TRANSFER OF INNOVATION, MULTILATERAL PROJECTS, LEONARDO DA VINCI - LIFELONG LEARNING PROGRAMME (2007-2013)
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ECVET system for no borders in the Green Economy sector

supporting Employability, Adaptability and European Mobility in VET systems and Labour Market

DESK ANALYSIS - AT
R.3.3

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ECoVET
ECVET SYSTEM FOR NO BORDERS IN THE GREEN ECONOMY SECTOR, SUPPORTING EMPLOYABILITY, ADAPTABILITY AND EUROPEAN MOBILITY IN VET SYSTEMS AND LABOUR MARKET

Guidelines and Research Tool Kit – DESK ANALYSIS - Part I

REFERENCE FRAMEWORK

The ECoVET project proposes the application and development of the ECVET system in the green economy sector. Specifically, since this is a "Transfer of Innovation" (TOI) project, the goal of the project is to use the methodology and tools developed within the project NETWORK - previously funded by the European Commission under the Lifelong Learning Programme, Leonardo da Vinci sub-program, Call EACEA/14/08 "Projects to test and develop the credit system for vocational education and training (ECVET)" - in order to adapt and transfer them into a different sectoral contexts of experimentation and in order to support the transparency and sharing at European level of the peculiarities of a professional profile working in the field of the green economy: the TECHNICIAN FOR THE DESIGN AND DEVELOPMENT OF ENERGY-SAVING SYSTEMS

The project, therefore, intends:

- to compare the qualifications of the identified sector existing in the partner countries, focusing our attention on the equivalent Regional profile;
- to identify parts of the educational pathways and qualifications which are "ECVET-compatible" and therefore able to dialogue with each other;
- to identify processes and protocols of understanding suitable to facilitate the mutual recognition
- to propose to competent bodies (key actors of VET systems and related systems of transparency and certification of qualifications), and in particular in Tuscany with whom the national partnership have shared the ECoVET planning phase, any changes and / or implementations to be taken on the basis of European experiences .

This for the benefit of the commissioning transparency of competences and qualifications and above all of employability in a the European labour market, in the specific sector and in the contexts identified.

From this emerges the primary importance, especially in the phase of setting up and organising the work among the partners, of acquiring a common reference framework, through the collection, organisation and sharing of indispensable background information.

From this information must begin the construction and application of common instruments for the definition, actuation, validation and recognition of modular training paths, already existing in the partner countries, within the ECVET system (including among these also the processes of support, validation and recognition of Life Long Learning and Life Wide Learning training experiences) with the double purpose of facilitating mobility in the various training phases and situations and of allowing the "accumulation" of tendentially recognisable credits, to improve employability and mobility, in the entire Community.

On an operational level, the partners are called upon to describe and select professional profiles using indicators and charts pre-defined by the partnership in order to represent a context framework from which to begin, in the first place to make a comparison of the existing profiles and certification methods and later, to identify the characterising elements indispensable to homogenise the representations.

This first phase of the research will involve a double methodology:

1. **DESK RESEARCH**, which calls for the analysis of the national repertories of professional profiles (for example REGIONAL VET Systems, repertoires of learning units, any existing systems for the validation of Learning from Experience, etc.) in the green economy sector, specifically as much as possible related to the characteristics of the selected Regional profile, in each partner country, with particular attention to vocational education and training systems
2. **FIELD RESEARCH**: which calls for field observations, with at least 5 interviews for each partner nation with operators in the green economy sector and, specifically, in different types of related structures and productive units, and validated within the research desk. The field survey will be carried out through the use of search tools such as semi-structured interviews and check lists for the direct field observation, etc...

ECoVET DESK RISEARCH

The **field of application** of the desk research will concern **the green economy sector** in its different possible meanings, that will be shared by the project partners, and more specifically the professional profiles working as technicians for the design and elaboration of energy-saving systems within the different types of companies and enterprises of the sector.

The reference profiles involved in the research, would have to be identified:

- from the viewpoint of the ***professional characterisation***, in those who work in the area of the implementation of policies and regulations for the design and elaboration of energy-saving systems within the different types of companies and enterprises of the sector and for the different operational specifications related to them, or, more specifically, to the professional profiles that may correspond, for example, to the Regional profile TECHNICIANS FOR THE DESIGN AND ELABORATION OF ENERGY-SAVING SYSTEMS within the different types of companies and enterprises of the sector
- from the viewpoint of the **level OF competence**, in EQF level 5.

Knowledge	Skills	Competences
factual and theoretical knowledge in broad contexts within a field of work or study	a range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities

- from the viewpoint of the ***correspondence to levels of institutional training***, in the technical-vocational training paths following the completion of secondary education [for example: Istruzione e formazione tecnica superiore (IT); Višje strokovne šole (SI), etc..] or analogous situations.

Within the field of application described, the desk research will be articulated in :

A) AN ANALYSIS OF CONTRACT FORMS: collection and elaboration of documentation on **the regulatory and contract situation in vigour in the partnership countries**, through the comparative analysis of the collective labour contracts of the sector in the part describing the levels and the professional qualifications that are applicable to the functional area selected and to the professional profiles operating in the area being studied.

The purpose of the analysis is the gathering and ordering of elements to be used in constructing a common reference grid, in order to make it possible, on the one hand, to effectively compare the specific regulatory-contractual situations to which the professional profiles selected, and, on the other, to determine whether or not forms of integration between the labour market and the training

system are present. (The analysis should be between 3 and 7 pages in length, following the attached format).

Analysis grid of the **REGULATORY AND CONTRACT SITUATION**	
Professional profile 1	**Austria**
Environmental Technician	
Working Framework: Skilled worker without professional experience in industrial and business enterprises, at academic institutes or at authorities.	
Reference documentation: Angestellten Kollektivvertrag in der für den Fachverband Maschinen und Metallwaren Industrie geltenden Fassung, Stand 1.11.2013 Arbeitsmarktservice Österreich (2014): AMS Qualifikationsbarometer http://bis.ams.or.at/qualibarometer/beruf.php?id=969, vom 9.10.2014	
Brief description of the activities: • Activities which can be carried out autonomously according to general guidelines and instructions • Graduates of VET colleges, if this qualification is significant for considerable parts of the activity	
Analysis grid on the REGULATORY AND CONTRACTUAL SITUATION	
Professional profile 2	**Austria**
Environmental Technician	
Working Framework: Skilled worker with professional experience in industrial and business enterprises, at academic institutes or at authorities.	
Reference documentation: Angestellten Kollektivvertrag in der für den Fachverband Maschinen und Metallwaren Industrie geltenden Fassung, Stand 1.11.2013 Arbeitsmarktservice Österreich (2014): AMS Qualifikationsbarometer http://bis.ams.or.at/qualibarometer/beruf.php?id=969, vom 9.10.2014	

Brief description of the activities:
• Autonomously carrying out difficult activities for which it is typically required to have additional specialist qualifications or major specialist knowledge, at least a completed VET college (BHS) with relevant (corresponding) professional experience which is necessary for the carried out activity

Analysis grid on the REGULATORY AND CONTRACTUAL SITUATION	
Professional profile 3	**Austria**
Environmental Technician	
Working Framework: Junior project manager in industrial and business enterprises, at academic institutes or at authorities.	
Reference documentation: Angestellten Kollektivvertrag in der für den Fachverband Maschinen und Metallwaren Industrie geltenden Fassung, Stand 1.11.2013 Arbeitsmarktservice Österreich (2014): AMS Qualifikationsbarometer http://bis.ams.or.at/qualibarometer/beruf.php?id=969, vom 9.10.2014	
Brief description of the activities: • Autonomously carrying out difficult activities requiring both responsibility and particular specialist knowledge and practical experience • Autonomously carrying out activities with demanding content which require responsibility and for which relevant, practical and theoretical specialist knowledge going beyond the completed VET programme and practical experience from many years of professional practice are a requirement • Considerable involvement in the management of projects • Regular and continuing, autonomous management, instruction and supervision of employees	

B)–With respect to the professional profiles identified in the start-up phase of the project, and shared by the partners during the first transnational meeting in Siena, here it is requested to project partners to explain and detail in terms of knowledge, skills and competences the collection and

analysis of the professional profiles extracted from the **national repertories** afferent to the activity area identified by the project (professional profiles working as technicians for the design and development of energy-saving systems within the different types of companies and enterprises), in order to create an initial comparative mapping of the competence frameworks represented in function both of the production of the ***"Descriptive Charts of the Professional Profiles***" and of a subsequent process of "construction /extraction" of common training *Units*.

The analysis of the repertories will keep in mind the close relation these have with the description of the training paths leading to them and, therefore, it would be useful to set up – independently from any diverging evaluations of their more or less certifiable "scientific" congruity - using reference describers that cannot be other than those indicated in the EQF in terms of:

- knowledge - K (knowledge: the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practises that is related to a field of study or work. In the European Qualifications Framework, knowledge is described as theoretical and/or factual);
- Skills - S (skills: means the ability to apply knowledge and use know-how to complete tasks and solve problems. In the European Qualifications Framework, skills are described as cognitive (use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments));
- Competence – C (competence: the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and/or personal development. In the European Qualifications Framework, competence is described in terms of responsibility and autonomy).

To this end the partners are expected to:

1. construct a synthesis of the professional profile(s) represented for the individual areas of activity indicated in the project, through the use of "macro-describers" (not more than 10/12 per profile) corresponding roughly to the Learning Units/Modules/subject areas, etc… of the corresponding standard training paths.
2. make a "translation" of the ways of presenting these repertories through their articulation in terms of K/S/C. In this phase, a descriptive analytical quality is to be preferred to great "precision" in the distinction between K, S, and C.
3. present the eventually related documentation (repertories etc.) attaching this to the chart.

To this end we propose a chart and a general example, which could be helpful for a generic orientation.

PROFESSIONAL PROFILE ANALYSIS CHART FOR: Environmental Technician – SKILLED WORKER WITH AND WITHOUT PROFESSIONAL EXPERIENCE	
Partner country: Austria	**Repertory: national profile for Austria - AT**

Areas of activity (Macro- competences) that can be recognised

1. **Being able to create designs**
2. **Being able to make technical, mechanical calculations**
3. **Knowing and applying production technologies**
4. **Knowing and being able to use and operate machines and systems**
5. **Knowing and applying automation technology**
6. **Knowing and applying process and housing technology (house systems)**
7. **Knowing environmentally relevant emissions and immissions and being able to respond to these**

Area of activity (Macro- competence) 1 : Being able to create designs

KNOWLEDGE	SKILLS	COMPETENCE
• Drawings according to standards • Understanding economic effects of production data • Understanding the methods of the innovation process • Consideration of the aspects of environmental compatibility and sustainability • Assessment of a design in terms of the testability and its economic viability	• Solving design tasks with suitable imaging methods • Illustration of technical components and modules according to standards • Analysis and design of technical components with regard to their geometry • Creating modules in line with 3D CAD • Selecting machine elements, standard parts and materials • Sizing modules according to standards, including with relevant specialist calculation software • Assessment of designs in terms of their function and producibility • Designing modules in line with materials, function, production and assembly	• Compiling and documenting technical data on workflow with consideration of requirements of quality assurance

Area of activity (Macro- competence) 2 : Being able to make technical, mechanical calculations		
KNOWLEDGE	**SKILLS**	**COMPETENCE**

• Concept of force and moment and the effect of these variables on a component
• Knowledge of procedures for determining support reactions
• Basic laws of
  ○ kinematics and kinetics
  ○ hydrostatics and hydrodynamics
  ○ thermodynamics
  ○ heat transfer
  ○ deformations and stresses
• Calculation of the energy balance in pipelines and hydraulic turbomachinery
	• Carrying out the calculation of
	  ○ support reactions and cut sizes for statically determined and simply statically indeterminate stored components
	  ○ effect of forces and moments on the movement of bodies and the associated questions of energy conversion
	  ○ energy balance in pipelines and hydraulic turbomachinery
	  ○ state variables and process variables and also the efficiency of cycles
	  ○ different types of heat transfer
	• Analysis of
	  ○ effect of the size of the load and the position of the load application on support reactions and cut sizes
	  ○ effect of force systems on the movement of bodies
	  ○ effect of three-dimensional force systems on the stress and deformation of components
	  ○ state changes and depiction accordingly as part of a thermodynamic model
	• Sizing components in terms of dynamic stress limit and limit deformation
	• Creating systems of equations to solve dynamic processes
		• Optimisation of
		  ○ components starting from simplifying calculation models with regard to deformation and stress
		  ○ thermal processes with regard to their energy efficiency

Area of activity (Macro- competence) 3: . Knowing and applying production technologies		
KNOWLEDGE	**SKILLS**	**COMPETENCE**

• Production processes, production machines, tools, devices and auxiliary materials
• Composition of the materials and the resulting properties
• Materials testing procedures
• Established measuring and testing methods and the tools needed here
	• Production processes
	  ○ selecting
	  ○ assessing with regard to their economic viability
	• Using diagrams of heat treatment and selecting procedures
	• Analysing product requirements and selecting suitable materials for the particular application
		• Combining and optimising production processes for efficient production
		• Applying quality assurance measures

Area of activity (Macro- competence) 4: Knowing and being able to use and operate machines and systems		
KNOWLEDGE	**SKILLS**	**COMPETENCE**

• Composition and function of
  ○ conveying technology components;
  ○ systems for energy conversion and their effects on the environment
  ○ power and work machines
  ○ conveying technology systems
	• Assessment of
	  ○ machine components regarding building and safety regulations
	  ○ energy efficiency of machines and systems
	• Selection and setting-up of
	  ○ rotary pumps for systems
	  ○ conveyor belt, a lift and a cable winch
	• Interpretation of effects of technical procedures and processes on the environment
		• Creating solution concepts for
		  ○ plant constructions
		  ○ conveying technology
		• Optimising machines and systems with regard to their energy efficiency

Area of activity (Macro- competence) 5: . Knowing and applying automation technology		
KNOWLEDGE	**SKILLS**	**COMPETENCE**

• Knowing function/operating principles of
  ○ electrical, hydraulic and pneumatic components, drives and circuit diagrams
  ○ measuring devices and measuring arrangements
	• Being able to assess how components and drives work
	• Being able to determine, analyse and rectify sources of errors
	• Setting up and selecting drives and sensors
	• Assessing and interpreting measurement data.
		• Implementing safety requirements according to regulations

Area of activity (Macro- competence) 6: Knowing and applying process and housing technology (house systems)

KNOWLEDGE	SKILLS	COMPETENCE
• Essential systems of housing technology and heating systems and also relevant legal regulations • Setup, mode of operation and the process sequence of basic procedural operations for treatment of solids, particle separation from liquids and gases, thermal separation processes and combustion processes • Interaction of basic procedural operations and combinations of procedures	• Designing pipelines incl. installations and measurement technology • Detection of weak spots and dangers with existing system components • Defining requirements for heating systems and selecting components • Analysing and assessing heating systems • Carrying out rough planning of house and heating systems • Setting up centrifuge, a cyclone separator and an air separator and calculating the energy conversion of chemical reactions • Selecting and combining process components • Developing the rough concept of a process system	• Analysing, interpreting available operating data and deriving proposals for optimisation • Knowing advantages and disadvantages of individual process steps and making proposals for optimisation

Area of activity (Macro- competence) 7: Knowing environmentally relevant emissions and immissions and being able to respond to these

KNOWLEDGE	SKILLS	COMPETENCE

• Cycles of materials and the causes and effects of environmental pollution
• Procedures for treating wastewater, waste and waste air and waste management, wastewater technology and noise protection
• Chemical and microbiological principles of environmental technology procedures
• Handling of hazardous materials
	• Calculations of
	  ○ pollutant concentrations and sound emissions
	  ○ wastewater
	  ○ noisy workplaces
	  ○ environmental technology processes
	• Analysis and assessment of
	  ○ emissions according to extent and harmful effect
	  ○ material flows
	  ○ wastewater purification plants and biogas plants
	  ○ implementation of waste management and safety technology in a company
	• Elaboration of reduction measures
	• Creation of technical concepts for treating waste and wastewater
	• Carrying out plausibility checks on analysis results
	• Developing a waste management concept for a company
		• Optimisation of environmental technology systems

PROFESSIONAL PROFILE ANALYSIS CHART FOR: Environmental Technician – JUNIOR PROJECT MANAGER	
Partner country: Austria	**Repertory: national profile for Austria - AT**

Areas of activity (Macro- competences) that can be recognised

1. **Being able to create designs**
2. **Being able to manage projects**
3. **Being able to make technical, mechanical calculations**
4. **Knowing and applying production technologies**
5. **Knowing and being able to use and operate machines and systems**
6. **Knowing and applying automation technology**
7. **Knowing and applying process and housing technology (house systems)**
8. **Knowing environmentally relevant emissions and immissions and being able to respond to these**

Area of activity (Macro- competence) 1 : Being able to create designs

KNOWLEDGE	SKILLS	COMPTENCES
• Drawings according to standards • Understanding economic effects of production data • Understanding the methods of the innovation process • Consideration of the aspects of environmental compatibility and sustainability • Assessment of a design in terms of the testability and its economic viability	• Solving design tasks with suitable imaging methods • Illustration of technical components and modules according to standards • Analysis and design of technical components with regard to their geometry • Creating modules in line with 3D CAD • Selecting machine elements, standard parts and materials • Sizing modules according to standards, including with relevant specialist calculation software • Assessment of designs in terms of their function and producibility • Designing modules in line with materials, function, production and assembly	• Compiling and documenting technical data on workflow with consideration of requirements of quality assurance

Area of activity (Macro- competence) 2 : Being able to manage projects		
KNOWLEDGE	**SKILLS**	**COMPTENCES**
• Understanding different project organisations	• Compiling technical project and product documentation • Compiling a functional specifications document	• Planning and organising workflow • Organising projects in the planning, development and implementation stages and controlling and monitoring these with appropriate decisions • Responding to current requirements in the project and taking on managerial tasks • Analysis of the contribution of other project participants and the person's own contribution • Taking measures to enhance the performance of employees and the person's own performance in the project

Area of activity (Macro- competence) 3 : Being able to make technical, mechanical calculations		
KNOWLEDGE	**SKILLS**	**COMPETENCE**

• Concept of force and moment and the effect of these variables on a component
• Knowledge of procedures for determining support reactions
• Basic laws of
  ○ kinematics and kinetics
  ○ hydrostatics and hydrodynamics
  ○ thermodynamics
  ○ heat transfer
  ○ deformations and stresses
• Calculation of the energy balance in pipelines and hydraulic turbomachinery
	• Carrying out the calculation of
	  ○ support reactions and cut sizes for statically determined and simply statically indeterminate stored components
	  ○ effect of forces and moments on the movement of bodies and the associated questions of energy conversion
	  ○ energy balance in pipelines and hydraulic turbomachinery
	  ○ state variables and process variables and also the efficiency of cycles
	  ○ different types of heat
		• Optimisation of
		  ○ components starting from simplifying calculation models with regard to deformation and stress
		  ○ thermal processes with regard to their energy efficiency

	transfer
	• Analysis of
	  ○ effect of the size of the load and the position of the load application on support reactions and cut sizes
	  ○ effect of force systems on the movement of bodies
	  ○ effect of three-dimensional force systems on the stress and deformation of components
	  ○ state changes and depiction accordingly as part of a thermodynamic model
	• Sizing components in terms of dynamic stress limit and limit deformation
	• Creating systems of equations to solve dynamic processes	

Area of activity (Macro- competence) 4: . Knowing and applying production technologies

KNOWLEDGE	SKILLS	COMPETENCE

• Production processes, production machines, tools, devices and auxiliary materials
• Composition of the materials and the resulting properties
• Materials testing procedures
• Established measuring and testing methods and the tools needed here
	• Production processes
	  ○ selecting
	  ○ assessing with regard to their economic viability
	• Using diagrams of heat treatment and selecting procedures
	• Analysing product requirements and selecting suitable materials for the particular application
		• Combining and optimising production processes for efficient production
		• Applying quality assurance measures

Area of activity (Macro- competence) 5: Knowing and being able to use and operate machines and systems		
KNOWLEDGE	**SKILLS**	**COMPETENCE**
• Composition and function of ○ conveying technology components; ○ systems for energy conversion and their effects on the environment ○ power and work machines ○ conveying technology systems	• Assessment of ○ machine components regarding building and safety regulations ○ energy efficiency of machines and systems • Selection and setting-up of ○ rotary pumps for systems ○ conveyor belt, a lift and a cable winch • Interpretation of effects of technical procedures and processes on the environment	• Creating solution concepts for ○ plant constructions ○ conveying technology • Optimising machines and systems with regard to their energy efficiency

Area of activity (Macro- competence) 6: . Knowing and applying automation technology		
KNOWLEDGE	**SKILLS**	**COMPETENCE**
• Knowing function/operating principles of ○ electrical, hydraulic and pneumatic components, drives and circuit diagrams ○ measuring devices and measuring arrangements	• Being able to assess how components and drives work • Being able to determine, analyse and rectify sources of errors • Setting up and selecting drives and sensors • Assessing and interpreting measurement data.	• Implementing safety requirements according to regulations

Area of activity (Macro- competence) 7 : Knowing and applying process and housing technology (house systems)		
KNOWLEDGE	**SKILLS**	**COMPETENCE**
• Essential systems of housing technology and heating systems and also relevant legal regulations • Setup, mode of operation and the process sequence of basic procedural operations for treatment of solids, particle separation from liquids and gases, thermal separation processes and combustion processes • Interaction of basic procedural operations and combinations of procedures	• Designing pipelines incl. installations and measurement technology • Detection of weak spots and dangers with existing system components • Defining requirements for heating systems and selecting components • Analysing and assessing heating systems • Carrying out rough planning of house and heating systems • Setting up centrifuge, a cyclone separator and an air separator and calculating the energy conversion of chemical reactions • Selecting and combining process components • Developing the rough concept of a process system	• Analysing, interpreting available operating data and deriving proposals for optimisation • Knowing advantages and disadvantages of individual process steps and making proposals for optimisation

Area of activity (Macro- competence) 8: Knowing environmentally relevant emissions and immissions and being able to respond to these		
KNOWLEDGE	**SKILLS**	**COMPETENCE**

• Cycles of materials and the causes and effects of environmental pollution
• Procedures for treating wastewater, waste and waste air and waste management, wastewater technology and noise protection
• Chemical and microbiological principles of environmental technology procedures
• Handling of hazardous materials
	• Calculations of
	  ○ pollutant concentrations and sound emissions
	  ○ wastewater
	  ○ noisy workplaces
	  ○ environmental technology processes
	• Analysis and assessment of
	  ○ emissions according to extent and harmful effect
	  ○ material flows
	  ○ wastewater purification plants and biogas plants
	  ○ implementation of waste management and safety technology in a company
	• Elaboration of reduction measures
	• Creation of technical concepts for treating waste and wastewater
	• Carrying out plausibility checks on
		• Optimisation of environmental technology systems

	analysis results • Developing a waste management concept for a company	

C) Description and analysis of the **certification systems** existing in the partner countries.
This analysis will have a prevalently qualitative form, through

1) a description of the architecture and functioning of the evaluation and certification procedures connected with the various training paths regarding the profiles of the energy saving area and corresponding to level 5 of the EQF with reference to the VET training systems described in the chart at point B,
2) a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) of these procedures connected with the possible presence and influence of forms of certification of the sector based on competence evaluation.

The analysis must be between 3 and 7 pages in length, following the format below.

❶ CERTIFICATION SYSTEM ANALYSIS CHART	Austria
Indicate the various typologies (connected with the certification of the profiles related to the reception area in energy saving and corresponding to level 5 [1]of the EQF**):** **FILL OUT A CHART FOR EACH TYPE OF SYSTEM REFERRING TO THE TRAINING SYSTEMS DESCRIBED IN THE CHART AT POINT 2** **a).** VET college (BHS)	

❷For each of the typologies indicated :
a) VET college
What is certified: In every subject (or macro-competence under B) there are tests where knowledge, skills and competences are examined. At the end of the year these are assessed with the school grades “Excellent” (1) to “Fail” (5). With grades 1-4 pupils can go up to the next higher class (competence level) in any case. At the end of the entire education/training, pupils sit the matriculation and diploma examination (Reife- und Diplomprüfung). With this, graduates are awarded general access to the higher education sector, acquire the qualification for senior occupations and obtain access to regulated professions. BHS also provides the basis for later self-employment. The high level of education and training at BHSs is also reflected in their recognition at the European level. The inclusion of BHS in Annex II of Directive 2005/36/EC on the recognition of professional qualifications confirms that graduates of BHS programmes acquire professional qualifications for which they need to complete programmes at the post-secondary level in the majority of the other member states. A reduction of the study duration at a university of applied sciences (Fachhochschule) can be achieved based on the competences acquired by BHS graduates who want to continue their studies.
What entities issue the certification? Both the end-of-year report and the matriculation certificate and VET diploma (Reife- und Diplomprüfungszeugnis) are issued by the respective school but are valid nationwide.
What instruments are used for certification? • End-of-year reports • Matriculation certificate and VET diploma
By what system or subsystem is the qualification recognised? National training system

[1] So far there is no fixed allocation for VET training paths to the EQF in Austria, excepting the tertiary pathways Bachelor, Master and PhD. The common politicial sense tends for VET colleges to the EQF-level 5.

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