

# Expert group joint opinion

Evaluation Procedure: Assessment of Study Field

Higher Education Institution: Rēzekne Academy of Technologies

Study field: Architecture and Construction

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# Summary Assessment of the Study Field

## Summary Assessment of the Study Field

Overall, Rēzekne Academy of Technologies (RAT) and its managed study field “Architecture and Construction” (study field) with study programme “Civil Engineering” (study programme) mostly or fully ensures the compliance of legal requirements and shows good management and quality assurance practices.

Experts have also identified several necessary and recommended improvements.

The major positive aspects of the study field and relevant study programme are:

1. Clearly defined and communicated key principles for quality management, ensuring a common understanding of the quality management system.
2. Facilities and other infrastructural resources are modern and sufficient.
3. Support system for students is effective and responsive.
4. Well organized overall system of acquiring funding for infrastructure developing and academic activities.
5. The regional municipalities and local construction industry are supportive of the study field, through co-operation agreements on internships, traineeships, study tours and access to relevant industry software and databases.

Among the weaknesses, the experts pointed out:

1. The unfavorable impact of insufficient English language skills on the opportunities for international cooperation.
2. Insufficient inter-institutional cooperation at the national level.
3. Insufficient opportunities for Rēzekne as a small city.

As in many universities in Latvia, student and teaching staff international mobility is a place for improvement, too.

## 1. Management of the Study Field

### Analysis

1.1 The study programme of the study field has been implemented from 2004 (Self evaluation report (SER), p. 10) with the aim defined in the RAT Strategy to strengthen the strategic role of RAT in the Latgale region, the Latvian and European system of higher education and scientific institutions. Aims of the study field are clear and based on the operational and development strategy of the RAT for 2016-2023:

- 1) the development, learning, study, promotion, and application of multidisciplinary technological solutions;
- 2) the improvement of the role of interdisciplinary link in the development of education and science in Latvia;
- 3) to primarily reduce the factors hindering the development of Latgale region;
- 4) the development and practical marketing of innovative products necessary for economic sectors.

Aim - to prepare students for work in the specialties of construction manager or construction supervisor, promoting their development as free, responsible and creative personalities, to facilitate the acquisition of knowledge and skills (including independent learning skills). This study field prepares the necessary construction specialists in the Latgale region and at the national level.

The study field conforms to the development trends in society and economy. RAT is the only institution in the Latgale region implementing a first level professional higher education study programme in construction. The economy has a high demand for graduates of this study programme. The attraction of new and qualified construction specialists is also one of the objectives of the Latgale Development Programme 2021-2027 “Quality Living Environment and Development

of Territories” (SER, p. 14).

Aims of the study field are closely linked with the Latgale Strategy 2030 (SER, p. 12).

After graduating from this programme, it is possible to continue studies and obtain the 5th professional qualification. RAT has concluded an ERASMUS cooperation agreement with the bachelor's study programme Civil and Construction Engineering, implemented at the Deggendorf Institute of Technology (DIT), which envisages study and internship mobility for the students acquiring the study programme. The content of the DIT programme corresponds to the RAT Study Programme, the study content acquired in mobility is fully acknowledged by RAT.

## 1.2.

The management and administration structure of the RAT is based on a variety of bodies approved by the Senate (SER, Annex 2) with clearly defined roles which promote focus on the continuous improvement and development of the curriculum. The structure of the study field ensures implementation of the following principles:

- 1) all stakeholders are involved in the implementation of the study field— students, student council, teaching staff, general staff, employers, graduates;
- 2) each unit has clearly defined responsibilities, rights and obligations;
- 3) continuous exchange of knowledge for the introduction of new developments and improvements.

The structure of the RAT management and administration is clearly levelled and with well distributed roles facilitating its orientation toward continuous improvement of the study programme. In general the management structure of the study field is good (SER, p.17, 18) and meeting in assessment visit with the director of the study field shows that the study field is managed by the Director of the Study Programme and the Head of the Study Field which manages and plans the work of the Study Field Council. The general meeting of the study field Council is convened at least three times per study year. The main directions and principles for the development of the study field are determined by the Faculty Council. However, this creates a discrepancy with the management structure of the study field indicated in Annex 4 to SER which also shows the Study Field Self-Assessment Group that is managed by the Head of the Study Field and the operational principles of which are already implemented by the Study Field Council.

Annex 4 to SER also shows the Study Field Expert Council which is connected with the Faculty Council and the Study Field Self-Assessment Working Group. The Study Field Expert Council should be connected with the Study Field Council, but this is not indicated. In overall, this shows disassociation among the established management structures.

The diagram provided in Annex 4 to SER does not clearly show to whom the Study Field Expert Council submits its proposals and who reviews them. In practice, operations of the RAT do not have any problems and are organised – proposals are submitted for examination to the Study Field Council. It would be advisable to make changes in the visual diagram to show the management structure of the study direction more clearly.

The administrative management and academic units and staff of the RAT actively participate in operational discussions and weekly and monthly meetings, and this allows for efficient work organisation and decision-making (SER, Annex 2). There is a visible student-centered approach also in the management and administrations of the study field as the Student Council is involved in the management discussions and decision-making. The content and administrative management decisions of the study field and relevant study programme are advised to the teaching staff whose tasks are the development and improvement of descriptions and content of study courses, updating of literature, determination of assessment criteria. This information gives rise to the question – how could course descriptions be approved on 21.06.2021 where laws and regulations that have become invalid several years ago are indicated as mandatory sources of information for students, e.g., in courses Construction Economy and Construction Design.

This problem was found only in descriptions of separate study courses; however, it shows that the management of the study field must pay more attention to prevent such cases.

Without considering that only one study programme is being implemented in this field, decision-making is swift and effective, since many study-field structures are based on the same academic staff, the head of the e.g. study field, the head of the study programme, the elected academic staff. The development of content for the study field and its practical implementation is supported by such administrative and technical units as the Study Department, Lifelong Learning Centre, library, Financial Department, Information and Communication Technologies Research Centre, Institute of Engineering. The structure corresponds to the strategy of the RAT.

During the assessment visit, the Information System Security Manager introduced experts with the used IT systems which ensure qualitative learning process and circulation of documents, and which are important, especially when lectures are held remotely. The availability of library resources and use of the software necessary in study courses is ensured to each student from the individual working places. The provided Moodle system also is a good support for the implementation of courses.

### 1.3.

Admission to the study programme of the RAT is governed by the Rules of Admission approved by the Senate.

Previously completed secondary education is a requirement for admission to basic study programmes. Students are admitted in an open and equal competition based on the results of final examinations. The RAT Rules of Admission specify three final examinations with the results of which applicants participate in the competition: Latvian language, math, and foreign language (SER, p. 19). Process for the receipt of additional points has been developed so that the best and most motivated applicants would be admitted as there is a competition for the State funded study places (2.1-2.8 applicants per State funded study place). There is a different trend in applications for personal funding and part-time tuition, where no competition takes place, and the number of students admitted is not large. Rules of Admission for each subsequent year are approved by the Senate and published on the website of RAT by 1 November of the respective year.

RAT has developed and introduced procedures for the recognition of competences acquired outside formal education or obtained by professional experience and study results achieved in previous education. In accordance with the Regulations regarding Recognition of Competences Acquired Outside Formal Education or Obtained by Professional Experience, and Study Results Achieved in Previous Education at RAT (SER, Annex 1, p. 19) which is approved by the Senate, the recognition is conducted by a commission of the engineering field which examines received applications and decides on the recognition of study results or rejection of the recognition. All decisions are recorded in the protocol log for the recognition of study results achieved in the previous education or obtained by professional experience. 85 % of the students have previous professional work experience in the field of construction, therefore such opportunity is important and requested by them.

RAT also has developed and implements in accordance with the Lisbon Convention procedures for the recognition of previous education when transferring from another higher education institution to the RAT, transferring from one study programme to another within the RAT, or commencing studies after a break. This process is governed by the RAT Regulation regarding the Academic Recognition of Study Courses (SER, Annex 1, p. 21).

Main principles for the assessment of study results at the RAT (SER, p. 22) are: course

- 1) conformity of the methods for the assessment of study results with the study results defined for the study programme and course;
- 2) clarity, consistency, and availability of the requirements for the assessment of study results to students;
- 3) aligned application of the measures for the assessment of study results within the period when the study course is implemented;
- 4) assessment of the individual work of students;
- 5) rights of students to request explanations.

At the RAT, procedures for the assessment of the achievements of students are developed so that they ensure consistent application of a student-oriented approach. Assessment principles at the RAT are laid down by the methodological recommendations Quality System based on Study Results, Regulations regarding Examinations and Tests in Study Courses, State and Final Examinations approved by the Senate, and Methodological Recommendations for Organising the Individual Work of Students approved by the RAT Study Council (SER, Annex 1, p. 15, 21, 26).

All procedures developed by the RAT fully meet the requirements of laws and regulations, are efficient and logical, and are supported by various internal documents and forms.

#### 1.4.

The academic integrity principles and mechanisms are well defined and sufficiently met (SER, p. 24), and they are governed by the Code of Ethics of the RAT (SER, Annex 1, p. 14). Academic integrity principles and their application at the RAT are governed by the Regulations regarding the Control and Elimination of Plagiarism in RAT (SER, Annex 1, p. 6) approved by the Senate. Within the RAT, measures for the control and elimination of plagiarism are applied to the study process and the academic and scientific activities of the academic staff. The use of the single computerised plagiarism control system is one of the essential tools for counter-planning RAT. Since 2014 under an order for final thesis, i.e., qualification thesis, of students' end tests, students have to upload jobs to the studio information system LAIS synchronized with the plagiarism control system. If the findings are qualified as plagiarism, the Study council shall propose to the Dean the student's exmatriculation. The risks of plagiarism identified in the direction of architecture and construction mostly show a small percentage of coincidence, because in most of the final works the technical task and the legislation coincide, to which the works are also referred to. In the academic year 2019/2020 and 2020/2021 plagiarism has not been detected in the qualification thesis.

In situations where a lecturer suspects a student's job, the plagiarism control system is also used to test study courses. The lecturer shall take a decision on the follow-up according to the nature and seriousness of the ethical violation.

Starting from 2019/2020, the automatic plagiarism recognition tools of the RAT are connected to the site for electronic journals <http://journals.ru.lv> where scientific articles prepared by teaching staff and students of the study field are published in freely accessible form. All stakeholders have been informed of such instruments and mechanisms.

#### 1.5.

Information of the study field and the study programme corresponding thereto is publicly available on the website of the RAT ([https://www.rta.lv/rta\\_istenotas\\_studiju\\_programmas](https://www.rta.lv/rta_istenotas_studiju_programmas)) and in the LAIS system (<https://luis.lu.lv/pls/lu/stud.menu?l=1&mn=K>). The information has been published in the Latvian language and is sufficient for attracting potential students, and fully covers the planned target audience. The information corresponds to the information available in the official registers. Marketing communications in the Latgale region and positive feedback from the graduates are important sources of information for the potential applicants.

### **Conclusions. Strengths and weaknesses**

Conclusions :

Aims of the study field are closely linked to the development strategies of the RAT, Latgale region and State, based on connection with the labour market. These aims are proven to be achievable (1). The structure and management process could be more efficient and flexible which would allow for decisions to be made in a more rapid manner. All administrative management and academic structures and members of the staff are involved in the decision-making process (2). Developed systems and introduced academic procedures fully correspond to the requirements of laws and regulations, they are logical and efficient, and supplement with internal documentation (3). The

academic integrity principles and mechanisms are well defined, legally determined and used in the operational practice (4). Information published on the website is developed, detailed, available and sufficient (5).

#### Strengths

1. The objectives of the study field are in line with the RAT development strategy.
2. Materials - technical provision for the development of study and non - study activities.
3. High awareness and positive effects of RAT in Latgale region.
4. Real approach to the working environment, positive feedback from graduates on studies and employers feedback on the need for the implementation of the programme for regional needs.

#### Weaknesses.

1. Disassociation among the established management structures, organizational structure does not clearly show to whom the Study Field Expert Council submits its proposals and who reviews them.
2. Literature is insufficiently checked when updating description of study courses and content prior to approval.

## **2. Efficiency of the Internal Quality Assurance System**

### **Analysis**

#### 2.1.

RAT has fully adopted European best practice in respect of a comprehensive quality assurance system, supported by a study quality management system covering all relevant aspects. The system is built on the RAT Quality Policy, published in the RAT Quality Handbook. The handbook is concise, clearly written and publically-available on the RAT website (SER p.9). Quality management has been facilitated since 2019 by an electronic internal document management system, which serves to enhance transparency of the RAT management processes and decision-making (SER, p.20).

Founded on nine clearly defined and communicated key principles for quality management, the quality assurance system is based on the Excellence Model ensuring continuous improvement and development to increase stakeholder satisfaction. It comprises regulations on academic and professional study programme development; courses based on learning outcomes, test and examination guidelines; staff quality evaluation and development, data collection in respect of student experience, graduate employability and institution-wide key performance indicators determined on an annual basis (SER, p.10, 25).

The quality assurance system subjects the following areas to internal evaluation through a self evaluation process:

- 1) compliance of the study process with RAT development policy;
- 2) quality of the academic staff;
- 3) quality of the study programme;
- 4) quality of cooperation with applicants and graduates;
- 5) quality of the study process;
- 6) quality of infrastructure;
- 7) financing and quality of economic activity.

Evaluation areas number 2), 3), 5) and 6) on this list are actively monitored through feedback from students, graduates and employers. Student feedback loops include formal surveys and regular meetings with the programme management. These four areas, in particular, address the ongoing achievement of the aims and learning outcomes of the study programme and thereby, in this case, the study field.

Prior to 2020 the self-evaluation was conducted as a comprehensive retrospective assessment of the previous academic year's implementation of a programme. The resulting SER was successively

discussed by a Study Direction Council, Study Expert Council and Study Council. Since 2020 the system of self-evaluation has focused on successive study directions and study programmes, evaluating the most important quality indicators of the education process on successive study directions and study programmes (SER, p.26).

## 2.2.

The development and revision of study programmes uses a methodology that is logical and inclusive of internal and external stakeholders. It is efficient in programme development but it lacks some efficiency in revision due to a relatively low level of participation by some stakeholders (notably students) in completing surveys. The process is primarily achieved through a Study Direction Council (SDC), which enables 'bottom up' and 'top down' proposals to be considered in a strictly regulated manner. The development process involves a review of the demands of the labour market, the stability of student demand and alignment with the RAT Development Plan. Prior to consideration by the Faculty Council the proposed study programme must be evaluated by a Study Expert Council. Subsequent approval by the Senate is contingent on a positive evaluation by an independent expert group in the academic or professional sector of the study field. Once implemented, the study programme delivery is reviewed annually and considers feedback data from surveys of students, graduates and employers. Additionally, there is cyclical external evaluation in accordance with national accreditation procedures.

The membership of the SDC includes the Director of the study programme and the module coordinators. (SER, p.8). The work of the SDC is informed directly and indirectly by students, employers and graduates through surveys and involvement of employers and graduates as external lecturers. These external lecturers form a significant percentage of the cohort delivering the programme. The SDC meets several times per academic year. It evaluates information on the current study programme implementation measures and tasks (SER, p.19).

The SDC is intended to, inter alia, plan, coordinate and promote scientific activities; scientific infrastructure; and cooperation with foreign institutions in the study field. Its other responsibilities centre around the matters directly linked to the immediate operational needs of delivering the programme. The responsibilities in respect delivering the teaching are better served than directing the research activity and internationalisation initiatives of the Academy underpinning high impact cutting edge teaching. This is an inevitable consequence of the high external composition of the staff delivering the current sole programme in the study field.

The quality procedures comply with regulatory standards and are inclusive of all stakeholder input - students, faculty, alumni and employers. During the site visit the Expert Group also learned of the horizontal nature of the management structure (as opposed to a departmental silo structure and mentality) such that the SDC can keep well-informed of current market needs ('pulse of the industry') through the external stakeholder involvement of Study Expert Council.

Regarding some lack of efficiency in revision due to a relatively low level of participation by students in completing surveys, this may indicate a breakdown in the feedback loop back to the students. The quality system is based on the annual Plan-Do-Check-Act (PDCA) loop, where in this case 'check' is the stakeholder surveys. Optimal functioning of any organisation's PDCA system involves a subsequent communication report to the stakeholders on how their 'Check input' has resulted in specific 'Act outputs' (if any). Although difficult to implement in the dynamic stakeholder cohorts of HEI's, the absence of this information exchange may be a contributor to the low rates of stakeholder feedback and survey fatigue.

## 2.3.

Statistical data is collected from internal and external sources. The students are surveyed at least twice a year, while graduates and employers are surveyed at least twice a year. Data is obtained annually from the State Employment Agency to determine graduate employability statistics. Statistical data collected for external agencies is also used for improving the study direction. These external agencies include the Central Statistical Bureau, the Ministry of Education and Science,

university ranking agencies and Erasmus partners. (SER, p.27,29).

Data is also collected or disseminated to individual students and the Students' Council. Individual students are advised through the "My Academy" publication of their legal rights to complain and/or comment on their personal student experience. Appropriate procedures are set out in student regulations and the RAT Constitution. Additionally, the RAT Student Self-Government Regulations give the Students' Council significant powers in respect of access to information to enhance the student learning experience. (SER, p.28).

Nevertheless, a weakness exists in respect of eliciting feedback from some stakeholders. This may be a result of the absence of adequate and timely feedback to stakeholders, especially students, on quality improvements that derived directly from their input to surveys. The students of RAT, in common with students in most well-functioning HEI's throughout the world, demonstrate elements of survey fatigue – the percentage participation rate in supplying feedback data is consistently low. See comments under 2.2 above.

2.4.

RAT is fully integrating the standards set out in Part 1 of ESG. For example, the quality assurance policy was developed in 2018 and is being used to update and replace the quality management system developed in 2009.; a study quality assessment and control system is in place since 2014; the quality indicators of lecturers' work are aligned since 2018 with the student-centered approach assessing the contribution of the lecturer to the development of the academic, scientific and professional competence of the student. No impediments have been identified in integrating the 10 standards set out in Part 1 (SER, Page 31, 47).

## **Conclusions. Strengths and weaknesses**

Conclusions :

RAT has fully adopted European best practice in respect of putting in place a comprehensive Quality Assurance System, supported by a study quality management system covering all relevant aspects. The system is built on the RAT Quality Policy, published in the RAT Quality Handbook. The handbook is concise, clearly written and publically-available on the RAT website. Founded on nine clearly defined and communicated key principles for quality management, the procedures and regulations capture all relevant aspects of the operation, allowing generation of data on student satisfaction with courses and staff performance across their academic duties.

Formal processes are in place for standing committees (Study Direction, Study Experts, Study Council) to review the data, in the context of quality improvement. There is staff 'buy-in' to full implementation of the administrative load attached to the comprehensive Quality Assurance System. Prior to 2020 this was conducted on an annual basis for each programme. Since 2020 a more holistic system has been introduced evaluating the most important quality indicators of the education process on successive study directions and study programmes. This move from micro-management to a more thematic style of review is to be welcomed.

A weakness exists in respect of eliciting feedback from some stakeholders. The students of RAT, in common with students in most well-functioning HEI's throughout the world, demonstrate elements of survey fatigue – the percentage participation rate in supplying feedback data is consistently low. The students are surveyed at least twice a year, while graduates and employers are surveyed at least once a year. It would seem logical to expect a fall-off of interest in stakeholder surveys if people feel that they are being asked about the same topics too frequently with little expectation of hearing if their comments have influenced change.

RAT is building on its quality assurance policy and is fully integrating the ten standards set out in Part 1 of ESG into its practices, not least student-centred learning.

Strengths:



1. Clearly defined and communicated key principles for quality management, ensuring a common understanding of the quality management system.
2. Staff 'buy-in' to implementation of the comprehensive Quality Assurance System, despite the somewhat cumbersome administrative load and multi-layered review bodies.
3. Migration (in 2020) from multiple body oversight of highly detailed annual self-evaluation reports for each programme to a more thematic style of review, evaluating the most important quality indicators of the education process on successive study directions.

#### Weaknesses:

1. Low rates of stakeholder feedback especially among students (surveyed twice a year) possibly through survey fatigue, indicating a loss of efficiency in the data collection methodology.
2. Deficiency in the optimal use of the Plan-Do-Check-Act continuous quality improvement loop, through lack of follow-up communication with students on how their survey comments ('Check' cycle) impact on changes, if any, to the study process ('Act' cycle). This may contribute to the low level of student engagement with the surveys.

### 3. Resources and Provision of the Study Field

#### Analysis

##### 3.1.

There is an established and controlled budget for the study field in RAT, separating financial resources for the implementation of the study programme (SER p.3.1. Table 3.1.1) and research activities (Table 3.1.2). The research budget is not divided by the study field, but is directed to scientific institutes, grant programmes, research projects, commissioned work and other scientific activities. This makes it difficult to assess the exact amount of resources dedicated to this particular study field and whether it is efficient. There is no clearly defined budgeting system for both, the implementation of the study field/ the relevant study programme and a system for financing the scientific research and artistic creation activities.

##### 3.2.

RAT owns a 4.2 hectare lot at 115 Atbrivosanas aleja, where a campus is being built, bringing together educational and scientific resources in a single location, thus ensuring a much higher quality, attractive and, above all, rational and economically efficient infrastructure. The study process at RAT is implemented in four study blocks. The total area of the central building is 4844.5 m<sup>2</sup>. For the study process there are 19 classrooms used with a total area of 2059.4 m<sup>2</sup>. Students and academic staff have access to all necessary resources for the study process. There are available rooms for group work. All buildings are accessible to people with special needs, equipped with an entrance and indoor lifts. There is also a student's hostel and another one is being built in the area of the Campus.

The Information Technology Centre with two classrooms and two spacious computer classes is used for the study process. The building of the Faculty of Engineering (IF) houses a large and modern library and a reading room, which are accessible to students.

The material and technical facilities are constantly updated and improved. The lecture rooms are equipped with new furniture, air conditioners and provided with the necessary equipment, i.e. boards, screens, blinds, overhead projectors etc. as well as equipment for translation of small conferences and international seminars. All computers are connected through a computer network. Lecturers and students can use the open-access Internet and Wi-Fi network.

The equipment of all laboratories / workshops is freely available to every IF student, lecturer and researcher on both weekdays and weekends in appropriate working hours with respective assistance by the technical staff. They provide support to lecturers during classes, to students and scientists in the development of their research work. The available software can be freely used by any IF student,

lecturer or researcher.

RAT has purposefully carried out modernization of the material and technical base in engineering programmes, including through the attraction of EU project funding.

The material and technical base of the RAT Faculty of Engineering is sufficient for the implementation of the study programme, research and practical work in laboratory conditions both for students and academic staff. The capital costs of the laboratory infrastructure and equipment was aided by grants. However, during the guided tour through the premises the Expert Group learned that there could be problems with meeting the costs of appropriate maintenance of the buildings and equipment in the future.

The RAT Library is located at the k-4 block built in 2014 with a total area of premises 460 m<sup>2</sup>. In 2016, the RAT Library was re-accredited as a local library. The library is open to students and provides access to information resources. Library opening hours at the beginning of each academic year are reviewed based on faculty demand. The library has two rooms for students' individual work. The RAT library provides all traditional services, including e-environment. The electronic catalogue reflects information about all books and magazines in the library's collection.

The library collection corresponds to RAT study programmes and directions. The most recent literature in the relevant field is regularly purchased, and most of the funding is used for books in English. In accordance with the "Regulations on the Provision of Literature", book requests are regularly submitted to the library (also in e-form). Subscription of the Databases are decided upon by the Science Council after having been informed with the Database subscription price and statistics on the use of previous periods. Interlibrary loan services are available to library users. A wide range of different databases is being offered by the library every academic year in both Latvian and English. Databases can also be used remotely. In order to provide students with knowledge of the RAT library e-resources, their use and availability, the library offers seminars and individual advising.

The list of sources necessary for the study process as well as the materials prepared by the lecturers for the study process can be obtained in the e-course (Moodle) system which provides access throughout the study process. For the convenience of users, a section on e-resources has been created on the library's website. During restrictions caused by the Covid-19 pandemic the RAT library continues to provide remote customer service and use of e-resources. Neither students nor teaching staff complained about missing databases or other information sources.

### 3.3.

RAT academic staff planning issues are regulated in a number of internal laws and regulations, for instance: Operation and development strategy of RAT 2016-2023, Academic Staff Development Guidelines 2016-2020, RAT Academic Staff Development Plan 2018-2023 (SER p.3.4.) and other documents. The most important criteria for the selection of the academic staff are scientific and professional competence. All vacancies for academic staff are advertised in open competition and eligibility of applicants is assessed in accordance with the Regulations on Academic Positions in RAT . In order to attract international teaching staff RAT advertises on the Euraxes portal. Guest lecturers are involved in the implementation of professional study courses for conducting individual courses or topics. RAT Center for Lifelong Learning, various institutions and companies representing the construction industry and certainly doctoral studies play a significant role in qualification improvement of the academic staff.

According to the RAT quality management policy there are principles regarding the qualification of the academic staff members including: i: Staff engagement and development; ii: Continuous learning and improvement, whereas RAT Academic Staff Development Guidelines define the main HR development processes:

- i. Student-centered study process,
- ii. A research process focused on public demand for innovative products and services,
- iii. Communication process, which provides for the exchange of knowledge and innovation in the

inter-university level, effective international academic and research co-operation,

iv. Technological process focused on access to high quality science-based higher education, introduction of new modern technologies in the study and research process (including distance learning).

There is a developed system of attraction and motivation of the teaching staff including principles of determining the workload, principles of payment for the amount and quality of work, measures of motivating the growth of the teaching staff.

There is also a system of evaluation and increase of the qualification of the teaching staff at RAT .

The balance between academic staff and visiting lecturers is 57% to 43% which shows a significant professional experience of the teaching personnel. The academic load of the teaching staff employed in the study field prevails over the volume of scientific work. This is due to several factors, among them the didactic strategy of the first level study programme is more focused on the development of professional competence.

The teaching staff participates in outgoing mobility (51 visits during the last six reported years, financed from Erasmus+ programme) and there is incoming mobility for guest lecturers and administrative staff (17 visits during the last six reported years, financed from Erasmus+ programme). In outgoing activities only some teachers (9) participated, therefore it is suggested to also encourage other members of the teaching staff to take part in Erasmus+ or other programmes. It is noticed during the site visit, that as a reason for insignificant mobility could be rather insufficient knowledge of English.

3.4.

Besides the possibility for students to use a physical resources (libraries, study equipment and IT infrastructure) and human resources (teaching staff, study consultants and other advisors), RAT supports its students by following:

- i. individual psychologist services on the psychological issues of organizing personal studies, psychological interrelations, etc.;
- ii. individual career counseling services to help students better identify their interests, skills, opportunities and values, deepen their understanding of career choices, and professional suitability;
- iii. the possibility to create an individual study plan for independent studies, which is supported by RAT in cases when the student is working or due to family circumstances. It is determined by RAT student regulations. All the above mentioned services are free of charge.

During the interviews with students and graduates the Expert Group heard about the deep satisfaction regarding students' support and the working relationship with RAT personnel.

## **Conclusions. Strengths and weaknesses**

Conclusions :

RAT has established a provision system for a controlled budget for the Study Field, separating financial resources for the implementation of the Study Programme and research activities. It is efficient.

There is a modern building for the Study Field and sufficient technical infrastructure and resources to support a high-quality learning process, including remote learning possibilities.

RAT has developed a system of procedures for attracting highly skilled teaching staff and it is being implemented. The academic and research workload of the teaching staff is relatively balanced and the teaching staff is mobile.

There is a well-functioning support system, based on the needs of the students in RAT .

Strengths:

Facilities and other infrastructural resources are modern and sufficient.

Due to the regional scale of the academy there is a good cooperation between RAT and local industry, graduates and municipalities.

Support system for students is effective and responsive.

Well organized overall system of acquiring funding for infrastructure developing and academic activities.

Weaknesses:

There is a risk and possible lack of resources for proper maintenance of well installed infrastructure.

There is no effective procedure for attracting talented teaching staff.

The budget for research activities is not divided between study field or study programme, therefore it is not possible to determine financial outcomes of each study field.

#### **4. Scientific Research and Artistic Creation**

##### **Analysis**

4.1.

RAT shows a clear intention to reach the mission defined within the formal documentation. The RAT was established in 1993 and has built up the presence of very dedicated faculty within the academic staff members. This intention enables stepwise progress towards fully reaching the scientific research goals.

The RAT strategy in the field of scientific research, set out in the main strategic document, has been identified as producing knowledge which can be transferred to the national economy. This is being supported by the RAT through the establishment of elected dominant research directions, each with a primary focus. To fulfill the scientific research goal of the strategy, RAT is taking part in funded projects. In total five projects were noted as ongoing during the assessment procedure.

Laboratory facilities were observed to have a high level of laboratory equipment which demonstrated the relevance of the RAT and its preparedness to support research on relevant civil engineering and environmental issues (3D printing, hydraulic flume, chemical processes in environment, materials, etc.).

A review of scientific publications, published in the period from 2013 up to date, shows a contribution towards both the fundamental and applied sciences. One part of the academic staff conducted scientific research in the fundamental sciences (mathematics, mechanics), while the dominant number of publications contributed to applied sciences (materials, planning, environment, etc.). This implies a correspondance with the RAT strategy.

The number of ongoing projects is low but with increasing tendency, demonstrating the intention of the RAT to gain the orientation towards scientific projects. During the assessment visit, the Expert Group noticed limited number of academic staff taking active role in ongoing projects. The foundation for scientific research and productivity should stem from the research projects and related funding, as well as the percentage of scientific employees fully funded from scientific or applied competitive projects.

The existence of an Engineering Institute (EI) is overall positive. However, although the mission and vision of the EI emphasize clear strategic directions, the implementation in the way that EI strategic goals should be reached suffers from inefficiency. The feedback that the Expert Group received from both the Director of the Engineering Institute and from the academic staff, indicated that the Institute is not yet sufficiently focused towards this study field and its study programme. This stems from the fact that the research effort of the EI is dispersed across all of the Faculty. The focus on research-led teaching in the 'Architecture and Construction' study field should be 'sharpened' to maximize the contribution of the EI mission towards the study programme of the study field.

More scientific orientated staff should be aspired for, compared to the present level of 39 % (employed in both lecture and scientific positions). This could potentially strengthen the research capacity of the RAT. When combined with laboratory equipment capacity the expected outcome is to:

i) widen the research areas,

- ii) establish the position of the RAT in the market,
- iii) increase the capacity to follow up industrial research needs and intention for novel products production.

#### 4.2.

As a main indicator of this quality criteria, experts reviewed a list of references published from 2013 to date. This allowed comparison of the content of the study programme and the scientific research topics that the academic staff are interested in. In this way, the Expert Group got a perception that research activities cover the study field relevant areas.

The thematic establishment of the laboratory unit confirmed both ad hoc and strategic alignment between the infrastructural capacity of the RAT and the civil engineering specialisation of the study field. This is supported by the fact almost 50% of lectures given in the study field are of a practical type.

The study programme offers up to date topics like the state of the art building and finishing materials, latest technologies in building materials production and construction, architectural trends in Latvia and in the world, energy efficiency solutions for buildings, heat utilization and reuse, energy efficient and environmentally friendly construction and construction digitization.

#### 4.3.

RAT established international cooperation through several projects. During 2013/2014 a lifelong learning project on brownfield assessment "BRIBAST " was implemented in collaboration with Lithuanian, Czech and Slovak universities. Furthermore, a joint project in the field of water protection WATERPRAXIS has been implemented together with the universities of Finland, Germany, Denmark, Poland, Lithuania, Sweden and Russia. In cooperation with the universities of Germany, Bolivia, Brazil, Guatemala and Chile, the "JELARE" acronym project in the field of renewable energy has been implemented within the framework of the Alpha III project.

Besides the above mentioned, RAT offered additional information on successfully implemented projects in collaboration with University of Florence (Italy), Vilnius College of Technologies and Design (Lithuania), European Center for Education, Science and Innovation - Bulgaria, iT Study Hungary Számítástechnikai Oktató és Kutatóközpont Kft - Hungary, Schnellkraft Personalmanagement GmbH - Germany and Veda Consult - Bulgari.

At the same time, the publication list demonstrated a significant number of local publications, published in Latvian journals.

During the assessment visit the academic staff emphasized that a very low percentage of them take an active role in international projects. Only a few of the academic staff published paper/s in collaboration with non-Latvian co-author/s. RAT encourages the participation of academic staff in international scientific work in several ways. Since September 2018 RAT has joined the EURAXESS Latvia Network of Contact Points to provide information and advice to foreign researchers on scientific career opportunities at RAT , as well as to provide practical support to foreign researchers in mobility and their family members who wish to work and live in Latvia. In addition, the EURAXESS Latvia Network of Contact Points provides information and contacts for support abroad, both in Europe and worldwide, for researchers planning to participate in an outgoing mobility. However, in total, only four members of the academic staff availed of the outgoing mobility, one of them currently in the USA.

The problem of institutional co-financing of projects should be overcome in some way, and should not be a reason to cancel the participation in the project. RAT should establish a sustainable and continuous financing management to support international (CBC and transnational) research competitive projects co-financing. Benefits of such an approach could be a multicomponent:

- i) income through overhead budget line,
- ii) maintenance for the lab equipment,
- iii) establishment of continuous presence within the international competitive projects community.

#### 4.4.

This criteria relies on two fundamental issues. The first one is the RAT regulation and institutional support. The involvement of RAT teaching staff in scientific research is regulated by the "Regulations on scientific activities at RAT ", which stipulates that scientific work is a mandatory part of the work of the academic staff.

RAT established the Project Department who support staff by offering information on open project calls, give support in the proposals preparation and feeds the academic staff by the updates via e-mails. RAT supports the outgoing mobility of the staff by enabling long term absence and overcoming teaching suficite during the mobility.

Additional support has been given by the RAT by offering project fundings, performance funding, and financial incentives for publishing in RAT scientific articles collection.

A second fact which is relevant for the evaluation of this criteria is that there is significant deviation in staff scientific research productivity. While the intent of the RAT policies and regulations is to make all the academic staff classifiable as 'research-active' (at least to those who are promoted in both scientific and pedagogical direction), the review of publications by author in the reference list demonstrated significant differences in the research output of the individual academic staff members.

When seeking examples of excellence in research output and scientific production, the Experts did not find evidence of mechanisms that would support such excellence. On the contrary, the academic staff emphasized the case-by-case routine for "solving the problems", through eventual meetings with the Dean or Vice rector.

Promotion of the academic staff from the point of QA does not work efficiently. Promotion usually happens every six years, mostly without foundation on formal QA analysis of the staff member to be promoted. The question of the QA relevance was posed by academic staff and students during the visit with global recognition of "pretty heavy system which is applied manually". Criteria for the promotion and election of the academic staff members should be transparent and presented in a formal way. The Experts suggest an increase in the use of the QA system outcomes during the election/promotion procedure.

Decision making protocols should be planned, established and implemented as a high priority. Instead of an individual approach for decision making, a system should work easily and efficiently, being able to handle most of typical academic procedures.

#### 4.5.

During the assessment visit, the Experts conducted interviews with both students and academic staff. Both target groups emphasize the individual enthusiasm of academic staff to promote scientific work and invite students to participate also. Academic staff use the opportunity and try to motivate students during lectures. A part of the lectures is the practical component. One segment of the practical lectures is given within the laboratory facility thus increasing the level of interest by the students to take a part into research activities performed by the research group. Through the academic year students are informed about the research activities at the study programme via e-mails.

To end this, although the information system is active and lecturers show their enthusiasm and motivation, a very low number of students confirmed their participation in research activities during the study.

#### 4.6.

RAT has established a Study Field Expert Council, which evaluates the compliance of study programme results with the needs of the branch and recommends improvements in the content of the study programme and didactic strategy. The composition of the Expert Council of the study field is based on the RAT Senate decision No.4 of February 26, 2019 "Regulations on the Expert Councils of the Study Fields at Rezekne Academy of Technologies" composed of professionals in the field of civil engineering.

In 2015 RAT founded the Eastern Latvia High School of Technologies, which promotes the

connection and succession of secondary and higher education in STEM (Science, technology, engineering, and mathematics).

One lecturer has been involved in the Interreg project "Improvement of employability competences in sales laboratories" to introduce problem-based learning method (PBL) in study courses.

Students and graduates of the study field use the services provided by Rezekne Business Incubator both in pre-incubation and incubation when starting their own business.

RAT put into operation so-called "Trust e-mail" and Student Pulse protocols which are recognized as examples of good practice by the student population.

## **Conclusions. Strengths and weaknesses**

Conclusions:

RAT gives effort to establish scientific research activities and production in accordance to relevant strategies and documentation. Overall, the fields of scientific research detected through the list of projects and published references, comply with the development aims of the RAT and relevant industry.

Relation between scientific research in the study field and the study process has been defined and ensured while international cooperation is ensured and improved in a target-oriented manner, still not being set up in a strategic and sustainable way.

Mechanisms of the involvement of academic staff, as well as students to research activities have not been implemented successfully, so the system shows needs for the improvements. Recommendations for the improvement have been pointed out below separately.

Strengths:

1. Presence of international projects within the RAT from 2013/2014 up to date is supportive and good practice example.
2. Infrastructural capacities of the RAT support and enable scientific research activities aligned with study programme content.
3. RAT supports and encourages international collaboration and presence via different already implemented mechanisms.
4. Enthusiasm of staff and equipment capacity within the laboratory units are utmost strengths of the RAT. This shows the presence of reliable foundations for future development and improvements to be easily implemented.
5. RAT demonstrated capacity to plan and implement innovation services, competencies and content into study programme.

Weaknesses:

1. The number of academic staff participating in scientific projects is very low to reach positive and sustainable institutional research development.
2. The higher percentage of scientific orientated staff should be aspired for, compared to the present level of 39 % (employed in both lecture and scientific positions).
3. The participation of the staff in outgoing mobility as well as incoming mobility realization suffer from the higher realization efficiency.
4. Problem of institutional co-financing of projects exists and has been evidenced by the academic staff.
5. The involvement of the teaching staff in scientific research is a priori assumed but far from being effective.
6. Students are individually motivated by academic staff to participate in scientific research activities but no participation has been evidenced.

## **5. Cooperation and Internationalisation**

## Analysis

### 5.1.

The level of activity in respect of national co-operation is developing from a low base but internationalisation is at a very low level, compared to peer institutions.

Co-operation in the study field is centred around two main aspects: formal links with national agencies and industry; and formal links with facilitators of study tours for students. Twenty two co-operation agreements are in place, including those covering access to resources (for example use of geospatial databases); site visits, and institution-wide agreements. The institution-wide agreements yield little mobility traffic in the specific case of the 'Architecture and Construction' study field (SER, Annex 9).

The strategic goal of RAT (following on from the goal of the preceding Rezekne Higher Education Institution) is primarily to reduce the factors hindering the development of the Latgale region of Latvia, by positioning itself as a recognised European multidisciplinary technological academy. However the ambition in respect the Study Field 'Architecture and Construction' is somewhat more limited, being a local response to the Rezekne City Council ongoing requirement for a professional study programme to provide construction managers and construction supervisors for the region (SER p.11). The specific features of the study field in RAT, (having only one programme, offered only in Latvian, and that being a first level professional higher education programme), limits the scope for international co-operation. To date student mobility has been low. In the period under review (2014-2020) there were 15 outgoing mobility placements of which only one was to a university – the others were to practice positions in companies and organisations (SER, Annex 10, 11).

### 5.2.

RAT has a clear internationalisation policy and strategic goal to become an international player in the European Higher Education and Research Area. The policy is based on the principles of the Erasmus Charter 2021-2027. RAT is a member of the Latvian Higher Education Export Association. Despite these enablers, the international activity with the study field is extremely low. To date the study field has only addressed one of the seven tasks in implementing the RAT internationalisation strategy. That task relates to student, faculty and staff exchange but even in this task the flow is predominantly in one direction: outbound. Therefore insufficient evidence was available from the study field for the Expert Group to assess RAT's efficiency as an institution in attracting foreign staff and students to the Academy. It may be stated however that no international culture was apparent in the study field, with the focus being regional (from both the market demand and institutional response to date), whatever about national or international developments and opportunities.

In the period under review (2014-2020) there were no incoming ERASMUS students, despite the fact that 34 of RAT's 100 contracts under ERASMUS + are applicable to the Study Field 'Architecture and Construction'. It is noted that the study field currently has only one programme, which is implemented only in Latvian. This is given as the reason that "there are no full-time foreign students in the study field and no foreign teaching staff are involved." (SER, p.57, Annex 10, 11).

Staff mobility in the study field is self-assessed as being "satisfactory", indicating that the level of mobility is not active enough. Nevertheless, in the period under review staff from the study field lectured in 11 countries under ERASMUS+ mobility, while visiting lecturers under ERASMUS+ were attracted from seven countries (SER, p.48 and Annex 7).

### 5.3.

The content, volume and implementation requirements of internships are organised in accordance with national regulations and each specific internship is governed by the internship provisions approved by the Study Direction Council. A tripartite agreement is put in place between RAT, the employer and the student before the internship commences. There is clarity on all important issues including learning objectives, tasks, deadlines, duration, supervision, student's diary, internship report, reflective journal, supervisors' reports (company / institution) and the evaluation



commission. Nevertheless, during the on-site visit the Expert Group learned that supervision by RAT faculty of students on placement was patchy.

The study field currently has only one study programme. In that programme two internships are included, each of 20 CP. The first, in the 4th semester, is on a construction site. The second is a “qualification internship” and takes place in the 6th semester, located in a construction company or a factory according to the student’s preference.

Internship contracts are in place with nine organisations, of whom three are municipal institutions (Vilaka Municipality Council, Rezekne Special Economic Zone Administration, Rezekne County Municipality) and six are private companies (SER, Annex 12, 13). Traineeship cooperation agreements are in place with the joint municipal institution Rezekne Special Economic Zone Administration and with Balvi Municipality, Education, Culture and Sports Department. There are also student practice programme agreements with Vilaka Municipality Council; Rezekne Housekeeper Ltd and JSC “Latvian State Forests”, (SER, Annex 9).

Students may choose their internship location and for part-time students it is typically their place of work. Students who fail to find a placement may take one offered at one of the companies with which RAT has concluded a student placement provision agreement.

5.4.

The study field has no joint study programmes at present.

## **Conclusions. Strengths and weaknesses**

Conclusions:

Co-operation in the study field is centred around two main aspects: internship placement agreements and formal links with companies / agencies for study tours or use of software / databases. The internships are organised in accordance with national regulations and each specific internship is governed by the internship provisions approved by the Study Direction Council, which include a tripartite agreement between RAT, the employer and the student. Students may choose their internship location but those who fail to find a placement are accommodated at one of the companies with which RAT has concluded a student placement provision agreement. Despite good practice in respect of written procedures, the internship supervision from the faculty of RAT seems to be patchy during the period of the student placement.

RAT has a clear internationalisation policy and the Academy is a member of the Latvian Higher Education Export Association. Student mobility has been low. In the period under review (2014-2020) there were only 15 outgoing mobility placements of which only one was to a university and there were no incoming ERASMUS students. Despite these enablers, the international activity within the study field is extremely low. No international culture was apparent in the study field, with the focus being regional, both from the market demand and institutional response to date, addressing perceived current requirements to serve the development of the Latgale region of Latvia. This may prove to be a short-sighted strategy for both the development of the Academy and the region’s innovative ability in a changing construction environment. It may be noted that the study field currently has only one programme, which is implemented only in Latvian.

Strengths:

1. The regional municipalities and local construction industry are supportive of the study field, through co-operation agreements on internships, traineeships, study tours and access to relevant industry software and databases.
2. Robust written procedures are in place to ensure that internships achieve learning outcomes.

Weaknesses:

1. Although the Academy has many international agreements, these have yet to translate into an international culture in the study field, which is currently firmly anchored in just fulfilling a local regional need for professional construction supervisors and managers.

2. The oversight of students' real-time internship experience by RAT faculty is generally weak.

## **6. Implementation of the Recommendations Received During the Previous Assessment Procedures**

### **Analysis**

#### **6.1.**

The previous external evaluation of the study field took place in 2011/2012. The commission of experts evaluated the quality, resources, sustainability, and cooperation of the study field. As the ending point, experts produced a report with the analysis and suggestions for the improvements.

The main findings were:

- i) Among the weaknesses, the experts pointed out the unfavorable impact of insufficient English language skills on the opportunities for international cooperation, insufficient inter-institutional cooperation at the national level, and insufficient opportunities for Rezekne as a small city.
- ii) They recommended more opportunities to improve the English language skills in students that would promote international cooperation and to focus on the regional implementation of topical research-based studies, especially forest technologies and renewable resources (biomass).
- iii) The Experts also recommended getting involved in EU projects and attracting new high quality academic staff.
- iv) The Experts mentioned the possible decrease in the number of students and the decrease in human resources in the study programme as possible threats.

Today, almost 10 years after the previous external QA, RAT has yet to demonstrate an activity plan to tackle possible threats. SER shows a reduced number of students, so an issue that was identified as a threat has now become a weakness.

The level of English language skills remains a barrier. Study is implemented in Latvian which represents an obstacle for incoming students from abroad. During this current assessment visit, the English language was still a barrier for fluent communication with both RAT employees and students. Enhancing English language skills is far from easy to implement, but it needs to be worked on in a well planned manner. Besides the competitiveness, conditions for incoming students and researchers will be created.

### **Conclusions. Strengths and weaknesses**

Conclusions:

According to SER documentation with annexes and information collected during the visit, it was visible that the RAT has taken into account the previous assessment visit recommendations but without significant results to manage threats and weaknesses. Improvements are still mandatory to be done.

Strengths:

1. RAT reacted to previous assessment suggestions partially and drastically turned the interest towards EU projects. Up to date, several projects were finalized, some of them are still ongoing. A certain percentage of the academic staff gained crucial experience in this way which is a healthy foundation for future progress and gaining success in internationally competitive EU projects.

Weaknesses:

1. English level competences within the academic staff have not been observed as satisfactory in general.
2. Number of students has been reduced although previous QA recommendations emphasized this as a threat.
3. The QA system at the RAT should be more focused towards improvements in achieving strategic goals. The external QA reports should serve as a stronger starting point to highlight and define

specific targets when planning improvements and success over a given timeframe.

## 7. Assessment of the Requirements for the Study Field

- 1 R1 - Pursuant to Section 5, Paragraph 21 of the Law on Institutions of Higher Education, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study direction whilst implementing their internal quality assurance systems:

**Assessment of compliance:** Partially compliant

RAT has several mechanisms for study quality improvement, including Study Quality Assurance Policy as well as the mechanisms for evaluating teaching staff and getting feedback. System is compatible with law, and it was discovered that one of the RAT weaknesses is low rates of feedback from students in the surveys. Also, there is lack of follow up communication with students about impact of their comments, it could be one of the reasons why there is low engagement. (SER p.9-10. information gained during the on-site visit ).

- 2 1.1. The higher education institution/ college has established a policy and procedures for assuring the quality of higher education.

**Assessment of compliance:** Fully compliant

RAT maintains a Study Quality Assurance Policy that includes a strategy for quality assurance and development of study programme with clearly defined laws and procedures. (SER, p.25; information gained during the on-site visit )

- 3 1.2. A mechanism for the development and internal approval of the study programmes of the higher education institution/ college, as well as the supervision of their performance and periodic inspection thereof has been developed.

**Assessment of compliance:** Fully compliant

RAT applies the rules of “Procedure for the Development, Approval and Supervision of the study programme”, which together with other regulations govern the high quality study process. Correct performance review might be impacted by the low engagement from surveys, as mentioned in chapter 2 (SER p.7-8.).

- 4 1.3. The criteria, conditions, and procedures for the evaluation of students’ results, which enable reassurance of the achievement of the intended learning outcomes, have been developed and made public.

**Assessment of compliance:** Fully compliant

There has been developed study quality system based on learning outcomes, Regulations on study course exams and tests, Regulations on state and final examinations. Available on RAT website, in RAT Student Manual (SER p.7-8.).

- 5 1.4. Internal procedures and mechanisms for assuring the qualifications of the academic staff and the work quality have been developed.

**Assessment of compliance:** Fully compliant

RAT human resource development plan, academic personnel development guidelines, regulations on RAT lecturer procedure for evaluation of academic staff quality. (SER, p.10; information gained during the on-site visit )

- 6 1.5. The higher education institution/ college ensures the collection and analysis of the information on the study achievements of the students, employment of the graduates, satisfaction of the students with the study programme, efficiency of the work of the academic staff, the study funds available and the disbursements thereof, as well as the key performance indicators of the higher education institution/ college.

**Assessment of compliance:** Partially compliant

RAT key performance indicators are assessed and analyzed and reflected in student surveys, Annual study programme SER, RAT annual reports.

As it was discovered in the assessment visit there is a low rate of feedback among students, that is possibly through survey fatigue, therefore the efficiency of correct data collection is lost. (SER, p.10; information gained during the on-site visit )

- 7 1.6. The higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study direction whilst implementing their quality assurance systems.

**Assessment of compliance:** Partially compliant

Internal quality and the continuous improvement is maintained by the principles in Annual study direction SER, RAT study direction expert councils. As mentioned in chapter 2 weaknesses there is lack of follow up communication with students about impact of their comments, it could be one of the reasons why there is low engagement. (SER, p.10)

- 8 R2 - The cooperation with different organisations from Latvia and abroad implemented within the study direction ensures the achievement of the aims of the study direction.

**Assessment of compliance:** Partially compliant

RAT has concluded an ERASMUS cooperation agreement with the bachelor's study programme Civil and Construction Engineering,[3] implemented at the Deggendorf Institute of Technology, which envisages study and internship mobility for the students acquiring the Study programme. RAT has cooperation agreements with 22 organisations. As mentioned in chapter 5 weaknesses, there is big unused potential in these international agreements, because for now it looks like the main focus is still on fulfilling local needs for professionals. (SER, p.12, Annex 9.xlsx, information gained during the on-site visit)

- 9 R3 - Compliance of scientific research and artistic creation with the development level thereof (if applicable).

**Assessment of compliance:** Partially compliant

RAT is successfully developing mechanisms for the involvement of the teaching staff in scientific research. RAT organizes every second year the International Scientific and Practical Conference " Technologies. Resources" with scientists from over 15 countries. Although there were found weaknesses with the problem of institutional co financing of projects as mentioned in chapter 4. Overall fields of scientific research complies with the development aim of the RAT it can be improved even more.( Summary of scientific research can be found in SER, Annex 8.docx)

- 10 R4 - Elimination of the shortcomings and deficiencies identified during the previous assessment of the study direction, if it has been conducted, or the implementation of the provided recommendations.

**Assessment of compliance:** Partially compliant

RAT has performed meaningful work on the fulfilment and implementation of these

recommendations. Although there were some shortcomings identified, like the level of English competence, as it also has been mentioned before, and the focus of the QA system. ( Overview of implementations can be found in SER, Annex 14.)

## 8. Recommendations for the Study Field

### Short-term recommendations

1. Seek more lean and agile targeted methods to elicit a higher volume of useful responses to student surveys, thus eliminating survey fatigue caused by too many repetitive questionnaires.
2. Enhance the effectiveness and sustainability of the Plan-Do-Check-Act continuous quality improvement loop by providing timely information to stakeholders on how their ongoing feedback (during the 'Check' phase) has specifically resulted in annual change (during the 'Act' phase).
3. There must be a well planned budget for the maintenance of the buildings and equipment particularly in the face of price increase of the energy resources. In this regard further measurements of energy efficiency ought to be taken.
4. Improve the frequency and depth of contact between faculty and students during internships to better assure real-time oversight of student experience by RAT .
5. Teaching staff should pay more attention to the descriptions of the study course, their content and the spotlight on the sources of information used in the study course before submitting them for approval.
6. In Organization Structure of study field show how to work together Study Field Council and Study Field Expert Council.

### Long-term recommendations

7. It is recommended to improve the system of recruiting new attractive academic staff.
8. Notwithstanding the value to the region of the study field's professional level programme, an international culture must be grown in the study field through greater emphasis on pan-European codes, standards and regulations; together with significant enhancement of the English language skills of the graduates; and greater incentives to avail of mobility opportunities.
9. It is warmly suggested to create additional criterias which would cover for participation of academic staff in scientific and/or competitive projects. For instance, this criteria could be used during the election or promotion of the staff members and create a positive competition in between academic staff.
10. Due to the absence of additional criteria for the promotion of academic staff members, creation of beneficiary criterias hereby would potentially motivate the scientific research and production. In this way, staff capacity will be drastically enhanced so the full laboratory capacity could be used in a long term way.
11. Outgoing mobility is a typical internationalization activity. Very low percentage of this mobility type recalls the origin of the problem. Academic staff worldwide are faced with multicomponent and dedicated work which does not always allow freedom to use the mobility. To increase this kind of mobility, RAT is warmly suggested to introduce mechanisms to support mobility. This can be done in several ways: i) financial benefits; ii) involvement of this criteria in election or promotion of the staff, iii) application of the excellence supportive measures etc.

12. Incoming mobility should be initially enabled through the improvement of the English language skill within the academic staff. Afterwards, the promotion of the study programme and RAT via individual international cooperation, through web communication (social media, web platforms and networking) should be done to enhance the visibility and the openness of RAT for incoming visitors.

13. Hereby the suggestion is founded on a long term, sustainable and reasonable planning and cash flow procedures. If the funding for project co-financing represents a constraint, faculty/study programme management board should find a way how to overcome it. Initially, the selection of projects of interest should be planned through the RAT strategy, keeping aligned with real need of the sector. Second, the priority for the project application should be given by applying the excellence criteria of the project leader/team. Finally, the criterias for the selection of priorities should be transparent and formal to staff members.

14. Expert group recommends supportive mechanisms to increase scientific activities and related production within the teaching staff. To keep the study programme aligned with RAT research directions, it is suggested to gain a strategic and non ambigue policy with definition of the benefits of the participation to scientific project activities, which would be recognised by QA system assessment prior the election/promotion procedure.

15. Study programme should involve supportive mechanisms to enhance student participation in research activities. First year should offer the course which would make research activities and outcomes closer and attractive to the students. To keep on the continuous involvement, advanced years of the study programme are warmly suggested to create a possibility where students could gain credits by participating in research. Some (very few or at least one) courses should be structured to offer advanced level learning outcomes (in accordance to standard qualification) achievements to motivate students to deal with research activities.

16. The English language skill within the academic staff has to be improved and the RAT should tend to enable at least one skilled English language lecturer per course. This is the only way to open towards the incoming international students.

17. Number of students has been reduced although previous QA recommendations emphasized this as a threat. Although this is recognised as a national level problem caused primarily by negative demographic trends and unstable financial situation, RAT should show the tendency towards the solution. Hereby students from abroad should be targeted for, students out of the region should recognise the quality and the guarantee of employment after study programme qualification acquisition.

18. Internal QA system should plan internal procedures as a response to independent QA assessments. The starting point should be focused on the analysis of the outcomes of such an assessment. Afterwards, the action plan should be done and follow up procedures should follow the level of improvement-orientated activities implementation.

## **II. "Civil Engineering" ASSESSMENT**

### **II. "Civil Engineering" ASSESSMENT**

#### **1. Indicators Describing the Study Programme**

##### **Analysis**

The name of the first level professional higher education study programme " Civil Engineering "

(study programme) reflects its content and the provided qualification - Building Construction Manager.

The aim of the study programme is clear and corresponds to the name of the study programme.

The objectives of the study programme and the learning outcomes follow the aim of the study programme, thus the connection is clearly visible in the content of the study programme, which is created sequentially and gradually in order to achieve the study results (Annex 4).

The name of the programme, aims, objectives, results, and professional qualification are logically interrelated.

The study programme is offered in a full-time studies format of the period of 3 years in Latvian in the amount of 120 Latvian study credit points or 180 ECTS and in a part time extramural studies format of the period of 3 years and 6 months in Latvian in the amount of 120 Latvian study credit points or 180 ECTS.

The name of the study programme corresponds to the code 41582 of the study programme according to Latvian Education Classification (Latvian Cabinet of Ministers Regulations (Cab,Reg.) No. 322, <https://likumi.lv/ta/id/291524-noteikumi-par-latvijas-izglitibas-klasifikaciju>), meaning that first two digits `41` notes that the study programme First level professional higher education (fourth level professional qualification) and the last three digits `582` notes the study programme belongs to the program in "Construction and civil engineering" educational programme group. Consequently, the qualification "Building Construction Manager" corresponds to the study programmes code and title.

Furthermore, the professional nature of the programme and the qualification "Building Construction Manager" corresponds to the Cabinet of Ministers Regulation No. 141 as of 20 March 2001 "Regulations regarding the State Standard for First Level Professional Higher Education" (Annex 2) and to the national professional standard of "Building construction manager" (11.08.2021) <https://registri.visc.gov.lv/profizglitiba/dokumenti/standarti/2017/PS-161.pdf> ( Annex 3).

The overall number of students enrolled into the study programme shows a decreasing trend. The number of students in the study programme in full-time studies in the reporting period shows stability. Approximately, a 19% decrease in the total number of students can be explained by the drop in the number of students in part-time self-funded studies, which in 2021., when referring to 2017., decreased by 46%. The decrease in the number of students in self-funded studies is also observed in other RAT study programmes, which has been explained by the insufficient solvency of applicants in the region, demographic and financial problems.

Learning outcomes of the study programme plan not only the provision of specific knowledge, but also the development of certain skills and competencies in the field of construction. In order to effectively achieve expected learning outcomes of the study programme, RAT applies a study process based on a student-centred approach, encouraging the development of students' independence, entrepreneurship and initiative.

In order to select most motivated students, RAT has defined the possibilities of receiving additional points to those applicants who have gained 1st, 2nd or 3rd place in State Olympics in mathematics, physics, economics, English, French or Russian languages, graduates of the Eastern Latvia Technology High School, graduates of secondary professional education related to the field of construction and architecture - 1.5 points; 1 point for a Junior Achievement Latvia certificate holders. The average ratio of admission to this programme in the last six years is 2.5 applicants per budget place, which is one of the highest admission rates at the RAT Faculty of Engineering, showing that students have purposefully chosen construction studies and is one of the most requested study programmes at RAT's.

## **Conclusions by specifying the strengths and weaknesses**

Conclusions:

The interrelation of the analyzed study programme elements - name, professional qualification, the aims, objectives, learning outcomes, and admission requirements - is strong, which is the result of the awareness of their importance (content-wise, legal-wise) to the needs of the country for qualified specialists.

Although high interest for the study programme exist, the number of students enrolled to the programme shows a decreasing trend.

Strengths

1. Attractiveness of the study programme.

Weaknesses

1. Reducing number of students enrolled in study programme.

## **2. The Content of Studies and Implementation Thereof**

### **Analysis**

2.1.

The structure of the study programme is regulated by RAT regulations approved by the Study Council. The study course descriptors are clearly mapped with the requirements of the 4th level occupational standard "Building Construction Manager" (SER, Annex 3).

The intended results of the study programme, the programme outcomes, are comprehensively set out under nine headings. Editorially there is some mixing of programme outcome competences under a single heading. For example, study programme Outcome #5 in a single sentence covers the analysis of resources consumed in a construction project while also covering the completely different skill of evaluating changes in the technical condition of adjacent buildings. The nine programme outcomes, as currently written, cover about 15 distinct outcomes in reality (SER, p.65, Annex 4).

The study course descriptors are very comprehensive. The course descriptors set out a complete picture for the student of credit points; number of hours distributed across lectures, seminars and practical works; prerequisites; course objective; learning outcomes; study course plan and content; description of students' independent work; form of testing and evaluation criteria; required and additional reading (SER, Annex 6).

A traineeship of 20 CP takes place in the 4th semester on a construction site. There is also an internship of 20 CP in the 6th semester, located in a construction company or a factory. The CPs allocated to traineeship exceed the minimum 16 CP required under the Regulation of the Cabinet of Ministers No. 141 'Regulations on the National Standard for the First Level Professional Higher Education'. (SER, Annex 2). The documentation associated with these tripartite arrangements between RAT, the student and the employer is comprehensive. Nevertheless the Expert Group learned in discussions with students that the level of supervision of the student experience in formal training off campus by RAT staff is not of a consistent standard. This aspect is covered in Section 5 of the Study Field Assessment, because there is only one programme in the study field at present.

The study programme outcomes meet the needs of the industry. The content relevancy was assured from the study programme inception through the input of teaching staff with professional experience. This was reinforced and kept current by the Council of Experts of the Study Direction, who meet at least twice a year. Additionally, employers provide input to an annual review of the content as members of the State Examination Commission. The Commission membership includes a strong contingent from industry including the chairperson and half the membership. There is representation on the Commission from the Latvian Union of Civil Engineers (SER, p.73).

The final thesis (in this case, final qualification paper) takes the form of the package of documents required to fully describe a completed building design - preliminary site investigation report, architectural solutions, engineering solutions, organisation of construction work, quantity estimations and full set of drawings. Ten CPs are allocated to the final qualification paper, which



exceeds the minimum 8 CP required but do not exceed 10% of the total amount, as required under the Regulation of the Cabinet of Ministers No. 141 'Regulations on the National Standard for the First Level Professional Higher Education'. (SER, Annex 2). The standard of the majority (62%) of final qualification papers completed during the review period were of a high standard (good/very good/excellent/with distinction). The proportion 'with distinction' represented 4% of the total (SER, P.81).

2.2.

The study implementation method is heavily directed at practical learning and the subdivision of the study programme content into a multitude of short courses. The practical learning bias is evident both from the number of seminars and practical works compared with lecture hours and from the evaluation strategy, which includes a high proportion of final marks for practical work compared to theoretical test papers.

Regarding the multitude of courses, the degree of subdivision is such that some courses may only have 1 or 2 CP's - 1.5 or 3 ECTS respectively. For example, one course attempts to cover research methods, principles of research methodology and basic principles of statistics in a period of learning covered by just 1 CP / 1.5 ECTS. (SER, Annex 6). Subdivision of the programme into such small blocks of learning can result in a less than optimal learning environment where an emphasis on memorising facts is favoured over development of the skills of comprehension, analysis, synthesis and interconnection of knowledge. These shortcomings were evident in the surveys of graduates where valuable learning topics were dismissed as irrelevant. The programme lacks consistently-sized blocks of teaching and learning (for example, it is not standardised on 3 or 4 CP).

Support for student-centred learning is well planned with individual consultations between lecturers and students, in person or by e-communication, have been timetabled at 20 hours per semester (SER, p.77).

The correlation between the learning outcomes, the course content and the assessment strategy is coordinated by the director of the module with the relevant teaching staff. The course programme, including evaluation requirements, are published on the RAT website prior to the course commencing. Student-centred assessment of learning outcomes is integrated under the principles of ENQA standards and guidelines. The principles employed are summing up positive achievements; compulsory assessment; openness and clarity of requirements; diversity of test types; and conformity of assessment. Formative and summative assessment is used, with the former constituting at least 40% of the latter. (SER, p.75).

2.3.

The curriculum was informed by expert professional opinion and the standard of its implementation and currency is maintained through data from surveys conducted among the students, graduates and employers.

The students are surveyed twice a year at the end of each semester. Paper-based surveys were used until academic year 2019 / 2020 before moving online. Summary results of surveys are available in the RAT internal document management system. Students are encouraged to participate fully in course evaluation surveys but there is a lack of motivation in engaging in the process. Although response levels are low, it may be noted that one third of respondents have declared fully satisfaction with the study programme, while the remainder are "satisfied". Trends have been identified with some students indicating a desire for more electronically available resources as they believe it is possible to successfully acquire the study programme by remote learning. On the other hand, many students sought more site visit excursions and practical work. The small number of scholarships in the study programme is a cause of concern in the student surveys. The thematic trends are considered by the Study Direction Council and there is evidence of response to student concerns. For example, there was a change of lecturer on a course which had received repeated negative evaluation of teaching quality; there are ongoing increases in online activity to support independent learning; and a review of principles by the RAT Scholarship Commission in collaboration with Faculty of Engineering student representative on the Student

Council (SER p.82).

Graduates are surveyed each year to inform RAT on their reasons for selecting the programme, the quality of their learning experience, relevancy of modules to professional and personal development and their overall impression. Respondents are typically positive in their views. The location of the programme in their home region is a very important factor. They are also attracted by the proposed programme content when considering their study programme options. Regarding relevance, there is a strong bias towards training in their chosen specialization with scant regard for a wider education (for example, “it was useless to learn psychology and English, .....chemistry and project management”). The vast majority of graduates (approx. 90%) obtained work in their speciality, others work in another speciality and few, if any, responded that they had gone on to further study (SER p.83).

Employers are surveyed formally and informally. A formal survey in 2020 found full satisfaction with the professional competence of the graduates. The quality of the graduates was deemed to be comparable with those from other higher education institutions. Theoretical knowledge was deemed to be ‘sufficient’ by 78% of respondents (‘partially sufficient’ 22%). Practical skills were deemed to be ‘sufficient’ by 70% of respondents (‘partially sufficient’ 24%, ‘not sufficient’ 6%). Employers stressed the importance of the programme in retaining talented individuals in the region (SER, p.84). 2.4.

Mobility opportunities are available through international cooperation agreements for both academic studies (one semester or year) and professional practice. Recognition of learning outcomes during mobility are ensured. However no international culture was apparent in the study programme, with the focus being on regional needs. In the period under review (2014-2020) there were no incoming ERASMUS students and there were only 15 outgoing mobility placements of which only one was to a university – the others were to practice positions in companies and organisations (SER, Annex 10, 11).

Regarding incoming students an impediment is that the programme is implemented only in Latvian. Regarding outward mobility impediments there is a general lack of students’ confidence in their English language skills and many students (approximately 75%) are over 30 years of age with significant work and family commitments (SER, p.84).

The low level of outward mobility to other HEI study programmes (only one student in 2014-2020) and the absence of inbound international students (none in 2014-2020) reinforce the statement above that no international culture is apparent in the study programme. Further evidence of this is presented in Section 5 of the Study Field Assessment, because there is only one programme in the study field at present.

## **Conclusions by specifying the strengths and weaknesses**

Conclusion:

The structure of the programme is regulated and the study course descriptors are clearly mapped with the requirements of the 4th level occupational standard “Building Construction Manager”. The study course descriptors are very comprehensive and the programme outcomes meet the needs of the industry.

The correlation between the learning outcomes, the course content and the assessment strategy is well coordinated. The study implementation method is heavily directed at practical learning with a stronger emphasis on seminars, practical works, study visits and internships than on lecture hours. The programme content is divided into a high number of courses, which leads to some being as short as 1 CP (1.5 ECTS). Support for student-centred learning is well planned with timetabled hours set aside for individual consultations between lecturers and students. Student-centred assessment of learning outcomes is achieved through the principles of summing up positive achievements; compulsory assessment; openness and clarity of requirements; diversity of test types; and

conformity of assessment.

Feedback from students, graduates and employers is used to monitor standards and explore areas for improvement. There is some lack of motivation by students in engaging in the process. It may be noted however that responses from all groups surveyed indicate a high level of correlation between programme outcomes and the expectations of the students and the employers. The results of surveys are considered by the Study Direction Council and there is evidence of response to concerns raised by the survey respondents.

Mobility opportunities are available but not well-exploited. A significant impediment to inward mobility is the fact that the programme is implemented only in Latvian. Outward mobility is hampered by significant work and family commitments of the majority of the students - 72% over 30 years of age - but a general lack of students' confidence in their English language skills may also be a factor. Of those who do take up opportunities abroad the dominant form is a short practice position in a company or organisation as opposed to a semester or year of study in a higher education institution.

Strengths:

1. Graduates of the programme 'hit the ground running' with theoretical knowledge and practical skills that are valued by the regional employers.

Weaknesses:

1. The study implementation method includes subdivision of the programme content into a multitude of short courses. The degree of subdivision is such that some courses may only have 1 or 2 CP's - 1.5 or 3 ECTS respectively, which severely limits the depth of the educational challenge that can be explored.

2. The regional focus of the programme and the age cohort of the students (many with significant work and family commitments) has effectively eclipsed the growth of an international culture in the programme and thereby in the 'Architecture and Construction' study field.

### **3. Resources and Provision of the Study Programme**

#### **Analysis**

3.1. See the analysis and conclusions of the study field (paragraph 3.1.-3.2.) since the study field has only one study programme. Assessment of the compliance of the resources and provision of the study field refers as well to the study programme.

There are modern premises for the needs of the Study Programme and sufficient technical infrastructure and resources to support a high-quality learning process, including the library as well as remote learning possibilities. This fully complies with the specific needs of the Study Programme and its successful implementation and ensures a high quality learning process in the future.

3.2. Not applicable.

#### **Conclusions by specifying the strengths and weaknesses**

Conclusions:

As explained for the Study Field (paragraph 3.1.-3.2) RAT has established a provision system for a controlled budget for the Study Field, separating financial resources for the implementation of the Study Programme and research activities. It is efficient. There is a modern building for the Study Field and sufficient technical infrastructure and resources to support a high-quality learning process, including remote learning possibilities.

There is a well-functioning support system, based on the needs of the students in RAT .

Study provision, scientific support, informative provision, material and technical provision, and

financial provision fully complies with the specific needs of the Study Programme and its successful implementation and ensures a high quality learning process in the future.

Strengths:

See the analysis and conclusions of the study field (paragraph 3.1.-3.2.)

Weaknesses:

See the analysis and conclusions of the study field (paragraph 3.1.-3.2.)

## **4. Teaching Staff**

### **Analysis**

#### **4.1.**

The study programme involves 23 lecturers, 13 of whom represent RAT. According to SER (p. 82), the composition of the lecturers has not changed significantly during accreditation.

During the reporting period, several improvements have been observed in the composition and competence of the academic staff. First, the proportion of elected academic staff has increased from 53% in 2013 to 57% in 2021, the number of doctors has increased from 4% to 8%. There were 2 professors, 2 associate professors, 4 assistant professors, 2 guest assistant professors, 4 lecturers and 9 visiting lecturers who participated in the implementation of the programme in 2021. (SER, p.85).

The courses envisaged are implemented and there are no visible risks in the competence of the teaching staff.

#### **4.2.**

The study programme is a professional study programme and should therefore attract lecturers with professional experience in different areas related to construction. The experience of the participating teaching staff, which is related to the courses provided by the study programme and the results of studies, is professionally relevant and conforms to the requirements specified in all regulatory enactments (SER, p. 5. + CV).

Thirteen (57%) were elected to RAT academic positions, 10 (43%) were visiting lecturers. 9 (39%) of the teaching staff are simultaneously elected to RAT academic and scientific positions. 8 or 35% of all teaching staff have a doctor's degree and 13 (57%) have a master's degree (SER. p. 47).

The elected lecturers hold the positions of professor (2), associate professor (2), assistant professor (3) and lecturers (4). Visiting lecturers hold the positions of visiting assistant professor (1) and visiting lecturer (8). 5 of the lecturers employed in the study programme teach only or mainly in the study programme "Civil engineering", 17 - conduct study courses in other study programmes of the Faculty of Engineering or other faculties (General Education Courses) (SER, p. 48)

During the visit, no shortcomings were identified in the membership of teaching staff from a regulatory point of view. However, serious consideration should be given to the recruitment of young teaching staff for professional study subjects in construction so that the gradual generational renewal could be successfully continued in the future.

In order to be more involved in international research projects, the different sources of literature could be consulted without problems, reading international scientific publications, exploring the latest technologies in the framework of their courses and interests. Therefore the RAT teaching staff needs to improve their proficiency in English. This would certainly improve the quality of the contents of study courses, students would be presented with the latest experience.

#### **4.3. Not applicable.**

#### **4.4.**

Synergy of academic and scientific work in the study field (9 out of 23 lecturers employed in the study field (39%) have been elected in both pedagogical and scientific positions (SER. p. 50, p. 84). RAT organizes every second year the International Scientific and Practical Conference "Technologies. Resources" with scientists from over 15 countries. The proceedings of the

International Scientific and Practical Conference “Environment. Technologies. Resources” available in open access databases [conferences.rta.lv](http://conferences.rta.lv), [journals.rta.lv](http://journals.rta.lv). which are also indexed in the SCOPUS database.

Scientific activity in the study field is ensured by the Engineering Institute. It operates in accordance with the RAT Strategy and the Research Strategy.

Research at the Institute is carried out both as systematic research by academic staff in the fields of their competence and as part of the education process when implementing a corresponding RAT study programme.

However, international investment could be increased, particularly international staff mobility (SER, Annex 7). It would be desirable to improve the involvement of lecturers directly related to construction in traineeship programmes abroad, in international programmes or in Erasmus mobility programmes.

Project grant of Science Council of RAT for year 2017. Project No 13.15/9: New functional composite materials from carbon fiber and fiber crops. Involved in the project: A.Martinovs, Ē. Teirumnieka.

Project grant of Science Council of RAT for year 2018. Project No 16.7/1: Enhancement of exposure resistance to composition materials. Involved in the project: A.Martinovs, Ē. Teirumnieka.

Project grant of Science Council of RAT for year 2018. Project No 16.7/6: Material impactor testing equipment II. Involved in the project: A.Martinovs, Ē. Teirumnieka.

ERASMUS+ KA2 “Improving the professional skills in green constructions through online training”. Project No. 2017-1-LV01-KAS202-035483. 2018. Involved in the project: S.Pleikšnis, Ē. Teirumnieka.

Rural Support Service project “Innovative solutions for the treatment and processing of industrial hemp”. No. 18-00-A01612-000026. Leading researcher. 2020. – 2022. Involved in the project: Ē. Teirumnieka.

The teaching staff involved in projects shall transfer the knowledge and competences acquired during the implementation of projects to students, involving them in discussions and a problem analysis on, for example, new functional materials, material interoperability, endurance, green construction trends, etc.

Teaching staff could more actively promote their involvement in research projects for students by interesting them in research. In the assessment visit meeting with teaching staff, it was confirmed by some lecturers and meeting with students, they also said that lecturers could talk more about their work on various projects.

4.5. The collaborative models of the teaching staff involved in the programme cooperation between the teaching staff employed in the Study Programme shall be implemented in the following ways:

1) by jointly delivering a study course. Teams of teaching staff are formed according to principle the study course is taught by an experienced practitioner and researcher with practical work experience (e.g. study courses Geodesy, Geodesy Practicum, Fine Geometry and Civil Engineering Graphics) (visiting lecturer A. Avots, researcher A. Skromulis) , Construction physics (J.Īgoznis, A.Martinovs)

2) the cooperation of the elected academic staff – visiting lecturers. The academic staff of the study programme will provide the pedagogical and methodological support of guest lecturers, especially when starting academic activities. For this purpose, RAT offers free professional development courses, which guest lecturers are not always able to use due to their professional workload.

3) interdisciplinary cooperation of the academic staff – the programme employs teaching staff of different fields, who can discuss topical issues when meeting in the general meetings of the study direction. Particularly productive cooperation for the study programme is with the study direction “Mechanics and metalworking, heat energy, heat engineering and mechanical engineering”. Lecturers conduct joint research and participate in the implementation of study courses.

4) cooperation of teaching staff and supportive staff. The cooperation of the teaching staff and ICT specialists is especially important for the implementation and development of the study programme, ensuring the cooperation of the teaching staff and general staff during the remote studying due to the Covid pandemic. RAT has created its own internal document management system, which also

contains cooperation planning and control options. In RAT , the greatest part of cooperation models during the emergency are ensured using the Microsoft Team platform'

5) cooperation between teachers and students. In March and April 2020, as a result of the influence of Covid-19 pandemic the authorities declared an emergency situation in Latvia, which determined the priority of new cooperation models. The study process at RAT was implemented remotely, using all the possible remote communication tools. In RAT , the dominant communication portal was the website of study courses [ekursi.rta.lv](http://ekursi.rta.lv), as well as online tools Microsoft Teams, Zoom, WhatsApp, Skype, etc.

## **Conclusions by specifying the strengths and weaknesses**

Conclusions:

The qualifications and research record of the teaching staff is generally satisfactory. The mechanism for mutual collaboration between the teaching staff could be improved. Attraction of young and qualified specialists for professional study subjects in construction should be strongly considered.

Strengths

1. Appropriate professional qualifications of teaching staff and experience of research work.
2. Pattern of cooperation between teaching staff, jointly teaching a study course.

Weaknesses:

1. Relatively low participation of teaching staff in international mobility.
2. Gradual renewal of the academic staff of the professional study subjects in construction.
3. Teaching staff need to improve their proficiency in English.

## **5. Assessment of the Compliance of the Study Programme "Civil Engineering"**

### **Requirements**

1. The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure by which state-recognised documents of higher education are issued.

**Assessment of compliance:** Fully compliant

The diploma sample provided in SER(Annex 7) fully complies with the procedure and regulations by which Latvian state-recognised documents of higher education are issued. (Cab.Reg.No 202, <https://m.likumi.lv/doc.php?id=256157>).

2. Documents confirming that the higher education institution/ college will provide the students with the options to continue the acquisition of education in another study programme or at another higher education institution/ college (a contract with another accredited higher education institution/ college), in case the implementation of the study programme is discontinued.

**Assessment of compliance:** Fully compliant

Agreement in place with Rīgas Celtniecības koledža ( RCK). (SER Annex 8.docx), based on the cooperation of the Parties in the field of studies and scientific research, in case the implementation of the RAT 1st level higher professional higher education study programme "Civil Engineering" (41582) is interrupted, RCK undertakes to provide study continuation opportunities for 1st level professional higher education in the programme "Civil Engineering" (41582).

- 3 3. Document confirming that the higher education institution/ college guarantees to the students a compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the higher education institution/ college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

**Assessment of compliance:** Fully compliant

Confirmation can be found in guarantee of certification. (SER Annex 9.docx)

- 4 4. The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

**Assessment of compliance:** Fully compliant

Confirmation can be found in SER declaration. ( SER Annex 15.docx)

- 5 5. The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language.

**Assessment of compliance:** Not relevant

Not relevant

- 6 6. At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts.

**Assessment of compliance:** Not relevant

Not relevant

- 7 7. The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Institutions of Higher Education.

**Assessment of compliance:** Not relevant

Not relevant

- 8 8. The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

**Assessment of compliance:** Fully compliant

Confirmation that it is in compliance with Cabinet regulations No 70. "Mandatory Provisions to be Included in the Study Agreement". (

<https://likumi.lv/ta/id/152072-studiju-liguma-obligati-ietveramie-noteikumi>) . (SER Annex 10.docx)

- 9 9. The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 56.1, Paragraph two and Section 56.2, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Partially compliant

Study course descriptions generally are well outlined and compliant with the Section 561, Paragraph two and Section 562, Paragraph two of the Law on Institutions of Higher Education. Information gained from on site visits and interviews with students and graduates also approves that. Most of the funding is used for books in English. Although, there insufficiently managed updating newest literature, because in some cases information that are checked is outdated.

- 10 10. The study programme complies with the valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided that the completion of the study programme leads to a professional qualification.

**Assessment of compliance:** Fully compliant

Confirmation that it is compliant with the valid professional standard is found SER Annex\_3.docx.

- 11 11. Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Institutions of Higher Education.

**Assessment of compliance:** Not relevant

Not relevant

- 12 12. The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard.

**Assessment of compliance:** Fully compliant

According to SER Annex2.docx the study programme complies with the State Professional Higher Education Standard (Cabinet of Ministers Regulation No. 141 "Regulations on the State Standard for the First Level Professional Higher Education"

<https://likumi.lv/ta/id/6397-noteikumi-par-pirma-limena-profesionalas-augstakas-izglitiba-valsts-standartu>)

- 13 13. The joint study programmes comply with the requirements prescribed in Section 551, Paragraphs one, two, and seven of the Law on Institutions of Higher Education (if applicable).

**Assessment of compliance:** Not relevant

Not relevant

- 14 14. Each member of the academic staff has either publications published in reviewed editions within the last six years, including international editions (if they have worked for a shorter period of time, the number of publications shall be in proportion to the work period), or artistic creation achievements (for instance, exhibitions, films, theatre performances, and concert activity), or a five-year practical work experience (except for the experience in the implementation of the study programme) in accordance with the Law on Institutions of Higher Education.



**Assessment of compliance:** Fully compliant

Referring to SER teaching staff publications (Annex 8.docx) and CV's (Annex 6.7z) each member of the teaching staff has either relevant and up to date publications or at least 5 years of practical work in the field.

15 R5 - Overall rating

**Assessment of compliance:** Partially compliant

The study programme overall generally complies with the legal requirements set forth in the Law on Institutions of Higher Education and other regulatory enactments. Reference has been provided, but still, it's necessary to update newest mandatory sources of information in study course descriptions.

**Requirements (R6-R8)**

- 1 R6 - The compliance of the study provision, scientific support (if applicable), informative provision (including libraries), material and technical provision, and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of the learning outcomes.

**Assessment of compliance:** Fully compliant

The study provision complies with conditions for implementation of the study programme. (SER Part II Chapter 3 sub-paragraph 3.1 to 3.3.)

However, RAT management should clarify the following risks/ weaknesses in the future: a risk and possible lack of resources for proper maintenance of well installed infrastructure; the budget for research activities is not divided between study field or study programme, therefore it is not possible to determine financial outcomes of each study field.

- 2 R7 - The compliance of the qualification of the academic staff members, visiting professors, visiting associate professors, visiting docents, visiting lecturers, and visiting assistants with the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments.

**Assessment of compliance:** Fully compliant

All representatives of the teaching staff from RAT have appropriate qualifications according to the conditions for the implementation of the study programme and the provisions set out in the respective regulatory enactments. Although the legal requirement has been met, the English skills of RAT academic staff need to improve.

- 3 R8 - The study programme leading to the master or doctoral degree is based on the advances and findings in the relevant field of science or artistic creation.

**Assessment of compliance:** Not relevant

Not relevant

**Conclusions by specifying the strengths and weaknesses**

Conclusions:

The interrelation of the analyzed study programme elements - name, professional qualification, the aims, objectives, learning outcomes, and admission requirements - is strong, which is the result of

the awareness of their importance (content-wise, legal-wise) to the needs of the country for qualified specialists.

Although high interest for the study programme exist, the number of students enrolled to the programme shows a decreasing trend.

The structure of the programme is regulated and the study course descriptors are clearly mapped with the requirements of the 4th level occupational standard "Building Construction Manager". The study course descriptors are very comprehensive and the programme outcomes meet the needs of the industry.

Mobility opportunities are available but not well-exploited. A significant impediment to inward mobility is the fact that the programme is implemented only in Latvian. Outward mobility is hampered by significant work and family commitments of the majority of the students - 72% over 30 years of age – but a general lack of students' confidence in their English language skills may also be a factor. Of those who do take up opportunities abroad the dominant form is a short practice position in a company or organisation as opposed to a semester or year of study in a higher education institution.

There is a well-functioning support system, based on the needs of the students in RAT .

The qualifications and research record of the teaching staff is generally satisfactory. The mechanism for mutual collaboration between the teaching staff could be improved. Attraction of young and qualified specialists for professional study subjects in construction should be strongly considered.

The related requirements have been fully or partially met both, in relation to legal requirements and to good management practices.

Strengths:

1. RAT and the study programme pays serious and strict attention to ensuring the compliance of legal requirements.

Weaknesses:

1. The English skills of RAT academic staff need to improve.

2. information is insufficiently checked when updating description of study courses and content prior to approval.

## **Evaluation of the study programme "Civil Engineering"**

Evaluation of the study programme:

Good

## **6. Recommendations for the Study Programme "Civil Engineering"**

### **Short-term recommendations**

1. Improving the English language skills of the students should be prioritised and greater incentives introduced for students to avail of mobility opportunities to other RAT study programmes, so that an international culture would be seeded in the typical graduate profile, in anticipation of greater international competition for regional projects as the economy grows in the European Union context.

2. The teaching staff should have additional training on foreign language skills for implementation of international courses and attraction of new students.

3. Gradual renewal of the academic staff of the professional study subjects in construction attracting guest lecturers from cooperation universities in Latvia and abroad, graduates and labour market representatives, doctoral students.

4. Increase involvement of all teaching staff in international mobility.

5. The study programme should be built around more consistently-sized blocks of teaching and learning (for example standardised on 3 CP minimum) to allow time for an emphasis on the development of deeper comprehension, analytical skills, synthesis and interconnection of knowledge within a module, rather than multiple short training courses (for example the existing 1 and 2 CP) with inevitable emphasis on transfer of knowledge in the lowest order of the taxonomy of learning.

6. Reduction of the number of students enrolled to study programme shows a constant decreasing trend which is a consequence of several key factors recognised as: i) national demographic politics and ii) general financial situation in Latvia and the gravity area. This issue was recognised as a potential threat during the previous QA visit, and now it has become a weakness. Several key countermeasures could be done to prevent further decrease of number of students by RTA. Hereby students from abroad should be targeted for, students out of the region should recognise the quality and the guarantee of employment after study programme qualification acquisition. English language skill should be improved by academic staff so the study programme can be offered for international students as well.

7. Necessary to update newest mandatory sources of information in study course descriptions.

### Long-term recommendations

## III. Assessment of the Requirements for the Study Field and the Relevant Study Programmes

### III. Assessment of the Requirements for the Study Field and the Relevant Study Programmes

#### Assessment of the Requirements for the Study Field

Requirements	Requirement Evaluation	Comment
R1 - Pursuant to Section 5, Paragraph 21 of the Law on Institutions of Higher Education, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study direction whilst implementing their internal quality assurance systems:	Partially compliant	RAT has several mechanisms for study quality improvement, including Study Quality Assurance Policy as well as the mechanisms for evaluating teaching staff and getting feedback. System is compatible with law, and it was discovered that one of the RAT weaknesses is low rates of feedback from students in the surveys. Also, there is lack of follow up communication with students about impact of their comments, it could be one of the reasons why there is low engagement. (SER p.9-10. information gained during the on-site visit ).

Requirements	Requirement Evaluation	Comment
R2 - The cooperation with different organisations from Latvia and abroad implemented within the study direction ensures the achievement of the aims of the study direction.	Partially compliant	RAT has concluded an ERASMUS cooperation agreement with the bachelor's study programme Civil and Construction Engineering,[3] implemented at the Deggendorf Institute of Technology, which envisages study and internship mobility for the students acquiring the Study programme. RAT has cooperation agreements with 22 organisations. As mentioned in chapter 5 weaknesses, there is big unused potential in these international agreements, because for now it looks like the main focus is still on fulfilling local needs for professionals. (SER, p.12, Annex 9.xlsx, information gained during the on-site visit)
R3 - Compliance of scientific research and artistic creation with the development level thereof (if applicable).	Partially compliant	RAT is successfully developing mechanisms for the involvement of the teaching staff in scientific research. RAT organizes every second year the International Scientific and Practical Conference “ Technologies. Resources” with scientists from over 15 countries. Although there were found weaknesses with the problem of institutional co financing of projects as mentioned in chapter 4. Overall fields of scientific research complies with the development aim of the RAT it can be improved even more.( Summary of scientific research can be found in SER, Annex 8.docx)
R4 - Elimination of the shortcomings and deficiencies identified during the previous assessment of the study direction, if it has been conducted, or the implementation of the provided recommendations.	Partially compliant	RAT has performed meaningful work on the fulfilment and implementation of these recommendations. Although there were some shortcomings identified, like the level of English competence, as it also has been mentioned before, and the focus of the QA system. ( Overview of implementations can be found in SER, Annex 14.)

#### Assessment of the Requirements for the Relevant Study Programmes of the Study Field

<b>No.</b>	<b>Study programme</b>	<b>R5</b>	<b>R6</b>	<b>R7</b>	<b>R8</b>	<b>Evaluation of the study programme (excellent, good, average, poor)</b>
1	Civil Engineering (41582)	Partially compliant	Fully compliant	Fully compliant	Not relevant	Good

### **The Dissenting Opinions of the Experts**