

# Tallinn University School of Digital Technologies Development Plan 2021-2022

## I Mission

The mission of the School of Digital Technologies (hereinafter the School) is to develop and implement innovative solutions to support digital transformation.

The core values of the School are, in addition to the core values of Tallinn University (openness, quality, professionalism, uniformity), research-driven approach, innovation, entrepreneurship, and cooperation.

## II Vision

By 2022, the School will become the leading academic institution in the Nordic and Baltic countries in its field of activity. The School is an internationally recognised competence centre in its field of activity, coordinates the execution of large-scale international research and development projects, and regularly conducts representative international research conferences. A common identity of the School has been established, the degree study programmes form a coherent whole, the conditions for the personal fulfilment of the School's employees have been created, and the proportion of students who have taken up studies in the School's specialities has increased, graduating the University within the period not exceeding the nominal period of studies by no more than one year.

## III Strategic goals for the year 2022

The School's strategic goals are set out at two levels: 1) applicable to all study areas and 2) goals for each study area.

### The School's strategic goals

In research and development:

- the development of mechanisms to support the School's activities integrating study areas;
- developing cooperation mechanisms with companies and institutions, including other universities and other educational institutions;
- identifying mechanisms to support and inhibit the digital transformation in society and developing new solutions that take them into account.

In the provision of education:

- enhancing the quality and efficiency of the provision of education through study programme development and linking it to the research and development.

In social relations:

- the development of activities aimed at non-university institutions, in addition to educational activities and research and development, as the third main field of activity of the School.

In the organisation development:

- determination of study areas supporting the School's long-term strategic development goals;
- development of an academic staff that ensures the sustainability of the School.

## Strategic goals of study areas

The priority goals set in the study areas for the following period are listed below.

Technology Enhanced Learning:

- Development, deployment, and validation of learning and research tools and methodologies for technology enhanced learning, including enhancing cooperation within the EDUSPACE Research and Teaching Laboratory in the provision of education, research and development, and education in a wider sense.
- Building close and systematic cooperation with non-university partners to enhance the dissemination and deployment of technology enhanced learning supporting tools in the private and public sectors.

Information Sciences:

- Development of the field of data analysis, including the research, development, and teaching of big data analysis.
- To be the leader of academic activities in the field of information sciences in Estonia.

Human-Computer Interaction:

- Establishing effective cooperation with national and international private and public sector partners.

Mathematics and Didactics of Mathematics:

- Creation of active research groups of applied mathematics and didactics of mathematics.
- Doctoral studies on mathematics didactics have been launched, and the Master's level study programme of applied mathematics in English has been created.

Applied informatics:

- Creation of speciality-specific ICT courses and corresponding study materials supporting digital transformation for the other schools of the University.

- Achieving the 35:1 ratio of students and lecturers in Estonian-language degree studies.

## Annex 1. Implementation plan for the School of Digital Technologies development plan

### Sub-goals and activities in research and development:

1. Enhancing capacity in research and development through the involvement of additional resources (the research coordinator is responsible). To this end, we will:
  - a. increase the total volume and proportion of interdisciplinary R & D projects to be carried out in cooperation with companies and institutions;
  - b. create additional conditions for the greater involvement of lecturers in the planning and execution of R & D projects;
  - c. implement open research practices, including contributing to the development of a virtual research laboratory in cooperation with the School of Educational Sciences.
2. Developing applications to support digital transformation in education based on research (the head of the Centre for Educational Technology is responsible). To this end, we will:
  - a. develop, test, and implement digital learning tools designed for different levels of education, enabling personalised learning and feedback;
  - b. create tools and environments to collect and analyse new data supporting evidence-based innovation in education;
  - c. create a framework for the assessment of digital competencies and plan its implementation to assess the digital competencies of all TLU graduates;
  - d. develop a systematic approach to educational technology knowledge, methods, and skills, and implement it in teacher education;
  - e. create a platform (HUB) to address problems of digital transformation in education and to develop solutions;
  - f. develop methods to increase digital competencies that support the digital transformation in different sectors;
  - g. promote mathematical education through teacher development projects and the preparation of study materials.

### Sub-goals in the provision of education

1. Ensuring the sustainability of studies in Estonian language (the head of studies is responsible). To this end, we will:
  - a. reduce the total workload of academic staff in the School's Estonian-language

- study programmes and harmonise it between academic employees;
  - b. plan speciality-specific courses and corresponding study materials for all the fields of the University;
  - c. develop training programs of degree studies and continuing education for the development of competencies in technology enhanced learning.
2. Creating the conditions for the inclusion of the members of academic staff and doctoral students who do not speak Estonian in the conduct of studies (the head of studies is responsible). To this end, we will:
- a. create the Master's level study programme of applied mathematics in English;
  - b. involve junior research fellows in the provision of education more than we have done so far.
3. Ensuring the use of open and research-based teaching practices in the training provided by the School's staff (the head of studies is responsible). To this end, we will:
- a. address the topics based on the results of research and development in the courses conducted by the School's staff;
  - b. integrate the activities carried out within the framework of research projects (project outreach events, project days, teacher innovation labs, school development projects) in continuing education.

### Sub-goals in social relations

1. Launching systematic cooperation with the institutions outside the School involving the staff of the School (the cooperation manager and programme coordinator in their field of activity are responsible). To this end, we will:
- a. develop partnership models for student learning in companies and institutions, deploy workplace-based methodologies and technologies to enhance cooperation with companies;
  - b. develop and offer new continuing education study programmes and courses;
  - c. set up a staff motivation system to develop cooperation with the institutions outside the School;
  - d. create a single alumni organisation of the School and launch its activity.

### Sub-goals in the organisation development:

1. Filling the announced positions with high-level employees (the director is responsible). To this end, we will:
- a. use both professional networks and cooperation channels to announce free positions alongside mass information channels;
  - b. provide employees with a working environment that meets their needs and

opportunities for professional development.

2. Developing an organisational structure and culture that includes and supports all the members of the School (The administrative head is responsible). To this end, we will:
  - a. involve students and employees who do not speak Estonian as their mother tongue in the activities of the School;
  - b. analyse the need for a redesign of the structure and profiles of study areas.

Annex 2. List of performance indicators and goals for 2021 and 2022

Serial No.	Performance indicator	Initial level (2019)	2021	2022
1.	Total volume of research and development	1490	1800	2000
2.	1.1-number of articles	19	20	25
3.	Number of defended doctoral theses (3-year	3.3	2	3.3
4.	Percentage of students who graduated within the nominal period of studies of all the admitted	35.3%	40%	45%
5.	Average number of conditional credit points (TAP) per lecturer*	897	800	700
6.	Number of students in the study programmes in English	133	160	200
7.	Volume of studies carried out for the students of other academic units	3751	4000	4000
8.	Number of strategic cooperation partners**	10	11	12
9.	Total volume of continuing education (k€)	78	80	120
10.	Average total remuneration of employees***	1.52	1.6	1.7

\* Research fellows are accounted for with a 10% workload.

\*\* A strategic cooperation partner is considered to be the institution with whom the School (NB! not a single employee) has **repeatedly** carried out **joint projects** and who has made a significant contribution to the **achievement of the School's development objectives** (e.g., by organising joint conferences, involving the School in key international networks whose representatives have actively contributed to the School's decision-making bodies, etc.) and who is continuously considered to be the most important partner in promoting academic activities.

\*\*\* Regarding the expected average salary in Estonia, considering the wages under employment contracts and the bonuses paid from the School's budget (including the supplementary research remuneration).