for this purpose in the system of evaluation
- create and apply motivational tools for publishing books (monographs) and monograph chapters which are published by prominent international publishing houses, and introduce a bonus for this purpose in the system of evaluation

(b) Projects:

- create the conditions for acquiring grants from the European Research Council and the coordination of Horizon 2020 projects – establish a goal of coordinating at least three

H2020 projects

- prepare “big” SAS projects for operational programmes involving research and innovation as well as proposals for the involvement of organizations in Scientific Section 3 in these projects
- establish and apply a motivational norm for researchers to participate in scientific projects (VEGA being the minimum)

(c) Patent applications:

- Increase the number of patent applications per year to at least two times the current level, and create adequate administrative and financial conditions for this purpose

(d) Doctoral studies:

- achieve a state where every research organization provides doctoral studies

(e) Implementation of research knowledge in the economic sector:

- motivate the creation of start-up companies (after becoming a public research institution)
- prepare Structural Funds projects which will involve collaboration with business partners
- strengthen the focus of the SAS on technology transfer and cooperation with the economic sector

(f) Social challenges:

- create a virtual centre for joint programmes with universities which deal with global issues and draw up expert reports
- support programmes of cultural identity development in the national and European context
- support critical and anticipatory social analyses

(g) Projects supported by EU Structural Funds and infrastructure development:

- undertake an audit of the built-up infrastructure of the SAS and create tools for improving its benefits
- prepare a quality project for the second programme period. These projects will build upon the SAS infrastructure and provide a basis for the improvement of outputs in the areas of scientific excellence and economic and social gain

VII. THE OPERATIONAL GOALS OF THE SAS

In order to achieve the strategic (long-term) and mid-term goals, it is important to fulfil the following operational goals in the short term (2015–2016):

A. Organizational and legislative changes at the SAS:

- transform the SAS organizations into public research institutions
- determine the rules for the long-term financing of public research institutions
- determine the rules for the evaluation and accreditation of public research institutions
- establish a department which will help researchers prepare European (EU-funded) projects.

B. Economic changes – proposals for negotiations with the Ministry of Education, Science, Research and Sport and the Ministry of Education:

- stabilize the institutional funding of the SAS at 60 million euros + 5.5 million euros (0.45 % of state expenditure in 2013): a guaranteed 60 million euros for three to five years (e.g. through an official agreement) for the basic operation of the SAS and 5.5 million euros for the stimulation of high-performing research teams and research priorities as set out in RIS3
- increase and stabilize funding from competitive sources:
  – research agency (SRDA – 35 million euros, Structural funds/ASFEU – 1.1

billion euros, VEGA – an open issue)
– technological agency (making it available for research and development institutions – SAS, universities and sectoral institutes)
– incorporate all state programmes and stimuli into a single state research policy (a set ratio between state and EU funds contributions)
– establish a ratio between "dedicated" (RIS3 – excellent and oriented research) and general (excellent research without any relationship to domestic priorities) research themes
– introduce grants linked to wages for doctoral students and postdoctoral researchers
– propose a programme for cooperation with business and social partners as a means of increasing the involvement of the private sector in the funding of research, development and innovation, and the fulfilment of its aims
– suggest programmes for cooperation among high-performing research teams (SAS + universities)

C. Specific steps from the Presidium of the SAS:

- assess the effectiveness of the use of resources acquired from EU Structural Funds projects by means of an internal audit
- prepare a programme of regularly informing the public about the research results of the SAS
- ensure that those SAS activities which have a duration longer than one Presidium term of office (e.g. *Encyclopaedia Beliana*, the Dictionary of Contemporary Slovak Language and the Slovak National Corpus) are placed into a project category where special arrangements apply. These projects will be assessed on a regular basis and will take into account adherence to economic indicators.
- identify an infrastructure suitable for ERI and then undertake the necessary measures for inclusion into the European Research Area
- have an expert discussion with the Ministry of the Interior and the Ministry of Finance on the possible repercussions of the Effective, Open and Reliable state administration reforms (known as ESO) in light of the fact that the SAS is not an administrative institution and currently there are misleading ideas being circulated about the possibilities of reducing the number of employees in its organizations

VIII. THE SAS VISION

The fulfilment of the abovementioned goals and development strategies will strengthen the position of the SAS as an excellent national non-university public research institution which undertakes top-level research in selected areas of the natural, technical, medical and social sciences as well as in the humanities, for which it will have the optimal conditions and resources. This will see the SAS form a stable and promising foundation for the economic and cultural development of Slovakia with its effective integration into the European Research Area. At the same time, the SAS will be an institution which is open to new civilizational challenges and new issues in science and research, which it will be able to react to with flexibility, creativity and innovation through the results of its research and its contributions to balanced and broad social development.