



Housing Decarbonisation Skills for Climate, Health and Jobs

Project No. 101123311– Skills4Deca

Advanced Digital Skills — DIGITAL-2022-SKILLS-03

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Main author (s):	Emlyn David Qivitoq Witt (TALTECH)
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1. Introduction

1.1. Project Overview

The Housing Decarbonisation Skills for Climate, Health and Jobs (Skills4Deca) project is co-funded by the Digital Europe Programme. It aims to meet the skills needs for the decarbonisation of housing in the Baltic countries by providing strategic advanced digital skills and promoting the use of digital technologies. The project is developing e-courses for housing decarbonisation digital skills that will enrich existing study programmes in 3 Baltic technical universities - Riga Technical University (RTU), Tallinn University of Technology (TalTech) and Vilnius Gediminas Technical University (VilniusTech). The targeted audience for the new learning e-content includes housing managers, landlords, certified construction engineers, evaluators of the technical condition of the building, energy auditors and construction designers, etc., who do not necessarily have a digital background.

The project consortium has 6 partners - the three technical universities mentioned above: RTU (coordinating partner), TalTech and VilniusTech, a centre of excellence: The Institute of Solid State Physics of the University of Latvia, and 2 SMEs: Data Mining Solutions SIA (Latvia) and UAB Getweb (Lithuania). The project started on 1st April 2024 and will end on 31st March 2028. It has a total estimated budget of approximately €5.5 million of which 50% (€2.8 million) is funded by a grant from the Digital Europe Programme.

The project comprises nine work packages:

- WP1 Management - ensuring the successful completion of the project goals on time within the budgetary framework and quality standards.
- WP2 Preparation of the project environment - defining the learning objectives, developing the Virtual Learning Environment and designing the teachers' guides.
- WP3, WP4, and WP5 - the e-content development WPs - digital competences (WP3), material science (WP4) and organisational science (WP5).
- WP6 Digital Twin - providing the instrumentation for hands-on courses as well as the application of the digital twin concept for demonstration, modelling, and decision-making.
- WP7 Content Delivery - e-content delivery in each of the beneficiary HEIs.
- WP8 Quality Assurance - external and internal monitoring of the project to ensure its successful delivery.
- WP9 Marketing and Dissemination - demonstrating and promoting the new learning programmes to stakeholders and ensuring their sustainability and expansion to other HEIs.

1.2. Quality Assurance for the Skills4Deca Project

The Skills4Deca project has a dedicated work package (WP8) for the project's quality assurance. The aim of this work package is to systematically ensure high quality in the delivery of all aspects of the project by:

- Proactively and collaboratively planning quality assurance and embedding quality management measures in all project processes, activities, events and deliverables.
- Instilling a culture of learning and continuous improvement throughout the project.
- Putting in place quality control processes both internal to the project and independent of the project implementation team.

The Quality Assurance work package has 5 defined tasks as follows:

1. Establishment of the Quality Assurance Committee (QAC) - the body responsible for planning, coordinating, monitoring and controlling project quality assurance.
2. Development of project quality plan - a collaboratively developed, comprehensive plan setting out the quality expectations for the project and providing an integrated approach to monitoring and quality throughout the project. This task relates to milestone MS22 Quality Plan (achieved in month 8 of the project).
3. Common, comparative evaluation of delivery of Skills4Deca e-courses – the development of evaluation tools to collect data from students / learners and from teachers / instructors of the Skills4Deca e-courses to monitor and evaluate their effectiveness and ensure that their performance goals are met.
4. Internal monitoring of Skills4Deca results – regular (annual) monitoring and evaluation through the project on the basis of the project quality plan. Continuous assessment of project processes, events and outputs by project partners feed into regular (annual) performance reviews and annual internal monitoring and evaluation summary reports. These are aimed at supporting continuous performance improvement through the project. This task relates to milestones MS29-33 Data on interim results for each year of the project (MS29, relating to interim results for the first year was achieved, as scheduled, in month 8 of the project).
5. External monitoring of Skills4Deca results – the appointment of an appropriately qualified, experienced and independent expert as the external evaluator for the project. The external evaluator will monitor and assess project performance and produce two external evaluation reports. The first, produced at the end of year 2 will be aimed at further improving project performance and the second, year 4 external evaluation report, will provide an independent assessment of overall project performance and the extent to which the project has achieved its objectives. This task relates to deliverables D8.1 External Evaluation Interim Report and D8.2 External Evaluation Final Report. (The appointment of the external evaluator was achieved in month 12 of the project).

In addition, to the tasks, milestones and deliverables described above, 2 further deliverables have been identified for this work package:

- D8.3 Quality Assurance Methodology (due in month 12 of project implementation)
- D8.4 Quality Assurance Methodology Application (due in month 48, at the end of the project funding period).

This document presents the Quality Assurance Methodology (QAM) for the Skills4Deca project and is intended to demonstrate that the QAM and its associated documentation (including the Quality Plan) have been appropriately developed.

2. Quality Assurance Methodology Structure

The purpose of the Skills4Deca Quality Assurance Methodology (QAM) is to describe, in detail, how systematic monitoring, evidence gathering, evaluation, and continuous improvement of project activities will be carried out to ensure adherence to quality standards and achievement of project objectives. Having an effective QAM in place helps to maintain excellence, manage risks and enhance project impacts.

Inspired by the four pillars of the European Commission’s Project Management Methodology (EC Centre of Excellence in Project Management (2021) PM2 Project Management Methodology Guide (3.0.1) p.13), the Skills4Deca QAM covers the following:

- Principles (including mindset and attitudes)
- Governance (roles and responsibilities)
- Processes
- Artefacts (documentation including guidelines and templates)

These will be elaborated in turn in the next sections of this document. In addition, further relevant Quality Assurance (QA) documents have been appended to provide full details with regard to key aspects of the QAM:

- Appendix A – Establishment of the Quality Assurance Committee
- Appendix B – Quality Plan
- Appendix C – Terms of Reference for the External Evaluator

Finally, while this document aims to describe the QAM in detail, it should be noted that the development of QA documentation and, indeed, methodology is expected to be ongoing throughout the project as project results become more clearly defined and as details of the QAM are further elaborated, adapted and even revised in the pursuit of continuous improvement through project implementation.

3. Quality Assurance Principles

The Skills4Deca QAM embraces best practice QA principles for projects:

3.1. Requirements clarity and customer focus

In project delivery, quality is the measure of the extent to which customers' expectations are fulfilled. To ensure quality, we first need a clear, common understanding of project requirements coupled with precise identification of whom project results are intended for together with their needs and expectations. To some extent, this has been defined in the project design, but, in certain cases, it requires further elaboration. The QA process begins with clarity of requirements and customer needs.

3.2. Process driven and right first time

QA is systematically designed into the delivery process. In advance of implementation, quality is considered in each stage of every project delivery process so that project results are "right first time" and quality problems are prevented by default. This does not eliminate the need for quality monitoring and rigorous peer review of project results. It does, however, change the focus of quality monitoring from failure detection to the identification of opportunities for further quality enhancements.

3.3. Data-driven continuous improvement

Best practice QA is dynamic and relies on a continuous cycle of process planning, implementing, monitoring and then taking actions to improve the process (as in the PDCA cycle and the Japanese concept of *Kaizen* or continuous improvement). Systematic data collection is a prerequisite for carrying this out effectively. For that, relevant data must first be identified and collection tools and analysis techniques selected in advance. Appropriate metrics, indicators and targets must also be defined.

3.4. Standardisation

Well-defined, standardised processes and guidelines ensure consistency of project activities and results and also help to reduce the effort required for implementing QA actions. Standardised processes are applied to typical, repeated actions within the Skills4Deca project such as meetings, events, and e-course development and delivery processes.

3.5. Stakeholder engagement

QA requires everyone's participation and should be seen to serve everyone's interests. In a skills development project such as Skills4Deca, a wide range of stakeholders are targeted and this makes their engagement both more challenging and more critical in determining and improving quality of project outcomes.

3.6. Mindset and Attitudes

The desired mindsets and attitudes for the Skills4Deca project team are:

- **Ownership and responsibility** – QA is the responsibility of every member of the project team (not just those directly responsible for delivering the QA work package). Participation in the project comes with joint ownership of the associated QA processes.
- **Best for project** – QA actions should always be “best for project” in that they always lead to project enhancement and focus on project benefits above institutional or personal benefits or convenience.
- **Learning and adaptability** – Continuous improvement requires a willingness to learn and adapt from the project team and for them to actively seek out lesson learning and enhancement opportunities.
- **Open communication and collaboration** – Within the project team and beyond to the wider circle of stakeholders, best practice QA requires a collaborative project environment with open communication.

4. Governance of Quality Assurance

The Skills4Deca project has clearly defined roles and responsibilities for QA which may be conveniently divided into 2: internal QA functions, led by the project's Quality Assurance Committee and external QA functions which are implemented by an independent External Evaluator.

4.1. Quality Assurance Committee (QAC)

The Quality Assurance Committee (QAC) is a subcommittee of the General Assembly of project partners. It is comprised of members of the General Assembly with at least 1 named representative of each project partner being a member of the QAC. In addition, and in recognition of the centrality of the development of e-courses to the project, 3 named educational quality experts, 1 from each of the 3 technical university partners, are members of the QAC. The QAC is chaired by a representative of the lead partner of the Quality Assurance work package (WP8 lead: TalTech).

The QAC has responsibility for systematically planning, coordinating, monitoring, controlling and continuously improving the quality of all project activities and events. It has specific responsibilities for overseeing QA tasks and deliverables under WP8:

- The development of a comprehensive project Quality Plan (Task 8.2).
- Derivation of the Quality Assurance Methodology for the project (Deliverable 8.3).
- Monitoring and reviewing the application of the Quality Assurance Methodology for the project (Deliverable 8.4).
- The development of evaluation tools for collecting data from both students / learners and from teachers / instructors (Task 8.3).
- Carrying out evaluations of all the Skills4Deca courses (Task 8.3).
- The regular internal monitoring of project quality (Task 8.4).
- The development of Terms of Reference for and the appointment of an External Evaluator to independently monitor project implementation (Task 8.5).

The QAC is intended to meet regularly in accordance with the schedule of General Assembly meetings with a separate agenda item in relation to Quality Assurance (WP8) being considered and reported on at each formal meeting of the General Assembly. Day to day activities of the QAC will be carried out with email communications to which all listed members of the QAC will be party.

Appendix A - Establishment of the Quality Assurance Committee contains the document formalising the QAC's establishment in which the names of the (current) QAC members are also presented.

4.2. External Evaluator

For independent, external project monitoring, an appropriately qualified, experienced and independent expert has been appointed as the External Evaluator for the Skills4Deca project. The External Evaluator's role is to regularly review project documents, outputs and progress in order to provide an unbiased, professional opinion of project performance. The QAC will ensure that the External Evaluator has access to the appropriate project platforms, websites and information and all the project documentation necessary to carry out their evaluations.

The External Evaluator is responsible for delivering 2 external evaluation reports:

- An interim external evaluation of project quality and results (Task 8.5, Deliverable 8.1) – an assessment of project status and quality as at the end of year 2 of project implementation with the purpose of enhancing project performance by providing actionable recommendations for mid-course corrections and to up-date strategies and processes relating to QA.
- A final external evaluation of project quality and results (Task 8.5, Deliverable 8.2) – an assessment of project status and quality at the end of the project funding period with the purpose of providing an independent assessment of overall project performance and the extent to which the project has achieved its objectives. This report will include recommendations for future scaling efforts and for sustaining project outcomes in the long term.

Appendix C – Terms of Reference for the External Evaluator contains the full, detailed terms of reference for the External Evaluator role.

5. Quality Assurance Processes

5.1. QA Planning Process

Initial QA planning for the Skills4Deca project took place at the project proposal development stage prior to the funding decision. In the first months of project implementation, these initial plans were elaborated into the project Quality Plan intended to comprehensively document the quality expectations for the project and how these expectations will be met. The Quality Plan (which is appended to this document as Appendix B) was collaboratively developed by all partners as represented by the QAC and sets out an integrated approach to quality management through the project.

The Quality Plan is central to the QAM as it documents:

- quality standards for all project activities and deliverables;
- objectively verifiable (qualitative and quantitative) performance indicators and means of verification for each quality standard;
- templates to support project quality assurance.

It provides the basis for internal and external project monitoring, reviews and evaluations and is intended to be a 'living document' so that it will be developed and adapted throughout the project as needed.

The QA planning process is shown in Figure 5.1:



Figure 5.1 – Quality Planning Process

5.2. Generic QA Processes for Project Implementation

Generic QA processes for the delivery of typical project management activities and works are detailed below for Work Package tasks, Meetings / Events, and Reports / Deliverables (Figures 5.2 – 5.4).

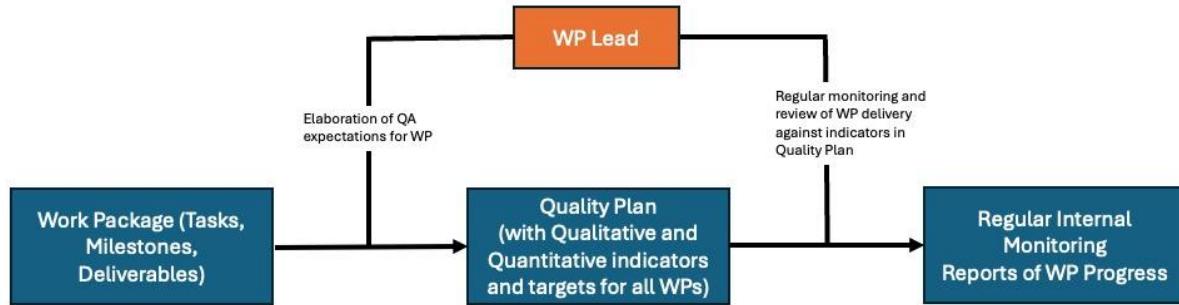


Figure 5.2 – QA Process for Work Packages

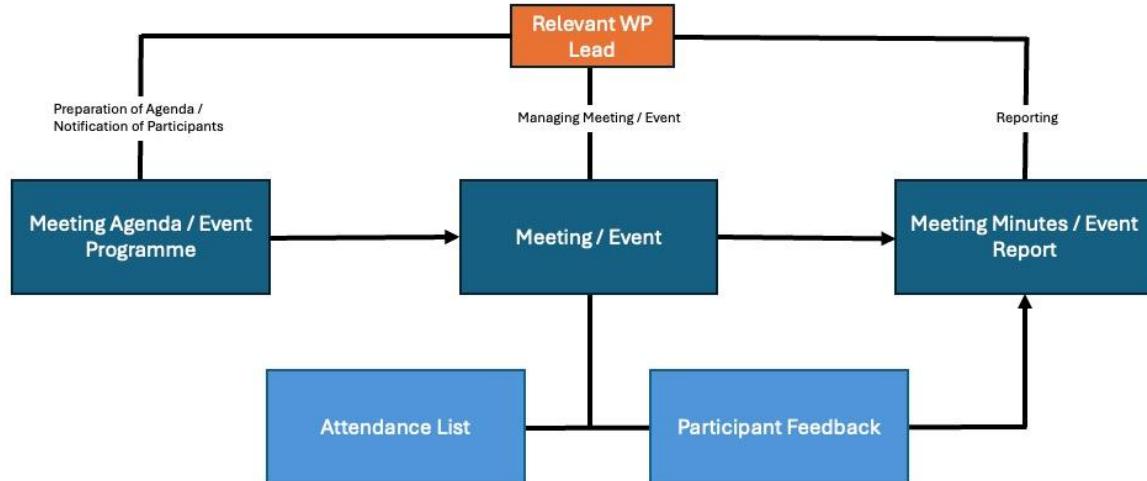


Figure 5.3 – Meetings / Events QA Process

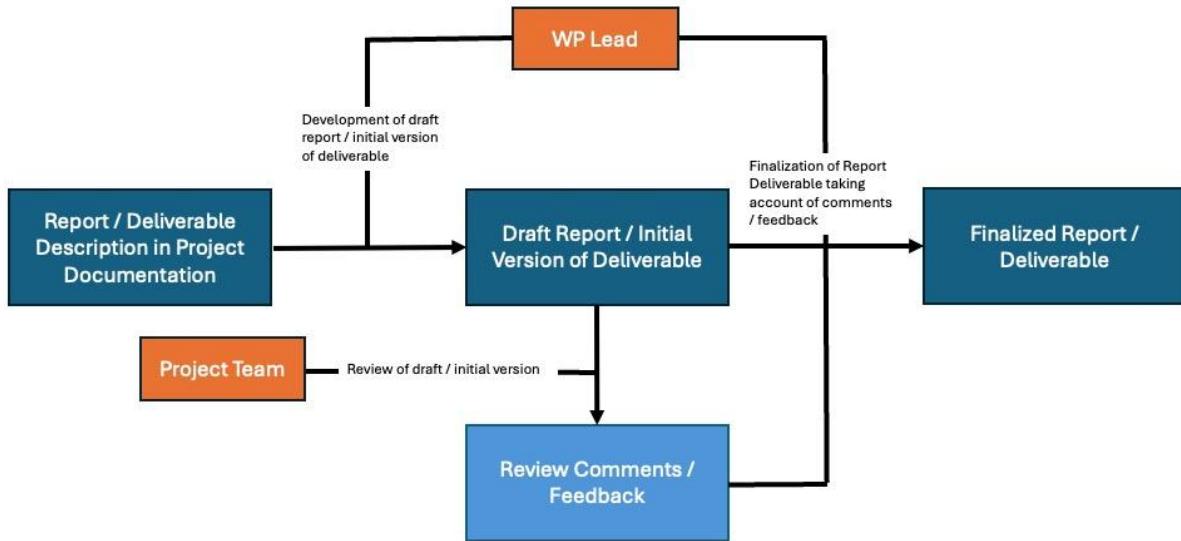


Figure 5.4 – QA Process for Reports / Deliverables

5.3. QA Process for E-courses

The key result expected from the Skills4Deca project is skills acquisition by stakeholders learning from the e-courses developed and delivered in the project. The QA process for the development and delivery of e-courses is therefore particularly important. This process is illustrated in Figure 5.5.

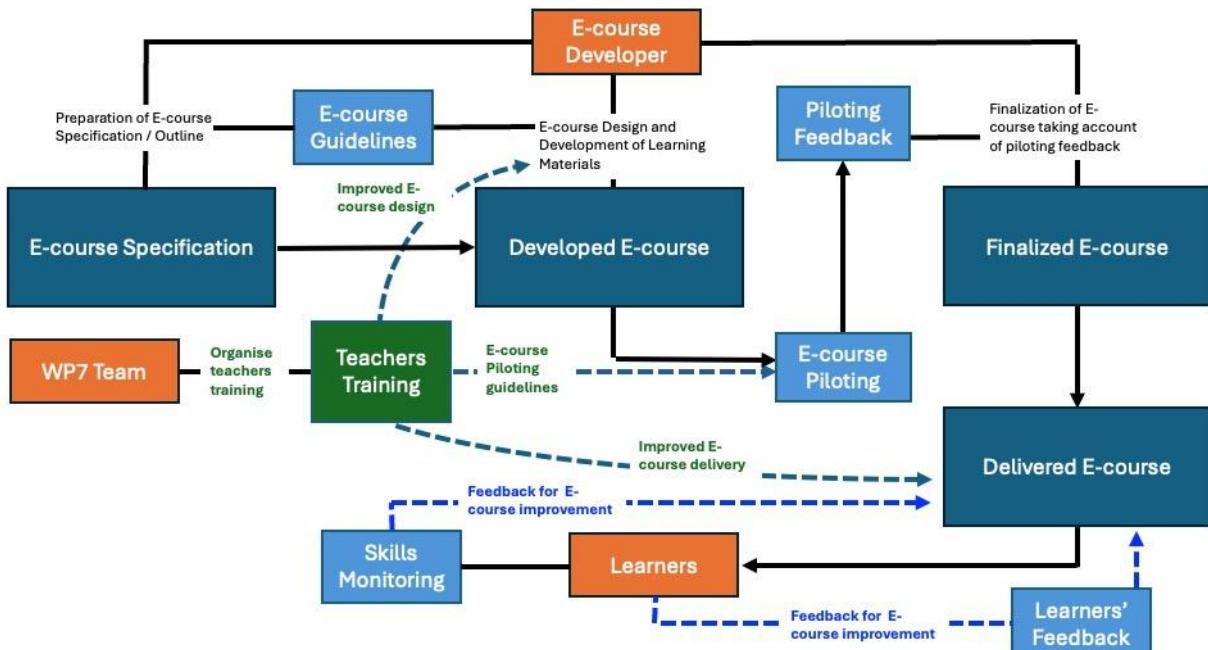


Figure 5.5 – QA Process for E-course Development and Delivery

6. Quality Assurance Artefacts

For each QA process described above, there are associated QA artefacts, i.e., documentation in the form of guidelines and templates that help ensure a standardized and systematic approach to QA. In this section, the artefacts for each typical QA process are listed. The actual artefacts (guidelines and templates) have not been included in this report as this would make this document overly long and, in some cases, artefacts (for example, the E-course certificate template) are still being developed at this stage of project implementation.

6.1. QA Planning, Work Package and Reporting Process Artefacts

- Project document / report template

6.2. Meetings / Events Artefacts

- Meeting agenda template
- Event programme template
- Meeting / Event attendance list templates
- Meeting / Event participant feedback form templates
- Meeting / Event presentation template
- Meeting minutes template
- Event report template (to be developed)

6.3. E-course Artefacts

- E-course development guidelines
- E-course specification document template
- E-course slide templates
- VLE (Moodle) E-course set-up templates (currently in development)
- E-course piloting guidelines (currently in development)
- E-course piloting feedback form templates (currently in development)
- E-course delivery - teacher feedback form templates (to be developed)
- E-course delivery - student feedback form templates (to be developed)
- E-course certificate template (currently in development)

7. Conclusions

The Skills4Deca Quality Assurance Methodology (QAM) describes the systematic monitoring, evidence gathering, evaluation, and continuous improvement of project activities that will be carried out to maintain excellence, manage risks, achieve project objectives and enhance project impacts. It presents the principles, governance arrangements, processes and artefacts of the Quality Assurance (QA) approach in the Skills4Deca project.

Although this document aims to describe the QAM in detail, it should be noted that the development of QA documentation and, indeed, methodology is expected to be ongoing throughout the project as project results become more clearly defined and as details of the QAM are further elaborated, adapted and even revised in the pursuit of continuous improvement through project implementation. This QAM should therefore be considered a “living” document subject to updating and improvement through the project.

Appendix A – Establishment of the Quality Assurance Committee



Housing Decarbonisation Skills for Climate, Health and Jobs

Project No. 101123311 – Skills4Deca

Advanced Digital Skills — DIGITAL-2022-SKILLS-03

ESTABLISHMENT OF THE QUALITY ASSURANCE COMMITTEE

Deliverable Title:	(WITH RESPECT TO TASK 8.1 ESTABLISHMENT OF THE QAC)
Lead Partner for Deliverable:	TalTech
Related Work Package:	WP8. Quality Assurance
Main author (s):	Emlyn David Qivitoq Witt (TALTECH)
Dissemination Level:	SEN - Sensitive
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1	27/05/2024	Emlyn David Qivitog Witt (TALTECH)	First draft for confirmation
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3	07/06/2024	Valentin Antonovič (VILNIUTECH)	Content review
3	10/06/2024	Emlyn David Qivitog Witt (TALTECH)	Approved version
4	21/06/2024	Emlyn David Qivitog Witt (TALTECH)	ISSP representative changed

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Introduction

Quality assurance involves systematic monitoring, evaluation, and continuous improvement of project activities to ensure adherence to quality standards and the achievement of project objectives. Having an effective project quality methodology in place helps to maintain excellence, manage risks and enhance project impacts.

The Skills4Deca (Housing Decarbonisation Skills for Climate, Health and Jobs) project includes a dedicated work package (WP8) for the project's quality assurance. This work package focuses on three key components:

1. The establishment of a body responsible for planning, coordinating, monitoring and controlling project quality assurance – the Quality Assurance Committee
2. The development of a comprehensive plan to manage project quality including specific provisions for the common, comparative evaluation of the delivery of the courses associated with Skills4Deca – the Quality Plan
3. The organisation and coordination of regular monitoring, control and continuous improvement of project quality through both internal and external reviews and evaluations.

This document serves to establish the Quality Assurance Committee and define its constitution. Approval and adoption of this document by the General Assembly shall formally establish the Quality Assurance Committee.

1. Constitution of the Quality Assurance Committee

1.1 Governance and meetings

The Quality Assurance Committee (QAC) is a subcommittee of the General Assembly of project partners and it is comprised of members of the General Assembly.

The QAC is chaired by a representative of the lead partner of the Quality Assurance work package (TalTech).

Note that, in the original project proposal, it was expected that the QAC would be established at the project kick-off meeting. The QAC's establishment and constitution were discussed at the project kick-off meeting, and it was decided that the leader of the Quality Assurance work package (WP8) would prepare a proposal to present to the General Assembly at a follow-up, online meeting.

1.2 Purpose

The purpose of the QAC is to coordinate quality assurance actions to ensure that the project delivers its planned outputs and achieves its intended outcomes.

1.3 Responsibilities

The QAC has responsibility for systematically planning, coordinating, monitoring, controlling and continuously improving the quality of all project activities and events. Under WP8: Quality Assurance, it has specific responsibilities for overseeing:

- The development of a comprehensive project Quality Plan (Task 8.2).
- Derivation of the Quality Assurance Methodology for the project (Deliverable 8.3).
- Monitoring and reviewing the application of the Quality Assurance Methodology for the project (Deliverable 8.4).
- The development of evaluation tools for collecting data from both students / learners and from teachers / instructors (Task 8.3).
- Carrying out evaluations of all the Skills4Deca courses (Task 8.3).
- The regular internal monitoring of project quality (Task 8.4).
- The development of Terms of Reference for and the appointment of an External Evaluator to independently monitor project implementation (Task 8.5).
- An interim external evaluation of project quality and results (Task 8.5, Deliverable 8.1).
- A final external evaluation of project quality and results (Task 8.5, Deliverable 8.2).

1.4 Membership

The QAC is comprised of members of the General Assembly. At least 1 named representative of each partner will be a member of the QAC. Since the primary deliverables of the project are the courses for imparting advanced digital skills, the quality assurance of these courses is of paramount importance

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and, 1 additional, educational quality expert will be appointed from each of the 3 technical university partners to be members of the QAC.

1.5 Meetings and Communications

The QAC will meet regularly in accordance with the schedule of the General Assembly. A separate agenda item in relation to Quality Assurance (WP8) will be considered and reported on at each meeting of the General Assembly.

Extraordinary meetings of the QAC may be called from time to time by the Chair of the QAC or by the Project Coordinator to make Quality Assurance-related decisions if it is impractical to wait for the next General Assembly meeting. Such meetings will be held online.

Day to day activities of the QAC will be carried out on the basis of email communications to which all listed members of the QAC will be party.

1.6 List of members

#	Partner	Name	Description	Role
1	RTU	Anatolijs Borodiņecs	Partner representative	Member
2	RTU	Marina Cerpinska	Educational Quality expert	Member
3	TalTech	Emlyn Witt	Partner representative	Chair
4	TalTech	Tiia Rüütmann	Educational Quality expert	Member
5	Vilnius Tech	Valentin Antonovič	Partner representative	Member
6	Vilnius Tech	Artūras Kaklauskas	Educational Quality expert	Member
7	ISSP	Sergejs Fomins	Partner representative	Member
8	DMS	Janis Sipkovs	Partner representative	Member
9	GETWEB	Paulius Kazokaitis	Partner representative	Member

APPENDIX B – Quality Plan



Housing Decarbonisation Skills for Climate, Health and Jobs

Project No. 101123311 – Skills4Deca

Advanced Digital Skills — DIGITAL-2022-SKILLS-03

Milestone Title:	MS22: Quality Plan
Lead Partner for Milestone:	TalTech
Related Work Package:	WP 8
Author (s):	TalTech, RTU, VilniusTech
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Due Date of Milestone: 30/09/2024	Actual Submission date: 30/09/2024



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MS22 - Quality Plan



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V1	30/08/2024	Emlyn David Qivitoq Witt	Draft for consultation
V2	02/09/2024	Anatolijjs Borodinecs, Kristina Lebedeva	Content review
V3	08/09/2024	Valentin Antonovich, Arturas Kaklauskas	Content review
V4	30/09/2024	Emlyn David Qivitoq Witt	Revised after consultation

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MS22 - Quality Plan



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List of abbreviations

Abbreviation	Description
QAC	Quality Assurance Committee
QAM	Quality Assurance Methodology
HEI	Higher Education institution
RTU	Riga Technical University
SMEs	Small and medium-sized enterprises
TalTech	Tallinn University of Technology
VilniusTech	Vilnius Gediminas Technical University
VLE	Virtual Learning Environment

Introduction

Quality assurance involves systematic monitoring, evaluation, and continuous improvement of project activities to ensure adherence to quality standards and the achievement of project objectives. Having an effective project quality methodology in place helps to maintain excellence, manage risks and enhance project impacts.

The Skills4Deca (Housing Decarbonisation Skills for Climate, Health and Jobs) project includes a dedicated work package (WP8) for the project's quality assurance. This work package focuses on three key components:

1. The establishment of a body responsible for planning, coordinating, monitoring and controlling project quality assurance – the Quality Assurance Committee
2. The development of a comprehensive plan to manage project quality including specific provisions for the common, comparative evaluation of the delivery of the courses associated with Skills4Deca – the Quality Plan
3. The organisation and coordination of regular monitoring, control and continuous improvement of project quality through both internal and external reviews and evaluations.

This document describes the Skills4Deca project Quality Plan. The Quality Plan is intended to comprehensively document the quality expectations for the project and how these expectations will be met. It sets out an integrated approach to quality management throughout the project. To ensure that a common vision of the project is achieved and that high-quality expectations are jointly agreed and owned by all project partners, the Quality Plan is collaboratively developed by all partners as represented by the Quality Assurance Committee (QAC) and it shall be approved by the General Assembly by month 6.

The Quality Plan contains:

- appropriate quality standards for all project activities and deliverables;
- objectively verifiable (qualitative and quantitative) performance indicators and means of verification for each quality standard;
- templates to support project quality assurance.

The Quality Plan provides the basis for both internal and external project evaluations as well as inputs for work package progress reporting. It is intended to be a 'living document' so that it will be developed and adapted throughout the project as the need to do so arises. For example, further quality indicators are expected to be added as some aspects of the project develop.

Regular monitoring and control of project quality will take place. All work packages will be regularly assessed against their (qualitative and quantitative) performance indicators and an internal monitoring exercise will be conducted each year of project implementation. This internal monitoring will include an internal review exercise of the overall project by all project partners. The purpose of the internal monitoring in years 1, 2 and 3 will be to address any implementation issues and improve project performance. The year 4 internal monitoring will be aimed at obtaining a self-assessed evaluation of overall project performance and the extent to which the project has achieved its objectives.

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MS22 - Quality Plan



For independent, external project monitoring, an appropriately qualified, experienced and independent expert or experts will be appointed as the External Evaluator for the Skills4Deca project. The External Evaluator will regularly review project documents, outputs and progress in order to provide an unbiased, professional opinion of project performance. The QAC will ensure that the External Evaluator is provided with all the project documentation necessary to carry out their evaluation duties. Reports documenting external monitoring and evaluation will be produced at the end of year 2 and at the end of year 4 of project implementation.

Quality Plan Structure

Quality assurance has already been generally considered in the project design so that numerous quality processes, events, indicators and tools (quality planning, reviews, evaluations, surveys, templates, etc.) are outlined in the project description. The intention of the Quality Plan with regard to these is two-fold:

1. to structure them so that any gaps are exposed and closed while minimizing the additional administrative burden,
2. to elaborate the details of these processes, events and tools so that they are explicit, clear and fully defined for implementation.

The Quality Plan is organised in the form of 2 related tables:

- Table 1 – A summary of the different types of project deliverables for the Skills4Deca project together with their corresponding quality assurance requirements and associated templates,
- Table 2 – which sets out Objectively Verifiable Indicators and Means of Verification for all the Skills4Deca project activities and deliverables.

Table 1 is intended to ensure a standard approach to quality assurance in all project activities (for example, standards for meetings, progress reporting templates, participant evaluations of events and so forth). The templates identified in Table 1 are listed at the end of the quality plan. They shall be developed and made available as required.

Table 2 compiles both quantitative and qualitative objectively verifiable indicators which have been identified and agreed by the project partners with respect to all project activities and outputs. These indicators are to be captured in order to demonstrate that the project activities / deliverables have been successfully carried out / achieved to appropriately high levels of quality. These are referenced to corresponding means of verification, i.e. the specific documents and other sources of information where the objectively verifiable indicators are expected to be recorded.

Quality Requirements and Templates by Deliverable Type

Table 1: Summary of quality assurance requirements and templates by deliverable type

Deliverable Type	Requirements / Standards / guidelines	Templates
All project documents, reports and presentations	DIGITAL Europe Programme logo, Skills4Deca project logo, European Commission disclaimer	Document /report templates Presentation template Standard disclaimer text
Project Management	Project progress reporting (internal, biannual) Internal monitoring evaluation Interim and final external expert evaluations	Project progress report template Internal monitoring evaluation form External evaluation report template
Skills4Deca courses	Evaluation tools including: Teacher evaluations of course content and delivery Student evaluations of course content and delivery Peer reviews of course content	Teacher evaluation form Student evaluation form Peer review templates
Conference papers, journal papers & editorials	EU funding acknowledgement with disclaimer	Standard acknowledgement text
Meetings	Agenda Meeting minutes Participant registration list Participant evaluation	Meeting agenda template Meeting minutes template Participant register template Meeting participant evaluation form
Project events	Event programme Participant registration Participant evaluation	Event programme template Participant register template Event participant evaluation form

Quality Indicators for All Project Tasks and Deliverables

Table 2: Objectively verifiable indicators and means of verification for all project tasks and deliverables

Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
Key indicators for overall project implementation				

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
Project as a whole (Includes all evaluation indicators from proposal p.18 and impact criteria (1...5) from proposal p.27-28 with duplications removed)	Overall project	<ul style="list-style-type: none"> Knowledge acquisition by students Types of digital solutions deployed 	<ul style="list-style-type: none"> Number of standalone new e-courses designed Number of students graduated Number of students benefiting from grant support Hours of hands-on training Number of improved study programmes delivered in each country Number of job placements / internships carried out by the students within partner organisations Number of job placements / internships carried out by the students in external organisations Number of new digital solutions deployed Number of seminars/lectures held by industry experts 	<ul style="list-style-type: none"> Project (progress and final) reports Independent evaluation reports Annual internal monitoring reports Course enrolment records Certificates issued Grant recipient records Virtual Learning Environment (VLE) logs Reports of the knowledge acquisition monitoring system Project website Website traffic statistics Project social media accounts / pages

Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
Impact criteria 1: The education programme(s) are offered and taught to students in all higher education institutions participating in the action	Enrolment of Baltic Countries' Higher Education Institutions <i>(Short term impact)</i>		<ul style="list-style-type: none"> Number of HEIs enrolled (Target = 3 HEIs within the consortium; 3 HEIs outside the consortium) 	
	New courses developed in bachelor and master levels <i>(Short term impact)</i>	•	<ul style="list-style-type: none"> Number/Type of courses (Target = 40 at master level; 45 at bachelor level) 	
	New microlearning developed <i>(Short term impact)</i>	•	<ul style="list-style-type: none"> Number of e-courses (modules) developed (Target = beyond 50, all HEIs) 	
	New degrees/certifications <i>(Short term impact)</i>	•	<ul style="list-style-type: none"> Number of new degrees / certifications (Target = at least 3, all HEIs) 	
	Students enrolled as a whole <i>(Mid term impact)</i>	•	<ul style="list-style-type: none"> Number of students enrolled (Target = 220 students per year) 	
	Teachers enrolled as a whole <i>(Short term impact)</i>	•	<ul style="list-style-type: none"> Number of teachers enrolled (Target = 50 teachers) 	
Impact criteria 2: Support (financial or other) has been provided to students in order to take part to the education programme(s)	Students who have successfully completed the education programme(s) in the time foreseen by the action (gender/age/educational background, country of origin) <i>(Long term impact)</i>	•	<ul style="list-style-type: none"> Number of students who received a degree after the successful completion of the full upgraded education programme (Target = 300 students) 	

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
Impact criteria 1: The education programme(s) are offered and taught to students in all higher education institutions participating in the action	Students who have successfully completed the education programme(s) in the time foreseen by the action (gender/age/educational background, country of origin) <i>(Short term impact)</i>	•	<ul style="list-style-type: none"> Number of students who received a certification after the successful completion of the full online short course (Target = 300 students) 	
	Financial support provided <i>(Mid term impact)</i>	•	<ul style="list-style-type: none"> Number of scholarships (Target = at least 300 scholarships) 	
	Other support provided <i>(Mid term impact)</i>	• Types of support provided	<ul style="list-style-type: none"> Number / quantity of (non-financial) support provided. (Target = at least 6 in-kind support (seminars, etc.) of SMEs) 	
Impact criteria 2: Support (financial or other) has been provided to students in order to take part to the education programme(s)	Housing decarbonisation technical tools upgrading/purchasing. <i>(Short term impact)</i>	•	<ul style="list-style-type: none"> Number of equipment sets available in universities (Target = 4 equipment sets: 2 sets in RTU, 1 set in TalTech, and 1 set in VilniusTech) 	
	Identification and selection of open-source Digital Twins <i>(Short term impact)</i>	•	<ul style="list-style-type: none"> Number of operating hours with students (Target = 480 hours in face-to-face sessions and 2,400 hours online) 	
	Hands-on sessions <i>(Short-term impact)</i>	•	<ul style="list-style-type: none"> Number of sessions (Target = 15 sessions) 	

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
	Hands-on sessions <i>(Mid-term impact)</i>	•	• Number of students (Target = 440 students)	
	New digital solutions deployed, instrumental for the delivery of the programme. <i>(Short-term impact)</i>	• Results of the Knowledge Acquisition Monitoring application integrated to VLEs	• Number of VLEs developed and enabled (Target = 1 VLE)	
	Impact criteria 4: Structural partnerships have been established among the members of the consortium (for example, through the number of seminars held by SMEs representatives, the number of hours taught, etc.)	• Seminars held by consortium's SMEs representatives. <i>(Mid-term impact)</i>	• Number of partnerships (Target = 6)	
	Collaboration with housing industry <i>(Mid & Long-term impact)</i>	•	• Number of seminars / cooperation agreements (Target = 6)	
	Job-placements/internships carried out by the students in the organisation member of the consortium, in an external organisation. <i>(Mid & Long-term impact)</i>	•	• Number of internships (Target = 440 student internships)	
	Impact criteria 5: The education programme is promoted and information is available on the Digital Skills and Jobs Platform.	• Project website <i>(short term impact)</i>	• Number of visits (Target = at least 40 times a day)	
	Social media projects' accounts <i>(short term impact)</i>	•	• Number of followers per social media (Target = at least 800)	

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
	Programmes promoted and information available on job platforms. BIS platform in LV, RTU platform in LV, TALTECH platform in EE, VILNIUS TECH in LT <i>(Short & Mid-term impact)</i>	•	• Number of applications to the education programme(s) through job-platforms (gender, age, educational background, country of origin) (Target = 440)	
	Events to promote the programmes and raise support. <i>(Mid & Long-term impact)</i>	•	• Number of events (Target = 2 events per country and 40 attendees per country per event)	
WP1 – Project Management and Administration (Lead: RTU)				
T1.1 Overall project management	General Assembly (GA) meetings	• Feedback from participants • Actions arising from previous meeting minutes fulfilled	• Kick-off meeting held on time (M51) (Required in M1) • Number of GA meetings held • Number of GA meeting attendees	• Meeting agenda • Meeting minutes • Participant registers • Participant evaluations
	Periodic reports	• Feedback from European Commission on periodic reports	• First periodic report delivered on time (D1.1) (Required in M20) • Second periodic report delivered on time (D1.2) (Required in M36) • Final periodic report delivered on time (D1.3) (Required in M48)	• Periodic reports • European Commission's feedback on periodic reports

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
T1.2 New degrees and certifications processes management.	Project Management Handbook	•	• Project Management Handbook delivered on time (D1.4) (Required in M6)	• Project Management Handbook
	Data Management Plan	•	• Data Management Plan delivered on time (D1.5) (Required in M6)	• Data Management Plan
T1.2 New degrees and certifications processes management.	Accreditation process	•	• All accreditation processes completed on time (M52) (Required in M20)	• Progress reports
WP2 – Project's environment preparation (Lead: RTU)				
T2.1 Design of learning objectives	Learning objectives	•	• Learning objectives for all courses developed on time (M53) (Required in M5)	• Progress reports • Course documentation
T2.2 Teachers' kits training design	Teachers' kits training designed	•	• Operating Manual for training design developed on time (M55) (Required in M16)	• Skills4Deca Operating Manual for Training Design.
T2.3 Joint Virtual Learning Environment (VLE) design and development	Joint VLE	•	• VLE developed, tested and available on time (M54) (Required in M6)	• VLE platform
	Preparation of environment	•	• Report on preparation of environment prepared on time (D2.1) (Required in M16)	• "Preparation of Environment" Report
WP3 – Skills4Deca's e-content development and/or updating (part 1) (Lead: VilniusTech)				

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
T3.1 Digital solution for smart housing	Digital solution	•	• Content on digital solution developed on time (M56) (Required in M11)	• Courses on VLE • Course documentation
	Capture hardware	•	• Content on data capture hardware developed on time (M57) (Required in M17)	• Courses on VLE • Course documentation
	Digital science content list and objectives	•	• Report on digital science content and objectives prepared on time (D3.1) (Required in M24)	• Digital Science Content and Objectives Report
T3.2 Digital twins for learning content development	Digital twins for learning environment	•	• Content on digital twins developed on time (M58) (Required in M18)	• Courses on VLE • Course documentation
T3.3 Learning content development on sensors, actuators and measurement devices for smart housing	Microlearning	•	• Microlearning contents developed on time (M59) (Required in M24)	• Courses on VLE • Course documentation
WP4 – Skills4Deca's e-content development and/or updating (part 2) (Lead: TalTech)				
T4.1 Material components in the housing ecosystem	Material components in the housing ecosystem	•	• Content in material components in the housing ecosystem developed on time (M510) (Required in M11)	• Courses on VLE • Course documentation

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
	Material science competences content list and objectives	•	<ul style="list-style-type: none"> Report on material science content and objectives prepared on time (D4.1) (Required in M23) 	<ul style="list-style-type: none"> Material Science Content and Objectives Report
T4.2 Photonics solutions in the housing ecosystem	Photonics solutions in the housing ecosystem	•	<ul style="list-style-type: none"> Content in photonics solutions in the housing ecosystem developed on time (MS11) (Required in M17) 	<ul style="list-style-type: none"> Courses on VLE Course documentation
T4.3 Lighting sound solutions in housing	Lighting sound solutions in housing	•	<ul style="list-style-type: none"> Content in material components in lighting and sound solutions in housing developed on time (MS12) (Required in M17) 	<ul style="list-style-type: none"> Courses on VLE Course documentation
T4.4 Energy consumption, sources, and auditing	Energy consumption, sources, and auditing	•	<ul style="list-style-type: none"> Content in energy consumption, sources, and auditing developed on time (MS13) (Required in M23) 	<ul style="list-style-type: none"> Courses on VLE Course documentation
WP5 – Skills4Deca's e-content development and/or updating (part 3) (Lead: RTU)				
T5.1 Organisational and regulatory framework	Organisational and regulatory framework	•	<ul style="list-style-type: none"> Content in organisational and regulatory framework developed on time (MS10) (Required in M14) 	<ul style="list-style-type: none"> Courses on VLE Course documentation

Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
	Organisational science content list and objectives	•	<ul style="list-style-type: none"> Report on organisational science content and objectives prepared on time (D5.1) (Required in M23) 	<ul style="list-style-type: none"> Organisational Science Content and Objectives Report
T5.2 Financial planning	Financial planning	•	<ul style="list-style-type: none"> Content in financial planning developed on time (MS15) (Required in M17) 	<ul style="list-style-type: none"> Courses on VLE Course documentation
T5.3 Decarbonisation and well-being	Decarbonisation and well-being	•	<ul style="list-style-type: none"> Content in decarbonisation and well-being developed on time (MS16) (Required in M17) 	<ul style="list-style-type: none"> Courses on VLE Course documentation
T5.4 Management for tomorrow's housing	Management for tomorrow's housing	•	<ul style="list-style-type: none"> Content in management for tomorrow's housing developed on time (MS17) (Required in M23) 	<ul style="list-style-type: none"> Courses on VLE Course documentation
WP6 - Digital twin & input (measurement and equipment) for hands-on work (Lead: VilniusTech)				
		•		•

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
T6.1 Digital twin model development and maintenance	Integration of BIM into learning content		<ul style="list-style-type: none"> Learning content preparation with integrated BIM developed on time (MS18) (Required in M24) Report on integration of BIM into learning content prepared on time (D6.1) (Required in M24) 	<ul style="list-style-type: none"> Course documentation Report on integration of BIM into learning content
	Digital twin model development and maintenance	*	<ul style="list-style-type: none"> Digital twin model is developed on time (MS27) (Required in M36) Digital twin model is maintained regularly (MS27) 	<ul style="list-style-type: none"> Digital twin model
T6.2 Arrangement of digital twin models for learning and teaching frameworks	Digital twin models for learning and teaching frameworks	*	<ul style="list-style-type: none"> Digital twin models for learning and teaching systems are prepared on time (MS28) (Required in M48) 	<ul style="list-style-type: none"> Digital twin models for learning and teaching

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
T6.3 5D, 6D, 7D simulation package for digital twin	Incorporating 5D (cost) and 6D (energy efficiency / sustainability) data into 7D simulation development	*	<ul style="list-style-type: none"> Incorporation of 5D (cost) data into digital twin Incorporation of 6D (energy efficiency) data into digital twin 	<ul style="list-style-type: none"> Digital twin models
T6.4 Human-centred 7D Emotional BIM (H7D-BIM) development and maintenance	Human-centred 7D Emotional BIM (H7D_BIM) development and maintenance	*	<ul style="list-style-type: none"> Preparation of learning content in the Human-centred 7D Emotional BIM on time (MS25) (Required in M24) Report on Human-centred 7D Emotional BIM (H7D_BIM) prepared on time (D6.2) (Required in M24) 	<ul style="list-style-type: none"> Learning content Courses Report on Human-centred 7D Emotional BIM (H7D_BIM)
WP7 - Skills4Deca content delivery (Lead: TalTech)				
T7.1 Planning and setting up of teachers training to content delivery.	Planning of teachers training	<ul style="list-style-type: none"> Collaborative development of teachers training plan 	<ul style="list-style-type: none"> Teachers training plan produced on time (MS19) (Required in M12) 	<ul style="list-style-type: none"> Teacher training plan
	Teachers training and new degrees content delivery	<ul style="list-style-type: none"> Feedback on training from participants 	<ul style="list-style-type: none"> Teacher training delivered on time (MS20) (Required in M24) Hours of teacher training delivered Number of teachers trained 	<ul style="list-style-type: none"> Teacher training materials Training participant registers Participant evaluations of training

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
T7.2 Planning and setting up of the new degrees content delivery pilot sessions	Planning of the new degrees content / e-courses delivery pilot sessions	<ul style="list-style-type: none"> Collaborative planning and development and of pilot sessions Feedback on pilot sessions from participants 	<ul style="list-style-type: none"> Pilot sessions planned on time (MS21) (Required in M21) Pilot sessions conducted on time (MS20) (Required in M24) Number of pilot sessions Number of teachers participating in pilot sessions Number of students participating in pilot sessions 	<ul style="list-style-type: none"> Pilot sessions plan Pilot sessions participation registers Participant evaluations of pilot sessions
(Content delivery tasks – under different WPs)	Annual reports on educational programmes	•	<ul style="list-style-type: none"> Annual reports on results of educational programmes prepared on time (D7.2, D7.3, D7.4) (Required in M24, M36, M48) 	<ul style="list-style-type: none"> Report on educational programmes – 1st year Report on educational programmes – 2nd year Report on educational programmes – 3rd year
	Results and data of Skills4Deca delivery sessions	•	<ul style="list-style-type: none"> Report on results and data of Skills4Deca delivery sessions produced on time (D7.1) (Required in M48) 	<ul style="list-style-type: none"> Report on results and data of Skills4Deca delivery sessions
WP8 – Quality Assurance (Lead: TalTech)				

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
T8.1 Establishment of the Quality Assurance Committee (QAC)	QAC establishment	<ul style="list-style-type: none"> QAC carries out its duties effectively 	<ul style="list-style-type: none"> QAC established on time QAC members include representatives of all project partners 	<ul style="list-style-type: none"> Report on establishment of the QAC (General Assembly) meeting minutes
T8.2 Development of project quality plan	Quality Plan	<ul style="list-style-type: none"> Quality Plan is developed collaboratively with input from all partners Feedback from External Evaluator on quality assurance measures 	<ul style="list-style-type: none"> Quality Plan developed and approved by the General Assembly (MS22) (Required in M6) 	<ul style="list-style-type: none"> Quality Plan document (General Assembly) meeting minutes External evaluation reports
T8.3 Common, comparative evaluation of delivery of Skills4Deca modules	Development and deployment of quality evaluation tools for all Skills4Deca modules / courses / content with data collection from both students and teachers.	<ul style="list-style-type: none"> Feedback (from teachers and students) on content evaluation tools 	<ul style="list-style-type: none"> Evaluation tools developed on time. Regular, systematic data collection using tools. 	<ul style="list-style-type: none"> Evaluation tools (Internal) Evaluation reports
	Quality Assurance Methodology (QAM)	<ul style="list-style-type: none"> QAM is developed collaboratively with input from all partners Feedback from Commission on QAM Feedback from External Evaluator on QAM 	<ul style="list-style-type: none"> QAM is developed on time (D8.3) (Required in M12) 	<ul style="list-style-type: none"> QAM report External evaluation reports

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
	Quality Assurance Methodology (QAM) application	<ul style="list-style-type: none"> Partner and participant collaboration in applying the QAM throughout the project 	<ul style="list-style-type: none"> QAM is applied throughout the project (D8.4) (Required in M48) Report on the application of QAM is produced on time (D8.4) (Required in M48) 	<ul style="list-style-type: none"> Report on the application of QAM throughout the project
T8.4 Internal monitoring of Skills4Deca results	Regular (annual) internal monitoring of project results	<ul style="list-style-type: none"> Collaboration of all partners in internal monitoring process 	<ul style="list-style-type: none"> Regular internal monitoring takes place on time. 	<ul style="list-style-type: none"> internal monitoring reports
	Data on interim first year results	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Data collection for first year implementation takes place on time (MS29) (Required in M8) 	<ul style="list-style-type: none"> internal monitoring report – year 1
	Data on interim second year results	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Data collection for second year implementation takes place on time (MS31) (Required in M20) 	<ul style="list-style-type: none"> internal monitoring report – year 2
	Data on interim third year results	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Data collection for third year implementation takes place on time (MS32) (Required in M32) 	<ul style="list-style-type: none"> internal monitoring report – year 3

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
	Data on interim fourth year results	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Data collection for fourth year implementation takes place on time (MS33) (Required in M44) 	<ul style="list-style-type: none"> internal monitoring report – year 4
T8.5 External monitoring of Skills4Deca results	External evaluator(s) appointed	<ul style="list-style-type: none"> External evaluator is suitably qualified and experienced Clarity of external evaluator's tasks 	<ul style="list-style-type: none"> External evaluator is appointed in good time External evaluator is provided with all relevant information in a timely manner 	<ul style="list-style-type: none"> External evaluator appointment contract Terms of reference for external evaluator
	External evaluation interim report	<ul style="list-style-type: none"> Feedback from Commission on external evaluation report 	<ul style="list-style-type: none"> External evaluation interim report produced on time (D8.1) (Required in M24) 	<ul style="list-style-type: none"> External evaluation interim report Feedback from European Commission
	External evaluation final report	<ul style="list-style-type: none"> Feedback from Commission on external evaluation report 	<ul style="list-style-type: none"> External evaluation final report produced on time (D8.2) (Required in M24) 	<ul style="list-style-type: none"> External evaluation final report Feedback from European Commission
WP9 – Marketing and dissemination (Lead: VilniusTech)				
T9.1 Students and teachers enrollment plan	Students and teachers enrollment plan	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Students and teachers enrollment plan produced on time (MS24) (Required in M12) 	<ul style="list-style-type: none"> Students and teachers enrollment plan

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
T9.2 Website and social media	Website (Portal) and social media	•	<ul style="list-style-type: none"> Project website / portal set up on time (MS23, D9.1) (Required in M3) Project social media accounts / pages set up on time (MS23) (Required in M3) 	<ul style="list-style-type: none"> Project website Project social media accounts / pages
T9.3 Universities plan for partnerships' and programmes'sustainability	Plan for partnerships' and programmes'sustainability	<ul style="list-style-type: none"> Types of stakeholders consulted in developing plan 	<ul style="list-style-type: none"> Number of stakeholders consulted in developing plan 	<ul style="list-style-type: none"> Plan for partnerships' and programmes'sustainability
T9.4 Dissemination and Exploitation Plan	Marketing and Dissemination Plan	<ul style="list-style-type: none"> Feedback from Commission on Marketing and Dissemination Plan Feedback from External Evaluator on Marketing and Dissemination Plan 	<ul style="list-style-type: none"> Marketing and Dissemination Plan produced on time (D9.3) (Required in M6) 	<ul style="list-style-type: none"> Marketing and Dissemination Plan
	Midterm Dissemination and Exploitation activities results	•	<ul style="list-style-type: none"> Midterm analysis of dissemination and exploitation actions carried out on time (MS30) (Required in M24) 	<ul style="list-style-type: none"> Midterm analysis of dissemination and exploitation action report

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
	First Year Report on the Marketing and Dissemination Activities	<ul style="list-style-type: none"> Feedback from Commission on Marketing and Dissemination activities 	<ul style="list-style-type: none"> First Year Report on the Marketing and Dissemination Activities produced on time (D9.4) (Required in M12) 	<ul style="list-style-type: none"> First Year Report on the Marketing and Dissemination Activities Feedback from European Commission
	Second Year Report on the Marketing and Dissemination Activities	<ul style="list-style-type: none"> Feedback from Commission on Marketing and Dissemination activities Feedback from External Evaluator on Marketing and Dissemination activities 	<ul style="list-style-type: none"> Second Year Report on the Marketing and Dissemination Activities produced on time (D9.5) (Required in M24) 	<ul style="list-style-type: none"> Second Year Report on the Marketing and Dissemination Activities External evaluation interim report Feedback from European Commission
	Third Year Report on the Marketing and Dissemination Activities	<ul style="list-style-type: none"> Feedback from Commission on Marketing and Dissemination activities 	<ul style="list-style-type: none"> Third Year Report on the Marketing and Dissemination Activities produced on time (D9.6) (Required in M36) 	<ul style="list-style-type: none"> Third Year Report on the Marketing and Dissemination Activities Feedback from European Commission

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Activity	Description of Deliverables	Objectively Verifiable Quality Indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
	Fourth Year Report on the Marketing and Dissemination Activities	<ul style="list-style-type: none">Feedback from Commission on Marketing and Dissemination activitiesFeedback from External Evaluator on Marketing and Dissemination activities	<ul style="list-style-type: none">Fourth Year Report on the Marketing and Dissemination Activities produced on time (D9.7) (Required in M48)	<ul style="list-style-type: none">Fourth Year Report on the Marketing and Dissemination ActivitiesExternal evaluation final reportFeedback from European Commission

List of Templates

1. Document /report templates
2. Presentation templates
3. Progress reporting template
4. Internal monitoring evaluation template
5. Acknowledgement with disclaimer
6. Meeting agenda template
7. Participant register template
8. Meeting minutes template
9. Meeting participant evaluation form
10. Event programme template
11. Event participant evaluation form
12. Teacher evaluations of course content and delivery form
13. Student evaluations of course content and delivery form
14. Peer reviews of course content templates
15. Training certificate templates

APPENDIX C – Terms of Reference for the External Evaluator



Housing Decarbonisation Skills for Climate, Health and Jobs

Project No. 101123311 – Skills4Deca

Advanced Digital Skills — DIGITAL-2022-SKILLS-03

Terms of Reference (ToR)

Independent Expert for External Evaluations of the Skills4Deca Project for Quality Assurance Purposes



Co-funded by
the European Union

The Skills4Deca project has received funding from the European Union's Digital Europe programme call "Specialised education programmes or modules in key capacity areas"
DIGITAL-2022-SKILLS-03-SPECIALISED-EDU under Grant Agreement no. 101123311

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1. Project Overview

The Housing Decarbonisation Skills for Climate, Health and Jobs (Skills4Deca) project is co-funded by the Digital Europe Programme. It aims to meet the skills needs for the decarbonisation of housing in the Baltic countries by providing strategic advanced digital skills and promoting the use of digital technologies. The project is developing micro-learning, bachelor level and master level e-content for housing decarbonisation digital skills that will enrich already existing bachelor and master study programmes in 3 Baltic technical universities - Riga Technical University (RTU), Tallinn University of Technology (TalTech) and Vilnius Gediminas Technical University (VilniusTech). The targeted audience for the new learning e-content is housing managers, landlords, certified construction engineers, evaluators of the technical condition of the building, energy auditors and construction designers, etc., who do not necessarily have a digital background.

The project consortium has 6 partners - the three technical universities mentioned above: RTU (coordinating partner), TalTech and VilniusTech, a centre of excellence: [the Institute of Solid State Physics of the University of Latvia](#), and 2 SMEs: Data Mining Solutions SIA (Latvia) and UAB Getweb (Lithuania). The project started on 1st April 2024 and will end on 31st March 2028. It has a total estimated budget of approximately €5.5 million of which 50% (€2.8 million) is funded by a grant from the Digital Europe Programme.

The project comprises nine work packages:

- WP1 Management - ensuring the successful completion of the project goals on time within the budgetary framework and quality standards.
- WP2 Preparation of the project environment - defining the learning objectives, developing the Virtual Learning Environment and designing the teachers' guides.
- WP3, WP4, and WP5 - the e-content development WPs - digital competences (WP3), material science (WP4) and organisational science (WP5).
- WP6 Digital Twin - providing the instrumentation for hands-on courses as well as the application of the digital twin concept for demonstration, modelling, and decision-making.
- WP7 Content Delivery - e-content delivery in each of the beneficiary HEIs.
- WP8 Quality Assurance - external and internal monitoring of the project to ensure its successful delivery.
- WP9 Marketing and Dissemination - demonstrating and promoting the new learning programmes to stakeholders and ensuring their sustainability and expansion to other HEIs.

2. Appointment of an External Evaluator

For independent, external project monitoring, an appropriately qualified, experienced and independent expert (or experts) will be appointed as the External Evaluator for the Skills4Deca project. The Skills4Deca project Coordinator will appoint the External Evaluator based on the recommendations of the project's Quality Assurance Committee (QAC) and its assessment of applications received.

Scope of Work

The external evaluator will regularly review project documents, outputs and progress in order to provide an unbiased, professional opinion of project performance. The QAC will ensure that the External Evaluator has access to the appropriate project platforms, websites and information and is provided with all the project documentation necessary to carry out their evaluations.

Deliverables

The External Evaluator will deliver 2 external evaluation reports as follows:

1. External Evaluation Interim Report (due in March 2026)

This report will be written in English and contain the External Evaluator's assessment of project status and quality as at the end of year 2 of project implementation. The purpose of the External Evaluation Interim Report is to improve project performance by providing actionable recommendations for mid-course corrections and to up-date strategies and processes relating to the quality and effectiveness of project implementation.

2. External Evaluation Final Report (due in March 2028)

This report will be written in English and contain the External Evaluator's assessment of project status and quality at the end of the project. The purpose of the External Evaluation Final Report is to obtain an independent assessment of overall project performance and the extent to which the project has achieved its objectives. This report should include recommendations for future scaling efforts and for project sustainability.

Required Expertise

The External Evaluator should possess:

- Extensive experience of similar European Union funded projects associated with the development of skills and educational e-content.
- Demonstrable knowledge of project quality assurance and evaluation processes.
- Excellent analytical, writing, and communication skills.

Reporting and Accountability

In carrying out their duties, the External Evaluator will liaise with and report to the Chair of the QAC: currently Emlyn Witt of Tallinn University of Technology.

Application Process

Interested experts are required to submit by email to emlyn.witt@taltech.ee:

- A detailed CV highlighting their relevant experience.
- A technical proposal outlining the proposed evaluation approach and methodology.

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- A financial proposal showing a breakdown of costs and the schedule of expected payments. The total sum must not exceed €10 000 (ten thousand euros).

Evaluation Criteria

All conforming applications received will be evaluated according to the following criteria:

- Relevant qualifications, expertise and experience of the proposed Expert Evaluator as demonstrated by the submitted CV (50 points)
- Technical excellence and value for money as demonstrated by the technical and financial proposals (50 points)

Application Deadline

Applications must be received by 17:00 Eastern European Time (UTC +02:00) on 12th February 2025.

Contact Information

For further information and clarifications, contact: emlyn.witt@taltech.ee