### ESTONIAN QUALITY AGENCY FOR HIGHER AND VOCATIONAL EDUCATION

# Report on the re-assessment of the study programme group of

# **Architecture and Building**

**Doctoral level** 

## **Estonian Academy of Arts**

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#### 1. Introduction

#### Re-assessment of study programme group

In the case the right to provide instruction has been granted for a specified term, EKKA shall, within a specified period, conduct a re-assessment of the study programme group and cycle of higher education.

When an institution applies for the right to provide instruction, it is ascertained whether the quality of instruction meets the requirements laid down for the relevant cycle of higher education; and whether resources and sustainability are adequate for the provision of instruction.

EKKA conducts initial assessment and re-assessment using three assessment areas:

1) Quality of instruction,

The Quality of instruction is divided into three sub-areas: Study programme, Learning and teaching, and Organisation of studies.

2) Resources,

The area of Resources has also three sub-areas: Academic staff, Learning and teaching environment, and Financial resources.

and 3) Sustainability.

When assessing sustainability, assessments for quality of instruction and resources are taken into account in addition to further sustainability criteria.

In the assessment report, the committee shall determine for each assessment area, whether the quality of instruction:

- 1) Conforms to the required standard;
- 2) Partially conforms to the required standard;
- 3) Does not conform to the required standard.

As a result of the re-assessment, EKKA Quality Assessment Council for Higher Education makes a proposal to the Minister of Education and Research, whether to grant the higher education institution the right to provide instruction in the relevant study programme group and cycle of higher education; to grant the higher education institution the right to provide instruction in the relevant study programme group and cycle of higher education for one to three years; or not to grant the higher education institution the right to provide instruction in the relevant study programme group and cycle of higher education.

The re-assessment is carried out in accordance with the document "Guidelines for the initial assessment and re-assessment of study programme groups" approved by EKKA Quality Assessment Council for Higher Education on 19.05.2020.

The re-assessment of the study programme group of Architecture and Building at the Estonian Academy of Arts was carried out on 12-13 April 2021.

The study programme Architecture and Urban Planning (Doctoral Study Programme) in the study programme group of Architecture and Building were submitted for the re-assessment by the Estonian Academy of Arts.

In order to carry out the re-assessment, EKKA formed an expert panel, which includes experts from higher education institutions, outside higher education institutions and student representatives. EKKA coordinated the composition of the expert panel with the higher education institution.

#### The following persons formed the expert panel:

| Philippe Bouillard (Chair)                                  | ippe Bouillard (Chair) Professor, Université Libre de Bruxelles, Belgium                |  |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|--|
| Marialena Nikolopoulou                                      | Nikolopoulou Professor, University of Kent, Kent School of Architecture ar Planning, UK |  |  |  |  |  |  |  |
| Jan-Gunnar A. Persson Professor Emeritus, KTH, Sweden       |   |  |  |  |  |  |  |  |
| Matti Rautiola  | Professor, Architect; ARRAK Architects Kiiskilä, Rautiola,<br>Rautiola Ltd, Finland     |  |  |  |  |  |  |  |
| Katre Koppel Doctoral student, University of Tartu, Estonia |   |  |  |  |  |  |  |  |

#### **Assessment process**

The assessment process was coordinated by EKKA staff – Ms. Liia Lauri.

The members of the assessment panel completed the re-assessment training organised by EKKA. The members of the panel worked through the documents submitted by the higher education institution. During the preparatory meeting for the assessment visit, the panel prepared a preliminary visit plan, which was coordinated with the institution and EKKA. The members of the panel agreed on the topics to be clarified on the basis of the documents submitted by the higher education institution. The division of workload and tasks were agreed in the panel for the assessment visit.

The assessment visit to the higher education institution took place on 12-13.04.2021. The panel got acquainted with the learning environment and conducted the interviews agreed in the schedule.

The assessment visit took place online.

EKKA sent the initial report of the panel to the higher education institution for comments on 10.05.2021.

The higher education institution submitted its comments on the initial assessment report on 17.05.2021.

When finalising the report, the panel took into account the comments of the HEI.

The panel submitted the final report to EKKA on 18.05.2021.

#### Information about the Estonian Academy of Arts

The Estonian Academy of Arts (hereinafter EKA) is a university of arts established in 1914 that provides higher education in architecture, design, arts and culture. Nearly 1,200 students are currently enrolled at EKA and are instructed by more than 100 Faculty members.

EKA is an integrated research, development, educational, creative and cultural institution, and has defined its mission to contribute to the sustainable development of the society and growth of the national welfare by international high-level research, development, education and creative work. In order to fulfil its mission, EKA provides educational programmes based on research, development and creative activities at all levels of higher education and life-long learning education in art, architecture, design and humanities.

There are four faculties at EKA: Fine Arts, Architecture, Design and Art and Culture offering training to artists, architects, designers, art historians, art teachers, heritage protection specialists and conservators. In 2019, instruction was provided in 30 curriculums (13 BA curriculums, 1 integrated curriculum, 12 MA curriculums and 4 doctoral curriculums). Many EKA curriculums are unique in Estonia. Lifelong learning opportunities are provided by the Open Academy offering continuing education and Summer Academy with its various art and design courses.

The instruction of architects in Estonia is slightly older than the republic. The Faculty of Architecture of EKA covers many disciplines concerned with the design of the built environment, including interior architecture, architecture, urban planning, urban landscapes and urban studies.

The Department of Architecture and Urban Planning of EKA is a member of the European Association for Architectural Education and the Nordic-Baltic Academy of Architecture. The initial five-year study programme conforms to the Estonian and European regulations and directive. It also complies with the Estonian professional qualification system for architects.

The doctoral curriculum of Architecture and Urban Planning 2020 (DAU) is a four-year (240 ECTS) programme offering two main study routes:

- 1. Text-based research,
- 2. Creative research.

Admission to the programme is open to graduate students with a Master's degree in architecture, interior architecture, urban design, landscape architecture, design or equivalent.

3 students have graduated from the programme over the period 2015-2020 and 12 students are currently enrolled.

EKA provided a detailed Self-Assessment Report (SAR). Together with the online assessment visit, these constitute the main evidence used to conduct this assessment.

# 2. A brief summary of the results of the assessment and their justifications

EKA has demonstrated that the PhD programme is based on the EKA Development Plan and national development plans and priorities and meets international standards. A range of collaborations with different stakeholders and international partners benefit the study programme. The learning outcomes of the study programme are equivalent and comparable to the learning outcomes of the academic cycles of higher education.

The admission and graduation conditions are clear and transparent. The academic roles are being carried out with responsibility and awareness. The multidisciplinary intellectual, artistic and physical environment enables both general support and a determined focus on the research themes of the student. The detailed assessment methods are described in the curriculum modules and specified in each syllabus. The academic staff members have adequate teaching competencies.

The small-sized environment supports an individual approach to each learner, guaranteeing the fulfilment of the needs of different learners and specificities of the study programme. EKA has built strong relationships and is collaborating closely with private and public sector stakeholders which offer practical training opportunities for the students. The students enrolled in the study programme have access to various counselling services and international mobility.

The academic staff qualifications meet the requirements. The number of academic staff is sufficient to achieve the objectives of the study programme. The academic staff are internationally active. The staff members get feedback from external research partners, in cooperative research projects.

The most modern facilities are available for studies and study-related research, development and creative activities, supporting the multidisciplinary collaboration between various departments. Research, development and creative activities are supported by an adequate amount of up-to-date equipment and study material.

EKA has demonstrated that they have the adequate financial resources to conduct a high-quality PhD in architecture and urban planning. EKA is also providing the students with adequate support services. Regarding the specific research budget, the DAU has managed to keep it stable in recent years, and recent success in applying for projects or grants has already secured it for the next years. The review panel is further recommending elaborating a long-term strategy to ensure the sustainability of the financial resources, including a risk analysis.

The existing Development Plan applies for the years 2016-2020 and is checked annually in the Action plan. The review panel has noticed a significant improvement in the programme. The stability, which has been reached within the last two years offer a sound environment for admissions, graduations and budgetary mobility. The academic staff represents a profound and balanced mix of best professionals in the country, both merited and young researchers, from Estonia and abroad. The PhD programme is relevant to the needs of society.

#### **ASSESSMENT PANEL DECISION:**

| ASSESSMENT AREAS       | CONFORMS | PARTIALLY<br>CONFORMS | DOES NOT<br>CONFORM |
|------------------------|----------|-----------------------|---------------------|
| QUALITY OF INSTRUCTION | X        |                       |                     |
| RESOURCES              | X        |                       |                     |
| SUSTAINABILITY         | X        |                       |                     |

#### **Strengths:**

- Despite its young age the PhD in Architecture and Urban Planning is developing into a strong programme. This is predominantly driven by the strong links with external stakeholders.
- Cross fertilisation of ideas through collaborations with teams in other faculties, universities
  in Estonia and internationally, as well as with public bodies, large industry and smaller
  commercial enterprises.
- International exposure encouraged through different means; including short term research visits, external supervisions.
- The members of the academic staff are chosen from highly qualified Estonian and foreign professionals and academics in the areas of architectural practice and research.
- The academic staff have good qualifications and are very engaged.
- The new premises and equipment of EKA are outstanding, creating an inspirational learning environment for students and a teaching/research environment for the academic staff.
- EKA has recently secured two major individual research grants (MSCA fellowship and starting grant).
- EKA today is a great entity for its societal relevance and a wanted partner. The societal commission calls for doctors and development of the construction industry, modular construction, digitalisation and urban development.

#### Areas of concern and recommendations:

- Given the PhD in Architecture and Urban Planning offers three distinct pathways (traditional
  text-based research, research by design, creative practice research), it is recommended to
  articulate the different learning outcomes, which are all currently combined. The three
  programme pathways provide distinct differences between them; differentiating the course
  aims and learning outcomes will enable EKA to champion the different routes nationally and
  internationally.
- The review panel recommends an increase in the number of students, both Estonian and foreign, to enhance critical interaction between different methods, approaches and themes within the programme.
- The process of applied professional activities should be formalised in order to increase students' awareness about their opportunities before the start of their PhD studies. The formalisation of the process should take place in close collaboration with the stakeholders in order to ensure that both PhD students' and stakeholders' expectations could be met.
- The department should elaborate a research strategy, including a risk analysis to ensure the sustainability of financial resources.

### 3. Analysis by assessment areas and criteria

#### 3.1. QUALITY OF INSTRUCTION

#### 3.1.1. Study programme

3.1.1.1. Launching and developing of the study programme is based on the Development Plan of the higher education institution, national development plans and analyses (including labour market and advisability analyses) and strives for top quality.

Reviewing the extensive portfolio of documents submitted for the evaluation by EKA, along with the discussion with faculty staff and external stakeholders, it is evidenced that the PhD programme is based on the EKA Development Plan and national development plans and priorities. Research activities and students' projects are partly shaped by these external developments (digitalisation, heritage, infrastructure, etc.) ensuring that the innovation produced by the research is beneficial to different stakeholders.

The interviews strengthened the understanding that Estonia applies digital technology widely in society and is one of the leading countries in the world. The research activity of EKA is, and needs to be integrated with the development of digital construction progresses, and also in creating new systemic solutions for the whole society.

3.1.1.2. Employers and other stakeholders of the study programme group are involved in the study programme's development.

The portfolio of documents submitted highlighted a range of collaborations with different stakeholders which benefit the study programme. Links with academics from leading institutions internationally provide important collaborations, particularly on the research by design pathway of the programme.

Beyond dissemination and public engagement events, such as Open Lectures, seminars and exhibitions, the review panel was impressed by the collaborations with external stakeholders. Beyond the submitted documents, the discussions during the meetings highlighted the active role of both public bodies as well as private companies in EKA's research activities. This was also apparent through the discussion with representatives or CEOs from the Estonian Association of Architects, Ministry of Economic Affairs and Communications, AS Port of Tallinn, AS Kapitel and AS Harmet, all of whom have directly benefitted from the collaboration with EKA and in turn provide useful input for the PhD programme in different ways.

According to the EKA staff, the institution follows the principle of an "open source" policy in giving out research results. The principle allows for free space in independent research, advances the utilisation of research results in society and underlines the reliability of research.

3.1.1.3. The study programme meets the requirements and trends in international legislation that regulate the professional field, and if an occupational qualification standard exists takes into consideration the acquisition and implementation of the knowledge and skills described therein.

As evidenced from the submitted documentation and Annex 1 to the Standard of Higher Education, the study programme meets the international requirements for PhD programmes. This includes the overall framework, description of the curriculum, provision for student training needs on generic skills and speciality specific subject, attestations and evaluations, teaching, publications, etc.

In terms of relevance to the professional standard, EKA's documentation highlights that the doctoral curriculum Architecture and Urban Planning supports the Professional Standard Chartered/Principal Architect, Level 8 issued by the Estonian Qualifications Authority.

3.1.1.4. The learning outcomes of the study programme are equivalent and comparable to the learning outcomes of the academic cycles of higher education described in Annex 1 of the Standard of Higher Education.

The learning outcomes of the study programme are equivalent and comparable to the learning outcomes of the academic cycles of higher education. These are clearly described in Annex 1 of EKA's Rules of Study Organisation.

The PhD programme provides two different routes, the traditional text-based research of the *history* and theory of architecture and the *Creative research* path, which is further sub-divided into (i) research by design and (ii) creative practice research, which is predominantly conducted in an architectural office.

The EKA team are at the forefront of *creative practice research*, having benefitted from the involvement with the EU FP7-funded ADAPT-r consortium, a collaboration that has continued beyond the completion of the project and evidenced through the co-supervision cooperation agreement with RMIT (Royal Melbourne Institute of Technology). These different pathways, however, would benefit from the explicit articulation of the different learning outcomes, which are all currently combined as part of the programme. Such differentiation will enable prospective candidates to fully comprehend differences between the different pathways in the learning process, rather than the final output. Additionally, it will enable the EKA team to champion the different educational models for PhD in architecture and disseminate the knowledge internationally in relevant educational fora.

The international exposure encouraged through different means, including short term research visits and external supervisions. Although due to the small cohort, statistics are not meaningful, the relevant examples show the range of activities included. Short-term visits have been enabled via mobility programmes, such as Dora and Erasmus. External supervision has included the RMIT as well as the shared tutoring with Tampere University of Technology on "Unfinished City", where the Harvard University Graduate School of Design was also involved, and UCL.

3.1.1.5. Different parts of the study programme form a coherent whole. The title of the study programme is consistent with the content and the structure; and content of the study programme supports the acquisition of the objectives and learning outcomes of the study programme.

The different parts of the PhD programme form a coherent whole, suitable for a Faculty of Architecture and supported, organisationally and academically by staff with suitable skills and experience, as well as state-of-the-art infrastructure. This was confirmed not only by the submitted documentation and virtual visit to the facilities, but also interviews with the staff and doctoral students from different years, i.e. from the first year of their studies to those recently completed. The discussions with the researchers were particularly useful, as they shed light on the modus operandi of the whole study programme, from supervisions to training opportunities within EKA, nationally and internationally, engagement with international supervisors, development of their research, experience with competitive research funding bids, involvement with teaching, as well as external collaborations with key stakeholders.

The title of the study programme, PhD in Architecture and Urban Planning, is consistent and aligned with the research strands and staff expertise, on history and theory of architecture and urban planning as well as the creative research paths which form a real strength in the school and provide a 'unique selling point'.

The contents and structure of the programme, the provision for student training, teaching, publications, etc., provide a comprehensive programme. These are further supported by collaborations with external stakeholders as suitable for the students' line of enquiry. Whether external supervision from a different institution or access to commercial partners suitable for the research, the programme utilises all available networks for the benefits of its students.

Additional support through short-term visits to other institutions, participation in conferences and workshops and other events such as hackathons is commendable.

The development of publications for peer-reviewed journals is aligned with international best practice and further supports the acquisition of the objectives and learning outcomes of the study programme.

#### **CONCLUSIONS AND ASSESSMENT: STUDY PROGRAMME**

EKA has demonstrated that the PhD programme is based on the EKA Development Plan and national development plans and priorities and meets international standards. A range of collaborations with different stakeholders and international partners benefit the study programme. The learning outcomes of the study programme are equivalent and comparable to the learning outcomes of the academic cycles of higher education. Therefore, the review panel concludes that EKA is conforming to the requirements regarding the study programme.

#### **Strengths**

• Despite its young age the PhD in Architecture and Urban Planning is developing into a strong programme. This is predominantly driven by the strong links with external stakeholders.

- Cross fertilisation of ideas through collaborations with teams in other faculties, universities
  in Estonia and internationally, as well as with public bodies, large industry and smaller
  commercial enterprises.
- Co-supervision cooperation agreement with RMIT enables EKA to be at the forefront of PhD by creative practice.
- International exposure encouraged through different means; including short term research visits, external supervisions.

#### Areas of concern and recommendations

Given the PhD in Architecture and Urban Planning offers three distinct pathways (traditional
text-based research, research by design, creative practice research), it is recommended to
articulate the different learning outcomes, which are all currently combined. The three
programme pathways provide distinct differences between them; differentiating the course
aims and learning outcomes will enable EKA to champion the different routes nationally and
internationally.

#### **Opportunities for further improvement**

None.

#### 3.1.2. Learning and teaching

3.1.2.1. Conditions for admission and graduation are clear and transparent; requirements to prospective students stem from prerequisites for the completion of the study programme.

The relevant recommendation of the previous assessment has been considered and definite actions have been taken, e.g. to describe the attractiveness of the study programme and advertise the studies in multiple media and to clarify the criteria for admissions, based on "The Estonian Academy of Arts Conditions and Procedures for Admission". The conditions are clear and transparent.

There has been an increase in applications from Estonia and abroad. It would still be beneficial to attract more applications for admissions by intensifying the actions that have been taken already.

3.1.2.2. Academic staff members are aware of the objectives of the study programme and their role in achieving these objectives.

The duties of the members of the academic staff are stated in detail in "The Rules for the academic staff labour relations at the Estonian Academy of Arts". The interviews indicate that the roles are being carried out with responsibility and awareness.

As evidenced by the interviews with the students, they are very appreciative of the regular contact with the supervisors and the opportunities provided to them for a range of activities from participation in research visits abroad, dissemination activities, participation in teaching and research projects, networking with external stakeholders, etc.

#### 3.1.2.3. Study methods motivate learners to take charge of their studies and achieve learning outcomes.

There are two routes of doctoral studies, "Text-based research" and "Design-based research" (further sub-divided into "Creative practice research" and "Research by Design"). For both, the structured curriculum and integrated research resources are coherent and logical. In addition to this, the given multidisciplinary intellectual, artistic and physical environment enables both general support and a determined focus on the research themes of the student. An orderly and supportive environment also helps to keep the timetable.

However, despite the definite improvement, the evidence of learning outcomes cannot be collected fully due to the fairly short experience of the curriculum, and especially because of the pandemic. Interviews with candidates that have completed the programme, published outputs and subsequent collaborations based on their research enhance confidence in the work.

3.1.2.4. Appropriate methods are used for the assessment of learning outcomes; assessment is transparent, objective and supports the development of students.

The assessment methods of learning outcomes are written in the self-assessment report (SAR) under title 1.5 "Methods used for assessing the achievement of learning outcomes". The detailed methods are described in the curriculum modules and specified in each syllabus. The interviews appeared to be supportive of the functioning of the methods.

3.1.2.5. The content and volume of independent work and in the case of doctoral studies, implementation of professional activities, support the achievement of learning outcomes of the study programme.

The doctoral students work in diverse roles in the wider society, e.g. in EKA, architectural practice and for the authorities. The perspective is fruitful in principle, but the evidence of learning outcomes is difficult to collect, due to the short experience and global pandemic. However, beyond the portfolio of evidence submitted and the list of published papers, according to the interviews with students, staff and external stakeholders, the collaboration has produced useful results and growing activity within the wider society. This is the case with the different strands of work and highlights the relevance of the doctoral programme and its impact on the wider society in Estonia.

3.1.2.6. The academic staff members have adequate teaching competences in order to support the autonomy of students and ensure adequate and professional supervision.

The members of the academic staff are chosen from highly qualified Estonian and foreign professionals and academics in the areas of architectural practice and research. Their qualifications and specialisation are listed in the assessment report. The number is adequate, especially in relation to the small number of students.

The volume and contents of lectures are listed in the self-assessment report and are adequate. Personal supervision is frequently available and is intensively present when needed.

3.1.2.7. The level and volume of research, development and creative activities of academic staff is sufficient to provide instruction and supervise academic work by students in the appropriate cycle of higher education.

According to the self-assessment report, the number of the teaching staff is 20 with 5 permanent full-time positions. The number of supervisors of the active doctoral dissertations is 13 in total, with a reserve of 16 people, all professors and doctors. During the interviews, the review panel found out that members of the staff are widely involved in different professional and creative activities in the society, as well as in positions in international universities. The staff's multitude of experience, activities and intensive availability give the students exceptional possibility to get supervision and academic intellectual exchange within the structure.

The review panel judged a fair level and volume of research by the academic staff, particularly within the Faculty's research areas "Timber in architecture" (Modular timber construction), "Urban design and urban studies", and "Digital spatial design process". Also, the publication activity is fair, based on the ETIS lists of publications for the academic staff.

| Publications by lecturers 2016-2020* | Classifi | cation |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------------------------------|----------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Year                                 | 1.1      | 1.2    | 1.3 | 2.1 | 2.3 | 2.5 | 3.1 | 3.2 | 4.1 | 5.1 | 5.2 | 6.1 | 6.3 | 6.6 | 6.8 | К   |
| 2020                                 |          |        |     |     | 1   | 1   | 2   | 6   | 3   |     |     |     | 1   | 3   |     | 17  |
| 2019                                 | 3        | 3      |     |     |     |     | 4   | 6   | 2   |     |     |     | 5   |     |     | 23  |
| 2018                                 | 5        | 2      | 1   |     |     | 3   | 2   | 5   | 2   |     | 1   | 5   | 2   | 2   | 1   | 31  |
| 2017                                 |          |        |     | 1   |     |     | 3   | 9   | 1   | 1   |     |     | 1   | 1   |     | 17  |
| 2016                                 | 1        | 1      | 2   |     |     |     | 1   | 6   | 1   | 1   |     |     | 3   | 4   |     | 20  |
| TOTAL                                | 9        | 6      | 3   | 1   | 1   | 4   | 12  | 32  | 9   | 2   | 1   | 5   | 12  | 10  | 1   | 108 |

<sup>\*</sup> The table "Publications by lecturers 2016-2020" is based on ETIS data as of 1 November 2020.

The extensive external collaborations with prestigious academic institutions, public bodies as well as infrastructure providers, industry, and smaller commercial companies ensure that research at EKA is at the forefront of developments enabling students to benefit from challenging real-life problems.

#### **CONCLUSIONS AND ASSESSMENT: LEARNING AND TEACHING**

The admission and graduation conditions are clear and transparent. The academic roles are being carried out with responsibility and awareness. The multidisciplinary intellectual, artistic and physical environment enables both general support and a determined focus on the research themes of the student. The detailed assessment methods are described in the curriculum modules and specified in

The table does not include the data of external supervisors and lecturers.

each syllabus. The academic staff members have adequate teaching competencies. Therefore, the review panel concludes that EKA is <u>conforming</u> to the requirements regarding learning and teaching.

#### **Strengths**

- The admission and graduations conditions are clear and transparent.
- The multidisciplinary intellectual, artistic and physical environment enables both general support and a determined focus on the research themes of the student.
- The members of the academic staff are chosen from highly qualified Estonian and foreign professionals and academics in the areas of architectural practice and research.

#### Areas of concern and recommendations

 The review panel recommends an increase in the number of students, both Estonian and foreign, to enhance critical interaction between different methods, approaches and themes within the programme.

#### **Opportunities for further improvement**

• Although the small size of the student body is a tremendous advantage for the students and the extensive support available with short notice and easily shared with other supervisors, it is an area that would need to be addressed. The small number of participants in the doctoral study programme raises a question about the continuity of adequate resourcing of the programme in the future. The thin student body may also weaken the intellectual exchange and thus slow down the promising dynamism in EKA. A bigger number of foreign students would also allow for more English courses and seminars.

#### 3.1.3. Organisation of studies

3.1.3.1. The organisation of studies is unambiguously regulated and information thereof publicly available; it allows to cater for the needs of different learners as well as specificities of the study programme group.

The organisation of the studies is unambiguously regulated and information thereof publicly available. As the EKA is a small-sized institution, it allows high flexibility and close personal interactions between students and academic staff. Such an environment supports an individual approach to each learner, guaranteeing the fulfilment of the needs of different learners and specificities of the study programme.

3.1.3.2. Applied professional activities are regulated, requirements for the completion of practical training have been laid down and preliminary agreements concluded with organisations offering opportunities for practical training.

EKA has built strong relationships and is collaborating closely with private and public sector stakeholders which offer practical training opportunities for the students. However, it remains

unclear if all students are aware of the potential training and applied research opportunities before the start of their PhD studies. Interviews with students and graduates indicate the risk that prospective students might not know which organisations offer training or collaboration opportunities, and what type of support they could get from these private or public sector stakeholders during their PhD studies.

3.1.3.3. The higher education institution has in place rules for academic recognition as well as for recognizing prior studies and work experience; these are implemented in the study programme group under assessment.

As stated by the Rules of Organisation of Study, EKA has put in place the rules for academic recognition as well as for recognising prior studies and work experience. The students can submit VÕTA (APEL) applications, allowing EKA to consider the previous study and work experience as part of the study programme.

3.1.3.4. Students enrolled in the study programme group have access to counselling (study; career and preferably psychological counselling); there are effective measures in place for supporting academic progress of students and preventing premature leaving.

As evidenced from the portfolio submission, students enrolled in the study programme have access to various counselling services.

Student academic progress is supported by individual supervision by local and international supervisors, research seminars and annual attestation. Besides the national stipend, EAA provides employment opportunities e.g. in teaching and engagement with research projects in order to support PhD students financially and keep them engaged with the university and their research work. This was also confirmed through the interviews with academics, support staff and students.

3.1.3.5. Students enrolled in the study programme group participate in international mobility programmes.

Students enrolled in the study programme participate mainly in short-term mobility programmes (Dora Pluss). Between 2016 and 2020 five PhD students used the Dora Pluss programme funding (SAR p. 62). The participation in long-term mobility programmes (Dora, Erasmus) is a bit lower. The supervising staff members encourage students to take the maximum from the mobility programmes. Given the very small numbers enrolled in the programme, a longer-term analysis will be required.

3.1.3.6. Fair and transparent rules for dealing with complaints are used in the study programme group.

The rules for proceeding complaints at the EKA are fair and transparent and stated in the following documents: The Statute of Doctoral Studies at the Estonian Academy of Arts (§ 7) and The Code of Ethics of EKA.

3.1.3.7. Regular internal assessment is conducted in the study programme group, including the analysis and taking into account of feedback from various stakeholders (students, alumni, employers, academic staff).

Regular internal assessment in the study programme group is conducted through the formal mechanism of annual attestations, which is a good mechanism to evaluate the students' progress and identify issues that need to be raised.

EAA organises regular meetings and discussions with private and public sector stakeholders/employers in order to develop the doctoral study programme and research. However, the assessment panel has the impression that the collection of feedback from various stakeholders is done rather informally than formally. As there does not seem to be a clear feedback collection process in place yet, the risk for non-transparency is increased when conducting the internal assessment of the study programme.

#### **CONCLUSIONS AND ASSESSMENT: ORGANISATION OF STUDIES**

The small-sized environment supports an individual approach to each learner, guaranteeing the fulfilment of the needs of different learners and specificities of the study programme. EKA has built strong relationships and is collaborating closely with private and public sector stakeholders which offer practical training opportunities for the students. The students enrolled in the study programme have access to various counselling services and international mobility. Therefore, the review panel concludes that EKA is <u>conforming</u> to the requirements regarding the organisation of studies.

#### **Strengths**

- The academic staff, students, alumni and external stakeholders demonstrate good and close relationships with each other, having a high potential to develop and improve the organisation of studies.
- An extensive network of external collaborators provides important platforms which benefit the students' research.
- Opportunities for the researchers to get involved with active research projects as well as teaching, all of which enhance their skills and strengthen their profile.

#### Areas of concern and recommendations

- The process of applied professional activities should be formalised in order to increase students' awareness about their opportunities before the start of their PhD studies. The formalisation of the process should take place in close collaboration with the stakeholders in order to ensure that both PhD students' and stakeholders' expectations could be met.
- EKA conducts a regular internal assessment of the study programme. However, the
  programme could benefit from a formalisation of the internal assessment process. This
  applies especially to collecting feedback and input for further developments of the
  programme from students, alumni and (potential) employers.

#### **Opportunities for further improvement**

None.

#### CONCLUSIONS AND AGGREGATED ASSESSMENT: QUALITY OF INSTRUCTION

EKA has demonstrated that the PhD programme is based on the EKA Development Plan and national development plans and priorities and meets international standards. A range of collaborations with different stakeholders and international partners benefit the study programme. The learning outcomes of the study programme are equivalent and comparable to the learning outcomes of the academic cycles of higher education.

The admission and graduation conditions are clear and transparent. The academic roles are being carried out with responsibility and awareness. The multidisciplinary intellectual, artistic and physical environment enables both general support and a determined focus on the research themes of the student. The detailed assessment methods are described in the curriculum modules and specified in each syllabus. The academic staff members have adequate teaching competencies.

The small-sized environment supports an individual approach to each learner, guaranteeing the fulfilment of the needs of different learners and specificities of the study programme. EKA has built strong relationships and is collaborating closely with private and public sector stakeholders which offer practical training opportunities for the students. The students enrolled in the study programme have access to various counselling services and international mobility.

Therefore, the review panel concludes that EKA is <u>conforming</u> to the requirements regarding the quality of instruction.

#### **Strengths**

- Despite its young age the PhD in Architecture and Urban Planning is developing into a strong programme. This is predominantly driven by the strong links with external stakeholders.
- Cross fertilisation of ideas through collaborations with teams in other faculties, universities
  in Estonia and internationally, as well as with public bodies, large industry and smaller
  commercial enterprises.
- Co-supervision cooperation agreement with RMIT enables EKA to be at the forefront of PhD by creative practice.
- International exposure encouraged through different means; including short term research visits, external supervisions.
- The admission and graduations conditions are clear and transparent.
- The multidisciplinary intellectual, artistic and physical environment enables both general support and a determined focus on the research themes of the student.
- The members of the academic staff are chosen from highly qualified Estonian and foreign professionals and academics in the areas of architectural practice and research.
- The academic staff, students, alumni and external stakeholders demonstrate good and close relationships with each other, having a high potential to develop and improve the organisation of studies.
- Good practices and innovative solutions from previous analysis that have produced the desired results and/or exceed the standard level and/or stand out in international comparison.

#### Areas of concern and recommendations

- The review panel recommends an increase in the number of students, both Estonian and foreign, to enhance critical interaction between different methods, approaches and themes within the programme.
- The process of applied professional activities should be formalised in order to increase students' awareness about their opportunities before the start of their PhD studies. The formalisation of the process should take place in close collaboration with the stakeholders in order to ensure that both PhD students' and stakeholders' expectations could be met.
- EKA conducts a regular internal assessment of the study programme. However, the
  programme could benefit from a formalisation of the internal assessment process. This
  applies especially to collecting feedback and input for further developments of the
  programme from students, alumni and (potential) employers.

#### **Opportunities for further improvement**

- Given the PhD in Architecture and Urban Planning offers three distinct pathways (traditional
  text-based research, research by design, creative practice research), it would be advisable to
  articulate the different learning outcomes, which are all currently combined. The three
  programme pathways provide distinct differences between them; differentiating the course
  aims and learning outcomes will enable EKA to champion the different routes nationally and
  internationally.
- Although the small size of the student body is a tremendous advantage for the students and the extensive support available with short notice and easily shared with other supervisors, it is an area that would need to be addressed. The small number of participants in the doctoral study programme raises a question about the continuity of adequate resourcing of the programme in the future. The thin student body may also weaken the intellectual exchange and thus slow down the promising dynamism in EKA. A bigger number of foreign students would also allow for more English courses and seminars.

#### 3.2. RESOURCES

#### 3.2.1. Academic staff

**3.2.1.1.** Requirements for academic staff are based on the Higher Education Standard and further rules put in place by the higher education institution, procedures for the selection and recruitment of staff are fair and transparent.

According to the legal framework, ordinary teaching or research staff are elected by competition. Specialised scientists or distinguished creative persons or practitioners can be invited as visiting teaching staff. The Faculty of Architecture is cooperating with professional associations and other stakeholders. Dissemination of research outcomes shall be achieved through public presentations, seminars and conferences. This framework forms the basis for fair and transparent recruitment of academic staff.

**3.2.1.2.** The qualifications of academic staff members meet the requirements laid down in legislation as well as those stemming from the specificities of the study programme group and academic cycle.

According to the self-assessment report, 18 out of the 20 academic staff members have a doctoral degree and two professors are internationally renowned for their creative work. Interviews with representatives of the academic staff also verified their qualifications. The qualifications of the academic staff are then considered to meet the requirements.

**3.2.1.3.** The number of regular academic staff in the study programme group is adequate and enables achieving the objectives of the study programmes as well as the learning outcomes.

The self-assessment report gives the following information on the number of regular academic staff: 20 teaching staff directly related to the subjects of the doctoral curriculum in Architecture and Building.

Considering this information as well as the official number of 12 students of the doctoral programme in Architecture and Urban Planning, the number of academic staff is adequate. The interviews with representatives of the academic staff also verified sufficient supervisory capacity and qualifications to enable achieving of the objectives of the study programme.

Both the gender situation, as well as the age distribution of the academic staff are considered favourable. Out of the 20 teaching staff, there are 8 female and 12 male Faculty members. Their average age is 50 years (4 Faculty members being under 40 years).

**3.2.1.4.** Academic staff members regularly engage in continuing education at institutions of higher education or research from abroad, take part in international research projects and deliver presentations at high-level conferences.

The self-assessment report indicates no formal continuous education of academic staff, but they are encouraged to participate in international conferences and venues for presentations, to establish international networks as well as cross-disciplinary research contacts. The academic staff has an extensive international mobility and a strong international network has then been established. Examples of international cooperation are: the EU FP7 programme ADAPT-r, RMIT Global University (Melbourne), and cooperation with several universities abroad e.g. Harvard, MIT, TU Delft, Tampere TU. This follows from the self-assessment report and was also verified during the interviews with academic staff. Continuous education of staff is ensured through frequent contacts with renowned domestic practitioners and invited high-level international researchers, e.g. in the EKA open lecture series, and by participation in international research projects and networks.

3.2.1.5. Regular academic staff members have undergone required attestation and/or received regular feedback on their performance; and have been topping up their professional and pedagogical skills.

Academic staff performance is regulated by EKA "Rules on employment relations with academic staff members"; a staff member working on a fixed-term employment contract shall be evaluated every fifth year of work (or more frequently, where warranted). In addition, following EKA's Action Plan for the elimination of the shortcomings detected in the previous evaluation, EKA has been tightly connected to various domestic stakeholders. EKA staff members then receive frequent feedback on their performance primarily by their contacts with industry and other stakeholders, in cooperative research projects. The industrial demand for researcher's competencies in the development of new methods and application of novel technologies (e.g. in digitalisation and modular design) means a rating on their performance.

#### **CONCLUSIONS AND ASSESSMENT: ACADEMIC STAFF**

The academic staff qualifications meet the requirements. The number of academic staff is sufficient to achieve the objectives of the study programme. The academic staff are internationally active. The staff members get feedback from external research partners, in cooperative research projects. Therefore, the review panel concludes that EKA is <u>conforming</u> to the requirements regarding the academic staff.

#### **Strengths**

- The academic staff have good qualifications and are very engaged.
- There is a good gender and age balance of the staff, there are many young researchers.
- The teaching staff are active researchers with good international networks and a high level of international mobility.

• The teaching staff have close cooperation with external organisations (private and public) and other relevant stakeholders.

#### Areas of concern and recommendations

None.

#### **Opportunities for further improvement**

None.

#### 3.2.2. Learning and teaching environment

3.2.2.1. There are facilities (lecture rooms, labs, seminar rooms, rooms for independent work by students etc.) available for studies and study-related research, development and creative activities; these are adequately furnished and equipped with up-to-date equipment needed for achieving the objectives of the study programmes.

The most modern facilities are available for studies and study-related research, development and creative activities, supporting the multidisciplinary collaboration between various departments. The facilities are adequately furnished and equipped with up-to-date equipment, allowing conducting high-level teaching. Students can use the prototype lab, wood and metal workshops for modelling and prototype construction in their projects.

3.2.2.2. Research, development and creative activities in the study programme group are supported by an adequate amount of up-to-date and pertinent textbooks, research publications and other study materials, access to research databases is ensured.

Research, development and creative activities are supported by an adequate amount of up-to-date and pertinent books, research publications and other study material which can be found at EKA's library, workshops, and labs. Access to research databases is ensured. Moreover, the databases are in constant development to provide students with the most relevant and up-to-date study and research materials. Students can order/buy necessary books via the EKA library.

**3.2.2.3.** State of the art and fit for purpose information and communication technological solutions, including study information system, document management system, online learning environment support learning and teaching.

Information and communication technology solutions are up to date, aligned with the standards of other public universities in Estonia, supporting learning and teaching in the best possible way.

#### **CONCLUSIONS AND ASSESSMENT: LEARNING AND TEACHING ENVIRONMENT**

The most modern facilities are available for studies and study-related research, development and creative activities, supporting the multidisciplinary collaboration between various departments. Research, development and creative activities are supported by an adequate amount of up-to-date study material. Therefore, the review panel concludes that EKA is <u>conforming</u> to the requirements regarding the learning and teaching environment.

#### **Strengths**

• The new premises and equipment of EKA are outstanding, creating an inspirational learning environment for students and a teaching/research environment for the academic staff.

#### Areas of concern and recommendations

None.

#### Opportunities for further improvement

None.

#### 3.2.3. Financial resources

3.2.3.1. The educational institution has adequate funds necessary for conducting high-quality studies as well as for the provision of adequate and up-to-date support services, for implementing learning and teaching related developments and for supporting the development of academic staff.

The overall EKA budget for education and research seems adequate with a budget of about 10,5M€ (EKA Financial Plan 2015-2024, SAR p. 60). EKA has recently massively invested in new facilities (28 M€), mostly with external sources of funding. In recent years, there has been a positive trend in increasing the research revenues (from 866 k€ in 2015 to 1,381 k€ in 2019, EKA Income components, SAR p; 60) and the research budget has not been impacted by the investment. The specific budget of the Department of Architecture and Urban Planning (SAR p.63) is about 497 k€ in 2020, coming from the State support (308 k€) and the research revenue (189 k€), which is a fair share in this field for public universities. It is also very positive to see that the average salary at EKA has increased by 11.7% in 2018 even if this remains a point of attention to attract and retain highly qualified staff. During the virtual tour, the expert panel could confirm that the new building provides the Faculty members and students with state-of-the-art facilities in terms of library, classrooms, studios, teaching and research labs. EKA provides the students with adequate support services from the Doctoral School, the Research & Development department (TAO) and other academic units.

3.2.3.2. The higher education institution has sufficient funds for research and development activities related to the study programme.

The research revenue for the DAU has remained relatively stable in recent years (about 200 k€ per year). With the participation to the Tranform4Europe consortium (European university programme

2021-2024), the individual Marie Skłodowska-Curie fellowship granted to Dr Maros Krivy '2021-2024) and the research starting grant awarded to Dr Andres Kurg (2020-2023), it makes no doubt that similar or even increased budget will be available for research in the next years. For the Doctoral School (all PhD programmes), the budget has increased from 204 k€ (2016) to 362 k€ (2020) while the corresponding research funds increased from 120 k€ (2016) to 359 k€ (2020, SAR Budget for the Research Fund and Doctoral School, p. 63). Each doctoral dissertation receives a 2,500€ support grant (editing, lay-out, printing), which is very positive.

3.2.3.3. The higher education institution has a long-term strategy for ensuring the sustainability of financial resources, including a risk analysis and financial projections. The strategy describes, among others, risks stemming from the operating environment and planned mitigating measures thereof.

The basic sustainability of financial resources is ensured by operating support for EKA (ca 7.8 M€ per year) and base funding for research (ca 360 k€ per year) from the Ministry of Education and Research. Both are based on a long-term contract with MER; research funding is calculated according to the research activities – grants, cooperation agreements, publications etc. – in previous year and has gradually grown over past years. During the online visit, the expert panel learned that a new building, next to the new one, will be soon constructed to extend the lab available surfaces but this project has not been presented or budgeted in the SAR. When commenting on this report, EKA confirmed that the new lab facilities will be built with help of Astra funding for EKA Loovkärg (Creative Cluster) which is very positive. Despite valuable EKA's efforts to increase the competitiveness of certain areas and organise support training, the recent notable successes in major grants are mostly to individuals and no clear research strategy, including funding, has been elaborated.

3.2.3.4. Financial reports for the higher education institution or keeper thereof are publicly available.

Annual reports for the higher education institution or keeper thereof have undergone financial auditing unless stipulated otherwise in legislation.

The annual reports have undergone financial auditing as required by the legislation. The financial and annual reports are made publicly available on the institutional website.

#### **CONCLUSIONS AND ASSESSMENT: FINANCIAL RESOURCES**

EKA has demonstrated that they have the adequate financial resources to conduct a high-quality PhD in architecture and urban planning. EKA is also providing the students with adequate support services. Regarding the specific research budget, the DAU has managed to keep it stable in recent years, and recent success in applying for projects or grants has already secured it for the next years. The review panel is further recommending elaborating a long-term strategy to ensure the sustainability of the financial resources, including a risk analysis. Therefore, the review panel concludes that EKA is conforming to the requirements regarding financial resources.

#### **Strengths**

- EKA has invested in a new building providing the Faculty members and students with state-of-the-art facilities without affecting the research budget.
- EKA has recently secured two major individual research grants (MSCA fellowship and starting grant).

#### Areas of concern and recommendations

 The DAU should elaborate a research strategy, including a risk analysis to ensure the sustainability of financial resources.

#### Opportunities for further improvement

None.

#### **CONCLUSIONS AND AGGREGATED ASSESSMENT: RESOURCES**

The academic staff qualifications meet the requirements. The number of academic staff is sufficient to achieve the objectives of the study programme. The academic staff are internationally active. The staff members get feedback from external research partners, in cooperative research projects.

The most modern facilities are available for studies and study-related research, development and creative activities, supporting the multidisciplinary collaboration between various departments. Research, development and creative activities are supported by an adequate amount of up-to-date equipment and study material.

EKA has demonstrated that they have the adequate financial resources to conduct a high-quality PhD in architecture and urban planning. EKA is also providing the students with adequate support services. Regarding the specific research budget, the DAU has managed to keep it stable in recent years, and recent success in applying for projects or grants has already secured it for the next years. The review panel is further recommending elaborating a long-term strategy to ensure the sustainability of the financial resources, including a risk analysis.

Therefore, the review panel concludes that EKA is <u>conforming</u> to the requirements regarding the resources.

#### **Strengths**

- The academic staff have good qualifications and are very engaged.
- There is a good gender and age balance of the staff, there are many young researchers.
- The teaching staff are active researchers with good international networks and a high level of international mobility.
- The teaching staff have close cooperation with external organisations (private and public) and other relevant stakeholders.
- The new premises and equipment of EKA are outstanding, creating an inspirational learning environment for students and a teaching/research environment for the academic staff.

- EKA has invested in a new building providing the Faculty members and students with state-of-the-art facilities without affecting the research budget.
- EKA has recently secured two major individual research grants (MSCA fellowship and starting grant).

#### **Areas of concern and recommendations**

• The department should elaborate a research strategy, including a risk analysis to ensure the sustainability of financial resources.

#### Opportunities for further improvement

• None.

#### 3.3. SUSTAINABILITY

Aggregated assessment: Quality of instruction: conforms to requirements

Aggregated assessment: Resources: conforms to requirements

#### 3.3.1. Further sustainability criteria

3.3.1.1. Regular development planning and risk management are ongoing in the higher education institution, aimed at ensuring the sustainability of high-quality studies in the higher education institution as a whole as well as in the study programme group.

Quote from the Development Plan of the Estonian Academy of Arts: "The Action Plan of the University is annually drawn up based on the Development Plan of the EKA. The Development Plan is discussed and, if necessary, adjusted by the University Council. The Development Plan and the Action Plan constitute the underlying basis for the preparation of the budget of the Estonian Academy of Arts." As the domestic and international situations change rapidly and even dramatically, flexible yearly follow-up and adjustment of the development plan seem recommendable. The existing Development Plan applies for the years 2016-2020 and is checked annually in the Action plan. There is no doubt that risk management would not be taken care of. However, a more determined, public risk management document would be an improvement.

3.3.1.2. Development trends for student admissions, graduations and budgetary resources indicate sustainability of the higher education institution as a whole and the study programme group under assessment.

The review panel has noticed the small size of the doctoral student body. Smallness is an asset, as described in other parts of this assessment, but may also be a potential risk. So far, the intake of two new students in a year has been understandable. The total number of students in the PhD programme in Architecture in EKA is 12 (Jan 1, 2021), grown with 2 from the 10 students in 2017-2018.

The present status of the institution is exemplary. The review panel has noticed a significant improvement in the programme. The academic staff is highly qualified and generous in size. The physical and operational resources are outstanding. The economic situation is stable and collaboration with the stakeholders is fluent. The stability, which has been reached within the last two years offer a sound environment for admissions, graduations and budgetary mobility.

To maintain the situation, it would be advisable to allow for growth in the admission and consequently end up in more graduations, not forgetting the importance of enriching the intellectual atmosphere of the whole institution. This should also be monitored by a regular risk analysis.

3.3.1.3. The higher education institution has a long-term financial projection of financial resources needed for conducting high-quality studies in the study programme group and sources for the provision thereof, which takes into account risks stemming from the operating environment.

The self-assessment report states that:

"The budget of the Research Fund, as well as the Doctoral School has increased considerably since 2017."

The budgets of the Research Fund and Doctoral School in 2016-2020

|                          |                              | 2016    | 2017    | 2018    | 2019    | 2020    | Total     |
|--------------------------|------------------------------|---------|---------|---------|---------|---------|-----------|
| A6033 – Research<br>Fund | Basic<br>research<br>funding | 120 060 | 136 400 | 222 570 | 330 004 | 358 910 | 1 167 944 |
| 924 – Doctoral School    | National operating support   | 203 680 | 197 880 | 285 820 | 267 300 | 362 400 | 1 317 080 |

At the moment the financial framework for the doctoral programme covers the near future of operations. The structure is built on different sources of funding described in 3.2.3. The question about the future of the doctoral programme and its feasibility rely on continuing support from EKA, the society, industry, European and global funds and grants and personal scholarships.

As the success of the financial framework of the doctoral programme depends on several variables, including the number of graduations, it would be advisable to manage the risks and consider long-term scenarios applicable to different developments in the operational environment.

3.3.1.4. The age structure of academic staff as well as share of young teachers ensures sustainability of instruction provision in the study programme group.

According to the self-assessment report and the tables, the academic staff represents a profound and balanced mix of best professionals in the country, both merited and young researchers, from Estonia and abroad. The young doctors and doctoral students gather experience by participating in the activities of the institute even as teachers of BA and MA students, in laboratories and collaborative industry projects.

It would be an improvement to find ways to grow the number of yearly admissions and graduates, as the outside labour market competes about the best persons, perhaps the same people.

3.3.1.5. In the case of doctoral studies, sustainability is achieved when doctoral studies in the study programme group are based on well-established fields of research and development within the higher education institution that have successfully undergone evaluation. Supervisors of doctoral theses are actively engaged in research and have supervised successfully defended doctoral theses.

The study programme of the Faculty of Architecture covers two routes of research, Text-based research and Design-based research.

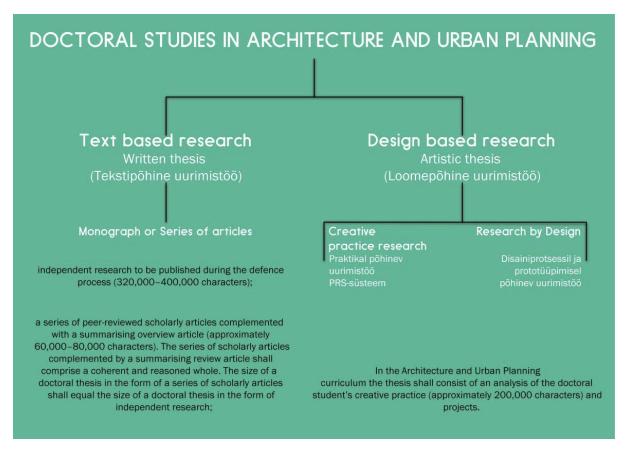


Figure 1. Doctoral studies in Architecture and Urban Planning (SAR p. 8).

Text-based research (Written thesis) follows the convention of research with tested methods, rigid formal requirements and established international tradition. The approach, program and curriculum are on safe ground, supported by acknowledged supervisors and societal interest.

The Design based (Artistic thesis) research route has two approaches, Creative practice research and Research by Design. A thesis in Creative practice research comprises a brief overview of creative practice, in addition to creative projects or exhibitions. Research work based on the design process and prototyping means an analysis of the design process. This Design based route of the PhD programme forms a real strength and provides a "unique selling point". However, achievements of Design-based research and Creative practice research, in particular, are difficult to measure formally. This field of research is so far not sufficiently supported by the state. The convention of Design-based research is much younger than Text-based research and partly has to reinvent the approach and documentation through exploration of more unknown territory of research. At the same time, it has to be noted that it is the very fundamental responsibility of an art university. Also, it became clear in the interviews with the stakeholders that there is a growing need to serve the industry, as well as the society with the production of doctors and applicable findings in the research, especially in the areas of modular wood construction and digitalisation. The "open source" policy in the research builds a sustainable foundation for continuing collaboration with the stakeholders.

The path is bold, but relevant for the needs of society. The evidence in EKA is built on a small number of graduates. Pioneering will benefit from constant follow-up and adjustment of the programme.

From the self-evaluation report as well as from interviews, it appears that supervisors within the faculty's staff are actively participating in research, in domestic as well as international research projects. Some doctoral theses have been successfully defended.

#### CONCLUSIONS AND AGGREGATED ASSESSMENT: SUSTAINABILITY

The existing Development Plan applies for the years 2016-2020 and is checked annually in the Action plan. The review panel has noticed a significant improvement in the programme. The stability, which has been reached within the last two years offer a sound environment for admissions, graduations and budgetary mobility. The academic staff represents a profound and balanced mix of best professionals in the country, both merited and young researchers, from Estonia and abroad. The PhD programme is relevant to the needs of society. Therefore, the review panel concludes that EKA is conforming to the requirements regarding sustainability.

#### **Strengths**

- EKA today is a great entity for its societal relevance and a wanted partner. The societal commission calls for doctors and development of the construction industry, modular construction, digitalisation and urban development.
- The facilities are outstanding and serve the future challenges for years.
- The doctoral programme is constructed with precision and annually reviewed.
- The mix and diversity of the academic staff point towards the future.

#### **Areas of concern and recommendations**

- In a pessimistic scenario the small size may fail in attracting finances, best supervisors and lecturers, research projects, and consequently impoverished intellectual environment, and finally seizes to attract doctoral students. The ratio between the number of students and resources may become too uneconomical to get support from society. Thus, the panel recommends an increase in the admissions to be considered.
- Related to the same issue, the review panel recommends EKA regularly perform a risk analysis.

#### **Opportunities for further improvement**

None.