



i-W@BAL

ANNEX 4 - Case studies

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Co-funded by the European Union

Project ref: 2021-1-ES01-KA220-HED-

Contents

| Chapter ' | 1: Austria | 4 | |
|-------------------|--|----|--|
| 1.1. | Title | 4 | |
| 1.2. | Short description of the case study | 4 | |
| 1.3. | Strengths of the case | 6 | |
| 1.4. | Possible weaknesses and challenges | 6 | |
| 1.5. | Opportunities for development | 7 | |
| 1.6. | Sources (literature, expert interviews,) | 8 | |
| Chapter 2: Italy9 | | | |
| 2.1. | Title | 9 | |
| 2.2. | Short description of the case study | 9 | |
| 2.3. | Strengths of the case | 9 | |
| 2.4. | Possible weaknesses and challenges | 10 | |
| Chapter 3: Spain | | | |
| 3.1. | Title | 11 | |
| 3.2. | Short description of the case study | 11 | |
| 3.3. | Strengths of the case | 12 | |
| 3.4. | Possible weaknesses and challenges | 12 | |
| 3.5. | Opportunities for development | 13 | |
| 3.6. | Sources (literature, expert interviews) | 13 | |
| Chapter 4: France | | | |
| 4.1.1. | Title | 15 | |
| 4.1.2. | Short description of the case study | 15 | |
| 4.1.3. | Strengths of the case | 15 | |
| 4.1.4 | Possible weaknesses and challenges | 15 | |
| 4.1.5 | Opportunities for development | 16 | |
| Case Stu | Jdy 2 | 16 | |
| 4.2.1. | Title | 16 | |
| 4.2.2. | Short description of the case study | 16 | |
| 4.2.3. | Strengths of the case | 16 | |
| 4.2.4 | Possible weaknesses and challenges | 17 | |
| 4.2.5 | Opportunities for development | 17 | |
| Case Study 3 17 | | | |
| 4.3.1. | Title | 17 | |
| 4.3.2. | Short description of the case study | 17 | |
| 4.3.3. | Strengths of the case | 18 | |
| 4.3.4 | Possible weaknesses and challenges | 18 | |





| 4.3.5 | Opportunities for development | 19 |
|---------|---|----|
| Chapter | 5: Germany | 19 |
| 5.1. | Title | 19 |
| 5.2. | Short description of the case study | 19 |
| 5.3. | Strengths of the case | |
| 5.4. | Possible weaknesses and challenges | |
| 5.5. | Opportunities for development | 20 |
| 5.6. | Sources (literature, expert interviews) | 21 |





Chapter 1: Austria

1.1. Title

'Fachhochschule Joanneum (FHJ)/University of Applied Sciences Joanneum', Bachelor Dual Programme 'Produktionstechnik und Organisation/Production Technology and Organisation'.

1.2. Short description of the case study

'Fachhochschule Joanneum (FHJ)' (https://www.fh-joanneum.at/, <u>https://www.fh-joanneum.at/en/</u>) is a university of applied sciences located in the city of Graz (main campus), in the south-eastern province of Styria. FHJ plays a crucial role in dual programmes in Austria. Currently, FHJ offers the following five dual programmes:

BSc: Mobile Software Development (<u>https://www.fh-joanneum.at/mobile-software-development/bachelor/en/</u>).

BSc: Industrielle Mechatronik (Industrial Mechatronics) (<u>https://www.fh-joanneum.at/industrielle-mechatronik/bachelor/en/admissions/dates-deadlines/</u>).

BSc: Produktionstechnik und Organisation (Production Technology and Organisation) (<u>https://www.fh-joanneum.at/produktionstechnik/bachelor/en/</u>).

MSc: Engineering and Production Management (<u>https://www.fh-joanneum.at/engineering-and-production-management/master/en/</u>).

MSc: Lebensmittel: Produkt- und Prozessentwicklung (Food: Product and Process Design) (<u>https://www.fh-joanneum.at/lebensmittel-produkt-und-</u>prozessentwicklung/master/en/admissions/application-requirements/).

The 'Produktionstechnik und Organisation (PTO)/Production Technology and Organisation' (https://www.fh-joanneum.at/produktionstechnik/bachelor/, https://www.fh-joanneum.at/produktionstechnik/bachelor/en/) bachelor programme was established about twenty years ago, and was the first dual programme implemented nationwide in Austria. The 'Duale Hochschule Baden-Württemberg' (Cooperative State University Baden-Württemberg) in Germany served as a key reference point in this process (https://www.dhbw.de/startseite, https://www.dhbw.de/english/home). Their vision statement is as follows: 'Study while at the same time gaining practical experience at a company and earn money – this is what our co-op bachelor programme offers. You will become an all-rounder in production technology and the organisation of manufacturing companies – and you can also immerse yourself in the international world of work'.

About 30-40 students are admitted per year, from a population of about 100-130 applicants. There is a competitive application procedure, in which the applicants are ranked. Once





students have been admitted, they are required to sign a 'student treaty' with the PTO programme. On enrolment, the whole educational plan is fully transparent for students (including the timing of the different sections). Students are expected to be employed by a company (which could even be outside of Austria) by the end of the second semester at the latest. The study programme can assist in connecting with firms. The PTO dual programme is linked to approximately 200-300 companies, mainly small and medium-sized enterprises (SMEs).

The standard structure of the programme is based on a rotating schedule: this involves learners studying for three months, and then working at the company for another three months, then they return to the higher education institution, and so on. While working at the company in these different time sequences, the plan is that the 'working student' rotates through different departments of the company so as to acquire comprehensive experience about working life. Consequently, the students are employed on a part time basis and receive a scholarship (approximately EUR 800, 14 times a year). The unemployment rate of graduates is lower than one percent.

'Academic Facilitators': Lecturers ('Fachlehrenden') also act as academic facilitators. All lecturers are required to demonstrate practical and experience-based knowledge in the areas and subjects that they teach. Lecturers are either employed on a full-time basis or linked to the institution on а part-time basis (https://www.fhjoanneum.at/produktionstechnik/bachelor/en/my-studies/faculty-staff/). Some of the part-time (external) lecturers work mainly for the companies that collaborate with the PTOs dual programme. 'Academic Mentors' are lecturers who support a student cohort throughout their whole undergraduate education (a different lecturer takes up this role each year). However, these 'academic facilitators' (lecturers) do not receive any specific training from (or by) the higher education institution. No provision is currently envisaged to offer them a training programme.

'Company Facilitators': These persons are called 'Betriebsmentor' or the 'Company Mentor'. The mentor is a member of the company that employs the student, and is the first port of call for students. Company facilitators support students at the host company throughout their studies. They are responsible for students. Mentors also regularly produce a written assessment on each student and their performance, consisting of completing a checklist and providing a series of more detailed open-ended views. Some of the mentors may also teach as part-time external lecturers (at the PTO), but this is not regularly the case. There are no particular training schemes for these 'company mentors' ('company facilitators') in place, either by companies or by the higher education institution. There is no such training planned for the near future.





1.3. Strengths of the case

The main strengths of the case include:

- 1. **Building connections with companies:** between 200 and 300 small and medium-sized firms (SMEs) are linked to the PTO Bachelor dual programme.
- 2. Cooperating with companies and higher education institutions from outside Austria: There are broader internationalisation measures, involving both companies from outside Austria or also higher education institutions from outside and within Austria. One such internationalisation project is LaTUFURE (Erasmus+) (<u>https://www.latfure.eu/</u>). The PTO has established a rich network of partner companies not only in Austria, but also in Germany and Switzerland. This requires personal contacts with representatives within the firms, which must be built up, developed and nurtured over time.
- 3. **Experience-based knowledge of lecturers:** Lecturers have specific experience in dual education and work-based learning, and represent a crucial asset for every dual education programme. The PTO boasts a long-standing history of expertise.
- 4. **Employability of graduates:** PTO graduates are in a very good position in terms of labour market prospects. The unemployment rate among them is lower than 1%, which means that there is great economic interest in PTO graduates.
- 5. A Bachelor's programme dissertation should be a useful (and innovative) problemsolving resource for the company concerned: Students work on their Bachelor's dissertation (or on their Master's dissertations, if applicable) in close cooperation with the companies that they are engaged with; in this way, their work is a problem-solving exercise for the companies involved, and enables and supports 'problem-based learning' for all actors concerned companies, students and higher education institution).
- Engagement in networks: PTO engaged in the development of the 'Dual Studieren' (dual studying, <u>https://www.dualstudieren.at/</u>) network and in capacity-building network activities with other countries, in order to create broader perspectives.
- 7. **Personal contact of the faculty and staff with students:** PTO is a 'smaller' study programme, with about 30-40 students per cohort. This allows lecturers to provide students individual support, while also aligning their respective expectations. This explains why drop-out rates are very low (not more than 2-3 students per cohort).

1.4. Possible weaknesses and challenges

A number of challenges have been identified:

- 1. **Ongoing work and communication exchange with the companies:** Matching students and graduates to the requirements and interests of the companies requires constant communication exchange and work. This is an ongoing process. Firms' interests across different sectors can (and do) differ substantially.
- 2. **A wave of retiring lecturers:** the retirement of a series of lecturers is currently bringing about some challenges for higher education institutions and the PTO.





3. **Continuous curriculum development :** The curriculum of the PTO (as is the case for the curricula of all dual education programmes) is to be continuously reflected on, adapted and improved. This only can be successfully achieved if there are valuable, growing and effective communication and cooperation networks with the firms concerned.

1.5. Opportunities for development

Some opportunities for development have been identified:

- 1. Continued marketing efforts: Once a specific partnership with a particular company has been established by the PTO, these are usually mutually beneficial arrangements, where the company is satisfied with the prospects of dual education. However, it is a major marketing effort for PTO to make contact with new companies. These are time-consuming processes, involving diversified initiatives and tactful, strategic communication. New, good-quality relationships with companies cannot be achieved 'out of nowhere'. Moreover, marketing efforts are not only directed at companies, but are also extended to other higher education institutions, in order to build partnership networks.
- 2. **Micro-credentials:** The design and development of curricula for dual education tends (and is also expected to) to be aligned with aspects of 'micro credentials'. The basic idea here is to implement modules or micro-modules into the curriculum in such ways that they can be recognised and taken over by other study programmes (within or without the same higher education institution, nationally or internationally). This allows students to have more flexible study plans and improves the attractiveness of any study programme. This is particularly important within the EU context.
- 3. Participation and action in developing international cooperation networks: Engagement in and building of cross-country networks is to be increased. One current example for this is the 'European University Alliance on Dual Education' (EU4DUAL, https://www.mondragon.edu/es/european-university-alliance), whose current members are the following higher education institutions: Duale Hochschule Baden-Württemberg (Germany), Mondragon Unibertsitatea (Spain) FH JOANNEUM Gesellschaft mbH (Austria), Savonia UAS (Finland), ESTIA Institute of Technology (France), Neumann János Egyetem (Hungary), PAR University Co. llege (Croatia), Malta College of Arts, Science and Technology (Malta) and Koszalin University of Technology (Poland). This (https://www.mondragon.edu/en/-/mondragon-unibertsitatea-european-universityeu4dual-formacion-dual) runs in parallel with the 'European Dual Studies University' (https://eu4dual.education/), representing a multi-country trans-national network style of university. According to the mission statement: 'OUR MISSION is to use transnational Dual Education, a model involving close collaboration between students, academics and business stakeholders, to help Europe address major societal challenges.' (https://eu4dual.education/465-2/). Consequently, the involvement of different companies across different countries should be met by a cross-country network of different higher education institutions, so as to reflect and address international firm activities.





1.6. Sources (literature, expert interviews, ...)

Expert interviews (for Case 1):

Maja Dragan (FH Joanneum, PTO) (maja.dragan@fh-joanneum.at) (5 September 2022)

Hagen Hochrinner (FH Joanneum, PTO) (hagen.hochrinner@fh-joanneum.at) (7 September 2022)

Further links to websites:

https://www.studieren.at/duales-studium/

https://www.dualstudieren.at/

https://www.lehrstellenportal.at/dual-studieren/

https://www.lehrstellenportal.at/dual-studieren/modelle/

https://www.lehrstellenportal.at/dual-studieren/bewerbung/

https://www.uni.at/studium/duales-studium/

https://www.qualitaet-lehre.at/duale-berufsbildung/lehrlingsausbildung-inoesterreich/zustaendigkeiten-und-finanzierung/





Chapter 2: Italy

2.1. Title

Classical vocational training pathway and the dual system

2.2. Short description of the case study

In the Italian case studies it is important to distinguish between the classical vocational training pathway and the dual system. This section focuses on the dual system, which is the most complex and the closest one to European standards.

The dual system envisages a curricular internship of 400 hours during the second year and of 500 hours during the third year for the three-year vocational qualification. In the fourth year, the internship lasts 495 hours, as provided in the new system following the entry into force of the PNRR (national resilience and recovery plan).

Each class in the dual system has its own training tutor, who takes care of matching students and companies and, above all, takes care of students' assessment, which is carried out in the company by a company tutor. The entire dual programme stipulates that the learning objectives to be achieved by each student must be established. (The tutor is a peculiarity of Enaip).

The training tutor visits the companies, becomes acquainted with them, assesses their production process and the work environment (especially health and safety aspects). This allows the training tutor to understand whether their processes are valid to fulfil the training obligation and to specify whether they are suitable for the second, third and fourth years of study.

The tutor then conducts individual interviews with students and tries to understand their aptitudes to match their characteristics with those of the company. The tutor draws up all the internship documentation with the teaching secretary.

Throughout the year the tutor visits the companies that the students have been matched with, and conducts interviews with tutors and company managers, from whom the assessments are collected. This is then presented to the course trainers, so that they can eventually evaluate the rescheduling of the classroom curriculum.

2.3. Strengths of the case

The strengths of this pathway are definitely the continuous and long-term presence of students in companies: the company has the opportunity to know the trainee for a long period (not only for two weeks, as state schools do) and generally then confirms their agreement to their employment.





2.4. Possible weaknesses and challenges

A weak point is that the world of work is too attractive to students; we have noticed that students tend to interrupt their dual programmes because they can easily find work, after only having gained the minimum amount of experience. They fall into the trap of accepting highly insecure employment contracts in exchange for a salary. Vocational school students are in fact already work-oriented, they want to learn a profession as soon as possible in order to be independent.

The challenge, therefore, is to establish a strong school-company relationship so that the world of work also respects the study time of each student. This will allow them to finish their education and prevent them from offering contracts that are only appealing to young people.





Chapter 3: Spain

3.1. Title

Dual Training as a Tool to Promote the Employability of Unemployed Young People with Intellectual Disabilities

3.2. Short description of the case study

The main objective of this programme is to help young people with intellectual disabilities enter the labour market through a training itinerary that combines training with employment. We use the accredited training of the Level Professional Certificates to achieve this, which do not require previous qualifications. These Professional Certificates serve to confirm the technical skills that people will acquire both in the VET institution and in the partner company.

This dual training programme operates in a series of stages: career guidance, group training and job placement.(a) Work focus: This involves giving advice to and taking actions to support people who need to join or re-enter the labour market.

(b) Technical training: The training actions must combine social and employment-related skills focused on the workplace, as well as a set of technical skills that is in increasing demand by companies.

(c) Employment guidance and support: this involves supporting young participants by training them for entering into the labour market, through meetings with companies plans to attract job offers. It also includes a pre-selection to identify the profiles that best fit job offers.

(d) Job placement: In order to promote employment, young participants engage in an unpaid internship programme in companies linked to the professional sector in which they have been trained.





Our objective is not only to qualify young people with intellectual disabilities to facilitate their access to the labour market, but also to adapt to the new current and future professional profiles demanded by companies.

3.3. Strengths of the case

One of the main strengths of this programme is not only to provide young people with intellectual disabilities with qualifications to ease their access to the ordinary labour market, but also to adapt to the new current and future professional profiles demanded by companies. This project involves placing learners at the centre of their training process. They therefore play an active role, not only as students but also as full actors. This Dual Training project is characterised by being a generator of social value, thus helping to achieve an inclusive, integrating and egalitarian society that includes all actors and people. This ultimately means that it is the VET institutions that are adapting to the new needs of companies, offering new professional profiles that allow companies to create

inclusive and diverse work teams that facilitate Corporate Social Responsibility.

3.4. Possible weaknesses and challenges

One of the main challenges that we have faced as a VET institution is the adaptation of the Professional Certificates for this group, due to their unique educational needs. However, at Centro San Viator we have always been committed to social innovation as a mechanism that encourages social and labour inclusion.

Another challenge that we have encountered entails identifying companies that are committed to Dual Training for young people with intellectual disabilities. It is undeniable that companies are reluctant to employ people from within this population group, as they are considered to be less productive.





However, this perception is gradually changing, especially when companies have the opportunity to test it in practice. Dual Training programmes are an excellent option for all those companies interested in creating more diverse and inclusive work teams.

3.5. Opportunities for development

This Dual Training model needs to have a stable team of people with experience in the training and job placement of young people with intellectual disabilities. In addition, to be able to implement it, there is a need for a solid network of companies to reach out to and a multidisciplinary human resources team that includes company recruitment officers, tutors, trainers, psychologists/pedagogues...

3.6. Sources (literature, expert interviews ...)

- Ainhoa de la Cruz, expert at Centro San Viator
- Professional Certificates

https://www.sepe.es/HomeSepe/en/Personas/formacion/certificadosprofesionalidad/familias-profesionales.html

- Amadip Esment Foundation. https://esment.org/
- Formación Profesional Dual para personas con discapacidad intelectual.

Monográficos aedis nº 1

https://media.timtul.com/media/crm_aedis/formaciondual2016_20180207120333.

<u>pdf</u>

 Programa de formación dual para personas con discapacidad intelectual en los centros especiales de empleo (CEE). Gobierno de España





http://tramites.administracion.gob.es/comunidad/tramites/recurso/programa-de-

formacion-dual-para-personas-con/1dd54dc9-ec2e-4bc4-933e-1791ef47b6ac





Chapter 4: France

Case Study 1

4.1.1. Title

Relationship between the company and the training centre, and the role of tutors

4.1.2. Short description of the case study

This is the story of a job seeking person named Saïd and a company that was looking for a new employee. Saïd came to visit our workshops and learnt about the profession of electrical winder.

We put the candidate in contact with the company to set up an internship in one of our hosting companies.

Saïd engaged in a 2-week internship in this company. In this way, he was able to validate his professional project, and the company confirmed that they wished to recruit him.

In October 2021, he began his one-year professionalisation contract to certify for French BAC level (European level 4).

4.1.3. Strengths of the case

Saïd was strongly motivated, despite having some weaknesses in terms of his theoretical knowledge. During his internship, the company became aware that Saïd had very good interpersonal skills.

Our follow-up documents with the company helped us to prevent any possible problems. The prerequisite tests and support times at Icam made it possible to conduct a close followup on Saïd's training process.

4.1.4 **Possible weaknesses and challenges**

Saïd's business tutor was not trained to support Saïd.

This entailed a risk for Saïd, because his theoretical level remained low.





Strong company support will be necessary for him to pass the exam.

4.1.5 **Opportunities for development**

Training should be put in place for the tutor.

Case Study 2

4.2.1. Title

Insufficient involvement of the company in a training action

4.2.2. Short description of the case study

'V' is a manufacturer of anti-vibration parts for the automobile industry. The company specialises in engine mounts, shock absorber attachments and other front or rear axle joints. The company reviewed its workshop organisation and appointed some leading teams who work under a 'supervisor'.

'V' intended to train 5 leading teams within the workshop. This company therefore asked Icam for a specific training package (about 300 hours of training, in work-study 1 week per month in our training centre).

4.2.3. Strengths of the case

This concerned employees who had been in the company for 2, 5 and 10 years, respectively, and who were well acquainted with the industrial environment. They were motivated because this training package was a major tool for their professional development within their company.

It was decided that training would be financed by V's OPCO*.

* An OPCO (Skills Operator) is an organisation approved by the State which aims to help companies with no more than 50 employees to support and promote the professional development of employees through continuing education.





4.2.4 Possible weaknesses and challenges

This (alternating) learning mode requires very close support from the company.

The company is required to appoint a tutor for each learner, who is responsible for supporting and training the learner throughout their training experience, including the path towards obtaining their diploma.

In the case of V, unfortunately, this training was only considered to be a 'stop-gap' during the 'slowdown' period (decline of the company's activity).

There was a lack of support from some tutors. Some learners were unable to practise the new skills acquired during their period in the company.

The assessment process was affected because the learners had insufficient practical experience in the company; as the training centre had to create the scenarios in real situations.

Learners were usually assessed at their workplace in the company.

4.2.5 **Opportunities for development**

Training should be put in place for the company tutor who plays a key role for the learner. There should be very strict coordination and cooperation between the training centre, the company and the certification centre in order to determine the role of each party concerned.

Case Study 3

4.3.1. Title

Apprenticeship leading to a Master's degree

4.3.2. Short description of the case study

Antoine, 20 years old, wanted to become an engineer in the aeronautic industry, and was also ready to start his professional career. He applied to an engineering school to prepare for his Master's degree, but his admission was conditional on having an apprenticeship contract. Two





months before starting his course, he managed to sign a contract with a small company in the field he was looking for.

For three years, Antoine engaged in alternating schedules between the company and the educational institution, 50% each.

Between the 1st year and the 2nd year, he was required to obtain professional experience abroad for 11 weeks. His company had no links to foreign companies, so he had to manage this by himself, with the help of the educational institution. Under applicable French regulations, his contract was suspended in 2019 during this international placement, because it was longer than 4 weeks. This meant that Antoine no longer had a salary, had no insurance, and no longer made contributions towards his pension. He had become a 'student', received a flat-rate aid from the OPCO, could also get an Erasmus grant, and the educational institution paid for new insurance for him. But managing all these matters required much time and hard work.

4.3.3. Strengths of the case

The alternating periods between the education centre and work were increasingly longer. In his 1st year, the periods were about 3 weeks at university/3 weeks in the company.

In his 2nd year, the periods were 3 months/3 months in each location.

In this 3rd year, Antoine spent 6 months in his engineering school and then 6 months in the company.

At the beginning of each academic year, the engineering school invited company facilitators to outline the prospects for the coming year: the schedule, course contents, types of tasks that could be expected from the learners at the companies, etc. The first year, the school explained the new regulations for international mobility because some companies were not aware of how complex this has become. Then, there was some time for company and engineering school facilitators to share their experiences and discuss with the learners. This half-day meeting is very important to strengthen the links between the companies and the institution.

4.3.4 Possible weaknesses and challenges

The alternating pace may not suit the needs of the companies. This pace has been chosen by the institution to allow the learner to grow in responsibility, with longer periods of time in the company when the learner is able to take charge of more demanding projects. But some companies would prefer to share the week (e.g. 3 days in the company / 2 days at school)





during the 3-year training period. To make this feasible, the assumption is that the company is not too far from the training centre.

International mobility conditions may appear not to be fair for apprentices. Some companies have subsidiaries abroad and can send their apprentices on a mission. In this case, apprentices do not lose their employee status.

4.3.5 Opportunities for development

As for the alternating pace, if the educational institution is not able to propose two schedules, companies may choose another institution.

The majority of companies and all training centres are not happy with the new regulations about international mobility and would like to have them changed. This will probably take some time.

Chapter 5: Germany

5.1. Title

Industrial Engineering at DHBW and Airbus

5.2. Short description of the case study

This case study covers the WBL study 'Industrial Engineering' programme, where DHBW Ravensburg was the HEI (in Baden-Württemberg) and Airbus Defence and Space (ADS) was its internship partner. Students sign a 3 year-contract and engage in a WBL programme, alternating practice (P) and theory (T) phases that are three months long each. In order to reduce conflict between the phases, they are arranged to allow for longer study and working periods, e.g., as follows:

- Year 1: P-T-T-P
- Year 2: T-T-P-P





• Year 3: T-P-T-P

During the first practice phase, the student is introduced to the firm and learns fundamental skills covering broad fields of engineering, from using specific machinery, such as milling machines, to coding, such as for programming microcontrollers, to planning projects, such as using waterfall methods. In the subsequent theory phases of year 1, the student learns academic fundamentals before entering a longer practice period in year 2 to manage and deliver a personal project that needs to be coded in an assessed project report as an assignment (assessed only by the company facilitator). In the final theory phases in year 3, students specialise in specific fields and use them in their final practice phase as part of the assignment to complete their Bachelor's dissertation (assessed by the company facilitator and the academic facilitator). Across the practice phases, students typically have the opportunity to become acquainted with two or three departments and benefit from creating an internal network within the company.

5.3. Strengths of the case

The case's strengths are the strong focus on either theory or practice in the different phases and the structured arrangement, which minimises conflict. As this WBL model is very well established (it has been operating for 50 years), there are strong supporting structures at the DHBW and ADS to complement each other. Furthermore, the study programme is wellknown at the firm, so the tasks and engagements are well-tailored to the student's abilities. Due to the breadth of WBL programme offerings, ADS can also provide central courses to support its students across multiple programmes, e.g. 'Thermodynamics'.

5.4. Possible weaknesses and challenges

Potential challenges of the case are that it is not embedded in career paths that include further graduate education, e.g. starting a Master's degree or eventually pursuing a PhD. Hence, the firm will recommend that the WBL Bachelor student should terminate the contract to pursue a Master's degree instead of considering alternative options, including recommending a WBL Master's programme or offering the Bachelor's degree graduate to suspend their contract while entering a full-time Master's programme.

5.5. Opportunities for development

Opportunities for improvement specifically address the creation of longer-term paths for WBL Bachelor students, e.g. directly joining a company as a full-time employee, directly continuing a Master's degree while staying at the firm, or shaping a custom 'solution'.





5.6. Sources (literature, expert interviews...)

Expert interview with Christoph Brosig (former graduate of this programme, former practice facilitator for this programme). For the underlying job posting, see also: https://ag.wd3.myworkdayjobs.com/en-US/Airbus/job/Duales-Studium-BEng--d-m-w---Wirtschaftsingenieur-FR- Elektrotechnik_JR10138644?locationCountry=dcc5b7608d8644b3a93716604e78e995&lo cations=f5811cef9cb501e0d621ee684c0a1444 (last visited: 5th September 2022)