TAMTAM Project

Exploiting the TIPTOE plAtforM by transferring ECVET and EQF semAntic tools in a Multi-sectoral perspective

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WP4.R9. Qualifications of selected sectors incorporated in the platform

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Lifelong Learning Programme

Result:	9	Qualifications of selected sectors incorporated in the platform
Work package:	4	Transfer of Innovation
Description:	This document accompanies the first result of work package 4 on transfer of innovation, which corresponds to the integration into the TAMTAM platform of the qualifications selected from the ICT, fashion/textile, mechanics/mechatronics, energetic efficiency/green building sectors. Each qualification has been carefully described in terms of activities, units (and sub-units, when needed) and learning outcomes. Each qualification is expressed in the English language (translations in the other project languages are performed by the platform), and its constituting units can be/have been linked to learning activities, EQF level and ECVET/ECTS points.	
Edited by:	P1. 3s research laboratory	
Contributing partners:	Project partners, by providing their national qualifications to be inserted in the platform.	
Public/Confidential:	Public	

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1. Work package 4 – Transfer of innovation

1.1. Aims

Following the application, the aim of work package 4 was to transfer the following innovations to TAMTAM:

- the methodology for defining the qualification, for aggregating learning outcomes into units and for eliciting the part of the qualification that is common to more countries;
- the contents, represented both by several complete sectoral qualifications as well as by innovation needs;
- the updated platform with new functionalities like the linguistic translation, an open space for collaborative reasoning/discussion, etc.

With respect to the **methodology** pursued for defining the qualification, the goal consisted in applying the methodology adapted in work package 2 for collecting relevant information and operating with the platform to highlight

a) the part of the qualification that is common (or at least that can be referenced among the various countries), so that to favour the occupational mobility and the concrete application of ECVET;

b) the gap of the qualification with respect to innovation needs emerging from the labour market.

With respect to **contents**, the aim, coherently with the guidelines elaborated in work package 2, was to collect and insert information concerning a qualification as well as related innovation needs for selected sectors and for each area: French, Italian and Anglo-Saxon.

With regard to the **TAMTAM platform**, it represents a true innovation from the technological point of view, and it also plays a key role from the methodological point of view, as it is through the platform that the other objectives related to the support of ECVET application and the identification of the coherency and flexibility of the standard with respect to innovation needs can be achieved. Also, a further opportunity offered by the platform is the possibility to assign a weight to each unit by linking it to the activities of the qualification based, among other, on the indications from the interviews with the opinion leaders. This way, a more objective and effectively bipartisan strategy for allocating ECVET credit points could be experimented.

1.2. Description of activities

During work package 2 and as starting point for work package 4, an adaptation workshop was organized in Brussels with representatives from the European Commission, European stakeholders and project partners involved in the transfer and adaptation phases of the TAMTAM project. There the results of work package 2 and work package 3 were presented with the aim of launching the transfer of the adapted innovation.

Transfer activities were referred to language, to country, to educational system/level and sector aspects. KCH organized, together with 3srl, the adaptation workshop for the verification of the value of the adaptation results and, at the same time, for sharing the strategy behind the operative modalities for the different typologies of transfer reported above. During the meeting, Politecnico di Torino also devoted time for introducing the platform.

Partners involved in transfer activities in the context of work package 4 were responsible for:

a) **collecting and inserting an EQF level 5 qualification** taken from the national system and/or from a training provider for each sector (ICT, fashion/textile, mechanics/mechatronics, energetic efficiency/green building/construction) and for at least three countries; for each qualification, several details needed to be extracted, namely description, core activities, tasks, performances and learning outcomes that characterize the qualification in the sector;

b) **verifying and checking the appropriateness of the automatic translation**, as each qualification was inserted in the national and in the English language into the platform; the goal was to have it expressed in multiple languages in order to facilitate the organization of mobility and the application of ECVET;

c) **aggregating and overseeing the aggregation of learning outcomes into units** that can be linked to activities using the platform and sharing results obtained with several stakeholders from the education and labour worlds;

d) **assigning ECVET credit points to units with modalities to be shared with an expert;**

e) **constructing and identifying units for the possible allocation of credit points** based on the work load and comparison between the two methods (in order to act consciously in identifying solutions);

f) **acting and overseeing interviews with at least three opinion leaders from the labour market** (one per country) for each qualification, and insert data according to the indications from P0;

g) **identifying and involving strategic partners and other experts.**

1.3. Role and tasks of partners and sub-contractors in work package 4

Work package 4 was lead by P1 (3s research laboratory, AT). It was the responsibility of 3srl to coordinate the activities of this work package by interfacing with work package 2 and work package 3 leaders as well as with the partners involved in the transfer activities.

Besides 3srl, staff budget for work package 4 was allocated to PO (Politecnico di Torino, IT), P2 (DEKRA, DE), P3 (IG Metall, DE), P5 (GIP FCIP, FR), P7 (USRV, IT), P8 (KCH, NL), P9 (Universidade do Minho, PT) and P11 (clockITskills, GB).

A budget was allocated to P3 (IG Metall, DE) for translating the interview guidelines for expert interviews into the project partners languages.

A budget was allocated to P1 (3srl, AT), P5 (GIP FCIP Rectorat de Paris, FR), P7 (Ufficio Scolastico Regionale per il Veneto, IT) and P8 (KCH International, NL) for subcontracting linguistic services required for checking the accuracy of the translations performed by the platform, by specifically verifying the appropriateness of the micro-language used and its adequacy for the qualifications concerned and its adherence to the terminology adopted in official ECVET and EQF documentation.

1.4. Deliverables of work package

In the context of work package 2 the collection of a set of descriptions of qualifications on EQF-Level 5 was started, which was later completed in work package 4. These descriptions were the basis for the further steps of work package 4, represented by:

- Result R9: Qualifications of selected sectors incorporated in the platform
- Result R10: Common part of the qualifications identified
- Result R11: Updated qualification responding to sectoral innovation needs

1.4.1. Result R9: Qualifications of selected sectors incorporated in the platform

The first result of WP4 was – after continuing and concluding the collection of descriptions of qualifications from the project partners – the **integration of the qualifications selected** from the ICT, fashion/textile, mechanics/mechatronics, energetic efficiency/green building/construction sectors **into the TAMTAM platform**.

Each qualification:

- was described in terms of **core activities**,
- **tasks**,
- **performances** and **learning outcomes**;
- was expressed in the **original** and **English language**;
- was, if applicable, articulated in terms of **learning outcomes** linked to activities with **ECVET credit point** allocated to them;
- had, if applicable, their **weight** indicated;
- with reference to **innovation needs**.
- **Sectoral data** also were included in the platform.

1.4.2. Result 10: Common part of the qualifications identified

With the support of the semantic platform, in work package 4 the **common part of the sectoral qualifications** (maximum common denominator computed on national qualifications) was made explicit, and the gap was identified. Subsidiary aspects were, if applicable, identified in relation to ECVET application. Results are expected to be made available through links to the TAMTAM platform on the project website (http://www.tamtam.polito.it/). Up to now the TAMTAM platform is accessed via the reserved area of the website, then following the button “TAMTAM platform”.

1.4.3. Result 11: Updated qualification responding to sectoral innovation needs

With the support of the semantic platform, selected qualifications from the considered sectors were updated, as result from desk research and expert interviews, by taking into account innovation needs. The gap with the original qualifications was unveiled in a trans-national perspective. Results are expected to be made available through links to the TAMTAM platform on the project website (http://www.tamtam.polito.it/). Up to now the TAMTAM platform is accessed via the reserved area of the website, then following the button “TAMTAM platform”.

1.5. Methodology and activities of work package 4

3srl, as lead of work package 4, was responsible for the organisation, co-ordination, quality management of work package 4. Therefore 3srl developed a suggestion for methodology for work package 4. The first draft of methodology was introduced at the kick-off meeting in Torino. This introduction included a description of work package 4, its content, targets, time schedule and involved partners.

The task of 3srl as work package leader was to coordinate the activities of this work package by interfacing with work package 2 and work package 3 leaders as well as with the partners involved in the transfer activities, to coordinate the actions of partners contributing to work package 4, to define partners responsibilities, to communicate with the coordinator and to monitor the working process. Furthermore 3srl was responsible for the quality management of results within work package 4.

3srl (P1) and KCH (P8) were responsible for the organization of a workshop for the verification of the value of the adaptation results and for sharing the strategy behind the operative modalities for the different typologies of transfer. This was the starting point for the transfer process of the TAMTAM project, on the basis of the “Guide on the adapted methodology” (as result 6 from work package 2) and the TAMTAM platform (as result from work package 3), introduced at the adaptation meeting. The workshop was participated by representatives from the European Commission, European stakeholders and project partners involved in the transfer and adaptation

phases of the TAMTAM project. During the meeting, Politecnico di Torino also devoted time for training participants on the use of the platform.

To provide partners from the very beginning of work package 4 with a clear structure and understanding of tasks and activities to be fulfilled, 3srl elaborated a 13 pages “Introduction into Work package 4: Description & Methodology”, including a description of work package 4, its deliverables, the methodological framework and a time schedule.

Before being able to insert qualifications into the platform 3srl needed to continue with the collection of EQF level 5 qualifications (via Annex D) from partners for the sectors ICT, mechanics/mechatronics, fashion/textile and energy efficiency/green Building/construction, so that each sector was covered with qualifications from at least 3 different countries for each sector (with two qualifications per partner or country). After concluding this task 3srl, with the support of partners, inserted the qualifications into the TAMTAM platform.

3srl furthermore provided templates for partners with adapted/elaborated versions of annex E (basis for expert interviews to analyse the state of the art in the described qualifications), annex F (analysis of innovation needs) and annex G (analysis of the economic situation).

3srl conducted an analysis of the economic situation for the sectors ICT, mechanics/mechatronics and energy efficiency/green building/construction and provided KCH with a template for analysing the economic situation for the sector fashion/textile.

On the basis of collected profiles selected partners were asked to conduct expert interviews (on the basis of above mentioned annexes) with opinion leaders from the relevant labour market for the sector of the profile, for evaluating the descriptions of qualifications with regards to innovation needs.

On the basis of the collected profiles 3srl and Politecnico di Torino created – based on two methodological approaches – common profiles for the four sectors: 3srl was responsible for creating common profiles for the sectors mechanics/mechatronics and energy efficiency/green building/construction, Politecnico di Torino was responsible for creating common profiles for the sectors ICT and fashion/textile. Via feedback loops to project partners and stakeholders the created common profiles were evaluated and slightly modified.

On the basis of the results from the expert interviews the qualifications in the platform were updated, if necessary, with regards to innovation needs identified from the experts.

Furthermore, the qualifications in the platform were automatically translated. The appropriateness of automatic translation was verified and checked via subcontracting linguistic services – as each qualification was inserted in the English language (and national language, if available) and the goal was to have it expressed in multiple languages.

In an overview work package 4 consisted of the steps reported below.

- Collection of profiles for the 4 sectors with annex D
- Building of 4 clusters and defining cluster partners for feedback on profiles
- Insertion of profiles in the TAMTAM platform
- Quality check after insertion of all profiles in the platform via partners
- Automatic translation of profiles within the platform
- Checking accuracy of translation via subcontracted linguistic services (ICT, P7-USRV, mechanic/mechatronics, P1-3s, fashion/textile, P8-KCH, energy efficiency/green building/ construction: P5-GIP FCIP Rectorat de Paris
- Inserting of corrected translations of profiles in the platform (P1, P5, P7, P8)
- Creation of common profiles (P0, P1)
- Feedback loops on common profiles (cluster partners)

- Desk research for gathering sectoral data – providing information in form of sectoral reports, available on the platform (P1, P8)
- Expert feedback/interviews on national profiles – innovation needs
- Reference to innovation needs via integrating results into the platform (P0, P1)
- Updating profiles with results from expert interviews

So far, there is a lack of information about ECVET credits and learning activities of the profiles described, due to the fact that in many of the countries descriptions of qualifications are not available in the form which was required in annex D, including information about ECVET and learning activities, especially not on EQF level 5. Whilst it was possible – with extra time and efforts – to generate descriptions which divide professional activities into competences, skills, knowledge, it was not possible to allocate ECVET credit points, if this information was not already available.

The information about ECVET credits and learning activities was not necessary for the creation of common profiles and the updating with regards to innovation needs, but it will be very helpful (for transparency and comparability of profiles) to supplement these information in the platform, where necessary and applicable, in the second year of the project while dealing with foreseen the testing and exploitation stages.

2. Qualifications of selected sectors incorporated in the platform (Result R9)

2.1. Format for the description of qualifications on EQF-level 5 (Annex D)

In the context of work package 2 partners were asked for descriptions of qualifications on EQF-Level 5, based on the adapted template from the project TIPTOE. The descriptions provided needed to match with the annex D template (→ Annex D: Description of qualifications on EQF-level). Each partner needed to provide descriptions for at least 2 qualifications. These descriptions should contain the following information:

- Name of the qualification
- Professional activities/tasks: 3-10 activities of occupation, for which the qualification is meant
- Subunits of the professional activity/task
- NQF-EQF per unit (if applicable)
- Competence (max. 1) per subunit
- Skills (max. 3) per subunit
- Knowledge (max. 5) per subunit
- ECVET in % or ECTS in points per subunit
- Learning activities (incl. workload and duration), such as courses, internships, theses, practical experimentations, on-the-job-training and its duration

2.2. Collection of descriptions of qualifications

Each sector (excluding tourism/logistics – these two sectors were intended to be 'back-up' sectors, optionally to be considered at a later stage of the project, e.g. in the second year in the context of the testing phase) needed to be covered with qualifications from at least 3 different countries for each sector (with at least two qualifications per partner or country). Following an overview about the sectors and partners contributing with descriptions of qualifications to these sectors is provided.

Table 2.1. Overview on sectors and partners contributions of qualifications

ICT	Politecnico di Torino, USRV (IT) CLOCK-IT-SKILLS (UK) DEKRA (DE) CPU (SI) Oviedo (ES)
Mechanics/Mechatronics	Politecnico di Torino, USRV (IT) IG METALL (DE) 3srl(AT)
Fashion/Textile	Politecnico di Torino, USRV (IT) KCH (NL) CLOCK-IT-SKILLS (UK)
Energy efficiency/Green building/Construction	USRV (IT) CREDIJ (FR) 3srl (AT) CPU (SI) CLOCK-IT-SKILLS (UK)
Tourism*	USRV (IT) 3srl (AT) CPU (SI) Oviedo (ES)
Logistics*	USRV (IT) ACADEMIE (FR) CPU (SI)

* Sectors to be optionally considered at a later stage (e.g. in the second year for testing)

Each partner should describe at least two EQF-level 5 qualifications in its country (using Annex D) for the assigned sectors. Table 2.2 shows the coverage of sectors, countries and qualifications.

Table 2.2. Coverage of sectors, countries and qualifications

Sector	Countries	Qualifications
ICT	**5 countries:** Italy (Politecnico di Torino – 1 qualification, USRV – 1) Germany (DEKRA – 2) Slovenia (CPU – 1) UK (clock-IT-skills – 1) Spain (Camera Oviedo – 1)	**7 qualifications**
Mechanics/Mechatronics	**4 countries:** Italy (Politecnico di Torino – 1, USRV – 1) Germany (IG Metall – 1, DEKRA - 1) Austria (3srl – 2)	**5 qualifications**
Fashion/Textile	**3 countries:** Italy (Politecnico di Torino – 1, USRV – 1) Netherlands (KCH – 2) UK (clock-IT-skills – 1)	**5 qualifications**
Energy efficiency/Green building/Construction	**5 countries:** Italy (USRV – 1) Austria (3srl – 2) Slovenia (CPU – 2) UK (clock-it-skills – 1) France (CREDIJ – 1)	**7 qualifications**

2.3. Sectoral clusters in the context of work package 4

To enable efficient work on the collection of qualifications, their insertion in the TAMTAM platform (deliverable 9) and efficient work on the common profiles (deliverable 10) 3srl defined in the context of work package 4 four clusters (according to the four sectors analysed), four cluster leads and cluster partners:

- The Cluster “ICT” was lead by Politecnico di Torino.
- The Cluster “Mechanics/Mechatronics” was lead by 3srl.
- The Cluster “Fashion/Textile” was lead by Politecnico di Torino.
- The Cluster “Energy Efficiency/Green Building” was lead by 3srl.

The cluster leads were responsible for collecting the necessary number of qualifications for each sector and for the creation of common profiles.

2.3.1. Cluster ICT

- Cluster lead: Politecnico di Torino
- Support/Feedback: DEKRA, clock-IT-skills

Qualifications:

- Politecnico di Torino (IT): Higher Technician for the audio-video communication
- USRV (IT): Computer Science and Telecommunication Technician
- DEKRA (DE): Information technology specialist (applications development)
- DEKRA (DE): Information technology specialist (systems integration)

- CPU (SLO): Developer software applications and taking care of databases
- clock-IT-skills (UK): Systems Architect
- clock-IT-skills (UK): Service Manager
- Camara Oviedo (ES): Data Base Administration

Profiles for the Cluster were provided from Politecnico di Torino, DEKRA, CPU, USRV, clock-IT-skills and Camara Oviedo. Cluster partners (for feedback on qualifications in the TAMTAM platform and for feedback on common profile) were DEKRA and clock-IT-skills.

2.3.2. Cluster fashion/textile

- Cluster lead: Politecnico di Torino
- Support/Feedback: KCH, USRV

Qualifications:

- Politecnico di Torino (IT): Higher technician of process, product and communication - marketing for the Fashion Textile Sector
- USRV (IT) Fashion Technician
- KCH (NL): Fashion Designer
- KCH (NL): Team manager textiles
- clock-IT-skills (UK): Profiles from Edexcel
- IT: New Technologies for made in Italy
- FR: Qualified technician/fashion and textile

Profiles for the Cluster Fashion/Textile were provided from Politecnico di Torino, USRV, KCH, clock-IT-skills and GIP FCIP. Cluster partners (for feedback on qualifications in the TAMTAM platform and for feedback on common profile) were KCH and USRV.

2.3.3. Cluster mechanics/mechatronics

- Cluster lead: 3srl
- Support/Feedback: IG Metall, USRV

Qualifications:

- Politecnico di Torino (IT): Higher Technician for Mechanics/Mechatronics
- USRV (IT): Automation and mechatronics technician
- 3srl (AT): Mechatronic engineer
- 3srl (AT): Automation and process engineering
- IG Metall (DE): Car Service Technician
- DEKRA (DE): Motor vehicle mechatronics technician
- CPU (SL): Toolmaker mechatronic

Profiles for the Cluster Mechanics/Mechatronics were provided from 3srl, Politecnico di Torino, USRV, IG Metall, DEKRA and CPU. Cluster partners (for feedback on qualifications in the TAMTAM platform and for feedback on common profile) were IG Metall and USRV.

2.3.4. Cluster energy efficiency / green building / construction

- Cluster lead: 3srl
- Support/Feedback: Universidad de Minho, USRV

Qualifications:

- CPU (SL): Foreman in electrical industry
- CPU (SL): Power-system engineer
- clock-IT-skills (UK): Construction and Built Environment
- 3srl (AT): Energy technician / Electrical energy technician
- 3srl (AT): Technician for Installation and Building
- CREDIJ (FR): Higher technician in building profiles

Profiles for the Cluster Energy Efficiency / Green Building / Construction were provided from 3srl, CPU, clock-IT-skills, and CREDIJ. Cluster partners (for feedback on qualifications in the TAMTAM platform and for feedback on common profile) were Universidad de Minho and USRV.

3. Result: collected qualifications and related activities/tasks in detail

Table 2.3 provides information in detail about the qualifications and professional activities/tasks related to the qualifications, which were provided and are available in the platform. They built the basis for the creation of common profiles for each sector, to be more precise that means for the identification of common parts of the profiles.

Table 2.3. Available descriptions of qualifications

Sector	Partner	Qualification	Professional activity/task
ICT	Politecnico di Torino (IT)	Higher Technician for the audio-video communication	1: Develop audio-video movies 2: Interact with complex computer systems 3: Develop communication plans for the dissemination on different channels
ICT	USRV (IT)	Computer science and telecommunication technician	1: Use and operate a robot (in accordance with safety standards) 2: Operate mechanical, electrical, electronics and computer science components of a robot 3: Use simulation programs to define features and construction/modelling tools 4: Exploit the potential of a robot in a work place and optimize the production/assembly cycle
ICT	DEKRA (DE)	Information technology specialist (applications development)	1: Translate specialist requirements into complex software systems 2: Analyse, plan, implement, roll-out new or modified applications 3: Provide customers and users with technical advice, support and training
ICT	DEKRA (DE)	Information technology specialist (systems integration)	1: Design and produce complex ITC systems by integrating hardware and software components 2: Analyse, plan, implement, roll-out new or modified information technology and communication systems 3: Provide customers and users with technical advice, support and training
ICT	CPU (SLO)	Expert for software applications and databases	1: Programming of software applications 2: Data base
ICT	clock-IT-skills (UK)	Computing and Systems Developer	1: Management in Information Technology 2: Computer Systems 3: Management of Projects 4: Human Computer Interaction 5: Database Design Concepts 6: Software Applications Testing 7: IT Support for End Users 8: Data Analysis and Design
ICT	Camara Oviedo (ES)	Data Base Administration	1: Data Base Administration, interpreting its design and structure, and doing the model adaptation to Managing System Data Base requirements. 2: Configuring and administration into the same logical and physical level 3: Assuring the incorporation, availability and confidentiality of storage information
Mechanics/ Mechatronics	Politecnico di Torino (IT)	Higher Technician for Mechanics & Mechatronics	1: Teachings of general area 2: Teachings of specific areas 3: Teachings of “Mechanics and Mechatronics” area 4: Use and operate a robot (in accordance with safety standards) 5: Operate mechanical, electrical and computer science components of a robot 6: Use simulation programs to define features and construction/modelling tools 7: Exploit the potential of a robot in a work place and optimize the production/assembly cycles

Mechanics/ Mechatronics	USRV (IT)	Automation and mechatronics technician	1: To cooperate in the mechatronic systems design and in their integration for the management of the production process 2: To write programs in different medium complexity languages concerning the programming of a logic unit (CAD, CAM, CIM) 3: To write and to edit technical documents about fitting and the running of machinery. 4: To install commanding and controlling units (PLC), electronic, electromechanical, pneumatic and hydraulic transducers and actuators. 5: To cooperate in the mechatronic systems management and in the production process management. 6: To define the policies of mechatronic systems maintenance and the procedures of the monitoring and the supervision of the same.
Mechanics/ Mechatronics	3srl (AT)	Mechatronic engineer	1: Maintaining and assuring the reliability of mechatronic systems 2: Installing and dismantling mechatronic systems and facilities 3: Installing and adjusting mechatronic components in systems and production lines 4: Designing, adapting, and building mechatronic systems and facilities on the basis of client needs and site plans
Mechanics/ Mechatronics	3srl (AT)	Automation and process engineer	1: Collecting data for planning 2: Planning of systems components 3: Assembling of plants 4: Taking plants into operation
Mechanics/ Mechatronics	DEKRA (DE)	Motor vehicle mechatronics technician	1: Perform upgrades and modifications 2: Release vehicles for operation 3: Maintenance and repair of vehicles 4: Maintain diagnostic and test equipment and tools 5: Plan and monitor work activities and evaluate results 6: Order and manage procurement of service and replacement parts and components
Mechanics/ Mechatronics	IG Metall (DE)	Car Service Technician	1: Service and maintenance of vehicles 2: Diagnosis of technical problems by talking to the customer 3: Discussing maintenance and repair measures with the customers 4: Supporting the training of apprentices 5: Functions in company-internal communications 6: Ensuring and overseeing the quality of work and service
Fashion/Textile	Politecnico di Torino (IT)	Higher technician of process, product and communication – marketing for the Fashion Textile Sector	1: Choose and use raw materials, intermediate products and final products of the production chains 2: Design and manage technological processes and organizational procedures of the production chains 3: Identify and develop product and process innovations (collaborating with Research centres and Universities) for the re-launch of the company and repositioning on the market 4: Contextualize the organization of the enterprise in the economic and in the market ambit, also in function of the new distribution and supervision models of international markets 5: Manage the role of immateriality in the value chain and emphasize the research of product sense and of immaterial component of product value for the customer 6: Restore and/or enhance the organizational

			efficiency of the system trough scale economies and costs control 7: Search and use marketing levers 8: Communication in English language
Fashion/Textile	USRV (IT)	New Technologies for Made in Italy	1: Development of analysis and marketing researches 2: Design of the collection plan 3: Development of the product – process 4: About the company 5: Design of the marketing and communication strategies
Fashion/Textile	KCH (NL)	Fashion Designer	1: Developing the collection 2: Conducting the sampling 3: Promoting the design/collection
Fashion/Textile	KCH (NL)	Team manager textiles	1: Prepares the production order 2: Supervises the production process 3: Contributes to the improvement of the quality of product and process 4: Provides leadership to the team
Fashion/Textile	clock-IT-skills (UK)	Fashion, Textile Manager	1: Management of the Design and Production Process 2: Design Research in Textiles 3: Experimental Constructed Textiles 4: Design Exploration in Fashion 5: Garment Manufacture 6: Manufacture 7: Fashion Promotion and Marketing 8: CAD/CAM for Fashion and Textiles 9: Fashion Collection Realisation
Energy efficiency/ Green building/ Construction	USRV (IT)	Energy saving and green building technologies	1: To analyse and make feasibility studies 2: To help in designing and choosing appropriate green building technical solutions 3: To manage the construction site logistics and to plan supplying 4: To manage the industrial process
Energy efficiency/ Green building/ Construction	3srl (AT)	Technician for Installation and Building	1: Collecting data for planning 2: Assembling of plants 3: Commissioning of plants 4: Maintaining of plants
Energy efficiency/ Green building/ Construction	3srl (AT)	Energy Supply Technician	1: Collecting data for planning 2: Planning of systems components 3: Assembling of plants
Energy efficiency/ Green building/ Construction	CREDIJ (FR)	Higher technician in building	1: Studies of building works and of interfaces including through rehabilitation 2: With or without digital assistance, design, the process of carrying out a building work 3: Control and management of the work on the site
Energy efficiency/ Green building/ Construction	CPU (SLO)	Power-system engineer	1. Professional terminology in foreign language 2. Business Communication and Management 3. Computer Science and Informatics 4. Environmental protection and safety at work 5. Technical mathematics 6. Fundamentals of Electrical Engineering 7. Applied mechanics, hydrodynamics and thermodynamics 8. Electrical measurements 9. Control and regulation 10. Economics and management 11. Technical regulations and engineering 12. Elements of Power System 13. Running of the electricity systems operations 14. Protection of the electricity systems

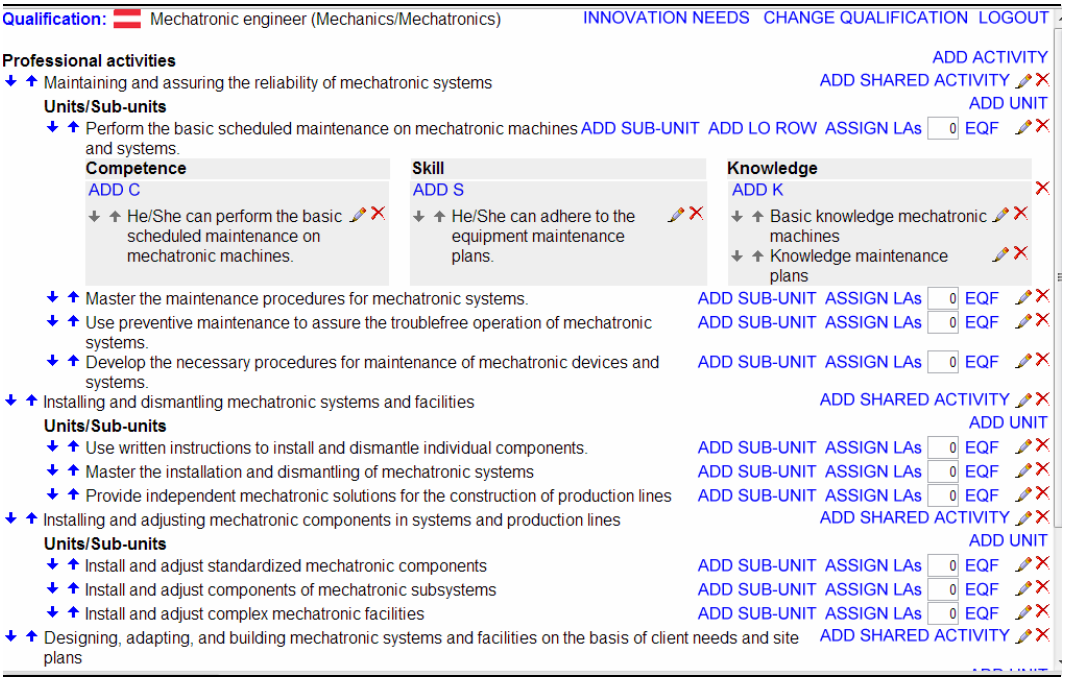
			15. Efficient use of renewable energy sources 16. Up-to date electrical installations 17. Practical training
Energy efficiency/ Green building/ Construction	CPU (SLO)	Foreman in electrical industry	1: Professional work in the field of energy 2: Work organization, management and operations 3: Transfer of knowledge
Energy efficiency/ Green building/ Construction	clock-IT-skills (UK)	Construction and Built Environment	1: Specification in Construction and the Built Environment 2: Energy Utilization and Efficiency for Building Services Engineering 3: Science and Materials for Construction and the Built Environment

4. Result: insertion of qualifications in the TAMTAM Platform

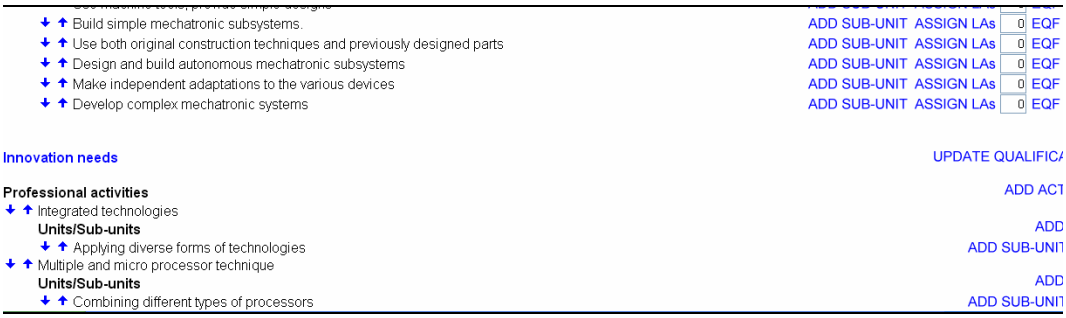
The insertion of the qualifications into the platform was primarily conducted by the partners delivering the qualification. Occasionally – where time constraints or technical barriers prevented insertion by the partners themselves – the insertion was carried out by the cluster leaders (3srl, Politecnico di Torino), by the respective work package leader (3srl). The instructions for the handling of the platform was produced by the leader of work package 3 (Politecnico di Torino) at the project meetings in Brussels and Venice. Videos documenting the course of the meeting in Brussels that were published on the reserved area of the project website (accessible to project partners) were helpful for all partners when starting the insertion work. The access codes for the TAMTAM platform were sent to all partners delivering qualifications.

The platform features a manageable structure. On the first level, the qualifications already inserted into the platform are listed. Flags are used to identify the national origin of the qualification. By clicking “ADD QUALIFICATION” a new qualification can be inserted into the platform. Symbols offer the options to extract, edit, and delete single qualifications. A single qualification can be opened and detailed information on that qualification displayed by clicking on the qualification’s name.

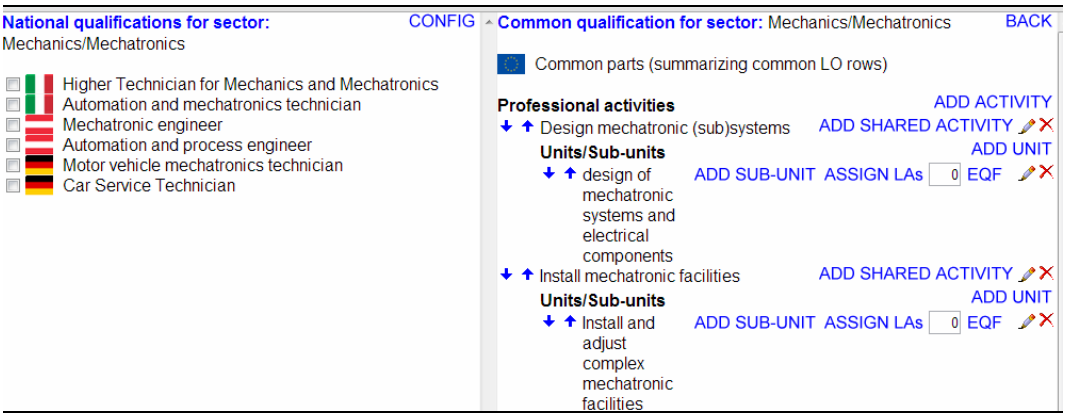
When opening a single qualification (an excellent example is the Austrian qualification “Mechatronic engineer” (P1, 3srl, Austria) three different levels can be identified: The level of “tasks/activities” (e.g. “Maintaining and assuring the reliability of mechatronic systems”); the level of “Units/Subunits” (e.g. “Perform the basic scheduled maintenance on mechatronic machines and systems”); and the level of learning outcome rows representing competences, skills and knowledge. Initially, only the supreme level is displayed. Additional levels can be viewed by simply clicking on single tasks/activities. New entries on any level can be added by clicking “ADD ....”.



Clicking on “innovation needs” displays the specific information above the original profile. Currently innovation needs are available for those qualifications for which interviews were conducted (in the context of work package 4), and information obtained on the matter (see work package 4 report about deliverable 11 “Updated qualification responding to sectoral needs” for more detail).



The creation of common profiles – one of the main working steps within work package 4 – can be conducted by hand or via an automatic process on the platform. Both methods were used to create the common parts of the qualifications and to compare the results (see work package 4 report on deliverable 10 “Common part of the qualifications identified” for more detail). The presentation of the common profiles on the platform is divided into two parts. The left side shows the national qualifications used to extract the common parts. The right side shows the results of the extraction by following the same structure as national qualifications.



5. Discussion of results

The qualifications featured on the platform are expressed on different levels – on tasks/activities as well as on learning outcomes expressed in terms of competence, skills and knowledge. Innovation needs, which have been identified through expert interviews, are shown for a number of qualifications in a separate compilation. Beyond the single profiles, sectoral data are included by integrating sectoral descriptions.

Information on reactions to the integration of qualifications into the platform was collected through expert interviews. It was agreed that interviews would only be conducted in an exemplary fashion, so they were conducted for selected profiles for the ICT, Fashion/Textile and Mechanics/Mechatronics sectors. Experts were interviewed for their reaction to the qualifications provided and to innovation needs identified.

The reactions confirmed largely the provided profiles and occasionally added some innovation needs which were also integrated into the platform.

The main challenge of work package 4 was to conclude and finalise the collection of qualifications started in work package 2. Descriptions of qualifications in the required form (as outlined in annex D; professional activities divided into competences, skills, knowledge; furthermore information about ECVET and learning activities) were only available from some partner countries, and consequently it took some partners significantly longer to transfer or generate descriptions in the form needed. This challenge was overcome in work package 4 by providing further instructions and examples of such descriptions.

Whilst information about activities/tasks, units/subunits, competences, skills, knowledge is now available for different qualifications from different countries within the four sectors that were analysed, there is a lack of information about ECVET and learning activities. This information was not necessary for the creation of common profiles and the updating of innovation needs, but it will be very helpful (for transparency and comparability of profiles) to include this information in the platform, where necessary and applicable, in the second year of the project.

In order to be more precise in the use of terminology, the project partners agreed to speak of “common parts” of qualifications rather than of “common qualifications”. This adheres to the overall goal of the project which is not the creation of a common qualification, but discovering the “common parts“. The terminology was therefore also changed on the platform.

TAMTAM has a different target to the TIPTOE-project. In TIPTOE the goal was to develop an EU-wide qualification in the trade sector; TAMTAM on the other hand looks for the common parts of qualifications. Unlike TIPTOE, TAMTAM does not feature an a-priori-choice of common job occupations. Instead it focuses on comparable parts of single profiles – even if they have their origin in different qualifications.

Annexes

Annex WP4.R9.1: Template Annex D (WP2) – Descriptions of qualifications on EQF-level 5

Annex WP4.R9.2: Transfer of Innovation – Collection of qualifications

Annex WP4.R9.1: Annex D (work package 2): Descriptions of qualifications on EQF-level 5

ANNEX D	
Description of Qualification	
Name Qualification	
Professional activities/ tasks	[name [3-10]activities of the occupation, for which the qualification is meant] 1. 2. 3. etc.

Professional activity/tasks 1: [name]						NQF – EQF per unit [if applicable]	
(Sub)units	1a ...						
	1b ...						
	1c ...						
(1a) (Sub)unit		Competences (max 1)	Skills (max 3)	Knowledge (max 5)	ECVET or ECTS	Learning activities (incl. workload and duration) (more answers possible)	
		[has professional competences based on responsibility and autonomy] - ... [has personal and social competences] - ...	[is able to apply their knowledge to practical applications as...] - ... - ... - ...	[has knowledge and understanding of...] - ... - ... - ... - ... - ...	ECVET in % ECTS in points	o Courses o Internships o Theses o Practical experimentations o On-the-job-training o ... o ... o ...	o 5 weeks o 10 weeks o …