

## Vidzeme University of Applied Sciences Development Strategy 2023–2028

### Description of the current situation

#### Abbreviations used:

CSB	Central Statistical Bureau
EU	European Union
ESG	Environmental, social and corporate governance aspects
ME	Ministry of Economics
E3UDRES2	European University: Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions
HESPI	Institute of Social, Economic and Humanities Research
IF	Faculty of Engineering
ICT	Information and Communication Technologies
CP	Credit point
LIAA	Investment and Development Agency of Latvia
NAP 2027	National Development Plan 2021-2027
RTA	Rēzekne Academy of Technologies
SSII	Sociotechnical Systems Engineering Institute
SP	Study Programme
SZF	Faculty of Social Sciences
VUAS	Vidzeme University of Applied Sciences
VIB	Valmiera Integrated Library
VNP	Municipality of Valmiera region
VPR	Vidzeme Planning region
STDIG	Guidelines for Science, Technology Development and Innovation 2021-2027
5V+	Regional partnership of Vidzeme University of Applied Sciences, Municipality of Valmiera region, Vidzeme Planning region, Valmiera Development Agency, Valmiera Business Incubator

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## 1. Description of the organisation

The tradition of education in Vidzeme has long roots<sup>1</sup>, but in its current form, VUAS was founded in 1996 when six municipalities (at that time district councils) decided on the need to establish a higher education institution in Vidzeme. In 2001 VUAS was granted the status of a state higher education institution and in 2002 it was accredited for an indefinite period. Legal status of VUAS – derived public entity. The development of the University has always been linked to national and international development processes. In the first years of its operation, VUAS offered social sciences studies, which met the demand of the time for young specialists to work in the public and private sectors and which could contribute to Latvia's rapid integration into the political, economic and security structures of the West. With the rapid transformation of the economy, VUAS followed the changes in labour market demand and established new study programmes in ICT and engineering – college, bachelor and master levels in the field of construction. Sociotechnical Systems Engineering Institute (SSII) was founded in 2006 In 2011, VUAS started the implementation of the first doctoral study programme "Sociotechnical Systems Modelling" together with Rēzekne Academy of Technologies. Institute of Social, Economic and Humanities Research (HESPI) was founded in 2013. In 2014-2016, VUAS significant structural reforms were carried out, which resulted in the establishment of two faculties: Faculty of Engineering and Faculty of Social Sciences. Knowledge and Technology Centre was established to develop lifelong learning, promote VUAS involvement in innovation, and develop cooperation with industry partners. In 2012-2014, the building of VUAS in Valmiera, Tērbatas iela 10 was significantly reconstructed and expanded to create a base for engineering studies and research. In 2015, VUAS obtained the status of a scientific institution, and has been purposefully activating its scientific activities both nationally and internationally. In 2016, both scientific institutes were transformed from agencies into VUAS departments. Since 2017, VUAS receives science-based funding. In 2019, VUAS participated in the International Evaluation of Scientific Institutions, where it was evaluated as a strong national player with some international recognition, receiving rating "good" in all criteria and an overall rating of three points.

In 2022, the Ministry of Education and Science has defined a typology and initial strategic areas of specialisation for state-founded higher education institutions in Latvia. According to the typology, VUAS is a university of applied sciences, and its strategic areas of specialisation are the following:

- engineering and technology (computing);
- social sciences (information and communication sciences, business and administration, individual services).

The current regulatory framework provides that strategic specialisation is the basis for the strategic development planning of a higher education institution, defining the primary fields of science and fields of study to be developed, but this does not exclude the possibility of developing other fields of study.

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<sup>1</sup> The development of the educational tradition in Vidzeme is inextricably linked with the development of the Vidzeme Brethren movement in the 18th-19th centuries, and with the activity of the Brethren teachers' seminary in Valmiera (founded in 1738). Due to the activity of the Brethren congregations, the number of educated residents in Vidzeme in the 18th and 19th centuries grew exponentially. A number of historical researchers describe this period as an educational "explosion" and a stage in the development of Latvia in which Latvians first became aware of themselves as a united nation. This article by Jurgis Klotins is a rich source of information on the movement of the Brethren congregations: <https://araisi.com/lv/2020/11/13/ieskats-lekcija-bralu-draudzes-kustibas-pienesums-latvijas-muzikas-attistiba/>

According to the VUAS Constitution (approved in 2022), the mission of VUAS is to build the future society in Vidzeme, Latvia and Europe by participating in regional, national and international networks of knowledge ecosystems. The objectives of VUAS according to the Constitution are:

- provide full-cycle higher education (first- and second-level higher vocational education, professional and academic bachelor's education and professional and academic master's education), doctoral studies, further education and lifelong learning in line with labour market trends;
- create a high-level scientific environment, generating new knowledge and promoting scientific research and their results;
- ensure stable funding, facilities and governance processes that support long-term development;
- create and maintain an environment that enables diverse development, cooperation and ability of everyone working and studying at VUAS to express themselves;
- create an environment open to collaboration, fostering interdisciplinarity;
- implement own internal quality assurance systems;
- promote cooperation in education and research at regional, national and international level;
- foster the attraction, growth and willingness of academic and general staff and students to contribute creatively to their intellectual and professional abilities by developing professionalism and competence.

In 2020, together with five other regionally based universities in five European Union countries, VUAS formed the European University Alliance E<sup>3</sup>UDRES<sup>2</sup>, which was joined by three more partners in 2022. The E<sup>3</sup>UDRES<sup>2</sup> network aims to proactively promote regional development through excellent and people-centred education, applied research activities and participation in innovation, working with a wide range of stakeholders. In total, of the 44 European University Alliances established by 2023, only four (including E<sup>3</sup>UDRES<sup>2</sup>) are applied science alliances.

**Table 1. List of E<sup>3</sup>UDRES<sup>2</sup> partner universities.**

<b>Higher education institution</b>	<b>Country</b>
St. Pölten University of Applied Sciences	Austria (leading partner)
UC Leuven-Limburg University of Applied Sciences	Belgium
Vidzeme University of Applied Sciences	Latvia
Saxion University of Applied Sciences	Netherlands
Polytechnic Institute of Setubal	Portugal
Polytechnica University Timisoara	Romania
Jamk University of Applied Sciences	Finland
Hungarian University of Agriculture and Life Sciences	Hungary
Fulda University of Applied Sciences	Germany

### **1.1. Studies**

Study work at VUAS is organised in two faculties— Faculty of Social Sciences (three study directions) and Faculty of Engineering (two study directions). The offer of the VUAS SP is a good basis for the internationalisation of studies – the SP at the master's and doctoral level are implemented in both Latvian and English, and one study programme in English is offered at the bachelor's level. Together with Rēzekne Academy of Technologies (RTA) and Ventspils University of Applied Sciences, VUAS implements the doctoral programme "Economics and Business", and together with RTA implements the doctoral programme "Sociotechnical Systems Modelling". VUAS has extensive experience in developing double degree programmes with foreign partners. From 2023, the Communication and Media studies direction will

offer two double degree study programmes in the field of communication – at Bachelor level with Kiel University in Germany and at Master level with Tbilisi State University in Georgia. In the Tourism Management studies direction, the Master’s study programme "Tourism Competitiveness Management " is offered in cooperation with Satakunta University in Finland, and in 2022 began the SP planning in the field of virtual and augmented reality with E<sup>3</sup>UDRES<sup>2</sup> partners in Austria and the Netherlands.

In 2023, VUAS offers studies in five study directions, 15 study programmes (SP), from college to doctoral level (see Table 2).

**Table 2. Overview of study fields and programmes implemented by VUAS (2023).**

<i>No.</i>	<i>Ministry of Education and Science study direction</i>	<i>MoES code</i>	<i>Study Programme</i>	<i>Study programme level</i>
1.	Hotel and Restaurant Service, Tourism and Recreation Organisation	42812	<b>Tourism Organisation and Management</b>	Professional Bachelor’s study programme
2.		45812	<b>Tourism Competitiveness Management</b>	Academic Master’s study programme
3.	Management, Administration and Real Estate Management	42345	<b>Business Management</b>	Professional Bachelor’s study programme
4.		47345	<b>Business Environment Administration</b>	Professional Master's study programme
5.		51345	<b>Economics and Business</b>	Joint doctoral study programme
6.	Information and Communication Sciences	42321	<b>Media Studies and Journalism</b>	Professional Bachelor’s study programme
7.		42321	<b>Communications and Public Relations</b>	Professional Bachelor’s study programme
8.		45321	<b>Media and Information Literacy</b>	Academic Master’s study programme
9.		45321	<b>Strategic Communication and Governance</b>	Academic Master’s study programme
10.		42481	<b>Information Technologies</b>	Professional Bachelor’s study programme
11.		47484	<b>Virtual Reality and Smart Technologies</b>	Professional Master's study programme
12.		47482	<b>Cybersecurity Engineering</b>	Professional Master's study programme

13.		51482	<b>Sociotechnical Systems Modelling</b>	Doctoral study programme
14.		42523	<b>Mechatronics</b>	Professional Bachelor's study programme
15.	Architecture and Construction	41582	<b>Sustainable Building Construction</b>	First level professional higher education study programme

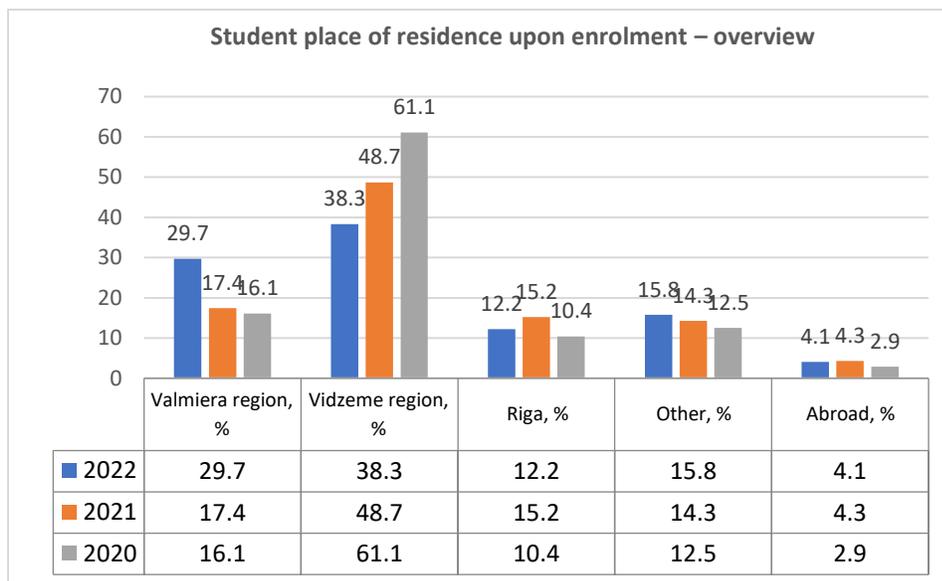
By the end of 2023, all study directions implemented by VUAS have been subject to the current international accreditation, and all study directions have been accredited for the maximum period of six years.

Unlike a number of other higher education institutions in Latvia, VUAS is characterised by intensive participation of guest lecturers in the implementation of study programmes – they are professionals in their fields, who ensure that the study content is linked to real-life experience and examples. Often, these professionals are not only present in individual classes, but also teach a significant part of a study course, including an individual course. In the implementation of studies, VUAS is increasingly using interactive methods that create authentic student experiences and are based on challenges defined by stakeholders. Thanks to the participation in the E<sup>3</sup>UDRES<sup>2</sup> network, the mobility of foreign guest lecturers, which almost stopped completely during the COVID-19 pandemic, is rapidly recovering at VUAS.

The average number of students enrolled each year during the previous strategy period (2016–2022) is 265. The average total number of students per year is 806.

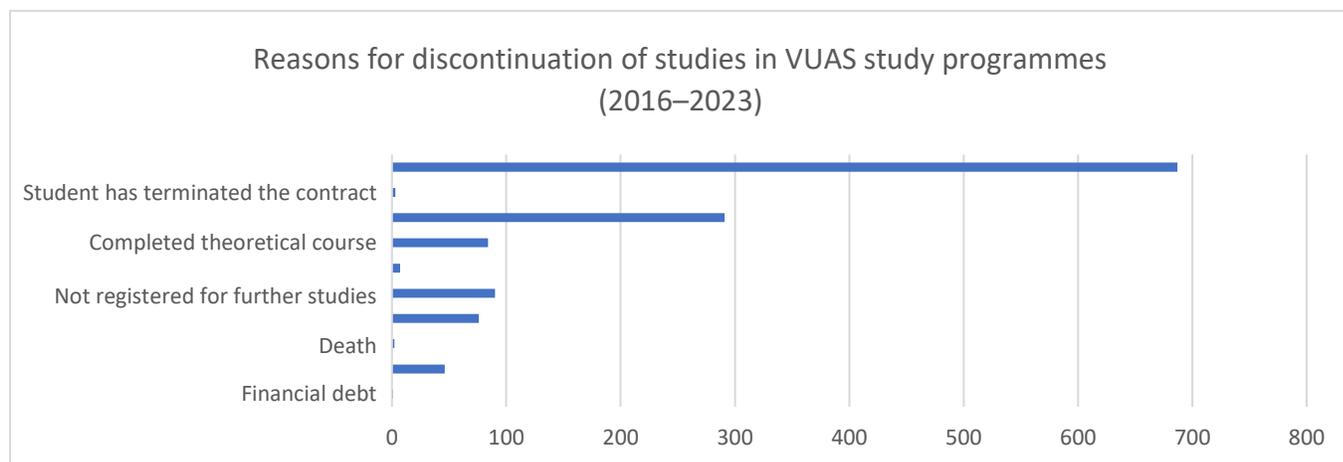
As can be seen in Graph 1, the largest number of students VUAS attracts from Vidzeme region (61.1% in 2022), as well as from Valmiera region. The number of young people from the Valmiera region has decreased in the last three years. People living in Riga are also relatively interested in studies.

**Graph 1. Overview of VUAS students by their place of residence.**



The drop-out rate at VUAS is below the average of the European Union countries and there are marked differences between different study programmes. The biggest drop-out rate is in engineering programmes, where many students have graduated secondary education institutions without sufficient knowledge of the core subjects – maths, physics. The most common reasons for dropping out are failure to meet the requirements of the study programme (accumulating a large amount of academic debt), as well as dropping out of their own volition, where the most common reason is the inability to combine studies with a full-time job.

**Graph 2. Reasons for discontinuation of studies in VUAS study programmes.**



There is a growing trend for students to leave their studies before obtaining their diploma, but to resume their student status after a period of time (one year to 10 years), to continue their studies, or to choose another study programme. An appropriate solution here would be to offer short, focused modules (micro-credentials programmes) when it becomes difficult to continue studying full-time, which would allow to personalise studies and also maintain the student status.

Similarly to other higher education institutions in Latvia, VUAS is facing a gradual decrease in the number of students, on average 5% per year. The main reason for this is the negative demographic situation in Latvia as a whole, but in the case of VUAS it is also related to the development of priority study and research areas by consolidating several study programmes, as defined in VUAS strategy for the previous period.

The internationalisation experience of local students has been developed through active participation in Erasmus+ exchange studies (the flow is recovering after the COVID-19 pandemic), NordPlus programme funded projects (mostly students of Business Administration and Tourism Management), as well as since VUAS involvement in the European University E<sup>3</sup>UDRES<sup>2</sup>, within the framework of the activities organised by this alliance. In general, slightly more than 30% of the total number of VUAS students gain international study experience by participating in long- or short-term mobility. The target should be at least 50% of students. Gaining international experience is an important factor that increases satisfaction with the educational experience at VUAS.

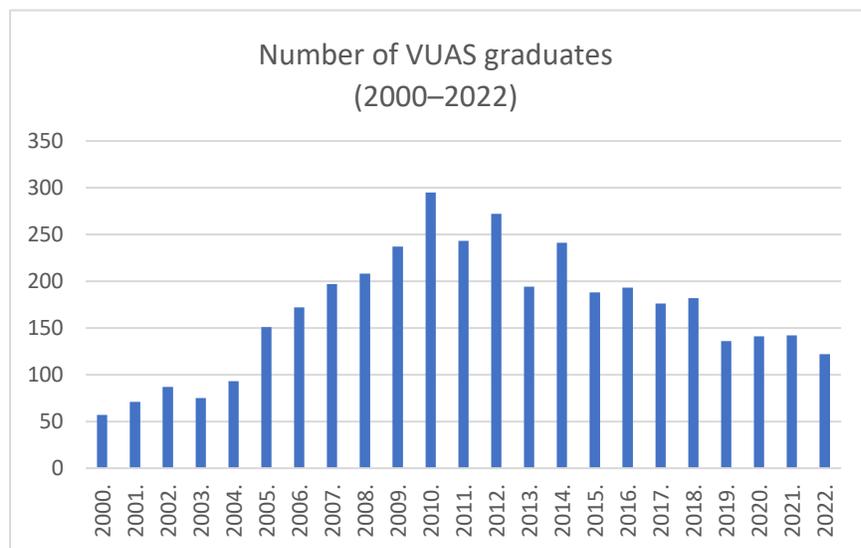
The number of foreign students at VUAS remains relatively small, its contribution is currently more in the area of reputation and branding, for example, VUAS established a scholarship programme for students from Belarus after the illegal elections in Belarus, after which repression against the civically active part of society began and after which people actively sought opportunities to emigrate. A separate assistance programme was set up for students from Ukraine immediately after the Russian invasion of Ukraine in early

2022, offering free study opportunities and places in dormitory. These activities were widely covered by the media in Latvia, strengthening the image of VUAS as an institution of higher education supporting civically active society in the Eastern Partnership countries.

In the development of study offer VUAS closely cooperates with Municipality of Valmiera region and Valmiera Development Agency, has participated in the strategic development planning for Municipality of Valmiera region until 2030, taking into account VUAS study and science offer and development opportunities, with the main emphasis on the fields of circular economy, wooden building construction, sustainable development, ICT. These fields are included in the Valmiera Industrial Areas Development Plan, and 1,770 new jobs are expected to be created up to 2030. In the context of the development of the city, the county and the region, VUAS has defined the following objectives: training a highly qualified workforce, providing lifelong learning and retraining the workforce, providing research and promoting innovation, and developing new enterprises. VUAS cooperates with other Vidzeme regions, as well as with regions outside Vidzeme. In the process of implementation of the Strategy, it is necessary to ensure that municipalities include more extensive cooperation with the VUAS in their development planning in the areas of its expertise.

**1.2. Graduates.** By the beginning of 2023, 3924 individuals have graduated from VUAS. Graph 3 shows the statistics of graduates since 2000.

**Graph 3. Statistics of VUAS graduates 2000–2022.**



The graduate statistics correlate both with the overall demographic and migration trends in Latvia, which show a gradually decreasing population<sup>2</sup>, and with the strategic choices made to optimise several study programmes and to integrate study directions into the social sciences block during the previous strategy period. At Masters level, the COVID-19 pandemic and the subsequent economic crisis had a strong impact on all higher education institutions in Latvia. At VUAS, this effect was felt most strongly in the tourism studies direction. Russia's full-scale invasion of Ukraine in February 2022 dealt a further blow to tourism industry in Latvia, temporarily almost halting international tourism flows, which further reduced students' motivation to pursue education in this field. Taking into account the demographic trends, a significant

<sup>2</sup> <https://stat.gov.lv/lv/statistikas-temas/iedzivotaji/iedzivotaju-skaitis/247-iedzivotaju-skaitis-un-ta-izmainas>

emphasis in the next stages of VUAS' development should be placed on attracting international students, including by developing distance learning study offer.

The annual monitoring of graduates by the Ministry of Education and Science, launched in 2017, shows good results for the employability of VUAS graduates. For example, data on graduates by 2020 show that 91% of VUAS graduates are actively employed in the labour market (the national average employment rate for graduates in this reporting year: 82%). Information and Communication Technology graduates mostly found jobs in the private sector, with 13.6% of graduates choosing the public sector as a place to work. 11.9% of graduates of the Business Administration study direction have started a business, which is the fourth best indicator among HEIs offering studies in this field. Overall, 9.22% of all VUAS graduates who completed their studies after 2017 have started their own business. Three years after graduation, the salary level of VUAS ICT graduates exceeds the national average: EUR 31 398 per year (national average for this thematic group: EUR 21 380).

Employers' feedback on VUAS graduates is positive<sup>3</sup>. Employers see VUAS as providing well-rounded young professionals who are able to adapt flexibly within their organisations and adapt to the changing needs of their sectors. Professionals from all sectors stress the need for digital skills, knowledge of foreign languages, and cite management and leadership skills, financial literacy, critical thinking, and a creative approach to problem solving as an advantage in the labour market for graduates of all programmes.

Based on the Development Strategy, the Study Process Development Plan shall be developed and approved by the VUAS Senate. Based on the VUAS strategic specialisation, specific goals and measurable results within each specialisation should be set.

**1.3. Science.** Research work at VUAS is carried out in two scientific institutes – the Institute of Social, Economic and Humanitarian Studies (HESPI), established in 2013, and the Sociotechnical Systems Engineering Institute (SSII), established in 2006. In 2015, VUAS was registered in the Register of Scientific Institutions.

In the 2019 International Evaluation of Scientific Institutions (IESI) in Latvia, VUAS was awarded three points, which enabled it to continue its work as an independent scientific institution. The next IESI is planned to take place in 2025.

Scientific activity at VUAS is mission-driven – solving challenges that are important for the growth of society by involving interdisciplinary research teams. The following research lines were developed as a priority during the previous strategy period:

- Smart technologies for the economy and eco-buildings;
- Virtual reality technologies and visualisation;
- E-learning governance and technologies;
- Sociotechnical systems modelling technologies;
- Sustainable economies and knowledge societies;
- Communication ecosystem and technologies;
- Cybersecurity;
- Sustainable and circular construction.

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<sup>3</sup> More information and analysis on employer feedback is available in the Self-Assessment Reports of the study directions, which were prepared within the current international accreditation.

Within E<sup>3</sup>UDRES<sup>2</sup>, since 2019 VUAS researchers have prepared research proposals based on the research missions defined in the alliance:

- Circular economy;
- Well-being, ageing, resilience, and vitality of society;
- Human interaction with artificial intelligence.

Four research missions have been defined for the next E<sup>3</sup>UDRES<sup>2</sup> implementation period, expanding the opportunities for VUAS researchers to join E<sup>3</sup>UDRES<sup>2</sup> research groups. These missions are:

- Health, well-being and social inclusion in the regions;
- Digitisation and deep tech;
- Sustainable economy and innovation for regions;
- Creative industries for the identity of regions.

Attraction of international researchers to VUAS in the previous strategy period was mainly carried out within the framework of the Postdoctoral Programme and by using the funding available in SAM 8.2.1 for attracting doctoral students and foreign professors. Within the framework of the Fundamental and Applied Research Programme, a diaspora researcher from Finland is working at VUAS, and a researcher from Ukraine is employed within the Baltic 100 project. The number of international researchers and the amount of time they spend at VUAS should definitely be increased to ensure more effective integration of VUAS into the international scientific community.

In 2022, VUAS had 43 science-related projects under implementation – regional-scale contract research projects, national-scale projects and international projects funded by the European Commission. The share of indexed scientific publications in SCOPUS or Web of Science (WoS) databases (1.1. publications) reached 51% in 2022 – see Table 3. 25% of total publications in 2022 were in 1<sup>st</sup> quartile (Q1) and 2<sup>nd</sup> quartile journals (4% in 2021), and the number of publications with foreign co-authors is increasing overall (40% of all publications in 2022).

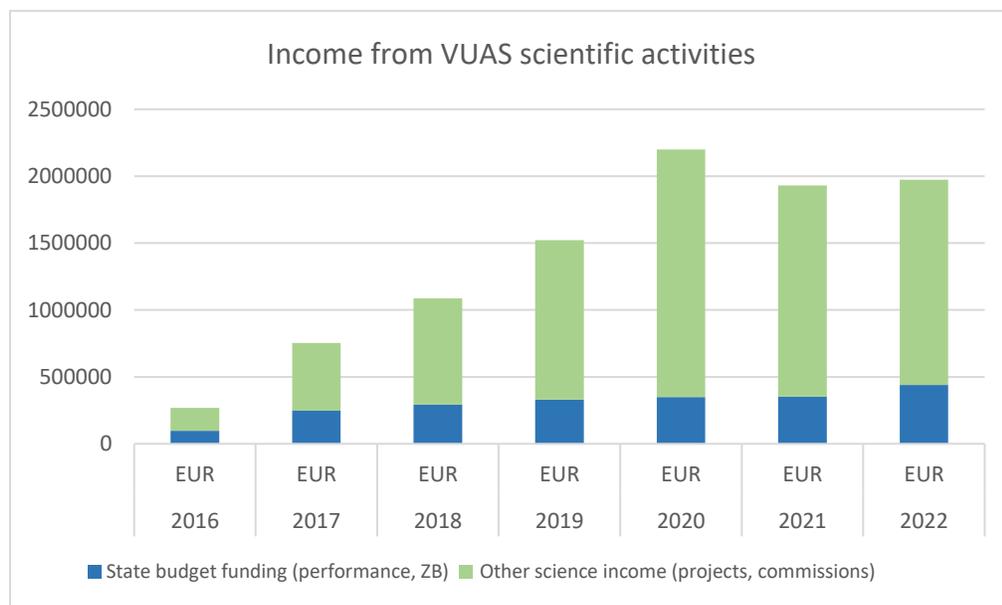
**Table 3. Overview of the number and quality of VUAS publications in 2016–2022.**

<b>Year</b>	<b>Total number of VUAS publications</b>	<b>1.1. number of publications</b>	<b>1.1. publications (%)</b>
2016	46	25	54%
2017	66	15	23%
2018	38	5	13%
2019	43	8	18%
2020	45	21	46%
2021	55	25	45%
2022	45	23	51%

The publication rating system, which is used to calculate the amount of science-based funding for research institutions, focuses not only on the need for publications in SCOPUS and WoS indexed journals, but also places a higher value on publications in Q1 journals. In the new strategy period, it is necessary to develop a publication strategy for VUAS researchers that is focused on excellence, on achieving higher results, as well as the creation of individual plan for scientific activities and development for each researcher.

Since 2016, the amount of funding raised for science in VUAS has increased from EUR 267 000 in 2016 to EUR 1.97 million in 2022. Data on science funding in the previous strategy period are presented in Graph 4. For VUAS to be even more successful in developing high-quality science project applications and attracting funding, it needs more active administrative support for researchers in preparing applications, as well as more intensive involvement of students (master students, doctoral students) in preparing research project applications and implementing projects.

**Graph 4. Overview of VUAS science funding 2016–2022.**



Based on the achievements in scientific activities, VUAS has obtained the rights of two UNESCO Chairs in the previous strategy period – the UNESCO Chair "Biosphere and Man" has been in operation since 2019, its activities were re-evaluated in 2022, and it was granted UNESCO certification until 2027. In 2023, the UNESCO Chair “Media, Information and Science Literacy” was launched. Both chairs are established at HESPI.

In the 2019 International Evaluation of Scientific Institutions VUAS was assessed as an institution that has chosen a direction very suitable for its profile to focus mainly on interdisciplinary applied science in areas that are important for regional development, but at the same time the need to engage in fundamental research that would enable more publications in high-level international journals, presentations at international conferences, wider participation in the international scientific community. The international experts' proposal is to focus on fewer research topics and work with fewer project partners. Both proposals have already been partially implemented in the previous strategy period by defining research missions and placing the greatest emphasis on continuing cooperation with existing partners with whom projects have already been successfully linked, such as the E<sup>3</sup>UDRES<sup>2</sup> alliance, research networks in the Baltic countries, etc.

**1.4. Fostering innovation, entrepreneurial culture.** Since 2015, VUAS has been operating a Knowledge and Technology Centre (KTC), whose objectives include promoting lifelong learning, cooperation with entrepreneurs and local governments and diversifying the services provided by the university. To activate the lifelong learning function, in 2023 it was added to the Study Administration Group and designated as

the direct responsibility of the Vice-Rector for Academic Affairs and Science. This is based on considerations related to the overall policy shift in the EU, where the student is defined as any individual who receives an educational service from a higher education institution, regardless of the format of education. The innovation promotion function (in cooperation with companies, industry associations and other stakeholders) is identified as an area of direct supervision of the Vice-Rector for Development. Since 2023, an Open Innovation Centre for Sustainability operates at VUAS, and VUAS participates as a partner in five other Open Innovation Centres in the E<sup>3</sup>UDRES<sup>2</sup> network in digitalisation and other areas.

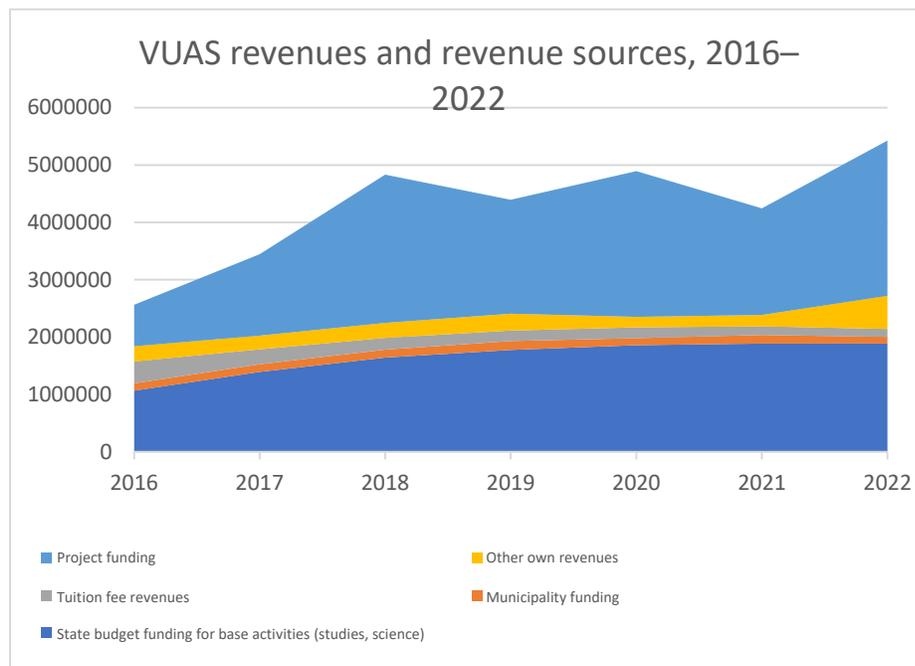
Cooperation with industry, which is also one of the areas of responsibility of KTC, has taken place in the implementation of LIAA voucher applications. The diversification of the services provided by the University has been successfully implemented by HESPI researchers, providing consultations and acting as experts in the development of municipal development planning documents, in the implementation of applied research commissioned by municipalities and various national and international applied projects. Both nationally and internationally, VUAS visibility has been boosted, for example, by the Virtual and Augmented Reality Laboratory team, which has been involved in a large number of different applied research projects, also contributing financially to the overall budget of the university. As a university of applied sciences, it is important for VUAS to develop a culture of innovation as part of its organisational culture, to engage in applied science that responds to the needs of the economy, contributes to the international competitiveness of companies, and helps to create new knowledge-intensive products and services. VUAS has the opportunity to commercialise the results of its research, and academic staff and students can participate in the creation of start-ups.

**1.5. Finances.** The structure of VUAS income in the previous strategy period was largely based on two main sources of funding: scientific and other project funding and state budget funding. A relatively small part of the budget was accounted for by other own revenues (e.g. dormitory fees, photocopying services, room rental, etc.), tuition fee revenues and annual funding from the Municipality of Valmiera region (see Figure 1: data for 2016–2022).

Factors influencing the planning of VUAS basic budget include:

- the number of projects implemented, the number of contracts, which varies from year to year and is difficult to predict in the face of competition;
- the total number of students (resulting in a change in the number of budget places allocated by the Ministry of Education and Science), and the low number of fee-paying students – the study process has to be partly internally subsidised by other revenues;
- lack of a sustainable use and development plan for VUAS infrastructure, the potential of space utilisation is not realised;
- digital base for the implementation of studies, scientific work and communication with different target audiences (website, VIA app), the renewal of which urgently requires significant investments.

**Figure 1 Changes in the revenue structure of VUAS in 2016–2022.**



### 1.6. Staff

The number of staff (on an employment contract basis) at VUAS has increased in the previous strategy period – from 110 to 125 people. The number of elected academic staff has increased from 56 to 70, of which 58% are women in both 2016 and 2022. The proportion of elected staff with a PhD has increased from 50% to 58% since 2016. In 2016, there were five professors working at VUAS. In 2022, VUAS employed six professors. At the end of 2022, 14 staff members were studying for PhDs. In 2022, 13 staff members had expert status in the Latvian Council of Science. The average age of elected staff has increased slightly from 46.3 years in 2016 to 48.5 years in 2022. In the new Strategy period, the university should aim to maintain approximately the same average age of staff, with objectives for staff renewal.

The number of guest lecturers has varied over the years, but has also increased from 82 in 2016 to 123 in 2016. Around 10% of the guest lecturers were from abroad. This reflects the tendency of VUAS to attract foreign lecturers, including industry professionals, to ensure the quality of study programmes, and this is happening at all levels of study.

The number of administrative staff has not changed significantly over the years: in 2016 there were 54 employees and in 2022 – 55.

The career model for academic staff planned for Latvia should be implemented in the next strategy period. More active inclusion of VUAS in international scientific networks, including involvement of academic staff in international research groups, as well as attraction of foreign doctoral students and visiting researchers from abroad should be encouraged. The 2021–2027 planning period at national level prioritises the development of human capital in science, including the renewal of the scientific workforce and increasing the number of scientists<sup>4</sup>. In the case of VUAS, a lot of emphasis is placed on the development of the new generation of scientists through the doctoral programmes implemented by VUAS, especially in

<sup>4</sup> <https://likumi.lv/ta/id/327732-par-eiropas-savienibas-kohezijas-politikas-programmu-2021-2027-gadam>

specific niche areas such as cyber security, virtual and augmented reality, where there is a shortage of young specialists.

**1.7. Assessment of the corporate governance system.** VUAS corporate governance system is designed in accordance with the current normative framework in the field of higher education. A well-functioning governance system in the period of the new Strategy is one of the prerequisites for achieving the goals of VUAS. According to the Law on Higher Education Institutions and the VUAS Constitution, the main decision-making bodies at VUAS are the Constitutional Assembly, the VUAS Council, the Senate, the Rector, and the Academic Arbitration Court. At the level of the structural units, there are faculty councils and scientific councils of scientific institutes. All key decision-making bodies are guided by good leadership principles such as compliance with the law, openness, participation, accountability, consensus-orientation, efficiency, ethical behaviour, fair and sound decision-making and collegiality. Representation of VUAS students is ensured in the Constitutional Assembly, the Senate, as well as in the decision-making bodies of the structural units; all important decisions are prepared and agreed upon in cooperation with students.

**Ethics and compliance.** In their activities, the management and staff of VUAS shall observe high ethical standards, ensure compliance with the requirements of the laws and regulations, and shall not engage in activities that may harm the interests of VUAS.

**Roles, duties and responsibilities** The roles and duties of the decision-making bodies are regulated by the VUAS Constitution, as well as by the statutes of the respective decision-making bodies, and for the Rector – by the job description. All aforementioned laws and regulations have been updated in 2022 based on changes in the Law on Higher Education Institutions and other laws and regulations. The current versions of the normative acts are available on the VUAS website: <https://va.lv/lv/par-via/dokumenti>. Efficient analysis of VUAS activities in its areas of responsibility is carried out at least quarterly by the VUAS Council. Once a year, the Rector shall present a report on VUAS activities at a meeting of the Constitutional Assembly. Every year, the Audit Commission of the Constitutional Assembly analyses in depth an area important for the development of VUAS, and the findings are used to set operational goals for the VUAS management team for the following year. At the level of the units, the directors of the study programmes and directions are responsible for preparing and submitting the annual self-evaluation reports to the Faculty and the Senate for approval. The directors of the institutes report annually on the activities of the institutes to the Scientific Councils of the institutes, and prepare a report for inclusion in the management report to the Constitutional Assembly of VUAS.

**Openness and transparency.** VUAS publishes information about its activities on the basis of the current normative framework for higher education institutions. The documents regulating the activities of VUAS are freely available in digital format: <https://va.lv/lv/par-via/dokumenti>, as well as the annual self-assessment reports of the study directions based on the Law on Higher Education Institutions, the annual report on the scientific activities of VUAS, the Law on Scientific Activity (ibid.). An independent external auditor carries out an annual audit of VUAS expenditure.

**Prevention of conflicts of interest.** The Rector and Vice-Rectors have the status of a public official, which precludes them from acting outside their official capacity in order to prevent personal or material interest in their activities. Employees that have the status of a public official must submit an annual declaration of a public official. The types of conflict of interest and measures to prevent conflict of interest situations are set out in the VUAS Internal Control and Risk Management System Policy. VUAS has issued a decree establishing procurement commissions; members of the procurement commissions are public officials; the procurement process is carried out in the Electronic Procurement System (EPS). VUAS has developed a Whistleblowing Procedure.

**Stakeholders.** VUAS analyses both its own impact on its stakeholders and the potential impact of its stakeholders on VUAS activities. VUAS is responsible in its cooperation with stakeholders. During the development of the Strategy, a stakeholder mapping has been carried out, identifying strategically relevant stakeholders at regional, national and international level (see Strategic part).

**Including sustainability in the VUAS agenda.** VUAS sets and implements sustainable development goals. A key instrument in this has been the involvement in the Eco-Schools movement, with VUAS becoming the first Eco-University in Latvia. In the future, efforts should be made to ensure that every employee, student, and cooperation partner in the VUAS community has the opportunity to better understand the sustainability dimensions of their work – both in their studies and research work by involvement in promoting innovation, as well as in the daily processes of VUAS and development planning. VUAS is not subject to the Corporate Sustainability Reporting Directive<sup>5</sup>, but based on the content of the Directive, VUAS annual report on the implementation of the Strategy in the new Strategy period could include an analysis of different aspects of sustainability, such as an analysis of risks related to sustainability; opportunities for VUAS related to sustainability; implementation of the Strategy in relation to sustainability and based on the objectives set in the Action Programmes, including plans for sustainability measures, including financial and investment plans. The key sustainability themes relevant to VUAS activities are climate and circular economy, digital inclusion, digital security, inclusive and just growth-oriented society, good working environment and organisational governance.

## 2. Performance indicators defined in the VUAS Strategy 2016-2020 (valid until 2022) and their fulfilment

Performance indicators selected in the development of the VUAS Strategy 2016-2020 was determined by the recommendations of the Ministry of Education and Science, as well as forecasts on the implementation of education and science policy in Latvia. Consequently, in a number of indicators, two fulfilment scenarios were outlined based on the indicators of the National Development Plan 2014–2020, the funding levels outlined in the Laws on Higher Education and Scientific Activity, and the very high impact of external factors. A third scenario, not originally outlined in the Strategy, was implemented, as the amount of funding available in the country was below even the pessimistic/cautious scenario. This experience has been taken into account in the development of the Strategy for 2023–2028.

**Table 4. Overview on the fulfilment of the performance indicators included in the VUAS Strategy 2016-2020.**

Indicator	Base (2016)	2018	2019	2020	2021	2022	2020 (1 <sup>st</sup> scenario)	2020 (2 <sup>nd</sup> scenario)	Comments on the fulfilment of indicators: Yes/No
<b>Education and knowledge transfer</b>									
<b>Students</b>									
State budget funding, number	468	576	551	526	511	473	630	1,000	No

<sup>5</sup> <https://eur-lex.europa.eu/legal-content/LV/TXT/HTML/?uri=CELEX:32022L2464>

	(SZF – 222; IF – 246)	(SZF – 341; IF – 235)	(SZF – 308; IF – 243)	(SZF – 286; IF – 240)	(SZF – 279; IF – 232)	(SFZ – 248; IF – 225)			
Other, number (incl. foreign students)	<b>355</b> (SZF – 288; IF – 67)	<b>166</b> (SZF – 110; IF – 56)	<b>164</b> (SZF – 97; IF – 67)	<b>169</b> (SZF – 70; IF – 99)	<b>147</b> (SZF – 63; IF – 84)	<b>162</b> (SZF – 53; IF – 109)	<b>250</b>	<b>400</b>	No
Self-funded foreign students, number	<b>26</b> (SZF – 1; IF – 25)	<b>18</b> (SZF – 1; IF – 17)	<b>21</b> (SZF – 1; IF – 20)	<b>15</b> (SZF – 6; IF – 9)	<b>18</b> (SZF – 11; IF – 7)	<b>18</b> (SZF – 9; IF – 9)	<b>110</b>	<b>200</b>	No
VUAS exchange students studying and interning abroad, number	<b>71</b> (SZF – 63; IF – 8)	<b>74</b> (SZF – 72; IF – 2)	<b>42</b> (SZF – 39; IF – 3)	<b>30</b> (SZF – 29; IF – 1)	<b>37</b> (SZF – 32; IF – 5)	<b>22</b> (SZF – 21; IF – 1)	<b>100</b>	<b>150</b>	No
VUAS graduates with foreign experience, % out of total number of graduates	<b>20%</b>	<b>24%</b>	<b>23%</b>	<b>24%</b>	<b>21%</b>	<b>16%</b>	<b>30%</b>	<b>37%</b>	No
Number of foreign or exchange students at VUAS (minimum duration 2 weeks)	<b>52</b>	<b>44</b>	<b>39</b>	<b>27</b>	<b>20</b>	<b>12</b>	<b>100</b>	<b>150</b>	No
Number of participants in the Baltic International Summer School	<b>8</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>30</b>	Yes
Number of students in joint/double degree programmes	<b>15</b> (SZF – 15; IF – 2)	<b>10</b> (SZF – 10; IF – 5)	IF: 7	IF: 9	<b>9</b> (SZF – 9; IF – 8)	<b>24</b> (SZF – 14; IF – 10)	<b>30</b>	<b>50</b>	No
<b>Academic and scientific staff</b>									
With doctoral degree (%)	<b>52%</b> (SZF – 36%; IF – 16%)	<b>56%</b> (SZF – 52%; IF – 61%)	<b>59%</b> (SZF – 55%; IF – 71%)	<b>53%</b> (SZF – 49%; IF – 62%)	<b>54%</b> (SZF – 47%; IF – 69%)	<b>58%</b> (SZF – 55%; IF – 69%)	<b>Total 60%</b> of elected academic and scientific staff with doctoral degrees		<b>Yes</b>
Number of lecturers who have lectured at universities abroad	<b>8</b> (SZF – 7; IF – 1)	<b>9</b>	<b>14</b> (SZF – 12; IF – 2)	<b>15</b> (SZF – 12; IF – 3)	<b>0</b>	<b>7</b> (SZF – 7; IF – 0)	<b>14</b>		<b>Yes</b>

Number of lecturers who have lectured at universities abroad, % out of total number	<b>14%</b>	<b>15%</b>	<b>23%</b>	<b>23%</b>	<b>0%</b>	<b>10%</b>	<b>25%</b>		<b>Yes</b>
Number of foreign guest lecturers at VUAS	<b>22</b>	<b>35</b>	<b>39</b>	<b>14</b>	<b>9</b>	<b>17</b>	<b>20</b>		<b>Yes</b>
Number of foreign universities in which VUAS lecturers have carried out academic work	<b>20</b>	<b>8</b>	<b>12</b>	<b>10</b>	<b>0</b>	<b>5</b>	<b>14</b>		<b>Yes</b>
Number of foreign guest lecturers, % out of total number of academic staff	<b>13%</b>	<b>13%</b>	<b>29%</b>	<b>22%</b>	<b>13%</b>	<b>23%</b>	<b>35%</b>		<b>Yes</b>
Lecturer's participation in professional organisations	<b>19</b> (SZF – 14; IF – 5)	<b>24</b> (SZF – 16; IF – 8)	<b>34</b> (SZF – 19; IF – 15)	<b>46</b> (SZF – 36; IF – 12)	<b>77</b> (SZF – 65; IF – 12)	<b>38</b> (SZF – 29; IF – 9)	<b>24</b>		<b>Yes</b>
Participation of lecturers as experts in study accreditation commissions	<b>10</b>	<b>5</b> (SZF – 5; IF – 0)	<b>9</b> (SZF – 8; IF – 1)	<b>12</b> (SZF – 10; IF – 2)	<b>4</b> (SZF – 4; IF – 0)	<b>3</b> (SZF – 3; IF – 0)	<b>20</b>		<b>No</b>
<b>Study directions and programmes</b>									
Directions	<b>6</b> (SZF – 4; IF – 2)	<b>6</b> (SZF – 4; IF – 2)	<b>6</b> (SZF – 4; IF – 2)	<b>6</b> (SZF – 4; IF – 2)	<b>5</b> (SZF – 3; IF – 2)	<b>5</b> (SZF – 3; IF – 2)	<b>5</b>	<b>5</b>	<b>Yes</b>
Study programmes	<b>16</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>18</b>	<b>17</b>	<b>19</b>	<b>20</b>	<b>Yes</b>
Study programmes taught in foreign languages	<b>6</b>	<b>5</b>	<b>9</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>9</b>	<b>10</b>	<b>Yes</b>
<b>Number of graduates</b>									
	<b>193</b> (SZF – 130; IF – 63)	<b>182</b> (SZF – 121; IF – 61)	<b>136</b> (SZF – 79; IF – 57)	<b>145</b> (SZF – 103; IF – 42)	<b>142</b> (SZF – 95; IF – 47)	<b>112</b> (SZF – 65; IF – 47)	<b>205</b>	<b>322</b>	<b>No</b>
<b>Attendees of lifelong learning and Open University courses, including from companies and individuals</b>									
	<b>108</b>	<b>153</b>	<b>612</b>	<b>122</b>	<b>78</b>	<b>209</b>	<b>130</b>		<b>Yes</b>
<b>Graduate employment</b>									
	<b>92%</b>	<b>73.89%</b> (SZF – 89.78%;	<b>71.96</b>	<b>86.49</b>	<b>80%</b>		<b>90%</b>		<b>Yes</b>

	(SZF – 91%; IF – 94%)	IF – 60%)							
<b>Number of active international internship agreements</b>									
	<b>50</b>	<b>0</b>	<b>26</b>	<b>11</b>	<b>20</b>	<b>9</b>	<b>50</b>	<b>55</b>	No
							<i>Science, knowledge transfer and thought leadership</i>		
<b>Number of completed (launched) studies</b>									
By source of funding, regional	<b>4</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>Yes</b>
By source of funding, national	<b>9</b>	<b>4</b>	<b>1</b>	<b>7</b>	<b>5</b>	<b>2</b>	<b>10</b>	<b>10</b>	<b>Yes</b>
By source of funding, international	<b>2</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>9</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>Yes</b>
<b>Number of submitted project applications</b>									
By source of funding, national	<b>3</b>	<b>11</b>	<b>4</b>	<b>13</b>	<b>12</b>	<b>7</b>	<b>8</b>	<b>12</b>	<b>Yes</b>
By source of funding, international	<b>15</b>	<b>20</b>	<b>18</b>	<b>19</b>	<b>15</b>	<b>16</b>	<b>20</b>	<b>22</b>	<b>Yes</b>
<b>Research results (average per year over the last 3 years)</b>									
International publications	<b>25</b>	<b>4</b> (15 on average)	<b>39</b>	<b>26</b>	<b>48</b>	<b>40</b>	<b>50</b>		No
Public benefit	<b>21</b>	<b>38</b> (36 on average)	<b>6</b>	<b>6</b>	<b>11</b>	<b>18</b>	<b>45</b>		
Encouraging business creation (spin-offs, start-ups, micro-enterprises)	<b>5</b>	<b>10</b>	<b>10</b>				<b>10</b>		<b>Yes</b>
<b>Conferences</b>									
International Scientific Conferences (organised by VUAS)	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>Yes</b>
International Scientific Conferences (VUAS as a partner)	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>Yes</b>
Academic/scientific staff participation in presentations	<b>24</b>	<b>48</b>	<b>17</b>	<b>15</b>	<b>20</b>	<b>26</b>	<b>50</b>	<b>50</b>	<b>Yes</b>

<b>Other activities for thought leadership</b>									
Seminars, forums, etc., number	10	125	124	62	51	74	10		Yes
Publication of VUAS lecturers' opinions as experts in the media, number	2716	2766	3139	2349	2614	2469	30	40	Yes
<b>Funding</b>									
State budget funding for science	172,027	853,867	1,082,444	1,450,002	1,457,507	1,154,057	350,000	450,000	Yes
Municipality funding for science	20,000	20,000	15,000	10,000	0	0	30,000	40,000	No
Third-party funding for science (contracts, projects)	61,739	212,468	424,566	738,162	472,149	664,228	200,000	300,000	Yes
State budget funding for studies	965,440	1,236,054	1,276,531	1,324,947	1,474,854	1,418,678	1,404,242	1,844,290	No
Third-party funding for studies	380,154	205,129	179,537	185,539	151,835	138,025	320,025	512,040	No
<b>Financing for development</b>									
For the development of infrastructure and facilities		1,153,276	255,129	0	0	90,276	525,000		Yes

### 3. Analysis of the external environment, context

This chapter provides an analysis of global and national trends in social development and economics, and an analysis of international, national and regional development planning documents, determining their impact on the development of VUAS activities (Table 5).

**Global trends.** The capacity for innovation and commercialisation of research results, openness to cooperation with industry, public administration, society, flexible and personalised study offer and the provision of skills demanded in the labour market in a lifelong learning format are some of the central aspects highlighted in the need for universities worldwide to transform themselves<sup>6</sup>.

Six key objectives for higher education, knowledge and innovation, which arise from various international planning documents and are relevant for VUAS as a university of applied sciences with significant international involvement:

- The need to provide students with a multi-institutional learning experience – as opposed to receiving their education at a single institution, which VUAS can provide by making full use of E<sup>3</sup>UDRES<sup>2</sup> network, as well as other partnerships. The European University Association (2021)<sup>7</sup> has created the concept of “universities without walls” – universities that are open, engaged in

<sup>6</sup> <https://www.unesco.org/en/articles/careers-post-millennials-driving-future-science-engineering-and-innovation>; <https://www.uin.org/product-category/fut-thoughtbooks/>; World Bank studies available on the MoES website: <https://www.izm.gov.lv/lv/pasaules-bankas-petijums>

<sup>7</sup> <https://www.youtube.com/@europeanuniversityassociat4050>

societal processes, serving society through mission-driven research and fostering innovation. HEIs must become agents of societal change through the creation of open, transformative trans-national knowledge and research spaces.

- Increased focus on the integration of future/transversal skills in the study process, which VUAS can ensure by further developing interactive study methods and improving the competence of lecturers to facilitate the preparation of highly qualified, professional and adaptive specialists.
- Lifelong learning is becoming as important as full-time studies, as it provides quick access to the skills and knowledge needed in the changing labour market. VUAS can offer it by developing its activities in lifelong learning, in the context of VUAS – with a particular focus on lifelong learning as a factor influencing the balanced development of regions.
- The need for HEIs to engage in extensive cooperation with stakeholders in research and innovation, offering solutions to complex problems through interdisciplinary approaches, which VUAS can do by fulfilling its development mission to be a driving force for innovation, knowledge creation and the research community, by fostering the attraction of highly qualified human capital in research and development, by developing talents and skills within VUAS. It is highlighted that higher education institutions are in a unique position<sup>8</sup>: as organisations focused on long-term benefits for the society, they do not operate for pure profit or political capital, so HEIs can successfully be hubs for multi-actor cooperation involving the private and public sectors and civil society.
- Monitoring external factors and anticipating their impact as part of the higher education institution's planning, keeping abreast of changes in labour market, environmental/climate changes, technological developments and digitalisation, migration caused by changes in human behaviour and the environment, which necessitate intercultural competence. VUAS can do this by carrying out comprehensive monitoring of its environment, by being part of a progressive and growth-oriented higher education community, by collaborating with organisations such as the University and Industry Innovation Network (UIIN), the European Association of Higher Education Institutions (EURASHE) and others.
- Strengthening societal resilience through building a culture of science, fostering media literacy, political education and civic engagement<sup>9</sup>, which VUAS is implementing and can strengthen through research and education activities in Latvia, as well as through engagement in development cooperation.

**Trends in Latvia.** The only policy planning document in Latvia that deals exclusively with higher education development issues is the concept “Latvian Universities 2030” developed by the Council for Higher Education. The strategic goal for HEIs stated in the concept is: to become a positive driving force for social, economic and political change and sustainable development, strengthening the security of the Latvian people, and preserving and developing the core values of Latvian culture.<sup>10</sup> OECD, regarding factors affecting the education sector in Latvia, highlights the need to reduce income inequality between different regions, which could be achieved by stimulating economic activity with higher added value, raising the educational level of the population, and developing the skills needed to create competitive products and services<sup>11</sup>. When planning for the HEI’s development, the increasing mobility of the population, the ageing population and health issues are also taken into account. Both the OECD and the European Commission, in their studies on future development directions in European countries, including Latvia, place particular emphasis on technological development and the need for digital transformation.

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<sup>8</sup> <https://eua.eu/resources/publications/757:trends-2018-learning-and-teaching-in-the-european-higher-education-area.html>

<sup>9</sup> <https://unesdoc.unesco.org/ark:/48223/pf0000379707>

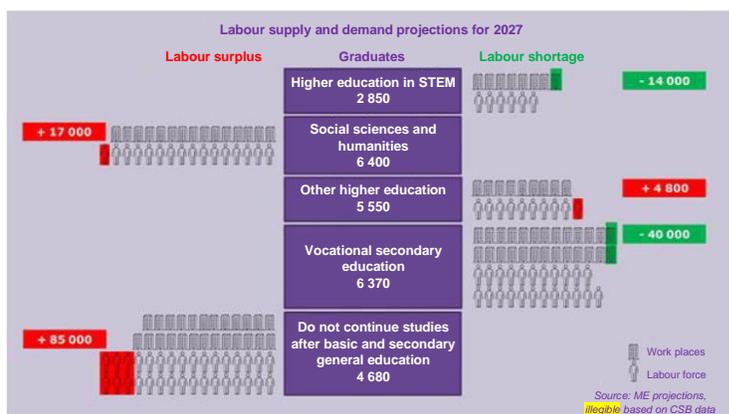
<sup>10</sup> [https://www.aip.lv/files/publikacijas/AIP\\_Koncepcija\\_2030\\_pilna\\_versija.pdf](https://www.aip.lv/files/publikacijas/AIP_Koncepcija_2030_pilna_versija.pdf)

<sup>11</sup> <http://www.oecd.org/education/trends-shaping-education-22187049.htm>

Compared to other OECD and European Union countries, Latvia is significantly behind in the use of digital technologies (almost half of the population still lacks basic digital skills). In the future, the Latvian economy will continue to be influenced by market globalisation, the international business environment, cooperation and global value chains, and the active use of technologies and research in the development of products and services<sup>12</sup>. As is often pointed out, Latvia has relatively low labour productivity indicators in this respect, which is influenced by the insufficient innovativeness of companies in Latvia, use of new technologies and their involvement in the production of various products in the world (global value chains). Economic processes are closely linked to the orientation towards an environmentally friendly approach in the use of resources – circular economy and sustainable consumption. The environment, the climate crisis and resource sustainability are particularly topical issues given the increase in pollution and natural disasters.

The employment structure in Latvia is changing, with a declining demand for low-skilled occupations and an increasing demand for workers in high- and medium-high-tech sectors, especially in ICT and high-skilled occupations. Figure 2 shows the Ministry of Economy's projections of labour demand changes up to 2027.

**Figure 2. Ministry of Economy projections of labour supply and demand up to 2027.**



The ME forecasts that Latvia will continue to face a shortage of highly qualified specialists in science, ICT and engineering until 2027. At the same time, a surplus of highly qualified professionals with a background in the social sciences, humanities and commercial sciences is projected – up to ~17,000 in 2027. It is clear that the professions of the future are primarily based on knowledge, skills and competences related to digital technologies, data, artificial intelligence, new technologies, as well as skills that enable successful process management and human interaction in professional environments (marketing, sales, etc.)<sup>13</sup>. Both the data obtained by VUAS during the preparation of the Strategy and various other studies confirm that employers value skills such as creativity, problem-solving, negotiation, critical thinking, teamwork, socio-emotional competence, intercultural communication skills, adaptability and change management. This means that the work already being done at VUAS to develop interdisciplinary curricula will be a major advantage in ensuring the preparation of graduates who will enter the labour market with good ICT skills and social science competences.

In regards to higher education, it is highlighted that the major changes expected during the implementation

<sup>12</sup> <https://likumi.lv/ta/id/324332-par-izglitiba-attistibas-pamatnostadnem-20212027-gadam>

<sup>13</sup> World Economic Forum. (2021). Education and Skills. Available: <https://www.weforum.org/agenda/archive/education/>

period of the Strategy will be related to strengthening the quality of the academic staff and ensuring sustainable academic careers – the introduction of a new academic career model, including a change in the funding principles that provides a balance between research and teaching activities. Policy planning focuses on promoting excellence in higher education, including the development of modular, flexible, skills-enhancing and research-based study and further education programmes. The implementation phase of the strategy foresees a transition to a cyclical institutional accreditation based on an assessment of a HEI as an institution: the relevance of the activities to the type of institution, the strategic specialisations, the integral management of the whole HEI.

Adult education requires a shift in culture and mind-set, improving both employers' and employees' understanding of the importance of regular development of skills and acquisition of new skills. It is pointed out that the motivation of workers to engage in lifelong learning is currently generally low and needs to be systematically promoted at national level. In this area, VUAS can provide a flexible, up-to-date lifelong learning offer that responds to the situation in the labour market and the learning needs of individuals, offering different learning formats such as online learning, distance learning, etc. In addition, VUAS can provide much broader recognition of competences acquired outside formal education such as a specific part of a professional qualification.

The research, development and innovation (R&D&I) system in Latvia is developing, however at European level Latvia is described as a moderate innovator<sup>14</sup>. There is a persistent low level of investment in R&D&I, including a low share of private investment. Entrepreneurship in Latvia is characterised by a low level of innovation, dominated by low value-added products, high resource intensity, lack of cooperation and integration into global value chains. 5% of large companies generate 90% of the economy's income, however they do not undertake high-risk projects in this sector either (ibid.). The main challenges in research and innovation system identified for these companies are increasing the quantitative and qualitative capacity of human capital, where the number of people employed in Latvia is still critically low (~50% of the EU average), especially in RIS3 areas and regions. Opportunities for VUAS to promote R&D&I are to participate in regional and international research and innovation networks, to purposefully develop its innovation competences, to focus on the creation of applicable knowledge.

Table 5 below provides an overview of the European, national and regional development planning documents taken into account in the preparation of the Strategy, which include goals in education, science, innovation and regional development. The table also includes assessment of the impact of the visions, goals and objectives included in these documents on the planning of VUAS activities during the Strategy implementation period.

**Table 5. Overview of current policy planning documents in education, science and innovation.**

Title of the document	Contents	Impact on the development of VUAS activities
<b>Documents at international level</b>		
UN resolution “2030 Agenda for Sustainable Development”	4. Goal for sustainable development: Ensure inclusive and quality education and promote lifelong learning opportunities. Envisions equal access to	Develop quality and accessible education offer at higher education level. Foster entrepreneurial skills in all study programmes.

<sup>14</sup> <https://likumi.lv/ta/id/327732-par-eiropas-savienibas-kohezijas-politikas-programmu-2021-2027-gadam>

	<p>quality higher education regardless of gender, age and social status.</p> <p>4.4. sub-goal: By 2030, significantly increase the number of young people and adults with skills for employment, decent work and entrepreneurship – including technical and professional skills.</p>	
A Clean Planet for all: EU 2050 Long-term Development Strategy	The EU aims to make Europe climate neutral by 2050. The transformation of all economic sectors (energy, industry, transport, construction, agriculture, forestry) involves investments in technological solutions and empowering society.	<p>Continue developing climate neutrality topics in VUAS research.</p> <p>Continue developing interdisciplinary curricula related to climate issues in study programmes, in the form of intensive programmes (summer schools).</p> <p>Offer lifelong learning content on sustainability topics.</p>
European Industrial Strategy 2030	The aim is to create thematic European industrial ecosystems that bring together key partners: academic and research organisations, service providers and suppliers, SMEs and large companies.	<p>Implement ecosystem approach in building partnerships with industry and sector companies to address global challenges, as envisaged in VUAS mission.</p> <p>VUAS to be involved in the establishment of at least one centre of excellence in an area of expertise.</p>
EU Digital Strategy	The strategy aims to empower the society in Europe with digital solutions. Within the implementation of the Strategy, an important role in the development of research and innovation is planned for the European Open Science Cloud, which is being developed as a trusted digital platform to provide uninterrupted access to data and interoperable services throughout the research data cycle.	Promote open science processes within VUAS, join the European Open Science Cloud
The Digital Europe Programme	Highlights an inclusive approach to the development of the digital space, the need to empower users, as the digital transformation requires a higher level of digital skills. HEIs need to get involved in promoting digital skills in society – for students, for businesses, for the workforce.	VUAS continues to participate in the establishment of the European Digital Inclusion Hub (EDIH) in Latvia.
European Commission report “European Education Area 2025”	<p>Areas of activities</p> <p>- introducing micro-credentials system in all Member States – boosting competitiveness of Europe, reskilling and</p>	<p>Develop the offer of micro-credentials courses.</p> <p>Continue participation in the European University E3UDRES2.</p>

	<p>upskilling of the workforce in line with labour market changes;</p> <ul style="list-style-type: none"> <li>- European Universities Initiative to promote a pan-European education offer (joint programmes, mobility, talent attraction and development) with the aim of building resilient, inclusive and sustainable societies;</li> <li>- digital component in education, study programmes and research in areas such as cybersecurity, artificial intelligence, increasing the share of women in STEM fields, linking STEM programmes with business education;</li> <li>- transition to a greener lifestyle, greening of the infrastructure, integration of sustainability elements into education, research, daily activities of institutions;</li> <li>- digital transformation – institutions and HEIs as agents of digital transformation in society.</li> </ul>	<p>Digital skills at all levels of study.</p> <p>Develop study programmes in cyber security, artificial intelligence.</p> <p>Develop interdisciplinary study content.</p> <p>Integrate sustainability themes into study content.</p> <p>Implement sustainability principles in VUAS activities (infrastructure development).</p> <p>VUAS involves in promoting the digital transformation of society.</p> <p>Plan and implement the digital transformation of VUAS as an institution.</p>
European Skills Agenda 2020–2025	<p>The priorities of the programme are: the development of partnership skills in educational institutions to ensure closer cooperation with the public sector; a stronger focus on the development of transversal and entrepreneurial skills in educational content; the personalisation of educational content; and increased mobility of students and people employed in education.</p> <p>The creation of a European University Network is seen as one of the key instruments for implementing the Skills Agenda.</p> <p>The Skills Agenda on skills development in the education sector identifies the need to improve knowledge in open science, science management.</p>	<p>Fulfil VUAS mission to be a driving force for innovation, knowledge creation and the research community.</p> <p>Continue participation in the European University E3UDRES2.</p> <p>Develop personalised educational content.</p> <p>Improve VUAS processes for science management.</p> <p>Professional development of VUAS staff on open science issues, preparation and implementation of a publication strategy.</p>
<b>Planning documents at national level</b>		
Sustainable Development Strategy of Latvia until 2023 (SDSL)	<p>The Strategy underlines the need to invest in human capital development and growth in productivity by developing knowledge and skills that foster mass creative activity, flexibility of skills and competences, and development of an innovative and resource-efficient economy. Measures and programmes should be geared towards cooperation between stakeholders and co-responsible</p>	<p>Fulfil VUAS mission to be a driving force for innovation, knowledge creation and the research community at regional, national and international level.</p>

	<p>parties. An open innovation system is needed to foster the rapid diffusion of knowledge and to reduce the various barriers to knowledge acquisition. Latvian HEIs and research institutions need to become more open and promote the dissemination of knowledge both between academia and the business sector, and on international – national, Baltic Sea Region, European and global level.</p>	
<p>National Development Plan 2021–2027 (NDP 2027)</p>	<p>The NDP 2027 highlights the need for a stable renewal of human capital, research-based higher education, quality knowledge creation and its effective transfer to the business and public sectors. NDP 2027 emphasises the importance of developing international cooperation, especially with the Latvian diaspora, by attracting high-level guest lecturers from abroad, engaging in cooperation networks, and thus ensuring global circulation of knowledge. Scarce development resources should be concentrated in the knowledge areas (smart specialisation areas, RIS3) where there is the highest potential to develop knowledge and technology intensive and exportable products and services. Higher education is addressed under the priority “Knowledge and Skills for Personal and National Growth”. NDP 2027 highlights lifelong learning opportunities for individuals, excellent science for knowledge transfer, strengthening of entrepreneurship, enterprise development to engage scientists and businesses in tackling challenges critical to the growth of the society, and the use of research results to create new products in promising areas. Objectives for the development of higher education: developing higher education institutions as innovation hubs, thus fostering creation of world-class knowledge, knowledge transfer and smart growth of society, development of student-centred and research-based education, strengthening of HEIs in their strategic specialisation areas, creation of</p>	<p>Develop quality and research-based education offer at higher education level. Continue cooperation with the diaspora academic community, especially in research. Develop and implement VUAS publication strategy. Develop educational content and research, be involved in innovation in RIS3 areas, in particular “Information and Communication Technologies” and “Social Sciences and Humanities”, an area with a horizontal contribution to strengthening RIS3 areas. Participate in the creation of innovative and exportable products, VUAS staff and students are involved in the creation of start-ups. Develop lifelong learning offer. Establish and develop a doctoral school, support measures for doctoral students. VUAS is involved in strengthening the security of the information space in Latvia – development of media literacy, strategic communication topics in study content and research, provision of expertise to public administration. Research, development of educational content with a regional dimension.</p>

	<p>an international environment in HEIs (staff, students), focus on the development of digital skills. The following are highlighted as objectives to be carried out in the context of scientific development: increasing the share of scientific staff in the country; increasing the share of doctoral students; increasing funding for research; increasing the number of internationally significant publications, especially focusing on publications with a high citation index; increasing private sector investment in research and development (R&amp;D). The role of HEIs is also reflected in the adult learning activities: to be involved in shaping education offer in line with trends in the labour market by developing training modules, e-learning courses, personalising learning and ensuring the recognition of acquired competencies. The NDP 2027 priority “Business Competitiveness and Material Well-being” highlights the important role of HEIs in fostering an innovation ecosystem that promotes a purposeful and continuous creation of knowledge and its further use in the development and marketing of products and services. The NDP priority "A United &amp; Open, Safe and Secure Society" emphasises the importance of the security of the information space and the knowledge and media literacy of its users, including civic skills, knowledge and attitudes, in strengthening the resilience of the society and democracy. In the context of VUAS as a regional university, it is important to note the rural development space outlined in the NDP, to which the related objectives set out in NDP 2027 are: diversification of the rural economy; use of bioresources to create innovative and exportable products; strengthening communities.</p>	<p>Align VUAS development goals with stakeholders' needs and vision for the development.</p>
<p>Education Development Guidelines 2021–2027 (EDG)</p>	<p>The EDG 20207 plans for targeted and mutually integrated actions to develop and improve the quality, efficiency, accessibility and cooperation aspects of education offer in all types and levels –</p>	<p>Develop quality and research-based education offer at higher education and lifelong learning levels.</p>

	<p>general education, vocational and adult education and higher education. Higher education offer must be modern, of high-quality, science-based and student-centred. A modular approach to curriculum development should be developed.</p> <p>The EDG identifies the need to develop research-based and innovation-oriented doctoral studies.</p> <p>The promotion process needs to be improved to ensure the development and growth opportunities of the academic staff – the academic career model needs to be implemented.</p>	<p>Implement the academic career model.</p> <p>Strengthen cooperation with sector partners, public administration.</p> <p>VUAS is involved in policy planning processes for education, science and innovation, increasing influence on policy planning at regional, national level.</p>
<p>Science, Technology Development and Innovation Guidelines 2021–2027 (STDIG)</p>	<p>The STDIG highlights the need to strengthen the overall R&amp;D intensity in the country, focusing on the digital transformation of the R&amp;D system, improving institutional governance, and increasing the social and economic value of research. It is planned to further develop public higher education institutions as knowledge and innovation hubs, concentrating research capacity there, strengthening research infrastructure and resource sharing, and proactively developing new ways of sharing knowledge with industry and the European R&amp;D community. The need for a new doctoral model is highlighted, as is the need for a reform of the academic career system.</p> <p>Improving knowledge and technology transfer requires improving the administrative and coordination processes of scientific institutes by developing a culture of open science and ensuring that research data and results are widely accessible and usable by the society.</p>	<p>Strengthen the scientific capacity of VUAS and its ability to participate in international research networks, primarily through opportunities within the E3UDRES2 alliance, but also through participation in other partnership networks.</p> <p>Establish VUAS doctoral school.</p> <p>Introduce an academic career model that ensures the development of human capital involved in research.</p> <p>VUAS participates in at least one RIS3 Research and Innovation Centre of Excellence.</p> <p>Implement open science principles in VUAS activities.</p> <p>VUAS is involved in policy planning processes for education, science and innovation, increasing influence on policy planning at regional, national level.</p>
<p>National Industrial Policy Guidelines 2021–2027 (NIP)</p>	<p>NIP 2027 emphasises productivity-based competitiveness, and therefore aims to foster the growth of productivity and export through measures to strengthen human capital capacity and increase innovation capacity. NIP 2027 outlines activities to transform the economy in Latvia through the development of research, technological development and</p>	<p>Fulfil VUAS mission to be a driving force for innovation, knowledge creation and the research community in RIS3 areas, in particular “Information and Communication Technologies” and “Social Sciences and Humanities”, an area with a horizontal</p>

	<p>innovation in RIS3 specialisation areas and within RIS3 value chain ecosystems.</p>	<p>contribution to strengthening RIS3 areas. Develop Open Innovation Centres at VUAS.</p> <p>Launch industrial doctoral programme at VUAS.</p>
<p>Digital Transformation Guidelines 2021 2027 (DTG 2027)</p>	<p>The DTG 2027 outlines an integrated strategy for comprehensive change in the society, economy and public administration of Latvia. For HEIs, the challenges highlighted in relation to the digitisation of the R&amp;D system are the development of digital research infrastructures and the integration of national digital infrastructures into European and global networks, improving the research data management process, adapting scientific activities information systems to the challenges of digital transformation, and raising and addressing human resources and international cooperation issues.</p> <p>In terms of education content, it highlights the need for HEIs to ensure that digital literacy as a transversal competency is integrated throughout the curriculum. Higher education institutions must become digital innovation hubs. A more active digitisation of education processes is needed.</p> <p>Transferring the digital knowledge of HEIs to the society.</p>	<p>More active inclusion of digital competencies as transversal competencies in studies, lifelong learning.</p> <p>Develop and implement VUAS digitisation strategy.</p> <p>VUAS continues to participate in the establishment of the European Digital Inclusion Hub (EDIH) in Latvia.</p>
<p>Mass Media Policy Guidelines of Latvia 2023–2027 (LMPP) (draft)</p>	<p>The LMPP points out that a quality and professional media environment prerequisite is the quality of media education programmes at HEIs in order to fully prepare students to work in the media. It is important to promote practical skills in the study process so that graduates are ready to work in the sector.</p> <p>On media literacy, it points out that the education system as a whole plays an important role in strengthening media literacy. There is a need for research on media literacy and its development in society in order to prepare appropriate measures to raise the level of media literacy.</p>	<p>Develop VUAS studies and research in the field of communication and media.</p> <p>Continue work within the Baltic Digital Disinformation Observatory.</p>

Regional Policy Guidelines 2021–2027	The RPG 2027 aims to create the conditions for more balanced territorial development in Latvia. It envisions to set up and operate a regional knowledge and innovation platform in each planning region to promote more efficient use of resources in the regions and foster cooperation between municipalities, businesses, higher education institutions, scientific institutions and civil society. The aim is to train and attract the highly qualified specialists needed for the region's specialisation, and to develop products, services, and processes with high added-value.	Fulfil VUAS mission to be a driving force for innovation, knowledge creation and the research community at regional level in Latvia and by gaining experience at European level. Effective use of the knowledge, competences at the disposal of VUAS to promote regional development. Align study and lifelong learning offer with the needs of the Vidzeme region, the region's specialisation. VUAS is involved in regional development policy planning processes.
<b>Policy planning documents at regional level</b>		
Vidzeme Planning Region (VPR) Development Programme 2022–2027, Strategy Part	The objectives identified for Vidzeme economic specialisation: -develop research and innovation in the strategic priority areas of Vidzeme economic smart specialisation by promoting appropriate targeted and complementary investment instruments; -facilitate the transfer and absorption of public and private research results, knowledge and technology into business in the strategic priority areas of the region's economic smart specialisation; -stimulate the production of more technology-intensive, higher added value and export-potential products and services in the region and their integration into higher levels of global value chains. The priority economic areas and sectors for smart specialisation in the Vidzeme region are technology- and export-intensive, sustainable areas: wood processing, food and beverage production; forestry; agriculture; health rehabilitation and care; renewable energy production; blue bioeconomy.	Link VUAS research and innovation activities to the smart specialisation areas identified by the VPR. Prepare joint applications for research projects with the VPR, other stakeholders in the Vidzeme region to attract funding for new knowledge acquisition, commercialisation of science in the region's smart specialisation areas where VUAS can significantly contribute within its expertise (ICT solutions in manufacturing, service creation, social, economic dimension in creation of new products and services, sustainable construction solutions, etc.).
Sustainable Development Strategy of Valmiera County 2022–2038	Long-term priority: a healthy, creative and knowledgeable society: - development of education services at all levels in the	Develop high-quality study and lifelong learning offer at VUAS, especially in STEM fields and in

	<p>region; linking education with entrepreneurship;</p> <ul style="list-style-type: none"> <li>- nurturing talent, especially in STEM disciplines;</li> <li>- promoting adult education.</li> </ul> <p>Long-term priority: a vibrant economy:</p> <ul style="list-style-type: none"> <li>- training and attracting qualified professionals;</li> <li>- strengthen synergies between education institutions and entrepreneurship;</li> <li>- development of industrial zones.</li> </ul> <p>Objectives to achieve long-term priorities:</p> <ul style="list-style-type: none"> <li>- Increasing knowledge level (especially in STEM disciplines), nurturing talent and attracting it to entrepreneurship;</li> <li>- Promoting knowledge transfer and synergy of higher and vocational education institutions with the business sector by Vidzeme University of Applied Sciences and other regional branches of higher education institutions and vocational schools participating in the development of Industrial Zones, offering adult education and retraining services;</li> <li>- Strengthening the strategic specialisation of Vidzeme University of Applied Sciences, promoting excellence, innovation and knowledge transfer for the competitiveness of the Vidzeme region economy;</li> <li>- Promoting cross-border mobility of academic and scientific staff, students and graduates;</li> <li>- Developing the learning environment in higher education institutions;</li> <li>- Improving the energy efficiency of higher education buildings, landscaping and infrastructure development;</li> <li>- Developing new study directions in priority sectors of the circular economy;</li> </ul>	<p>relation to entrepreneurship skills.</p> <p>Flexible planning of study offer according to the needs over the course of the development of industrial zones in the region.</p> <p>Promote cooperation with service providers at different levels of education, including in lifelong learning.</p> <p>Implement joint support measures, including attraction of external funding with Municipality of Valmiera region to strengthen VUAS strategic specialisation, to promote mobility of staff, graduates and students, to support students, to improve the study environment, to implement energy efficiency measures, etc.</p> <p>Activate VUAS Foundation in the implementation of scholarship programmes.</p> <p>VUAS participates in the development of the EDIH Centre. VUAS is involved in the creation of start-ups.</p> <p>Provide VUAS expertise in the development of culture and tourism sectors in the region – creation of new services, historical research, digitisation. Cooperate with Valmiera Business Incubator.</p>
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	<ul style="list-style-type: none"> <li>- Coordinating adult education services in the county and promoting the value of lifelong learning;</li> <li>- Development of new, high-quality cultural products and services;</li> <li>- Development of accessible cultural education offer;</li> <li>- Training digital agents for the Vidzeme region;</li> <li>- Improving the infrastructure of higher education and vocational training institutions for education directions in priority sectors of the circular economy;</li> <li>- Supporting ICT start-ups;</li> <li>- Municipal scholarship fund for ICT students;</li> <li>- Promoting clusters of IT companies;</li> <li>- Valmiera – an environment for testing and experimenting with smart technologies;</li> <li>- Human resource development in the tourism sector;</li> <li>- Electronic encyclopaedia of the regions or extension of the existing encyclopaedia and digitisation of the collections of the regional museums;</li> </ul>	
<p>VUAS Alumni Association Strategy</p>	<p>Cooperation with VUAS in research and innovation, talent development, involvement in VUAS communication and marketing activities, becoming a networking platform for graduates.</p>	<p>Joint research and innovation projects.  Involve graduates in VUAS brand creation.  Involve graduates in ensuring internships for students, career creation.  Improve communication with the graduates community.  VUAS Foundation scholarship programmes with support from graduates.</p>

#### **4. Analysis of strengths, weaknesses, threats and opportunities**

The SWOT analysis is based on the description of the current situation in the organisation and the sector as a whole, taking into account the impact of external factors, to strengthen the organisation's weaknesses and reduce external challenges.

##### **Strengths**

###### **Studies and lifelong learning**

Diverse study content offer, including in English (at Master's and Doctoral level, all programmes are in English)

Experience in creation of double degrees and jointly delivered SPs

Modern, interactive methods used in the implementation of studies

Intensive involvement of local and foreign guest lecturers in the study process

Relatively young academic staff

Loyal graduates interested in the growth of the university

###### **Research**

Active scientific activity in regional, national and international research projects

Wide and diverse range of academic and industry partners for development of new applications

Experience in applied research

###### **Promotion of innovation**

Open to new ideas

Environment for testing ideas, making mistakes, learning

Easily accessible international knowledge and experience (partner networks)

VUAS has historically established good relationship with Valmiera Business and Innovation Incubator of LIAA, with other partners involved in innovation promotion

###### **Organisation development**

Dynamic environment and short decision-making "chain" in the organisation

Relatively small organisation, ambitious, flexible and able to change and adapt quickly

Orientation towards international cooperation as an essential value in the culture of the organisation

No distinct formal hierarchy, accessible and supportive leadership of the organisation

##### **Weaknesses**

###### **Studies and lifelong learning**

Insufficient number of students at all levels of education, with a downward trend, especially in bachelor programmes

Unattractive remuneration system for attracting high-level guest professors

Significant drop-out rate, especially in engineering programmes, where students enter without sufficient knowledge

Insufficient activity in lifelong learning

###### **Research**

Insufficient number of high-level publications

Insufficient number of international research projects

Incomplete planning and management system for scientific activities

Few doctoral students in VUAS doctoral programmes, insufficient number of doctoral degree holders

###### **Promotion of innovation**

Culture of innovation within VUAS is still emerging

Up to now, measures to develop and coordinate culture have not been targeted and coordinated

###### **Organisation development**

Distinct diversity of micro-cultures within VUAS

Fragmented cooperation between departments

It has not been possible to allocate sufficient funding within the existing budget for infrastructure development, digitisation  
Administrative staff salaries not in line with average (regional) salary levels  
Uneven workload of academic staff  
Lack of recognition of VUAS, fragmented brand  
Accessibility in all VUAS buildings

### **Threats**

Russia's war in Ukraine lowers the paying capacity of potential students in Latvia  
Demographic situation in Latvia  
Overall geopolitical situation in the region and the war in Ukraine making Latvia unattractive for potential students from abroad  
Potential for politically motivated, inconsistent decisions in education and science policy at national level  
Negative public image of higher education in Latvia  
Poorly prepared secondary education graduates for successful completion of study programmes offered by VUAS  
Insufficient state budget funding for higher education, science, innovation  
High competition in lifelong learning  
Increasing bureaucracy in Latvia  
Increasing international competition for student attraction: the number of study programmes offered in e-environments of foreign HEIs is increasing, while the demand for traditional face-to-face studies is decreasing.

### **Opportunities**

#### **Studies and lifelong learning**

EU policies see the need to increase the number of people with higher education  
European University Alliances are envisaged as key platforms for the future development of education in the EU  
Increasing emphasis on creation of interdisciplinary study programmes, multi-institutional experiences for students, joint programmes  
Emphasis on lifelong learning offer, lifelong learning opportunities  
Cooperation in development as a priority after the end of the war in Ukraine

#### **Research**

Demand for applied research is growing, the role of higher education institutions in commercialisation of science is being emphasised  
Shift towards a mission-based approach to research

#### **Promotion of innovation**

National policies in Latvia highlight the role of higher education institutions in promotion of innovation  
Start-up Village Initiative for creation of innovative companies outside national capital cities  
Ambitions of Valmiera region to boost the region's economic activity