

Guide “Startups and validation – benefits and importance”



Substance of circular Economy concept as Efficacious
Determinant for the development of Successful entrepreneurship

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Introduction

Validation refers to the process of assessing by professionals the competences, skills, or knowledge of a person in a given area. Formal qualifications are the formal outcomes (certificate, diploma or title) of an assessment process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards and/or possesses the necessary competence to do a job in a specific area of work. However, formal education and training can only partly cope with the skills required in a labour market that is continuously changing. In addition, people also learn through work experience, social experiences or self-learning (for example on-line courses, readings, etc), but usually, individuals cannot use these new skills to access further education or to progress in their careers. Validation is therefore a crucial building block of a real lifelong learning society.

Non-formal education refers to the education in which learners receive a well-structured and well-planned educational program although it takes place outside of a formal learning classroom setting (outside of formal educational institutes). Thus, non-formal education provides learners with the opportunity to develop different skills and abilities. It does not only enhance social inclusion, active citizenship and individual development, but also increases competitiveness and employability.

Recognition and validation of competences acquired through the participation in non-formal training courses, may have many benefits for entrepreneurs such as:

- Highlight their competences in front of clients
- Improve their business competitiveness
- Improve their self-confidence, empowerment
- Possibilities to get better finance, be able to convince authorities (i.e., banks or funding institutions) about their knowledge
- Stimulus to engage in further learning, to know what do they know and what do they need to improve for their business to succeed
- Improve their self-confidence and recognition

Unfortunately, the available reports state that the general awareness regarding the benefits of validation among start uppers and young entrepreneurs is quite low (see European inventory on validation of non-formal and informal learning, 2018).

In the First Part of this guide, we present an overview of the current *Qualification System Framework - Vocational Education and Training (VET)* system in Poland, Italy, Spain Romania and the Netherlands, including the validation of non-formal learning. From the overview, we can conclude that the awareness of validation has increased in all sectors of society and stakeholders have become more sensitive to validation as a way of recognising learning outcomes acquired in non-formal and informal contexts, as well as through work experience.

In the Second Part of this guide, we introduce different *Good practice examples of the validation of entrepreneurial competencies* from the countries involved in the SEEDS project.

Finally, we propose to the SEEDS users to participate in the validation of “A sense of initiative and responsible entrepreneurship”, an Open Education Resource (OER) designed for the



recognition and validation of competences acquired through the participation in non-formal training courses on Circular Economy related aspects and their implementation in day-to-day activities of start uppers.



First part - National Framework - Vocational Education and Training (VET) system

Poland

Introduction

In Poland the introduction of frameworks has led to the identification of areas where learning outcomes had not been previously applied or had not been used to their full potential. Moreover, Poland has opened up to qualifications awarded outside formal education and training, i.e. non-formal and informal learning, thus for the benefit of learners. Another important matter is the compliance of the National Qualification System in Poland with the European Qualification System, making it easier to transfer credits and validate qualifications obtained in other European countries.

Polish Qualification Framework

Poland started developing a comprehensive PQF (Polish Qualifications Framework) in year 2006. The PQF was formally adopted through the Act of 22 December 2015 on the integrated qualifications system, which entered into force in January 2016.

The PQF consists of eight learning-outcome-based levels, covering all types of qualifications, from general education, VET and higher education. This means it is organised in the same way as the EQF (European Qualification Framework) with eight levels, and Poland has formally linked its PQF to the EQF in year 2013.

Graphic presentation of the PQF corresponding to the EQF:

| PQF levels | Qualifications from the formal system | Regulated and non-statutory qualifications | EQF levels |
|------------|--|---|------------|
| 8 | Third cycle of higher education (PhD) | | 8 |
| 7 | Second cycle of higher education Integrated first and second cycle Partial qualification for post-diploma studies | | 7 |
| 6 | First cycle of higher education Partial qualification for post-diploma studies | | 6 |
| 5 | Vocational qualifications Partial occupational qualifications | | 5 |
| 4 | Upper secondary school leaving certificate (<i>Matura</i>) Vocational qualifications Partial occupational qualifications | | 4 |
| 3 | Vocational qualifications Partial occupational qualifications | Assembly of construction woodwork (<i>Montowanie stolarki budowlanej</i>) | 3 |
| 2 | Lower secondary school leaving certificate Vocational qualifications Partial occupational qualifications | | 2 |
| 1 | Primary school leaving certificate | | 1 |

Source: Cedefop (2018). National qualifications framework developments in Europe 2017.

However, what differs is that the PQF additionally includes three degrees of learning outcome descriptors:

- universal descriptors, applying to all types of education;



- specific descriptors, applying for VET and/or higher education;
- subject area/discipline descriptors.

The PQF recognizes full qualifications (completed level of education) and partial qualifications (confirmed by certificates). In year 2012, changes were introduced, implying that the journeyman's and master's examinations are to be conducted by the examination boards of craft chambers. In November 2017, the first non-statutory qualification was added to the integrated qualifications register: Assembly of construction woodwork at EQF level 3 for VET formal qualification.

Additionally, the vocational education core curriculum, required as of the 2012–2013 school year, introduced a new way of describing and acquiring qualifications, i.e. learning outcomes were introduced. The core curriculum distinguishes coherent sets of learning outcomes that can be validated within the framework of out-of-school learning, as well as accumulated and recognised to attain successive qualifications. The concept of having learning outcomes distinguished in a qualification is consistent with the ECVET system developed in Europe (European Credit System for Vocational Education and Training).

In Poland, accumulating and transferring credits within the higher education system functions in the form of ECTS (European Credit Transfer and Accumulation System). The ECTS has been fully adopted by Polish higher education institutions – its implementation was required by legislation (Act of 27 July 2005 on the Law on higher education (Journal of Laws 2012, item 572 with later amendments)).

Graphic presentation of higher education system qualifications:

| Type of studies | Name of qualification | ECTS credits | Planned qualification level in the PQF |
|---|---|--|--|
| First cycle studies (Bologna first cycle) | Diploma certifying the professional title of <i>licencjat</i> / <i>inżynier</i> or an equivalent title | At least 180 | 6 |
| Second cycle studies (Bologna second cycle) or Long cycle studies | Diploma certifying the professional title of <i>Magister</i> / <i>magister inżynier</i> or an equivalent title (for example, physician) | Second cycle studies – at least 90 Long cycle master's degree studies: at least 300 (five-year studies), 360 (six-year studies) | 7 |
| Third cycle studies (Bologna third cycle) | Diploma certifying the academic degree of <i>doktor</i> in a specific discipline | 45–60 | 8 |

Additionally:

| | | | |
|---------------------------------|---|--|----------------------------|
| Postgraduate non-degree studies | Certificates of completion of postgraduate non-degree studies | At least 60; (the duration of the studies should not be less than two semesters) | Depending on the programme |
|---------------------------------|---|--|----------------------------|



Source: Educational Research Institute (2014). Referencing the Polish qualifications framework for lifelong learning to the European Qualification Framework.

Links between the Polish Qualification Framework and the European Framework

The Polish model of credit accumulation and transfer is to be compatible with European procedures (ECTS – European Credit Transfer and Accumulation System – used today in higher education, ECVET – European Credit System for Vocational Education and Training). A system based on ECTS credits operates in the Polish higher education system under the Polish National Agency of Erasmus+ Programme.

It is important that the PQF is aligned ECVET and EQF since it enables the accreditation of acquired learning outcomes regardless of the EU country they have been obtained in, the learner benefiting from their qualification to better fit for the labour market requirements. It can therefore be concluded that the preservation and improvement of this road will be conducive to increasing the employability of Polish citizens, including within the European Union.

Validating non-formal and informal learning and links to the NQF

The PQF includes the validation of learning outcomes at all levels: formal education, non-formal and informal learning. Most recently, under the law of 22 December 2015, Articles 9.1, 15.1 and 38.1., the non-formal sector was included in the PQF.

Regardless the level or type of learning to be validated, in Poland the Ministry of Education is responsible for the accreditation of institutions for the validation of qualifications. They can be represented by the National Chamber of Commerce, their advisory body, but also the Educational Research Institute, working closely on the topics of national frameworks.

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Italy

Introduction

The Italian situation is characterized by some specifics that need to be considered:

- school teaching staff is older than the European average
- statistics show that the number of low achievers in reading, maths and science is higher than the EU averages (Programme for International Student Assessment -PISA- 2018)
- there are still disparities in terms of early school leaving and attainment both geographically (between north and south) and socio-culturally (native and foreign students, etc.)

In Italy, the percentage of students in vocational education and training (VET) is higher than the EU average (in 2017 it stands at 55.3% compared to 47.8% of the European average), but the possibility of access to the labour market remains lower (53.9% in 2018, compared to 79.5% -European Commission statistics related to the year 2019).

In 2015, a reform plan "La buona scuola" was introduced, making workplace training compulsory for all students in the last three years of upper secondary education, in general education schools and technical and vocational colleges (Cedefop, 2020).

The employment rate even after graduation is low and an increasing number of graduates seek work abroad

Adult participation in lifelong learning was 8.1 % in 2019 and only 2 % among the low-skilled (European Commission data, year 2019).

National Qualifications Framework in Italy

The Italian education and training system is fragmented.

Different levels of lifelong learning had to be integrated into a coherent national qualifications system with a system allowing for effective inter-regional coordination including recognition of regional qualifications systems and inter-regional mobility.

The design and allocation of qualifications are regulated by legislative acts in charge of different regional and national authorities. To address this complexity, Italy adopted a comprehensive National Qualifications Framework (NQF) based on learning outcomes in 2018.

In 2010, a qualification framework for higher education (Italian Qualifications Framework for Higher Education, QTI) was prepared by the Ministry of Education, Universities and Research. In 2012, it was linked to the Qualifications Framework for the European Higher Education Area (QF-EHEA).

Between 2009 and 2012, Italy first referenced its formal national qualifications and those awarded by regions under the State-Regions agreement directly to the eight levels of the European Qualifications Framework (EQF). The first Italian referencing report was presented to the EQF Advisory Group in May 2013 (Italian Technical Working Group, 2012). A national strategy on lifelong learning has been defined (Law No. 92/2012 on labour market reform and Legislative Decree No. 13/2013) and a national system of skills certification and a national repository of education, training and vocational qualifications issued at national and regional levels and described in terms of learning outcomes has been established.



In 2015, stakeholders agreed on an operational common framework for the national recognition of regional qualifications and related competences - the National Regional Qualifications Framework - followed by an inter-ministerial decree.

The full NQF is structured on eight levels described in learning outcomes in the three domains of the EQF (knowledge, skills and responsibility and autonomy). The framework covers school education qualifications (general, technical and vocational), higher education and regionally administered VET qualifications.

Vocational and international qualifications will be included in the future. The NQF is in the process of being implemented.

Referencing of Italian formal qualification to the EQF

| EQF levels | Italian formal qualifications |
|------------|--|
| 8 | Research doctorate <i>(Dottorato di ricerca)</i> Academic diploma for research training <i>(Diploma accademico di formazione alla ricerca)</i> Specialisation diploma <i>(Diploma di specializzazione)</i> Second level university master <i>(Master universitario di secondo livello)</i> Academic specialisation diploma (II) <i>(Diploma accademico di specializzazione (II))</i> Higher specialisation diploma or master (II) <i>(Diploma di perfezionamento o Master (II))</i> |
| 7 | Master degree <i>(Laurea magistrale)</i> Second level academic diploma <i>(Diploma accademico di secondo livello)</i> First level university master <i>(Master universitario di primo livello)</i> Academic specialisation diploma (I) <i>(Diploma accademico di specializzazione)</i> Higher specialisation diploma or master (I) <i>(Diploma di perfezionamento o Master (I))</i> |
| 6 | Bachelor degree <i>(Laurea)</i> First level academic diploma <i>(Diploma accademico di primo livello)</i> |
| 5 | Higher technical education diploma <i>(Diploma di tecnico superiore)</i> |
| 4 | Professional technician diploma <i>(Diploma professionale di tecnico (**))</i> Upper secondary education diploma <i>(Licei diploma liceale)</i> Upper secondary education diploma – technical schools <i>(Diploma di istruzione tecnica)</i> Upper secondary education diploma – vocational schools <i>(Diploma di istruzione professionale)</i> Higher technical specialisation certificate <i>(Certificato di specializzazione tecnica superiore)</i> |
| 3 | Professional operator certificate <i>(Attestato di qualifica di operatore professionale (**))</i> |
| 2 | Compulsory education certificate <i>(Certificato delle competenze di base acquisite in esito all'assolvimento dell'obbligo di istruzione (**))</i> |
| 1 | Lower secondary school-leaving diploma <i>(Diploma di licenza conclusiva del primo ciclo di istruzione)</i> |

(*) Competent authority: regions.

(**) Competent authority: Ministry of Education, University and Research (Ministero dell'Istruzione, dell'Università e della Ricerca) or regions, according to type of education pathway.

Source: Adapted from Italian Ministry of Labour; ISFOL (2012).

Source: Cedefop (2018). National qualifications framework developments in Europe 2017

National Qualification Framework and European Qualification Framework (NQF vs EQF)



In order to put order in the complexity of the competence assessment systems, "L'Atlante del Lavoro e delle Qualificazioni" has been built, providing a detailed map of work and qualifications. The result is the result of a long collaboration between different institutional actors, including employers and trade unions, bilateral representatives, professional associations, experts of sectors and stakeholders of the work-learning system.

The "Atlas of Work and Qualifications" is organised in three sections:

- Atlante Lavoro,
- Atlante e Qualificazioni
- Atlante e Professioni.

It is a map describing the world of work and qualifications. Job contents are represented and made navigable through a classification scheme formed by 24 economic and professional sectors.

Describing the job contents in a process perspective, pushing the analysis to the minimum detail of the activities, allowed the positioning of the single qualifications, contained in the regional repertoires, in the ADA (activity fields), creating the premises for a comparison.

Its main aim is to ensure national recognition of regional qualifications, but it allows

- the recognition of training credits
- the validation of competences acquired in the experience.
- the certification of competences acquired in different contexts.

In terms of consultation, the Atlas constitutes an essential reference for training design, labour market access routes and professional development and retraining or vocational retraining.

The Atlas is provided for by Legislative Decree no. 13/13 and represents the National Directory of Education and Training Titles and Vocational Qualifications and is the reference for the certification of competences.

Only competences referring to qualifications included in the National Directory, which should collect qualifications issued by schools, universities, vocational education and training, regional vocational training and regulated professions, can be certified.

Qualifications are organised in three sections:

- Second cycle of education: General Education and Training and Vocational Education and Training (IeFP)
- Higher education: University, Higher Education in Art, Music and Dance (AFAM), Higher Technical Education (IFTS)
- Regional vocational training and IFTS: regional training, National Framework of Regional Qualifications (QNQR), Higher Technical Education and Training (IFTS)

Each qualification included in the Directory refers to an Activity Area (Area di attività -ADA), a process and a sector of the Atlante del Lavoro.



The table of equivalences or correlations is the basis for the national recognition of regional qualifications, for their certification (also in the form of single competences) and for the recognition of credits.

Validation of non-formal and/or informal learning in relation with the NQF

The NQF includes the validation of learning outcomes at all levels: formal education, non-formal and informal learning. Law 92/2012 on labour market reform, in unambiguously defining the concept of lifelong learning, provided for the establishment of a national public system for the certification of competences, in order to provide for homogeneous minimum service standards throughout the territory.

The 'certifiable competence' is a structured set of knowledge and skills that can also be recognised as training credits through a specific validation procedure in the case of non-formal and informal learning. The certification of competences is a public act aimed at guaranteeing the transparency and recognition of learning, in line with the guidelines set by the European Union. Certification leads to the issue of a certificate, diploma or title formally documenting the assessment and validation carried out by a public body or an accredited or authorised entity.

Legislative Decree no. 13/2013, issued in implementation of Law no. 92/2012, defines the general rules for the certification of competences and activates the 'National System for the Certification of Competences', including professional competences acquired not only at work but also in leisure time, in order to encourage geographical and professional mobility, to facilitate the matching of supply and demand in the labour market, to increase the transparency of learning and the expendability of certifications at national and European level.

The inter-ministerial decree (Ministry of Labour and Ministry of Education) of 8 January 2018 established the National Qualifications Framework (NQF) as a tool for describing and classifying the qualifications issued within the National Skills Certification System, which represents the national device for referencing Italian qualifications to the European Qualification Framework, with the function of linking the Italian qualifications system with the systems of other European countries.

An innovative aspect of the new adult education system is the possibility to enhance the individual cultural and professional heritage. The introduction of the Individual Formative Pact allows, in fact, the recognition of formal, informal and non-formal knowledge and competences possessed by the adult.

The Italian Cooperation 4 Transparency of Skills & Mobility project on non-formal and informal learning has been launched to support the development of general norms and standards for the definition and validation of non-formal and informal learning, as well as to facilitate the certification of skills, in order to enhance the learning of individuals, regardless of the environment in which the learning took place.

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Spain

Introduction

Spain has been developing the Spanish qualifications framework for lifelong learning (Marco Español de Cualificaciones, MECU), however MECU is not yet operational. A royal decree setting the legal basis for implementation is pending and is expected to be adopted in 2021. One of the main objectives of MECU is to make Spanish qualifications easier to understand by describing them in terms of learning outcomes, clarifying relationships between them, and indicating the qualification level on certificates and diplomas facilitating comparability within Spain and Europe. So, in Spain, VET graduate tracking is under development, with the creation of an integrated information and monitoring system, coordinated by the State Public Employment Service (SEPE).

Currently, within the scope of vocational training can be distinguished between the **initial** (IVET Programmes) and **training for employment**. From January 2020, the **Ministry of Education and Vocational Training** has been **responsible for all VET regulation, including initial and continuous VET**. Not all FPE (Formación Profesional para el Empleo = Vocational Training for Employment) focuses on certificates of professionalism, since the FPE addressed to employed persons does not have as much connection with those certificates. This means that while on one hand most training programmes included in the different initiatives for unemployed workers are directly linked to obtaining a full or partial professional certificate (certificado de profesionalidad - CdP), the training organised for example by companies for their employees does not lead to a formal qualification.

National Qualifications Framework in Spain

Spain has been developing the Spanish qualifications framework for lifelong learning (Marco Español de Cualificaciones, MECU), however MECU is not yet operational. A royal decree setting the legal basis for implementation is pending and is expected to be adopted in 2021. A qualifications framework for higher education (Marco Español de Cualificaciones para la Educación Superior, MECES) has been put in place separately and self-certified against the QF-EHEA in 2014 as part of Spain's continuing commitment to the Bologna process (Ministry of Education, Culture and Sport, 2014). The levels within MECES are labelled 1 to 4 and correspond to cycles of the FQ-EHEA, técnico superior (advanced VET), grado (bachelor), master (master) and doctorado (doctorate) (Table 1). Of these, the first is a non-university higher education level included to support and promote lifelong learning. Some advanced vocational education and training (VET) is considered higher education (HE) but is undertaken outside the university system.

In turn, the National Catalogue of Occupational Standards (CNCP - Catálogo Nacional de Cualificaciones Profesionales) is the instrument of the National System of Qualifications and Vocational Training (SNCFP) that orders the professional qualifications susceptible of recognition and accreditation, identified in the productive system, in function of the appropriate competences for the professional exercise.

VET qualifications issued by education authorities (VET diplomas) are composed of a set of occupational standards whereas in the case of qualifications from employment authorities (professional certificates) the relation is a single occupational standard for each certificate. The Government establishes the equivalences and recognition between **VET diplomas** (issued by education authorities) and **professional certificates**- CdP (issued by employment authorities) through competence units.

- VET diplomas. Education authorities design vocational qualifications (VET Diplomas of basic, intermediate and higher levels) based on the occupational standards included in the CNCP.



These VET Diplomas have an academic and professional value and attest both an educational level and the professional qualification obtained.

- Professional Certificates (CdPs). The state public employment service (SEPE), with the cooperation of the national reference centres, develops and updates professional certificates (Certificados de Profesionalidad – CdPs) programmes, based on occupational standards, produces the teaching and assessment guides, and pilots them. CdP programmes are organised in three levels, level 1 being the most basic and level 3 the most complex.

The National Catalogue of Occupational Standards (Catálogo Nacional de Certificados Profesionales, CNCP) is applicable to the entire national territory and allows adapting the different training offers to the needs of the labour market making their accreditations to the business fabric transparent.

The CNCP (Catálogo Nacional de Certificado Profesional, CNCP) thus includes the most significant professional qualifications of the Spanish productive system. It includes the content of the professional training associated with each qualification, with a structure of training modules articulated in a Modular Catalogue of Vocational Training (CMFP). The CNCP lists 680 occupational standards defined in competences and is continually updated. Professional modules for each qualification gather the learning outcomes and the corresponding assessment criteria that show that the qualification holder knows, understands and is able to do as expected on completion of the programme.

The National Institute of Qualifications (INCUAL) is responsible for defining, preparing and keeping updated the CNCP and the corresponding CMFP.

National Qualification Framework and European Qualification Framework (NQF vs EQF)

Spain has been developing the Spanish qualifications framework for lifelong learning (Marco Español de Cualificaciones, MECU) however as stated in the previous sections MECU is not yet operational. The draft comprehensive framework is based on learning outcomes and has eight levels, with descriptors defined in terms of knowledge, skills and competence. They have been inspired by EQF level descriptors but adopted to suit the national context. Once the legal basis is in place, the framework is expected to include qualifications awarded at all levels in the formal education system and will also integrate qualifications obtained through validation of non-formal and informal learning. MECU is planned to be referenced to the EQF in 2021.

The level of implementation of learning outcomes varies across subsystems. The Ministry of Education and VET has established in legislation national core curricula for the various levels of education: pre-primary, primary, lower secondary, upper secondary and vocational training. The most developed and elaborated implementation of learning outcomes is in VET.

The correlation of the Spanish model with the EQF is made from the Spanish Qualifications Framework (MECU) or National Qualification Framework (NQF), which covers all levels, from level 1 of basic education to 8 of university doctorate.



National Qualification Framework (NQF)

| NQF LEVEL | QUALIFICATION TYPES | EQF LEVEL |
|---|---|--------------|
| Draft MECU levels 8 MECES levels 4 | Doctoral degree (Doctorado) Spanish qualifications framework for higher education (MECES) and draft Spanish qualifications framework for lifelong learning (MECU) levels | No EQF level |
| Draft MECU levels 7 MECES levels 3 | Master degree (Master) Spanish qualifications framework for higher education (MECES) and draft Spanish qualifications framework for lifelong learning (MECU) levels | No EQF level |
| Draft MECU levels 6 MECES levels 2 | Bachelor degree (Grado) Spanish qualifications framework for higher education (MECES) and draft Spanish qualifications framework for lifelong learning (MECU) levels | No EQF level |
| Draft MECU levels 5 MECES levels 1 | Advanced technician (Técnico superior) Spanish qualifications framework for higher education (MECES) and draft Spanish qualifications framework for lifelong learning (MECU) levels | No EQF level |
| Draft MECU levels 4 | (not available) | No EQF level |
| Draft MECU levels 3 | (not available) | No EQF level |
| Draft MECU levels 2 | (not available) | No EQF level |
| Draft MECU levels 1 | (not available) | No EQF level |

The MECU is therefore the product of the sum of the National Catalogue of Professional Qualifications (CNCP) and the Spanish Framework of Qualifications for Higher Education (MECES).

For the effective correlation between the national framework and the European qualifications framework, references must be established in the different domains of responsibility, coordination, legal, administrative, methodological and quality assurance.

Validation of non-formal and/or informal learning in relation with the NQF

Spain does not have a comprehensive national strategy for validation; different laws frame validation, targeting different education sectors. The validation of skills acquired through non-formal, informal, or work experience is one of the 11 strategic lines included in the 2020 plan for the modernisation of vocational training (Cedefop and ReferNet, 2021). In February 2020, the one-off report for validation of non-formal and informal learning of Spain was also presented to the EQF advisory group (Ministry of Education and VET, 2020). Awareness of validation has increased in all sectors of society in Spain and stakeholders have become more sensitive to validation as a way of recognising learning outcomes



acquired in nonformal and informal contexts, and through work experience. Once the Spanish national qualifications framework for lifelong learning (MECU) is in place, the competences acquired through non-formal and informal learning can be used to acquire a qualification or gain access to programmes and qualifications which will be linked to the framework.

The new organic law on Education, in effect since 2021, and the Organic Law of Universities incorporate actions to validate non-formal and informal learning, such as access exams to VET and university studies aimed at those who do not have the required qualifications. Royal Decree 1224/2009 ([36]) which is currently being revised established the procedure for the validation and recognition of professional competences acquired by work experience and non-formal training; this is common to gaining qualifications previously from the employment administration (certificados de profesionalidad) and now from the education administration through specific calls for validation. The Reconoce project, approved in 2017 by the Spanish Youth Institute (INJUVE) and the youth departments of the autonomous communities, created a new recognition system for non-formal education, covering the youth sector in the country. Progress has been achieved in higher education; universities have developed procedures to validate and recognise working experience to access study programmes (for people over 40 years of age) or gain credits toward a degree.

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Romania

Introduction

The Romanian Qualifications Framework (ROQF) is a categorization system for all types of qualifications available in Romania, covering all types of education, from basic (certificate of completion of compulsory education) to the most advanced ones (level 8, Ph.D. diploma). ROQF includes qualifications acquired in both formal, non-formal and informal learning systems and allows these to be compared, either if they are provided by state or private institutions. Employers, employees, students, and training institutions in Romania are supported and informed about qualification categorization through the National Qualifications Authority which acts as the National Coordination Point (*RO: Punct național de coordonare*) for the Romanian Qualifications Framework (NCP-ROQF).

National Qualifications Framework in Romania

The ROQF is a general classification system for qualifications regulated by the Romanian government. It comprises 8 qualification levels that can be acquired in education and training, in initial and continuing vocational education and training, apprenticeship, general education and higher education, and by validation of learning outcomes from non-formal and informal learning contexts. The ROQF was referenced to the European Qualification Framework (EQF) in April 2018.

Currently, in Romania, the non-formal system operates parallel to the formal one and the link between them is still under development. Obtaining formal qualifications (full or partial) through validation of non-formal and informal learning is not possible at the moment. Validation is linked with occupational standards that relate only to CVET qualifications in the ROQF. These are different from the training standards used for certification in formal education and training.

The validation process is coordinated and monitored by the National Authority for Qualifications, through the National Centre for Accreditation. Persons that acquired vocational skills in non-formal and informal learning and want these to be evaluated, must make requests to the relevant professional competence assessment centres. These centres are local private or public bodies authorised to conduct validation procedures and to validate prior learning of candidates, for one or more occupations, developed at national level.

ROQF allows to improve coherence and progression in the education system and the use of validation of non-formal learning. Also, it contributes to the development of a qualifications culture, built on the principles of quality, transparency, transferability and progression.



National Qualification Framework and European Qualification Framework (ROQF vs EQF)

The Romanian Qualifications Framework (ROQF) levels are referenced to the European Qualification Framework (EQF) levels since 2018, aiming to increase transparency, comparability and portability of qualifications.

ROQF closely follows the eight-level structure of the EQF and covers the full spectrum of nationally recognised qualifications irrespective of the learning context, including those acquired through validation of non-formal learning.

Graphic presentation of the PQF corresponding to the EQF:

| ROQF levels | Qualification types | EQF levels |
|-------------|--|------------|
| 8 | Doctoral degree (<i>Diploma de doctor</i>) - third cycle of higher education Certificate for postdoctoral studies (<i>Atestat de studii postdoctorale</i>) - postdoctoral study programmes | 8 |
| 7 | Master degree (<i>Diploma de masterat</i>) - second cycle of higher education Combined bachelor and master degree (<i>Diploma de licenta si master</i>) - 5 to 6 years | 7 |
| 6 | Bachelor degree / Engineering diploma / Urbanism diploma (<i>Diploma de licenta / Diploma de inginer / Diploma de urbanist</i>) - first cycle of higher education Certificate attesting professional competence (<i>Certificat de atestare a competentelor profesionale</i>) – Postgraduate programmes for professional training and continuing professional development organised by higher education institutions Graduation certificate (<i>Certificat de absolvire</i>) – Postgraduate programmes for professional improvement organised by higher education institutions Graduation certificate (<i>Certificat de absolvire</i>) – Professional development programmes organised by authorised training providers Graduation certificate (<i>Certificat de absolvire</i>) – Postgraduate programmes for continuing education organised by higher education institutions Professional conversion diploma (<i>Diploma de conversie profesionala</i>) – Professional conversion programmes organised by higher education institutions | 6 |
| 5 | Graduation certificate (<i>Certificat de absolvire</i>) – Postgraduate programmes for professional improvement organised by higher education institutions Post-secondary certificate / Qualification certificate (<i>Certificat de calificare</i>) – post-secondary non-university tertiary education) | 5 |
| 4 | Upper secondary school leaving certificate (<i>Diploma de Bacalaureat</i>) - general, technological or vocational high-school, four years of study and baccalaureate exam VET certificate level 4 / Qualification certificate (<i>Certificat de calificare</i>) - technological / vocational high-school, four years of study and certification exam VET certificate level 4 / Qualification/Graduation certificate (<i>Certificat de calificare/absolvire</i>) – authorised training provider – adult learning VET certificate level 4 / Qualification certificate (<i>Certificat de calificare</i>) - authorised training provider – adult apprenticeship programmes in the workplace | 4 |

| ROQF levels | Qualification types | EQF levels |
|-------------|---|------------|
| 3 | <p>VET certificate level 3 / Qualification certificate (<i>Certificat de calificare</i>) - authorised training provider - adult apprenticeship programmes in the workplace</p> <p>VET certificate level 3 / Qualification certificate / Certificate of professional competence* (<i>Certificat de calificare / Certificat de competente profesionale</i>) – accredited assessment centre - validation of non-formal learning</p> <p>VET certificate level 3 / Certificate of professional competence* (<i>Certificat de competente profesionale</i>) – authorised assessment centre – validation of non-formal learning</p> <p>VET certificate level 3 / Qualification/Graduation certificate (<i>Certificat de calificare/absolvire</i>) – authorised training provider – adult learning</p> <p>VET certificate level 3 / Qualification certificate (<i>Certificat de calificare</i>) - at least two years of study in technological/vocational high school and practical exam</p> <p>VET certificate level 3 / Qualification certificate (<i>Certificat de calificare-vocational training programme in dual system lasting at least three years</i>)</p> <p>VET certificate level 3 / Qualification certificate (<i>Certificat de calificare</i>) - VET programme lasting at least three years)</p> | 3 |
| 2 | <p>VET certificate level 2 / Qualification certificate (<i>Certificat de calificare</i>) - authorised training provider - adult apprenticeship programmes in the workplace</p> <p>VET certificate level 2 / Qualification certificate / Certificate of professional competence* (<i>Certificat de calificare / Certificat de competente profesionale</i>) – accredited assessment centre – validation of non-formal learning</p> <p>VET certificate level 2 / Certificate of professional competence* (<i>Certificat de competente profesionale</i>) – authorised assessment centre – validation of non-formal learning</p> <p>VET certificate level 2 / Qualification/Graduation certificate (<i>Certificat de calificare/absolvire</i>) - authorised training provider - adult learning</p> | 2 |
| 1 | <p>Certificate of professional competence* (<i>Certificat de competente profesionale</i>) – authorised assessment centres – validation of non-formal learning</p> <p>Qualification certificate (<i>Certificat de calificare</i>) – authorised training provider -adult learning)</p> <p>Graduation Diploma (<i>Diploma de absolvire</i>) (first eight years of compulsory education)</p> | 1 |

Source: Cedefop (2021). *European inventory on NQF 2020 – Romania*.



Validation of non-formal and/or informal learning in relation with the NQF

Romania is among the early adopters of the validation framework in the EU, the validation system being created in 2004, in line with the EU principles and recommendations. The ROQF includes the validation of formal, non-formal and informal learning and the validation approach is based on learning outcomes expressed in knowledge, skills and competence. Currently, it is only possible to obtain level 3 or lower through the validation of non-formal and informal learning.

Validation is linked with occupational standards and is not yet operational with regards to formal education. There are links between NQF and the qualifications acquired in continuous training. Therefore, at the moment the access to formal education by learning acquired through non-formal/informal learning can be given up to level 3 NQF.

Regardless the level or type of learning to be validated, in Romania the Ministry of Education through the National Authority for Qualifications and the National Centre for Accreditation is responsible for the accreditation of institutions for the validation of qualifications and authorizes the assessment centres and assessment bodies. Adults with professional competences acquired in non-formal and informal ways can be assessed in these competence assessment centres and have their competences validated.

Unfortunately, according to the database of National Register of Assessment and Certification Centres of professional competencies obtained in other ways than the formal ones (<http://www.anc.edu.ro/registru-centre-cna/>), in Romania currently there is no institution that validates entrepreneurial qualifications obtained by non-formal and/or informal learning. Most of the authorizations are related with qualifications / occupations such as commercial worker, construction worker, blacksmith-fixer, mechanic, various machines operators, waiter, cook, etc.

In Romania, there are no mechanisms for validation of non-formal and informal learning in relation to obtaining the same type of certification as for general education, upper secondary level (baccalaureate), initial vocational education and training or university education. Also, there is no specific policy or legislation on the validation of learning undertaken by means of open educational resources (OER).

The law of education no. 1 from 2011 considers the validation of non-formal and informal learning as a lifelong learning service offered to individuals in order for them to become aware of their own skills and competences and to receive a certification linked to a specific qualification.

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Netherlands

Introduction

The Dutch Qualifications Framework (NLQF) is a categorization system for all types of qualifications available in The Netherlands, covering all types of education from elementary school to a PhD. The National Qualifications Framework (NLQF) allows formal and non-formal qualifications to be compared, either if they are provided by state or private institutions. Employers, employees, students, and training institutions in The Netherlands are supported and informed about qualification categorization through the National Coordination Point (*NL: Nationaal Coördinatiepunt*) of the Dutch Qualifications Framework (NCP-NLQF).

National Qualifications Framework in The Netherlands

The NLQF is a general classification system for qualifications regulated by the Dutch government. Owners of non-formal (non-governmental) regulated qualifications can apply to the NCP-NLQF to have their qualification classified at an NLQF level. There are two steps to this classification:

1. A validity evaluation is used to determine whether the organization (owner of the qualification) is eligible for a categorization request.
2. The qualification is then classified into an NLQF level in the second phase.

The NLQF is useful for educational providers because it allows them to compare the learning outcomes of their qualifications to those of similar qualifications offered by other providers. The labour market prefers a clearly defined standard with learning outcomes categorised at a level of the NLQF since it is easier to identify and compare the level of attained qualifications.

The NLQF encourages providers to include learning outcomes as a fundamental component of credentials and training programs.

National Qualification Framework and European Qualification Framework (NLQF vs EQF)

The Dutch Qualifications Framework (NLQF) levels are linked to the European Qualification Framework (EQF) levels. Currently, 39 European countries are attempting to integrate their certification frameworks to the EQF. This because the ability to compare qualification levels improves transparency between EU countries' educational systems and encourages lifelong learning.

In The Netherlands, over 133 qualifications requested from private providers will be incorporated in the NQLF in 2021, and a significant demand for classification is foreseen. Furthermore, the Dutch government foresees an early approval of the law on the NLQF.

This will help the NLQF/EQF have a greater impact, specifically in The Netherlands, where there is a large private sector of education and training providers, particularly for adults. To give a general view idea, in The Netherlands 1,6 million adults attend private sector education and training each year, with a combined turnover of € 3.4 billion each year.



- per **Education sector**, the division being made based in the sector of the Dutch education system each qualification can be obtained, such as Formal and Non-Formal.

Validation of non-formal and/or informal learning in relation with the NQF

In The Netherlands, 121 non-formal learning outcomes corresponding to the same number of non-formal education fields, are validated according to the NLQF. From the total NLQF qualifications, a number of 24 qualifications are aimed to established entrepreneurs, start-ups and would-be entrepreneurs. The 24 entrepreneurial qualifications are distributed both to the formal education sector (22 qualifications) and the non-formal education sector (2 qualifications). The 2 non-formal entrepreneurial qualifications in relation with the Dutch National Qualification Framework (NLQF) are: *NIMA B Communication* and *Entrepreneurship based on the own expertise* (NL: Ondernemen vanuit eigen vakmanschap). The *NIMA B Communication* qualification focuses on the development of the necessary knowledge, skills and attitudes to carry out tasks in the field of internal and external marketing)communication as a professional, while the *Entrepreneurship based on the own expertise* focuses on the development of the necessary knowledge, skills and attitudes to practice independently the own craftsmanship.

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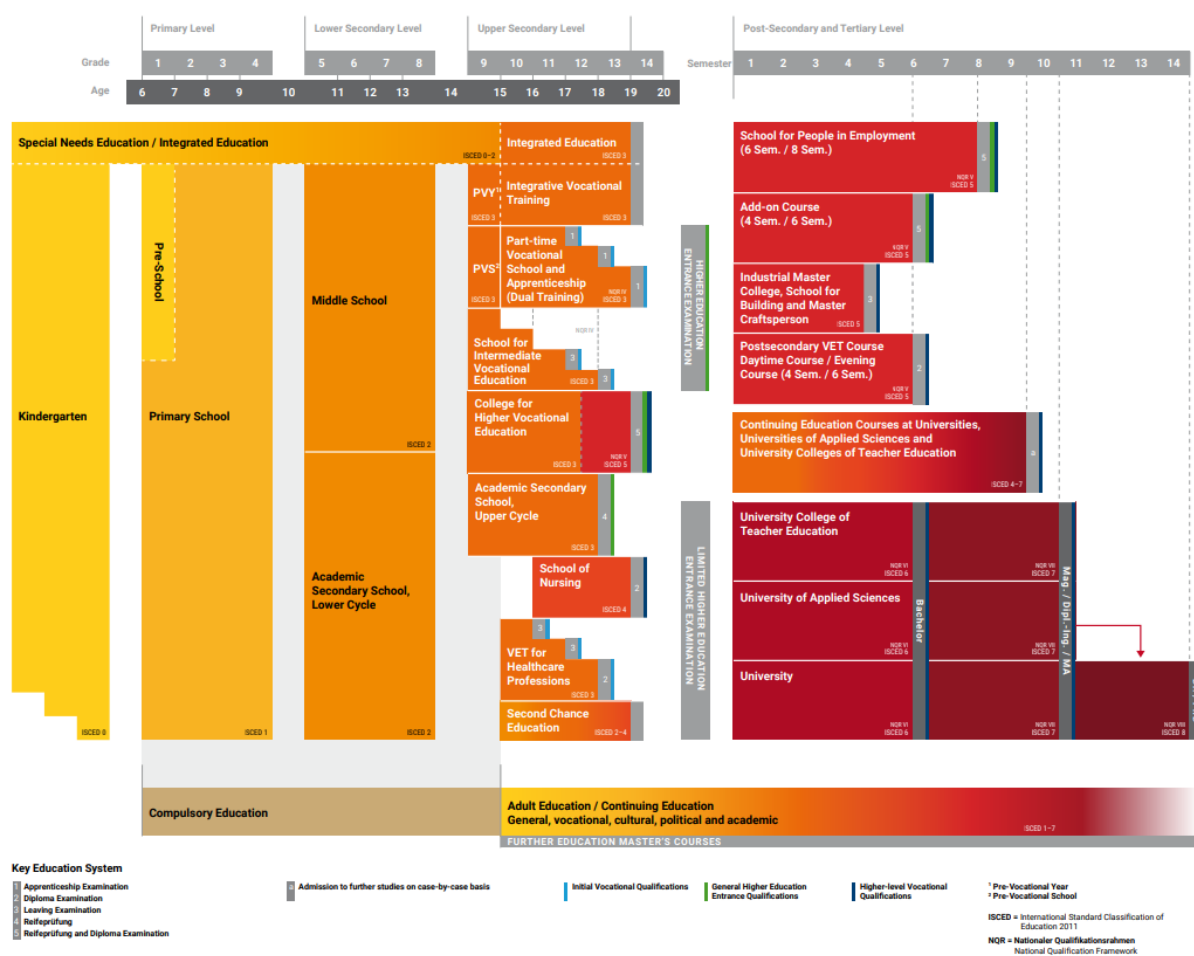


Austria

In Austria, a national ECVET implementation strategy was presented 2013, showing added value of ECVET. Based on this, a national working group on ECVET was founded as a kind of community of practice to provide advice and training but no National Coordination Points (NCPs) have been implemented.

ECVET can be found in Erasmus programmes but not yet (fully) in VET programmes. Where it is referred to, the structure suggests to use modules and units and allocate training credits following the EU recommendations on ECVET.

Related to the formal education system, Austria follows the EQF suggestions as shown in the table below:



Source: <https://www.bildungssystem.at/bestellung-printprodukte/grafik-des-oesterreichischen-bildungssystems>



Part two - Good practice examples of the validation of entrepreneurial competencies

Poland

Best practice method 1:

| | |
|---|---|
| Title | Warmia and Mazury Institute Vocational Training Institute |
| Country | Poland |
| Type of validation method | <i>Educational</i> |
| Description | <p>An educational association, which was founded in 1992. It is a non-governmental organization that works for the benefit of continuing education. Through a network of educational institutions and schools located in 12 towns in the region, they pursue a mission: the continuing education of adults and young people. It operate mainly in the field of vocational and school education. It provide services in the field of vocational and business consulting.</p> <p>It actively participate in activities related to obtaining European Union funds for the implementation of training and research projects. They are a leaders in local innovative actions supporting the development of the region.</p> <p>Their strengths include an available team of employees, professionally prepared and qualified lecturers, experts, trainers and instructors. The directors of that institutions are training organizers who gain their knowledge and experience through participation in national and international educational programs.</p> |
| How to obtain validation of competences | <p>Validation of competences is a systemic solution that allows for formal confirmation of professional competences acquired through extracurricular education.</p> <p>Many people have high professional qualifications, however, not confirmed by appropriate documents. They gained their knowledge and professional skills on their own, without participating in trainings or courses. Validation of competences makes it possible to verify these skills and to confirm them with a certificate or diploma recognized on the labour market. Other terms used to describe this process are: balancing, recognizing, recognizing, approving, certifying.</p> <p>The first stage of knowledge testing is a written test. A passing score is followed by a practical test. In arranged conditions, simulating real ones, the participant independently performs the relevant tasks. Based on the results of the theoretical and practical levels, the</p> |



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| | Qualification Commission decides whether or not to approve professional qualifications. |
| Further notes | <p>It is the first organization in Poland to test the validation of competencies under the "Let's Build Together" project. The pilot concerned the confirmation of qualifications in two professions: gas fitter and sanitary fitter. The project activities benefited 200 people.</p> <p>Their experience in validation helped in the implementation of subsequent projects: "A professional with a title" "A professional with a title 2"</p> <p>The validation process is supervised by a specially appointed Qualification Commission. It is composed of specialists from a given industry who have appropriate knowledge and qualifications to carry out the exam.</p> |
| Source | https://wmzdz.pl/ |



Best practice method 2:

| | |
|---|--|
| Title | Zintegrowany System Kwalifikacji (The Integrated Qualifications System) |
| Country | Poland |
| Type of validation method | <i>Educational</i> |
| Description | <p>The Integrated Qualifications System describes, organizes and gathers various qualifications in a single, universally accessible register - the Integrated Qualifications Register. IQS also defines the principles and standards for confirmation of qualifications functioning in it, which guarantees high quality professional certificates issued under the system.</p> <p>This is a solution aimed at increasing the level of human capital in Poland, thanks to which it is possible to confirm skills on the Polish and foreign labour markets.</p> <p>Thanks to the introduction of the system:</p> <ul style="list-style-type: none"> - everyone can apply for confirmation of their competences, regardless of how they obtained them, - the method of awarding qualifications is scrupulously monitored by ministers, - employers can more easily recognize the value of a potential employee, and employees can present their competencies in a credible way. |
| How to obtain validation of competences | <p>What the validation process looks like depends on:</p> <ul style="list-style-type: none"> the market qualification - the basic requirements are included in its description, the certification authority - they plan and organise the validation and publish the information on their website. <p>Validation is not only a test of your knowledge and skills that are needed to get a certificate, it is also a recognition of potential - what is already know, what is possible to do, and what is still to be learned or can be learned.</p> <p>The organisation of validation depends on:</p> <ul style="list-style-type: none"> the description of the qualification in question, the certifying institution - each institution has its own way of doing it. <p>Validation can take place in 3 stages:</p> <ul style="list-style-type: none"> identifying, |



| | |
|---------------|--|
| | documenting verification. |
| Further notes | The Integrated Qualification System offers the possibility of formal confirmation of skills and knowledge acquired through self-directed learning and provides public access to a structured list of marketable qualifications with a clearly defined description. The full list of qualifications can be found in a public database - the Integrated Qualifications Register (ZRK). A well-described qualification will tell you what knowledge and skills a person must have if they want to prove their competence in a particular field or what an employer can expect from a candidate for a particular position. |
| Source | https://wmzdz.pl/ |



Best practice method 3:

| | |
|---|--|
| Title | Voivodeship Labour Office in Cracow |
| Country | Poland |
| Type of validation method | <i>Mentoring / consulting</i> |
| Description | The participants of the project " Direction of Career", implemented by the Voivodeship Labour Office in Cracow, can take advantage of a series of vocational counseling under the name of Deepened Career Balance. The In-depth Career Balance was developed on the basis of the Competency-Based Assessment Method, expanded with additional diagnostic tools. Competency-Based Assessment Method was developed by the experts of the Educational Research Institute and the Voivodeship Labour Office in Cracow. The Competence Balance method involves identifying and documenting learning outcomes. Its aim is to identify the participant's competencies that are worth developing, as well as his/her interests and plans for further development. |
| How to obtain validation of competences | <p>Process stages:</p> <ul style="list-style-type: none"> - initial stage: participant registration and counselling and recruitment interview - research stage: identification and documentation of competences - concluding stage: discussion of results and handing over final documents <p>In the course of work with an occupational counsellor, the participant has an opportunity to systematise his current educational and professional experience, get to know his advantages on the labour market, reflect on his current professional life and determine further steps he should take to ensure himself a better professional position. The diagnostic activities may be accompanied by the documentation of learning outcomes by the participant through the creation of a portfolio.</p> |
| Further notes | The outcomes of the Career Balance should be divided into two groups. The first one includes formally defined products of identification and documentation and further actions within the framework of the "Career Direction" project. The second one includes potentially numerous and varied changes (direct or indirect), which in the professional life of the participant can be brought by the in-depth variant of the Career Balance. |
| Source | https://wupkrakow.praca.gov.pl/ |



Italy

Best practice method 1:

| | |
|---|---|
| Title | INCUBATORE CERTIFICATO t2i (SISTEMA CAMERALE VENETO) |
| Country | ITALY |
| Type of validation method | <i>Mentoring / consulting / educational / other</i> |
| Description | <p>Real incubation service</p> <p>Start-ups are also provided, for the first year only, with a number of business start-up support services, such as entrepreneurial start-up training courses, support in drawing up the business plan, supervision of the implementation of the business plan through the personalised advice of a business tutor, vouchers for advice on sector analysis and market research, funding opportunities (support desk for the first company, assistance in accessing facilities for young and female entrepreneurs, etc.).</p> |
| How to obtain validation of competences | <p>Acceleration service for opening an innovative start-up and value-added services:</p> <ul style="list-style-type: none"> • Verification and fine-tuning of the idea's potential to develop innovation • Description of a corporate purpose that complies with regulations • Choice of requirement for innovative start up • Advice on compiling the Articles of Association and Memorandum of Association on the online Company Register • Assistance in setting up an Innovative Start Up at the Chamber Offices of the Business Register without a notarial deed • Innovative Start Up web presentation services • Search for funding (Microcredit or Central Microcredit Guarantee Fund) • Assistance in business planning, tutoring and targeted training within the project activities • meeting for the evaluation of Intellectual Property and guidance on protection • checkups dedicated to needs assessment and business model development/review, with a customised programme based on the needs identified • 2 meetings for promotion and/or acceleration, in technology dissemination, animation and networking activities • Promotion of the company in the web and social space, 1 annual checkup on website and social usability |



| | |
|---------------|--|
| Further notes | <p>t2i promotes Bikeen, a startup for the innovative project in the development of sustainable mobility through innovative approaches to the circular economy, reuse and valorisation of assets, as well as digitisation and innovation of the business model of commercial activities. The main objectives are to</p> <ul style="list-style-type: none">- to create the largest channel dedicated to the sale of used bicycles (or Km 0) and services in the cycling sector, developing a Marketplace that will be the point of reference in Italy and Europe;- provide a network of rental and service points to encourage and facilitate the use of two wheels at different levels of users, from amateurs to bicycle tourists.- introduce a standardised quality mark to help cyclists and operators preserve the value of the bike when it is sold or, more appropriately, when it has a new owner. |
| Source | https://www.t2i.it/startup-impresa-incubatore/ |



Best practice method 2:

| | |
|---|---|
| Title | IE3P (Turin Polytechnic Incubator) |
| Country | ITALY |
| Type of validation method | <i>Mentoring / consulting / educational / other</i> |
| Description | <p>The programme supports the entrepreneurial team of start-ups It provides consultancy, training and contacts in the I3P network.</p> <p>It supports start-ups in defining their funding strategy and enables direct access to entrepreneurship support measures of local authorities and institutions.</p> <p>It supports the creation of synergies between start-ups and the community of innovators by introducing the start-up into a network of research centres, large enterprises, associations and institutions.</p> <p>It helps start-ups to move into foreign markets through a network of partner incubators linked by "soft landing" agreements in Europe, Israel and the United States.</p> |
| How to obtain validation of competences | <p>The start-up must present the business idea by filling in an application form.</p> <p>The proposal will be evaluated by a team of I3P experts who will pay particular attention to the composition of the team, technology, and market prospects.</p> <p>If the outcome of this preliminary assessment is positive, a meeting is scheduled with the tutor, during which the project's themes are discussed in depth.</p> <p>Within 30 days, the I3P team evaluates the project and announces whether the business idea will become part of the incubator.</p> <p>If the outcome is positive, the team is taken on and supported in all phases of business development, including the application for funding.</p> <p>The incubation process lasts between 3 and 5 years.</p> <p>There is a pre-incubation phase lasting at least 3 months (no more than 18 months) in which startupper use part of the I3P services, and work with a tutor to enhance the project in view of the Evaluation Committee's analysis</p> |
| Further notes | I3P promotes Aquaseek, a startup that, in line with sustainability goals, aims to make water available to everyone by extracting it from the air. |



| | |
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| Source | https://www.i3p.it/programma |
|--------|---|



Best practice method 3:

| | |
|---|--|
| Title | 012Factory (Caserta) |
| Country | ITALY |
| Type of validation method | <i>Mentoring / consulting / educational / other</i> |
| Description | <p>012factory is the largest innovation hub in Southern Italy in terms of turnover and number of start-ups.</p> <p>012factory offers multi-disciplinary services with a holistic approach and, with an open, integrated and shared vision, multi-sectoral experience and know-how aimed at finding innovative and value-creating solutions.</p> <p>The proposition is structured:</p> <ul style="list-style-type: none"> - Define a successful growth strategy. - Identification of investment and financing possibilities. - Enhancement of capacities to create innovation. - network sharing. |
| How to obtain validation of competences | <p>012factory has an entrepreneurial Academy that has been running for seven editions and is a programme that trains aspiring entrepreneurs, providing them with the essential tools to create new businesses with a high rate of innovation.</p> <p>The approach is to start with the talent of the start upper before the idea or project. 012 Academy is an opportunity for future entrepreneurs to do business and find their own way.</p> <p>Starting from the concept of contamination and the opportunities of doing business together, the proposal is to unite several visions and professionalism, integrating people of different backgrounds, ages and experiences and creating an initial network.</p> <p>The mentors follow the Academy participants and help them step by step to transform their ideas into a real business, capable of growing and competing on a national and international level through the construction of an entrepreneurial and innovation-oriented mind-set.</p> |
| Further notes | 012factory has incubated Artemetra, a start-up for the development and design of furniture, innovative and eco-sustainable furnishing elements, obtained through the use of layers, composites and bio composites with reduced environmental impact, able to interact with the environment through IOT technologies. |
| Source | https://www.012factory.it/ |





Spain

Best practice method 1:

| | |
|---|--|
| Title | Fondo de Emprendedores |
| Nation | Spain |
| Type of validation method | <i>Mentoring and consulting</i> |
| Description | <p>A program by Fundación Repsol, helps entrepreneurs launch their business project through financing. This program is especially suitable for start-ups in their initial phases, where they are being tested with real clients or otherwise, start-ups that will be in that stage in 1-2 years.</p> <p>This program aims to help entrepreneurs launch their start-ups around innovative solutions in low carbon emissions, circular economy and digitalization for the energy industry.</p> |
| How to obtain validation of competences | <p>The project presented by the applicant is evaluated by a team of two senior mentors – Repsol ex-workers who collaborate voluntarily on the program –, professionals with high knowledge on matters of business administration and management. Aside from that, two current workers in Repsol will mentor the applicant in technological and marketing-related issues ¹.</p> <p>The selected projects will be financed from 60.000 to 100.000 euros during a year.</p> <p>Repsol will facilitate its platforms to carry out pilot tests whenever possible, and the applicants are not restricted in any manner from performing pilot tests with any other companies. Also, this is an international program so applicants can participate from all around the world without having to travel to Spain's facilities.</p> |
| Further notes | <p>The selected entrepreneurs will enjoy financial aid from 60.000 up to 100.000 euros, while securing that Fundación Repsol will not partake into the intellectual property or capital of the start-up. This makes the present program especially secure and attractive for young entrepreneurs.</p> |
| Source | https://www.fundacionrepsol.com/es/fondo-emprendedores |



Best practice method 2:

| | |
|---|--|
| Title | Compe10cias LED |
| Nation | Spain |
| Type of validation method | <i>Mentoring, educational and consulting</i> |
| Description | <p>Developed by Youth Business Spain and Fundación Tomillo, Compe10cias LED is an educational/formative program that aims to train young entrepreneurs – aged from 18 up to 35 years old – by helping them develop 10 key entrepreneurship competences based on the UN Empretec competence framework ²⁻³.</p> <p>Based on a study conducted by Harvard University, this training program follows a <i>Cycle of Experience Learning</i> which consists of 10 4-hour sessions where each one of the 10 competences is acquired by the students. The competences in question are ³:</p> <ol style="list-style-type: none"> 1. Search for opportunities 2. Persistence 3. Information search 4. Fulfilment of commitments 5. Calculated Risks 6. Goal Setting 7. Quality and efficiency 8. Planning and monitoring 9. Persuasion and contacts 10. Independence and self-confidence |
| How to obtain validation of competences | <p>The methodology of study is <i>learning by doing</i>, and thus it consists of dynamic and participative workshops where students develop the competences for entrepreneurship by themselves.</p> <p>This formation is completed with personalized tutorial sessions and one-on-one evaluations, with the ultimate goal of shaping the formative experience to each one of the students' particular cases.</p> <p>After the development of the entrepreneurial competences, the students business idea is designed and validated by the team through the methodology Lean Startup, the students are offered further online formation through +IDEAETE and finally, orientation and technical assistance in order to analyse the viability of the entrepreneurial project. Financing is offered through microcredits and Crowdfunding.</p> |
| Further notes | The program is completely free of cost, as it is financed by Fundación Endesa. |

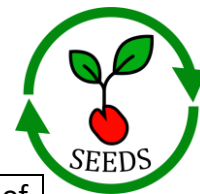


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| Source | https://www.youthbusiness.es/emprendedores/compe10cias-led/ |
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Best practice method 3:

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| Title | Programa Cultura Emprenedora a l'Escola (CuEmE) de la Diputació de Barcelona |
| Nation | Spain |
| Type of validation method | <i>Mentoring and educational</i> |
| Description | <p>The program CuEmE was funded in 2011 by the Council of Barcelona with the aim to promote entrepreneurship in educational centers – mainly primary schools – through the implementation of a particular work methodology consisting on working on different projects in order to develop entrepreneurial competences in class. This also implies the formation for the capacitation of the teaching staff to conduct said program.</p> <p>In this methodology, the students create and manage a <i>cooperative</i> company at school during the school year, with the support of the school staff, the administration and other local social work agents.</p> <p>In the CuEmE framework, the schools and the local enterprises are linked through two basic principles: the educational program itself at the schools, and strategy that gets implemented that allows further development of local businesses ⁴.</p> <p>The students learn by working on projects, reinforcing values of solidarity, equal opportunity and equity in them, as well as contributing to social inclusion. The competences learned are:</p> <ol style="list-style-type: none"> 1. Linguistic communication 2. Mathematical skills 3. Knowledge of and interaction with the physical world 4. Digital competences and information processing 5. Social and civic competences 6. Cultural and artistic competences 7. Learning to learn 8. Autonomy and personal initiative (entrepreneurial spirit) |
| How to obtain validation of competences | <p>The present educational project follows a series of steps that consist of:</p> <ol style="list-style-type: none"> 1. Preparation of the students (acquiring the competences) 2. Creation of the cooperative 3. Design of the prototype and communication 4. Choice of product 5. Search for financing 6. Production |



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| | The Generalitat de Catalunya is in charge of giving the recognition of <i>innovative project</i> and accredit the formation of the teaching staff. |
| Further notes | According to official data from the Provincial Council of Barcelona, in the school year 2019-2020, up to 9600 students from 236 schools as well as 52 local companies had participated in this program. |
| Source | https://www.diba.cat/es/web/cueme/programa |

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4. Diputació de Barcelona, El programa - Cultura emprendedora a l'escola, diba.cat, 2022. [Online]. Available: <https://www.diba.cat/es/web/cueme/programa>



Romania

Best practice method 1:

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| Title | Romania Startup Plus |
| Country | Romania |
| Type of validation method | <i>Educational</i> |
| Description | <p>For Romanian start-uppers, one of the most popular ways of acquiring entrepreneurial skills outside the formal learning, is to take entrepreneurial courses in the frame of projects funded by EU. In the last years, the European Social Fund founded many such training courses through the Human Capital Operational Programme (POCU), especially the programmes “Romania Startup Plus” and „Diaspora Start-Up”. Most of the projects financed through the two programmes include training in entrepreneurship, business plan competitions, pitching sessions and funding of the selected start-ups. The start-uppers can also benefit from internship programs, personalized consultancy services, mentorship and monitoring from the experts of project partnership. Usually, the courses are given by trainers authorised by the National Authority for Qualifications and the start-uppers, after passing an exam, receive a Graduation Certificate issued by the Ministry of Education, Ministry of Labour and National Authority for Qualifications.</p> <p>One example is the project „START IT UP” („Sprijinirea Tinerilor Antreprenori din Regiunea Nord-Est prin Transfer de Inovații și Tehnologii Utile pe Piață – START IT UP Nord-Est”). It was implemented in the period January 2018 – January 2021 being funded through the “Romania Startup Plus” programme. It targeted people interested in starting a business in the urban area of North East region of Romania and trained 300 participants in entrepreneurship. A business plan competition took place and 36 business plans were selected and received start-up funding.</p> |
| How to obtain validation of competences | <p>In order to obtain the validation of the entrepreneurial competences obtained, the participants trained in the „START IT UP” project had to pass an exam. The exam includes a practical test and a theoretical examination.</p> <p>The participants that attended the training and passed the exams have been awarded with Graduation Certificates issued by the Ministry of Education, Ministry of Labour and National Authority for Qualifications.</p> |

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| | <p>Source: https://startup.eastmarketing.ro/</p> |
| <p>Further notes</p> | <p>The programmes “Romania Startup Plus” and „Diaspora Start-Up” funded by European Social Fund through the Human Capital Operational Programme (POCU) led to the creation of 8715 start-ups in Romania. In addition, many thousands of people received entrepreneurial training.</p> |
| <p>Source</p> | <p>https://startup.eastmarketing.ro/</p> <p>https://www.fonduri-structurale.ro/program-operational/2/programul-operational-capital-uman</p> <p>https://www.fonduri-structurale.ro/stiri/22420/romania-start-up-plus-si-diaspora-start-up-afla-cate-afaceri-noi-au-fost-infiintate-si-in-ce-domenii</p> |



Best practice method 2:

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| Title | Entrepreneurial competences for students |
| Country | Romania |
| Type of validation method | <i>Educational</i> |
| Description | <p>Many Romanian universities are offering complementary courses aimed at developing the entrepreneurial competences of their students. These students are specialising in various fields and the entrepreneurial training can help them to found and run a start-up in order to make better use of their knowledge and competences.</p> <p>University of Bucharest (UB) is considered to be the most important educational, research and cultural institution in Romania. In October 2021, UB in collaboration with UNIHUB Student Entrepreneurship Society organised the 4th edition of an “Entrepreneurial competences” training offered online to its students. The training course takes 32 hours and it is structured in four modules:</p> <ul style="list-style-type: none"> - business management - marketing - financial-accounting management - business plan development. <p>The course is designed following the methodology and support tools specific to the Lean Startup concept, a recent entrepreneurial paradigm, based on identifying the Minimum Viable Product (MVP) and developing the business around it through quick iterations. It aims to answer the question "What is a startup?", to offer students techniques for promoting products / services online and offline and to allow them to identify, test and validate the business model of a start-up and to perform a SWOT analysis.</p> |
| How to obtain validation of competences | The competences acquired can be validated through further activities facilitated by UNIHUB Student Entrepreneurship Society, such as hackathons, pitching sessions during “UB Challenges: IdeaJam”, various contests and workshops, business incubators, etc. |
| Further notes | Universities and students’ associations can have a very powerful impact on the development of student’s competences related to the entrepreneurship and, further, on the development of business ideas and start-ups. |
| Source | https://unibuc.ro/cursul-de-competente-antreprenoriale-pentru-studentii-ub-organizat-de-faa-si-unihub-ajuns-la-cea-de-a-iv-a-editie/ |

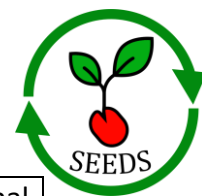


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| | <p>https://unibuc.ro/wp-content/uploads/2021/10/Descriere-curs-antreprenoriat-versiune-finala-1.pdf</p> <p>https://unibuc.ro/unihub-societatea-antreprenoriala-studenteasca-din-cadrul-ub-isi-continua-activitatile-si-in-2018/</p> |
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Best practice method 3:

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| Title | “Entrepreneurial competences” courses |
| Country | Romania |
| Type of validation method | <i>Educational</i> |
| Description | <p>More and more Romanian institutions are offering courses aimed at developing Entrepreneurial competences. From chambers of commerce, private companies, NGOs, public authorities to VET institutions, adult education providers and universities. The course providing institutions and the courses are authorized by the Romanian National Authority for Qualifications and the certificates obtained at the end of the training are recognised at European level.</p> <p>GS Training is a centre of excellence in professional training for adults, being present on the profile market and conducting courses authorized by the National Authority for Qualifications since 2011. They trained over 6500 persons from various governmental institutions and companies. Among the training courses provided, there is also the course “Entrepreneurial competences”. This course is aimed at people who want to start a business, to create their own business plan and to successfully develop it in the long run. The participants learn how to attract potential customers and what are the stages of communication with associates, partners or clients.</p> <p>The main topics of the training are as follows:</p> <ul style="list-style-type: none"> - Introductory notions in entrepreneurship - Creating a company strategy - Business management and development - Strategy, marketing mix and marketing plan - Notions related to the market - Business communication and negotiation - Human resources management in the business - The structure and development of a business plan <p>The total duration of the training is 40 hours.</p> |
| How to obtain validation of competences | GS Training is authorized by the Romanian National Authority for Qualifications to conduct the specialization programme “Entrepreneurial competences” so the certificates issued are recognised at national and European levels. |
| Further notes | Entrepreneurial competences can be acquired by attending the “Entrepreneurial competences” provided by many institutions authorized by the Romanian National Authority for Qualification. The |



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| | competences are validated with certificates recognised at national and European levels. |
| Source | https://gstraining.ro |



Netherlands

Best practice method 1:

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| Title | HEI innovative and entrepreneurial |
| Country | The Netherlands |
| Type of validation method | <i>Educational</i> |
| Description | <p>The Netherlands' whole higher education system – including research institutions, technical universities, and Universities of Applied Sciences – provides a wealth of outstanding examples of what it means to be an innovative and enterprising Higher Education Institution (HEI). The valorisation of knowledge, or the process of making information fit and/or available for economic and/or social use through turning knowledge into usable goods, services, processes, and entrepreneurial activity, is a critical component. Value creation covers many disciplines, and its effect extends far beyond economic considerations to include societal and cultural value generation. It comprises, for example, various methods of presenting research and research results in the media, expositions, community research, and so on. Entrepreneurship support is the most developed aspect of value creation in terms of support structures and focused teaching initiatives.</p> |
| How to obtain validation of competences | <p>The HEI evaluates entrepreneurial teaching and learning on a regular basis throughout the institution; ensuring that entrepreneurial teaching activities attain their full potential necessitates rigorous evaluation across all faculties and departments. An entrepreneurial higher education institution has specific goals that are routinely monitored and assessed, with the outcomes feeding back into course renewal and staff development plans.</p> <p>To ensure a successful validation of entrepreneurial competencies, the HEI in The Netherlands set clear objectives for the impact of entrepreneurship courses and activities, evaluate the impact of entrepreneurship teaching and learning at different phases of implementation (beginning, end, point in time after) to get an accurate picture of change, recorded changes in participants' motivation and the level of knowledge, skills, and competences gained through the entrepreneurship program, and evaluated changes in participants' motivation.</p> |
| Further notes | <p>The Netherlands' higher education system illustrates what it means to be inventive and entrepreneurial, promoting entrepreneurial mindsets, entrepreneurship, and knowledge exchange. At the heart of this strategy is the creation of value from academic knowledge</p> |



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| | through new services, products, processes, and business models that address economic, social, and environmental needs. |
| Source | https://www.oecd-ilibrary.org/ |



Best practice method 2:

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| Title | Entrepreneurship |
| Country | The Netherlands |
| Type of validation method | <i>Educational</i> |
| Description | <p>The programme supports would-be entrepreneurs to gain the necessary qualification that will allow them to practice independently the own craftsmanship. In order to reach this goal, the programme guides the learners to build a network, make acquisitions, carry out the financial administration and deal with customers or clients in a service-oriented way. Furthermore, it makes sure the applicants are aware of the government's entrepreneurial regulations, follow the latest developments in their own field and anticipate them.</p> <p>The programme requires a social, investigative, innovative and agile attitude at the micro, macro and meso level, necessary for independent entrepreneurs.</p> <p>The training programme also support, the participating professionals develop new entrepreneurial skills, expand their network, conduct research into new developments in their field and each draw up a business plan to strengthen their own revenue model.</p> <p>The programme helps would-be entrepreneurs develop to a higher NLQF thinking and functioning level 5, in which their own entrepreneurial craftsmanship is central and serves as an important learning environment.</p> |
| How to obtain validation of competences | <p>The applicant must have at least MBO 4 craftsmanship diploma (level 4 of vocational education) with at least one year of work experience or self-taught craftsmanship with demonstrable thinking level at NLQF level 4.</p> <p>The applicant is required to work an average of 420 hours, this being the estimated time necessary to complete all learning activities required to achieve the following learning outcomes: awareness of current professional, social, economic and political developments, ability to look up and process reliable information in the field of self-employment; skills to conduct research into market, industry, competition, customers and own entrepreneurship; ability to map the network and formulate goals for the company in the short and long term; competency to choose a legal form and knowledge of the laws and regulations for a new business; expertise to create a realistic business plan and able to keep a (financial) administration; proven capacity to determine marketing strategy and build a promotion plan; ability to communicate appropriately about the own company with</p> |



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| | <p>the target group; knowledge of different sales techniques; capacity to look critically and as objectively as possible at own actions in the role of independent entrepreneur.</p> <p>For each 25 to 30 hours of work, the learner receives one ECTS credit.</p> <p>The entrepreneurial competence is validated when the learner received a total of 15 ECTS credits. In this respect, the owner of the qualification (in this case, Stichting sQuare) determines the learning outcomes of the qualification and decides what organisation is allowed to act as an awarding body of the qualification.</p> |
| Further notes | <p>The full name of the competence is “Entrepreneurship based on the own expertise”. The qualification corresponds to EQF-Level 5 and to NLQF-Level 5 and it is included in the <i>Non-formal education</i> sector. The qualification targets the following fields: Business, administration and law; Business and administration; Business and administration not further defined.</p> |
| Source | <p>https://database.nlqf.nl</p> |



Best practice method 3:

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| Title | The Dutch Centres for Entrepreneurship |
| Country | The Netherlands |
| Type of validation method | <i>Educational</i> |
| Description | <p>The Dutch Centres for Entrepreneurship (DutchCE) are contained within 20 out of 36 Higher Education Institutions (HEIs) in The Netherlands, that participate in four categories of entrepreneurship-related activities. They collaborate with one another to build a community, share knowledge and best practices, stimulate and promote entrepreneurship and entrepreneurship education in higher education, and strengthen entrepreneurship research by facilitating national collaboration and stimulating new research that the community deems relevant to the development of an entrepreneurial society.</p> <p>The HEIs participating in DutchCE conduct applied research and organize national and international initiatives to promote entrepreneurship research.</p> |
| How to obtain validation of competences | <p>Through qualitative criteria, the DutchCE provides validation and quality control. They also collaborate with worldwide networks and platforms like the Global Entrepreneurship Network, as well as academic institutions like the Academy of Management and the International Council for Small Business.</p> <p>Entrepreneurial learning outcomes are validated by the HEI, which guides the design and implementation of the entrepreneurial curriculum.</p> <p>An entrepreneurial learning experience allows people to gain valuable skills and competencies. These are necessary for both graduate entrepreneurs and entrepreneurial students who are seeking employment. A higher education institution that supports entrepreneurial learning commits to reviewing, validating, and upgrading course material and learning outcomes on a regular basis across all study programs.</p> <p>In order to foster the gain of the entrepreneurial competencies, an HEI codifies the desired entrepreneurial learning outcomes in connection to knowledge, skills, and competencies in all degree programs; ensures that students have a clear knowledge of the intended and accomplished entrepreneurial learning outcomes; validates entrepreneurial learning outcomes at the institutional level; and recognizes entrepreneurial learning outcomes in students' records of accomplishments.</p> |



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| Further notes | <p>DutchCE also has a broader influence by sparking useful scientific breakthroughs, communicating those findings with a varied audience through many media, and encouraging active engagement in public and private contracts as well as public discussion.</p> <p>Furthermore, the DutchCE aids policymaking by bringing key entrepreneurship-related issues to the attention of policymakers and serving as a consulting organization for government, parliament, and interest groups.</p> |
| Source | https://www.oecd-ilibrary.org/ |



Austria

Best practice method 1:

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| Title | Let's make plastic circular (Plasticpreneur, Vienna) |
| Country | Austria |
| Type of validation method | Consulting/educational |
| Description | <p>Plasticpreneur is an Austrian start-up that strives to close the loop and foster the transition from a linear (take-make-dispose) to a circular economy. With its characteristics, plastic is a perfect material for a circular economy – it is durable, light, easy to process, and energy efficient to recycle.</p> <p>This is accomplished by designing, manufacturing and providing user-friendly, mobile and easy to repair plastic recycling machines and offering entrepreneurship training. They offer developing, designing and manufacturing plastic recycling machines, standard and customized moulds, and all kinds of other services such as technical training and assistance, market research and consulting, design and product development as well as entrepreneurship training and programs.</p> <p>For a global positive impact, the start-up provides technology, services and products to</p> <ul style="list-style-type: none"> • Explore & experience the recycling process hands-on • Design & create new products from recycled plastic waste • Enable new business & skill development opportunities • Manufacture locally batch produce & manufacture products <p>To set up a sustainable project or social business and involve the local communities, business models are developed and put in place. Establishing and running of recycling centres and producing useful products requires entrepreneurship skills; through the programs and workshops Plasticpreneur offers, people are enabled and inspired to create, plan and carry out their own projects, start their social businesses and create solutions for everyday problems – directly where it's needed: locally.</p> |
| How to obtain validation of competences | <p>The hands-on opportunity of turning plastic waste into new products enables creativity and the emerging of tangible solutions. At the same time in each step, environmental awareness is raised.</p> <p>Plasticpreneur's programs and workshops foster and inspire people to create, plan and carry out their own projects, start their social businesses and create solutions for everyday problems, directly where it's needed: locally. With the human-centred design approach, lean business modelling and rapid prototyping ideas are put into practice, creativity is unleashed and</p> |



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| | <p>innovative thinking encourages a sustainable mind-set to create systemic impact.</p> <p>Due to the large variety of possible use cases for this technology, services and products are set up by many different user groups such as universities, schools, science centres, museums, maker spaces, design studios, NGOs, public sector, private people, cooperates, etc.</p> |
| Further notes | <p>Due to the lack of access to basic recycling technologies and know-how, plastic waste can barely realize its potential as a valuable secondary raw material in manufacturing. Most often it gets incinerated or accumulates in landfills or the natural environment as waste – although the process itself is very easy and possible in small-scale:</p> <p>Plastic waste is collected, sorted, washed, shredded into fine granules, heated and pressed into a mould. Through this simple process, plastic waste gets transformed into new and useful products for local markets.</p> |
| Source (if any) | <p>https://plasticpreneur.com/</p> |



Best practice method 2:

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| Title | Re: Wien Start-ups/Vienna |
| Country | Austria |
| Type of validation method | Consulting/educational |
| Description | <p>OekoBusiness Wien and Impact Hub Vienna accompany a new generation of companies on their contribution to a better urban quality of life. Re:Wien, a programme for start-ups has been established.</p> <p>In 2021, OekoBusiness Wien and Impact Hub Vienna were once again looking for young entrepreneurs with innovative ideas to point the way to a sustainable future. Seven start-ups, six months of coaching, workshops, networking and industry exchange - that is "Re:Wien".</p> <p>Sustainable business is becoming more and more important; not only established companies, but above all young start-ups are trying to counteract the climate crisis through particularly resource-saving measures. In order to support the founders in this, "Re:Wien" has already taken place seven times.</p> <p>Bertram Häupler from OekoBusiness Wien: "It is very satisfying that every year new young entrepreneurs with exciting projects take part in the Re:Wien programme and seize the opportunity to receive advice on sustainable business."</p> <p>Re:Wien is an accompanying programme organised by OekoBusiness Wien and the Impact Hub Vienna, which supports promising start-ups with resource-efficient and sustainable business models in their development.</p> |
| How to obtain validation of competences | <p>Various coaching programmes, networking events with established companies in their sector offer ideal networking opportunities. This type of cooperation results in efficient collaborations that not only bring significant benefits to the start-ups, but their partners also profit from the synergy effects.</p> <p>The founders gain an insight that is essential for positive business development. All of this is under the guiding principle of urban sustainability at Re:Wien - because responsible entrepreneurship must also include the interests of social and ecological added value.</p> <p>Once the participating companies have completed the six-month Re:Wien programme, another six months of membership in the Impact Hub Vienna follow. After successful completion, the young companies are certified within the framework of OekoBusiness Wien.</p> |



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| Further notes | <p>OekoBusiness Wien shows that environmental protection and successful business are not opposites. The Environmental Service Programme of the City of Vienna - Environmental Protection supports companies in Vienna in implementing and anchoring sustainable measures that also pay off economically.</p> <p>The programme is closely networked with comparable initiatives around the world in order to advance the transfer of knowledge to city and regional administrations and to build a network of businesses that have recognised that economic success and sustainable business go hand in hand.</p> |
| Source (if any) | <p>https://unternehmen.oekobusiness.wien.at/</p> |



Best practice method 3:

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| Name | "Waste separation is always a hit"- Campaign of the MA48 and the traditional football club "Rapid Wien". |
| Type of validation method | Demonstration/consulting |
| Description | <p>The Waste Management and Vehicle Fleet Department (MA 48) of the Vienna municipality was able to win SK Rapid, a traditional soccer club and record champion in Vienna, for a new campaign on waste separation. For MA 48, two members of the Rapid team show how waste separation works in Vienna. The video is "shot" in Vienna's Allianz Stadium, the home of Rapid. The message is unmistakable: waste separation is always a hit! Waste separation can reduce the amount of residual waste and recycle valuable old materials.</p> <p>Through conveying these principles to a broader public by a traditional and well-known sport association, the focus is put on the impact of sustainable waste management for companies and organisations.</p> <p>With this campaign, MA 48 wants to show how easy separate collection of waste is in Vienna, also for companies and organisations. Of course, there is no shortage of humor, as demonstrated by the soccer-savvy slogans of the individual subjects and a short film. The funny film can also be seen on the MA 48's social media channels: https://www.wien.gv.at/video/1353/Gruen-Weiss-trennt-sich</p> <p>Green and white separates</p> <p>This only applies to used glass, because waste separation is a matter of concern to the Rapid Organisation. For coloured and white glass, 7,000 used glass containers are available for collection in Vienna, and around 30,000 tons of used glass are collected every year. The waste glass is used to produce new bottles. This saves valuable raw materials. White glass consists of 60 percent secondary raw material, stained glass of up to 75 percent. Recycling stained glass saves 27 percent energy and 63 percent CO2 emissions. Throughout Austria, the recycling of waste glass saves around 250,000 tons of primary raw materials (quartz sand, limestone, dolomite and soda ash) every year.</p> <p>There aluminium is not off</p> <p>In Vienna, around 13,000 tons of scrap metal (ferrous and non-ferrous metals such as aluminium) are collected in the 6,200 blue garbage cans and at the garbage tip. This quantity could be used to make over 50 Vienna Ferris wheels or 1.4 million bicycles. The collected metal waste is first separated into different metal fractions by magnetic separation and mechanical sorting and freed from interfering and foreign materials. Ferrous metals are used together with other scrap and pig iron for steel production. End</p> |



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| | <p>products include railroad and automotive components, washing machine housings, and reinforcing steel. Aluminium packaging can be used to produce high-quality castings. 95 percent less energy is used to re-melt recycled aluminium than to produce the same quantity of new aluminium products from metallurgical material.</p> <p>No trick: separating plastic bottles</p> <p>Around 5,000 tons of plastic bottles are collected in Vienna every year. The production of one ton of PET bottles requires 1.9 tons of petroleum. By recycling PET bottles, the Viennese population therefore saves almost 10,000 tons of petroleum each year. By using new technical processes, it is possible to manufacture products for the food sector from recycled materials, despite the high hygienic requirements. For example, new beverage bottles can be produced from old ones ("bottle to bottle"). Other recycled products include fibres for the textile sector or for thermal insulation, plastic containers and much more.</p> |
| How to obtain validation of competences | <p>Sensitivity to environmental issues are made more central to the club's own actions. The campaign of the traditional soccer club and the Municipality of Vienna primarily addresses their members and fans, referring to terms and peculiarities of the sport. It also serves as a role model for other clubs, companies and organizations to start their own campaigns or actions (partly with "playful approaches).</p> <p>In doing so, the participating role models are to achieve a kind of imitation effect and be adapted for circumstances in other companies or organisations.</p> |
| Additional remarks | <p>In addition to MA 48, partners of the campaign are, among others, the federal government, the provinces, various waste associations, disposal companies, the WEEE Coordination Office, various recycling companies and producers.</p> |
| Source (if any) | <p>https://www.wien.gv.at/video/1353/Gruen-Weiss-trennt-sich</p> <p>https://www.wien.gv.at/umwelt/ma48/beratung</p> |