PADST

Public Administration Capabilities for Digital and Sustainable Transition - PADST

D1.1 Curriculum Development Strategy

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Author(s):	Veiko Lamber (TalTech) Külli Taro (TalTech) Vasilis Kostakis (TalTech) Egert Juuse (TalTech) Erkki Karo (TalTech) Iulii Selianko (TalTech)
Contributors:	All Beneficiaries and associated partners

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Introduction and background

One of the PADST project's goals is to prepare the future public and private sector specialists who bring forth the necessary institutional transformation for digital and sustainable futures. Therefore, TalTech and universities across Europe aim to develop new teaching capabilities explicitly addressing this challenge and related public sector innovation capacities.

As teaching represents the critical medium to transfer much-needed knowledge to the wider society, the PADST project will develop new graduate and executive training capabilities on public administration, digital transformation and sustainability that can serve students and practitioners in Estonia, Europe and beyond.

Here we outline the key steps to be taken, during and after the PADST project, to fulfil the above-mentioned goals.[i] The Curriculum Development Strategy consist of five stages: needs assessment, goal setting, curricula re-design, implementation, and continuous updating.

1. Needs assessment and benchmarking

We will conduct a needs assessment exercise to identify current and emerging educational needs and gaps. This will involve consulting students, teachers, and public sector stakeholders to determine what knowledge and skills are most in demand or likely to emerge concerning PADST. We will use the existing feedback gathering and dialogue platforms such as program councils, student feedback sessions, and courses' feedback surveys. We will do a benchmarking exercise among partners (i.e. their graduate programs) for lesson-drawing. We will also conduct systematic consultations with other project stakeholders and relevant international policymakers and academics (e.g., project advisory board members and representatives of the project's international networks).

2. Goals and objectives

Based on the project's initial aims and the needs assessment and benchmarking exercise, we will develop the goals and objectives for selected curricula (see below). According to the initial aims of the project, the PADST project will:

- upskill the graduate and open university students for the needs of modern public and private sector organizations;
- increase the pool of university graduates capable of contributing to policymaking for digital and sustainable futures;
- increase the employability of TalTech graduates as they obtain new skillsets;
- increase the relevance and responsiveness of the TalTech's teaching to students' and society's needs;
- establish TalTech as a European knowledge hub in the governance of digital and sustainability transitions that will attract more international students to study in Tallinn;
- increase the awareness and skills of practitioners on the PADST topics.

Based on the initial aims of the project, it is expected that:

- 350 TalTech students per year will gain access to the academic content and skills developed during the project. This includes students from both social sciences (75%) and engineering and science (25%) programs as well as Estonian (33%) and international (66%) students from 12 countries on average.

- TalTech will increase the number and quality of high-level applications to its public administration and technology governance graduate programs by 20% by 2026.
- 50 civil servants during the project will be trained in Estonia.

3. Curricula re-design

We will re-design TalTech's three Public Administration and Technology Governance graduate curricula by outlining the PADST-related teaching aims, content, instructional methods, and assessment strategies to be used. With the help of all project partners, we will base the changes on current research and best practices in education. As such, the strategic steps to be taken will address the curricula design on three levels:

- Graduate (MA/PhD) programs.
- Specific courses.
- Professional training.

Developments at the graduate program level

The steps to be taken will focus foremost on two international master's programs [Technology Governance and Sustainability (TG&S), and Public Sector Innovation and e-Governance (PIONEER)] and one national master's program [Public Administration and Innovation (PAI)]. The planned steps will also affect other TalTech programs (e.g., the e-Governance Technologies master program, and the Business Administration and Governance Ph.D. program).

The TG&S program will focus significantly more on the questions and skills related to sustainable futures, sustainability transitions, debates around green growth vs. de-growth, etc. A key question the re-designed TG&S program will address is how to reap the benefits of modern technology in a more democratic, meaningful, and sustainable way for all the ecosystems of this planet.

PIONEER and PAI will bring in new PADST elements, such as the role of digitalization in sustainable transformations and global governance capacities for sustainable transformations.

The new capabilities developed during the project will be used for developing further graduate-level micro-degrees (nano-degrees) accessible to public sector practitioners.

Gender mainstreaming is another essential concept for the curriculum development strategy. It refers to integrating gender perspectives and analysis into the updated study programs and teaching activities. In the graduate and professional training programmes, gender mainstreaming is crucial because it will enable students to identify gender biases, stereotypes and promote gender-sensitive solutions to digital and sustainable transition problems. Gender mainstreaming classes shall ensure that students are better equipped to tackle the challenges of gender inequality and discrimination in their future careers or research projects in Public Administration.

The update process shall consider mainstreaming the gender dimension by including gender-sensitive theories, methods, readings, questions, and activities in the teaching materials. The teaching materials review shall also consider how to guide students in developing skills for integrating gender analysis into their future work-related assignments and adequately apply these skills in knowledge production and transfer. To do this, we will study the models for Integrating Gender Analysis into University Curricula during the curricula update process.[ii]

Developments at the course level

On a course level, the project will address the identified needs gap by revising five graduate-level courses at TalTech:

- Governance in the Digital Age;
- Creating Innovation Capacities in Government;
- Digital Transformations in Government;
- Entrepreneurship, Innovation and Technology Governance;
- Sustainable Futures.

Currently, these courses are taught in English and are part of four different social sciences and IT curricula at TalTech, attracting additional students from other programs (engineering, economics, natural sciences). This means that students from 12 different countries and almost all continents will use the new course content at TalTech. Moreover, all these courses will also be made available to Ph.D. students. This way, the students could work in interdisciplinary teams and learn from each other. The content of the courses will be made public, and partner universities and other universities can freely use the syllabi. The partners will not only help to develop the content of the courses but their staff will be involved in teaching parts of the courses. The partners will also introduce elements of the newly developed courses into their curricula and classes, some of which will be taught by TalTech staff. The courses will also be available to students outside the project partners via the EuroTeQ, ESST, and EMPA consortia and Erasmus students.

Developments in professional training

The project will also develop a new training module for executive education on public administration for digital and sustainability challenges. Public administrations in Estonia and Europe need new conceptual and practical frameworks to develop new public administration capabilities.

The module will serve two target groups: a) senior leadership level and b) mid-level leadership of public sector organizations. Currently, no training programs in Estonia offer this kind of training for the public sector. With the help of UU, KU Leuven, and University College London, the training module will be provided to larger audiences in Europe and beyond. The project will also develop a concept for this training suitable for online mediums.

4. Implementation and evaluation

We will implement the curricula changes step-by-step and evaluate their effectiveness through continuous monitoring and assessment. This will involve collecting data on student learning, teacher performance, and program effectiveness. For the latter, we will regularly consult with relevant policymakers in Estonia and beyond. Based on the evaluations, we will provide ongoing professional development opportunities for lecturers to ensure they have the knowledge, skills, and resources needed to implement the curriculum effectively. The latter includes, for example, TalTech teaching staff study visits to partner universities.

5. Continuous updates

We will continuously revise and update the curricula based on the evaluation results and new research and good practices. This will ensure that the curricula remain relevant and effective in meeting the needs of students and the policy-making community.

Additionally, reference tools will be used to update curricula such as the Competence Frameworks developed by the Joint Research Centre of the European Commission.[iii] The review will check for the newly arisen needs for cross-cutting competencies (such as working with evidence, managing transformations, creative and systemic thinking, etc.).[iv]

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[i] This is the first iteration of the development strategy, subject to revisions on M17 and M35. Some of the content was inspired by the interactions with the OpenAI's ChatGPT.

[ii] For example: Ana Puy, María Pascual Pérez and Abigail Forson (2015) – GENDER-NET Report "Manuals with guidelines on the integration of sex and gender analysis into research contents, recommendations for curricula development and indicators", deliverable of the GENDER-NET ERA-NET,funded by the European Commission under the 7th Framework Programme.

[iii] Schwendinger, F., Topp, L., Kovacs, V. *Competence Frameworks for Policymakers and Researchers working on Public Policy*, Publications Office of the European Union, Luxembourg, 2022, doi:10.2760/642121.

[iv] Snowden, D. and Rancati, A., Managing complexity (and chaos) in times of crisis. A field guide for decision makers inspired by the Cynefin framework, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-28843-5, JRC123629.

Topp et al. (2018), Knowledge management for policy impact: the case of the European Commission's Joint Research Centre, Palgrave Communication vol 4(87)