Chapter 5.20

RMA in Belarus: Not Yet a Full-Fledged Profession But an Important Part of R&D Activities

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Abstract

The chapter presents an overview of the state of Research Management and Administration (RMA) in Belarus. The country enjoys sound traditions in basic and applied research in some areas relevant to its economy, particularly in science, technology, engineering, and mathematics (STEM). The current science, technology, and innovation (STI) policy is focussed on the commercialisation of domestic research and development (R&D) results and the effectiveness of the national STI system.

The majority of competitive budget funds are allocated within different types of programmes that support R&D and innovation. Formal RMA positions exist at the programme level and are based in research centres, universities and companies being grounded on a solid legal basis. Roughly 150–250 people within 50 legal entities are directly involved in RMA. At the project level, the RMA activities are either combined with scientific supervision or informally distributed within the project team.

A possible increase in overall R&D expenditures in the country, the eventual enlargement of the scope of publicly supported STI projects and their collaborative

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nature, as well as their internationalisation and widening of international cooperation may significantly increase the demand for RMA professionals.

Keywords: Profession; Belarus; RMA; Research Management and Administration; State Committee on Science and Technology (SCST); lead executing organisations (LEOs)

The Research Ecosystem in Belarus

Belarus gained independence in 1991 after the collapse of the Soviet Union. Today, it is an industrialised country with an open, export-oriented economy. Recent independent international assessments highlight that the past couple of decades were marked by a relatively high economic growth and an expanding ICT services sector, fuelled in part by reforms that increased openness and macroeconomic stability. The private sector, especially in regard to innovation, is hamstrung by the dominance of state-owned firms, burdensome regulations and ambitious but, at the same time, inefficient support mechanisms. Belarus has a highly educated population and a skilled workforce, a strong tradition in fundamental and applied research in several important fields, as well as a relatively diversified economy with a strong international position in ICT and pockets of excellence in manufacturing (United Nations Economic Commission for Europe, 2021). Such assessment is also corroborated by other international benchmarks: Belarus takes 53rd position in Human Development Index (2020), 32nd – in the ICT Development Index (2017), 47th – in the Competitive Industrial Performance Index (2020), etc. In the Global Innovation Index, Belarus occupies 62nd place (2021); although it performs below the European average in all pillars, some notable achievements were recorded in the pillars 'Knowledge and Technology Outputs' (e.g. ICT services exports, ISO 9001 quality certificates) and 'Human Capital and Research' (tertiary enrolment, graduates in science and engineering).

The national science and technology policy, on the one hand, promotes research as a systemic basis for the generation of knowledge, the development of advanced technologies, the introduction of innovative models of economic growth, and also as an integral component of ensuring sovereignty and national security. On the other hand, the country's priorities reflect the global scientific trends, boost the competitiveness of the national economy and its businesses, and satisfy the interests of the society and the state. By doing that, Belarus mainly relies not only on domestic resources, competencies, and scientific reserves, but also on international cooperation (NASB, 2018). For instance, in 2021–2025, the key task of the State Programme of Innovative Development of Belarus is to promote the priority development of technologies, goods, and services corresponding to Industry 4.0, as well as export-oriented technologies, goods, and services, in particular, through priority financial support.

The most important decisions in science, technology, and innovation (STI) policy are taken at the level of the Government or the President of the country while their implementation is delegated to the State Committee on Science and Technology (SCST).[1] SCST is ranked as a ministry for S&T and, in performing its functions, it closely cooperates with the Ministry of Economy, Ministry of Education, Ministry of

[1] https://www.gknt.gov.by/, Belarus public body that coordinates implementation of the state STI policy.

Industry and other line ministries, as well as with the National Academy of Sciences of Belarus (NASB).[2] The role of NASB is quite unique: apart from being the largest and most important public research organisation of umbrella type in Belarus, NASB also coordinates basic and applied scientific research carried out by all public scientific organisations in the country regardless of their location and subordination.

The draft public R&D budget is designed and monitored by SCST on the basis of proposals by the NASB and the line ministries. For more than a decade, total R&D expenditure in Belarus has stayed at the level of 0.5–0.7% GDP and, despite the intentions of the government to raise them, there are no signs at the time of writing for an increase in the years to come. In 2019, public spending accounted for 44% of the total R&D expenditure and the rest was contributed by the business sector.

In contrast with most of the European countries, universities are not major R&D players in Belarus: in 2019, the share of higher education institutions (HEIs) in the total domestic R&D expenditures and in R&D was just slightly above 10%. Therefore, Research Management and Administration (RMA) in Belarus cannot be regarded as an exclusive prerogative of the universities. Although RMA is present in some leading HEIs, the major role in this process belongs to NASB, the sectoral research institutions and the business entities (see below).

The crucial point for understanding the scope of RMA activities in Belarus is the fact that the largest share of gross domestic expenditure on research and development (GERD) is distributed within the national STI programmes. Currently, there are two main types of programmes that support R&D: one is the State Scientific Research Programmes[3] (SSRP) which funds basic research in selected scientific areas and to some extent the applied research, while the second is the Science and Technology Programmes[4] (STP) which mainly supports experimental technological development for further commercialisation or meeting the societal needs. The STP is organised and implemented at three levels: national (the so-called State Science and Technology Programmes or SSTP,[5] which are the most relevant for the study), sectoral (Branch Science and Technology Programmes or BSTP[6]), and regional (Regional Science and Technology Programmes or RSTP[7]). SSTP are organised in accordance with the national STI priorities, so they are thematic by nature and annually fund dozens if not hundreds of projects selected on a competitive basis.

For basic research, there are also several schemes that fund single projects, such as, among others, projects implemented by young researchers or in collaboration with foreign partners. All of them are operated by the Belarusian Republican Foundation for Fundamental Research.[8] Similarly, there are separate funding organisations, programmes, and financial schemes that support single commercialisation and

[2] https://nasb.gov.by/, the largest R&D centre in Belarus that unites over 100 legal entities, including research institutions and production companies.
[3] https://www.gknt.gov.by/deyatelnost/gosudarstvennaya-ekspertiza/gosudarstvennye_programmy_nauchnykh_issledovaniy/
[4] https://www.gknt.gov.by/deyatelnost/nauchno-tekhnicheskaya-politika/nauchno_tekhnicheskie_programmy_nauchnoe_obespechenie_gosudarstvennykh_programm/
[5] https://www.gknt.gov.by/deyatelnost/gosudarstvennye-nauchno-tekhnicheskie-programmy.php
[6] https://www.gknt.gov.by/deyatelnost/otraslevye-nauchno-tekhnicheskie-programmy.php
[7] https://www.gknt.gov.by/deyatelnost/regionalnye-nauchno-tekhnicheskie-programmy.php
[8] https://fond.bas-net.by/ is the Belarus national public research funder for individual basic research projects.

technological modernisation projects, including those which are based on the results of SSRP and STP.

SCST, which, among other tasks, is responsible for promoting international STI cooperation, provides funding for Belarusian partners in bilateral projects via the joint calls for proposals that it runs in collaboration with counterpart ministries and agencies of foreign countries. In contrast to the common practice to support international mobility, Belarus mostly provides funding for R&D activities.

The core of the national research ecosystem comprises 25.6 thousand people engaged in R&D in 445 legal entities. 90 of the latter belong to the public sector, 71 – to HEIs and 283 – to the commercial sector. In 2021, the total number of researchers was 16,300, and the number of PhD students was 4,700 (National Statistical Committee of the Republic of Belarus, 2022).

Current State and Scope of RMA

Studies on RMA in Belarus are not publicly available, at least to the best of the author's knowledge. Therefore, this chapter cannot rely on desk research and presents just some observations of the author supported by several informal interviews with people involved in RMA at NASB and local universities.

In Belarus, formal (permanent) RMA positions exist only at the level of national STI programmes while at lower levels the notion of RMA as such is not used. The activities that conventionally fall under the definition of RMA are usually referred to as 'academic and organisational support for research programmes'. Presenting RMA as a scientific activity (which is not by its nature) can be explained by the fact that such a description facilitates the funding of such jobs from the budget of programmes supporting STI. In addition to that one should not ignore the fact that within the scientific community RMA positions do not command the same respect as research positions.

Given these specificities, one could assume that by analysing the STI programmes in terms of their setting, management, and coordination, one can approximately assess the scope of RMA.

In 2016–2020, the latest closed programme cycle, 12 SSRP and 38 STP were completed of which 39 came to an end in 2020 (Table 5.20.1).

For each programme, a 'lead state client' (LSC) and a 'lead executing organisation' (LEO) are defined as the first step of the project. While the role of a LSC, which is usually held by a line ministry, regional authority or NASB, is more or less similar to the one of a programme owner, the category of 'LEO' is quite specific and could be explained by differences in the overall organisation of STI management in Belarus compared to some other countries. In most EU member states, the design and implementation of the state STI policy is usually shared between a ministry that is a policy-maker and an agency that serves the needs of this ministry (or several ministries) in terms of policy implementation (including the management of the programmes the ministry owns). In Belarus, these two functions are not divided and the agencies as interim bodies between the programme owners and the R&D players are missing. Therefore, the RMA at the programme level is entrusted by LSC to one of the R&D players which, in addition to implementing R&D projects within the programme, takes over the administrative responsibilities.

Often there are more than one LSC per programme. If a programme includes sub-programmes, the LEO is nominated at the sub-programme level. For each sub-programme, there can be more than one LEO. In some cases, one legal entity performs LEO function for more than one (sub)programme.

Table 5.20.1. Number of Public Programmes Supporting R&D and Projects Within Them.

Programme Type	Number of Programmes		Number of Projects Within a Programme	
	2020	2016–2020	2020	2016–2020
SSRP	12	12	1,276	n/a[a]
STP, of which	27	38	544	1,151
SSTP	*16*	*17*	*410*	*891*
BSTP	*10*	*17*	*133*	*256*
RSTP	*1*	*4*	*1*	*4*
SSRP + STP	**39**	**50**	**1,820**	**appr. 4,400**

Source: SCST and NASB (2021) and the author's estimations.

[a]Data on the total number of projects implemented within SSRP in 2016–2020 are not available; however, the annual average for the period is 1,310 projects.

The legal basis for RMA in SSRP and STP is well elaborated. For instance, in the case of STP, in line with the Rules for Procedure for the Development and Implementation of STP (Council of Ministers, 2005), RMA is carried out by LEO in the form of a project that is part of the programme. The aim of the project is to ensure academic and organisational support for the programme implementation that includes the following activities:

- carrying out technical and economic analysis of the implementation of projects ('tasks') within the programme;
- summarising and drafting of documents and reports related to the planning, implementation, and adoption of the results of the projects;
- developing consolidated reports on the implementation of a programme;
- organising S&T conferences and exhibitions (based on an agreement with SCST); and
- promoting the results of the programme implementation through publications and other dissemination activities.

Up to 3% of the state budget contribution to the programme budget can be provided to finance RMA activities.

The tasks and functions of LEO have been further detailed in the Regulations on the Lead Executing Organisation of the State (Regional, Branch) STP (SCST, 2005). In particular, a LEO:

- takes part in the programme design;
- organises a call for proposals within the programme jointly with the LSC;
- participates in the ranking of submissions and selecting winners;
- concludes contracts for implementing the projects within the programme;
- submits to the LSC information on the amount of funding allocated for the implementation of each project of the programme;
- prepares proposals on the scope of work within the programme and the annual request for funding from the state budget for the next financial (budget) year;
- coordinates and controls the activities under approved projects;

- develops proposals for introducing changes and amendments to the programme;
- takes part in the assessment of the projects' results; and
- performs dissemination activities, etc.

In line with the contract with the LSC, the LEO is responsible for:

- ensuring that the goals of the programme are fully achieved;
- ensuring the complete and timely implementation of the projects in accordance with the contracts concluded with the executing organisations, and the project commitments under extrabudgetary funding in the case when such exists;
- targeted and efficient use of budget funds allocated for the implementation of the programme;
- ensuring compliance of the resulting S&T products developed within the projects with the approved technical specifications; and
- timely transfer of the results of completed projects to the LSC and relevant manufacturing companies for their uptake in production, etc.

The SCST Regulations (SCST, 2005) state that the role of the LEO can be delegated to a research, development, experimental, and technological or production organisation subordinated to the programme LSC that automatically limits the circle of potential LEOs to public research organisations, including universities, and to the state-owned companies. Exemptions are possible for R&D players and HEIs that are not subordinated to LSC but are competent in the respective programme area. In principle, this provides room for outsourcing RMA to the private sector and leaves a chance for developing appropriate services on a professional basis. However, in reality, such an exemption is rarely applied, and on the contrary, there is a strong interdependence at the LSC – LEO level.

In the start of the 2021–2025 programme cycle, 36 unique organisations implemented RMA in SSRP and 30 in SSTP. Due to the nature of the programmes, in the first case almost 80% of the LEOs are public non-profit research organisations and universities, while in SSTP the picture is the opposite: in the majority of cases, RMA is actually done by the business sector (Table 5.20.2). The 'Other' category includes a variety of legal entities starting from big production companies to the so-called 'research & production centres' within NASB and sectoral research institutes that have a legal status of 'republican unitary enterprise'[9] and perform some business (for-profit) activities.

The majority of LEOs implement RMA for just one (sub)programme. At the same time, 17 LEOs cover simultaneously SSRP and SSTP. For instance, the Institute of Microbiology of the NASB is currently nominated as LEO for SSRP 'Biotechnogies-2' and SSTP 'Prospective chemical and biotechnologies' (sub-programme 'Industrial biotechnologies-2025'). Since 2006, a special unit at the Institute of Microbiology, with staff of 3 persons, is tasked with RMA within STI programmes in non-medical biotechnologies. The number and the types of programmes may differ from one programme period to another (Institute of Microbiology, n.d.). Similarly, at least 50 research organisations and companies in Belarus have been experiencing RMA at the programme level in 2021–2025. The personnel directly involved in this activity is estimated at about 150–250 people.

[9] Belarus civil law distinguishes three types of unitary enterprises depending on the owners of their property: republican, communal and private forms of ownership.

Table 5.20.2. Legal Status and Number of Unique Organisations Performing RMA at the Programme Level in 2021–2025.

Programme Type	Number of Unique LEOs		
	Public Research Organisations	Universities	Other
SSRP	21	7	8
SSTP	8	3	19

Source: Author's compilation.

At the project level, the RMA activities are either combined with scientific supervision or informally distributed within the team that implements the project. However, according to the interviewees, RMA is associated mainly with EU-funded projects. As for the national projects, researchers are not used to treating their management as a significant activity that could be detached from the overall process of project implementation into a separate type of activity. Most probably, this is due to the limited (on average) scope of the national projects in terms of budget and number of partners. This refers both to the projects that are part of the national STI programmes and to the single basic research projects funded from the national budget by the Belarusian Republican Foundation for Fundamental Research and also to the bilateral R&D projects promoted by SCST.

In large research centres, e.g. the leading universities actively involved in R&D on the national and international level, the project teams often partially delegate RMA to the centralised research department that is part of the university administration. One of the main tasks of such departments is the organisation and coordination of R&D carried out within the university on a contractual basis. In particular, they provide assistance with arranging contracts and registering the contracted R&D projects in the State Register of R&D.

According to the available information, neither the staff of centralised research departments in universities nor the LEO's staff participate in international associations of RMA professionals. This provides a good chance for Belarus to open up a new area of international collaboration and the leading research universities seem to be those who should be interested more than the others.

Is There a Future for RMA as a Profession in Belarus?

By definition, a profession is a group of individuals who adhere to ethical standards and who hold themselves out as, and are accepted by the public as possessing special knowledge and skills in a widely recognised body of learning derived from research, education, and training at a high level, and who are prepared to apply this knowledge and exercise these skills in the interest of others (Australian Council of Professions, n.d.).

From the point of view of society, a profession is a system of professional tasks, forms, and types of professional activity of people that can meet the society's needs in achieving a significant result, producing a product or a service. From the point of view of a particular individual, a profession is an activity that is the source of his/her existence and a means of personal self-realisation (CyberPedia, n.d.).

Starting from the above characterisation, one can conclude that some features of an emerging RMA profession in Belarus can be found to some extent. There is a demand for these professionals, although with some national peculiarities, and there is

a community of specialists engaged in RMA and remunerated for performing such an activity. The missing features are the recognised name of the profession and the lack of formal training. In the LEOs, the RMA staff most frequently switch to management from research and learning-by-doing is the way to acquire the respective skills.

Since 2002, Belarus has been taking part in the EU Framework Programmes for Research and Innovation with some 60 projects in each of the latest two of them, FP7 and Horizon2020. Thus, the principles of multilateral communication and EU RMA practices have been gaining some ground in Belarus and enriching the national routines. However, these experiences so far have been relatively limited compared to the neighbouring Poland and Baltic states, EU member states, and the associated Eastern European countries like Georgia and Moldova.

A possible overall increase in the R&D expenditures in the country, the eventual enlargement of the scope of publicly supported STI projects and their collaborative nature, as well as their internationalisation and widening of international cooperation may significantly increase the demand for RMA professionals.

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