"Development Strategy of the Riga Aeronautical Institute for 2021–2027"

Rīga, 2021

1. Introduction

Riga Aeronautical Institute (hereinafter – RAI) Development Strategy for 2021–2027 (hereinafter – Strategy 2021)

The RAI Development Strategy 2021 is a medium-term planning document that defines the continuity of RAI's development for the next seven years. It outlines the development goals, tasks, and performance indicators to be achieved as a result of the strategy's implementation.

RAI Strategy 2021 has been developed based on the following policy documents:

National Development Plan for 2021–2027;

Education Development Guidelines for 2021–2027;

Science, Technology Development and Innovation Guidelines for 2021–2027;

Transport Development Guidelines for 2021–2027;

The National Development Plan (NAP2027) defines the state's major investments in Latvia's development and in improving the quality of life of its people. It includes priorities, goals, investment directions, reforms, and policy changes. These directions also serve as the foundation for the Institute's development plan, which adapts the national priorities to the needs of the Institute — balancing investments and creating added value in academic and research activities, which in turn promote both institutional growth and Latvia's sustainable development.

The Education Development Guidelines 2021–2027 emphasize that education is essential not only for national but also for institutional development. The broader aim of the Institute is to prepare individuals for life and professional activity by providing knowledge and skills acquisition, civic engagement, and competitive professional competence. The Institute's development goals are closely aligned with the country's strategic directions – economic growth, strengthening social well-being, building a democratic and civically active society, and ensuring the sustainability of Latvia's cultural and historical identity and language.

The overarching goal of the Institute's development plan is to provide high-quality education, research, and professional growth opportunities for all students and researchers, to foster their potential and ability to adapt to changes in science, society, and the economy. At the same time, it supports the NAP2027 vision of Latvia as a knowledge-based society with modern, relevant education and sustainable development.

The Science, Technology Development and Innovation Guidelines 2021–2027 (ZTAIP2027) set the medium-term policy principles, goals, priorities, action areas, and tasks for science and technology development in Latvia. They support the achievement of the strategic goals of the National Development Plan 2027 (NAP2027). The Institute's strategy is closely linked to ZTAIP2027, ensuring the Institute's contribution to priority areas: promoting research excellence, developing innovation, knowledge and technology transfer, strengthening R&D human capital, as well as improving the quality and accessibility of education.

The Transport Development Guidelines 2021–2027 (TAP2027) define the country's

medium-term transport policy goals, priorities, and action directions. These focus on ensuring sustainable mobility, economic growth, business environment development, and transport accessibility. The Institute's strategy is closely linked to TAP2027 by contributing to the development of necessary knowledge and technologies in the field of transport and mobility, strengthening research and innovation, and improving the quality of education and professional competence.

In light of this, RAI's vision is:

to be a recognized professional higher education institution in the Baltic region which prepares specialists in the transport sector, particularly in the field of aviation, and engages in applied research.

RAI's mission is to prepare highly qualified specialists for modern and rapidly developing sectors of the economy, primarily in aviation and transportation services.

In addition to their diploma, RAI aviation graduates receive a professional qualification license or certificate, which grants them the right to begin working immediately after graduation in relevant industry companies.

The right to train students for obtaining such certification is granted to RAI through a license issued by the European Union Aviation Safety Agency (EASA).

RAI is regularly audited by this agency, which serves as confirmation of the quality of education provided and its compliance with European Union standards.

This interconnection ensures the Institute's contribution to the development of the national transport sector, while simultaneously strengthening academic and research capacity, innovation potential, and sustainable educational opportunities.

2. Description of the Current Situation

RAI is a professional higher education institution with over 30 years of experience in higher education and the training of specialists for the transport sector. RAI implements professional bachelor's and professional master's degree programs, and also engages in applied research.

The teaching staff consists of elected academic personnel and contract-based guest lecturers, including highly qualified specialists from the Latvian transport sector and lecturers from other higher education institutions, who teach both theoretical foundation courses and specialized professional courses within the sector.

Research activities are organized within the Riga Aeronautical Institute as a scientific institution, registered in the Register of Scientific Institutions of the Republic of Latvia under registration number 472 007.

RAI's research and innovation activities are not fundamental, but applied, focusing on solving specific practical problems in the fields of transport and engineering sciences. These activities are closely linked to the National Development Plan, the Education, Science, and

Transport Development Policy, and the objectives for 2027, which include the creation of a stable human capital base for research and development, the promotion of innovation capacity, and technological advancement within the national economy.

At the international level, RAI strengthens its competitiveness through cooperation across various industries and specializations, developing new innovative approaches in both study programs and research, and applying these in the development of transport sector solutions.

The sub-goal of RAI's strategy in the development of science and research is to increase the institute's competitiveness by establishing a stable base of research infrastructure and human capital, strengthening cooperation between science and the business sector, and developing the implementation of research results in entrepreneurship.

The Riga Aeronautical Institute (RAI) offers professional bachelor's and master's study programs across several study directions, tailored to the requirements of the transport and engineering sectors:

In the field of information technologies, computer engineering, electronics, and telecommunications, RAI offers one bachelor's program:

"Maintenance of Electronic Equipment."

In the direction of mechanics, metalworking, thermal power engineering, and mechanical engineering RAI offers the following bachelor's programs – "Aircraft Technical Maintenance" and "Air Transport Systems Management and Operation" – as well as one master's program – "Transport Systems Management."

In the field of transport services, the Institute provides three bachelor's programs

"Air Traffic Management", "Logistics of International Transport," and "International Transport Business Management" – along with one master's program "International Transport Business Administration".

RAI's study programs are accredited for six years, ensuring the training of qualified specialists by combining academic knowledge with practical skills that meet the requirements of both the Latvian and international transport industries.

Throughout its history, RAI has trained over 50,000 specialists, including radio technicians, air traffic controllers, transport company managers, transport economists and managers, pilots, and mechanics.

Currently, the Institute has more than 300 students from various countries and diverse cultural and linguistic backgrounds. More than half of them are international students.

RAI graduates are employed across Europe, Asia, Africa, North America, and South America.

RAI is actively developing scientific research focused on practical applications in aviation, transport, and engineering sciences.

The Institute integrates research into the educational process, allowing students to

participate in research groups and international conferences, helping them to develop skills and apply modern knowledge in their professional practice.

3. RAI Governance Structure

In accordance with the Law on Higher Education Institutions, the RAI Constitution, and the attached RAI governance structure diagram, the main representative and management bodies of RAI are:

Convention – Board,

Senate,

Rector.

Vice-Rector,

Faculty Dean,

Study Program Directors.

The Convention – Board (hereinafter referred to as the Convention) is the highest collegial representative and management body of RAI and the decision-making institution in academic and scientific matters. The Convention consists of 11 representatives.

The Senate is a collegial management and decision-making institution of the staff that approves the procedures and regulations governing all areas of RAI's activities. The term of office of the Senate is four years. The Senate consists of 10 senators.

The Rector is the highest official of RAI, who exercises general administrative management and represents the university without special authorization. The Rector is elected by the Convention in a secret ballot for five years and may serve no more than two consecutive terms.

RAI has at least one Vice-Rector. The number of Vice-Rectors and their main duties are determined by the Convention. The Vice-Rector carries out the operational management of study and scientific research work, coordinates and organizes RAI's cooperation and development activities, and performs other tasks assigned by the Convention, Senate, and Rector.

The Faculty Dean is elected by the Senate. The Dean leads the academic, research, and administrative activities of the faculty, ensures the quality of studies and research, and coordinates the work of personnel and the use of resources.

The Study Program Director leads and coordinates the academic and research activities of a specific study program and ensures the quality of the study process and courses.

The management and governance of RAI are effectively carried out collegially through cooperation among the aforementioned institutions, as well as by consulting the student self-government and academic staff.

4. SWOT Analysis

The SWOT analysis in the RAI Development Strategy 2021–2027 allows for a systematic assessment of the institute's internal strengths and weaknesses, as well as external opportunities and threats.

It helps to identify areas where RAI can strengthen its competitiveness, promote innovation, and develop its academic and research activities.

The results of the analysis provide a solid foundation for the development of strategic plans, the efficient allocation of resources, and the achievement of long-term goals.

This enables RAI to adapt to industry requirements and maintain a leading position in aviation and transport education and research.

Strengths	**Weaknesses**
• Qualified academic and research staff with international experience; • Integrated research and study process; • A well-developed practical component of the study programs, providing students with opportunities to obtain licenses or certificates to begin working in EU-regulated fields; • Established international cooperation opportunities within the framework of Erasmus+ and other programs; • Good collaboration with employer organizations, including employer involvement in the development and improvement of study programs, as well as participation in examination and thesis defense committees; • University infrastructure – buildings, land, and technical equipment are owned by the university. A research infrastructure has been developed; • Due to the small number of students, there are extensive opportunities for an individual approach in study groups; • A historically preserved and recognizable specific niche of the university.	• No state budget funding, limited resources for implementing new research projects and modernizing equipment; • Insufficient exchange of students and academic staff; • Incomplete student involvement in certain research areas; • Insufficient visibility in international research networks; • Inadequate publicity of scientific research results, especially in internationally cited publications; • Limited opportunities to commercialize research results.
Oportunities	**Threads**
• The university has extensive experience and wide-ranging opportunities to implement qualification enhancement courses, retraining, and qualification maintenance courses, attracting additional funding; • Increase the number of international students; • Further develop cooperation with foreign universities and organizations in the fields of aviation and transport; • Develop partnerships with industry and international research institutions; • Encourage academic staff to be more actively involved in expert councils, promotion (doctoral) committees, and other collegial bodies; • Growing demand for new specialists as the transport sector develops; • Opportunities for funding from EU and international funds for research and innovation projects	• Demographic changes and a decline in the number of students, which affect the capacity for studies and research; • High school graduates' choices, including opportunities to study in state-funded positions or at foreign universities; • Due to the continued decrease in student numbers, there is a risk of a reduction in overall funding volume; • Insufficient level of secondary education among high school graduates; • Rapid technological changes and decreased demand for collaboration from industry, which may lead to the obsolescence of existing research; • Geopolitical and regulatory changes, as well as unpredictable external influencing factors.

RAI's strengths include qualified academic and research staff with international experience, integrated research with the study process, practice-oriented study programs, good cooperation with employers, well-developed infrastructure, and a recognizable institutional niche.
At the same time, weaknesses arise from limited funding, insufficient student and faculty exchange, incomplete student involvement in research, and limited visibility in international networks.
Opportunities for the institute include the development of qualification enhancement courses, attracting international students, expanding cooperation with foreign universities and industry, as well as accessing funding opportunities from EU and international research and innovation funds.
On the other hand, threats include demographic changes, a decline in student numbers, insufficient quality of secondary education, rapid technological changes, reduced demand from industry, and geopolitical or regulatory changes.
Based on the SWOT analysis, the continuity of RAI's development, and the national-level planning documents mentioned in Section 1, the goal of the RAI Strategy 2021 and the necessary tasks for its achievement during the 2021–2027 period have been defined.
Goal:
To strengthen RAI as an internationally recognized university of applied sciences with high academic and research capacity, providing high-quality, practice-oriented education and innovative, industry-adapted research that promotes the development of students, academic and research staff, and ensures sustainable cooperation with industry and international partners.

1. Promotion of internationalization: attracting international students; strengthening cooperation with foreign universities (conferences, projects, student exchange, etc.); enhancing collaboration with foreign partners in scientific research; activating cooperation with the European Union Aviation Safety Agency; participation in the Erasmus program;
2. Strengthening scientific research activities: participation in international competitions and research grant acquisition processes; implementation of applied commercial projects; participation in scientific conferences and other events; increasing student involvement in research activities;
3. Development of cooperation with industry and international research institutions to ensure the relevance of research, attract funding, and commercialize practical results: identifying and engaging new cooperation partners, strengthening existing cooperation networks, ensuring the relevance of research topics, attracting funding for research, and commercializing practical outcomes;
4. Enhancing cooperation with employers: involving them in internship implementation, improvement of study programs and courses, and participation in the coordination of bachelor's and master's thesis development;
5. Faculty renewal policy: hiring staff with good foreign language skills, especially English; increasing the involvement of professionals currently working in the relevant economic sector; regularly updating English language courses for academic and administrative staff;
6. Improving students' knowledge at the secondary education level during the first year of studies;

7. Expanding and updating the library collection with the latest publications, especially in English.

5. Key Indicators to be Achieved as a Result of Strategy Implementation

The goal of implementing the strategy is to ensure the modernization of RAI's study programs, increase international attractiveness, and strengthen the quality of academic staff's research activities. The key performance indicators make it possible to systematically assess progress in the development of study processes, student recruitment, faculty competencies, and the integration of research results into the teaching process.

Additionally, successful audits conducted by the European Union Aviation Safety Agency confirm the institute's adherence to high quality and safety standards.

Indicators	**2021.**	**2023.**	**2027.**
Number of modernized study courses	5	10	20
Proportion of international students out of the total number of students, %	30	32	35
Proportion of academic staff working in the relevant industry, %	20	25	30
Consolidated indicators of research and scientific activity quality (Research quality, Impact on the development of the scientific field, Economic impact of research, Social impact of research, Research environment and infrastructure, Development potential) per year per elected academic staff member at RAI	0,7	0,8	1,0
Audits conducted by the European Union Aviation Safety Agency with positive results	+	+	+

Based on the results of the strategy implementation, clear progress is achieved in the modernization of study courses, the attraction of international students, and the professional development of academic staff.

The consolidated indicators of research and scientific activity quality demonstrate a stable level of scientific performance, while successful audits by the European Union Aviation Safety Agency confirm the Riga Aeronautical Institute's compliance with international standards and strengthen the institute's reputation as a high-quality, innovation-driven scientific institution (university).