



Innovative Training Programmes for Dual Education in the Alpine Space

WP T2 Innovation and quality in dual education

D.T2.3.1 Best practice collection report

New Design University / Austria

Julia Pintsuk-Christof, M.A.

Univ.-Prof. (NDU) Mag. Stefan Moritsch

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1. Introduction

Policy makers and stakeholders at national and EU level recognise the important role of dual education in addressing difficulties in the transition phase from education to work, in improving the skills supply and in fostering entrepreneurship and innovation. However, countries in Europe and the Alpine Space are in very different starting positions. Even well performing dual education systems face challenges, such as engaging employers, inclusion of marginalized groups, demographic change, and innovation and adaptation to new professional realities. One of the strengths of the Alpine economy is a strongly rooted tradition in the skilled crafts and trades sector. In order for SMEs to remain competitive in this sector, they need a skilled workforce that is able to keep up with technological, social, business and design innovations. Yet, SMEs in this field find it increasingly difficult to get new apprentices.

DuALPlus will go new ways to address these challenges and to increase the attractiveness of dual education for skilled crafts and trades in the Alpine Space. The outputs and results of the project will directly benefit young individuals that decide for a career in the skilled crafts and trades sector. They will also benefit SMEs, tutors and master craftsmen that want to upgrade their teaching and technical skills. DuALPlus pursues three objectives. First, the project will improve the career guidance of youngsters and the public recognition of dual education as valuable learning path. Second, it will promote innovation and quality in dual education. And finally it will improve the framework conditions for innovation by increasing the horizontal and vertical permeability of the dual education system.

The project brings together SMEs, educational institutions, business support organisations such as handicraft clusters and chambers of commerce, universities and design institutes and regional public authorities from six Alpine countries: Regional Development Vorarlberg eGen (AT), New Design University (NDU), St. Pölten (AT), Technical University of Applied Sciences, Rosenheim (DE), Chamber of Trade & Crafts for Munich and Upper Bavaria (DE), Autonomous Province of Trento (IT), Ivh-Education and Service cooperation (IT), Chamber of Craft and Small Business of Slovenia, Auvergne-Rhône-Alpes Regional Chamber of Crafts (FR) as well as School of Art and Design, Valais (CH).

The objective of work package T2 is to innovate and increase the quality of dual education. Key factors in dual education are the teachers, in-company trainers and mentors. They need to be supported to continuously update their skills and competencies in order to respond to new technological and social realities. Training programmes will be co-developed and evaluated with the users (T2.4). The communities of practice (T2.1) will be involved in career guidance (T1) and will be the link for continuous education programmes (T3).

Under the guidance of the WPL, the project partners researched for initiatives and best practices for dual training programmes in their countries which are summarised in this report. They also adopted a joint methodology to evaluate their own training programmes. The evaluation took place in connection with the data collection for the SME needs assessment report (D.T2.2.1) which therefore also presents issues relating to the evaluation. There will be a deeper evaluation of dual training formats within activity T2.4 in the form of a focus group discussion with members of the Communities of Practice. The results of the evaluations as well as of the SME needs



assessment analysis will be the basis for the revision of existing, respectively the development of new dual training formats in activity T2.4.



2. Research interest and approach

The objective of this report is to present successful examples for innovative dual training programmes from Alpine Space as well as EU-wide activities. Because of the differences in the dual education systems of the partners' countries in general as well as in their current state of development, we included best practice examples describing renowned strategies for implementing and promoting dual education as well as concrete initiatives and programmes for dual education. As criteria for "best practice" all partners agreed on strategies, initiatives and programmes, which are long-standing and well-established, unique in their region or country respectively which have received awards.

Along with the results of the SME needs assessment report (D.T2.2.1), the best practice examples of this report will flow in the handbook (activity T2.5). Certain partners will use them for the revision respectively development of dual training formats in their region within activity T2.4 as well.



3. Innovative activities on dual education in EU

3.1. Dual education in EU-countries

European vocational education and training systems can rely on a well-developed network of vocational education and training (VET)-providers, which are governed with the involvement of social partners. Such partners include employers and trade unions as well as, in different bodies, chambers, committees and councils.

Vocational education and training systems comprise initial and continuing vocational education and training. Initial vocational education and training (I-VET) takes usually place either in a school-based environment (e.g. classroom) or in a work-based setting (e.g. training centers and companies). This differs in the EU-countries, depending on national education training systems as well as economic structures (see chapter 4).

Continuing vocational education and training (C-VET) usually follows initial education and training or takes place after beginning working life. Goals are to upgrade knowledge, help citizens acquire new skills, retrain and further their personal and professional development. Continuing vocational education and training is primarily work-based with the majority of learning taking place in workplaces.

According to data of the European Commission¹, on average 50% of European teenagers between 15 and 19 years old participate in initial vocational education and training at upper secondary level. It should be noted, however, that there are significant geographical differences in participation ranging from 15% to more than 70%.

3.2. EU-wide best practice examples

The Bruges Communiqué and the Riga Conclusions have further enhanced European cooperation on vocational education and training. So, EU institutions, member states, candidates and European Economic Area countries as well as social partners and European providers of vocational education and training agreed on a set of priorities and deliverables for the period 2015-2020. These include:

- Promotion of work-based learning in all its forms, with special attention to apprenticeships, by involving social partners, companies, chambers and vocational education and training-providers, as well as stimulating innovation and entrepreneurship
- Further development of quality assurance mechanisms in vocational education and training in line with the Recommendation on the establishment of a European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET), and to establish continuous information and feedback loops in I-VET and C-VET systems based on learning outcomes
- Enhancement of the access to vocational education and training and qualifications for all through more flexible and permeable systems, notably by

¹ https://ec.europa.eu/education/policies/eu-policy-in-the-field-of-vocational-education-and-training-vet_en, last call: 28.10.19.



offering efficient and integrated guidance services and by enabling the validation of non-formal and informal learning

- Strengthening key competences in vocational education and training curricula and provide more effective opportunities to acquire or develop those skills through I-VET and C-VET.
- Introducing systematic approaches to, and opportunities for, initial and continuous professional development for vocational education and training teachers, trainers and mentors in both school- and work-based settings

The Commission's work on vocational education and training is supported by the European Centre for the Development of Vocational Training (Cedefop) as well as the European Training Foundation (ETF). Cedefop supports in the development of European vocational education and training policies due to its research, analyses and information on vocational education and training systems, policies and practices, skill needs and demands in the EU. ETF contributes to the development of professional skills and competences.²

There are several best practice examples on EU level. In the following, we introduce a selection of current cooperations and activities.

- **European Alliance for Apprenticeships (EAfA)**³: This multi-stakeholder platform unites governments and key stakeholders to strengthen the quality supply as well as overall image of apprenticeships across Europe. Another aim is to promote the mobility of apprentices. Members can benefit from Apprenticeship Support Services, such as online resources and networking opportunities, which enable like-minded individuals to connect, learn and act.

EAfA's goals are promoted national commitments and voluntary pledges from stakeholders. Members include national governments, companies and business organisations, chambers of industry, commerce and crafts, education and training providers, youth and non-profit organisations, regional and local authorities, social partners, professional bodies and networks as well as research institutes and think tanks. They are able to find partners, promote their events, develop new ideas and activities as well as provide access to the latest news and tools on apprenticeships.

The European Alliance for Apprenticeships is open to EU, EFTA and candidate countries, as well as stakeholders from these countries. It promotes youth employment and supports the aim of the Youth Guarantee, while reducing the disparity between skills supply and demand on the labour market.

- **European Apprentices Network (EAN)**⁴: This network of apprentices at European level was established in 2017 with the aim to make sure that the voice of young apprentices is heard in discussions related to vocational education and training, in particular for apprenticeships. It is formed by current as well as former apprentices, representatives of student structures and representatives of youth labour unions. The network was created in

² https://ec.europa.eu/education/policies/eu-policy-in-the-field-of-vocational-education-and-training-vet_en, last call: 28.10.19.

³ <https://ec.europa.eu/social/main.jsp?catId=1147>

⁴ <https://apprenticesnetwork.eu/>



cooperation of the European Youth Forum (OBESSU) and with the support of DG Employment of the European Commission.

The members meet four times a year, alongside the meetings of European Alliance for Apprenticeships. They are working in between the physical meetings, using online discussion spaces, as well as through individual participation in events as well.

The role of the European Apprentices Network is, first, to develop the views of young people on apprenticeships through exchanging experiences and best practices, discussing challenges, sharing information on important educational policies or research developments. Second, to function as an informal consultative body of the European Commission on apprenticeships, especially for the EAfA, by providing input to EC proposals respectively initiatives, events or EAfA meetings. Third, to facilitate contacts between youth organisations and other actors of apprenticeships, in particular members of EAfA.

- **ET 2020 Working Group on Vocational Education and Training**⁵: ET 2020 working groups are set up as part of the EU's policy cooperation process in education and training supporting common policy objectives. They support policymaking at the EU and national levels, and offer a forum for the exchange of experiences and best practices on ways to address the key challenges facing education and training systems.

Their members are government officials appointed by EU Member States and other participating countries. There are also several representatives from stakeholder organisations and social partners are also appointed to the groups.

The Working Group on Vocational Education and Training focus on the role and potential of innovation, with a focus on digitalisation to create more flexible, sustainable and high-quality vocational education and training systems. This includes examining innovation and digitalisation within vocational education and training, and its link to other pathways, but also reflects the impact of broader trends of innovation and digitalisation in the economies and labour markets on vocational education and training, such as industry 4.0, automisation or artificial intelligence.

The aim is enhancing the employability and personal development of young learners and people of working age in vocational education and training, to contribute to the competitiveness of companies, as well as sustainable growth and social cohesion. The main priority areas of the working group include, first, the establishment of innovative teaching styles for teachers and trainers. Second, the strengthening of key competences by adapting curricula respectively training programmes and regulations, which are responsive to rapidly changing labour markets. Third, the creation of new learning environments and organisational developments in training institutions and companies. Fourth, the working group aim at ensuring the use of modern learning technologies in vocational education and training and higher vocational education and training. Fifth, at fostering pro-active and flexible

⁵ https://ec.europa.eu/education/policies/european-policy-cooperation/et2020-working-groups_en



vocational education and training systems supporting smart specialisation strategies and cooperation through industry clusters. Sixth, at the promotion of quality and excellence in vocational education and training. Seventh, at the reinforcement of governance and financing via cost-sharing and investing in infrastructure. Eighth, the working group supports the learning mobility of vocational education and training, careers without borders as well as the internationalisation of vocational education and training.

- **University Business Cooperation**⁶: The goal of this cooperation is to build closer links between business and academia to encourage the exchange and sharing of knowledge, create long-term partnerships and opportunities as well as to drive innovation, entrepreneurship and creativity. Cooperations between universities and business are also able to support graduates to acquire the right skills and mind-sets required on the job market, as well as for their own personal development.

There are numerous examples of successful cooperation between academia and industry in Europe. The form and extent of such cooperations differ considerably between different countries, higher education institutions and academic disciplines.

- **University-Business Forum (UB Forum)**⁷: This forum was established in 2008 as a part of European Commission's initiative aimed at supporting modernisation of higher education as well as strengthening cooperation between academia and business on a European level. It serves as platform to bring closer the key drivers of the knowledge economy and those vital to regeneration and competitiveness of Europe.

The forum offers an opportunity for higher education institutions, companies, business associations, public institutions as well as students to present and discuss common issues, share examples of good practice and explore the benefits and value of ongoing cooperation and its strengthening.

After this insight into current EU activities, the following chapters focus on dual education as well as best practice models in the Alpine Space on macro-, meso- and micro-level.

⁶ https://ec.europa.eu/education/policies/innovation-in-education/university-business-cooperation_en

⁷ <https://oead.at/de/veranstaltungen/detail/2019/02/14/european-university-business-forum/>



4. Dual education in the Alpine Space

For a contextual understanding, it is necessary to give a short insight in the dual education systems of the partners' countries respectively possibilities of attending apprenticeships.

4.1. Austria

Austria is constituted by nine Regions, which have a certain level of autonomy. In view of the vocational education system, the federal government is main responsible.

The success of the dual system is the result of a process involving many institutions and bodies at different levels. At the federal level, there are the Ministry for Digital and Economic Affairs (BMDW) as well as the Ministry for Education, Science and Research (BMBWF). Latter defines the curriculum and partially finance the vocational schools. Each region has an Apprenticeship Office, placed at the Regional Economic Chamber (WKO), but subordinate to the Federal Ministry of Economy (BMDW).

Regional governments provide the financial resources for building and maintaining the vocational schools, for purchasing equipment, machinery and teaching materials and (together with the Federal Government) co-fund the salaries of teachers and trainers. The participation of companies and workers in the dual system is provided through several bodies.

At local level, enterprises hire apprentices. The on-the-job training is delivered through authorised trainers or instructors. Vocational schools provide general and theoretical training as well as some practical training.

Before they can hire trainees, the enterprises have to show they meet the legal requirements, in terms of suitable machinery and equipment, as well as of the skills of the trainers or instructors providing the on-the-job training. The trainer can be the entrepreneur him- or herself or another employee appointed by him or her. Trainers are required to have a professional expertise in the trade, or in a similar one, and to have passed the initial training instructor examination.

Enterprises can choose to train apprentices within the framework of training alliances with other companies as well. Since 2009, it is possible to carry out the apprenticeship through a supra-company training model (ÜBA), if a student is not able to find a placement in a company.

Beyond the on-the-job training, the trainees have to attend a vocational school for one day or a day-and-a-half per week, i.e. for 20% of the time. The organisation of the learning at the vocational school can also be blocked, e.g. continuously for eight weeks per year⁸. Curricula of vocational schools contain mainly basic knowledge and skills related to the chosen occupation. Though the curricula are defined at federal level, the schools are allowed to have a certain degree of autonomy.

The apprenticeship period ends with a leaving (practical as well as theoretical) examination, which verifies that the trainee has properly acquired the required skills.

⁸ Scheduled in certain periods of the year for particular trades with a high seasonality



The classical Austrian apprenticeship is a two to four years course of dual education, including education in a vocational school as well as practical training in an enterprise. The curricula of vocational schools are primary oriented on teenagers between 15 and 19 years old. The requirement for starting an apprenticeship is the completion of the ninth school grade.

At present, there are about 200 legally recognised apprenticeships in Austria. They are located in the following groups: construction and building service, administration and organization, chemicals and plastics, paper making and converting, electrical engineering and information technology, tourism and gastronomy, health and body care, trade, wood, glass and clay, arts and crafts, food and luxury items, metal technology and engineering, media design and photography, textile, fashion and leather, flora and fauna, as well as transportation and storage.

After completion of apprenticeship, former trainees have various possibilities: employment in their training enterprises as skilled workers, self-employment in free crafts, following courses for master craftsmen respectively master craftswomen certificate for self-employment in qualified crafts as well as following courses for higher education certificates.

Besides classical dual education, there are initiatives like the nationwide model "Lehre mit Matura"⁹, which enable students to simultaneously pass apprenticeship and high school diploma. Furthermore, in certain fields it is possible to attend a shortened apprenticeship¹⁰ after high school.

Moreover, adults are admitted to extraordinary apprenticeship-leave exams, if they are at least 18 years old and are able to prove certain trainings or relevant professional experiences.

The Austrian Labour Market Service (AMS) enables job seekers to be trained in a profession respectively to catch up on an apprenticeship certificate, provided, that they are at least 18 years old, unemployed and have completed the ninth school grade.

⁹ https://www.wko.at/service/bildung-lehre/LehreundMatura_Bundeslaender.html, last call: 29.05.19.

¹⁰ <https://www.wko.at/service/w/bildung-lehre/lehre-nach-matura.html>, last call: 29.05.19.

4.2. Germany

Germany is constituted by 16 Regions and three city-states, which have autonomy in certain political fields. While education is regulated by the ministries of the regions, vocational education and on-the-job training is more a federal-level responsibility.

Dual education and training has a long tradition in Germany. The structure of the dual vocational education, as we know it today, was established by the so-called craft order in 1953 and the Vocational Education and Training act in 1969, when the state became a central player in vocational education and training. Since then, dual vocational education and training was standardised throughout Germany and the vocational schools were legally embodied.

Multiple bodies are involved in the dual system. At the federal level, there are the Ministry for Education and Research (BMBWF), which has a coordination role in order to ensure a consistent system, the Federal Ministry for Economic Affairs and Energy (BMWi) respectively other sector ministries in agreement with the Ministry for Education and Research. The dual system is also supported by the Federal Institute for Vocational Education and Training (BIBB).

Further, chambers of industry and commerce, of handicrafts as well as of agriculture assure the success of the dual system. They are associations with a compulsory membership of the sector companies, established at a regional level with organisation acting at a federal level, as the association of German Chambers of Commerce and Industry (DIHK) and the German Confederation of Chambers of Skilled Crafts (DHKT).

The competent bodies supervise the functioning of the dual system at sector and territorial level.

Before hiring apprentices, enterprises have to meet certain requirements, assessed by competent bodies. They have to be able to make trainees develop all the skills included in the training regulation, so relevant working processes and equipment have to be available. Further, there has to be an instructor with appropriate professional and pedagogical skills. Instructors are required to have professional expertise in the trade, or in a similar one, and to have passed an aptitude examination.

For the on-the-job training, there is generally a detailed training plan elaborated, being based on prescriptions by the Training Regulation. Enterprises can integrate additional subjects and skills as well as provide additional qualifications. While large companies sometimes establish company training centres for their apprentices, instructors of small and medium companies often deal with apprentices in addition to their work. Competent bodies monitor the on-the-job training progress and offer counselling and support services for instructors.

The German dual vocational education and training system enjoys an outstanding reputation at international level. Beside the corporatist management by economy and state, another particularity of the German dual education system are the two learning environments, in which it takes place: at the vocational school and at the company respectively crafts business. This guarantees that the theoretical education is always closely linked to the practical work experience at the (future) work place. However, the major part of the dual vocational education and training takes place within the companies (three to four days per week). The dual education starts with the

signature of the articles of apprenticeship between the apprentice and the training company.

In general, the education period lasts three years. In that period attendance of vocational school complementary to the vocational education and training in the company is compulsory.

Additionally, apprentices are entitled to receive a financial compensation for their work (often fixed by labour agreement), which is increased on a yearly basis during the apprentice period.

At the end of the training period (sometimes also in the middle), the apprentices have to attend to apprentices' final respectively intermediate examination. This happens in front of a multi-stakeholder board of examiners, which is composed of representatives of the Chambers, employers, employees and vocational school teachers (however not those who trained the trainee). The final dual vocational education and training certificate is then issued by the Chambers and nationally recognised by the government.

In Germany, over 328 professions are trained by dual vocational education and training, whereas only a very limited number of professions is trained by full-time vocational schools. In contrast to dual education, full-time education at vocational education is unpaid and in some cases, it is even offered by private vocational schools where tuition fees have to be paid by the students.

Consequently, the majority of young people – roughly 61% according to the BIBB VET report 2018- decides to study in the dual education system.

4.3. Italy

Regarding Italy, we take a closer look at Type-1 apprenticeship, which is based on multi-level governance. The main institutional actors are, at national level, the state, the Ministry of Education, University and Research (MIUR) and the Ministry of Labour and Social Policies (MLPS) as well as the Regions and Autonomous Provinces of Trento and Bolzano.

The state defines basic principles as well as minimum training standards, which have to be met by the Regions in the execution of their specific competences related to the vocational education and training system. The cooperation between MLPS and MIUR ensure the general coordination, monitoring and assessment of the implementation of strategies and objectives set out in Type-1 apprenticeship legislation.

Regions have a simultaneous legislative power for education and an exclusive one for vocational training. The Regions as well as the Autonomous Provinces of Trento and Bolzano are responsible for the Type-1 apprenticeship. Social partners are important as well, so they are appointed in tripartite commissions which define strategies and programmes concerning education and labour policies.

Before hiring apprentices, employers have to meet certain requirements, such as structural capacity, technical capacity as well as training capacity. Latter includes the availability of one or more on-the-job tutors (instructors). However, there is no defined accreditation procedure for the enterprises yet.

The apprenticeship training is organized in on-the-job training periods and off-the-job training periods. Curricula agreed by the training institutions as well as the employers, are designed in view of specified national standards together with regional standards, and implemented following the prior agreement. The training institutions and companies elaborate the Individual Training Plan (ITP).

The length of the training at the training institutions is prescribed by law. For regional vocational education and training paths, the off-the-job training cannot be more than 60% of the timing established for ordinary courses for the first and the second year, and 50% for the third and the fourth year.

The apprenticeship leaving examinations as well as the issue of qualifications and certificates are done in accordance with the legislation on the respective ordinary upper-secondary school and regional vocational education and training paths.

The Italian State has exclusive legislation powers on the general rules of education, on work and on the determination of standard levels of performances, which must be guaranteed throughout the national territory. The Regions and the Autonomous Provinces have concurrent legislative power in the fields of education and work and exclusive legislative power in the field of education and vocational training.

The apprenticeship, currently regulated by the legislative decree 81 of 15th June 2015, provides for three different types. First, apprenticeship for the professional qualification, with which individuals between 15 and 25 years of age (about 80 apprentices currently active) can be hired. Second, professionalizing apprenticeship, with which individuals between the ages of 18 and 29 can be hired, starting from 17 for those in possession of a professional qualification (followed by the Employment Agency). Third, apprenticeship in higher education and research, for subjects aged between 18 and 29, starting from the age of 17 for those in possession of a high level professional qualification (not yet started in Trento).

The Province of Trento has legislated on the subject by modifying the provincial law of 7th August 2006 n. 5 "Education and training system of Trentino" on 20th June 2016 and adopting two specific resolutions with the subject. First, the adoption of the general objectives of the training apprenticeship and the related training standards. Second, the definition of the standards and the general criteria for the realization of the apprenticeship. Moreover, the definition as well as signing of a Memorandum of Understanding between the Autonomous Province of Trento and the Social Partners to promote dual apprenticeship and to define the aspects of territorial bargaining for what concerns the classification and remuneration.

Since 2016, the regulatory and administrative conditions for the start-up and implementation of dual apprenticeships in the province of Trento have been laid down, along with an accompaniment of the training institutions for the activation of the courses and a series of promotional activities for this tool in the territory (mainly aimed at companies and at the labour market).

The Autonomous Province of Trento also participated as lead partner in the three-year SWORD project "School and Work-Related Dual Learning" in the framework of the Erasmus + community program for the purposes of a model development about dual approach. The partners were the Autonomous Province of Bolzano, the Autonomous Region of Friuli-Venezia Giulia, Arbeit und Leben of Hamburg, Berufsförderungsinstitut of Linz, TNOiK of Gdansk (Danzig). This project made it possible to carry out a comparative analysis of dual apprenticeship models and the

development of a dual approach shared between partner countries. The various partners have also started some pilot projects that in Trentino led to the setting up of pre-apprenticeship courses (or preparation courses for apprenticeship or return to full-time training paths) in Education and vocational training, nowadays existing as a choice in the school system. The main product of this project was the drafting of a manual called "Recommendations and guidelines to support dual apprenticeship courses", the result of co-planning work between the various partners.

Compared to the recent reorganization of the regulatory framework, the first contracts and dual apprenticeship paths, at the provincial level, have been activated since the 2016/2017 school year in the area of Vocational Education and Training (IeFP) and especially for the achievement of the vocational education diploma obtained at the end of the 4th year (4th EQF level).

From this school year, dual apprenticeship courses have been started also in technical colleges, both in day and in evening courses.

In 2016/17 there were 26 dual apprentices (nine for the qualification and 17 for the vocational diploma). In 2017/2018 they became 45 (16 for the qualification and 29 for the vocational diploma). In 2018/2019 there are 67 students in dual apprenticeship paths (19 for the qualification, 46 for the vocational diploma and two for the technical education diploma), to which will be added another eight young people who are formalizing the employment contract.

To sum it up, Trento is still in the process of implementing the paths and we cannot therefore speak of a structured system. Currently, schools can start the courses at any time of the year and therefore there is no unitary start-up moment in the course of the school year, as it is the case with full-time courses. Schools that have started dual apprenticeship courses are not always able to guarantee rescheduling the following year

The conditions to start dual training paths are, first, presence of young people, and their families, interested in the dual apprenticeship paths, second, the presence of companies available to hire young people in dual apprenticeships, and, third, the presence of teachers who believe in this tool and are open to new teaching methods. Currently these conditions are not always present in all contexts.

In perspective, PAT is working to implement and support the development of dual apprenticeship paths, as an additional offer to full-time vocational education and training courses through, first, continuation of the initiatives undertaken in connection with the promotion of the tool, second, path monitoring, third, the organization of work tables to systemize teaching tools and approaches and thus favour a systemisation of the dual apprenticeship, and, fourth, the training of school and company tutors.

In June 2018, PAT approved a call addressed to educational and training institutions for the strengthening of the dual apprenticeship which has mainly financed teaching and coaching activities for teachers and tutors in the application of innovative teaching methods and practices. A set of monitoring tools for the paths was structured, that it intends to implement and make system. Moreover, PAT applied for a specific training course started by ANPAL Servizi (national agency for the



promotion of labour policies) in other national contexts (the first was held in Emilia Romagna at the end of 2018).¹¹

These guidelines, which are currently being developed, could become future best practices.

4.4. Slovenia

In Slovenia, the governance of the vocational and technical education programmes involves, at national level, the state's central administration, the Ministry of Education (MoESS28), the Ministry of Labour (MoLFSAE029), the Ministry of Economic Development, Chambers of Commerce, Industry and Craftsmanship, trade unions as well as enterprises and schools at local level. The Council of Experts of the Republic of Slovenia, and in the Sector Committees for Occupational Standards act as social partners.

As basis for vocational education, occupational standards are updated any five years in relation with the needs of the labour market. Normally, a vocational education programme refers to more than one standard and integrates general subjects as well. According to INAPP (2019), there is a disagreement between the school and enterprise sectors on this aspect.

Slovenian Institute for Vocational Education and Training (CPI) is another body entrusted with important functions in the field of apprenticeship by the 2017 law, which is working in cooperation with experts on training and work. It is in charge of tasks such as the definition of system solutions for the development of the apprenticeship, the coordination of the drawing up of the catalogues of knowledge and skills, the promoting of development and the dissemination of teaching materials or the monitoring and evaluation of the effectiveness of the system and the quality of the vocational training.

To guarantee the quality of the training, vocational schools and enterprises cooperate. So, employers are responsible for the quality of the on-the-job training, while the schools are responsible for the quality of the school training.

On-the-job-trainings can be partially provided by inter-company training centres, which are organised by professional schools to allow students and local enterprises to improve their technical capacities and skills. These centres could be especially important, when trainees are not able to develop all the required skills on workplaces. Enterprises and vocational schools design training plans for the apprentices in cooperation as well as define the cooperation ways.

The training's length cannot be longer than 8 hours per day and 36 hours per week. During school holidays, trainees have the possibility to attend the on-the-job training, provided that the employers must ensure for the apprentices at least six continuous weeks of summer holidays and at least eight days of holidays throughout the year.

Though the apprenticeship training takes place in several learning venues (school classrooms and laboratories, company, inter-company training centres), the training

¹¹ https://www.anpal.gov.it/notizie/-/asset_publisher/N8WP7kJxDIv5/content/sistema-duale-al-via-a-bologna-il-primo-corso-per-tutor, last call: 29.05.19.

institutions are responsible for the final examinations. They are planned on the basis of the reference legislation on vocational education and training.

The initiatives from the new educational programs come from crafts and entrepreneurship. They are reflected through the professional sections at the Craft Chamber of Commerce of Slovenia. Such course has the changes from the professional standard to the final education program. This system of gaining new educational programs should follow the needs of crafts, entrepreneurship and economy due to the employer's impulses for novelties. Therefore, the economy directly determines what the new educational programs should be like.

The probation of apprenticeships began undertaking in the school year 2017/2018. The time of practical training noticeably prolongs when undertaking the apprenticeship education. The practical training period is 56 weeks in three years of education. Companies have a big chance to create their future staff. Apprentices in return gain useful knowledge and have a higher chance of employment in the future. Young people get employed faster and are therefore professionally socialized. Moreover, the transition between the education and work is easier. The employer's risk reduces with the selection of personnel. With apprenticeships the gap between supply and demand of labor reduces.

The pilot project of introducing apprenticeships in the school year 2017/2018 covered four educational programs: carpenter, gastronomic and hotel services, manufacturer of metal-tools as well as stonemason.

Four new educational programs were introduced in the school year 2017/2018: Industrial Machine Mechanic, Papermaker, Glassworker as well as Painter and Signwriter.

Another four new educational programs will be added in the school year 2019/2020: Mason, Electrician, Mechatronic Operator as well as Body Shop Mechanic and Roofer.

It is important to gradually introduce changes in individual educational programs. In this way the system deficiencies in implementation can significantly reduce. The network of schools, where the apprenticeship is or will be carried out is limited. Educational programs are covered in the regional sense.

4.5. France

In France, the apprenticeship system is regulated by state, Regions, trade unions and employers' associations, jointly with other actors and intermediaries, such as the Chambers of Commerce and Industry, Chambers of Craftsmanship and Agriculture as well as the bodies collecting taxes intended to fund the apprenticeship. According to INAPP (2019), the collaboration among these bodies, as well as the mechanism of collection and provision of the resources dedicated to the apprenticeship, are considered very complex, heterogeneous and dysfunctional.

The 2018 reform act has acted deeply changing the governance and management system of vocational training and apprenticeship. Further, the funding system of apprenticeship has been simplified and centralised. New bodies will have the function to fund training centres according to the number of apprentices participating

in training and will have to enhance their provision of technical support to sectoral social partners as well as to companies.

The strategic framework and the policies for the development of vocational training and guidance will be still defined in the Contrat de Plan Régional de Développement des Formations et de l'Orientation Professionnelles (CPRDFOP), at regional level, having a multiannual validity and being structured on annual basis. Such contracts are developed in the framework of the Regional Employment and Vocational Training Coordination Committee (CCrEFp), composed by state representatives, representatives of Regional Assemblies, trade unions and employers' organisations, as well as Regional Chambers of Agriculture, Commerce, Industry, and Craftsmanship. Trainees are required to take part in a training period in both an enterprise as well as a training centre for apprentices (CFA).

Before hiring apprentices, companies have to complete a declaration, by which they certify the adequacy of the facility, equipment and security conditions on the basis of the needs for the apprentice's training. Within this declaration, they also have to confirm that there's an apprenticeship instructor within the organisation or an équipe having the pedagogical and professional skills required to play a mentoring role for the trainee.

Each apprentice has to be compulsorily trained by an instructor, who can be either the entrepreneur or an employee of the enterprise, with the task to ensure the coordination of the training team and the relationship with the CFA. The instructor has to be able to guide the trainee in the enterprise as well as and to transfer to her/him her/his own expertise.

According to the 2018 reform act established that the trainees' number of hours for the external training at a CFA is equal at least to 25% of the total apprenticeship period.

Regarding the training plan, CFAs and training enterprises are responsible for making the standards of qualification an operational reality. At the end of the apprenticeship period, trainees have to pass an examination to achieve their qualification.

4.6. Switzerland

Switzerland is constituted by 26 Cantons, which have a certain level of autonomy. Cantons are the primary responsible bodies for education; the federal recognition of A-level certificates is governed by a Confederation-Cantons agreement. The Confederation, in consultation with Cantons and economic sector, is entrusted with the legislative competence on vocational training. The federal training competence is assigned to the Secretariat for Training, Research and Innovation (SEFRI). Cantons join in the definition as well as implementation of training policies through the Conference of Cantonal Ministers of Education (EDK).

The Vocational Training Act (BBG), in cooperation with the Ordinance on Vocational Education and Training, constitutes the legislative framework regulating the whole basic and tertiary vocational training and the lifelong training.

At cantonal level, there are 26 Offices in charge of the vocational training implementation, which coordinate their activities in the framework of the Conference

of Swiss VET Offices (SBBK). Cantons manage vocational schools offering opportunities of apprenticeship, full-time training programmes, and preparatory courses for vocational baccalaureates.

Dual education programmes are the same all around Switzerland governed by federal laws. It exist two main types of dual education programmes: vocational training in SME as well as vocational training in a vocational school.

Youngsters need to be hired by a training SME. Apprenticeship lasts between two and four years depending of apprenticeship type. Apprentices work four days a week in the SME supervised by tutors respectively mentors, where they experience practical work and spend one (or two) day a week in a vocational school, where they learn theoretical knowledge. In addition, apprentices must attend inter-company courses several times over a period of a few days or weeks. They must also complete internships. These courses are organised by trade association. At the end of their apprenticeship, apprentices must pass several exams to obtain a federal certificate of qualification.

The two types of the dual education programme aim to link practical work with theoretical knowledge which is the main strength of the dual education program. The two types of dual education programme are complementary. Vocational training in SME is favoured to train apprentices. Vocational schools provide training for apprentices who have not found an apprenticeship, allow to open up new sectors of the labour market and to save technologies and traditional trades.

In Switzerland tutors respectively mentors in SMEs have to have a federal certificate of qualification have practiced the trade for two years. They also need to be qualified in terms of professional pedagogy.

Differently teachers, who teach in vocational schools, have to have a tertiary level diploma. They also need to be qualified in terms of professional pedagogy and to have a six month experience of work in a company.

In Switzerland the Swiss Federal Institute for Vocational Education and Training (SFIVET) provide services in the following areas: basic training of VET/PET professionals, continuing training of VET/PET professionals, research and development in the VET/PET field as well as development of occupations.¹²

¹² SFIVET is very active in the field of research and all scientific papers about dual education are available at: <https://www.sfivet.swiss/>, last call: 29.05.19.



5. Best practice examples of the Alpine Space

Goal of this chapter is to give an overview of current best practice models in the Alpine Space. The strategies, initiatives and programmes introduced below are representative examples of the partners' regions; no claim is made to completeness.

Important to consider is the different current state of development of the dual education systems as well as their differences (see chapter 4). While there are no best practice examples for the Italian Autonomous Provinces of Trento yet, the best practice examples of the other countries refer more or less to successful strategies to implement, improve and promote dual education and training (Slovenia, France, and Switzerland) respectively to concrete successful initiatives and programmes within and beyond classical apprenticeship (Austria and Germany).

The following strategies, initiatives and programmes differ by the purposes they were developed, based on specific problems on regional or local level.

5.1. Austria

The Austrian economy requires qualified workers, whereby trainees have primary completed classical apprenticeships. Skilled workers are seen as backbone of SMEs. According to Dr. Christoph Jenny (Economic Chamber Vorarlberg), the current lack of qualified workers in various professional fields is the biggest economical challenge. So, about three quarters of the Austrian SMEs are facing problems meeting the needs for qualified employees.

As a result, dual education and particularly apprenticeship is an area of special importance. Demands by SMEs for trainees are high, which leads to tensions between industry and commercial companies. Another issue in this context is the continuously falling birth rate in Austria.

There are various initiatives of the Austrian Regions, Regional Economic Chambers, municipalities, schools and professional associations to enhance the image and the visibility of apprenticeship as well as enable students to learn more about certain different professions. Besides public relations work (e.g. print paper respectively web articles or posters at public places), these are primarily offers like **job and career fairs, information and consultation days** in schools, **open days** in vocational schools as well as in training companies or **public apprentice competitions**. Furthermore, extracurricular education institutes (e.g. WIFI, BFI) offer **courses** to catch up on skills necessary for certain apprenticeships as well as the final apprenticeship examination and the craftsman respectively craftswoman master's certificate.

To win over potential trainees, enterprises present themselves on **job and career fairs** (e.g. annual career information fairs in, among others, Vienna and Vorarlberg) as well as in schools. They also use various **media** channels (e.g. newspapers, homepage, social media, and radio) for promotion and evaluation purposes. Particularly larger companies invite students to **open days**, enable them get to know their workshops and try out working with certain materials and technical tools. The possibilities for promotion and evaluation are more limited to smaller enterprises because of personal, time as well as spatial resources.



Since the 2000s there are increased efforts to train apprentices in **cooperation** of two or more SMEs. Therefore, trainees of heterogeneous professions are bundled and trained respectively further educated at local level.

These cooperations enable a future as well as practical oriented dual education. Beside comprehensive specialist training in the company and vocational school, apprentices are educated in further relevant key competences.

In Vorarlberg, the programme **HIPOS** was a role model for the development of various initiatives to enhance apprenticeships. It started in 2004 in Walgau and was, among others, rewarded the Austrian State Award of Consulting in 2008. Subsequently, best practice projects models in Austria as well as other countries followed.

There are numerous best practice examples addressed to **students respectively apprentices** in cooperation with schools respectively universities and training companies in the Austrian Regions. In the following, we introduce a representative selection of initiatives and programmes located in **Vorarlberg, Vienna and Lower Austria**:

- **Digitale Lehrlingsmesse Montafon (Vorarlberg)**¹³: Due to the Covid-19-pandemic, the apprenticeship fair in the region Montafon was held online first time in 2020. Thus, eleven enterprises presented their training companies via Instagram livestream. After the event, the videos were uploaded at the WIGE Instagram Account @lehremontafon to be able to be watched anytime on demand.
- **AZV Ausbildungszentrum Vorarlberg (Vorarlberg)**¹⁴: These training centres, located in Hohenems and Rankweil, offer a classical dual apprenticeship for teenagers with disadvantages. They do a six-to-twelve-month basic training and can follow a regular apprenticeship in an enterprise after completion.
- **Handelsschule + Lehre, Lustenau (Vorarlberg)**¹⁵: The market town of Lustenau developed this project linking higher vocational school with apprenticeship in 2018. Simultaneously, students attend a three-year-education at school as well as a two-year-training at one of currently twelve partner companies.
- **Werkraumschule Bregenzer Wald (Vorarlberg)**¹⁶: In the region Bregenzerwald the project Werkraumschule merges school and apprenticeship. In cooperation with the higher vocational school Handelsschule Bezaun and Werkraum Bregenzerwald, students attend a five-year dual education and training.
- **Lehre im Walgau (Vorarlberg)**¹⁷: The former **HiPos-Lehrlingsoffensive** (trainee offensive) in the region Walgau is cooperation between 78 enterprises currently training 358 apprentices in 77 professions. The primary

¹³ www.lehremontafon.at

¹⁴ <http://www.ausbildungszentrum-vorarlberg.at/ausbildungszentrum-vorarlberg/azv-ausbildungszentrum-vorarlberg/>

¹⁵ <https://bhak-lustenau.snv.at/schule/has/>

¹⁶ <http://werkraum.at/werkraumschule/>

¹⁷ <http://www.lehre-im-walgau.at/>



goal is enabling exchange and communication between training companies, apprentices, students, teachers as well as parents to issues concerning apprenticeship.

- **Extrix - Lehre am Kumma (Vorarlberg)**¹⁸: This initiative of Wirtschaft am Kumma in cooperation with the municipalities Altach, Götzis, Koblach and Mäder started in 2014. The main goal is to encourage the exchange and support of 32 training companies.
- **GASCHT – Die neue duale Tourismusausbildung (Vorarlberg)**¹⁹: This four-year tourism and gastronomy education programme in cooperation between 80 partners is located in Bezau, Bludenz as well as Hohenems.
- **Lehrlings-Potenzialprogramm „Kern-Zeit“ (Vorarlberg)**²⁰: The goal of this so called “potential programme” for apprentices is enabling them to explore their personality as well as to contribute their skills in their training companies and beyond. Thereby, the relationship between trainees and enterprises can be strengthened. The programme was developed by the Economic Chamber Vorarlberg in cooperation with „tag eins – büro für wandel“.
- **Duales Studienmodell – FH Vorarlberg**²¹: The Bachelor-Programme “WING” offers ten dual study places. The programme “Wirtschaftsingenieurwesen Dual” links university education with practical training in one of fourteen partner training companies.
- **Überholz (Vorarlberg and Upper Austria)**²²: The University of Art and Design Linz offer an two-year interdisciplinary, dual Master-Programme in wooden structure in Dornbirn (Vorarlberg) and Linz (Upper Austria) in cooperation with partners - Vorarlberger Architektur Institut (vai) in Vorarlberg and Architekturforum Oberösterreich (afo) in Upper Austria.
- **Duale Akademie der WKV (Vorarlberg)**²³: This project in the professions „Technics“ (current focus mechatronic and informatics as well as coding) starts in autumn 2019. The two-and-half-to-three-year dual educations are addressed to high school graduates. Cooperation with the university FH Vorarlberg is planned.
- **Projekt „TalenteCheck Berufsbildung“ (Vienna)**²⁴: This project of the Economic Chamber Vienna and Department of Education Vienna enables students (eight school grade) to explore their personal skills as well as to learn more about needs of the labour market and recruitment of companies.
- **NÖ Begabungskompass (Lower Austria)**²⁵: This region-wide project supports Lower Austrian students (seventh or eighth school grade) with their

¹⁸ <http://www.extrix.at/>

¹⁹ <https://www.gascht.at>

²⁰ <https://www.tag eins.net/wp-content/uploads/2019/04/Kernzeit-Lehrlinge-Flyer-4.pdf>

²¹ <https://www.fhv.at/studium/technik/wirtschaftsingenieurwesen-berufsbegleitend-bsc/das-duale-studienmodell/>

²² <https://www.schlosshofen.at/bildung/technik-gestaltung/ueberholz-msc/>

²³ This programme is already implemented in Upper Austria:

https://www.wko.at/Content.Node/kampagnen/dualeakademie/A-WOOE-W18024_DA_Folder_Mechatronik.pdf

²⁴ <https://www.talentecheckwien.at/>

²⁵ http://www.noe.gv.at/noe/Wissenschaft-Forschung/Noe_Begabungskompass.html

professional as well as further educational orientation. Within a “talent day” they attend structured ability and interest tests, personality and potential analyses as well as courses career orientation. After that, there is a consultation meeting with the students and parents.

- **Bildungsmeile Amstetten-Scheibbs (Lower Austria)²⁶**: During two days the Economic Chamber Lower Austria and certain partner training companies enable school classes, teenagers and parents to visit the according companies. They get more insights in the tasks, material as well as tools relevant for the professions.
- **DUO**STARS SUMMERSchool (Lower Austria)²⁷**: Within the ETZ-project DUO**STARS, the Region Lower Austria, the Federal Ministry of Lower Austria, the Economic Chamber Lower Austria in cooperation with municipalities, schools and universities developed summer school programmes addressed to students from vocational schools. These included career information and consultation, visits of educational institutions, training companies as well as workshops, where they could learn more about different education path ways and professions.
- **Duales Studienmodell – FH Technikum Wien (Vienna)²⁸**: The dual Bachelor-Programme “Informatik Dual” links university education with practical training in one of 23 partner training companies.
- **Duales Studienmodell – FH St. Pölten (Lower Austria)²⁹**: Within the Bachelor Programme “Smart Engineering of Production Technologies and Processes”, students pass university education as well as practical training in one of 63 partner companies.

There are also some offers for **(potential) in-company trainers**, like **advanced training courses** (e.g. professional competences, personality training) as well as **network meetings** for the purpose of exchange at WIFI locations in Vorarlberg, Vienna and Lower Austria. In the following, we introduce some other best practice examples of offers addressed to trainers:

- **VEM Veranstaltungen (Vorarlberg)³⁰**: The extracurricular education institute Vorarlberger Elektro- und Metallindustrie (VEM) offers leadership training courses as well as work groups in different fields (e.g. metal, electronic).
- **Akademie für Ausbilder (Vorarlberg)³¹**: The Internationale Bodensee Konferenz (IBK) is a cooperation between the Cantons respectively Regions Baden-Württemberg, Schaffhausen, Zürich, Thurgau, St. Gallen, Appenzell Ausserrhoden, Appenzell Innerhoden, Principality of Liechtenstein, Vorarlberg as well as Bavaria. Goals of this conference for in-company trainers are networking, exchange as well as issues like self-competence and social competence.

²⁶ <https://www.berufsinfo-noe.at/bildungsmeile-amstetten-scheibbs-2019>

²⁷ <https://docplayer.org/43360093-Duo-stars-summer-school-jugendliche-tauchen-in-die-welt-der-industrie-ein-und-entdecken-faszinierendes.html>

²⁸ <https://www.dualstudieren.at/hochschulen/fh-technikum-wien/>

²⁹ <https://www.dualstudieren.at/hochschulen/fh-st-poelten/>

³⁰ <https://technikland.at/>

³¹ <https://www.akademie-ausbilder.eu/vorarlberg/die-akademie/initiatoren/>



- **Projekt Lehrstellenakquise Wien (Vienna)**³²: Goal of this project of the Economic Chamber of Vienna in cooperation with the Vienna Employment Promotion Fund (WAFF) is the free information and consultation for potential training companies.
- **Lehrgang Dipl. Industrie-Ausbilder/innen (Lower Austria)**³³: In cooperation with WIFI Lower Austria, the Economic Chamber Lower Austria offers this qualified training for in-company trainers in industrial professions. The curriculum is coordinated with current needs of the labour market concerning professional, didactical as well as social competences.

5.2. Germany

The city of Munich together with the regional Chamber of Skilled Crafts and the regional Chamber of Industry and Trade and the Association of Liberal Professions initiated the award „**Erasmus Grasser Preis**“ in 1993, which is a prize targeted at training companies based in the city of Munich. It is awarded to training companies who are providing a very high quality in vocational education and training, apply innovative approaches in dual vocational education and training or are showing continuously high commitment in offering dual vocational education and training for a large number of youngsters.

Criteria for selecting training companies are statistical figures like number of successfully accomplished apprenticeships, number of trainees, voluntary work and engagement related to dual vocational education and training as well as the diversity management and activities relating to social inclusion of marginalised and handicapped persons.

Until 2017 this prize could be only awarded to crafts businesses, but in 2018 this has changed. Since 2018 all training companies in Munich are able to apply for it. To participate, an application form must be filled in by the training companies and submitted to the city of Munich until a specific deadline (mostly in August/ September of every year). The prize is endowed with 5.000 EUR, which can be shared among up to five award winners.

There are many training companies and initiatives providing exceptional dual vocational education and training in the Region Bavaria. In the following, we introduce a representative selection of best practice examples:

- **Kreiller**³⁴: The company Kreiller is based in the district of Traunstein. More than 300 people are employed there, 32 of them are apprentices. Currently, they train apprentices at all their locations in commercial and administrative job profiles as well as in logistics. Most of the apprentices are offered a permanent employment contract after successful termination of their apprenticeship.

Moreover, Kreiller offers their employees the opportunity to participate in a large number of further vocational education and training offers, which are

³² <http://docplayer.org/17663123-Projekt-lehrstellenakquise-wien-in-kooperation-mit-waff.html>

³³ <https://www.wko.at/branchen/noe/industrie/lehrgang-dipl-industrie-ausbilder-innen.html>

³⁴ <https://www.kreiller.de/>



financially supported by the company and a large number of further career opportunities within the organisation.

Thanks to its particular apprenticeship concept Kreiller has won already several awards as training company, e.g. the Rudolf Egerer Prize, initiated by the education and training centre of the Bavarian Trade and Economy. And Kreiller was also selected third best training company in Germany by the Economic Magazine Focus Money in 2018.

Kreiller's apprenticeship concept intends to ease the access into professional life for youngsters and to ensure that they successfully complete their apprenticeship and achieve the related training certificate.

This is achieved by offering complementary training programmes to the apprentices such as an introductory training week, and throughout the apprenticeship product specific as well as general trainings.

Moreover, a mentoring concept is implemented at the organisation. This means that to every apprentice in the organisation a mentor is appointed who supports the apprentice from the very first day in the company. The mentors answer questions, help the apprentice to get familiar with the team and the organisational culture and support them in work-related problems and issues and cares for the needs and interests of their apprentices.

Additionally, the apprentices have the chance to assume special responsibility by projects such as the participation in exhibition like the Truna taking place every 2 years and the company internal trade fair at which the apprentices organise, decorate and manage their own booth.

To increase the team spirit among the apprentices, an excursion takes place every year in September by which all apprentices have the opportunity to get to know each other, and newcomers and older apprentices can share experiences.

Last but not least, before the final examination, an intensive examination preparation is offered by the companies' tutors and trainers for all apprentices.

- **Bachner Elektro GmbH & Co KG (electrical trade)**³⁵: This enterprise for electricians trains apprentices already since 1937. From the first day of their apprenticeship, all apprentices can rely on the support of a responsible for trainees in the company, who is always available for questions, needs, suggestions and solving problems that might come up in the course of the training programme. The company is particularly engaged in winning females for an apprenticeship in the electrical trade, which is nowadays still dominated by men.

Due to its particular performance and quality of training their apprentices, it won the "Erasmus-Grasser-Preis" in 2018.

- **Martin Fassnacht GmbH (painting and varnishing)**³⁶: Also this painting company has a long tradition in offering apprenticeships to young people in the painting trade, to be precise since 1942. The company assumes

³⁵ <http://www.bachner.de/>

³⁶ <https://www.maler-fassnacht.de/>



particular social responsibility by systematically giving the opportunity for apprenticeship in their organisation to young migrants and youngsters with poor school-leaving certificates. Moreover, the company is committed to sending very talented or committed youngsters in their third year of apprenticeships to advanced courses offered by the painting and varnishing guild in Munich. This gives the participants the opportunity to learn special skills and techniques which go beyond those foreseen in the normal training regulations and thus, they qualify themselves for better job opportunities in the future.

Due to its particular performance and quality of training their apprentices, the company won the “Erasmus-Grasser-Preis” in 2018.

- **Ernst Pertler GmbH (building technology)**³⁷: The enterprise trains apprentices since more than 30 years. They are particularly engaged in giving youngster who dropped out of school or previous apprenticeships a new chance. Also youngster with no school leaving diploma or with social problems can start an apprenticeship at the company.

Accordingly, the company is also helping their trainees in social and private aspects, such as apartment search and offering travel and subsistence allowances.

The company manager stated that dual education and training nowadays has to go beyond the mere transfer of knowledge and skills. The role of the training company is also to support the entire personality development of the apprentices and to give them the self-confidence to succeed in their jobs as well as in their private lives.

Due to its particular performance and quality of training their apprentices, the company won the “Erasmus-Grasser-Preis” in 2018.

There are also offers for **in-company tutors** respectively **instructors** to support them in training apprentices. In the following, we introduce two representative best practice examples:

- **Stark für Ausbildung**³⁸: „Stark für Ausbildung“ is an initiative brought to life by the Chambers of Skilled Crafts and the Chambers of Trade and is financially supported by the German Ministry of Economy and Energy. to strengthen and support the dual vocational education in general and particularly the people directly involved into it, such as the training companies, the tutors/ instructors and trainees therein.

The initiative is running a web platform respectively a knowledge database offering a broad range of information and educational content relevant to tutors and trainers as well for trainees. It helps both of them coping with difficult situations within the educational process at the training companies, e.g. how to deal with different cultural backgrounds and integrate migrants.

Additionally, the initiative offers targeted trainings to strengthen the communication and leadership skills of the in-company tutors and help them better organise the dual education process within their companies as well as

³⁷ <http://www.pertler.de/>

³⁸ www.stark-fuer-ausbildung.de



dealing with all kind of trainees, even those with a „difficult“ social background.

Moreover, the initiative tries to foster the dialogue about the further development of the in-company training part of dual education in Germany as well as the exchange of experience and expertise among tutors.

- **Ausbilderakademie**³⁹: The Ausbilderakademie of the Chambers of Industry and Trades in Bavaria offers a basic qualification programme for in-company tutors and trainers including a highly recognised certificate at national level.

Besides, the Academy offers a broad range of further vocational education and training programmes and seminars in almost all competence areas, such as work techniques and specific problem-related training such as „trainee retention“ after accomplishment of the dual education, coaching and supervising trainees, training methodology and didactics, writing reference letters respectively certificates, managing assessment conversations, managing recruiting processes and selecting the right candidates, leadership skills, understanding the needs of the current generation Z, marketing and promoting dual education, legal basics related to dual education, digital skills in dual education or time and self-management.

There are also vocational education and training offers for developing the personality of the tutors and trainers including communication skills training, conflict management, motivating and managing staff, project management techniques, elocution, small talk in business life, intercultural awareness and integrating refugees/ migrants as well as handling difficult or critical situations.

The Academy for In-Company Tutors and Trainers was financially supported by the EFRE until 2013.

5.3. Italy

Within the DuALPlus project, the focus is on the Italian Autonomous Regions Trento and Bolzano.

Trento

Since its development in the Trentino region, the Dual Education/Apprenticeship System has seen the schools as the dominant partners for all those aspects linked to the design and organization of apprenticeship paths: matching students with companies, preparing Individual Training Plans, etc. In order to foster dual apprenticeship and make it more effective, there is a need to reinforce the companies' point of view and role, to create opportunities for collaboration at the institutional level and at the level of the actors.

A boosting step towards this direction is that of creating significant synergies at the regional level between strategic stakeholders from both the school and the professional world. For this reason, in August 2020, the Department of Education and Culture of the Autonomous Province of Trento signed an agreement with the Chamber of Commerce of Trento with the goal of developing, consolidating and

³⁹ <https://ausbilden.bihk.de/>



strengthening dual education by favouring tightly coupled relationships between vocational schools and companies. This is achieved through the preparation and publication of specific announcements that call for proposals from schools to design and realize - with the involvement of at least one company - innovative, successful and high-quality dual education paths. The proposals concern different actions:

- recruitment of companies and apprentices (e.g., creation of digital tools such as apps and/or websites to facilitate the matching between the demand and supply of dual apprenticeships);
- design of dual apprenticeship paths
 - definition of actions-measures-guidance tools (information material, promotion campaigns, info days, etc.) aimed at students and their families;
 - definition of training courses for teaching staff and / or company tutors involved in the dual courses;
 - development, in co-planning with companies, of individual training plans for apprentices;
 - preparation of assessment and self-assessment tools for learning;
- realization of the designed apprenticeship paths
 - internal and external training of the apprentice
 - implementation of training courses for teaching staff and company tutors
 - use of assessment tools and self-assessment of learning.

The main expected results are:

- the increase in the qualification (upskilling) of the "dual system" through the co-design of projects aimed at supporting initiatives involving students and entrepreneurs;
- the reduction of the mismatch between supply and demand of labour;
- a greater awareness of new technologies among the local enterprises through the digital skills of students;
- the activation of processes aimed at consolidating and/or strengthening the competitiveness of companies in the labour market;
- the opportunity for students to achieve a degree consistent with the technical and professional skills required by the world of work.

The call for proposals is expected to be opened at the end of June 2021 and the candidate projects will be evaluated based on the number of companies involved, the apprenticeship paths to be started and the novelty of the proposal.

The successful projects will start in September 2021.



Bolzano

In Bolzano, there are four examples to highlight as best practices for the region:

- The **Talent Center Bolzano**⁴⁰ tests students in secondary school and above for their abilities and strengths in order to support them in their choice of studies and careers, and serves as an impulse to take a closer look at their own potential. A standardized test procedure is used to identify the young people's strengths, interests and potential. Based on the results, the students receive important input for their future skills development, which can serve as a basis for an individual counselling interview at the Office for Educational and Vocational Guidance. The Talent Center will test the students of one year group - approximately 5,000 young people - over the course of one school year. The test stations provided will allow approximately 30 young people to be tested at the same time.
- The "**Futurum**"⁴¹ education fair aims to provide guidance on educational paths from high school through higher education to further education and to present professional activities. With its offer, it supports young people in their educational and professional decisions.

In 2020, it took place in digital form due to the exceptional situation caused by COVID-19. The digital education fair "Futurum" offered three days of webinars in live streaming and provided for numerous webinars on the topics of training, studies, recognition of study and professional titles, occupation and application.

- At **JobInfo**⁴², South Tyrolean companies from a wide variety of sectors and size categories can provide information about their professional activities, describe the job profiles in the company and highlight training and continuing education opportunities. The participating companies come into direct contact with young people and adults.
- The **MINT**⁴³ (mathematics, computer science, natural sciences and technology) initiative has set itself the goal of sensitizing students and the general population to scientific and technical areas of knowledge and business, as well as awakening or increasing interest in a scientific culture.

The Office for Educational and Vocational Guidance coordinates the MINT initiative in South Tyrol and cooperates with various partners. They have all been awakening curiosity for the MINT field for years and are active - from kindergarten to school to university and in continuing education - in providing the population with insight into science and technology, theory, practice and research.

The German, Italian and Ladin Directorates of Education, for example, offer subject-specific orientation for young people, further training for pedagogical staff and projects and initiatives to promote giftedness in the MINT- subjects.

⁴⁰ <https://www.camcom.bz.it/en/node/5735>

⁴¹ <https://www.alpine-space.eu/project-event-details/en/5786>

⁴² <https://www.handelskammer.bz.it/de/bildungsmesse-futurum-jobinfo>

⁴³ <http://www.provinz.bz.it/bildung-sprache/ausbildungs-studien-berufsberatung/mint.asp>



5.4. Slovenia

In Slovenia, the basis of conducting practical training with working in a real environment is a catalogue of practical training. The representatives of chambers, who are the experts in their individual fields, participated in the creation of this basic document.

Apprenticeship plan is a tool for a successful practical training for the mentors, apprentices and schools. This document lists the content that the apprentices have to acquire before a certain deadline. Moreover, it lists the content that the mentor has to give to the apprentice by the deadline. Employer evaluates the apprentice alongside with the organizer of the practical program. For easier conduct, the Apprenticeship plan contains evaluation sheets, which is a supporting document for the employer.

The apprenticeship plan is not explicitly defined and can be changed from an individual educational program to the school, where the educational program is held. The Apprenticeship plan is an individual document of the apprentice, employer and the school! The responsible chambers are also involved with the preparation of said document.

The apprentice has to write a daily Apprenticeship Diary, where all the events and content that the apprentice performed during his practical training are noted. The Apprenticeship Diary is also a document that is submitted at the midterm

The success and the knowledge of apprentices are verified once during the time of the apprenticeship relationship, usually at the end of second year. The midterm is not an exam and is not assessed. Primarily, the midterm serves as a tool for providing advice and gaining information about the apprentice. The chambers also account for the execution of the midterm. The midterm is held where the apprentice is having his practical training. The employer and the apprentice are informed on the content of the midterm at least one week before it commences. The midterm checks the current state of the apprentice in regard to the Apprenticeship plan. The student should submit the Apprenticeship Diary for the 1st and the 2nd year to the expert supervisor or the commission at the midterm test. The completed midterm is a condition for an apprentice to be able to enrol in the next year.

The **instructions on how to conduct the midterm** that ensures quality implementation and additional help for the committee can be described as an example of good practice.

- The midterm is carried out in the company in the real working environment
- The chamber coordinates the date of the midterm with the employer/mentor and the expert supervisor
- The expert supervisor and the employer/mentor agree upon the exact date
- The initial interview, the apprentice's and the employer's/mentor's documentation and the determination of the way of documenting the apprentice's skill and knowledge can last up to 15 min
- The midterm may take up to 60 min. It includes the defence and conversation that is not linked to the working test, product or a service



- The interview about the apprenticeships with the employer/mentor can last up to 15 min
- The employer/mentor has to assure same working conditions that are assured during the practical training. The emphasis is on the protection of health and safety at work.
- Should the apprentice not abide by the safety regulations, the mentor can terminate the midterm
- Before the midterm, the employer completes the Catalogue of Practical Training. The realization of professional content needs to be shown.
- The employer/mentor prepares a set of work tests (3-5 tests). In doing so, the objectives realizations from the Catalogue of Practical Training is considered
- The professional supervisor picks 3 working tests from the set of tests that the employer/mentor previously prepare
- The professional supervisor sets the working test and the apprentice can begin completing it
- Employer/mentor makes sure that the apprentice has all the necessary tools, machines and devices that are needed at hand
- The professional supervisor reviews:
 - The Apprenticeship Diary from the 1st and 2nd year
 - The evaluation sheets/collection of assessments, that are the integral part of the apprenticeship
 - The completed catalogue of practical work-related training
 - Completes a professional conversation with the apprentice and the employer/mentor
- Upon the completion of the interview, the professional supervisor has to complete the review of the midterm. The professional supervisor gives the opinion on the successfulness of the midterm and orally informs the apprentice and the employer/mentor
- The review is completed in three copies. One copy is received by the employer/mentor, one by the apprentice and one by the chamber.
- The apprentice attaches the review to the Apprenticeship Diary
- The apprentice continues the education by passing the midterm.

The criteria for the **observation** of the apprentices during the process of the midterm include:

- How did the apprentice prepare for the evaluation?
- Did the apprentice comply with all the health and safety at work regulations?
- How the apprentice chooses the tools and prepares the means for work?
- How the apprentice seeks and transfers the dimensions from the plan onto the product?



- Did the apprentice follow the technological process with accordance to the Apprenticeship Diary?
- How quickly did the apprentice perform the work test?
- How accurate was the apprentice during the performance?

Not at least, the criteria for the **professional conversation** during the midterm embrace:

- How the apprentice explains the process of the work test?
- Can the apprentice use the professional terms, and can the apprentice understand the conversational language in the company?
- How did the apprentice fit in the team? Does he go along well with the co-workers?
- How well does the apprentice know the rules and the organization of the company?
- How well does the apprentice know the production/services of the company in total?
- How many departments has the apprentice worked with?
- Where does the apprentice sees his or hers practical training next year?

5.5. France

As soon as the Chamber of Trades and Crafts (CMA) was created, the Crafts Code gave it competence in matters of guidance. This competence has resulted in the establishment within them of **Decision Support Centres** (CAD – Centres d’Aide à la Décision) which implement the desire of the CMA to contribute to the Regional Guidance Service (SPRO – Service Public Régional d’Orientation).

The CAD carry out job promotion activities to better meet the needs of young people, families, craft businesses and schools, in order to make people aware of the reality of the trades and the business. The CAD also contributes to information on vocational training sectors, in particular on apprenticeship.

The nationally defined missions for the CAD of the CMA network are, first, promoting trades and crafts. Second, informing young people and their families about trades and training, employment and career outlook, changes in job techniques and working conditions. Third, support young people in their orientation and the construction of their personal and professional projects. Fourth, build the partnerships necessary to carry out projects, particularly with the various AIO (Accueil Information Orientation / Welcome Information Orientation) networks. Fifth, support companies in their reception and training processes.

The CAD are actively involved in, among others, policies for information on trades, discovery of business, promotion of entrepreneurship, access to training and employment for young people, hang-up in training, the integration of disabled people, the gender diversity in the different professions.

Every year, nearly 7 000 young people in Auvergne-Rhône-Alpes take advantage of the various actions led by the CAD. The Auvergne-Rhône-Alpes Regional Council,

the academies of Clermont-Ferrand, Grenoble and Lyon, and the CRMA Auvergne-Rhône-Alpes wish to continue their cooperation in the field of the School-Enterprise relation for 2019 - 2021.

The partnership between the Auvergne-Rhône-Alpes Region, the academies of Clermont-Ferrand, Grenoble and Lyon and the CRMA Auvergne-Rhône-Alpes pursues the following objective: support young people in the construction of their vocational training and professional integration within the framework of the SPRO - Regional Public Service of Guidance.

In France, the **axes of intervention** are to mention as best practice examples. The Regional Council Auvergne-Rhône-Alpes, the academies of Clermont-Ferrand, Grenoble and Lyon and the CRMA Auvergne-Rhône-Alpes have agreed, within the framework of a shared steering, to deploy the axes defined below:

□ **Axe1 - Bravo les artisans**

- Objectives: The aim of the "Bravo to the Artisans" operation is to introduce students from secondary schools to the reality of a craft enterprise. The pupils go to the companies to carry out a project and then pass on to their classmates the knowledge and information they have acquired during their presence in the company. It allows, through this last point, a multiplication with other pupils and a strong involvement of the teaching teams.
- Target groups: The target audiences for this action are 4^o, 3^o, and secondary school students (general, vocational or technological high schools).
- Implementation of the actions: The action aims to reach as many young people as possible through a double approach:

By establishment initially with the presentation of the trades and the craft enterprise as well as the outline of the action to all the classes of a level within each establishment concerned by the action.

By class: with the deepening of two different trades per class through an immersion of students in an enterprise.

The operation directly involves the educational teams and the participating craft enterprises and thus contributes to the logic of school-enterprise rapprochement. The parents of immersion students in the workplace are also made aware of the projects led by the students.

□ **Axe2 - Development of the consular internships**

- Objectives: The aim of this action is to increase the number of internships offered in craft enterprises to young people in Auvergne-Rhône-Alpes. This presents different interests for young people in the context of their orientation according to their problem, by allowing them to either discovering a trade, validate a professional project, and test a host company in the context of an apprenticeship contract or vocational training.
- Target groups: The target audience for this action is young people in school and at least 14 years old. This applies directly to: pupils in the last two levels of secondary education, pupils in secondary schools (general, vocational or technological secondary schools) during school holidays as well as students in higher education, outside the weeks reserved for courses and knowledge testing.



□ **Axe 3 - Promotion of the crafts and its trades**

- Objectives: Promote craft trades, craft SME's, training and employment opportunities within the sector.
- Target groups: This action is aimed at young people in school and their families as part of their orientation to promote the training and vocational integration opportunities offered by the craft sector.
- Implementation of the actions: First, through collective information sessions within the CMA, in institutions or on forums including the "Mondial des Métiers (Worldwide of Trades)". Second, through individual interviews at the Chamber of Crafts and Crafts and positioning procedure in the context of a vocational training project related to crafts.

Depending on partnerships with different institutions, other cross-cutting themes can be more specifically addressed, such as diversity, gender diversity or disability.

To achieve this, CAD is mobilizing nationally developed tools to promote the sector:

- Trade sheets from the national website www.artisanat.info
- Module developed in partnership with ONISEP to initiate a first level of reflection on its project of orientation type «questionnaire of interest»: [www.oriente-métiers.org](http://www.oriente-metiers.org) ;
- Deployment of "artimobiles" and their tools to promote trades in colleges
- Valuation of "craft viruses" to introduce the four sectors of craft activity in a fun way

5.6. Switzerland

The VET/PET system in Switzerland owes its success largely to the fact that the Confederation, the cantons and professional organizations share their responsibilities and work together to ensure high-quality VET/PET and sufficient apprenticeship places.

The federal government acts as a steering and development authority for vocational education and training. Two institutions are available to help it in this regard:

- The **State Secretariat for Education, Research and Innovation (SERI)** ⁴⁴ regulates vocational education and training, jointly funds it, promotes the further development of new educational programs and the vocational baccalaureate. More so, SERI is involved in vocational education and training on the international scene.
- The **Swiss Federal Institute for Vocational Education and Training (SFIVET)** ⁴⁵ offers training and continuing education for vocational education and training officers and examination experts. In addition, it is in charge of the

⁴⁴ <https://www.sbf.admin.ch/sbfi/en/home.html>

⁴⁵ <https://www.sfivet.swiss>

scientific monitoring of vocational education and training (research, pilot tests).

The OdA (Organisationen der Arbeitswelt) or organizations of the labour world, professional organizations, are professional associations, branch associations and social partners. They define the educational content of basic vocational training, are responsible for in-company courses, provide higher vocational training courses and participate in the further development of vocational training.

Cantons implement and supervise vocational education and training. They issue educational permits for companies, run vocational schools, approve apprenticeship contracts and provide vocational, academic and career counselling services.

Such cooperation can already be considered a best-practice example.

- **BerufsbildungPlus**⁴⁶, the umbrella campaign for Swiss vocational training was launched in 2007 by the federal government, cantons and organizations in the world of work to strengthen vocational training and to publicize its importance to the economy and society. With slogans such as “Learn to be an electrician, become an electrical engineer” or “Learn to be a hairdresser, become a biologist”, the current campaign draws attention to the high permeability of the Swiss education system.
- **Berufsbildung 2030**⁴⁷ is a joint initiative of the swiss confederation, the cantons and organizations in the world of work with the aim of anticipating social and professional market-specific changes and making vocational training sustainable.

Prioritized focus areas⁴⁸ have been defined in a mission statement as an orientation framework; with the start of the implementation phase in 2018, 30 projects were developed and will be implemented in partnership. The projects are divided into the following sub-areas: *lifelong learning, digitization, information and advice, flexibilization of educational offers, reduction of bureaucracy and governance.*

Some of the projects developed are:

- **Blended learning: Basics and framework conditions**⁴⁹: The project aims to offer innovative forms of learning (here: blended learning) on a well-established basis through mutually agreed framework conditions. On the one hand, these framework conditions guarantee the quality and uniformity of the implementation of blended learning sequences and ensure efficiency and legal security when introducing blended learning sequences as part of the reform process.
- **Orientation aid for digital transformation in basic vocational training**⁵⁰: An orientation aid for the bodies responsible for basic vocational training is being developed in this project. This is a tool for the

⁴⁶ <https://www.berufsbildungplus.ch>

⁴⁷ <https://berufsbildung2030.ch/de/>

⁴⁸ https://berufsbildung2030.ch/images/_pdf_de_en/vision2030_d.pdf

⁴⁹ <https://berufsbildung2030.ch/de/projekte/21-projekte-de/241-blended-learning-grundlagen-und-rahmenbedingungen>

⁵⁰ <https://berufsbildung2030.ch/de/projekte/21-projekte-de/48-orientierungshilfe-digitale-transformation-in-der-beruflichen-grundbildung>

sponsors to recognize the digital skills required by the labor market and to incorporate them into basic vocational training. To ensure that the topic of digital transformation is included in the five-year reviews, SERI is integrating this topic as an aspect of professional development in the *Process of Professional Development in Basic Vocational Training* handbook.

- **Flexible vocational training from the perspective of the world of work⁵¹**: A network of several organizations of the labour world, with the involvement of the confederation and the cantons, is defining a common understanding of future flexible basic vocational training and developing a basis for subsequent model developments.

Due to technological change and digitization, basic education training content is subject to ever shorter life cycles. At the same time, more and more basic skills are becoming relevant beyond individual professional groups.

These changed requirements call for new training structures, models and tools that enable organizations of the labor world to adapt basic vocational training flexibly, efficiently, and outside of the usual revision processes.

- **Lehrverbund Schreinermacher (apprenticeship company associations)⁵²** is a good example of an association of apprenticeship companies founded in 2005. It is made up of 24 specialist companies with the aim of counteracting the effects of the decline of carpenter apprenticeship positions and the increasing changes seen in companies.

The apprentices are given comprehensive training, either in a single company, or in rotations across several companies. In this way, companies can also be included that, for example, can only cover part of the training spectrum for the carpenter's profession, while still getting involved in training.

In addition, the training companies are relieved of administrative work (from the point of recruitment right up to the end of the apprenticeship).

- **VIAMIA - professional assessment and advice for people over 40⁵³**: In order to respond to the rapid changes in the world of work, it is important to actively shape one's own career. For this reason, the Federal Council and the social partners encourage employees aged 40+ to regularly assess their position. Against this background, the State Secretariat for Education, Research and Innovation (SERI) subsidizes the development and implementation of the free "viamia" service on behalf of the Federal Council.⁵⁴

⁵¹ <https://berufsbildung2030.ch/de/projekte/21-projekte-de/45-flexible-berufsausbildung-arbeitswelt>

⁵² <https://www.schreinermacher.swiss/index.html>

⁵³ <https://www.viamia.ch/de>

⁵⁴ <https://www.sbf.admin.ch/sbf/de/home/bildung/berufsbildungssteuerung-und-politik/projekte-und-initiativen/foerderung-der-inlaendischen-arbeitskraefte/kostenlose-standortbestimmung.html>



Users of “viamia” will first be asked to complete an “employability check”. This test assesses employability. The test results serve as a basis for the position assessment in which the personal and professional situation is analyzed and any need for action is determined. With the help of a career advisor, the person seeking advice will then develop and plan specific measures for maintaining or improving their employability.

- **Netzwerk Kleinsterberufe (Network of Small-Scale Professions)**⁵⁵: The Network of Small-Scale Professions was launched as a project after the 2014 SwissSkills special exhibition of small professions and was heavily supported from the offset by the Swiss Federal Institute for Vocational Training (SFIVT) and the Swiss Trade Association (STA).

In addition, there is a parliamentary group for the support of small-scale professions, which represents the concerns of the Network of Small-Scale Professions in parliament and in the commissions.

The goals of the Network of Small-Scale Professions include the development of a viable and sustainable network, the development and implementation of educational offers and the improvement of framework conditions for small-scale professions.

⁵⁵ <https://kleinstberufe.ch/>

6. Conclusion and recommendations

The focus on best practices is different in the partners' regions. The dual education systems in Slovenia and France are in development, so the given practice examples refer more to the implementation and promotion of dual training. In France, the focus is also more on cooperations and axes of intervention. In Austria and Germany there are well-established strategies of promotion of dual education and training as well as examples of successful initiatives and programmes within and beyond classical apprenticeship.

The described situation and examples of each partners' region show the importance of cooperations and exchange between political and economic actors as well as municipalities, educational institutes, training companies, in-company trainers, (potential) trainees and parents. Contacts and discourses on political level should be used primary for the implementation of innovation in education as well as the steady improvement and permeability in the education system as well as on vertical and horizontal level.

In the following, **recommendations** on the basis of the best practice researches in the Alpine Space are summed up. They mirror the results of the SME needs assessment analysis and evaluation of current dual education formats described in the SME needs assessment report (D.T2.2.1).

- Advancement of value and visibility of dual education path ways as well as professional fields
- Encouragement of students to test their skills out as well as to learn more about different professions, material and tools
- Enhancement of the exchange, coordination and networking between political and economic stakeholders, SMEs, educational institutes, in-company trainers, teachers, trainees, students and parents
- Conjunction of higher education (e.g. high school diploma, university) and practical training in SMEs
- Advancement of special support services and educational opportunities for trainees with disadvantages
- Promotion of the women's quota in training companies
- Enhancement of possibilities for adults and people with higher education certificates to follow a dual education and training
- Strengthening of the support of training companies and in-company trainers concerning issues like information, consultation, resources or advanced training