

# Apprenticeship For The Development Of Design Thinking(ADDET)

Project N°: 2020-1-RO01-KA202-079926



VET - COMPANY PARTNERSHIPS FOR APPRENTICESHIPS GUIDE IO3

COPYRIGHT

© Copyright 2020 ADDET Consortium

### The Project Partners

- 1- Colegiul Economic "Ion Ghica" Braila / ROMANIA
- 2- MAGENTA CONSULTORIA PROJECTS SL / SPAIN
- 3- IDEC / GREECE
- 4- ZENTRALSTELLE FUR BERUFSBILDUNG IM HANDEL EV ZBB / GERMANY
- 5- Antalya İl Milli Eğitim Müdürlüğü / TURKEY
- 6- KLUB PO UPRAVLENIE NA ZNANIYA, INOVACII I STRATEGII / BULGARIA
- 7- CESIE / ITALY

This document may not be copied, reproduced, or modified in whole or in part for any purpose without written permission from the ADDET Consortium. In addition, an acknowledgement of the authors of the document and all applicable portions of the copyright notice must be clearly referenced.

All rights reserved.

This document may change without notice.

Author: Antalya Directorate Of Education

26.08.2022

## OBJECTIVES OF THE OUTPUT

The aim of this document is to provide a guide for the establishment of apprenticeships partnerships between VET companies and schools.

The objectives of this output are:

- To promote the notion of VET – companies’ partnerships at local level
- To support the creation of partnerships with practical tools
- To promote the apprenticeship model for the development of entrepreneurial spirit
- To prepare the ground for the piloting activities to experiment and validate the apprenticeship model
- To promote partnerships between VET schools and enterprises
- To develop a “VET – company partnerships for apprenticeships guide”

The “VET-company partnerships for apprenticeships” guide will encourage and support local companies and VET centres to join the partnership and adopt the apprenticeship model. The guide will present practical support for the creation of partnerships and successful stories in various sectors on the basis of the pilots.

## Contents

### Context

<b>OBJECTIVES OF THE OUTPUT</b> .....	3
<b>Contents</b> .....	4
<b>Context</b> .....	4
<b>APPRENTICESHIP FOR THE DEVELOPMENT OF DESIGN THINKING</b> .....	6
<b>1. APPRENTICESHIP IN EUROPE</b> .....	6
<b>2. BENEFITS OF APPRENTICESHIPS</b> .....	7
<b>3. ENTREPRENEURSHIP POLICIES AND PRACTICE</b> .....	8
<b>4. THE ROLE OF SMES</b> .....	9
<b>5. THE ROLE OF VET CENTRES</b> .....	11
<b>6. STEPS AND GUIDING PRINCIPLES FOR THE ESTABLISHMENT OF A PARTNERSHIP FOR APPRENTICESHIPS IN ENTREPRENEURSHIP</b> .....	12
1) PRELIMINARY PLANNING .....	12
<b>2) PARTNERSHIP FOUNDATION</b> .....	12
<b>3) IMPLEMENTATION OF THE PARTNERSHIP</b> .....	13
4) PARTNERSHIP SUSTAINABILITY.....	13
<b>5) EVALUATION OF THE APPRENTICESHIP</b> .....	13
<b>6) TIPS</b> .....	13
<b>7. QUALITY ASSURANCE PRINCIPLES OF A VET-COMPANY PARTNERSHIP</b> .....	14
<b>1. Quality Assurance principles of a VET-company partnership</b> .....	15
<b>1.1. Roles and responsibilities of the different parties</b> .....	15
<b>1.1.1. Responsibilities of VET providers</b> .....	15
<b>1.1.2. Responsibilities of companies</b> .....	15
<b>1.2. Quality criteria for apprenticeships</b> .....	15
<b>1.3. Planning, implementation, evaluation and review of an apprenticeship programme according to the Addet Apprenticeship model for the acquisition of problem solving competencies and design thinking mindset.</b> .....	17
<b>The model focuses on the five phases of design thinking:</b> .....	17
<b>The model focuses on the problem solving competences:</b> .....	17
<b>1.1.3. Steps to plan, implement, evaluate and review an apprenticeship programme</b> .....	17
<b>2. QUALITY ASSURANCE PRINCIPLES OF A VET-COMPANY PARTNERSHIP</b> .....	18
<b>2.1. Place in the Education and Training system</b> .....	19

2.2. Governance structures.....	19
2.3. Training contents and learning outcomes .....	19
2.4. Cooperation among learning venues .....	19
2.5. Participation of and support to companies .....	20
2.6. Requirements and support to teachers and in-company trainers.....	20
2.7. Financing and cost-sharing mechanisms.....	21
2.8. Quality assurance.....	21
2.9. Apprentices' working and learning conditions.....	21
2.10. Responsiveness to labour market .....	21
8.GOOD PRACTICES COLLECTION TEMPLATE.....	22
9.AGREEMENT TEMPLATE (MEMORENDUM OF UNDERSTANDING).....	23
10.REFERENCES.....	29

## APPRENTICESHIP FOR THE DEVELOPMENT OF DESIGN THINKING

### 1. APPRENTICESHIP IN EUROPE

The European Commission defines apprenticeships as work-based learning periods formally combining and alternating company-based training with school-based education which lead nationally recognised qualification upon successful completion<sup>1</sup>. The apprenticeships, most of the times, is ruled by a formal contract between the employer, the apprentice and/or the VET education provider.

Achieving a better understanding of what is understood to be an apprenticeship is essential for involving companies in apprenticeship schemes, increase their attractiveness for young people and improve the general quality.

At the moment, many different vocational programmes fit within the EU definition of “apprenticeship” and provide separate vocational pathways for young people alongside school-based VET. The VET field is constantly subject to policy reforms and is largely influenced by national traditions and culture as well as employers’ associations.

Due to the peculiarities of national policies when it comes to apprenticeships it is difficult to find a clear and agreed definition of it.

According to the European Commission’s apprenticeships are characterized by the following:

- They are part of the formal VET system;
- They are ruled by a dual learning principle which combines or alternates enterprise-based training (periods of practical experience at a workplace) with school-based education (periods of theoretical/practical education in a school or training center);
- completing the apprenticeship leads to a nationally recognised VET certificate/degree;
- it is ruled by a contract between the company, the apprentice and/or the training institution;
- the apprentice is usually paid for the work

The time allocation between the two activities can vary according to national legislations. Taking into consideration these criteria, three apprenticeship schemes can be identified in Europe:

- a) type A apprenticeships, when training on the job overweighs theoretical learning (employment based);
- b) type B apprenticeships, where theoretical training is preponderant over in-company training, making it similar to a traineeship;

<sup>1</sup>European Commission (2015), “*European Alliance for Apprenticeships – Good for Youth, Good for Business*”

<sup>2</sup>[http://erc-online.eu/wp-content/uploads/2016/05/Employers\\_Final-Report-on-Apprenticeships-May-2016.pdf](http://erc-online.eu/wp-content/uploads/2016/05/Employers_Final-Report-on-Apprenticeships-May-2016.pdf)

c) type C apprenticeships (dual apprenticeships), which are characterized by a balance between learning and training, with the involvement of different stakeholders at local level.

Evidence proves that countries with a strong VET and apprenticeships system have lower levels of youth unemployment, facilitating a smoother transition from education and training to work. Still in too many EU Member States, VET (particularly at upper secondary level) suffers from lack of esteem. Perception of VET is poor when compared to general education, with a tendency still to consider VET as a second choice for second-rate students.

With the purpose to strengthen the quality, supply and image of apprenticeships in Europe, as well as that of VET education, the European cross-industry social partners have launched in 2013 a European Alliance for Apprenticeships. The majority of Member States have committed to the European Alliance for Apprenticeships and this has supported plans for the reform of apprenticeship system in order to address youth unemployment, tackle skills shortages and mismatches and provide qualified workforce to boost growth.

## 2. BENEFITS OF APPRENTICESHIPS

The positive impact of apprenticeships policies not only results in increased employment opportunities for young people but extends to the company’s welfare and society in general. Among others:

- reduced skills mismatch
- opportunity to train from scratch fresh workforce
- increased enterprise loyalty
- improved brand image and reputation
- earnings arising from the work of the apprentice
- reduced recruitment costs when apprentices are retained in the business
- improvements in the diversity of the enterprise’s staff
- a cheap way to recruit talented individuals and to pick up the best in times of demographic change
- increased tax revenues on local level
- reduced marginalization and welfare costs
- opportunity to learn a job and enter the job market
- potential grants and subsidies from the state
- opportunities to improve the reflective skills of all staff who become involved in supporting or training apprentices

### 3. ENTREPRENEURSHIP POLICIES AND PRACTICE

Entrepreneurship education is identified as a priority in the Europe 2020 Strategy, in the EU's policy framework on small and medium enterprises (SMEs) and in the EU's key strategies for education and training.

The European Union's policy framework on small and medium enterprises (SMEs), through the overarching Small Business Act for Europe and the Entrepreneurship 2020 Action Plan<sup>3</sup>, emphasizes the importance of entrepreneurship education in building an entrepreneurial culture in the EU, which in turn will result in a more competitive economy, job creation and social cohesion.

At the same time, entrepreneurship education is considered a self-standing competence. Since 2006, entrepreneurial attitude has been defined at full title one of the eight key competences for lifelong learning defined by the European Parliament and Council as the set of knowledge, skills and attitudes that are fundamental for each individual in a knowledge-based society which should be acquired at the end of compulsory education and through lifelong learning<sup>4</sup>.

Integrating entrepreneurship education into policy, curricula and related qualifications frameworks means ensuring that students acquire the key competence of entrepreneurship. However, it is unlikely to be sufficient: due to the novelty and complexity of entrepreneurship education, achieving this goal will require a bigger effort.

In this sense, the European Commission has solicited Member States to introduce students to entrepreneurial experiences before leaving compulsory education which could range from running a training firm to manage an entrepreneurial or a social project. Most of the Member States already implement training or cooperation programmes allowing students to have some form of practical entrepreneurial experience, but their implementation is not uniform. Moreover, not all the experiences are capable of developing the key competence of entrepreneurship<sup>5</sup>.

Many of the measures promoting and supporting entrepreneurship typically take place outside the formal education system and include non-formal entrepreneurship training for specific groups (or training for SMEs).

The adoption of a key competence approach to entrepreneurship education means ensuring that all those who complete formal education acquire the knowledge, skills and attitudes defined under the EU competence entitled "a sense of initiative and entrepreneurship", and that they can further develop this competence through lifelong learning. In addition to considering organizational options for delivering entrepreneurship education, adopting a key-competence approach requires paying equal attention to course content and learning outcomes. In particular, curricular approaches should reflect the fact that the key competence of entrepreneurship in a broader sense means the capability to "turn ideas into action", a key component of employability<sup>6</sup>. In this sense, entrepreneurship education should cross the boundaries of the "Economics" and "Business" sector to become a general competence to be provided compulsively to all students.

#### 4. THE ROLE OF SMES

Small and medium-sized enterprises (SMEs) employ two thirds of the European workforce and account for 99% of all European companies<sup>7</sup>.

<sup>3</sup>European Commission (2013), “*Entrepreneurship 2020 Action Plan: Reigniting the entrepreneurial spirit in Europe*”

<sup>4</sup>European Commission, DG Education and Culture (2006), “*Key competences for Lifelong Learning: European Reference Framework*”

<sup>5</sup>South East Centre for Entrepreneurial Learning, “*Entrepreneurship Education in the European Union: an overview of policies and practice*”

<sup>6</sup><http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=23932&no=3>

<sup>7</sup>European Commission (2017), “*Annual Report on European SMEs 2016/2017: Focus on self-employment*”

Despite their importance for the European economic growth and job creation, SMEs hardly engage in apprenticeships programmes, differently from larger businesses. Averagely, even in countries where apprenticeships culture is widespread, bigger companies enrol more apprentices than smaller ones. The main reasons for this reluctance rely on bureaucracy, costs, internal shortfalls and lack of time to invest in training.

A relevant and sound VET education addressing the labour market needs can tackle the issue of unemployment which affects more than the 16% of youngsters aged 15 to 24 (Eurostat data 2017) across the European Union.

VET education has proved to be effective in easing transition from education to work in those countries with a consistent apprenticeships tradition, raising the attentions of policy-makers across Europe. Now the European Commission is promoting apprenticeships as a key component of a wider strategy to tackle youth unemployment and social exclusion<sup>8</sup>.

As SMEs account for 99% of all European companies and 67% of employment in the European Union, public authorities have naturally been looking to them for ways to increase their commitment to apprenticeships.

By combining learning and work, apprenticeships allow young people to gain work experience while acquiring hands-on skills matching (their) employers' requirements insofar that apprentices often stay in the company after the end of their training period.

Apprenticeships are a cost-effective way for SMEs to handle recruitment processes. By providing initial vocational training, companies enable themselves to better select and train their future employees and secure skilled workers: training an apprentice allows a company to shape a young person's work habits and to retain, over time, a qualified and motivated employee.

Even for those who are not hired in the company after the training period, apprenticeships allow to find a qualified job than their peers from general education or school-based VET.

On a general level, a well-functioning apprenticeship programme improves the school-to-work transition and raises employability, making available medium level skills which are particularly valuable for SMEs<sup>9</sup>. Systemic cooperation between VET schools or training centres and companies is essential in order to ensure good quality apprenticeships and enhance a smooth transition from school and work. Particularly SMEs with limited administrative resources may benefit from such continuous cooperation and support, including access to skilled and specialised labour, access to regional innovation networks or other opportunities to improve their business activities. VET organisations, on the other hand, can benefit from a continuous update on the skill needs, job profiles and use of technology in companies.

Ensuring responsiveness to market needs requires an approval procedure for recruiting training companies and permanent organizational supportive measures. In this context, it is important to involve social partners that have the sector specific expertise. They are therefore key players in defining the skills and competences required in setting quality standards.

VET-schools or training centres and companies can establish partnerships with specific objectives, for instance in the form of common school-enterprises development projects, or can create general partnerships that not only focus on apprenticeships, but also on other issues, such as research, regional innovation or entrepreneurship.

<sup>8</sup>Cedefop (2011), *"Making apprenticeships work for Small and Medium Enterprises: what does it take to strengthen their commitment?"*, Briefing note. <sup>9</sup>European Commission, DG Employment, Social Affairs and Inclusion (2015), *"Guidance Framework. Support for Companies, in particular SMEs, offering apprenticeships: Seven guiding principles"*

In all cases, companies have to negotiate a training plan, provide the facilities, range of work and supervision as well as keeping constant contact with the training centre in order to provide the apprentice with a relevant experience.

Throughout the whole period, the tutor will represent the reference point for the apprentice as mentor and support figure. The tutor will not only show, demonstrate and explain the work to the apprentice, but will also act as facilitator between the apprentice and the company's environment. At the end of the training period, the successful achievement of the competencies expected in the training plan will be certified through a training record and the release of an entitlement. The duties of companies in the establishment of apprenticeships include:

- evaluate the availability of material and human resources for the creation of an apprenticeship programme;
- identify training figures;
- establish a cooperation with the VET institution;
- define a training and learning path with the VET institution;
- sign an apprenticeship partnership agreement;
- provide training to the apprentice;
- pay the apprentice, ensure safe working conditions and social security;
- evaluate the progress and achievements of the apprentice;
- release a certification.

## 5. THE ROLE OF VET CENTRES

Vocational training is in constant response to match the people's and the different sector's demand. Indeed, theoretical and practical training for students are adapted to the social and economic reality. VET centres are the privileged stakeholders for SMEs willing to engage in apprenticeships policies thanks to their territorial roots: through this continuous dialogue the training offer is constantly improved and adjusted on the labour market's skills needs.

This feedback system allows to set up new or update existing qualifications, VET programmes or curricula. Thus, new or changing demands coming from the labour market are easily identified and placed on the education and training agenda to adapt the training provisions.

In many countries, VET-schools and VET-training centres also offer services to match the apprenticeships offered by companies better with apprentices searching for such opportunities.

The main role of the VET centre within the apprenticeship relationship is to provide theoretical learning and guidance to the apprentices.

Since SMEs, especially micro enterprises, cannot always afford to make staff available to supervise apprentices or to deal with the administrative requirements their training entails<sup>10</sup>, training centres can alleviate such problems by organising supplementary, external training.

The apprenticeship is regulated by a contract between the company and the VET centre or can consist in a multilateral relationship between the VET centre, the company and the apprentice.

<sup>10</sup> Cedefop (2011), "Making apprenticeships work for Small and Medium Enterprises: what does it take to strengthen their commitment?", Briefing note.

The training centre, generally speaking, is in charge of the management of the administrative procedures for the implementation of the apprenticeship and monitoring the respect of mutual obligation between the company and the VET centre as well as towards the apprentice.

VET roles in the establishment of an apprenticeship agreement include:

- research of work-based learning opportunities;
- create a cooperation network with local companies;
- define a training and learning plan with the company;
- provide in-class training to the apprentice;
- monitor the progress and effectiveness of the apprenticeship;
- monitor the fulfilment of contractual duties towards the apprentice;
- provide a final evaluation of the apprenticeship.

## 6. STEPS AND GUIDING PRINCIPLES FOR THE ESTABLISHMENT OF A PARTNERSHIP FOR APPRENTICESHIPS IN ENTREPRENEURSHIP

Apprenticeships partnerships can be a good fit for small and midsized firms that aren't sure how to select or train untraditional candidates but want to expand their hiring and are willing to mentor them into a role. Establishing apprenticeships in entrepreneurship can be seen as a challenging activity, since entrepreneurship and entrepreneurial attitude are often perceived as something which cannot be taught. It is common belief that entrepreneurship is an innate ability often associated with boldness, daring, imagination, or creativity which cannot be channelled in a structured training path.

However, in the last years this paradigm has been changing and now entrepreneurship classes and seminars are flourishing in education, training and working environments.

An effective path to implement successful apprenticeship partnerships between SMEs and VETs should be carefully designed and include at least the following steps:

### 1) PRELIMINARY PLANNING

Before setting up a partnership, it is important to have a clear scenario taking into consideration all possible obstacles and risks. In this sense, it is essential to:

- Identify the sector, the profile of the students, the activities (the knowledge that will be provided to the students)
- Describe tasks, learning outcomes, required competences, the duration, the cost...

### 2) PARTNERSHIP FOUNDATION

After assessing the opportunity of an agreement to start an apprenticeship path, partners have to:

- Meet in person or via Skype
- Sign an agreement for the assignment of duties and responsibilities
- Define methodologies for monitoring and assessment and evaluation tools

### 3) IMPLEMENTATION OF THE PARTNERSHIP

The development of the activities needs to be constantly monitored and, eventually, adjusted in order to provide effective learning opportunities, ensure quality and guarantee safe working conditions. Particular attention has to be devoted to:

- Time framework and communication between partners
- Monitoring and supervision
- Tutoring and mentoring activities
- Guarantee of safe working conditions
- Fair treatment and mutual respect

### 4) PARTNERSHIP SUSTAINABILITY

In order to ensure long term impact of the partnership, partners are suggested to:

- Set up a contingency plan (risk analysis, ...)
- Design a sustainability plan
- Keep on tracking the progress after the training is over (e.g. in cases of hiring after the training period)

### 5) EVALUATION OF THE APPRENTICESHIP

The partnership could be a success, but also a failure or only need some adjustments. In order to assess the quality of the apprenticeship, ensure continuous improvement and promote fruitful collaboration all partners should:

- Deliver an evaluation at the end of the apprenticeship period
- Write recommendation for improvement (positive and negative)
- Organize a meeting with the VET centre and the company to review the apprenticeship (if the student is present it is even better)

### 6) TIPS

- Evaluate the possibility to involve intermediary organizations
- Participate in show-ups and events like career days and open days in VET centres and companies (e.g. the European Vocational Skills Week)

## 7. QUALITY ASSURANCE PRINCIPLES OF A VET-COMPANY PARTNERSHIP

The implementation of good-quality apprenticeship requires significant investments (financial, infrastructure, human, etc.). Understandably, most employers want to tailor the training to the specific skill needs of the company to help offset these costs. However, this could be risky for the apprentice, who needs to be generally employable and to develop general skills and competences covering “whole professions”<sup>11</sup>.

<sup>11</sup> European Commission, “*High performance apprenticeships & work-based learning: 20 guiding principles*”.

In order to ensure the employability of young people the content and provision of apprenticeships must be reviewed continuously in view of the labour market needs while respecting the skill needs of the individual training company<sup>12</sup>.

According to Cedefop, apprenticeships policies share characteristic features, present to different extents and in different combinations which may be prerequisites for quality apprenticeship<sup>13</sup>.

This Quality Assurance framework is designed to be adopted by VET centres and companies in order to monitor and assure high quality during apprenticeship programmes, where the apprenticeship model for the acquisition of problem solving competencies and design thinking mindset produced by Addet will be applied.

The aim of the Quality Assurance framework is to ensure:

- the effective implementation of the model for the acquisition of problem solving competencies and design thinking skills, during apprenticeships in a company.
- the quality of offered apprenticeships
- formative feedback
- maximum impact of the model

The quality assurance standards presented below, will be inserted in the Memorandum of Understanding, signed by both VET centres and companies. These standards detail the overall approach to quality of internships and the project consortium urges the parties involved in apprenticeships to commit to them and to apply a clear and coherent code of conduct, leading by example.

## 1. Quality Assurance principles of a VET-company partnership

### 1.1. Roles and responsibilities of the different parties

#### 1.1.1. Responsibilities of VET providers

- VET providers should sign a legally binding contract with the apprentice and the hosting organisation, which will outline the main principles of the apprenticeship, including how many credit points this will contribute to the diploma of the intern/apprentice; a description of learning objectives and tasks should be attached to the contract.
- VET providers should cooperate with the company that hosts the apprenticeship and monitor the process and progress of the apprentice.
- VET providers should hand in all necessary documentation that the company needs to keep during the apprenticeship.

#### 1.1.2. Responsibilities of companies

- Companies should share with the student at the beginning of his/her apprenticeship length and tasks of the apprenticeship with a refer to specified learning objectives. - The employer should reimburse apprentices according to collective agreements, or a national and/or sectoral minimum legal wage, for the period of training.
- In-company trainers should be designated for each apprentice, who will undertake the effective implementation of educational activities, monitor the progress of the trainee and give feedback to the VET provider.
- Companies should possess appropriate facilities, means and equipment for the implementation of the apprenticeship.
- Companies should comply with the health and safety rules and provide individual protection means to the apprentice if deemed necessary, according to national legislation.
- Companies should keep a training record of the apprenticeship and communicate it with the VET provider.

### 1.2. Quality criteria for apprenticeships

1. Apprenticeships should be built on stable foundations – on the basis of national law, regulations and/or collective bargaining agreements.
2. Apprenticeships should provide good quality training in the workplace, with in company mentors trained for this purpose, and also within training institutions employing trainers that have up-to-date and appropriate skills. Both mentors and trainers should enjoy good working conditions so that they are able to do their job properly.

3. Comprehensive learning outcomes defined in accordance with national legislation should be agreed by the employers and vocational education and training institutions and, where appropriate, trade unions. This should ensure a balance between job specific skills, knowledge and key competences supporting both the personal development and career opportunities of the apprentices.
4. Apprenticeships should provide appropriate career guidance, mentoring and learner support before and during the apprenticeship to ensure successful outcomes, to prevent and reduce drop-outs as well as support learners
5. VET schools and providers should provide assistance to students when they search for a suitable apprentice programme.
6. VET schools and companies should apply mechanisms to promote the exchange of good practices
7. Apprenticeships should guarantee high quality and safe working environments
8. Apprentices should be entitled to social protection, including necessary insurance in line with national legislation.
9. Apprenticeships should cater for the real employment and skills needs of employer within the framework of sectoral and/or national priorities.
10. Apprenticeships should ensure that apprentices are paid by the employer, according to collective agreements, or a national and/or sectoral minimum legal wage, for the period of training
11. Apprenticeships should be primarily a learning experience thus should never lead to job replacement.
12. Apprenticeships should be competence-based and have a duration which enables apprentices to attain the appropriate standards to work competently and safely.
13. Apprenticeships should ensure equal access, promote gender balance and tackle discrimination in apprenticeship schemes.
14. Apprenticeships should have robust quality assurance procedures.
15. Quality assurance approaches should be in place taking into account the European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET), including a process allowing a valid and reliable assessment of the learning outcomes. The tracking of employment and career progression of the apprentices should be pursued, in accordance with national and European legislation on data protection .

### 1.3. Planning, implementation, evaluation and review of an apprenticeship programme according to the Addet Apprenticeship model for the acquisition of problem solving competencies and design thinking mindset.

The Addet apprenticeship model is meant to be a pillar and its purpose is to enhance the acquisition of problem solving competencies and design thinking mindset and competences by upper secondary and higher VET students, by applying problem solving competencies and design thinking mindset.

#### The model focuses on the five phases of design thinking:

- Empathize: It is important phases to understand what is the problem.
- Define: By collecting the data ,need analyze is done by VET students to define the problem in a human-centric way
- Ideate: VET students begin generating new ideas to solve the defined problem with free thinking.
- Prototype: Vet students create multiple approaches to solving the problem.
- Test: combining skills and the best solutions to solve the problem. Fine tuning phase of creating solutions with problem solving skills.

#### The model focuses on the problem solving competences:

- Analyze: Data gathering, Data analysis ,Fact-finding and Historical analysis
- Generate Interventions: Brainstorming, Creative thinking, Prediction, Forecasting, Project design, Project planning
- Evaluate Solutions: Analysis, Discussion, Corroboration, Teamwork, Prioritizing
- Implement Plan: Project management, Project implementation, Collaboration, Time management, Benchmark development
- Effectiveness: Communication, Data analysis, Surveys, feedback, Follow-through, Troubleshooting

### 1.1.3. Steps to plan, implement, evaluate and review an apprenticeship programme

#### Defining the apprenticeship

To develop an apprenticeship programme, first companies need to define the scope of the programme, the standards, the goals and the benefits for the organisation.

The next step is to define the strategy, by which the organisation will implement the apprenticeship programme.

### Create partnerships

After defining the scope, networks of VET providers and companies, should be build. Good collaboration and shared vision are critical for the success of apprenticeships programmes. Moreover, shared vision and goals are vital for the success of an apprenticeship that meets the needs of all parties involved.

During this stage, both institutions should agree on their roles and responsibilities and sign the Memorandum of Agreement.

### Design a high-quality apprenticeship programme based on the addet model

After the agreement between organisations is signed, both should work together in order to design a high-quality apprenticeship programme which will enhance the acquisition of design thinking mindset and competences by applying problem solving competencies.

### Evaluate and review apprenticeship programme

The next step is the monitoring and evaluation of the programme. Monitoring should be put in place from the beginning of the procedure. Both companies and VET providers should track outcomes and assess the impact of the programme on their organisations and on the apprentices. This assessment will help organisations make necessary adjustments for continuous improvement of the apprenticeship programme.

## 2. QUALITY ASSURANCE PRINCIPLES OF A VET-COMPANY PARTNERSHIP

The implementation of good-quality apprenticeship requires significant investments (financial, infrastructure, human, etc.). Understandably, most employers want to tailor the training to the specific skill needs of the company to help offset these costs. However, this could be risky for the apprentice, who needs to be generally employable and to develop general skills and competences covering “whole professions”.

In order to ensue the employability of young people the content and provision of apprenticeships must be reviewed continuously in view of the labour market needs while respecting the skill needs of the individual training company.

According to Cedefop(European Centre For The development of Vocational Education

Training), apprenticeships policies share characteristic features, present to different extents and in different combinations which may be prerequisites for quality apprenticeship .

### 2.1. Place in the Education and Training system

- Apprenticeship is regulated and defined in a legal framework
- The position of apprenticeship in relation to other learning paths is clear
- Apprenticeship offers both horizontal and vertical pathways to further specialization or education at all levels

### 2.2. Governance structures

- Clear definition and distribution of roles and responsibilities of the key players at national, regional, local levels
- Active engagement of employers' organizations and trade unions
- Recognition of the apprenticeships' importance at society level

### 2.3. Training contents and learning outcomes

- Regular evaluation and update of qualification standards and occupational profiles for the development of programmes and curricula
- Provisions for adjusting parts of curricula to local labour market needs
- Stipulation of minimum requirements to access apprenticeship programmes
- Final assessment covering all learning outcomes independently of learning venues
- Clear distribution and organization of content, duration and outcomes of company and school based learning

### 2.4. Cooperation among learning venues

- Cooperation, coordination and clear distribution of responsibilities among venues and established feedback mechanisms

- Training plan development with the contribution of the school, the company and the apprentice, according to the curriculum
- Cooperation among companies to ensure the acquisition of all required learning outcomes as provided in the curriculum
- Clear definition of the coordinator's role
- Clear definition of the administrative responsibilities for the company-based part of the programme

### 2.5. Participation of and support to companies

- Clear agreement on the rights and obligations of companies providing apprenticeships
- Marketing strategies and initiatives to promote apprenticeships and benefits for companies, including incentives
- Minimum requirements for companies willing to provide apprenticeship places and/or an accreditation procedure
- Non-financial support to implement apprenticeship
- Recognition and award for companies that provide quality apprenticeships
- Involvement of employer's organization in companies' engagement

### 2.6. Requirements and support to teachers and in-company trainers

- Qualified tutor assignment to accompany apprentices
- Clearly defined requirements and qualifications in the tutor vocation's field
- Pedagogical/didactic competence of the in-company trainer
- Continuous training path for tutors and teachers to develop and update their competences
- Cooperation and exchange between in-company trainers and VET teachers in schools
- Clear definition of ultimate responsibility for the apprentice learning

## 2.7. Financing and cost-sharing mechanisms

- Companies' costs' include wages and apprentice's materials
- Companies' costs can be supported by employer organisations and trade unions
- State economic support for VET schools and apprenticeships' grants
- Investment recovery thanks to the apprentice work
- Incentives (subsidies, tax deductions) to encourage companies to take on apprentices

## 2.8. Quality assurance

- Quality assurance systems cover apprenticeships

## 2.9. Apprentices' working and learning conditions

- Legal stipulation of rights and obligations of apprentices, both for working and learning
- Definition of a reference point for the apprentice's support
- Provision of an employment contract defining the rights, benefits and responsibilities of the apprentice
- Access to guidance and counselling services

## 2.10. Responsiveness to labour market

- Institutional procedures that allow apprenticeship to respond to or to anticipate the needs of the labour market
- Regular monitoring and evaluation of the apprenticeship outputs and outcomes
- Establishment of ex ante/ex post apprenticeships' evaluation mechanisms

## 8.GOOD PRACTICES COLLECTION TEMPLATE

<b>COUNTRY</b>
....
<b>CITY</b>
....
<b>VET CENTER</b>
...
<b>COMPANY</b>
...
<b>AGE TARGET</b>
...
<b>DESCRIPTION OF THE APPRENTICESHIP</b>

...
<b>POSITIVE AND NEGATIVE IMPACTS</b>
...
<b>SUGGESTIONS FOR IMPROVEMENT</b>
....

## 9.AGREEMENT TEMPLATE (MEMORENDUM OF UNDERSTANDING)

### Agreement Template

#### Main Aspects

*Depending on the country and on legal regulations the apprentice will have to sign an agreement or a contract.*

*Below is the list of the fundamental aspects the agreement contain:*

- Identification of all parties (company and/or VET centre, apprentice)
- Name, address, etc.
- Agreement between the parties
- Contents (subject)
- Tasks (plan)
- Deadlines/periods
- Resources
- Responsible persons
- Rights and duties (each of the parties)
- Date and place
- Signature and stamp of all parties

\*This agreement template must be adapted according to national regulations.

## MEMORANDUM OF UNDERSTANDING

Agreement between.... (company name) and .....(institution name)

This Memorandum of Understanding hereinafter referred to as the “Agreement” is entered into the ... [company’s name] with its registered office and address in ... [address] , [VAT No]..... represented by the Chief Executive Officer/Managing Director ... [full name], hereinafter referred simply as ...(company abbreviation ) collectively referred to as the “Parties”.

... [company’s name] in the following referred to as ...,  
and

... [Project partner institution’s name], hereinafter referred to as ...  
conclude this framework agreement for vocational education and training.

The parties have mutually agreed upon the following terms and conditions relative to their negotiations and the basic terms.

### Article 1

#### Objective of the agreement

This framework agreement regulates the conditions and performances between the contracting parties, which are part of the process to develop vocational education and training in ... [country’s name], in the profession of...(field area) .

The purpose of the present Memorandum is to facilitate collaboration between the Parties here to in matters of common interest to them, and to establish the arrangements necessary for the implementation of the Memorandum.

They agree to carry out monitoring and evaluation activities to assess the impact of activities on participating organizations.

## Article 2

### Implementation of the training

The training period covers ...(the number of years) years. It starts at xx.xx.xxx and ends at xx.xx.xxxx.

The training takes place at two learning places:

- at ... [company's name], where the practical training content is taught;
- at ... [institution's name], where the theoretical knowledge of the profession is taught.

The scope of the practical training is defined in the training contract between the company and the apprentice.

The scope of the theoretical training covers as a whole ...(hours) hours. The corresponding schedule is part of the annex to this agreement.

The training period ends with the completion of the final examinations required by applicable ... [country's name] law.

If the apprentice does not pass the final examinations, his apprenticeship is extended until the next possible examination.

## Article 3

### Duties of ... [company's name]

Within the framework of vocational education and training ... [company's name] practically trains ... [number of apprentices] apprentices in the profession of ... (field area)

In order to participate in the theoretical part of the training, the apprentices are going to be sent to the ... [institution's name].

The obligations of ... [company's name] towards the ... [institution's name] are the result of the contract concluded between the two parties on ... [date].

## Article 4

### Duties of ... *[institution's name]*

The ... *[institution's name]* conducts the training according to the framework curriculum of the respective profession, which has been coordinated with the competent authority of the public administration in ... *[country's name]*.

The ... *[institution's name]* informs the ... *[company's name]* about the prerequisites that the apprentices must fulfill in order to be able to take part in the theoretical training course. For further details, please see the schedule in the annex on the distribution of theoretical and practical training.

The ... *[institution's name]* undertakes the appropriate measures necessary in order to carry out the theoretical training of the respective profession.

The learning group consists of the apprentices whose practical training is carried out in different training enterprises.

After completing the final examinations, the ... *[institution's name]* will provide the apprentices a state-recognized certificate which demonstrates the acquired professional qualification.

## Article 5

### Liability and force majeure

Each contracting party shall be liable to the other contracting parties for the breach of contractual obligations. Exceptions are cases of force majeure.

Force majeure, e.g. natural disasters, labour disputes, unrest, armed conflict or terrorism which lead to unpredictable consequences for the performance of the contract shall relieve the contracting parties of their performance obligations for the duration of the disturbance and to the extent of their impact, even if they are in default. Automatic contract resolution is not associated with this. The contracting parties are obliged to notify themselves of such events and to adapt their obligations to the changed circumstances in good faith.

If, in the event of force majeure, performance of the contract becomes impossible in the long term, the contracting parties are entitled to terminate the agreement.

## **Article 6**

### **Term of the agreement**

The agreement shall enter into force on the date of its signature.

The agreement term ends on **xx.xx.xxxx (date)** for the training period beginning on **xx.xx.xxxx(date)**.

The contracting parties may extend the contractual relationship by mutual agreement as often as the will of all parties shows.

## **Article 7**

### **Termination of the agreement**

The foregoing agreement may terminate as follows:

- by a consensual written declaration by all contracting parties.
- by expiry of the agreed term (see Art. 6).
  
- each contracting party may terminate the agreement without notice for good cause, in accordance with the legal provisions. Any claims for damages remain unaffected.

## **Article 8**

### **Final provisions**

This agreement and its annexes constitute the entire agreement of the contracting parties. There are no silent, verbal or written ancillary agreements. Amendments and additions to this contract require their written form to be effective. This also applies to the amendment or abolition of this font clause.

The contracting parties undertake to keep silence about all their business matters acquired within the framework of vocational education and training.

Should provisions of this contract be wholly or partly null, invalid or unenforceable, or lose their legality or feasibility later, the validity of this agreement shall not be affected. The same applies to the extent that

a breach should arise in the agreement. In place of the ineffective or impracticable regulation or the filling in of the contractual gap, the parties will make an appropriate regulation which, as far as legally possible, comes closest to

what the contracting parties had wanted or according to the purpose and purpose of the agreement.

The parties to the contract undertake to carry out a mediation procedure in the event of disputes arising from this agreement before the legal proceedings are terminated, with the aim of an amicable agreement with the aid of a jointly commissioned mediator. The mediation procedure is initiated by written notification of a contracting party. The contracting party has to propose a mediator. The proposal is not binding on the other contracting parties. If the contracting parties cannot agree on a common mediator within one month after receipt of the notification, the mediation procedure shall be deemed to have failed.

This agreement has been made in two copies, one for each party.

The parties agree ... [city], ... [country' name], as the court of their mutual rights and obligations under this agreement ... [country's name] law applies to this agreement.

Done at .....Place, ....date  
.....[company's name]

.....(Name of legal representative)  
.....(Signature and stamp)

Done at .....Place, ....date  
..... [institution's name]

..... (Name of legal representative)  
..... (Signature and stamp)

## 10. REFERENCES

Albizu E., Olazaran M., Lavia C., Otero B., (2011), “Relationship between vocational training centres and industrial SMEs in the Basque Country: a regional innovation system approach”, Intangible Capital.

Cedefop (2018), “Apprenticeship schemes in European countries: a cross nation overview”, Luxemburg, Publication Office of the European Union.

Cedefop (2011), “Making apprenticeships work for Small and Medium Enterprises: what does it take to strengthen their commitment?”, Briefing note, Luxemburg, Publication Office of the European Union.

Cedefop (2017), “Cedefop European public opinion survey on vocational education and training”, Luxemburg, Publication Office of the European Union.

European Commission, “EntreComp: The Entrepreneurship Competence Framework”, JRC Science for Policy Report, 2016.

European Commission (2013) “Entrepreneurship 2020 Action Plan: Reigniting the entrepreneurial spirit in Europe”.

European Commission, ”High-performance apprenticeships & Work-Based Learning: 20 Guiding principles”.

DG Employment, Social Affairs and Inclusion (2015), “Guidance Framework: support for companies, in particular SMEs offering apprenticeships, seven guiding principles”.

Klein, P. G. (2006), “Can entrepreneurship be taught?”, Journal of Agriculture and Applied Economics.

South East Centre for Entrepreneurial Learning, “Entrepreneurial education in the European Union: an overview of policies and practice” (2015).