

## Survey response for Hungary

### OECD database of governance of public research policy

This document contains detailed responses for Hungary to the survey on governance of public research policy across the OECD. It provides additional background information to the OECD database of governance of public research policy as described in Borowiecki, M. and C. Paunov (2018), "How is research policy across the OECD organised? Insights from a new policy database", *OECD Science, Technology and Industry Policy Papers*, No. 55, OECD Publishing, Paris, <https://doi.org/10.1787/235c9806-en>. The data was compiled by the OECD Working Party on Innovation and Technology Policy (TIP). Data quality was validated by delegates to OECD TIP Working Party the in the period between March 2017 and May 2018. Additional references that were used to fill out the questionnaire are indicated.

The data is made freely available online for download at <https://stip.oecd.org/resgov>.

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## Abbreviations and acronyms

AKT	Council of Research Institutes
EMMI	Ministry of Human Capacities
EU	European Union
HEIs	Higher Education Institutions
IDP	Institutional Development Plan
KTIA	Kutatási és Technológiai Innovációs Alap Research and Technological Innovation Fund
MTA	Magyar Tudományos Akadémia Hungarian Academy of Sciences
NKFIA	Nemzeti Kutatási, Fejlesztési és Innovációs Alap National Research, Development and Innovation Fund
NKFIH	Nemzeti Kutatási, Fejlesztési és Innovációs Hivatal National Research, Development and Innovation Office
OTKA	Országos Tudományos Kutatási Alapprogramok Hungarian Scientific Research Fund
PRIs	Public Research Institutes
RDI	Research, Development and Innovation

## Survey of public research policy

### Topic 1: Institutions in charge of priority setting, funding and evaluations

**Table 1. Questions on institutions in charge of priority setting, funding and evaluations of universities and PRIs**

Question	Response
<p><b>Q.1.1. Who mainly decides on the scientific, sectoral and/or thematic priorities of budget allocations for a) HEIs and b) PRIs?</b></p> <p>c) Which are the main mechanisms in place to decide on <b>scientific, sectoral and/or thematic priorities of national importance</b>, e.g. digital transition, sustainability? Please describe who is involved and who decides on the priorities (e.g., government, research and innovation councils, sector-specific platforms including industry and science, etc.).</p> <p><i>(This question does not refer to who sets overall science, technology and industry priorities. This is usually done by parliaments and government. The question refers to decisions taken after budgets to different ministries/agencies have been approved. Scientific priorities refer to scientific disciplines, e.g. biotechnology; sectoral priorities refer to industries, e.g. pharmaceuticals; and thematic priorities refer to broader social themes, e.g. digital transition, sustainability, etc.)</i></p> <p>d) From 2005-16, were any significant changes introduced as to how decisions on scientific, sectoral and/or thematic orientation of major programmes are taken (e.g. establishment of agencies that decide on content of programmes)?</p>	<p>a) The Ministry of Human Capacities (EMMI) decides on priorities of higher education development policies.</p> <p>b) The Academy of Sciences (main PRI) decides itself on the scientific orientation of its major programmes.</p> <p>c) To decide on scientific, sectoral and/or thematic priorities of national importance is governmental task.</p> <p>The EMMI coordinates the priorities of higher education. Inter-ministerial coordination is part of the strategy preparation process.</p> <p>The National Research, Development and Innovation Office (NKFIH) decides on the thematic and scientific orientation of competitive programmes of RDI financed by the National Research, Development and Innovation Fund. The NRDI Office responsible for the preparation of the RDI strategy.</p> <p>d) Establishment of the agency National Research, Development and Innovation Office (NKFIH) in 2015. At operational level, the NKFIH is the governmental body responsible for research, development and technological innovation. The new office was established by Law LXXXVI on "Scientific Research, Development, and Innovation" (of 25 November 2014) in order to integrate strategy-making and governance of research-development and innovation as well as to coordinate the RDI funding. Its tasks included strategy-making and programme planning as well as international RDI collaboration. The NKFIH is responsible for the National Research, Development and Innovation Fund. This fund integrates the former Hungarian Scientific Research Fund (OTKA) and the Research and Technological Innovation Fund (KTIA) programmes. The Office decides on project based funding of scientific research, development and innovation from this fund.</p> <p>The NRDI Office is the legal successor of the National Innovation Office (NIH) that was established in 2010. Before 2010 the National Office for Research and Technology (NORT) operated.</p> <p>The institutional system for managing EU funds was built during that time (2006-2016). During this time this system has changed.</p>

## References:

European Commission (2016), RIO Country Report 2015 Hungary, p. 18, <https://rio.jrc.ec.europa.eu/en/country-analysis/Hungary/country-report> (accessed 24 February 2017).

MTA (n.d.), "General Assembly", <http://mta.hu/english/general-assembly-105955> (accessed on 15 February 2017).

National Research, Development and Innovation Office (2015), "The National Research, Development and Innovation Office", <http://nkfi.gov.hu/the-office/mission> (accessed on 8 February 2017).

**Q.1.2. Who allocates institutional block funding to a) HEIs and b) PRIs?**

*(Institutional block funds (or to general university funds) support institutions and are usually transferred directly from the government budget.)*

c) Who allocates **project-based funding** of research and/or innovation for HEIs and PRIs?

*(Project-based funding provides support for research and innovation activities on the basis of competitive bids.)*

d) Is there a transnational body that provides funding to HEIs and PRIs (e.g. the European Research Council)?

e) What is the importance of such funding relative to national funding support?

f) From 2005-16, were any changes made to way programmes are developed and funding is allocated to HEIs and PRIs (e.g. merger of agencies, devolution of programme management from ministries to agencies)?

a) Institutional block funding of HEIs and PRIs is allocated by the Ministry of Human Competences.

b) The Academy itself allocates funding to research and innovation activities to its 39 research institutes and co-funds 130 research groups at universities. The General Assembly of the HAS adopts the annual budget. Besides the HAS and the Ministry (EMMI) also co-finance scientific projects of HEIs in a smaller proportions.

c) The NKFIH is the main funding agency in Hungary and allocates as project-based funding for HEIs and PRIs. It operates the National Research, Development and Innovation Fund (NKFIA); it is responsible for the allocation of funding from European Structural Funds through competitive calls. The NKFIA integrates two previously separate agencies, the Hungarian Scientific Research Fund (OTKA) and the former Research and Technological Innovation Fund (KTIA).

d) The Ministry for National Economy is responsible for the allocation of funding from European Structural Funds through competitive calls in the field of RDI. The amount of project based funding in 2016 was higher from NKFIA than from Structural Funds, but it can change from year to year. It depends on the cycle of the European programming period (because this is a seven year program, and the NKFIA is yearly). The Academy and the Ministry for Human reReferences also have smaller project based funding system.

f) Setting up of the National Research, Development and Innovation Fund (NKFI Alap) which merges two previously separate funds: the Hungarian Scientific Research Fund (OTKA) and the former Research and Technological Innovation Fund (KI Alap). The institutional background of the Structural Funds was elaborated and changed during this period. Further direct funding is allocated by the Ministry of Human Capacities (EMMI) and the Academy.

## References:

EC/OECD STI Policy Survey 2016 for Hungary. Response B4.

MTA (2015), Research Network of the Hungarian Academy of Sciences, [http://mta.hu/data/MTA\\_kutatohalozata\\_ENG.pdf](http://mta.hu/data/MTA_kutatohalozata_ENG.pdf) (accessed on 10 February 2017).

OECD (2008), OECD Reviews of Innovation Policy: Hungary 2008, OECD Publishing, Paris, p.118.

DOI: <http://dx.doi.org/10.1787/9789264054059-en>

<p><b>Q.1.3. Do performance contracts determine funding of a) HEIs?</b>  <i>Institutional block funds can be partly or wholly distributed based on performance. (Performance contracts define goals agreed between ministry/agency and HEIs/PRIs and link it to future block funding of HEIs and PRIs.)</i></p> <p>b) What is the share of HEI budget subject to performance contract?</p> <p>c) Do performance contracts include quantitative indicators for monitoring and evaluation?</p> <p>d) What are the main indicators used in performance contracts? Which, if any, performance aside from research and education is set out in performance contracts?</p> <p>e) Do HEIs participate in the formulation of main priorities and criteria used in performance contracts?</p> <p>f) Do the same priorities and criteria set in performance contracts apply to all HEIs?</p> <p>g) Are any other mechanisms in place to allocate funding to HEIs and PRIs?</p> <p>h) From 2005-16, were any changes made to funding of HEIs and PRIs?</p>	<p>a to f) Funding of HEIs is not subject to performance criteria or performance agreements in Hungary.</p> <p>g) Currently, institutional funding for teaching and student allowances is allocated based on the number of students and some qualified institutions receive an annual subsidy of around EUR 65 million for research excellence. However, a new higher education strategy is being developed – <i>Government Decree No. 24/2013. (II. 5.) on National Higher Education Excellence</i> – that aims at introducing performance-based funding of HEIs. The strategy plans to establish institutional evaluations of HEIs performance on the basis of indicators. Performance criteria will guide the allocation of 90% of the state budget for universities (70% for education and training and 20% for research). The upcoming indicators system will take into account number of teaching and research staff and age structure of the institution. 10% of the budget will be reserved for “special tasks” (i.e. tasks of “national strategic importance”). The decree plans to differentiate between HEIs: priority higher education institutions, research universities, and colleges of applied sciences.</p> <p>h) No major changes made.</p>
<p><i>(In case performance contracts are in place that bind funding of PRIs, please provide information about them.)</i></p>	
<p><i>References:</i>  <i>EC/OECD STI Policy Survey 2016 for Hungary, Response C4 and C6.</i>  <i>MTA (2015), Research Network of the Hungarian Academy of Sciences, <a href="http://mta.hu/data/MTA_kutatohalozata_ENG.pdf">http://mta.hu/data/MTA_kutatohalozata_ENG.pdf</a> (accessed on 10 February 2017).</i></p>	
<p><b>Q.1.4. Who decides on the following key evaluation criteria of HEIs and PRIs?</b></p> <p>Who is responsible for setting criteria to use when evaluating performance of a) HEIs? Who is responsible for b) evaluating and c) monitoring HEIs' performance?</p> <p>Who is responsible for setting criteria to use when evaluating performance of d) PRIs? Who is responsible for e) evaluating and f) monitoring PRIs' performance?</p> <p>h) From 2005-16, was any institution created for evaluating HEIs and PRIs or were any changes made to criteria applied for evaluations of HEIs and PRIs?</p>	<p>a to c) The Ministry of Human Capacities is responsible for the evaluation and monitoring of HEIs.</p> <p>d to f) The Council of Research Institutes (AKT) at the MTA decides on criteria for evaluating performance, and performs evaluations and monitoring of performance of its research centres, institutes, and units.</p> <p>h) In 2014, there was an amendment made to the National Higher Education Act that affected the way monitoring and evaluation of HEI performance is conducted. The Ministry of Human Capacities evaluates HEIs' annual budgetary reports. HEIs are also required to prepare an institutional medium term development plan every four years. The development plans report the on expected revenues and expenses as well as their use of assets to be submitted to the Ministry of Competences.</p>
<p><i>References:</i>  <i>EC/OECD STI Policy Survey 2016 for Hungary, Response H4.</i>  <i>MTA (n.d.), “Council of Research Institutes, AKT”, <a href="http://mta.hu/english/council-of-research-institutes-akt-105692">http://mta.hu/english/council-of-research-institutes-akt-105692</a> (accessed on 15 February 2017).</i></p>	

**Q.1.5.** Which **recent reforms** to institutions that are in charge of priority setting, budget allocations, and evaluations of HEIs and PRIs were particularly important?

- Creation of the NRD Office in 2015.
- The process of University integration, which was started in 2000-01 (not at the same time at different universities) and it lasted for several years (after 2005 as well).
- The appointment of chancellors at the HEIs in 2014.
- Consistories were created at HEIs in 2016. The consistory is an economic advisory board made up of external members (local economic actors) besides the members of HEI (chancellor, rector).
- Restructuring the PRIs was in 2011.
- Setting up the Hungarian Accreditation Committee (MAB).

*References:*

*EC/OECD STI Policy Survey 2016 for Hungary. Response B4.*

*National Research, Development and Innovation Office (2015), "The National Research, Development and Innovation Office", <http://nkfih.gov.hu/the-office/mission> (accessed on 8 February 2017).*

## Topic 2: Policy co-ordination mechanisms

**Table 2. Questions on research and innovation councils**

Question	Response
<p><b>Q.2.1. a)</b> Is there a <b>Research and Innovation Council</b>, i.e. non-temporary public body that takes decisions concerning HEI and PRI policy, and that has explicit mandates by law or in its statutes to either?</p> <ul style="list-style-type: none"> <li>– provide policy advice (i.e. produce reports);</li> <li>– and/or oversee policy evaluation;</li> <li>– and/or coordinate policy areas relevant to public research (e.g. across ministries and agencies);</li> <li>– and/or set policy priorities (i.e. strategy development, policy guidelines);</li> <li>– and/or joint policy planning (e.g. joint cross-ministry preparation of budgetary allocations)?</li> </ul>	<p>a and b) The National Research, Development and Innovation (NKFIH) Office is the main research and innovation council in Hungary. There are separate councils in charge of research (Research Council) and innovation (Innovation Council) at the NKFIH.</p> <p>According to the provisions of Section 8 (4) of Act. No. LXXVI of 2014 on Scientific Research, Development and Innovation the NRDI Office shall set up specialised colleges, an Innovation Board (IT) and expert groups pursuant to this Act with a view to drawing up the general concept of R&amp;D programmes and tenders and the evaluation of the programmes, tenders and reports.</p>
<p>b) What is the name of the main research and/or innovation Council/Committee? Are there any other research Councils/Committees?</p>	<p>c) Besides there is the National Research Infrastructure Committee, the International Scientific Advisory Board, and the National Science Policy and Innovation Board. There are also Colleges of Science: Colleges of Humanities and Social Sciences, College of Mathematics, Physics, Chemistry and Engineering, College of Medical and Biological Sciences, College of Agrarian, Environment, Ecology and Geosciences.</p>
<p>c) Are there any other research Councils/Committees?</p>	<p>The members of the different Colleges of Science are representatives of HEIs and PRIs. These are expert groups whose operation is constant.</p> <p>The members of the National Research Infrastructure Committee are representatives of the academic sector. The Committee promotes the NKFIH's work in the field of research infrastructures. The Committee is the main actor in the preparation process of the Hungarian National Roadmap on Research Infrastructures.</p> <p>The International Scientific Advisory Board is a panel providing strategic proposals to support the work of the President of the NRDI Office. The members of the Board are international experts. The first meeting was on December 18, 2015. The Board can support the work of the Office, and of the President of NKFIH. The members of the Board are: Sierd A.P.L. Cloetingh - Professor of Tectonics – University of Utrecht, Anne Glover - Vice-Principal External Affairs &amp; Dean for Europe – University of Aberdeen, Bengt Johan Fredrik Nordén - Chair Professor of Physical Chemistry – Chalmers University of Technology, Gothenburg, Sir George Charles Radda - Emeritus Professor of Molecular Cardiology – University of Oxford, Chairman of the Biomedical Research Council – A*-STAR, Singapore, Gyula (Julius) Vancsó - Chair Professor of Polymer Materials Science and Technology – University of Twente.</p>

The National Science Policy and Innovation Board was established by government decree 116/2013 (IX.25.). The mandate of the board is to provide advice to the management of the NKFIH, evaluate and make recommendations on strategic issues of scientific, research and development and innovation programmes, the sustainable finance of these programmes and the evaluation methodology to be carried out at scientific institutions.

There are other expert groups in the field of innovation but these are not permanent committees. Their activity is related to one of the tender schemes in the field of innovation. The members of these groups are mainly the representatives of the relevant sectors of business life.

*References:*

*EC/OECD STI Policy Survey 2016 for Hungary. Response B7.*

*National Research, Development and Innovation Office (2016), "Innovation Board", <http://nkfi.gov.hu/the-office/innovation-board/innovation-board> (accessed on 6 February 2017).*

**Q.2.2.** With reference to Q.2.1, does the Council's **mandate** explicitly include a) policy coordination; b) preparation of strategic priorities; c) decision-making on budgetary allocations; d) evaluation of policies' implementation (including their enforcement); e) and provision of policy advice?

a to e) The National Research, Development and Innovation (NKFIH) Office coordinates the preparation of priorities of research and innovation policy (research, development, and innovation - RDI strategy). Moreover, the NKFIH coordinates the development of STI policies and programmes with other ministries and the HAS.

The mandate of the Research Council is to provide advice to the management of the NKFIH, evaluate and make recommendations on strategic issues of scientific research, and development and innovation programmes, the sustainable financing of these programmes and the evaluation methodology to be carried out at scientific institutions.

The Innovation Council was established in 2015 with the aim to coordinate strategic priority setting in the field of research and innovation within government, and to evaluate the appropriate use of the public budget for programme development.

The mandate of the Innovation Board is to ensure the optimal use of domestic and EU funding for innovation that should contribute to Hungary's economic and social development. The Board elaborates on specific programmes to facilitate investment in relevant projects and evaluates them. The Board also contributes to the formulation of policy guidelines and strategies for Research, Development and Innovation. It also selects experts to form part of evaluation committees of R&D programme proposals.



**Q.2.3.** With reference to Q.2.1, **who formally participates** in the Council? a) Head of State, b) ministers, c) government officials (civil servants and other representatives of ministries, agencies and implementing bodies), d) funding agency representatives, e) local and regional government representatives, f) HEI representatives, g) PRI representatives, h) private sector, i) civil society, and/or j) foreign experts

- a to j) The members of the Research Council are:
- Blaskó Gábor – Head of the Council and Director of Servier Hungary Ltd., Member of the Hungarian Academy of Sciences (HAS)
  - László .Ac nád Institute of Experimental Medicine, head of the College of medical and biological sciences, member of HAS
  - Gábor Prószéki Pázmány Péter, Catholic University – Faculty of Information Technology and Bionics; Head of Colleges of Humanities and Social Sciences, Member of HAS
  - Attila Demény HAS Research Centre for Astronomy and Earth Sciences ; Head of College of agrarian, environment, ecology and geosciences, Member of HAS
  - Tibor Krisztin, University of Szeged – Department of Applied and Numerical Mathematics; Head of College of Mathematics, physics, chemistry and engineering, Member of HAS
  - Anna Erdei, Eötvös Lóránd University, Department of Immunology, Member of HAS
  - Éva Jakab, University of Szeged, Faculty of Law and Political Sciences, Member of HAS
  - Kissné Horváth Ildikó, National Korányi Institute of Pulmonology
  - Zoltán Rácz, Eötvös Lóránd University, Faculty of Science Institute of Physics, Member of HAS

The Innovation Board is composed of nine distinguished members that represent academia and industry appointed by the President of the NKFIH. The members are senior representatives of different sectors, e.g. business (IT, chemistry and food), the NKFIH, universities and PRIs: Currently, there are five private sector representatives from large and multinational enterprises, including Dr. László Ábrahám (general manager at National Instruments), Attila Csányi (CEO at Bonafarm Co.), Dr. Greiner István (director of the Chemistry and Biotechnology R&D Department and Deputy General Director for Research, Gedeon Richter Plc.), Dr. Balázs Marczis (Electrical Drives Engineering Director at Robert Bosch Kft.), and Ferenc Pongrácz (Director of Southeast European development at IBM, president of the American Chamber of Commerce in Hungary)

Two representatives are from HEIs and PRIs: Dr. Péter Ákos Bod (economist, university professor), and Dr. Tamás Dóczi (neurosurgeon and professor at University of Pécs and ordinary member of the MTA).

**Q.2.4.** With reference to Q.2.1.b., does the Council have its own a) **staff** and/or its own b) **budget**? If so, please indicate the number of staff and the amount of annual budget available.

a and b) The Councils do not have their own staff and budget.

c) There were no changes in Research Council and Innovation Council.

c) From 2005-16, were any **reforms** made to the mandate of the Council, its functions, the composition of the Council, the budget and/or the Council's secretariat? Was the Council created during the time period?

**Table 3. Questions on national STI strategies**

Question	Response
<p><b>Q.2.5.</b> a) Is there a national non-sectoral <b>STI strategy</b> or plan?</p> <p>b) What is the name of the main national STI strategy or plan?</p>	<p>a and b) The "National Research, Development and Innovation Strategy 2013-2020 - Investment in the Future" (National RDI Strategy 2013-2020) is the national STI strategy. The strategy is currently under review.</p>
<p>References:  <i>EC/OECD STI Policy Survey 2016 for Hungary. Response B1.</i>  <i>Ministry for National Economy (2013), Investment in the future National Research and Development and Innovation Strategy (2013-2020), p.7. <a href="http://nkfih.gov.hu/policy-and-strategy/national-strategies/national-rdi-strategy/2013-2020">http://nkfih.gov.hu/policy-and-strategy/national-strategies/national-rdi-strategy/2013-2020</a> (accessed on 6 February 2017).</i></p>	
<p><b>Q.2.6.</b> Does the national STI strategy or plan address any of the following priorities?</p> <p>a) Specific themes and/or <b>societal challenges</b> (e.g. Industry 4.0; "green innovation"; health; environment; demographic change and wellbeing; efficient energy; climate action) - Which of the following themes and/or societal challenges are addressed?</p> <ul style="list-style-type: none"> <li>- Demographic change (i.e. ageing populations, etc.)</li> <li>- Digital economy (e.g. big data, digitalisation, industry 4.0)</li> <li>- Green economy (e.g. natural reReferences, energy, environment, climate change)</li> <li>- Health (e.g. Bioeconomy, life science)</li> <li>- Mobility (e.g. transport, smart integrated transport systems, e-mobility)</li> <li>- Smart cities (e.g. sustainable urban systems urban development)</li> </ul> <p>b) Specific <b>scientific disciplines and technologies</b> (e.g. ICT; nanotechnologies; biotechnology) - Which of the following scientific research, technologies and economic fields are addressed?</p> <ul style="list-style-type: none"> <li>- Agriculture and agricultural technologies</li> <li>- Energy and energy technologies (e.g. energy storage, environmental technologies)</li> <li>- Health and life sciences (e.g. biotechnology, medical technologies)</li> <li>- ICT (e.g. artificial intelligence, digital platforms, data privacy)</li> <li>- Nanotechnology and advanced manufacturing (e.g. robotics, autonomous systems)</li> </ul> <p>c) Specific <b>regions</b> (e.g. smart specialisation strategies)</p> <p>d) <b>Supranational</b> or transnational objectives set by transnational institutions (for instance related to European Horizon 2020)</p> <p>e) <b>Quantitative targets</b> for monitoring and evaluation (e.g. setting as targets a certain level of R&amp;D spending for public research etc.)</p> <p>f) From 2005-16, was any STI strategy introduced or were any changes made existing STI strategies?</p>	<p>a and b) The National RDI Strategy, the Smart specialization Strategy and several national sectoral strategies specifically address, digital economy, green economy, health, environment and energy, mobility and smart cities.</p> <p><i>The National RDI Strategy 2013-2020</i>  The National RDI Strategy does not focus primarily to thematic dimension of RDI processes. It identifies the main problems and challenges.</p> <ul style="list-style-type: none"> <li>• Green economy: energy research, energy efficiency, increased use of renewable energy and of low CO<sub>2</sub>-emission transport, utilization of the so-called "waste energy", advanced innovative water treatment technologies and wastewater treatment and waste management.</li> <li>• Health: Healthy society and wellbeing - health care industry innovation chain, advanced health care technologies, biotechnology in health industry, biomedicine and pharmaceutical industry, maintaining and improving the general health condition of the society.</li> <li>• Mobility: development of economically and environmentally sustainable transport infrastructure, intelligent transport systems.</li> <li>• Digital economy: Strong digitalisation knowledge, strong modernization effect on the economy, especially the SME sector. Promote digital literacy that promotes innovation and creativity.</li> <li>• Smart cities: the well-being of the citizens of the city, not only digitalized infrastructure but services and smart residents well organizes cooperation system, "smart city" in the energy domain. The sectoral priorities are determined in the S3 Smart specialization strategy. Besides the different sectoral strategies identifies the relevant challenges and priorities.</li> </ul> <p><i>Smart Specialization Strategy</i>  The Smart Specialization Strategy contains thematic objectives. The representatives of all RDI sectors were involved in the strategy creation process at the National Research, Development and Innovation Office.</p>

National Smart Specialisation Strategy (S3) (2014) was developed in the rigorous methodological framework predefined by the EU in every country. Hungary began planning in early 2013, using a variety of domestic design documents, summarising the objectives of the different territorial levels and intertwining with the design of the operational programmes. Prepared as a result of the work, the national smart specialisation strategy sets the directions for the entire country, along which research, development and innovation are planned to be supported in the most sustainable way.

Key priorities are identified in the Smart Specialisation strategy are:

- Agricultural and food industry research;
- Energy research, energy efficiency, increased use of renewable energy and of low CO<sub>2</sub>-emission transport;
- Brain research, research related to diseases of public health significance and healthy ageing
- Biotechnology
- Nanotechnology
- Adaptive innovation solutions – mainly ICT technology based
- Accelerating the spread and development of ICT applications

Sectoral priorities:

- Healthy society and wellbeing
- Advanced technologies in the vehicle and other machine industries
- Clean and renewable energies
- Sustainable environment
- Healthy local food
- Agricultural innovation

Horizontal priorities:

- ICT (info-communication technologies) & Services
- Inclusive and sustainable society, viable environment

Additional sectoral strategies specifically focus on:

- Green innovation: National Environmental Technology Innovation Strategy (NETIS);
- Efficient energy: National Energy Strategy 2030; Climate action: National Biodiversity Strategy 2014-2020; National Climate Change Strategy 2014-25,
- Mobility: National Transport Infrastructure Development Strategy, 2014,
- Digital economy: Digital Export Development Strategy, 2016, Digital Education Strategy, 2016
- Smart cities: Smart cities programs and 56/2017. (III. 20.) government decree about the modification of certain decrees in connection with the definition of the concept of “smart city, smart city methodology”.

c) Specific regions are addressed by the Smart Specialisation Strategy.

d) Supranational or transnational objectives in the RDI Strategy include Horizon 2020 objectives:

- Supporting international mobility of researchers,
- Facilitating access to major international infrastructures and networks (especially: ESFR),
- Representing Hungarian interests in EU CSO's organizations, initiatives and forums (national contact points, NPCs, EIT KIC). Strengthening Hungarian participation.

- Encourage participation in the European Innovation Partnership (EIP), Joint Program Initiatives (JPIs.)
- Ensure more effective access to EU programs and initiatives

e) The National RDI Strategy 2013-2020 includes quantitative objectives:

- Increase gross domestic expenditure on R&D to 1.8% by 2020, and to 3% by 2030;
- Raise the business expenditure on R&D to 1.2% by 2020;
- Attract 30 R&D centres of multinational enterprises to locate in Hungary, have 30 research groups achieve “world’s elite” status;
- Create an additional 30 R&D-intensive medium-sized service enterprises;
- Create 300 R&D-intensive and global growth-oriented small enterprises and fund 1 000 innovative SMEs, start-ups by 2020.

f) The National RDI Strategy 2013-2020 (2013);  
The revision of this strategy is under preparation.  
Science Technology and Innovation-policy Strategy 2007-13

*References:*

*EC/OECD STI Policy Survey 2016 for Hungary. Response A2, B1.*

*Ministry for National Economy (2013), “Investment in the future National Research and Development and Innovation Strategy (2013-2020)”, National Innovation Office, p.29, <http://nkfih.gov.hu/policy-and-strategy/national-strategies/national-rdi-strategy/2013-2020>*

*NIH (2014), National Smart Specialisation Strategy, National Innovation Office, p.7, <http://nkfih.gov.hu/policy-and-strategy/national-strategies/s3/national-smart-specialisation>*

**Q.2.7.** What reforms to policy co-ordination regarding STI strategies and plans have had particular impact on public research policy?

Creation of the NKFIH (2015) and the different councils/boards as part of the NKFIH;  
Creation of the NKFIA which merges two previously separate funds, the Hungarian Scientific Research Fund (OTKA) and the former Research and Technological Innovation Fund (KTIA).

*References:*

*National Research, Development and Innovation Office (2015), “The National Research, Development and Innovation Office”, <http://nkfih.gov.hu/the-office/mission> (accessed on 8 February 2017).*

*National Research, Development and Innovation Office (2014), Act LXXVI of 2014 on Scientific Research, Development and Innovation, <http://nkfih.gov.hu/the-office/organization/act-lxxvi-of-2014-nrdi-office> (Accessed on 8 February 2017).*

**Table 4. Questions on inter-agency programming and role of agencies**

Question	Response
<p><b>Q.2.8.</b> Does <b>inter-agency joint programming</b> contribute to the co-ordination of HEI and PRI policy?</p> <p><i>(Inter-agency joint programming refers to formal arrangements that result in joint action by implementing agencies, such as e.g. sectoral funding programmes or other joint policy instrument initiatives between funding agencies.)</i></p>	Inter-agency programming is not in place.
<p><b>Q.2.9.</b> a) Is co-ordination within the <b>mandate of agencies</b>?</p> <p>b) From 2005-16, were any changes made to the mandates of agencies tasked with regards to inter-agency programming? Were new agencies created with the task to coordinate programming during the time period?</p>	<p>a) There are no official rules in effect for inter-agency coordination. There are ad-hoc professional consultations between the institutions concerned.</p> <p>b) No changes made.</p>
<p><b>Q.2.10.</b> What <b>reforms</b> of the institutional context have had impacts on public research policy?</p>	<p>The NKFIH was established in 2015 as a key player that is responsible for policy coordination with regard to policy formulation within the government (based on Act LXXVI of 2014 on Scientific Research, Development and Innovation promulgated on 5/12/2004). The aim of the NKFIH is to "create stable institutional framework for the governmental coordination of the national research, development and innovation ecosystem, provide predictable funding and implements an efficient and transparent use of available reReferences" (National Research, Development and Innovation Office, 2015).</p>
<p>References:</p> <p>National Research, Development and Innovation Office (2015), "The National Research, Development and Innovation Office", <a href="http://nkfi.gov.hu/the-office/mission">http://nkfi.gov.hu/the-office/mission</a> (accessed on 8 February 2017).</p> <p>EC/OECD STI Policy Survey 2016 for Hungary. Response B4.</p>	

### Topic 3: Stakeholders consultation and institutional autonomy

**Table 5. Questions on stakeholder consultation**

Question	Response
<p><b>Q.3.1. a)</b> Do the following stakeholders participate as formal members in <b>Research and Innovation Councils</b>? (i.e. <i>Formal membership as provided by statutes of Council</i>)</p> <ul style="list-style-type: none"> <li>– Private Sector</li> <li>– Civil society (citizens/ NGOs/ foundations)</li> <li>– HEIs/PRIs and/or their associations</li> </ul> <p>b) Do stakeholders participate as formal members in <b>council/governing boards of HEIs</b>? (i.e. <i>Formal membership as provided by statutes of Council</i>)</p> <ul style="list-style-type: none"> <li>– Private Sector</li> <li>– Civil society (citizens/ NGOs/ foundations)</li> </ul>	<p>a) The Council include representatives from the private sector and HEIs/PRIs (see response 2.3). There are also foreign experts present.</p> <p>b) The governing board of HEIs is the Senate; it does not have external stakeholder representation. The government has to approve the appointment of university rectors. HEIs have their own different advisory board, scientific council. This can be different at universities.</p> <p>Besides at national level there are</p> <ul style="list-style-type: none"> <li>• Hungarian Rectors' Conference (MRK)</li> <li>• Higher Education Roundtable: a body dealing mainly with on-going issues, strategic projects and budgetary planning</li> <li>• Higher Education Planning Body (FTT): an expert body making reflections and proposals on development issues</li> <li>• Hungarian Accreditation Committee (MAB): a national body of experts facilitating the control, assurance and evaluation of the scientific quality of education, scientific research and artistic activity at higher education institutions</li> </ul> <p>Consistories were created in 2016 at HEIs. The consistory is an economic advisory board made up of external members (local economic actors) besides the members of HEI (chancellor, rector).</p>
<p><i>References:</i></p> <p><b>Q.3.2. a)</b> Are there <b>online consultation</b> platforms in place to request inputs regarding HEI and PRI policy? b) Which aspects do these online platforms address (e.g. e.g. open data, open science)?</p> <p>c) From 2005-16, were any reforms made to widen inclusion of stakeholders and/or to improve consultations, including online platforms?</p>	<p>a and b) Online platforms are not in place.</p> <p>The Ministry of Human Capacities (EMMI) sends ad-hoc surveys questionnaires to interested entities in different topics. Every kind of relevant topics. Example: 3rd mission activity, technology transfer, dual training.</p> <p>c) The NKFIH was established in 2015.</p>
<p><b>Q.3.3.</b> Which <b>reforms</b> to consultation processes have proven particularly important?</p>	<p>Major emphasis is put on the entrepreneurial discovery process (EDP), based on EU recommendations. This is part of the National Smart Specialisation Strategy, and also in the revision of RDI strategy.</p> <p>Besides the President of the NKFIH holds special forums to the representatives of science and business about the experiences of the evaluations related to the RDI applications to promote the more effective use of RDI reReferences.</p> <p>Consistories were created at HEIs in 2016. The consistory is an economic advisory board made up of external members (local economic actors) besides the members of HEI (chancellor, rector).</p>

**Table 6. Questions on autonomy of universities and PRIs**

Question	Response
<p><b>Q.3.4.</b> Who decides about <b>allocations of institutional block funding</b> for teaching, research and innovation activities at a) HEIs and b) PRIs?  <i>(National/regional level: If HEIs face national constraints on using block funds, i.e. funds cannot be moved between categories such as teaching, research, infrastructure, operational costs, etc. This option also applies if the ministry pre-allocates budgets for universities to cost items, and HEIs are unable to distribute their funds between these.</i>  <i>Institutions themselves: If HEIs are entirely free to use their block grants.)</i></p> <p>References:            Data on institutional autonomy is based on a survey conducted by the European University Association between 2010 and 2011 across 26 European countries. The answers were provided by Secretaries General of national rectors' conferences and can be found in the report by the European University Association (Estermann et al., 2015).            Estermann, T., Nokkala, T., and Steinle, M. (2015). University Autonomy in Europe II The Scorecard. Brussels: European University Association. Retrieved from <a href="http://www.eua.be/Libraries/publications/University_Autonomy_in_Europe_II_-_The_Scorecard.pdf?sfvrsn=2">http://www.eua.be/Libraries/publications/University_Autonomy_in_Europe_II_-_The_Scorecard.pdf?sfvrsn=2</a>, accessed 19.09.2016.            European University Association (2016). University Autonomy in Europe (Webpage). Retrieved from <a href="http://www.university-autonomy.eu/">http://www.university-autonomy.eu/</a>, accessed 19.09.2016.</p>	<p>a) In Hungary, HEIs receive a block grant is divided into broad categories and are unable to move funds between these categories.</p> <p>b) PRIs are free to move public funds across institutions and budget items. The Council of Research Institutes (AKT) of the Hungary Academy of Sciences recommends budgetary support for each institution in the network.</p>
<p><b>Q.3.5.</b> Who decides about <b>recruitment</b> of academic staff at a) HEIs and b) PRIs?  <i>(National/regional level: If recruitment needs to be confirmed by an external national/regional authority; if the number of posts is regulated by an external authority; or if candidates require prior accreditation. This option also applies if there are national/regional laws or guidelines regarding the selection procedure or basic qualifications for senior academic staff.</i>  <i>Institutions themselves: If HEIs are free to hire academic staff. This option also applies to cases where laws or guidelines require the institutions to publish open positions or the composition of the selection committees which are not a constraint on the hiring decision itself.)</i></p>	<p>a) At universities, the appointment of the rector and some senior academic staff members must be confirmed by the Ministry of Human Capacities.</p> <p>b) PRIs themselves decide about recruitment of academic staff.</p> <p>c and d) Salary bands of academic staff at HEIs and PRIs are decided at the national level.</p> <p>e and f) HEIs and PRIs freely decide on promotions of academic staff on the basis of merit.</p>
<p>Who decides about <b>salaries</b> of academic staff at c) HEIs and d) PRIs?  <i>(National/regional level: If salary bands are negotiated with other parties, if national civil servant or public sector status/law applies; or if external authority sets salary bands.</i>  <i>Institutions themselves: If HEIs are free to set salaries, except minimum wage.)</i></p>	
<p>Who decides about <b>reassignments and promotions</b> of academic staff at e) HEIs and f) PRIs?  <i>(National/regional level: If promotions are only possible in case of an open post at a higher level; if a promotion committee whose composition is regulated by law has to approve the promotion; if there are requirements on minimum years of service in academia; if automatic promotions apply after certain years in office, or if there are promotion quotas.</i>  <i>Institutions themselves: If HEIs can promote and reassign staff freely.)</i></p>	

**Q.3.6.** Who decides about the **creation of academic departments** (such as research centres in specific fields) and functional units (e.g. **technology transfer offices**) at a) HEIs and b) PRIs?

*(National/regional level: If there are national guidelines or laws on the competencies, names, or governing bodies of internal structures, such as departments or if prior accreditation is required for the opening, closure, restructuring of departments, faculties, technology offices, etc.*

*Institutions themselves: If HEIs are free to determine internal structures, including the opening, closure, restructuring of departments, faculties, technology offices, etc.)*

Who decides about the creation of legal entities (e.g. **spin-offs**) and **industry partnerships** at c) HEIs and d) PRIs?

*(National/regional level: If there are restrictions on legal entities, including opening, closure, and restructuring thereof; if restrictions apply on profit and scope of activity of non-profit organisations, for-profit spin-offs, joint R&D, etc.*

*Institutions themselves: If HEIs are free to create non-profit organisations, for-profit spin-offs, joint R&D, etc.)*

**Q.3.7.** Who earns what **share of revenues** stemming from IP (patents, trademarks, design rights, etc.) created from publicly funded research at a) HEIs and b) PRIs?

- HEI
- Research unit / laboratory within HEI
- Researchers

c) From 2005-16, were any reforms introduced that affected the institutional autonomy of HEIs and PRIs?

a to d) Universities and PRIs are free to determine their internal academic structures. They can create both for-profit and not-for-profit entities.

PRIs are free to set their internal structures with guidelines from the Hungarian Academy of Sciences Secretariat; the founding of new research centre from existing or new research units may be initiated by various actors (including research teams) but must be approved by the president of the Hungarian Academy of Sciences. The Hungarian Academy of Sciences is free to establish companies.

a and b) Institutions set their own revenue schemes.

The Innovation Act (Act CXXXIV of 2004) requires that publicly funded research institutions have to establish rules for Intellectual Property Rights management. These must regulate the commercialisation of inventions, remuneration of researchers, guidelines for license agreements and a framework for the establishment of spin-off companies.

c) The Act CCIV of 2011 (XII. 30) on National Higher Education introduced Research Centres at the HAS. Research Centres are composed of several research institutes; their establishment aimed to reduce the fragmentation of research at the HAS while preserving the autonomy of research institutes.

A new system of HEI funding focused on performance is also in development (EC/OECD STI Policy Survey 2016 for Hungary, response C6).

In 2014 chancellors were appointed at universities. The chancellors responsible for the economic, financial (including the controlling), accounting, labour affairs of the institution, the property management of the institution.

References:

National Research, Development and Innovation Office (2015), "Exploitation of IPR", <http://nkfih.gov.hu/policy-and-strategy/archive/intellectual-property> (accessed on 6 February 2017).

**Q.3.8.** Which **reforms** to institutional autonomy have been important to enhance the impacts of public research?

The network of PRIs has significantly been restructured in 2011. The objective of this move was the more effective operation of PRIs.

Besides, the National Agrari-cultural Research and Innovation Centre (NAIK) was established in 2014 by merging 12 formerly independent research institutes linked to the agri-food industry.