



BOOSTING BUSINESS INTEGRATION
THROUGH JOINT VET EDUCATION

Research report

of the project BBVET – boosting business integration through joint VET education

The challenges and achievements of a 2.5-year project on interregional
cooperation between five South Baltic Region countries

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Abbreviations

BBVET	Boosting Business Integration through joint Vocational Education and Training
CV	Curriculum Vitae
ECVET	European Credit System for Vocational Education and Training
EdTech	Educational Technology
GCSE	General Certificate of Secondary Education
LA	Learning Agreement
MoU	Memorandum of Understanding
ULO	Unit of Learning Outcomes
SBR	South Baltic Region
VET	Vocational Education and Training
WP	Work Package





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1 Introduction

The aim of the BBVET project – *Boosting Business Integration through joint Vocational Education and Training*– was to pilot two cross-border vocational trainings with a duration of one year based on ECVET components in the vocational sectors Educational Technology (EdTech) and Mechatronics. Financed by the Interreg South Baltic Programme and in line with the European Union Strategy for the Baltic Sea Region, six project partners from five South Baltic country regions in Denmark, Germany, Lithuania, Poland and Sweden worked in collaboration to develop the first European one-year cross-border curricula that included long-term mobilities of 10 weeks. This would take place four times in four different partner countries. In line with the overall objective of the project to boost business in the South Baltic region, and in accordance with the EU goal to increase the mobility rate in Vocational Education and Training (VET) by up to 10 % alongside implementing long-term cross-border mobilities in VET, the BBVET consortium presents the results and achievements of the project in this report.

The BBVET project partners are listed below:

NetPort Science Park Ltd (Sweden) - LEAD BENEFICIARY

The Science Park is a Triple Helix organisation which aims to increase cooperation among the private, public and academic sectors in order to facilitate sustainable economic growth in the Blekinge region. It is a meeting place for people, ideas, creativity and knowledge.

CELF (Denmark)

The Centre for Vocational Education Lolland Falster is a large educational institution offering a wide-range of studies including upper secondary, tertiary and continuing education and a choice of training programmes. CELF has departments in three towns on Lolland-Falster and has a large number of facilities at its disposal.

Plunge Technology and Business School (Lithuania)

This education provider offers initial and continuing Vocational Education and Training. In 2016 the school opened a department in Rietavas, formally known as Zemaitija College. It is well known as an institution for having long traditions and an experienced teaching staff who train highly qualified specialists and practitioners.





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Rietavas Tourism and Business Information Center (Lithuania)

The Centre was founded by the Ministry of Economy of the Republic of Lithuania and the Council of Rietavas Municipality in 2002. It is a reliable partner for entrepreneurs working in Rietavas, and provides them with high-quality consultation, training, and technical assistance. Clients are mainly SMEs.

University of Rostock – Chair of Business, Economics and Entrepreneurship Education (Germany)

The Chair of Business, Economics and Entrepreneurship Education provides lectures, research, and academic consultant on various topics of Vocational Education and Training. With a focus on the Baltic Sea Region, the chair works in the internationalisation of VET with regards to networking, mutual co-operation and regional development.

University of Szczecin (Poland)

The Faculty of Management and Economics of Services at the University of Szczecin is comprised of 18 professors and 3 departments. It actively participated in the former SBTP project and as a result established a reliable network of stakeholders and VET schools in the region. Whilst doing this, it also motivated students and employers to actively participate in the internationalisation process.

Through the assignment of different work packages, the project partners distributed the responsibilities among themselves. Netport Science park was mainly responsible for the management of the project. The Rietavas Tourism and Business Information Centre coordinated the Train-the-Trainer activities. The Plunge Technology and Business school was responsible for the testbed itself, i.e. the piloting of the two cross-border curricula. The University of Szczecin as well as the CELF intensively contributed to dissemination and research aspects, as well as, in the case of CELF, to the usage of ECVET components. The Chair of Business, Economics and Entrepreneurship Education of the University of Rostock was mainly responsible for the development of the two cross-border vocational curricula as well as the research report.

Given the efforts of the project consortium, a total of 45 students were able to successfully participate in the piloting of the two different one- year cross-border training programmes from January 2018 to December 2018. The achievements and the impact of the project will be presented in this research report. The report is structured chronologically with regards to the activities that have been carried out during the project. The report sets out to identify from which project idea the consortium was born and how the necessary activities were adapted to the current situation. The report as a whole adopts





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the character of a labour process analysis but also provides empirical research that has been conducted during the project. It includes the multiple perspectives of all participating partners as these were the results of different workshops that have been conducted during several partner meetings within the project. In addition to this, the report includes a variety of innovative approaches that can be transferred to further development and/or to other sectors/training areas. The purpose of the report is not only to present results and to highlight achievements and challenges but also to raise questions and to intensify the discussion within the field of long-term mobilities in the VET. Increasing the flexibility of education systems in Europe whilst at the same time ensuring the quality of VET was one major concern of the project consortium and this report makes a delicate attempt to stimulate further discussion.





2 Intercultural cooperation within the project consortium

This chapter presents the various formats (of meetings), media and fundamentals of communication within an intercultural team.

2.1 Task management

Within the framework of the project application, an overview was developed for task management (see annex 1).

This overview guided all project partners through the term of the project. The overview shows the five work packages that needed to be elaborated upon: Work Package (WP) 1: Management and coordination, WP 2: Communication and Dissemination, WP 3: Teacher and Coaching Training, WP 4: Testing pilot and research report and WP 5: Mobility agency. The order of the WPs is already (generally) structured chronologically. The WPs are defined by detailed work tasks which are presented in the rows of the table. The table columns specify the six participating project partners. Tasks that are highlighted (in green) indicate that the respective project partner is responsible for the task. This table ensures a very high degree of transparency regarding the tasks in the BBVET project and proved to be a great management tool.

2.1.1 Meetings

Partner meetings

In the period from September 2016 to May 2019, there have been 20 partner meetings in total. The partner meetings have taken place in all five participating project countries and, as a general rule, representatives from each country participated in each partner meeting. Two weeks before the meeting the agenda was sent out. It gave an overview about the different topics that were going to be discussed and it also specified if partners would need to prepare content for the meeting. The leading beneficiary always provided the agenda. If there were additional files that were to be used for the meetings, then they would be uploaded beforehand to the SharePoint, so that the partners were able to familiarise themselves with the documents. After the partner meeting, minutes were sent out by the lead beneficiary. The minutes documented the deadlines and tasks that the partners had agreed on.



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Special working group meetings

In addition to the partner meetings, special working group meetings took place. For example, with regards to the curriculum development there was a smaller group from the project consortium that met in different countries to discuss the development. Other topics for special work groups were, among others, the graphical profile, soft skills measurement as well as the cooperation of city councils in accordance with the partner city agreement.

National meetings

In order to be prepared for the cross-border partner meetings several national meetings took place with other stakeholders, such as schools, companies, start-ups, associations, chamber and other educational institutions so to raise the awareness of the project and to establish new partners.

Skype meetings

Even though the project consortium organised project partner meetings on a regular basis, additional skype conferences were needed to exchange information. The skype conferences were prepared and evaluated in the same way as the project partner meetings, and they helped to improve the flow of information during the project. The BBVET project began when the provider *skype* launched the new version *skype business*. There were partners who used the new version and partners who continued using the older version. This, at times, caused problems when it came to the connectivity.

2.1.2 Other communication

Office 365 – Sharepoint

The project consortium planned to use a cloud solution to share documents and other files. Office 365 was implemented in a SharePoint hosted by the lead beneficiary. All digital files that were in use during the project were uploaded to the SharePoint. The SharePoint was structured by different folders each representing the work packages that had been defined by the project application.

Phone calls

In extremely urgent cases, the project partners would ring one another. Hence, the partners exchanged their mobile and office phone numbers at their first joint partner meeting. The exchange of mobile phone numbers also proved to be rather useful during skype meetings if the software was



malfunctioning so that partners could connect to the person who was absent - at least via mobile phone.

Social media

The project has its own social media channel on Facebook and Instagram. This served as a further connection between the project partners through which they could comment on posts that were made by partners. Some partners also utilised the messenger functions of the social media providers to exchange information. In addition to this, they also connected on a personal basis through Facebook and Instagram and liked each other's profiles or followed one another's personal accounts.

Emails

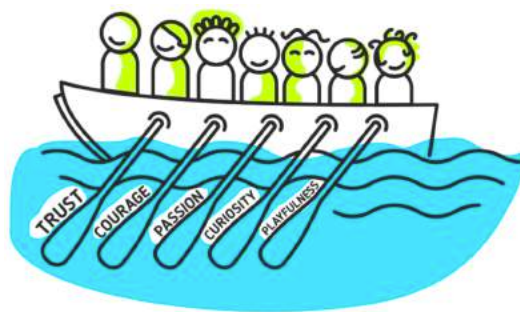
The project partners communicated with one another via email on a weekly basis. All the necessary information was forwarded through a common mailing list to partners. Sometimes the emails contained attachments with further information regarding special tasks or concept developments, which were simultaneously uploaded to the SharePoint.

Joint conference visits

The project consortium attended the *South Baltic Annual Conference* and the *Development Forum*.

2.1.3 Common values

The project partners agreed on a series of common values at the outset of the project. These shared values would serve as the basis for fruitful cooperation and facilitate the implementation of common concepts within the project consortium. The five common values established were as follows:



- Trust
- Courage
- Passion
- Curiosity
- Playfulness

Figure 1: BBVET value ground.



2.2 Challenges and achievements regarding intercultural cooperation

Challenges

Throughout the collaboration period, the project partners were continuously faced with challenges for which they always endeavoured to find a solution.

- Cooperation was based on open discussion. This facilitated an atmosphere in which every partner could share their point of view. However, it was not always easy to find a common solution (different approaches regarding how to implement “cross-border education”; different understanding of roles and responsibilities among teachers, coaches, companies; different understanding of professions).
- Holding regular partner meetings was certainly successful in terms of fruitful communication, given that it allowed partners to directly communicate with one another; however, regular meetings also brought about many challenges as regards daily responsibilities (e.g. finding a balance between daily work and partner meetings).
- The common values served as an important foundation, but these were seldom embraced or consolidated. For instance, at the beginning of each project meeting, projects partners should have been regularly reminded of values.

Achievements

At the end of the project term, the participants listed the achievements as follows:

- The flow of communication generally worked very well in the BBVET project.
- Partners were very communicative and honest and addressed institutional challenges in a timely and open manner. In this way, joint solutions could be developed and implemented. There was no conflict at any point.
- The project team was solution-orientated and extremely flexible when it came to solving problems and finding solutions.
- All countries contributed to the same degree/extent.
- The lead beneficiary was very well organised in terms of planning. All meetings were held as scheduled, and all partners were provided with important information at all times.
- Informal activities that took place during partner meetings helped partners to get to know one another better and helped to build trust.



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- The check-in/check-out method used at each project meeting helped the project team to get to know each other better and helped participants to feel comfortable within the team.
- Multiple partner meetings were necessary to develop joint solutions and to mutually support one another within the project team.
- The dates for the partner meetings were given in advance so that projects partners could organise these around their work in order to be able to join the meetings.
- There were different working methods and communication strategies in the international project team. It took time to understand these different approaches/strategies but it got easier as time went on. Working in an intercultural team was a positive experience and one that offered many insights; working in a multi-cultural environment enriches your own way of thinking. The project consortium revealed (cultural) differences but also similarities, for example, one of these being the mutual drive to improve.
- Within the scope of the common values, the focus was on developing consortium skills and cooperation techniques.
- The common values permitted the consortium to work informally, securely and based on a relationship of mutual trust.



3 Train-the-Trainer workshops

Within the project application, the project consortium agreed to conduct Train-the-Trainer workshops for future educational staff to prepare them for intercultural work as regards both hard and soft skills (see annex 1).

During the preparation of the workshops the project partners realised that it was necessary to address teachers, trainers and coaches as the three types of educational staff who were involved in VET in all participating countries. However, the expressions of 'teachers' and 'trainers' were generally synonymous within the work of the project consortium; which is caused in the differences of the education systems.

The project consortium agreed on the following criteria for the participants in the Train-the-Trainer workshops in both vocational areas:

Criteria	Responsibilities	Benefits
<ol style="list-style-type: none"> 1. Fluent English 2. Basic EdTech/Mechatronics knowledge 3. Flexibility 4. Open mindset 5. Entrepreneurial thinking 6. "Euroness" – focus on Europe 7. Connection to industry/company 	<ol style="list-style-type: none"> 1. Attendance and active participation in training sessions (3 trainings) 2. Delivery of training during testbed period 3. Active participation 4. Communication with BBVET project team 5. Maintaining contact with companies 6. Drawing up training curriculums 	<ol style="list-style-type: none"> 1. Enhanced qualifications 2. Innovation in education (models/methods) 3. Internationalisation 4. Individual growth 5. Contacts/network-building 6. Development of school-company cooperation 7. Improvement of technical English level 8. Receipt of certificate 9. Regional awareness

Table 1: Criteria for the teacher/trainers.

Criteria	Responsibilities	Benefits
<ol style="list-style-type: none"> 1. Fluent English 2. Coaching experience 3. Flexibility 4. Open mindset 	<ol style="list-style-type: none"> 1. Attendance and active participation in training (3 trainings) 2. Delivery of coaching during testbed period 3. Active participation 	<ol style="list-style-type: none"> 1. Enhanced qualifications 2. Innovation in education (models/methods) 3. Internationalisation

5. Entrepreneurial thinking 6. "Euroness" – focus on Europe 7. Connection to industry/company	4. Communication with BBVET project team 5. Maintaining contact with companies - building bridges between companies and trainees/project participants 6. Drawing up training curriculum	4. Individual growth 5. Contacts/network-building 6. Development of school-company cooperation 7. Improvement of technical English level 8. Receipt of certificate 9. Regional awareness
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Table 2: Criteria for the coaches.

In 2017 the BBVET project consortium conducted four Train-the-Trainer workshops that are explained in the following.

3.1 24 - 28 April 2017, in Karlshamn/Hässleholm/Malmö/Karlskrona Sweden

The Train-the-Trainer week in Sweden, hosted by Netport Science Park, was the first of several consecutive training sessions for trainers, teachers and coaches, who are to play supporting roles in the BBVET project during the mobilities. Before the workshop began a small brochure was given to participants which contained the necessary information for the training sessions, including the agenda for the whole week, the presentation by the guest speaker and that of workshop leaders and facilitators. The agenda was different as regards the two different vocational fields EdTech and Mechatronics. In accordance with the participation in one of the two vocational fields, the participants attended presentations from respective subject experts.

In the first few days, intercultural learning, getting to know one other, but also the project goals and funding structures were the main focus. In addition, coaching methods were explained and practiced, as well as shared values for future cooperation. For the coaching part of the BBVET testbed a coaching manual was distributed to all participants (see annex 2). The first two days also included an initial presentation of the relevant EU documents used during mobilities: Memorandum of Understanding, Acceptance Letter, Learning Agreement and Grant Agreement.

On Wednesday and Thursday, all participants were assigned to the Mechatronics and EdTech project-specific occupational areas. In addition to company and school visits together with conference participation, these days dealt more intensively with the international curricula, which aimed to provide the basis for the mobilities in the BBVET project.

On the last day, the whole group came together again to discuss the digital learning platform "Canvas" and to agree on the upcoming steps.

The following participants (excluding the project consortium itself) were present from the range of countries specified below, which are shown in accordance with their function:

Function	Teacher		Trainer		Coach	
Country	Mechatronics	EdTech	Mechatronics	EdTech	Mechatronics	EdTech
Denmark					1	
Germany		2	2			
Lithuania	2				1	2
Poland						2
Sweden	2				1	1

Table 3: Representation of countries based on their functions.

During the first training session, the cross-border testbed for both vocational fields was presented to all participants (see chapter 4).

After the workshop, an evaluation of this session took place (see annex 3). Some of the anonymous statements resulting from two questions of this evaluation can be found below:

1: Benefits of ongoing participation in Train-the-Trainer workshops:

- International influences, new knowledge; development at my school: training of employees, students and myself; new contacts
- Improving understanding of innovative systems, requirements for study programmes and student exchanges
- The project will bring innovation and change with regards to teaching methodology, international communication and relations
- Implementation of new teaching methodology



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- Enhancement of education quality that students will receive; internationalisation of students, the education programme and the institution itself
- Internationalisation of the university, particularly with regards to the study programme “Business Education”
- Being in possession of the infrastructure which is necessary for BBVET (media lab, etc)
- Added value for our students; review of education programmes; transfer of knowledge from different countries; bank of knowledge for business sector

2: If you want to continue the training, what topics are the priority ones for you in order to continue to develop our joint curriculum

- Knowledge, skills and competences in training sessions
- Practical concerns concerning the students themselves
- A more hands-on approach: recruitment of students etc.
- Programme (contents) for soft skills in the first week for each country
- Delving deeper into topics we started to discuss in depth in previous sessions
- Clarification regarding all German issues
- More discussions with companies and schools; agreements on responsibilities concerning curriculum development; validation + recognition of education (how the ‘official VET’ will be)
- Persuasion of companies to take part who will be attractive to students and that who will provide specialised know-how
- The validation of training/internship which students will receive

3.2 29 - 31 May 2017, in Nykøbing Denmark

The Train-the-Trainer week in Denmark, hosted by the CELF, was the second training session to take place for trainers, teachers and coaches who were to play supporting roles within the BBVET project during the mobilities.

After the welcome session, the work that had begun in Sweden on content then continued. During the first afternoon, following the presentation on the "Effect Measurement of Education" (see annex 4), the participants discussed the additional value that was created by the BBVET education programme and how this could then be measured.





Figure 2: Model for measuring Return on Investment.

Source: CELF

Measurement aspects defined by the Danish project partner were as follows:

- Bringing resources into a country (high-scale effect)
- Improving reputation of VET
- Improvement of quality
- Sustainable structures
- Influential departments/agencies
- Personal development
- Organisational development (internationalisation)
- Salaries
- Imports + exports
- Creation of networks
- Certificate
- Etc.

For more information about the soft skills measurement, please see chapter 6.4.

The second day started with a comprehensive tour of the CELF – *Center for Vocational Education Lolland Falster*. Here teachers, trainers and coaches from Germany, Lithuania, Sweden and Poland were able to gain insights into the training provided in Denmark. During the afternoon on the second day,



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the groups were again separated into the two professions of Mechatronics and EdTech. This way they were able to work on the respective curricula for the BBVET education programmes.

In the area of EdTech: A first draft of a possible EdTech curriculum was presented by a Swedish coach who is considered an expert in this area. Participants discussed the working paper 'Why BBVET EdTech – the need and the opportunity', which included background information on EdTech, the EdTech network and the pilot programme (see annex 5). The participants used a content wish list to discuss possibilities and realities in the specific national contexts.

In the area of Mechatronics: Representatives from schools and companies (teachers and trainers) were invited to present their country-specific situation, explaining how education/training is carried out in their respective countries. They also explained the way in which short term-mobilities already operated and how these achievements could be adapted to the long-term mobilities. The participants specified the professional fields they worked in and indicated the names of different experts they would like to see involved in the curriculum development.

During this Train-the-Trainer workshop the presentation 'A structure and guide for a value-based and process-oriented education' also took place, which was conducted by coaches from Move Management.

On the last day, the whole group came together again to face the educational and didactic challenges of implementing a digital learning platform. The keynote speech was given by an IT specialist, whose function was as educational IT consultant at the CELF.

The following participants were (excluding the project consortium itself) present from the range of countries specified below, which are shown in accordance with their function:



Function	Teacher		Trainer		Coach	
Country	Mechatronics	EdTech	Mechatronics	EdTech	Mechatronics	EdTech
Denmark					1	
Germany		1	2			
Lithuania	2				1	2
Poland						3
Sweden	1				1	1

Table 4: Representation of countries based on their functions.

After the workshop, another evaluation took place (see annex 6). The anonymous statements that resulted from one question of this evaluation are listed below:

1: The most urgent questions in order to continue the work to assure sustainability of BBVET:

- Begin the discussion of Mobility Centres
- The need for insurance, particularly professional liability insurance?
- The concept of national recognition
- Logistics of how internships will function
- An agreement is needed on the timeframe required for training students: 4 weeks or less?
- The finalised versions of the joint VET EdTech and Mechatronics curricula
- Clear action plan and continuous status updates of what has been achieved

3.3 8 - 9 November 2017 in Karlskrona, Sweden

The 3rd Train-the-Trainer Workshop focused on the completion of the two international curricula. Experts in the fields of Mechatronics and EdTech were invited to Karlskrona from all project countries.

The two coaches of Move Management guided and helped motivate participants, who continued to work intensively on establishing the new curricula. The concept of the coaches used to guide the work of the teachers, trainers and coaches was based on 'Wheelan's Integrated Model of Group Development'.

While on the first day priority was given to hard skills (knowledge, skills, competences), on the second day both soft skills, their weighting as well as general standards and values of the curricula were discussed and defined.

The coaches of Move Management promised to provide the BBVET project with an in-house training platform until the next Train-the-Trainer workshop took place.

The following participants (excluding the project consortium itself) were present, which are shown in accordance with their function:

Function	Teacher		Trainer		Coach	
Country	Mechatronics	EdTech	Mechatronics	EdTech	Mechatronics	EdTech
Denmark	1				1	
Germany			1			2
Lithuania	1				1	2
Poland		2				1
Sweden	2				1	1

Table 5: Representation of countries based on their functions.

3.4 4 - 6 December 2017 in Rietavas, Lithuania

Leading the three days as facilitators was a coach from Move Management together with his colleague from NetPort Science Park.

The training platform which had been developed in-house served as a working basis for this Train-the-Trainer workshop. Before the start of the training, the login data was sent to all participants so that access to the documents on the training platform (developed in Karlskrona) was possible at any time. The training platform included 12 descriptions of soft skills workshops which would be held in 2018 for the BBVET participants to encourage their personal development. The Train-the-Trainer workshop in Rietavas aided the participants in familiarising themselves with the workshop content. The BBVET consortium, teachers, trainers and coaches shared their various experience and aided one another's development.

The following participants were present (excluding the project consortium itself) from the range of countries specified, shown in accordance with their function:

Function	Teacher		Trainer		Coach	
Country	Mechatronics	EdTech	Mechatronics	EdTech	Mechatronics	EdTech
Denmark					1	1
Germany			1		1	
Lithuania	1					2
Poland		2				
Sweden	1				1	

Table 6: Representation of countries based on their functions.

3.5 Challenges and achievements of the Train-the-Trainer workshops

Challenges

- Unfortunately, there has not been the possibility to recruit an equal number of teachers, trainers and coaches from both educational fields for every workshop. This made creating the curriculum more difficult, especially in the area of EdTech.

- The participants for the Train-the-Trainer workshops were changing from workshop to workshop. This resulted in participants having different backgrounds. A solution for this could be to repeat the content from the previous sessions before beginning each workshop.
- Due to the involvement of teachers, trainers and coaches in their respective educational systems, it could not always be assured that all participants could take part in the Train-the-Trainer workshops.
- The Train-the-Trainer workshops were of different durations and were developed as on-site training sessions. The shortest workshop lasted two days, whilst the longest was a whole week. Adding travel time to this, the participants had to be released from their daily duties for three days, minimum. This was not always possible.
- For some of the participants there has been a language barrier. The way this barrier was dealt with differed. Sometimes participants would ask for an interpreter/translator, and other times communication was successful nonetheless, given that the participants conversed in common languages other than English.
- The implementation of the competences range was difficult, as there were no concrete strategies for implementation.
- Almost one year passed between the soft skills workshops from the Train-the-Trainer workshop in Lithuania and the use of soft skills workshops with students from other countries. This is a long time and refreshing the contents would have made sense for the teachers/trainers/coaches.
- Recruiting teachers/trainers/coaches was sometimes difficult due to internal organisational structures and schedules. This led to last minute cancellations and less time for preparation.

Achievements

- The participants engaged in mobilities by their own. They learned what it personally means to be abroad, to work in international/intercultural teams, to respect other cultures and to deal with language barriers.
- The participants were trained in soft skills workshops.
- The participants were familiarised with the concepts of heterogeneous education systems and the flexibility and barriers that this concept brought with it.



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- The participants were made aware of having a common goal: the successful realisation of long-term mobilities.
- The teachers, trainers and coaches got to know each other before the long-term mobility was established. That improved internal communication and promoted trust.
- During the discussion about hard and soft skills with regards to the curriculum a common basis was agreed upon, which was to be employed among those countries participating. This basis built the foundation for the special 10-week-curricula of each country period.



4 Development of the two cross-border curricula in the vocational fields of EdTech and Mechatronics

The project partners firstly needed to agree on the vocational sectors. Having come from the application to developing trainings in the green and blue sector, it was necessary to identify the specific occupations. An agreement was reached on Mechatronics almost immediately. This agreement was in relation to the blue sector, with regards to maritime industries. In the green sector, however, the project partners firstly began to reflect on media and digitalisation professions; they later agreed that training should focus on the area of EdTech, including aspects of sustainability, for example.

The plan as to how the testbed would be implemented was developed before starting work on the curricula. It was decided that the whole training model would last for one calendar year, i.e. 12 months. The training period in each country would be 10 weeks and the students would receive training sessions in four different countries over the year.

The one-year training model was planned as a combination of a 40 weeks training which would be provided by four different countries, in accordance with the different holiday periods (spring, summer and autumn holidays). The original plan for the pilot project can be found below:

WEEK	COUNTRY	SWEDEN		LITHUANIA		DENMARK		GERMANY
	DATES	15 January – 16 March	E A S T E R	03 April – 08 June	S U M M E R	01 August – 05 October	A U T U M N	15 October – 19 December
1	INTROCUCTION	8 – 14 January		03 – 08 April		01 – 05 August		15 – 21 October
2	SCHOOL	15 January – 11 February	H O L I D A Y S	09 April – 06 May	H O L I D A Y	06 August – 02 September	H O L I D A Y	22 October – 18 November
3								
4								
5								
6	COMPANY	12 February – 11 March		07 May – 03 June		03 – 30 September		19 November – 16 December
7								
8								
9								
10	RECAP	12 – 15 March		04 – 07 June		01 – 04 October		17 – 19 December
	TRAVEL HOME	16 March		08 June		05 October		19 December

Figure 3: Overview of one-year cross-border educational programme for mechatronics students.

WEEK	COUNTRY	SWEDEN		POLAND		LITHUANIA		GERMANY
	DATES	15 January – 16 March		03 April – 08 June		01 August – 05 October		15 October – 19 December
1	INTROCUCTION	8 – 14 January		03 – 08 April		01 – 05 August		15 – 21 October
2								
3								
4	SCHOOL	15 January – 11 February		09 April – 06 May		06 August – 02 September		22 October – 18 November
5								
6								
7								
8	COMPANY	12 February – 11 March		07 May – 03 June		03 – 30 September		19 November – 16 December
9								
10	RECAP	12 – 15 March		04 – 07 June		01 – 04 October		17 – 19 December
	TRAVEL HOME	16 March		08 June		05 October		19 December

Figure 4: Overview of one-year cross-border educational programme for EdTech students.

The model for each testbed (10 weeks in each country) was the international training model developed by the BBVET project partners:

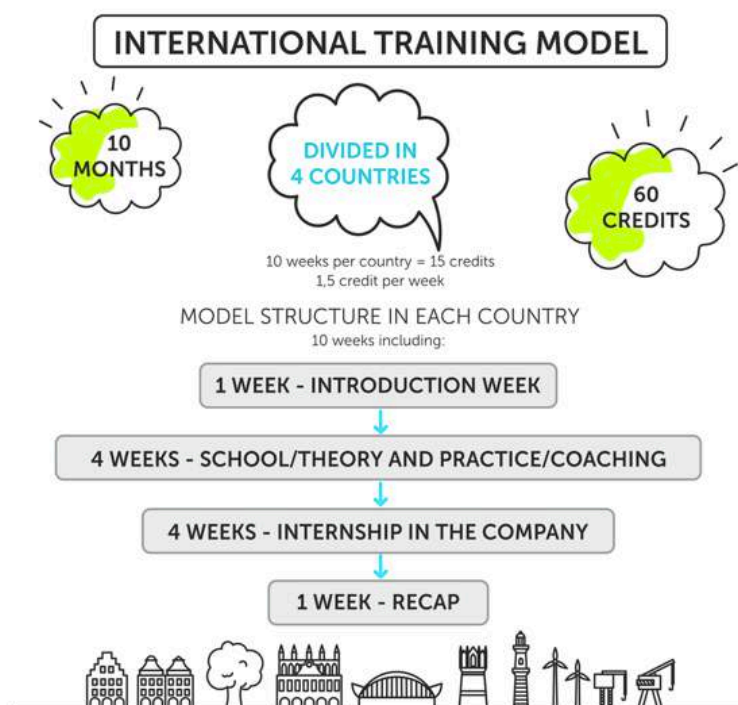


Figure 5: Overview of 10-week testbed in each country.

The figure above illustrates the idea set out by the project consortium at the beginning, and how the testbed would be implemented in each country. Namely, each period consisted of four different elements: the introduction week, 4 weeks of school-based training, 4 weeks of company based training and the recap week. These elements would be repeated in every country to ensure a consistent approach. The cross-border trainings were built on this basic framework, to which content would then be added.

The different steps are presented in the following model:

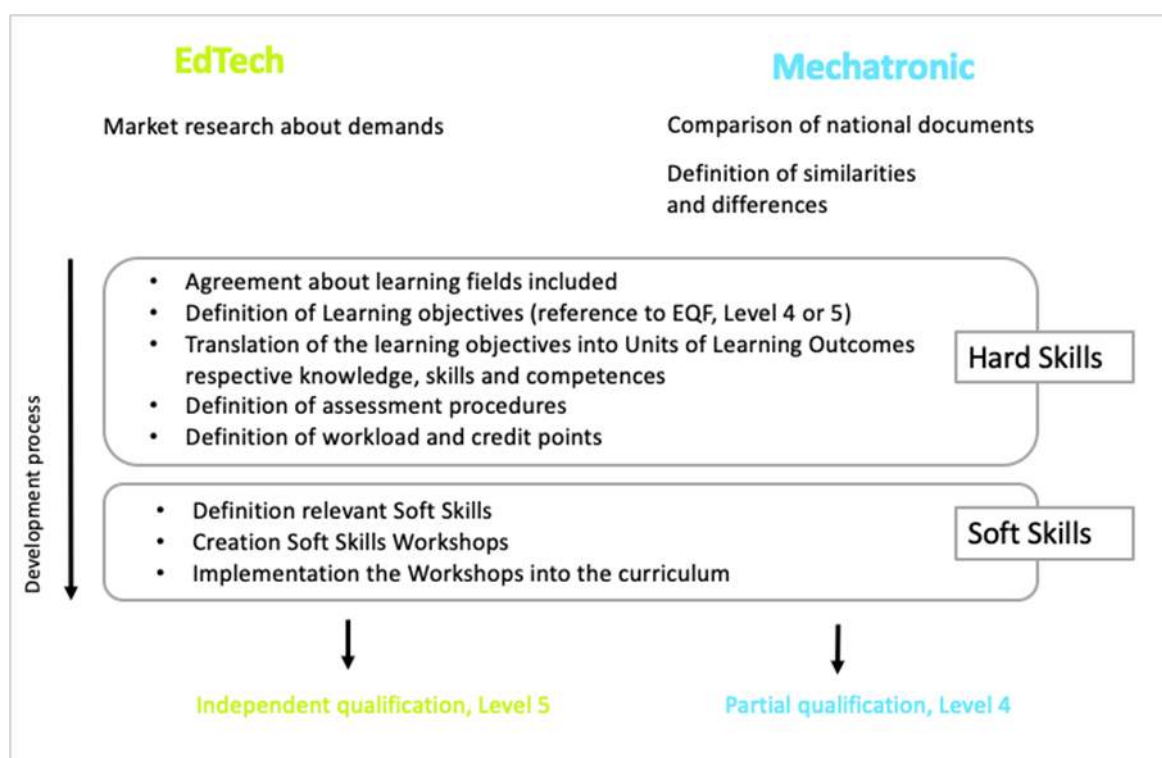


Figure 6: The two different ways of curriculum development.

This overview shows that the two cross-border vocational curricula were developed differently. The reason for the two different approaches was that the cross-border curriculum for Mechatronics was based on a national curriculum that already existed in the field whereas the EdTech curriculum was a newly developed innovative curriculum for which no related legal documents were in place. The curriculum for Mechatronics was the result of contents that all participating partner countries would be able to deliver.

The curriculum for EdTech, resulting from the innovative approach in this vocational field, was developed as an additional qualification to be implemented in line with the European Qualification Framework (abbreviated to EQF) level 5. This is mainly given due to its connection to higher education VET schools as well as universities that provide the training content.

The cross-border curriculum in Mechatronics were specified to refer to EQF level 4, because it was merged by using national legal Mechatronics training documents that already existed in the participating partner countries and it consisted of dual structures.

The curriculum development process included three different elements:

- Definition of the hard skills in the curriculum (cross-border (1 year)/national (10 weeks))
- Definition of the soft skills in the curriculum (cross-border (1 year)/national (10 weeks))
- Definition of the role of the coach who is responsible for the personal development of the BBVET student

An explanation of these different components can be found in detail below. Regarding the hard skills, the two different cross-border curricula will be explained separately. With reference to the soft skills development and the coaching, this explanation takes place together as there are no major differences here. Following on from this, the subsequent implementation of ECVET will be summarised. Finally, the chapter concludes with an assessment and a number of reflections.

4.1 Hard Skills curricula development

4.1.1 Mechatronics

The curriculum in Mechatronics was developed with the help of the four partner countries who would put the curriculum into practice during the piloting stage. The four countries were as follows: Sweden, Lithuania, Denmark and Germany.

The development process in milestones

- Definition of a basic curriculum for the respective field (mechatronics and media)
 - o Seeking out training or national regulations that oversee the respective professional training, including the learning fields / modules
 - o Translation of the documents into English



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- Comparison of the respective documents
- Description of similarities and differences in the respective VET education (training period, learning units, EQF levels, etc.)
- Decision of which learning fields / modules should be included in the interregional curriculum
- Development of the learning objectives of the cross-border curriculum with regards to respective learning fields / modules by specifying the knowledge, skills and competencies to be achieved
- Integration of the learning fields / modules into the testbed (4x10 weeks in four countries) including the specified learning objectives (knowledge, skills and competences)
- Translation of the learning goals as regards knowledge, skills and competencies into learning outcomes
- Definition of learning units
- Establishment of procedures for the assessment of learning units
- Allocation of ECVET credits for learning units
- Subsequent implementation of ECVET in:
 - o Partnership agreements (MoU)
 - o Learning agreements (LA)
 - o Personal performance reports (Europass)

Content generation

Each partner was required to seek out the national legal documents in which the national VET education regulations were agreed. The partners had to translate these documents into English and provide the working group for curricula development with this information. In order to ensure that each partner was providing the same information, the working group for curricula development provided a template for all partners in order to have an operational basic framework for transnational comparison.



The template included the following content:

Country:

Occupational field:

Duration: XX years

EQF Level: X

Learning Field/ subject/ module	Learning out- comes (knowledge, skills, compe- tences)	Duration (hours)	1st year of train- ing	2nd year of train- ing	3rd year of learn- ing	4th year of learning
1	•					
...	•					
Total						

Table 7: Content of national Mechatronics VET.

This approach is visualised in the following model.

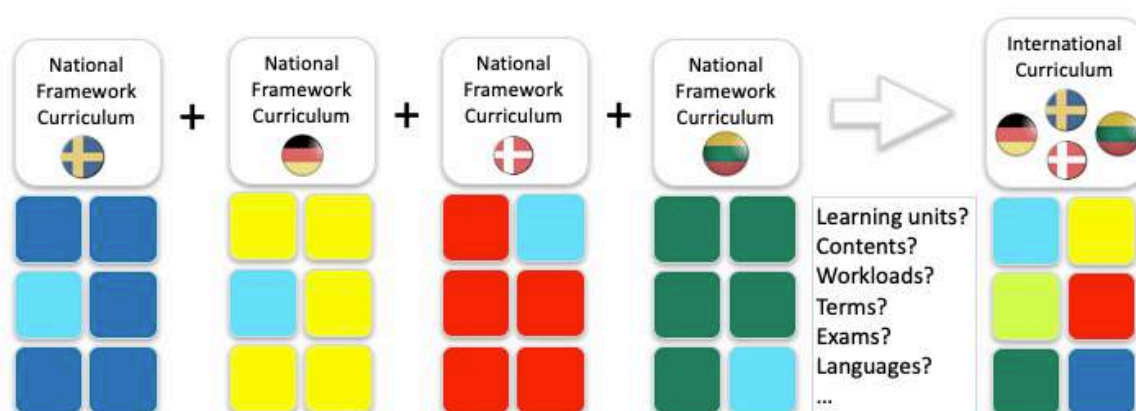


Figure 7: How to develop an international Mechatronics curriculum.

The dark blue boxes within the Swedish curriculum, the yellow boxes within the German, the red ones within the Danish and the dark green boxes within the Lithuanian curriculum represent the respective



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national content from which parts of this are transferred to the international curriculum. In every national curriculum, there are specialities, indicated by the light blue boxes, that were also transferred to the international curriculum to enrich the education. The light green boxes in the international curriculum represent the new contents that were added and that have a connection to intercultural and soft skills. Ultimately, the international curriculum consists of a combination of national common content, national specific content and new – intercultural content.

Having agreed on a common theme within the one-year cross-border curriculum, the partners then had to focus on the specifics of the ten-week programme that would be conducted in their country. The partners were required to carry out the following steps:

- Define the timeframe (10 weeks) in accordance with the international training model (see above)
- Elaboration of the Welcome phase (1 week)
- Elaboration of the Recap phase (1week)
- Elaboration of the 8 weeks of the teaching phase into 4 weeks of school-based learning and 4 weeks of company-based learning
- Define the training priorities for each of the 8 weeks (using the national curricula that have been sent as a basis)
- Define the training priorities in terms of knowledge, skills and competences for the school-based part using the national curricula as the basis
- Establish the tasks that will be carried out by the trainees at the companies in question and define the training priorities in terms of knowledge, skills and competences for the time spent working at the company
- Integrate the Soft Skills workshops



Content-related results of the curricula development

To increase the degree of transparency, the project partners also developed a template for each period. The final curriculum was developed as seen below. Each partner country was responsible for one module out of the four and focused only on one area.

weeks	contents
1	Introduction (team building, safety requirements etc.)
4	<p>SCHOOL</p> <p>26h/ week = 104 – 130 hours</p> <p>Control system I (basic programming, industrial communication, preventative maintenance) + electrical systems (4 weeks)</p> <p>The aim of the course is for the student to learn to program PLC systems and develop the capacity to understand and analyse how a PLC system works with the use of peripheral applications. The student should also, using basic drawings in the form of electrical diagrams and description of functions, learn to connect industrial electrical components, motors and operating systems to a functional unit and also carry out the assigned tasks in the correct manner in line with safety and regulations.</p> <p>Knowledge</p> <ul style="list-style-type: none"> - Automatic control terms, concepts and components - Application programs for programming of PLC systems - Number systems, variables and types of data - Digital technology and digital inputs and outputs - Industrial components, their function and range of uses - Reading of electrical drawings <p>Skills</p> <ul style="list-style-type: none"> - Creating new projects in application programs for PLC systems - Integrating a PLC system and transferring programs - Connecting and building an electrical control panel for automated solutions - Carrying out circuit connections in a way that is electrically secure <p>Competences</p> <p>Based on a description of functions, the student will be able to create a logical and structured program and ensure the function, flexibility and future prospects of its maintenance</p>

	and add-ons. The student will carry out a project by building an electrical control panel, setting this in motion and trouble-shooting any problems based on a description of functions
4	COMPANY in connection with teaching content
1	Recap

Table 8: Sweden, 10 weeks.

weeks	contents
1	Introduction (team building, safety requirements etc.)
4	<p>SCHOOL</p> <p>26h/ week = 104</p> <p>Control system II (Troubleshooting and repair) + Mechanical Systems 4 weeks</p> <p>The course aims for the student to acquire knowledge on technical maintenance and repair of mechanical systems, technological processes of maintenance and repair, and to understand how to perform electronic diagnostics using breakdown services, perform trouble-shooting, localise errors and rectify malfunctions.</p> <p>Knowledge</p> <ul style="list-style-type: none"> - Structure, properties and areas of deployment of the materials and auxiliary materials - Mechanical work procedures in preventive maintenance - Technological processes of technical maintenance and repair - Electronic diagnostic devices and services <p>Skills</p> <ul style="list-style-type: none"> - Reading structural drawings - Obtaining information from technical documentation - Outlining sections from the drawings and modifying them - Testing, setting and making adjustments to mechanical systems - Documenting results <p>Competences</p>

	<ul style="list-style-type: none"> - Learners are able to plan a cost-effective use of the materials whilst considering environmental and health aspects. - Learners can perform preventive maintenance and repair work of the mechanical systems. - Learners are able to perform troubleshooting, localise errors and rectify the malfunctions.
4	COMPANY in connection with teaching content
1	Recap

Table 9: Lithuania, 10 weeks.

weeks	contents
1	Introduction (team building, safety requirements tec.)
4	SCHOOL 26h/ week = 104 – 130 hours <u>Control system III (regulation technique)</u> Knowledge <ul style="list-style-type: none"> - The student has a basic knowledge of control technology including the most common types of regulators, regulation circuits and instrumentation. - The student understands the principles behind temperature, pressure, flow and level measurements and can distinguish between static and dynamic measurement accuracy. Skills <ul style="list-style-type: none"> - Learners can make adjustments to / optimise the PID regulator at a process plant and document the transitional phase via the recording equipment. - Learners are able to test / commission the individual components included in the overall control loop and can operate and calibrate the instruments used in the process. - Learners can install and commission the measuring circuit and the control / calibration circuit using portable measurement / calibration equipment, whilst taking into account the signalling pathways associated with EMC, voltage drop, impedance etc.

	<ul style="list-style-type: none"> - Learners are able to use the PID controller's basic parameters for commissioning and optimising a control loop, and apply the handbook rules to define the parameters of the controller. <p>Competences</p> <ul style="list-style-type: none"> - Learners are able to build, operate, calibrate and optimise the process plant. - Learners are able to troubleshoot and debug the module level of small processing plants and assess process stability, including optimisation of the controller parameters. - Learners can control the individual components in the control loop, and make the necessary adjustments / improvements and use them for troubleshooting and to repair process plants by using the corresponding documentation - Learners can explain the safety aspects that may occur when there is an interference with automated processes during debugging / direction. <p><u>Hydraulics</u></p> <p>Knowledge</p> <ul style="list-style-type: none"> - Learners possess the knowledge of conventional hydraulic components and systems including pumps and motors with fixed displacement and can perform pump tests. - Learners possess knowledge of viscosity, additives and viscosity index and can assess the choice of hydraulic oil as well as provide proper storage of oils. - Learners possess knowledge on the importance of a hydraulic system and can create replacement filters. - Learners understand the special safety and environmental requirements of hydraulic components and systems. <p>Skills</p> <ul style="list-style-type: none"> - Learners can make the connection to and understand the function of diagrams for smaller hydraulic systems using the applicable drawing standard (eg ISO 1219). - Learners are able to use charts, nomograms and documentation, size and mount pipes, hoses and fittings on a hydraulic system, and make use of documentation etc. This is stipulated by the Danish standard. - Learners are able to assemble and commission the hydraulic components such as directional valves, flow control valves, cylinders and engines. <p>Competences</p> <ul style="list-style-type: none"> - The student can perform preventive maintenance on operational hydraulic systems.
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	<ul style="list-style-type: none"> - The student can perform changes to the design of a hydraulic system, and can document these changes. - Students are able to build, operate, maintain, perform troubleshooting of and debug automatic machines and systems which contain hydraulic and pneumatic circuits. <p><u>Pneumatics</u></p> <p>Knowledge</p> <ul style="list-style-type: none"> - The student possesses the knowledge about the structure and function of different types of compressor systems and pneumatic and electro-pneumatic components. - The student can identify and understand the function and technical characteristics of pneumatic components, which are common in the industry, including various control forms. - The student understands the special safety and environmental requirements for pneumatic and electric pneumatic components and systems <p>Skills</p> <ul style="list-style-type: none"> - Students can select instruments and conduct systematic troubleshooting and debugging at component level, as well as replace and repair components with available evidence - The student can understand a pneumatic diagram as part of machine documentation via knowledge of the applicable drawing standard (eg ISO 1219) <p>Competences</p> <ul style="list-style-type: none"> - Learners can produce documentation and operating instructions in connection with changes made to pneumatic and electric-pneumatic plants - Learners can refer to specifications for pneumatic and electric-pneumatic systems, perform control measurements, and document the installation according to current standards so that the documentation can be used to instruct users <p>The student can perform preventive maintenance on operational pneumatic and electric-pneumatic plants.</p>
4	<p>COMPANY</p> <p>in connection with teaching content</p>
1	Recap

Table 10: Denmark, 10 weeks.

weeks	contents
1	Introduction (team building, safety requirements etc..)
4	<p>SCHOOL</p> <p>26h/ week = 104 – 130 hours</p> <p>Control system IV (measuring and testing of electrical quantities)</p> <p>The apprentices possess profound knowledge of the effects of electrical energy in manageable technical processes. They understand the basic electrical engineering circuits, can present them and analyse their mode of action. They are able to apply their knowledge to the selection of the electrical equipment. For this purpose, they can perform mathematical operations and use spreadsheets and formulas to solve specific practical tasks. They understand the hazards in connection with the use of electrical energy, for both humans and technology. They comprehend the protective measures necessary to ensure the safety of the technical facilities and adhere to the known regulations. They are able to select and utilise the test equipment required and also the measuring devices necessary. They can extract information from the working documentation, and integrate changes if necessary.</p> <p>Knowledge</p> <ul style="list-style-type: none"> - Students learn to handle measuring instruments safely - They gain knowledge of various measurement methods and understand their operational purposes - They gain expert knowledge on how to evaluate measurement results - They will learn how to assess measurement errors - They gain understanding of dependencies between electrical parameters, such as voltage, electricity, resistors and power in both direct and alternating current circuits - They gain knowledge about voltage-, light- and temperature-dependent resistors and their different reactions - They gain an understanding of the composition and structure of digital and analogue signals, their signal behaviour and the data transmission via Data-Bus System - They learn about circuit symbols in relation to electrical engineering and the programs used for the construction of complex circuits - They gain knowledge about measuring methods used to verify a fixed installation and their importance <p>Skills</p> <ul style="list-style-type: none"> - Students will learn how to interface the measuring instruments correctly - They will learn to select the relevant measuring range

	<ul style="list-style-type: none"> - They learn how to perform measurements - They learn to design various experimental circuits in serial or parallel connections - They learn how to record the measurements - They learn to measure various signal types via measuring instruments and to transfer the measurement results into the relevant quantity measured (e.g. pressure, temperature, speed, fill level, switch status) - They learn to design and evaluate complex circuitry with use of the computer - They learn to develop and construct circuits independently, apply their knowledge of the correct usage of measuring instruments, and detect and eliminate errors independently - They learn how to execute the initial testing of a fixed installation (visual inspection, measuring, recording, performance check) - They learn to hand over the completely installed and tested unit to a client <p>Competences</p> <ul style="list-style-type: none"> - Students learn how to handle electric current responsibly - They learn to record measurement data precisely - They learn to work carefully while recording measurements - They learn to work independently during the setup of their own circuits - They learn to work in teams and to maintain collegial relationships with associates - They learn to plan and perform sequences of structured actions - They learn to interact with customers in a polite and friendly manner
4	<p>COMPANY</p> <p>in connection to teaching content</p>
1	Recap

Table 11: Germany, 10 weeks.

4.1.2 EdTech

The curriculum in EdTech was developed with the help of the four partner countries who would be responsible for the curriculum during the piloting. These countries were as follows: Sweden, Poland, Lithuania and Germany.

The development process in milestones

- Definition of a basic curriculum for the respective field
 - o Identification of relevant subjects, needs and stakeholders

- Establishment of a dialogue with potential training providers, who were a key resource for translating insights into concepts in the curriculum
- Inviting different actors such as sector representatives, teachers and cluster associations to Train-the-Trainer workshops and discussing contents
- Discussion of the working paper 'Why BBVET EdTech – the need and the opportunity' by participants.
- Decision of which learning fields / modules should be included in the interregional curriculum
- Development of the learning objectives of the cross-border curriculum with regards to the learning fields / modules in terms of knowledge, skills and competencies to be achieved
- Integration of the learning fields / modules into the testbed period (4x10 weeks in four countries), including the learning objectives specified (knowledge, skills and competences)
- Translating learning goals in terms of knowledge, skills and competencies into learning outcomes
- Definition of learning units
- Establishment of procedures for the assessment of learning units
- Allocation of ECVET credits for learning units
- Subsequent implementation of ECVET in:
 - Partnership agreements (MoU)
 - Learning agreements (LA)
 - Personal performance reports (Europass)

This approach is visualised in the following model.

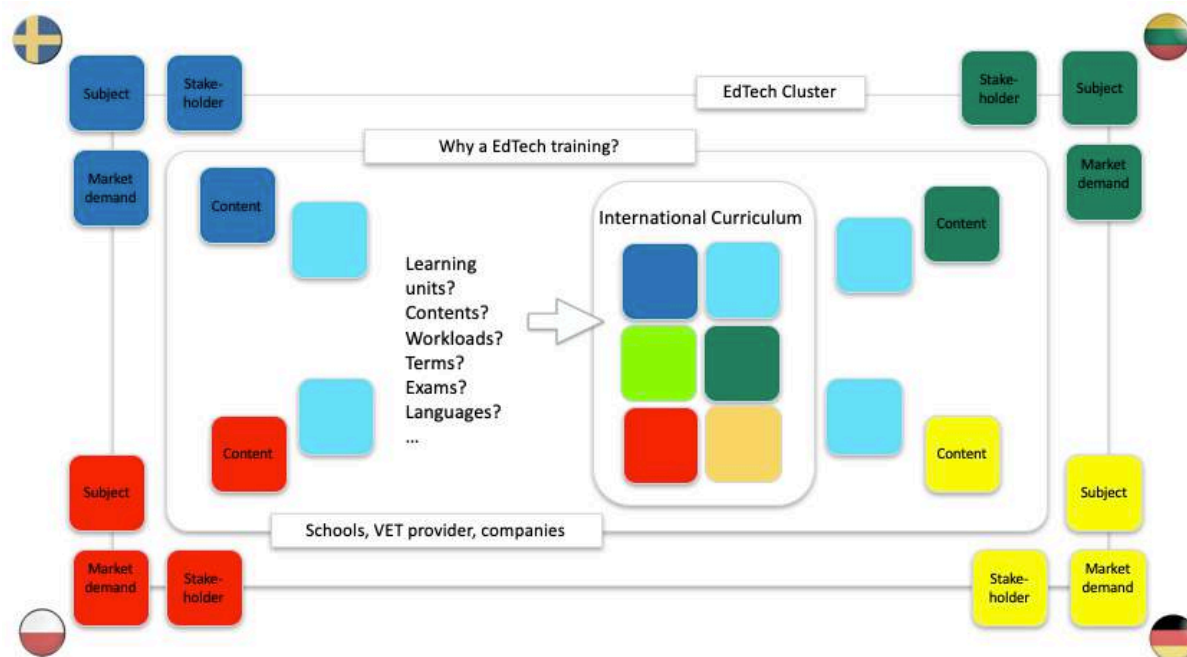


Figure 8: How to develop an international EdTech curriculum

The approach regarding the development of the international EdTech curriculum was different from the approach for the Mechatronic one. In EdTech there were no already existing legal document that could have been used for a comparison. For this reason, the demand of the market was taken into account primarily. The first common agreed contents have been discussed with stakeholders and several subjects have been added. This was done in every country. The combination of these results was the fundament for the contents related to hard skills which are indicated with the dark blue, red, dark green and yellow boxes for Sweden, Poland, Lithuania and Germany. After this, similar to the process regarding the Mechatronic curriculum soft skills have been added, indicated in light blue boxes.

Generation of contents

As there were no documents which could have been used as reference in the area of EdTech it was important to contact the actors who were already working in this field. These actors were contacted in order to exchange information.

The first draft of a possible EdTech curriculum was presented by a Swedish coach who was considered to be an expert in this area. The paper provided a first overview of the main curriculum goals, and



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included background information on EdTech, the network and the pilot programme (see annex 5). The participants discussed the possibilities and realities from a content wish list in the specific national contexts.

Following on from the Train-the-Trainer workshop, a draft of the curriculum was drawn up to gain understanding of the different subjects that would be necessary. The draft was shown to various experts working in this field who were from a range of different countries.

Experts valued the following content:

- learning curve
- iterative processes throughout the programme
- a combination programme which included science of learning, technology and business
- digitalisation and change management

Contents that experts deemed to be unfit were as follows:

- a larger block of photo/film production

The main purpose of the curriculum as a whole was for students to gain new knowledge, skills and competences and put these into practice simultaneously whilst working alongside company clients. In this way, the practice and theory would come together, and students would also be able to establish their own network during their training. Furthermore, experts also endeavoured to teach modules interactively. Following clarification of which partner would provide each specific learning unit, the next step was to identify the timeframes.



Content-related results in relation to curricula development (see also annex 12)



Sweden

Purpose: Familiarising oneself with the EdTech field and briefly touching on the required subjects (Science of Learning, Technology & Business)

Poland

Purpose: Delving deeper into functionality of digital learning(design), project management and branding, and building a concept/service for a company

Lithuania

Purpose: Consolidating knowledge in terms of technology and software and building a concept/service for a company

Germany

Purpose: Delving deeper into business and having students start their own EdTech businesses to demonstrate competence level



Following on from this step, the project consortium still intended to include further aspects on pedagogy, learning sciences and gamification. The final curriculum is the product of a combination of feedback from experts in the field and of the opportunities that were available to the project partners at the time. Hence, the curriculum depended on which partner was able to provide the content in question and the extent to which he could provide it. The parallel structure of developing the curriculum within the Train-the-trainer workshops and seeking out potential lecturers, teachers and docents at the same time also proved to be a great challenge (notably, as the curriculum was not finalised at that point).



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Following the successful completion of the BBVET cross-border programme, students are equipped to work in the following areas:

- EdTech Coordinator: EdTech Coordinators work with teachers and administrators to plan, manage and maintain technology for use in classrooms and school computer labs. They train and mentor teachers on how to integrate digital curricula, classroom management, lessons planning tools and other EdTech products into their classrooms. The exact title of the role varies according to the district and respective school and is known as Technology Coordinator, Instructional Technologist and Blended Learning Manager.
- EdTech Solution Developer: This position involves taking on an active role in projects in order to identify opportunities and develop EdTech solutions in collaboration with an international company network in the EdTech cluster.
- EdTech Entrepreneur: During the programme the students were able to develop their entrepreneurial skills, including developing their own business ideas. Following on from the cross-border training students are offered a 6-month programme in the business incubator BBI in Sweden.

4.2 Soft Skills curricula development

The project consortium agreed to focus both on hard and soft skills to support personal development and key competences.

Parallel to the development of the hard skills training, which involved different processes depending on the respective vocation, there were also discussions on soft skills, which were ultimately the same for both cross-border curricula. The soft skills were to be included during the welcome week, the recap week and over the eight weeks of school and company training.

The project partners started with brain storming sessions. Following this, during the Train-the-Trainer workshops, coaches of Move Management established a training platform to provide all teachers, trainers and coaches (who were involved in the BBVET testbed period) with all the relevant information on soft skills workshops (see further information chapter 3).

The first brain storming contents are presented below:



PERSONAL IDENTIFICATION <ul style="list-style-type: none"> - Personal expectations and fears - Talk about importance of students in the project - A personal letter to myself - Personal presentation (company, school, teachers, trainers, coaches) - Presentation of outcomes - Different personality traits - Stepping outside of one's invisible limits 	CULTURAL AWARENESS <ul style="list-style-type: none"> - Who is present? Are the other countries similar or different? - How do we see our own culture? - Induction days - facts about each country and the social behaviour associated with the country in question. Typical behaviour seen in the country itself, school, company - Cultural Intelligence - Learning about behaviour at a workplace, informal approach at work, what's appropriate and what's not. Rules and limits - Baltic Sea Region - Education system in each country - History of the country. Study visits, sightseeing
INTRODUCTION TO THE LEARNING STYLES, RULES AND AIMS IN EACH COUNTRY <ul style="list-style-type: none"> - BBVET contents, background, assessment, validation - Introduction to study plan of 10 weeks, goals and tasks to undertake - Look at development aims over the 10 weeks - Assessment of students learning style - How does the student learn? - Individual learning style - Contact persons (emergency cases) 	GROUP DEVELOPMENT <ul style="list-style-type: none"> - Joint social activities. - Meeting with local organisations (youth club, students) - Joint teambuilding activities for students, coaches and trainers, photo opportunities, joint meals, hiking, cycling activities - Homestay in each country - IMGD (group development tool), Walnut, <i>Idran</i> Window - Conflict management - Creativity - Feedback/ Reflexion/filming

Table 12: Soft Skills session during a project partner meeting.



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The training platform for teachers, trainers and coaches involved was made available online. Each participant received their personal login data. The training platform is now available online (<https://bbvet.teamtrainer.se>).

The platform was divided into the following sections, primarily in accordance with the planning schedule of the international training model:

- Welcome
- Our beliefs
- Period I
- Period II
- Period III
- Period IV
- Design tips



Figure 9: Screenshot of the training platform.

Each country period (10 weeks) included three soft skills workshops that would be conducted by the respective national project partner responsible over the course of the 10 weeks. The descriptions of the workshops always followed the same structure. Firstly, the overall purpose of the workshop was explained, including if any specific conditions were necessary. The workshops were always orientated around Check-Ins and Check-Outs in connection with the main purpose of the workshop. The task for



the workshops was explained in detail so it was easy enough for the respective facilitator to complete the task.

4.3 Coaching of the BBVET students during the cross-border mobility

In addition, coaching also made up an important part of the curriculum development. Initial brainstorming sessions defined common goals of the coaches, the idea of cross-border coaching relations, the focus on individual coaching and the provision of local coaches.

Coaching helps students to become self-aware and develop individual problem-solving abilities in order to achieve a goal. Instead of counselling or providing professional answers and recommended actions, the coach asks questions in order to guide students, so that they are able to find their own answers and plan actions themselves which will in turn lead to goal achievement. Coaching requires a certain attitude on the part of the coach - as it is the student (and the coach himself) who is at the centre of the development process. The coach - student relationship must be built on trust, which is to be maintained throughout the process, no matter how difficult this may be. It is important for the coach to use specific methods which are appropriate to the student's situation; he/she must possess distinct skills such as an active listening ability. The BBVET consortium proposed that BBVET coaches used a tool called an integral project coaching map, which helps to monitor and document the process, using all perspectives; it also provides several checklists and memos that are helpful to the student.

The approach is based on the method of integral coaching. The term „integral” in the sense of Ken Wilber goes far beyond that which is generally termed „systemic”. In short, it means taking on all possible perspectives without favouring any of them, to get a holistic picture – for example of a person and their issues. The different perspectives can be divided into five categories: quadrants, levels, lines, states and types.¹ Each person has four sides (also called quadrants). The person is both: an individual and a member of many systems. The individual and his systems influence each other. In addition, the individual can look at everything from an outside perspective (it-perspective) or from an inside perspective (me- or we-perspectives). This creates four quadrants:

¹ See Integral Coaching Canada Inc. (2015), w. p.

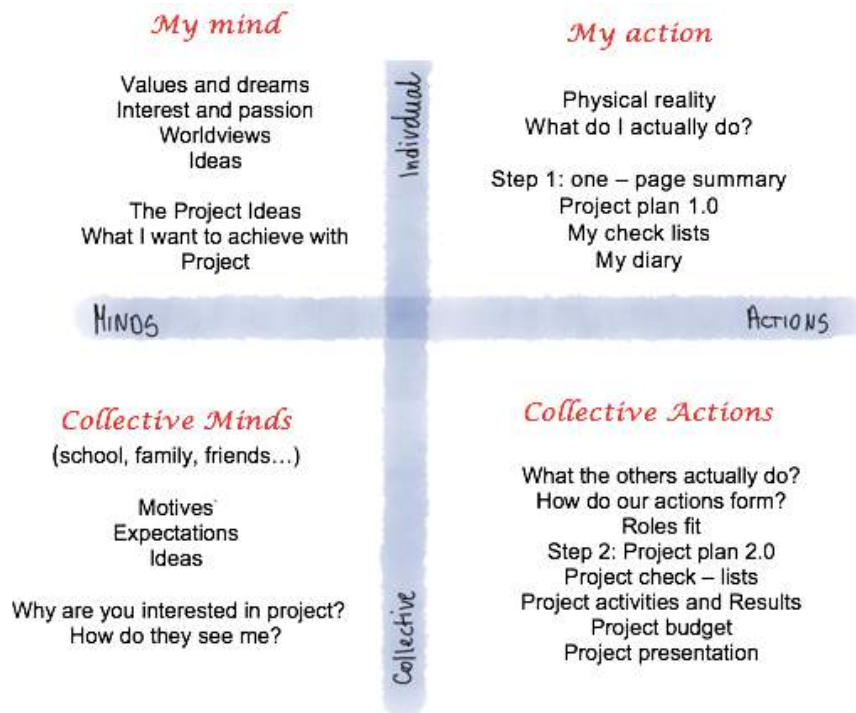


Figure 10: Integral project coaching map.

These perspectives were taken into account during the coaching process with the students and they were further developed over the one-year cross-border mobility. Another method that the BBVET project consortium recommended was the Business Model Canvas.

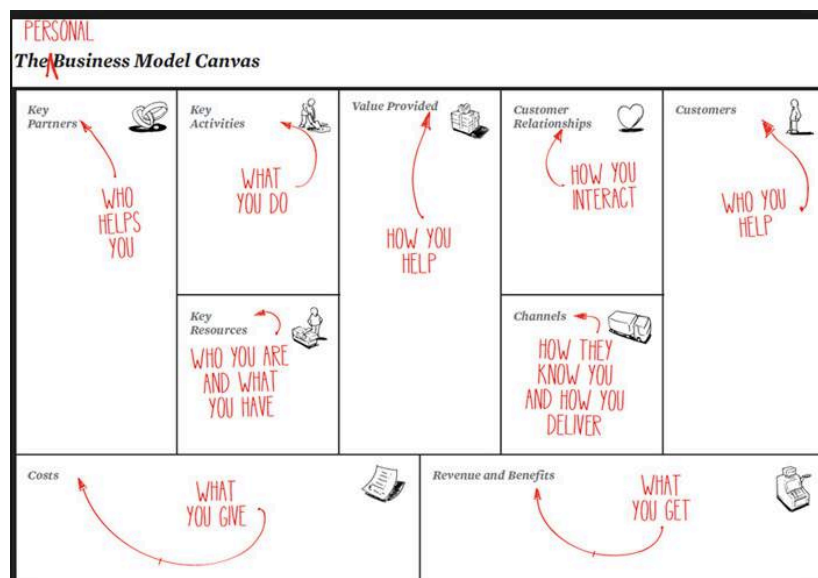


Figure 11: Business Model Canvas.



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Using the business model canvas method, business ideas and models can be visualised and structured. It serves as an analytical tool for conceptualising and testing start-up ideas. The business model canvas is divided into nine building blocks: key partners, key activities, value proposition, customer relationship, customers, revenue and benefits, channels, key resources and costs. These building blocks are intended to help students to consider important aspects when structuring their own ideas.

Coaching used as a method of engagement is therefore very different when compared to other methods such as consulting or lecturing. The coach should seek to maintain the perspective at all times and help the student to be both specific whilst acting in relation to the project, but also open to change depending on how the situation unfolds. A coach moves through this delicate terrain by asking questions and not giving ready-made pieces of advice, thus stimulating the students on their own premises. The relationship which is built on mutual trust between the student and their coach allows the coach to ask more personal questions, and challenge and motivate the student - which is, of course, needed in times of change. Finally, a coach can help to balance several perspectives at the same time.

The most important issue when coaching is to ask questions yet resist the urge of self-response, prompts, suggestions and to avoid judging students' ideas. The task is to listen actively and ask questions that students will then answer themselves.

Having decided on the general coaching approach to be worked with, suitable coaches must then be recruited. During a brain storming session at a partner meeting, the project partners agreed on the following criteria for the coaches. The criteria were drawn up in connection with several responsibilities. The student is to further their development during the coaching sessions, but the coach too (who is trained by the BBVET consortium during the Train-the-Trainer workshops) will benefit from the coaching function. This is demonstrated in the table below:



Criteria	Responsibilities	Benefits
<ul style="list-style-type: none"> - Fluent English - Coaching experience - Flexibility - Open mindset - Entrepreneurial thinking - “Euroness” – i.e. focus on Europe - Connection to industry/company 	<ul style="list-style-type: none"> - Attendance and active participation in training session - Delivery of coaching during BBVET testbed period - Active participation - Communication with BBVET project team - Maintaining contact with companies - building bridges between companies and trainees/project - Producing training curriculum 	<ul style="list-style-type: none"> - Enhanced qualifications - Innovative educational programme (models/methods) - Internationalisation - Personal growth - Establishing contacts/network - Development of school-company cooperation - Improvement of technical English - Certificate - Regional awareness

Table 13: BBVET’s coaches’ criteria, responsibilities and benefits.

Before the BBVET testbed begun, coaches were selected from all participating countries. The project consortium decided that the coaches would be responsible for students from their own specific country. There were at least two reasons for this: firstly, students were already stressed having to deal with so many cultures and the consortium didn’t want to increase the students’ stress levels by involving them in cross-border coaching; secondly, availability was an issue. Ongoing cross-border coaching sessions would have been difficult to arrange.

Mechatronics coaches

A total of 4 mechatronics coaches were recruited, one from each participating country (Sweden, Poland, Lithuania, Germany). The BBVET class contacted all BBVET coaches while participating in the testbed. Each coach aimed to support the soft skills development of the BBVET class itself during each country period. Additionally, the coaches carried out individual coaching sessions for students from their own country. The agreement among the BBVET consortium was to hold at least 3 coaching sessions during each country period. For each coaching session, a protocol would be drawn up.



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EdTech coaches

In total, 6 EdTech coaches were recruited, two were selected each from Lithuania and Poland, while Sweden and Germany would select one from each country on each occasion. The BBVET class contacted all BBVET coaches while participating in the testbed. Each coach would support the soft skills development of the BBVET class itself during the specific country period. Additionally, the coaches would hold individual sessions for students from their country only. The agreement among the BBVET consortium was to hold at least 3 coaching sessions during each country period. For each coaching session, a protocol would be drawn up.

Suggestions that were made by the project consortium for the first coaching session were:

- establish student's dreams and goals,
- question what the student was doing to achieve them
- what steps he / she is taking
- the student's environment and discuss with whom he / she works and cooperates well
- what actions and what result he / she wishes to achieve

Challenges and achievements of the cross-border coaching

Challenges

- There was a need for a common structure of the coaching in terms of the appointment time itself, the timeframe of the coaching sessions and the content. A protocol, which was developed in collaboration with the project partners, would have been useful here.
- Distance coaching always poses a variety of challenges such as technical problems, time differences and a feeling of the lack of human closeness.
- The methodology and the process was not fully comprehended by all coaches; this was possibly due to the differences in attendance during the Train-the-Trainer workshops. Measures should have been put in place to guarantee that every coach received the same level of training. Additional webinars may have prevented such difference.





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- It was not always easy to keep professional distance. From time to time communication would turn to personal issues. It was quite difficult for coaches to stick to professional topics as they felt it were also necessary to address students' personal problems.
- Due to individual commitments, it was difficult to agree on an appointment time, and often appointments were rescheduled, even after the appointment had been previously agreed upon. A way of resolving this would have been to schedule the appointments into the programme itself, making sure to always schedule the appointment at the same time, for example by holding the session on the first Monday of every month in the afternoon. Having had a fixed slot in the timetable would have meant that the sessions would have also been more highly valued.
- Increased communication was needed between the coaches themselves. During the testbed, there was little of exchange of information. This prevented coaches from being able to learn from one another.

Achievements

- With the aid of the coaches, students were able to feel more secure, as it meant they had a contact person who they could trust at their side throughout the whole year, even whilst changing countries.
- The project consortium was able to involve many coaches from all partner countries.
- The students highly valued having a coach for the one-year cross-border mobility.
- On the one hand, the BBVET students and coaches established a very good relationship based on trust, which was, of course, an extremely positive aspect of the coaching sessions. However, on the other hand, this crossed over into personal issues, and therefore coaching was not solely focussed on professional issues. A way to solve this problem could have been by having a new coach in each country rather than having a coach from one's home country for the entirety of the year. By having a coach from the country of exchange may also have solved problems in that there would not have been any technical difficulties or challenges posed in terms of the distance felt through videoconferencing.
- The project consortium developed rules for the hand-over regarding coaching achievements within one country period. This approach was useful and ought to be developed further.



4.4 Subsequent implementation of ECVET

Whilst developing the cross-border curricula, European frameworks were considered such as the European Qualification Framework (EQF) and the ECVET system. Mainly responsible for the development of the two cross-border vocational curricula was the Chair of Business, Economics and Entrepreneurship Education of the University of Rostock in cooperation with the Danish project partner, who was officially approved as ECVET expert in Denmark. To secure the transfer process, the following three documents were drawn up.

The Memorandum of Understanding (MoU), which normally serves as a bilateral agreement between the sending and receiving organisation, was used as a multilateral agreement between the participating partner institutions. The MoU, which was signed by all partners, gave detailed information about the parties involved and specified general agreements, whilst stipulating individual responsibilities of parties and guaranteeing the quality assurance of their work. Furthermore, it also specified aspects regarding the assessment of the learning outcomes as well as validation and recognition of these. The document can be found under: www.bbvet.eu/toolkit.

The project consortium also used the template for Learning Agreements (LA) provided by the EU and adjusted this document for project-specific purposes. The LA served as an individual agreement between the participating student, the sending institution and the receiving institution. It specified all partners involved, the duration of the mobility and information on the student's qualifications and progress. Taking into consideration what was agreed on in the MoU, there were also descriptions in the LA of the assessment procedures, including documentation, validation and recognition. During the one-year testbed, the students stayed for 10 weeks in one country, before travelling onto the next. In a period of twelve months, they stay in four different countries, which make up their one-year European cross-border training in its entirety. For each 10-week mobility period one individual LA was drawn up between the student and the institutions involved (see figure 12). The document can be found under: www.bbvet.eu/toolkit.

For the student's Transcript of Record, the BBVET consortium selected the Europass Mobility document. This document is a commonly recognised document both in the educational sector and on the



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labour market. The Europass covers the student's learning achievements from the whole of the one-year training. The document can be found under: www.bbvet.eu/toolkit.

Besides the technical aspects of the transfer process, this document guarantees transparency in terms of the student's qualifications. The importance of transparency became particularly clear during the development process of the two vocational curricula. The curriculum for EdTech, highly innovative in this particular vocational field, was developed as an additional qualification to be implemented at the EQF level 5 given its connection to higher VET schools as well as universities providing training content. The cross-border curriculum in mechatronics, which was merged using national legal documents from mechatronics training that already existed in the participating partner countries, was due to the implementation of dual structures at VET schools and companies, specified to refer to EQF level 4.

In connection to the LA, Units of Learning Outcomes (ULO) were developed that specified the content and structure of the qualification. The specific characteristic of the ULO in the BBVET project was that each document corresponded to one fourth of the entire qualification as the one year training consisted of four long-term mobilities. The document specified the name of each respective unit, the reference to the qualification as a whole (in terms of BBVET to EdTech or Mechatronics), identified the area of tasks and specified the location of the EQF as well as the respective national level. The key aspect of the ULO was the specific knowledge, skills and competences acquired during each cross-border mobility. The document can be found under: www.bbvet.eu/toolkit. It was agreed by the project consortium that the student would receive 1.5 credits per week in each country and that each credit would correspond to a workload of 27 hours. That meant that the BBVET curriculum developed for a qualification in EdTech or in Mechatronics would have a value of 60 credits. The workload was not specified in the ULO as the participating countries dealt differently with the crediting system.

After the successful completion of the long-term mobility, validation would take place in students' home countries. Following each long-term mobility, learners would receive a BBVET certificate and the Europass.

The BBVET consortium admits that the use of the ECVET components worked really well and it gave the long-term mobility a high level of quality. The BBVET consortium really recommends to use ECVET especially in cross-border education context to create a common recognised framework. Within the project the templates that are provided within the ECVET toolkit were used. ECVET is a tool to express the value of education that has been gained abroad.



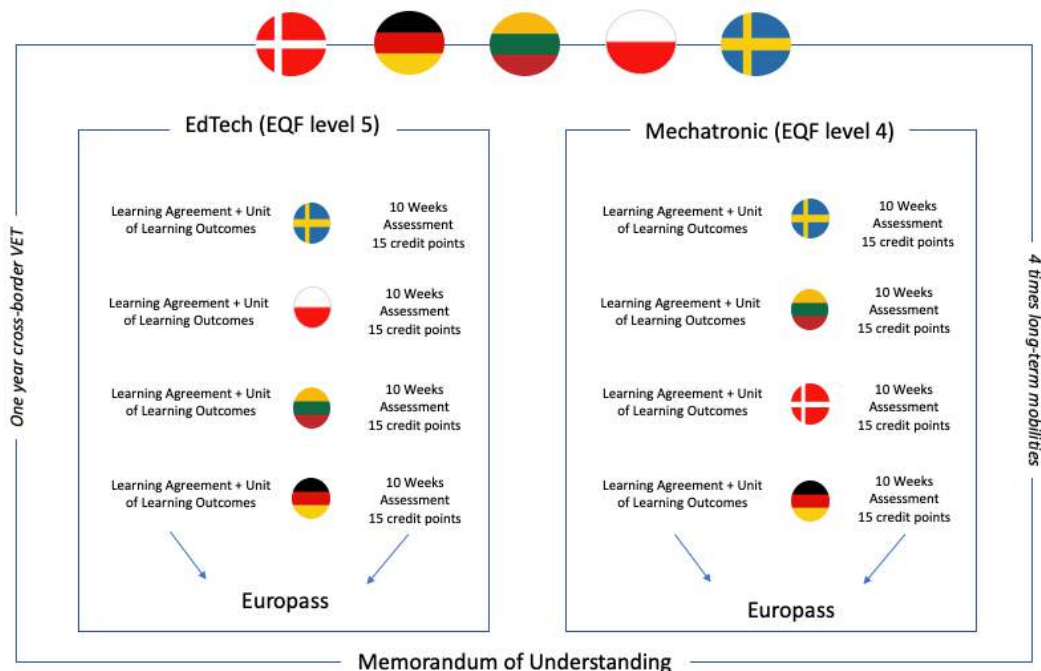


Figure 12: Subsequent implementation of ECVET.

4.5 Assessment and Reflexion

Regarding the technical components of ECVET the part of the accumulation process was the most difficult one. The knowledge, skills and competences indicated in the ULO were assessed and recorded separately in each receiving partner country and assigned to the respective level of competence in the EQF (see Annex 13).

Also, the reflection by the students has been an important part of the assessment process as this is one key competence that has been focussed on within the soft skills education. The reflection included e.g.:

- Visual presentation on what has been achieved and what next steps should be realised
- Reflections on the personal learning journey
- Presentation of success stories
- Reflexions from students, teachers and companies.
- Feedback to class/ team mates
- Coaches feedback

- Presentations to clients
- Identification with the role of ambassador

After having defined the two cross-border curricula, the student marketing started. The process that followed is shown in the graphic below.

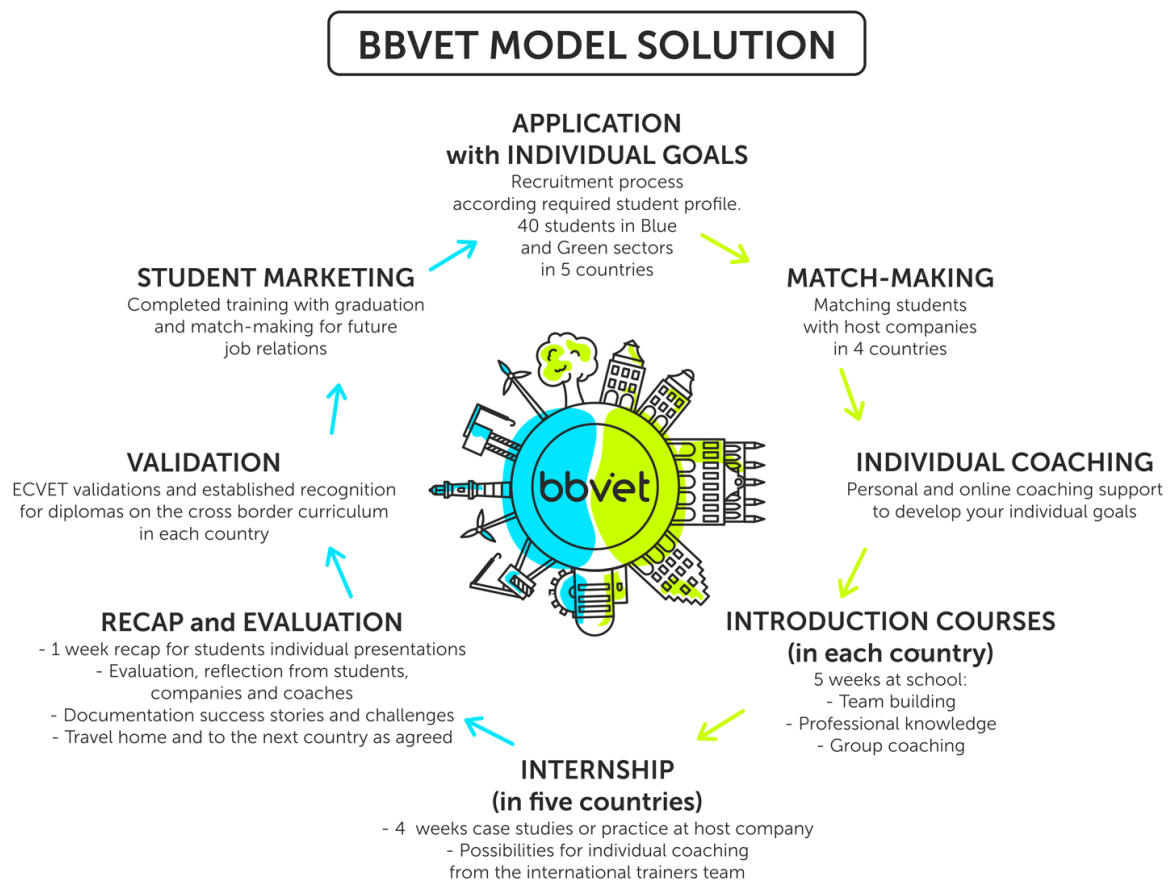


Figure 13: BBVET model solution.



5 Student recruitment

About the “BBVET student”: In this report, the expression ‘student’ is mainly used to indicate participants in BBVET international VET programmes. To ensure the term is properly understood, a few further explanations should be provided.

The term ‘student’ is not meant in an academic context. In regard to BBVET, participants are always called VET students. For example, VET students are usually called apprentices in Germany because they are hired by the company as part of the training agreement, although in a school context they are also called VET school pupils. This is also the case for the Danish trainees. In Polish and Lithuanian educational VET contexts, participants are also usually called pupils. As explained earlier, the consortium always refers to them as students in the BBVET context – VET students. BBVET (VET) students and trainees are used synonymously in this report.

5.1 Definition of the target group – BBVET student profile

Whilst the curricula were being developed, there were several discussions about the potential target group for the international training programmes at the same time.

The common entry requirements for applicants of both training programmes agreed with the project partner before the marketing and recruitment phase started were as follows:

Formal qualification:

- General Certificate of Secondary Education (GCSE)

Additional skills:

- Creativity
- Understanding of technological processes,
- Ability to plan, organise and implement learning activities
- Logical and critical thinking
- Analysis and decision making
- Ability to apply mathematic measures
- Ability to use and apply concepts and the laws of Physics
- Ability to use information and communication technologies (ICT)
- Good command of English (B1)



The order of the bullet points does not express any preferences. Recruitment mainly took place from 1 September to 15 November 2017 (but carried on into 2018) according to the criteria and requirements set by the BBVET project consortium.

The possibility to apply for these two international VET programmes was communicated by the project consortium through different channels, for example the BBVET website itself, the national websites of the project partners and the BBVET Facebook and Instagram accounts.

5.2 Application process for potential participants

The student selection procedure consisted of four different steps:

1. The student's application form should be filled out electronically, printed, signed and e-mailed (or use typeform) to the indicated contact point for the relevant country (along with attached copies of GCSE certificates, personal ID and CV).
2. Interviews – motivational discussions and English language proficiency checks are preferably carried out through Skype/face-to-face interviews conducted by the responsible persons from the home institution. Recommended recruitment questions are used.
3. The applicant must provide a valid medical statement confirming the applicant may take part in the programme.
4. As soon as the documents mentioned above have been received and the applicant has been matched to a BBVET programme, the Letter of Acceptance is issued by the home institution.

A draft application form was created and used to build the online application form using the software "Typeform". Digital texts on Typeform for Mechatronic and EdTech education were created, with which students obtained information about the project activity, provided background information on their personalities and attached the documents required (CV, cover letter). The application form consisted of the following main aspects (see annex 7):

- Student personal data
- The study programme being applied for
- Educational qualifications
- Language proficiency



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- Motivation
- Work experience

Optional attachments that could be added:

- A copy of secondary school certificate, maturity certificate or diploma
- Copy of passport or ID
- CV

Admission limits for international BBVET programmes were as follows:

- 20 students in the Mechatronic class (students from 5 countries with 4 students each)
- 20 students in the EdTech class (students from 5 countries with 4 students each)

The students always had access to the important financial information they needed:

No tuition fees: the student's programmes, travel costs between the programme county and another, accommodation and living costs were covered by the Interreg South Baltic programme, project no. STHB.04.01.00-SE-0019/15 "Boosting Business Integration through joint VET."

Application through Typeform – quantitative analysis

In total, there were 45 applications for EdTech and 67 applications for Mechatronics. In the following section, some of the application indicators are presented.

EdTech

29% of all applications were from Sweden, 18% from Poland and Lithuania, 7% from Germany, and 13% from other countries. Regarding the areas of interest, both Design and Teaching & Psychology had the highest interest at 26%, Entrepreneurship and Business was rated at 24%, programming at 17%, and "others" at 9%. 36% of applicants had a bachelor's degree, 27% a master's degree, 22% an upper secondary school qualification and 2% a vocational degree. The experiences already made regarding EdTech were ranked quite moderately, with an average value of 4.8 out of 10. The passion for learning how to create EdTech experiences was rated quite highly with an average of 8.91.



Mechatronics

12% of all applicants were from Germany, 9% from Lithuania and Sweden, 1% from Denmark and 69% from other countries. The biggest areas of interest were mainly Technology at 27%, followed by Robots at 25 % and Mechanics at 24%. Additionally, there was interest shown in cars (15%), metal works (11%) and ships and boats (10%). 5% also showed interest in other areas. The most common degree was a bachelor's (42%), followed by an upper secondary school qualification at 30 %; 6% had the compulsory school leaving qualification and 6% a master's degree. The rest had other qualifications. All applicants rated the mechatronics skills already obtained at an average of 5.31 out of 10. The passion for learning was rated at an average of 8.75.

Interviews

After having a deeper look into the application forms, skype or personal interviews for the selection were conducted. The interviews lasted 30 minutes. For the BBVET programme to be a success and to recruit potential learners, the project partners wanted to know more about the students' attitude, career development, ethics, problem solving skills, education, leadership experience and above all individual personality features.

In total, there were 46 interviews in all countries.

	Denmark	Germany	Lithuania	Poland	Sweden
EdTech	-	4	14	No data	14
Mechatronics	1	13		-	No data

Table 14: Interviews carried out during the application process.

The BBVET consortium developed guiding questions for the interviews, e. g.:

Goals

- How will a BBVET training programme prepare you for your future career goals?

Motivation

- What do you know about the BBVET project and the Mechatronics/EdTech international training programmes?



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- What would you like to know about BBVET/Mechatronics/EdTech, blue and green?
- What did you enjoy doing most at school or college?
- When you're not working, what do you enjoy doing?

Personality features

(preferably to have someone who will bring positive energy to the team)

- How would your best friend describe you?
- What are your values as a person? Give the applicant an opportunity to share a story – let them know that they'll be encouraged to bring their whole identity to the BBVET team.

Educational/extracurricular experience

- Which subjects did you enjoy most at school? Why?
- Tell us about your extracurricular activities. How have they prepared you for this internship?
- What would your favourite teacher say about you?
- What would your least favourite teacher say about you?

Ethics

- During your work experience, tell me about a time when you demonstrated your ability and desire to work effectively with your co-workers.
- What excites you about the BBVET international training programme?

Problem solving / analytical abilities

- What steps do you take to study a problem before making a decision?
- Tell me about a time when things went wrong at school or whilst working in a group, and how you fixed the problem?
- What were some of the typical problems you experienced at school? How did you deal with them?
- What have you learnt from your mistakes?

Communication

- What technical-based communication skills do you use? What platforms are you familiar with besides Facebook and Twitter?
- Do you work well with other people? What bothers you about other people around you?



Leadership/interpersonal skills

- What are the three most important values you demonstrate as a leader?
- What type of people do you work best with?

The way in which the interviews were evaluated differed between countries. The Swedish model for the EdTech application process should be explained a little bit deeper.

The Swedish partner scored each student based on:

- EdTech skills (scored 0-3)
- Background (tech/designer/business/teacher) and
- Business experience (Y/N)

The goal was to choose students that complemented each other and came from different backgrounds. The scoring was 0 (not a good match), 2 (ok match), 4 (good match) or 6 (very good match). The students were scored individually. Afterwards, the results were compared.



N	J	BKG	EdTech skills	Business experience
6	6	Designer	3	✓
4	6	Designer	2	✓
4	4	Designer	1	✓
6	4	Designer	3	
6	4	Tech	1	
2	2	Tech	1	
6	6	BUSINESS (teaching)	3	✓
4	6	IT/teaching	0	
2	2	BUSINESS	3	✓
2	2	TECH	5	
2	2	Designer	0	
6	4	Teacher	0	
		JENNY		
4	4	Business	0	

Figure 14: The scoring process.



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Selection of the applicants

As soon as the documents mentioned above were received and the applicant was matched to the BBVET programme, the Letter of Acceptance was issued by the home institution. The respective national project partner was in regular contact with the partner organisation in order to stay up-to-date about the host country, host company and logistical aspects, and shared the information with the students. Face to face meetings were organised with the students to inform them and provide them with clear information about the planned activity and to sign the mobility documents. Some countries also held workshops hosted by coaches before the mobility started.

The Learning Agreements were signed by the three parties – the student, the sending institution and the host Institution.

The Financial Agreements were concluded by the student and the institution that financed the mobility period abroad. In the case of BBVET, that was the host institution (the BBVET student's receiving partner). The home institution had to provide the outgoing students with an insurance package covering health, travel, stay, emergencies, repatriation and accidents. Details about the insurance package are also indicated in the Financial Agreement.

EdTech

- Sweden: five students were accepted, of which some declined. This meant new students were accepted, who were informed by acceptance letters. In total, 9 acceptance letters were sent out and 5 students participated in the programme. 5 applicants did not get the acceptance offer.
- Poland: no information available.
- Lithuania: the Lithuanian project partner received 14 applications and conducted 14 interviews. 3 students were accepted in the area of EdTech.
- Germany: out of the four interviews conducted, three students were selected and sent an Acceptance Letter informing them that they had been chosen to participate in the BBVET international programme.

Mechatronics

- Sweden: no information available.
- Lithuania: Lithuania received 14 applications and conducted 14 interviews. 9 students were accepted in the area of Mechatronics.





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- Denmark: no information available.
- Germany: the participants were chosen by the companies. The choice depended on the learning year and performance in the VET. The demand from the students themselves was higher than the students that were eventually selected. In total, 13 students have been accepted in Mechatronics.

Analysis of the recruited target group

An overview of both BBVET classes is provided on the following page. The characteristics of the classes can be concluded using the following information.

EdTech

For the EdTech class, 19 students out of 20 were recruited. The class started in January 2018 with 18 members but a newcomer joined in the second country period. After the second country period, two students dropped out, followed by another after the third country period. 16 class members successfully completed their international training programme after one year. The class consisted of 10 males and 9 female students. The age during the application process ranged from 20 to 35. Four class members came from Sweden, nine from Poland, three from Lithuania, one from Germany, one from Austria and two from Georgia. 14 of 19 class members already held academic degrees.

Mechatronics

Due to the fact that the German participants exchanged between countries, the class members differed from country to country. In Sweden and Lithuania there were 17 members, in Denmark 18 and in Germany 13, as there were no German participants during the German period. The class consisted completely of male participants, and no females. No students dropped out in this class. The age during the application process ranged from 18 to 24. Three class members came from Sweden, nine from Lithuania, one from Denmark and a total of 13 from Germany. 17 of 27 had an upper secondary school qualification.





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Analysis of the recruited target group

EdTech

Applicants	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19
Sex	M	F	F	M	M	F	M	F	M	F	M	F	M	M	M	F	M	F	F
Age at application	23	24	38	28	35	24	20	22	33	31	29	21	23	26	24	26	24	29	21
Country	PO	PO	GE	SW	LI	LI	SW	SW	SW	LI	PO	PO	PO	Other	SW	Other	PO	Other	PO
Highest formal qualification	BA	BA	MA	MA	Other	BA	Other	UP	Other	MA	MA	UP	BA	MA	UP	MA	BA	BA	BA

Table 15: Analysis of the recruited EdTech class.





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Mechatronics

Applicants	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20
Sex	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Age at application	23	20	20	20	24	24	20	21	20	19	22	18	21	22	20	19	19	19	19	19
Country	LI	SW	GE	GE	GE	LI	LI	GE	GE	GE	GE	LI	SW	LI	LI	SW	DE	LI	LI	LI
Highest formal qualification	BA	UP	UP	UP	UP	BA	UP	UP	UP	UP	UP	VO	CO	BA	UP	VO	CO	UP	UP	UP

Table 16: Analysis of the recruited Mechatronics class (1).



Applicants	P21	P22	P23	P24	P25	P26
Sex	M	M	M	M	M	M
Age at application	22	20	19	-	18	19
Country	GE	GE	GE	GE	GE	GE
Highest Formal qualification	UP	UP	UP	CO	CO	UP

Legend

F	female
M	male
PO	Poland
GE	Germany
SW	Sweden
LI	Lithuania
DE	Denmark
VO	vocational degree
CO	compulsory school leaving qualification
BA	bachelor's
MA	master's
UP	upper secondary school qualification

Table 17: Analysis of the recruited Mechatronics class (2).

5.3 Challenges and achievements during the student recruitment process

The project consortium held a brain storming session during one project partner meeting to collect challenges and achievements from different perspectives.

Challenges

- More time was needed to develop the curriculum than was originally planned. Therefore, the time for recruitment was shortened, which made it difficult to find suitable candidates for the long-term mobilities.
- Different VET systems:
 - o The vocational school did not know how to integrate the mobility period into the study process (Lithuania).
 - o Differences in national VET systems caused big differences in the educational backgrounds of the students.
 - o It was hard to recruit because this VET does not exist in every country and the target group was partially unclear, especially when it came to EdTech students.
 - o Interest in EdTech and knowledge about the topic was very difficult to distinguish between the students.
- A clear candidate profile should have been developed to facilitate the recruitment process.



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- Changes in Danish legal frameworks during the project period made it impossible to recruit students.
- The online system does not bring out the student's personal "touch" in important information; confidence is needed
- During the recruitment process, one special circumstance was raised. It was quickly becoming obvious that, due to the dual education system in Germany, the German Mechatronics students wanting to participate in BBVET were only allowed to participate for one country period by their companies, i.e. 10 weeks. After one period, they had to return to their home country and their company to continue their formal training. The students were replaced from country to country so that there were German participants in three of the four periods.
- Unfortunately, it was not possible for German Mechatronics students to also participate in the German period.

Achievements

- The demand for mobilities increased significantly after the BBVET students came back.
- The companies were convinced by the BBVET international pilot and sensitised for internationalisation. Mechatronics students had been recruited through direct contact with the companies (Germany).
- Interviews were important and useful to find most motivated students.
- BBVET partners were flexible and motivating each other in the recruitment of students.
- Existing networks could be used to recruit students.
- New marketing channels could be tapped (Jobcenter, other VET schools, etc.).
- Above all, direct contact with candidates and Facebook groups were perceived as the most successful recruitment strategies.



6 Data evaluation and interpretation of student surveys

The implementation of long-term mobilities during VET is associated with different positive effects and benefits for the students, the companies, the economy in general and the countries. During the last ten weeks of the long-term mobility, which took place in Germany, the students – for both the Mechatronics and EdTech – were asked which effects and benefits are connected to an internship abroad from their individual point of view. This included both a survey on the assessment of benefits and a survey on the international professional competence and effects of long-term mobilities. The students were also asked to give advice for future long-term mobility students. In the following section, an overview of the most important results of the three surveys is given.

6.1 Benefit assessment

The students were tasked with ranking 17 aspects regarding the benefits of a long-term mobility in VET (see annex 8). These aspects refer to the study of Friedrich and Körbel (2011) and are listed below:

- General job market opportunities
- Professional knowledge
- Information about the country's economy
- Opportunities in my job
- Getting to know new techniques/practices
- Greater tolerance towards foreigners
- Working independently
- Ability to handle new tasks
- Has motivated me to work abroad in the future
- Increases when applying
- Linguistic proficiency
- Ability to deal with people
- Self-confidence/self-esteem
- Better understanding of foreign cultures
- Knowledge of country/people in general
- Career opportunities
- Earning potential at work

Each number/rank could only be awarded once. Number 1 meant “highest benefit”, number 17 meant “lowest benefit”. The task was carried out in English, which is a foreign language for all students. When considering the results of the evaluation, potential problems understanding the vocabulary or scaling must therefore be taken into account.

The results of the Mechatronics students are shown in the following table:

13 participants

Scale: Number 1: highest Benefit
Number 17: lowest Benefit

statement	evaluation														average	median
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	P 9	P 10	P 11	P 12	P 13			
General job market opportunities	11	7	6	10	8	12	5	15	4	6	17	1	14	8,92	8	
Professional knowledge	2	3	5	2	1	13	2	2	1	1	7	12	3	4,15	2	
Information about the economy of the country	17	9	17	12	9	17	9	16	5	17	8	17	17	13,08	16	
Opportunities in my job	3	2	4	5	2	2	1	10	2	2	14	3	4	4,15	3	
Getting to know new techniques/practices	4	10	3	1	3	14	17	11	1	14	1	4	7	6,92	4	
Greater tolerance towards foreigners	10	11	16	17	10	16	13	17	4	13	10	16	5	12,15	13	
Working independently	8	4	13	11	4	3	6	1	10	12	9	5	8	7,23	8	
Ability to handle new tasks	9	15	14	4	11	4	13	12	4	7	2	11	6	8,62	9	
Has motivated me to work abroad in the future	5	5	12	6	5	10	10	9	1	15	3	2	16	7,62	6	
Increases chances when applying	6	16	15	7	16	5	4	13	2	7	12	13	9	9,62	9	
Linguistic proficiency	12	13	11	8	17	15	16	14	3	9	15	10	13	12	13	
Ability to deal with people	7	6	7	13	12	1	11	3	4	3	4	15	1	6,69	6	
self-confidence / Self-esteem	13	17	2	14	13	11	7	6	1	4	16	9	12	9,62	11	
Better understanding of foreign cultures	14	12	9	9	14	7	14	5	7	16	11	8	10	10,46	10	
knowledge of country/ people in general	15	14	10	15	15	6	12	4	2	11	13	7	11	10,38	11	
career opportunities	1	1	7	3	6	8	3	8	1	5	5	6	6	4,62	5	
Earning potentials at work	16	7	8	16	7	9	8	7	2	10	6	14	2	8,62	8	

Table 18: Assessment of mobility benefits by VET students, Mechatronics.

The table shows the individual results of all 13 Mechatronics students surveyed, as well as the calculated average and median. Three aspects were rated particularly highly on average by most of the Mechatronics students. “Professional knowledge” and “opportunities in my job” were ranked highest (average 4.15), closely followed by “career opportunities” (average 4.62). This is also reflected in the calculation of the median. A fourth aspect also has a highly ranked median: „getting to know new techniques/practices” (median 4). For the Mechatronics students surveyed, the main focus is apparently on benefits directly related to their profession and their professional competence. The opportunity to pursue a career abroad in the future is also important to the students. Possible benefits in connection with language, culture and country were put at the bottom of the list according to the average and median: “linguistic proficiency” (average 12/median 13), “greater tolerance toward foreigners” (average 12.15/median 13), “information about the country’s economy (average 13.08/median 16).

16 participants

Scale: Number1: highest Benefit
Number 17: lowest Benefit

statement	evaluation																average	median
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	P 9	P 10	P 11	P 12	P 13	P 14	P 15	P 16		
General job market opportunities	6	3	13	13	6	10	16	16	8	10	10	10	13	4	12	13	10,31	10
Professional knowledge	8	2	12	7	4	5	7	8	3	9	9	11	16	2	4	5	6,92	7
Information about the economy of the country	16	14	14	12	14	15	12	15	14	8	14	17	17	12	17	11	13,54	14
Opportunities in my job	5	4	5	8	5	14	14	13	6	17	11	2	12	7	11	6	8,46	7,5
Getting to know new techniques/practices	3	3	4	1	1	4	2	3	4	7	3	3	6	8	5	1	3	3
Greater tolerance towards foreigners	17	13	11	16	17	11	11	4	15	13	5	9	4	13	13	3	11,15	12
Working independently	13	12	3	6	13	3	10	6	11	15	12	8	14	14	10	16	9,85	11,5
Ability to handle new tasks	12	6	15	10	7	9	9	5	12	14	13	7	2	15	3	7	9,69	9
Has motivated me to work abroad in the future	2	17	8	11	12	8	5	7	13	6	1	12	8	9	2	8	8,46	8
Increases chances when applying	4	10	10	5	2	13	13	9	2	4	7	14	11	11	9	17	8,46	9,5
Linguistic proficiency	1	7	2	17	11	17	1	2	1	12	2	13	10	17	8	4	6,92	7,5
Ability to deal with people	11	11	9	9	15	7	6	12	9	11	16	4	7	3	16	9	9,92	9
self-confidence / Self-esteem	7	1	1	2	16	1	3	1	5	3	4	1	3	16	1	10	4,23	3
Better understanding of foreign cultures	10	16	17	15	10	2	8	11	16	1	15	16	1	6	15	2	10,69	10,5
knowledge of country/ people in general	3	13	16	14	9	12	4	10	17	2	17	15	5	1	14	12	11,08	12
career opportunities	14	8	6	3	3	6	13	14	7	16	6	5	9	10	6	14	8,85	7,5
Earning potentials at work	15	9	7	4	8	16	17	17	10	5	8	6	15	5	7	15	10,54	8,5

Table 19: Assessment of mobility benefits by VET students, EdTech.

Another picture is painted by the results of the 16 EdTech students surveyed. They rated two benefits particularly highly, which are related to their professional competences and their self-competence. “Getting to know new techniques/practices” was rated highest with an average of 3.00. “Self-confidence/self-esteem” in second place (average 4.23) also stands out clearly in front of the other aspects. This is followed by “professional knowledge” and „linguistic proficiency” (average 6.92). In comparison to the Mechatronics students, linguistic skills seem to play a bigger role for the EdTech students. In terms of culture and country, the trend is similar to that of the Mechatronics students: “information about the country’s economy” (average 13.54), “greater tolerance towards foreigners” (average 11.15) and “knowledge of country/people in general” (average 11.08) play a less important role.

6.2 International professional competence and the effects of mobilities

The students then filled out a questionnaire on “international professional competence and the effects of mobilities”. In this survey, the students had to evaluate their own international vocational competence, which consists of international hard skills, foreign language skills, intercultural competence, network competence and soft skills. They also evaluated the effects of BBVET long-term mobility on their personal skills, knowledge, professional skills and professional chances, as well as its effects on the

attractiveness of VET. There are nine aspects in total. The students were asked to rate different statements on these aspects from 1 to 5. 1 meant “strongly untrue” and 5 meant “strongly true”. For example, the first aspect “international hard skills” included the statements: “I am able to interpret descriptions, information and texts in English”, “I am able to write descriptions, information and texts in English”, “I can understand professional terms in English”, “I can use professional terms in English orally”, “I can use professional terms in English in a written way”, “I can conduct customer conversations in English” and “I can conduct customer consultations in English” (see annex 9). The aspects and statements are related to Wordelmann (2009) and NA BIBB (2018).

The evaluation results are presented below. The various statements on the ten aspects are also presented. The following table shows the overall average of the ten aspects divided between Mechatronics and EdTech students:

Aspect	Overall Mechatronics Average	Overall EdTech Average
International hard skills	3.41	3.14
Foreign language skills	3.85	4.44
Intercultural competence	3.63	4.21
Network competence	3.60	4.02
Soft skills	3.68	4.39
Personal competence	3.76	4.14
Knowledge	3.98	4.19
Professional skills	3.87	4.30
Professional chances	3.83	4.11
Attractiveness of VET	3.92	4.28

Table 20: Results of the international professional competence survey.

Significant differences in the ratings can be seen between the two student groups. In general, the overall average scores of the EdTech students are higher than those of the Mechatronics students, with the exception of “international hard skills”. Furthermore, the students placed different weightings on the aspects and statements. The results of the Mechatronics students are considered first, followed by the results of the EdTech students.

The Mechatronics students mainly classified the ten aspects in the between 3 and 4 ("neutral" to "true"), meaning the overall average lies between 3.4 and 4. A rating higher than 4 is especially common in statements related to professional competence.

The students gave the statements on “international hard skill” lower ratings, meaning that the overall average of 3.41 is the lowest of all – as with the EdTech students. This aspect includes knowledge of law regulations, European economic and social systems, international payment transactions, European markets and foreign traffic connections and infrastructure, as well as geographical knowledge.

“Foreign language skills” includes the following statements:

- I am able to interpret descriptions, information and texts in English.
- I am able to write descriptions, information and texts in English.
- I can understand professional terms in English.
- I can use professional terms in English orally.
- I can use professional terms in English in a written way.
- I can conduct customer conversations in English.
- I can conduct customer consultations in English.

The overall average is 3.85. When it comes to interpreting and writing descriptions, information and texts in English, the students see themselves as capable, and classify these first two statements at an overall average of 4.31 and 4.15. In contrast, students rated the overall use of the English language, not just written, much lower.

The last three aspects of international professional competence are “intercultural competence”, “network competence” and “soft skills”. The Mechatronics students rated these aspects between 3.6 and 3.68. “Intercultural competence” includes the following statements:

- I am good in working in international teams.
- Dealing with people from other cultures is easy for me.

- I can consider significant political, economic, cultural and historical circumstances.
- I am sensitized to other cultures, religions and mentalities.
- I can adapt well to foreign cultures.

Interacting with and adapting to foreign cultures is more highly regarded than considering significant political, economic, cultural and historical circumstances. The overall average is 3.63, for the network competence 3.6. "Network competence" includes knowledge of databases, networks and communication systems, usage of online services and networks for information exchange and shopping. Only the statement "I shop online" was rated with a total average value higher than 4.

"Soft skills" includes statements about the ability to orientate oneself in new places and to travel independently through Europe, as well as the relevance of feedback and reflection in the student's daily (working) life. The statements were mostly rated 2 or 4 ("untrue", "true"), resulting in an overall average of 3.68.

In addition to questions about their own international professional competence, the students were asked about the effects that the BBVET long-term mobility had on them personally.

For "personal competence", which includes statements about increased motivation, independency, responsibility, the ability to work in teams, understanding foreign cultures, tolerance of foreigners, interacting with people and self-esteem, the students rated the statements very differently, mostly between 3 and 5, making an overall average of 3.76.

In contrast, the students rated "knowledge" the highest overall with an average of 3.98. This aspect includes the following statements:

- I have gained professional knowledge.
- I have gained knowledge about countries and people.
- I have gained knowledge about the economy of the countries.
- I improved my language skills.

The first two statements, which target professional knowledge and knowledge about countries and people, were rated particularly highly by the Mechatronics students at 4.23.

"Professional skills" and "professional chances" comprise statements on improvement regarding considering courses of action, handling new tasks, working in international teams and acquiring new working techniques, which the students rated at an average of 3.87 and 3.83.



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Finally, the last aspect focuses on the attractiveness of VET and includes four statements:

- Mobility as an integral part of VET makes VET more attractive.
- The possibility of mobilities increases the attractiveness of our education compared to an academic study.
- The possibility of mobilities increases the attractiveness of our education compared to another VET education.
- In the future, an education without mobility can no longer exist.

The majority of the Mechatronics students agreed with the first three statements, rating them at an average of 4. However, the students were neutral on the last statement “in the future, education without mobility will no longer be able to exist” and rated it at an average of 3.46.

In contrast, the EdTech students mostly rated the different statements more highly, apart from “international hard skills”. The overall average for the statements regarding international hard skills was not only lower than the results from the Mechatronics students, but also the lowest overall average for EdTech students. With an average of 3.14, they classified their international hard skills as moderate.

By contrast, the EdTech students predominantly rated their foreign language skills highly (4 to 5). The statements related to the English language and to listening, reading and speaking skills had an overall average of 4.44, the highest compared to the other aspects amongst the EdTech students.

The students rated “intercultural competence” relatively highly with an overall average of 4.21, similar to “soft skills” at 4.39. Only the statement for “intercultural competence” regarding the consideration of “significant political, economic, cultural and historical circumstances” was rated below 4 several times (average 3.69). Regarding “soft skills”, only the statement “I can find my way around a new job quickly” has an average lower than 4 (3.94).

Finally, the students classified network competence –the last aspect of international professional competence – at an average of 4.02. In this way, they agreed with the first two statements regarding the knowledge of databases and the usage of data networks and communications systems (average 3.31, 3.81) less than they did with the last two statements regarding the usage of online services and information exchange networks, as well as online shopping (average 4.38 and 4.56).

The EdTech students also evaluated the effects of mobility based on the given aspects. In the statements on personal competence, they particularly agreed with those regarding improved teamwork



competence and a greater understanding of foreign cultures. The overall average for “personal competence” was 4.14, similar to “knowledge” at 4.19. Regarding the second aspect, the statement “I have gained knowledge about countries and people” was solely approved with values of 4 ("true") or 5 ("strongly true"), with an overall average of 4.69.

As for the aspects “professional skills” and “professional chances”, most of the EdTech students agreed or totally agreed with the statements (4 to 5), making the overall averages 4.3 and 4.11.

Finally, regarding the last aspect “attractiveness of VET”, the majority of the students (totally) agreed with the first three statements:

- Mobility as an integral part of VET makes VET more attractive. (4.63)
- The possibility of mobilities increases the attractiveness of our education compared to an academic study. (4.69)
- The possibility of mobilities increases the attractiveness of our education compared to another VET education. (4.75)

Similarly, to the Mechatronics students, the EdTech students had a negative or neutral attitude towards the last statement, “in the future, an education without mobility can no longer exist”, resulting in an overall average of 3.06.

6.3 Advice for long-term mobility

In a third survey, the two student groups were asked to give advice for future long-term mobility participants. This survey was conducted at the end of the final stay abroad in Germany. The students were presented with the following scenario:

“Just imagine, in the next summer, after you have successfully completed BBVET, you will meet a colleague who also has the opportunity to participate in a long-term mobility. What would you advise him/her about the following aspects or which tips would you give him/her?” (see annex 10)

The students were given different aspects and questions relating to the organisation of a long-term mobility (target country, financial issues, duration, organisation, school/company), as well as to possible challenges (culture, language, etc.) and the personal impact it could have (benefits, personal development/soft skills, hard skills). In total, ten aspects and questions were given:

- Target country: Which one should he/she choose and why?
- Financial issues: How should he/she finance his mobility?



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- Duration: How long would you suggest to stay and why?
- Organisation: What is important regarding the organisation?
- Culture: What is important to know regarding the foreign culture?
- Language: How fluent should he/she be in a foreign language and why?
- Benefits: What are the benefits from a long-term mobility?
- School/company: What are the important things to discuss with educational institutions?
- Personal development/soft skills: What do you learn about yourself, when you are abroad?
- Hard skills: What about the professional development?

The students were asked to answer the questions based on this scenario. On the one hand, the results provide recommendations for the realisation of a long-term mobility from the point of view of the participating students. On the other hand, a differentiated insight into the advantages and benefit categories is given, which the students attribute to cross-border mobility in VET. Of course, the results should be assessed against the background of the long-term mobility that has taken place in the context of BBVET. Consequently, there is no comparison group so far. The survey was carried out for the first time and provides important insights. In the following section, the results of both groups of students will be presented together.

With regard to the choice of target country, the students named different criteria, either mentioning specific countries, which then represented the BBVET countries, or naming relevant criteria of choice. These criteria were the design of the education system, living costs, industry, job perspectives and the level of development in the target country. While one student advised choosing a country with the same education system and language, another suggested choosing a country with a well-differentiated and high-quality education system. Germany's dual system, on the one hand, was positively highlighted by several students. The students particularly liked the practical learning approaches and working in the companies. The BBVET learning activity in Sweden, on the other hand, was praised for its high-quality organisation and implementation. With regard to financing the mobility, attention should be paid to the living costs of the potential destination country. According to the interviewed students, training in the industry of interest should be well developed in the target country. There should also be pre-existing job perspectives. Finally, some students also referred to the level of development in the potential target country in general as a relevant piece of criteria. In order to be able to make the most of free-time experiences during the long-term mobility, two students advised that they would





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recommend choosing an area/city in the target country that offers leisure facilities and opportunities, ideally a city with more than 500,000 inhabitants. One student pointed out that every country is interesting and can provide important and interesting experiences.

The students did not give concrete advice on financing a long-term mobility, which could be because participants in the BBVET project did not have to finance a long-term mobility themselves, and thus had no experience with funding strategies as part of this project framework. In general, the students advised finding a sponsor (grant, donors, scholarship). Another suggestion was that the internship company should pay a salary, or at least cover travel and accommodation costs. However, some surveyed students also suggested saving money in advance themselves, which would also promote greater motivation and engagement during the long-term mobility (“paying for it yourself creates greater engagement”). One last suggestion was to take a student loan. Two students also gave advice regarding the stay itself: search for low prices, cook food yourself, travel by train/bus rather than car, etc.

The students responded very differently to the question “how long would you suggest to stay and why”. Some students did not provide a general period, but said that the amount of time to be chosen is determined by certain factors like the (amount of) content, structure of the education system (at home and in the target country), family/social context in the home country, etc. However, most interviewees indicated a specific period of time for a long-term mobility, ranging from “as long as possible” to “10 weeks are enough”. This can be used to identify the individual expectations, ideas and needs of young adults, which are relevant in the context of cross-border mobilities and must be taken into account. A quarter of the students suggested a duration of between 5 and 12 months (necessary to adapt to and understand the foreign environment, to get used to the culture, contacts and way of life and to adopt new habits). Five students recommended a stay lasting between 2 and 4 months (“to see if it's worth continuing”, “not being away from home for too long”). Another student also recommended a mobility in different countries, similar to BBVET's long-term mobility: first a period of 2 months, followed by a second period of 3-4 months in 2 countries without going home.

What is important when it comes to organisation? The students gave many different, mismatched recommendations, presumably because the students interpreted the question differently: either as the organisation in charge of an internship, or as organisation in the sense of planning a long-term mobility.





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Regarding the organisation in charge of an internship, the students stated that the trainee should always be polite, open and interested. Good communication is very important. Some students said payment from the internship organisation should be required. Two students also highlighted the internship organisation's reputation as important: “the organisation needs a good reputation and you should know what they provide” (mechatronics interviewees), “high status and experience in dealing with foreigners in new educational and working environments” (EdTech interviewees).

As for organising and planning a long-term mobility, the students regarded the following aspects as relevant:

- always have a plan if something goes wrong
- it is necessary to prepare everything before starting the mobility
- be aware of your own expectations
- be open to the people who can help with organisational matters
- certainty
- submit documents on time

The students were also asked what was relevant to them in terms of foreign culture and how to deal with it, citing both the need for expertise, especially in terms of legal basics, and country-specific traditions, structure and hierarchy (“knowledge about culture helps you to adapt to society faster”). Three students also mentioned language skills as a relevant aspect. Finally, certain aspects of self and social competences were described as being important when dealing with foreign cultures: politeness, respect, openness and helpfulness.

When it comes to how fluently the trainee has to speak a foreign language to be able to successfully complete a long-term mobility, two opposing opinion groups can be identified amongst the students. One group of students emphasises the need for language skills - the recommendations range from “knowing technical terms” to “level B2 (being able to have good and understandable conversations)”. The other group rated basic language skills as sufficient, as the rest could be learned during the stay: “fluency is not as important as the willingness to learn”. Two students also highlighted the relevance of technology/internet to help with communication and language learning. The students explicitly pointed out the importance of English language skills several times.



Students were asked about the benefits of long-term mobilities. Five aspects can be highlighted. The number in brackets represents the number of students who made this statement. Interviewees were able to select multiple answers:

- personal growth (6)
- gaining new inspiration and motivation (2)
- gaining knowledge and new perspectives (14)
- making new friends (3)
- making new contacts (2)

With regard to the main aspect of “personal growth”, the students named increasing self-confidence and openness, being open-minded and becoming independent. Two students stated that you could generally gain new inspiration and motivation through a long-term stay abroad. The main aspect “gaining knowledge and new perspectives” covers different dimensions:

- gaining knowledge of and new perspectives on yourself and your personality (explained in more detail under “personal development/soft skills”)
- gaining knowledge of and new perspectives on the culture (cultural insights, understanding of country-specific differences)
- gaining knowledge of and new perspectives on working culture (such as technical content, standards)
- gaining new points of view (“on large and small things”)

In this context, a student emphasised that they feel more international thanks to their international long-term mobility. They are also able to use the knowledge gained in everyday life. For three other students, making new friends and contacts are big benefits.

The two student groups gave very different statements regarding the question “What are the important things to discuss with educational institutions?” The Mechatronics students predominantly emphasised agreements regarding the necessary preparations, schedule and cooperation between the school and the company. They named personal counselling and support from the education staff regarding how to successfully access the labour market, how to reach your personal goals, how to improve soft skills and how to learn in the best way. The EdTech students interpreted this question as

what training content and professional knowledge must be discussed with the educational institutions/staff:

- encourage them to be progressive/early adopters of EdTech solutions
- convince them to introduce new educational methods
- it is important to know the reasons and purposes behind the design of educational programmes

The students were asked which soft and hard skills can be obtained during a long-term mobility. With regard to soft skills/personal development, five main aspects were identified. The number in brackets represents the number of students who made this statement.

- improving self-development and self-consciousness (12)
- improving self-confidence (7)
- improving teamwork (3)
- maturing and becoming more independent (3)
- improving language skills (2)

The most important dimensions of soft skills are the “improvement of self-development and self-confidence”. Essential aspects are discovering unknown skills, passions, values and goals; learning how to reach goals; discovering expectations, needs, strengths and weaknesses; learning how to improve strengths; developing trust in skills; and increasing reflection capacities. Another key dimension is the “improvement of self-esteem”. For the students, this is linked to interacting with foreign people, feeling comfortable abroad and becoming more communicative. In addition to “improving teamwork”, three students also described “improving and becoming independent” as another major dimension. The interviewees saw independency as distinct from their own family and the home country’s framework for action. Two students also described “improving language skills” as a relevant aspect. This could also be counted as a hard skill.

For the last question “What about your professional development?”, several students either didn’t respond or gave an unspecific answer. This might be down to how the question was formulated. Two students stated that the development of hard skills is dependent on the specific exchange programme and they therefore cannot be named specifically. One student rated the development of soft skills more highly during long-term mobilities than during short-term mobilities. Nine students emphasised



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that there was much to learn in the context of long-term mobilities and that they could broaden their expertise (e.g. gain technical knowledge of new tools, technology solutions, videos, graphics, prototyping, coding, how EdTech is implemented in different countries, etc.). “The best chance to grow professionally is to see the foreign aspects of your job.”

6.4 Soft Skills Measurement

Developed by CELF

In 2017, the BBVET consortium focused on the development of interregional VET curricula within initial VET, with regard to carrying VET structures forward in the *Green Media* and *Blue Mechatronics* economic sectors. In 2018, the two EdTech and Mechatronics international VET curricula were piloted.

The VET curricula consist of a unique mixture of hard and soft skill development, respecting the extraordinary international learning experience. To be able to show individual personal soft skill development throughout the entire cross-border BBVET year, the project is using the *Soft Skills Measurement Tool*, which was developed by Danish project partner CELF.

The BBVET consortium decided to take into account a reference group (for quality assurance) to be able to underline similar or different development levels between national and international students. Therefore, not only did the BBVET students use the tool, but also a national reference student group in each partner country (Denmark, Germany, Lithuania, Sweden and Poland).

That means two reference groups were needed in each partner country: one for EdTech (if there was no adequate national education within the region, a group from the field of media should be taken) and one for Mechatronics.

The reference group should have the following characteristics:

- Coherent class
- Approximately 20 students
- Measurement after the first period in January and in December with the same class and as many of the same students as possible
- Students should have had some learning experience before (ideally in their 2nd learning year)
- Each student needs a unique code



Data gathering – schedule

The following table shows the planned different points of action.

EDUCATIONAL TECHNOLOGY (EdTech)				
	Sweden	Poland	Lithuania	Germany
BBVET class	Everybody takes the test at the start of period 1	Only newcomers take the test at the start of period 2	Only newcomers take the test at the start of period 3	Only newcomers take the test at the start of period 4
	Everybody takes the test at the end of period 1	Everybody takes the test at the end of period 2	Everybody takes the test at the end of period 3	Everybody takes the test at the end of period 4
National reference group	Everybody takes the test at the start of period 1			
	Everybody takes the test at the end of Period 1			Everybody takes the test at the end of the Period 4
MECHATRONICS				
	Sweden	Lithuania	Denmark	Germany
BBVET class	Everybody takes the test at the start of period 1	Only newcomers take the test at the start of the period 2	Only newcomers take the test at the start of period 3	Only newcomers take the test at the start of period 4
	Everybody takes the test at the end of period 1	Everybody takes the test at the end of period 2	Everybody takes the test at the end of period 3	Everybody takes the test at the end of period 4
National reference group	Everybody takes the test at the start of period 1			
	Everybody takes the test at the end of period 1			Everybody takes the test at the end of period 4

Table 21: Soft skills measurement – data gathering.

With the national reference group, the test after ten weeks is done once in every country to collect similar data that can be analysed and compared with the data from the international students, who only took part in BBVET for one country period (the German Mechatronics students). During data analysis, the five different national groups will be merged into one multinational group for comparison with the international group. The analysis should be done on individual, institutional (school or company) and programme level. It is used anonymously and confidentially.

Introduction to the measurement tool

The tool was adapted for BBVET by the Danish project partner, which has an “impact of education on CELF measurements” project. The idea of the tool was to measure the educational achievements within different educational contexts, e. g. in schools, in companies, through VET providers. The tool focuses on training soft skills and attempts to measure the individual development of each student with the Danish VET provider. The measurement is based on the Return on Investment approach, and respects that all the different target groups in the VET systems have different expectations regarding education.

The measurement tool measured six soft skills identified by the Danish project partner.

- Communication
- Cooperation
- Learning
- Sociability
- Maturity
- Problem solving

The aim of the measurement is not only to identify the development of the soft skills, but to also give them a manifestation value which is split into four different levels:

1. "Attitudes" (level of motivation and therefore ability to solve the task),
2. "Knowledge" (knowledge the pupil needs in order to be able to solve the task),
3. "Behaviour" (actions the learner displays in order to be able to solve the task)
4. "Results" (overall level and ability to solve tasks, i.e. the result of the first three levels).

The overall idea is that the professional (non-)formal training combined with the personal “soft skills” profile creates a picture of the skill level and the effect of the entire training. This effect is related to the base approach of how high the Return on Investment for each individual student, the company and the school is.

The questionnaire that need to be answered was provided online. Using the names of the students and their personal email addresses, unique codes for each student were created. The unique code was not only needed to log into the survey, but also to secure the anonymity of the participants.

The questionnaire included 72 questions in total, divided into six sections in accordance with the identified soft skills. The whole questionnaire is attached to this report (see annex 4).

The questionnaire consisted of four different types of questions:

- A. Position-based question ("I thought that...")
- B. Knowledge basics ("I always know how...")
- C. Behaviour-related questions ("I [do]...")
- D. Result-based questions ("I always have success with...")

Each question could be answered on a scale from 1 to 6.

1	2	3	4	5	6
Completely disagree	Disagree	Partly disagree	Partly agree	Agree	Completely agree

The survey is conducted electronically and uses the "Relationwise" tool for data collection and "Excel" for data processing and generating the report. Thus, a quantitative data collection is realised.

Implementation of the measurement

The following table shows the actual completed measurements in the partner countries.

EDUCATIONAL TECHNOLOGY (EdTech)				
	Sweden	Poland	Lithuania	Germany
BBVET class	13 measurements in February	No data	10 measurements in June	10 measurements in October
National reference group	No measurements			
MECHATRONICS				
	Sweden	Lithuania	Denmark	Germany
BBVET class	16 measurements in February	10 measurements in June	18 measurements in August	16 measurements in October
National reference group	Measurement conducted with two German classes in January 2018			Measurement conducted with two German classes in January 2019

Table 22: Implementation of the measurement.

NATIONAL REFERENCE GROUPS

There was one control group measurement in Germany. The measurement was conducted twice, in February 2018 and January 2019, with the same classes. Two classes took part in the measurement.

Comparison of the measurement criteria and the participants.

Date of measurement	06.02.2018	07.02.2018	22.01.2019	23.02.2019
Coherent class	Yes, 1 st learning year	Yes, 2 nd learning year	Yes, 2 nd learning year	Yes, 3 rd learning year
Approximately 20 students	13 students	15 students	16 planned 10 realised	17 planned 14 realised
Measurement in January	February 2018	February 2018	February 2018	February 2018
After the first period (March 2018)	No	No	No	No
Measurement in December 2018	January 2019	January 2019	January 2019	January 2019
Some learning experience	yes	yes	yes	yes
Unique code	yes	yes	no	no

Table 23: Measurement criteria of the national control group

Results of the soft skills measurement

Unfortunately, there is no data that can be analysed which would have value. This has several reasons.

Regarding the EdTech group. There is no data available that can be analysed. The data was incomplete and irregular, as no student answered all surveys at all measurement points completely (see table 22).

Regarding the Mechatronics group. The German students have been excluded from the analysis because they only participated in the BBVET programme for 10 weeks and there were no Germans in the fourth period. After excluding the German participants, the data was checked for completeness. Unfortunately, only three students had completely answered the questionnaire at every measurement point. It seems like the reason for this were technical problems as the students needed to complete

the survey completely and agree to send in their data to be registered on the last page. If they didn't do this, their data was not available.

Even if a student answered all the surveys and a comparison can be made through the whole year, the data doesn't really show any development. This is indicated in the following example by one randomly picked Mechatronics student that answered all three surveys. The figures show the results of the measurements, separated by the six measured soft skill: Communication, Cooperation, Learning, Sociability, Maturity, Problem solving.

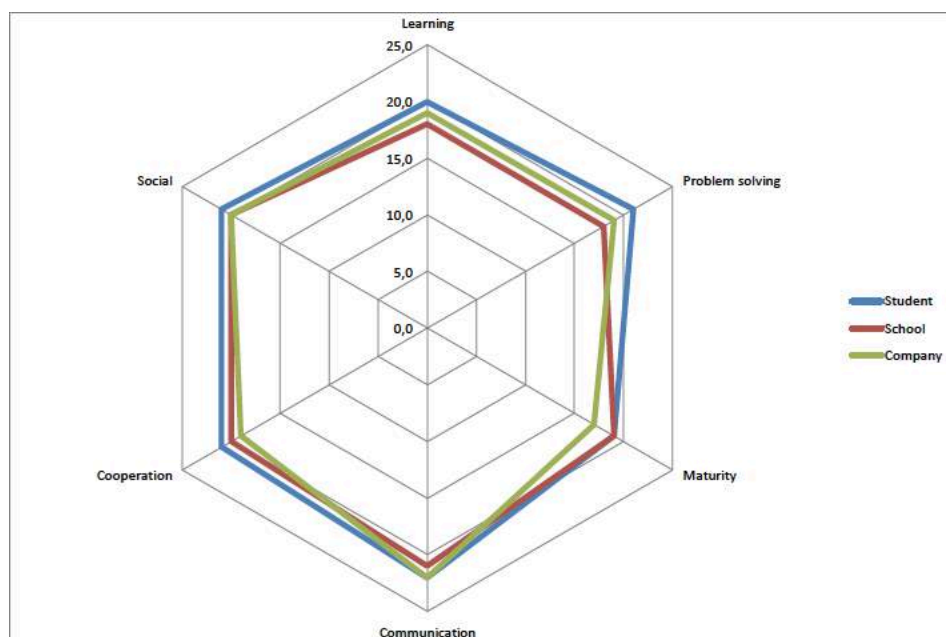


Figure 15: Mechatronics student, measurement 1

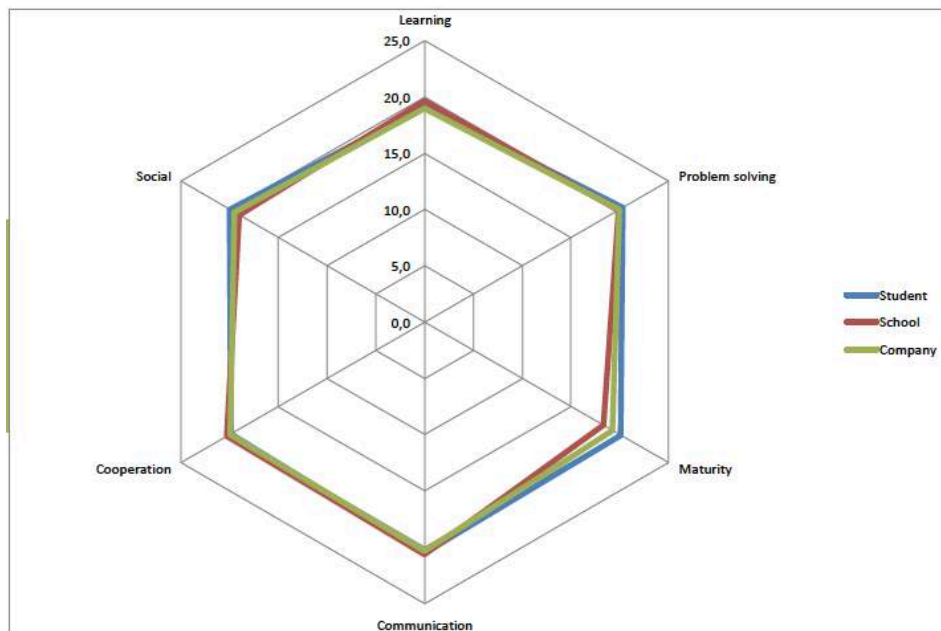


Figure 16: Mechatronics student, measurement 2

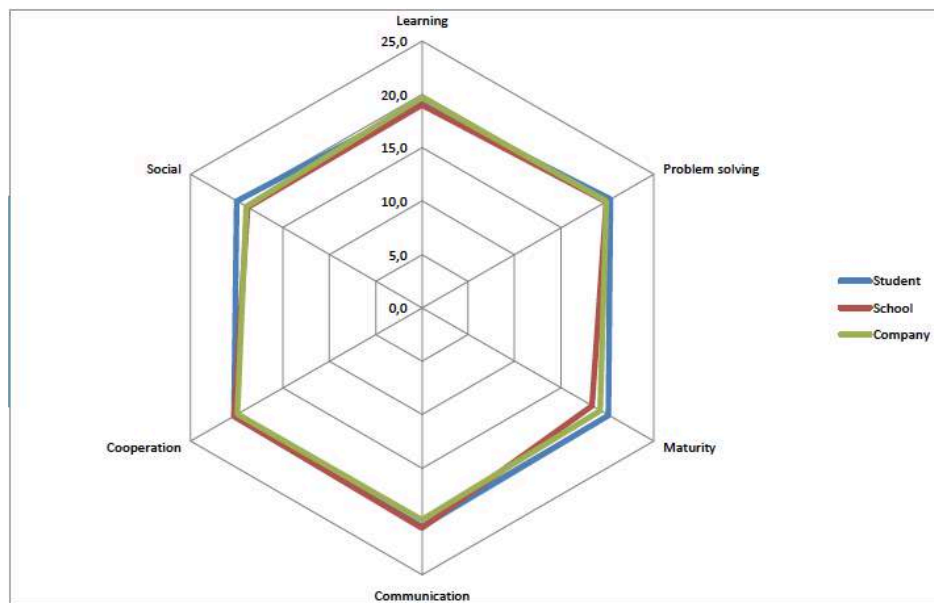


Figure 17: Mechatronic student, measurement 3

The fact that the data isn't really showing any development can have different reasons:

- It is unclear whether the students understood the value of the scale. As they had already answered with quite high values at the very beginning, a development process is hardly visible.



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- It is also unclear whether the students understood the purpose of the survey. The idea of the Danish project partner was to use this measurement tool at the school to monitor individual learning paces and to adapt the individual needs to the learning schedule. The BBVET students sometimes communicated that they did not understand the purpose of the survey.
- Sometimes the data looks like that the students evaluated their own performance due to a country period instead of completing a self-assessment on their personal soft skills development.

As there is no valid data existing for the two BBVET groups EdTech and Mechatronics the comparison with the national control group is obsolete.

It needs to be stated that the soft skills measurement couldn't deliver the results that the project consortium expected. But nevertheless, it was a try make the development of the soft skills during cross-border mobilities transparent. There will be a bit more time needed to adapt this model of CELF for cross-border mobilities. The BBVET consortium will work on the further development and give advice for future use.



7 Implementation of mobility agencies in the South Baltic regions

This chapter includes different approaches on how to implement mobility agencies in the SBR. The project partners have had a closer look at pre-existing mobility agencies, what they offer and how they work. Following problem analysis, a joint problem tree for the South Baltic region has been developed as part of the collaboration and different models have been discussed. The partners tried to approach potential responsible future mobility agency implementer stakeholders, in several ways and provide an overview of their experiences within this chapter.

One mobility agency will be presented in the following section especially. The “Arbeit und Leben” agency, located in Hamburg, was one of the planned collaboration partners of the project.

7.1 Existing mobility agencies

In the following section, the “Arbeit und Leben” mobility agency will be presented, as it was one of the BBVET collaboration partners that inspired the lobby work done within BBVET in the SBR. Of course, there are also other existing mobility agencies. This description is not guaranteed to be complete.

“Arbeit und Leben” Hamburg e. V. sponsored by the German Trade Union Confederation (DGB) Hamburg and the Hamburg Adult Education Centre (VHS).

“Arbeit und Leben” Hamburg is a non-profit educational institution. No departments are profit-oriented. The departments are:

- Political education
- Mobility agency
- District work
- Consultation centre handicap
- Consultation and further education
- Arbeit und Leben Hamburg Bildungswerk GmbH (independent non-profit institution)

The “Arbeit und Leben” Hamburg association addresses workers, the unemployed, young and elderly people and socially disadvantaged groups. It wants to empower these people to co-determination, co-responsibility and to shape societal democracy.



To this end, it organises political and integrative education events at home and abroad, and promotes intercultural competences through networking in Europe and European mobility activities. The agency organises cross-border mobilities, short-term or long-term, in other European countries for apprentices and graduates. The programmes are usually funded by the EU. This gives the participants financial support for their cross-border mobility. For teachers, trainers and other professionals in the field of education and training, the agency organises professional exchanges and offers comprehensive advice on international traineeship programmes.

In general, the mobility agency is the contact point for every interested party regarding cross-border mobilities. It consults, increases the sensibility regarding internationalisation, organises networking events and strengthens the internationalisation of the respective region.²

There are different funding programmes that can be offered by a potential mobility agency. Some of them are briefly presented in the following section. The listing is not guaranteed to be complete.

7.2 Implementation of mobility agencies – opportunities and challenges

7.2.1 Joint problem analysis

The point of departure for the planning process is the problem analysis, which leads to the objectives and makes it possible to choose the relevant activities. Hence, before making an activity plan, it is necessary to analyse the problems and objectives.

Stakeholder analysis

The project consortium started with an analysis of possible mobility agency stakeholders by using the logical framework approach. Stakeholders are people who are influenced by and exert an influence on the project – directly or indirectly.

The consortium focuses on four main groups:

Beneficiaries/target group	Implementers	Decision-makers	Financiers
----------------------------	--------------	-----------------	------------

Table 24: Stakeholder analysis groups.

² See Arbeit und Leben (2019a), w. p.

All of them have important information to give to the “mobility agency” project. The results of the BBVET consortium’s joint stakeholder analysis reflecting on all five participating SBR countries is shown below. The results vary between more general answers to specific institutions or responsible persons that are already collaborating with some of the BBVET project partners.

Beneficiaries / target group	Decision-makers
VET staff and VET learners Companies (VET) schools VET service providers Students Teachers / trainers / coaches Youth centres / associations Work agencies Universities Networks	VET providers (dept. heads or international coordinators) Principals Teachers / trainers Chambers Network managers Funding programme managers PA EUSBSR education Interreg South Baltic contact point Unions/ Employer associations
Implementers	Financiers
VET providers (international coordinators), Fehmarn Belt mobility office Multipliers BBVET consortium BBVET students BBVET trainers / teachers / coaches Schools/ Companies Recaps guests Contacts at study visits ‘Arbeit und Leben’ association	ERASMUS+ KA1 (mobility), Interreg. + own contribution (mobility office) Funding Programmes: - Erasmus + - ESF - “Berufsbildung ohne Grenzen” - Companies - Municipalities - Voluntary services National agencies Ministry of Education Unions Youth organisations

Table 25: Results of the stakeholder analysis.

Problem tree - problem analysis

After completing the stakeholder analysis, the project consortium carried out a problem analysis. This problem analysis was done by drawing a “problem tree” (see annex 11).

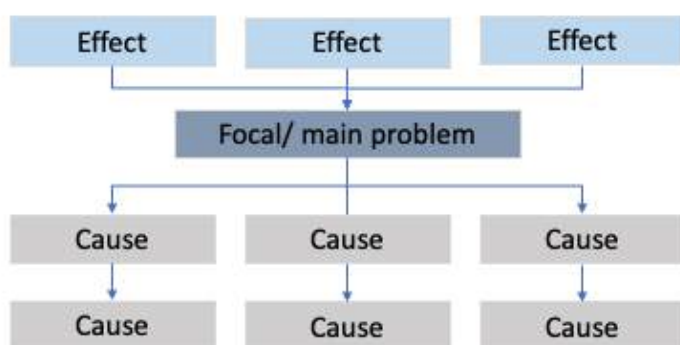


Figure 18: Schematic representation of a problem tree.

The basic questions that needed to be answered and that guided the process were:

- What is the main/focal problem that is to be solved?
- What caused this problem?
- What are the effects of this problem?
- Who is affected by the problem and who's problem is it?

The causes are represented by the roots of the problem tree; the focal problem is indicated by the trunk and the effects represent the leaves.

The project consortium identified the main problem that is relevant for all project partners: The South Baltic Region has “a low level of internationalisation in VET”. To paint a clearer picture of the main problem, the causes and effects were individually identified by each partner to indicate why is it not possible for the municipalities/regions to solve the problem alone and why international collaboration is needed.

The results from the project consortium's work are shown in the following figure.

Effects		
Micro level	Meso level	Macro level
<ul style="list-style-type: none"> - Students lack intercultural + language skills - Motivation for long-term-mobility is very low - Qualification for “mobility coaches” needs to be developed/advertised - Interested people do not know where/how to start - No door-opener or contact persons 	<ul style="list-style-type: none"> - No stable network - No one feels responsible for increasing internationalisation - Mismatch between the education delivered by VET providers and the needs of the labour market - Too little communication with political stakeholders/decision-makers 	<ul style="list-style-type: none"> - Only unsustainable short-term solutions - Lower competitiveness - Special structures in smaller regions need to be created - No collaboration and no synergies are used - Sceptical attitude towards foreign neighbours
Causes		
Micro level	Meso level	Macro level
<ul style="list-style-type: none"> - Lacking motivation - Not a high priority for students - Lack of interest + knowledge of the countries - Poor communication - Language barrier - Fear of travelling/distance - Fear of the unknown - Apprentices/students are forced to gain international experience in their holidays - More “mobility coaches” are needed - Not a high priority for staff 	<ul style="list-style-type: none"> - Lack of resources (financial/staff) - Companies in smaller regions need information and support - Disconnection between VET providers’ international strategies and their day-to-day operations - Schools don’t have an” international” culture – regional focus - There are no mobility centres in our regions - There is no existing strong network– no contacts - No association membership - Teachers/trainers don’t know about the possibilities/opportunities (application for grants) 	<ul style="list-style-type: none"> - Historical issues - Legal limits for long-term mobility - No long-term strategy - Lack of national political interest/priority - Lack of funding/management attractive to the institutions - Nationally focused curricula

Table 26: Results of problem tree analysis.

7.2.2 BBVET regional model solutions for mobility agencies

Activities in Denmark

Project partner CELF in Denmark already has a mobility centre, but it has been built up differently to how it was envisioned for the BBVET project.

On the one hand, there is the Femern Bælt-Uddannelseskantor³, which is a collaboration between CELF, IHK Lübeck, Lübeck Chamber of Trade, Lübeck Employment Agency, Lolland Municipality and Guldborgsund Municipality. The office is partially funded by Interreg in addition to its own funds.

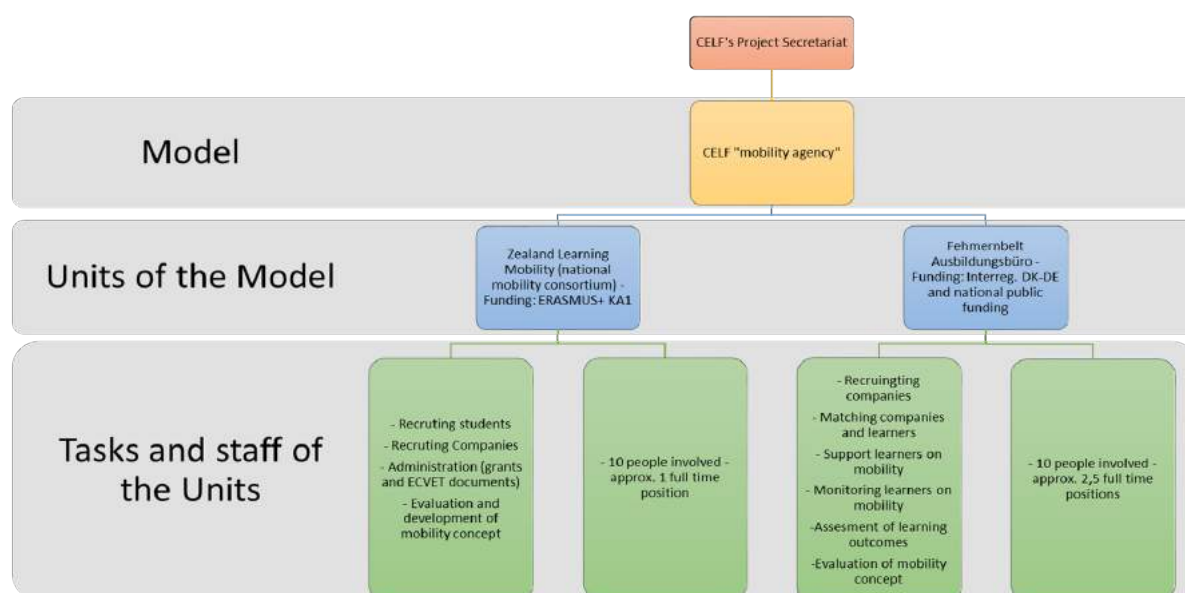


Figure 19: Mobility centres in Denmark models.

On the other hand, there is already an existing national mobility consortium, Zealand Learning Mobility⁴, which is a collaboration between five VET schools in the Region of Zealand. This is supported financially with ERASMUS+ KA1 funding.

Social Fund funding is currently not an option for mobility centres in Denmark due to the priorities of the Danish Business Authority that oversees the ESF in Denmark.

What have the project partners achieved in this field?

³ See IHK zu Lübeck (w. y.), w. p.

⁴ See Celf (w. y.), w. p.



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During the BBVET project period, the CELF mobility agency has also been working on implementing long-term mobility into existing mobility activities, and has also included BBVET partners in them. In connection with this long-term mobility implementation process, CELF has also seen a closer connection between the two above mentioned units. Meaning, that members of ZLM are also joining Fehmarn Bælt-Uddannelseskontoer specially to implement more long-term mobilities.

CELFs commitment to the BBVET has also led to that the project manager Claus Brandt Kristensen who worked as the BBVET ECVET expert has become a member of the Danish ECVET expert team.

The CELF is now working together with YH Syd on an international mechatronics education application within the Swedish YH system.

Activities in Germany

The German partner, the Chair of Business, Economics and Entrepreneurship Education at the University of Rostock, has made many efforts to implement a mobility agency. For example, the Chair organised a round table event in June 2018 – an exchange between stakeholders and anchor long-term mobilities in Vocational Education and Training – and also participated in another round table event in Lübeck that has been organised by CELF. Key regional and national actors were brought together to discuss the needs and strategies in the field of VET internationalisation. During these round table, several letter of intentions was signed for collaborating with mobility initiatives by different stakeholders.

In Germany, there are already several mobility agencies that are coordinated and promoted by the “Berufsbildung ohne Grenzen” (“VET without borders” or BOG). Nationwide, there are over 40 mobility counselling centres, mostly located in the Chamber of Commerce and Industry and the Chamber of Trade.⁵ The programme is funded by the Federal Office of Economic Affairs and Export Control. The programme’s objective is the to preserve and constantly expand a nationwide, business-oriented consulting structure. As part of the programme, around 40 mobility consultants currently inform, motivate and provide support for the organisation and implementation of learning stays abroad.⁶ Legally, international learning activities during VET have been possible since the amendment of the Vocational

⁵ See BOG (w. y.), w. p.

⁶ See BOG (2017), p. 11.



Training Act in 2005. But the mobility rate in Germany has only slightly risen, which can be partly attributed to the lack of awareness amongst companies and VET students regarding this topic, as well as also to the lack of practical implementation strategies. This programme has helped to significantly increase the importance and awareness of international mobility for VET students in recent years.⁷

In details, mobility consulting as a service includes:

- Information on funding opportunities
- Support in applying for funding
- Support in the search for partner companies abroad
- Coordination between the key players involved in the exchange: companies, VET students, vocational schools
- Mediation and organisation of preparatory measures such as language courses and intercultural training
- Mediation and preparation of companies for the accommodation of VET students and young professionals from abroad (incoming mobility)
- Press and public relations work to increase awareness⁸

It is indicative that there is still no mobility agency in the federal state of Mecklenburg-Western Pomerania. In Mecklenburg-Western Pomerania, there are three Chambers of Commerce and Industry (Schwerin, Neubrandenburg and Rostock) as well as several Chambers of Trade. The Chair is in active exchange, mostly with the IHK zu Rostock, especially in the Chamber of Commerce and Industry. With this Chamber, the Chair has considered an initiative in the BOG programme. For structural and personnel policy reasons, it is not currently possible for the IHK zu Rostock to establish an international project office. However, the Chamber has offered to cooperate through the BOG programme together with the Chair of Business, Economics and Entrepreneurship Education. For this reason, the Chair submitted a project application in October 2018 in collaboration with the IHK zu Rostock under the title "Establishment of a mobility agency in MV for SME business consultancy, increasing the rate of short and long-term mobility activities in dual vocational training and promoting international economic collaboration." On the one hand, the aim was to increase the cross-border mobility rate of trainees in

⁷ Ibid., p. 4.

⁸ See BOG (2017), p. 15.



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MV in commercial and technical occupational fields through company-specific and regional consultation and support for SMEs, trainers and VET students in the realisation of their long-term mobility. On the other hand, the aim included the scientific monitoring and evaluation of long-term mobilities with the intention of a medium-term examination of their curricular roots in the regulatory dual vocational training system. Perspectively, mobility measures should be professionalised and implemented by acquiring, consulting, quality assuring and monitoring a regional mobility agency as a regional offer. Several letters of intent from important partners supporting this project in the federal state were collected, such as from Ecovis Europe AG, Liebherr-MCCtec Rostock GmbH, Neptun Werft GmbH & Co. KG, Nordex Energy GmbH and the Entrepreneur Association Northern Germany Mecklenburg-Schwerin e. V. The Chair's BBVET project staff also completed a preparatory two-day advanced training course on mobility guidance in November 2018.

In December 2018, however, the project was rejected by the Federal Office of Economic Affairs and Export Control. This was justified by the fact that, according to funding guidelines, a university cannot be counted among organisations providing business-related advice and support, for which the funding was designed.

In the federal state of Mecklenburg-Western Pomerania, no uniform internationalisation strategy is currently being pursued with all major players and institutions. Even so, the Chair of Business Economics and Entrepreneurship Education was in contact with the Ministry of Education of Mecklenburg-Western Pomerania and attended consolidation meetings with their international affairs representative in June 2018. The Ministry didn't accept invitations to follow-up events such as the recap of the German testbed period in December 2018 or the final BBVET event in April 2019. When the Chair was informed that the Ministry would be conducting a networking event to which all relevant stakeholders and interested parties in VET internationalisation would be invited, the Chair asked for permission to attend, but was unfortunately rejected.

Nevertheless, the German partner has also attended meetings with Arbeit und Leben Schwerin as well as the International House at the University of Rostock to discuss potential future strategies for the implementation of a mobility agency.

What have the project partners achieved in this field?





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Although the implementation of a mobility agency in Mecklenburg-Western Pomerania has not yet been successful, the Chair has had many successful achievements. The topic of VET internationalisation in the federal state was fundamentally further advanced by raising awareness of important stakeholders and players. Important network partners could be established during the BBVET project period for future exchange activities – both local partners in Mecklenburg-Western Pomerania and important actors from the BOG programme (such as Tamara Moll). As a result, in cooperation with the IHK zu Rostock, the Chair once again made an effort to submit a project application to BOG in 2019. There will be a new funding directive next year with the opening of the beneficiary group.

The Ministry of the Interior and for Europe was able to attend the final BBVET event in April 2019 and promised follow-up events, which are planned for August 2019. The Ministry of the Interior and for Europe also tried to update the Ministry of Education about the BBVET achievements in Mecklenburg-Western Pomerania and strengthen the collaboration. The Chair of Business, Economics and Entrepreneurship Education is still in close contact with the Interreg South Baltic Programme contact point in order to stay up-to-date on new funding developments, as well as with the Priority Area coordinator for Education in Hamburg.

Activities in Sweden

What have the project partners achieved in this field?

For Sweden, an application for Erasmus Strategical Partnership was handed in in March 2019. Sweden has selected the Danish model to work with setting up a mobility agency infrastructure, by piloting mobility projects. NetPort and Hyper Island together with 4 other partner countries continue to integrate the mobility ideas into the region and the Science Park by implementing the mobility ideas by piloting different mobility projects connected to the focus areas. The Erasmus Strategical Partnership application was approved 17 June 2019, with a budget of 409.000 Euro.

Parallel there will be new meetings with politicians and other stakeholders taking place after BBVET ends in May 2019. The first meeting will take place with a delegation of Mayors from Lithuania, Germany and Sweden 19th July in Karlshamn. The intention of this meeting is to discuss the multi-functional Educational Centre in Rietavas and how it will be possible to collaborate cross-border.

Other meetings with Region Blekinge and the PA Coordinator Anders Bergström are also planned during Sept- Nov both locally and national.





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Activities in Lithuania

The mobility centre for Lithuania is under development and will be a combination of multifunctional/educational centre and will find its funding by both national initiatives, cross border projects and Erasmus+. This is half a year delayed due to political influence and it has been taken longer time then estimated.

What have the project partners achieved in this field?

The significant achievement is that Rietavas municipality politicians are engaged in the process of developing multifunctional education centre – both in terms of content but also caring of infrastructure. Infrastructure is related to the facilities that used to be Zemaitija College, which was closed in 2016 and Plunge Technology and Business School took over the assets. Plunge School is not using full capacity of infrastructure and Rietavas community take steps to convert the existing infrastructure into educational centre. There are series of lobbying meetings with ministries of education and agriculture, Lithuanian Parliament members are engaged. In December 2018, the conference was held, initiated by Rietavas mayor, which highlighted the attitudes and insights of various stakeholder groups. Swedish experience was also shared – Marie Björck presented NetPort development and trends especially related to EdTech sector, and Marie Håkansson Wahlström shared experience of Halda Development Centre (Karlshamn municipality).

Regarding the concept and the content of the educational centre the stakeholders came up with the concept of “Rietavas Oginski Science and Innovation Valley”, and the content is under development. Rietavas Tourism and Business Information Centre managed to achieve that cross border aspect is also included and the centre is going to operate with cross-border perspective. Letters of intention to cooperate in this field are going to be signed with NetPort Science Park (SE), CELF (DK) and Absalon University College (DK). A workshop will be held on the 19th of July by NetPort and the Mayor of Karlshamn with a delegation from Rietavas, including Rietavas Mayor to discuss how the cross-border collaboration will be realised in this area.

Process of developing the educational centre including mobility function is managed and mobilised stakeholders from Rietavas municipality and engaged national authorities and cross border partners.

Another activity is connected to Rietavas Gymnasium. An Erasmus+ application for staff mobility "EdTech Solutions at School" was approved as a strong BBVET impact on Rietavas Gymnasium that was a hosting partner for EdTech students in Rietavas. Erasmus+ fund subsidy was granted for Rietavas





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Gymnasium teaching staff mobility and that will provide further teachers skills development in the EdTech area. 6 teachers from Gymnasium are going to improve EdTech knowledge and skills in Poland, in Germany and Italy in autumn this year.

Next step will be a Strategical Partnership with other schools interested in digitalization and EdTech. Besides, the contacts started in Mobility round tables in Lübeck and Rostock, resulted in partnership between Rietavas Gymnasium and Berufliche Schule Wirtschaft Rostock, Germany. Two teachers from Germany will perform mobility in Rietavas in autumn 2019.

The originally idea of the BBVET consortium was to create somehow a franchise model of 'Arbeit und Leben' in Hamburg as this is a very successful mobility agency not far away from the South Baltic region. But the BBVET consortium underestimated the political dimension. Without the support of the politicians a system change can't be realized. This is why all individual partner regions found and are still working on their individual solutions. Due to the political influence, all partners need time to anchor this processes and structures, but the most import has been done through the BBVET initiative and it is; finding motivation for regional actors to be more pro-active in designing the mobility structures in their region.





8 Impact and outlook

The planned project activities were successfully implemented, but not all processes could be planned and foreseen during the project's development. BBVET had some previously unmentioned side effects that can be positively highlighted in the following section, arranged by country.

Germany

- Classification of VET at level 5 in the European qualifications framework was an innovative approach for the German project partners, since VET in Germany is classified at level 4 at the highest.
- The inflexibility of the German education system was made clear by several processes. In this sense, it was useful for the German partners to become familiar with a bottom-up approach of how new qualifications should be developed in national education systems, as well as to implement education without the support of responsible national institutions (ISQ).
- There is a demand for skilled EdTech staff in German schools, companies, etc., which was not known before.
- New networks and collaborations could be initiated – at a local, regional and international level. There has been an increase in the degree of internationalisation on a local and regional level (for example through the companies).
- The German project members thought up many ideas for new project applications. A special focus placed will be on long-term mobilities.

Lithuania

- The EdTech trainees inspired the school and its teachers to develop a project for Erasmus+ funding in the field of EdTech.
- A twin-city cooperation between Karlsmann and Rietavas has been set up.

Sweden

- BBVET has made the EdTech cluster stronger, created new business relations and raised awareness about the market situation in each country.



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- Municipalities have been introduced to and involved in cross-border and international topics. BBVET activities place them in an international environment and create an openness to such topics.
- BBVET increases the level of internationalisation level for companies, schools, students and teachers.

Denmark

- BBVET created a better understanding of how to formalize cross-border mobility as part of normal standard education.
- The focus on developing the students' soft skills was rewarding for the Danish partner. They will ensure soft skills are more deeply integrated into education delivery.

Over the last 2.5 years, the BBVET project consortium has been able to achieve many milestones that were not expected at the beginning. The consortium, managed by Netport Science Park, developed new tools to develop the exchange of information and to build trust among the partners. All participating partners from the SBR were dedicated to the topic and committed to succeeding, not only within the project consortium but also with regard to the special needs of their regions and the further development of their organisations. The network of all participating teachers, trainers and coaches established through the Train-the-Trainer workshops is full of trust, shared experiences and ideas for the future. This network will still exist after the BBVET project period and collaboration on new projects and ideas has already begun. As BBVET was more of a development project than a research project, the research results that are presented in this report are only the beginning. It still needs to be stated that the level of research in this area of training, especially regarding long-term mobility, is very low when it comes to relationships. There is still a lack of research, which needs be elaborated in the future.

Nevertheless, the project partners, associated partners and collaboration partners like schools and companies were all impressed by the high quality of the cross-border mobilities. The project consortium is convinced that the documents used and the technical ECVET components, were the main contributor to the high quality. The documents convey reliability not only for the students, but also for the participating schools and companies and the project consortium. The ECVET principles represent a great opportunity to increase the flexibility of VET, both nationally and internationally. To understand life-long learning, each piece of the education puzzle needs to have a value, and must be recognised





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on a European level. In the BBVET project, the consortium was able to prove that it is worth defining Units of Learning Outcomes, providing Learning Agreements and agreeing on common quality standards within long-term mobilities in a Memorandum of Understanding. The BBVET consortium also proved that it is possible to develop cross-border mobilities, even though VET education in each country or region was at different EQF-levels. The consortium proved that there is a very high demand for long-term mobilities among VET students, and that they are also open regarding cross-border mobilities.

To conclude, the BBVET consortium established new networks, boosted business integration whilst improving exchange between private companies, VET schools, universities, research institutions and other stakeholders, and jointly developed two cross-border VET programmes involving 45 students from seven countries during the piloting to attract young talents to the regions, to increase the attractiveness, quality and flexibility of VET and to challenge education systems in the SBR.





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