



THE LEARNED SOCIETY OF SLOVAKIA

**Vision for a knowledge-
based society and
a better Slovakia**



Učená spoločnosť Slovenska
The Learned Society of Slovakia
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Initiative – – Vision for a knowledge- based society and a better Slovakia

Slovakia 2050 – A society successful thanks to excellent research, quality education, and increased awareness

Humanity is living through a period of change whose pace is unparalleled in history. Many challenges lie ahead of us, and these can be viewed as either inspiring or depressing, as motivating or paralyzing. Nation states must redouble their efforts and find new sources of financial support to adapt this changing world. An even larger challenge

stands before Slovakia, which must markedly improve its long-term perspectives in the uncompromisingly competitive international market, which is driven by a burgeoning economy and by sociocultural advancements created by a knowledge-based populace.

In such circumstances, we believe that Slovakia can only be successful if it builds its further development on a foundation of research, innovation, education, and increased knowledge. An attitude of exploration moulds both individuals and society, and curiosity is a universal human quality that lends meaning to our endeavours. History teaches us that investing in excellent research, quality education, and increased knowledge contributes to economic growth, improved quality of life, and sociocultural advancement. Conversely, turning away from these fundamental pillars of development can lead to the demise of a society.

As a young country, Slovakia has no tradition of support for intellectual activities and developing its own elite experts. Instead, egalitarian approaches are often adopted in areas where they are downright damaging. One example of this is the inability to agree on the construction and funding of several top universities. However, we can compensate for our lack of tradition by drawing inspiration from the rest of the world.

Slovakia in 2019 – a society that underestimates the importance of quality home-grown research and education and the effect of knowledge on societal development

Scientific results have a huge impact on the daily life of individuals and society. Despite this, many politicians, managers, members of the public, and even university educators and researchers in Slovakia fail to act in the best interests of science, research, and education, not perceiving an importance of these disciplines. The following realities illustrate this point:

- The research sector suffers from low financial support from the state and low investment from the private sector;
- Financial resources intended for science and education are poorly distributed due to influences from short-term, local political and economic interests at the expense of the long-term needs of research, knowledge development, and the state.
- Research performance in excellent outputs is low on an international level (ERC grants, publications in the Nature index, etc.), and Slovak science shows poor penetration into the global research area and disappointing mobility of scientists.
- To a large degree, feigning of scientific quality takes precedence over encouraging healthy competition, a motivational

environment, and differentiated support for scientific excellence.

- The network of universities in Slovakia is oversized, and university education remains of insufficient quality, even though such education is clearly badly needed in the competitive European and world stage.

Economically, Slovakia is doing well. Why has is not increased funding for research accordingly? The Slovak Research and Development Agency (SRDA) and The Slovak Academy of Sciences (SAS) have only a small budget, and state subsidies for quality universities are inadequate. Doctoral students, young lecturers, and scientists feel that most politicians, and indeed most of society, fail to appreciate their efforts and knowledge.

Our failure to address these problems carries several negative consequences. Most visibly, thousands of talented young people leave Slovakia every year to study abroad, and only a small proportion of them wish to return. If Slovak society fails to act quickly to reverse this mass exodus, it will face stagnation and demise.

Slovakia at a crossroads – What must we change in our approach to science, research, and education?

In our efforts to rectify this situation, we can take inspiration from several countries where long-term support programs for research and



education have had positive effects on the development of society and the state. After all, the main principles for organizing science, research, and innovation do not vary from country to country.

Increasing overall funding for science, research, and education in Slovakia would definitely help. However, if this measure is to be effective and successful in the long run, the methods for distributing funds must be fundamentally improved as well. Above all, those who make these decisions must not be compromised by short-term personal or partisan financial or political goals, and they must be qualified to distinguish what is best and necessary. The membership of decision-making bodies that fund science, as well as the system of evaluating research projects, could be improved with minimal financial burden.

Without a doubt, the type of research and the rationale for its undertaking must be distinguished, and degree of connection between the academic and private sectors must be identified. Without research that is primarily curiosity-driven, it is not possible to develop the concept of problem-solving research in the long run. In the current technological climate, frontier research, which scientific tradition categorises as basic research, can quickly be given real applications. Research that is guaranteed academic freedom must be financed by the

state and by the European Union. Applied research, which includes the private sector by definition, should also receive support from the state in the form of stimuli and tax relief. It is also important to protect intellectual property and enforce the law. The best way to support applied research that is motivated by the needs of practice and industry is to increase the transfer of new knowledge by supporting free academic research and talented scientists. Funding of free academic research requires a functioning national research agency, separate from the agencies and institutions that support practical, applied research and innovation. These have quite different goals, resources, and standard practices. The financial stability of these agencies is very important to ensure they can support long-term project frameworks.

In parallel with project-based research funding, successful countries support scientific institutions through a system of demanding performance evaluations that compare these institutions with other world players. The quality of research results must be judged in an independent audit using international standards.

The quality of education must be improved in primary and secondary schools, as well as in universities. In particular, the quality of doctoral study must be markedly improved if Slovakia is to cross over into the world research area.



Indeed, Czechia provides one example of systematic development of education, research, and knowledge-based society. In the last few years, the country has undergone significant systematic changes in this area. The research environment was submitted to a broad and detailed audit with help from international reputable agency. Selected universities and academy received extensive investment, and the country has begun building a large scientific infrastructure of transnational significance, as well as a state-wide system of quality evaluation in all research sectors. Another reason why we should pay attention to the Czech model of education is that a significant proportion of young, talented Slovaks are lost to the top Czech universities and research institutes.

If our efforts are not synergised with other developmental activities, they will fail

These fundamental changes in the organisational system of education, science, and innovation, which are necessary to transform society, should be understood as part of a broader effort to protect and develop natural and human resources, humanist values, and cultural potential. Such a synergistic approach could be achieved through efforts to transform Slovakia into a society focused on knowledge and innovation, as well as to improve quality of life across all social groups

and regions in Slovakia. For this reason, one key aim will be to tie our priorities and vision in the field of science, research, and education together with a strategic programme for effective and sustainable development of Slovak society.

Main aims for Slovakia in the field of science, research, and education

1. The vision of Slovakia as a knowledge-based society by 2050 will be the subject of national dialogue involving all relevant parties: parliament, government, representatives in European institutions, political parties, scientists and teachers, entrepreneurs, public institutions, non-governmental organisations, regional governments, and individual citizens.
2. An independent international audit of the Slovak research environment will be carried out.
3. The basics of a state science policy will be formulated, with a focus on developing all parts of the research system and on defining the role of science in the development of a society, as follows:
 - Science, research, and education must become a real priority for society.
 - A system of funding for research and development will be established in Slovakia, together with a coherent concept for evaluating publicly-funded research and development organisations.

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- The stance of universities, SAS, and other research institutions towards the system of research and development in Slovakia must be defined.
 - Measures for improving the quality of education at primary and secondary schools, as well as at universities, must be established.
 - Measures should be established to support the best undergraduate and doctoral students to ensure they are motivated to study and work in Slovakia.