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*Management and Technologies of Water, Waste Water, Waste and Circular Economy  
WWW&CE*

Hamburg, May 2019

# Concept for the development, testing and evaluation of educational measures in **WP4, WP5 and WP6**

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## 1 Summary

About 99 % of all EU companies are SMEs, providing up to 70 % of all jobs. Even though SME may have stable growth prospects, they are particularly well-positioned to solve pending environmental issues, and, thus, ensuring their growth in the sector of Green Economy. Nowadays, main hindrance to growth is a significant skills shortage across most sectors of the economy, while job vacancies in SME and overall unemployment and, in particular, youth unemployment, are steadily on the rise. Thanks to cooperation between educational institutions and industry, work-based learning has become a tool of choice in eliminating bottlenecks and has enabled conditions for further growth in innovative market segments.

In order to lastingly coordinate educational and skills requirements and to address skills shortage, higher education institutions, education and training providers and economic chambers from six countries have endeavoured to form an alliance in the application areas of water, wastewater, waste treatment and circular economy. The Alliance is about to be extended to 13 countries and to include 68 education and labour market players. In the long term, it will continue assuming the leadership role of a centre of competence on “eco-innovation”.

This partnership shall develop tools, following work-based learning principles that will be implemented and evaluated:

- training program for strong learners in initial vocational training - 6 courses
- program of 6 further vocational training courses
- train-the-trainer program
- integrative program for unemployed clients
- Bachelor's degree program with 4 modules

These programs are about to convey sector-specific skills, in both, environmental technologies and management. Furthermore, three countries with predominantly school-based vocational training, will introduce dual education systems for initial, advanced and higher education.

Following measures will be carried out to ensure assessment of the sector-specific situation and development of all educational programs:

- evaluation and completion of existing studies on prospects for economic growth, education and labour markets of the Baltic Sea Region,
- determination of qualification needs:



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- a) analysis and implementation of surveys on qualification requirements and needs in the environmental part of the project; shortcomings analysis,
- b) evaluation of the analysis results (see a)) and development of requirement and qualification profiles for initial vocational training,
- c) evaluation of the analysis results (see a)) and development of requirement and qualification profiles for advanced training,
- d) evaluation of the analysis results (see a)) and development of requirement and qualification profiles for Bachelor's programs.

All results and qualifications will be transferred to 11 project and 68 associated partners from 13 countries, which will also receive implementation consultation. Extensive dissemination activities are within responsibility of all interested parties, in order to ensure free use of project results.

## **2 Training programs for strong learners in initial vocational training**

The project aims at promotion of work-based learning by introduction of dual vocational education and training, especially in countries with school-based vocational training. The German system of dual vocational training will be amended by a description of the dual vocational training system of Norway, following by evaluation and preparation procedures. Training regulations, curricula and examination regulations for the recognised occupation of plumber will be published and spread to all project and associate partners, as well as to political decision makers, administrations and further stakeholders in 13 countries.

Dual training has proven to be particularly effective, however, attention should be paid to observe individual abilities and possibilities and better adapt to youth with different educational backgrounds, competencies, skills and learning progress, such as:

Level 1: Two-year training for youth with practical talents with a recognised degree (EQF Level 2)

Level 2: Three-year practical and theoretical training, completed with a recognised qualification as skilled worker/journeyman (EQF Level 3)

Level 3: Three- to three-and-a-half years training for overachievers, including additional qualifications, completed with a recognised qualification above the examination level of skilled worker/journeyman (EQF Level 4)

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Strong learners as well as trainees with proper training achievements in intermediate examinations can be granted a shortening of the regular vocational training time by up to one year. Such shortening is to be limited to half a year, while the second half of the year should be invested in transferring skills in technology and management of waste, wastewater, water treatment and to circular economy. In a sense, this is comparable to an early training, delivered already during vocational training.

Regardless of ways of shortening the training period, additional qualifications can be imparted during the regular training period or, alternatively, upon completion of vocational training.

Imparting additional qualifications allows for

- a) attracting skilled workers who have already acquired in-depth knowledge and skills in environmental techniques during or immediately upon vocational training,
- b) prompting stronger learners (e.g. with Matura (Abitur) or school leaving certificate (intermediate level)) towards completing vocational training that will be equivalent to advanced training qualifications and will serve as a door-opener to perfect career opportunities.

Learning results are based at EQF Level 4. Additional competencies and skills imparted during vocational training (EQF Level 3) are largely inter-occupational. Only selective modules are job specific. The project will address in particular young people who are undergoing vocational training in relevant occupations, for example

- specialists in wastewater technology
- specialists in recycling and waste management
- specialists in water supply technology
- plant mechanics for sanitary, heating and air conditioning technology
- gas and water fitters
- plumbers.

Following the example of VET, additional qualifications should be offered, if applicable, in a dual VET-system. To this end, in the project five key modules will be developed, with the following scope of training:



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A	Technologies in water supply	60 – 80 hours
B	Technologies in water saving	80 – 100 hours
C	Greywater and rainwater utilisation technologies	80 – 100 hours
D	Decentralised wastewater treatment technologies	100 – 120 hours
E	Fundamentals of the circular economy	80 – 100 hours
F	Systemic solution-oriented consulting	60 – 80 hours

Participants may complete selective or all main modules, and for each completed main module an attendance certificate will be issued. Participants who complete all five main modules are entitled to an advanced training exam with the degree “Environmental Consultant in... (followed by the name of the qualified occupation)”. This requires development of the following measures:

- examination regulations,
- classification of the exercised occupation and of acquired additional qualifications in a qualification framework; assessment by credit points (ECVET), a harmonised procedure for transnational transfer of already acquired credit points as well as recognition of acquired degrees.

During the project curricula and teaching materials shall be developed which will be tested and evaluated in different countries. This will ensure inclusion of differing national terms and conditions even in the process of development and completion activities, thus, firmly encouraging their use in different countries.

Training	Development of Curricula until 31.05.2020 by the following partners	Tests of the curricula in the period from 01.04.2020 to 31.05.2021 in the following countries by the following partners
<b>A</b> <b>Technologies water supply</b> with 60 – 80 lessons	Lead: PP6 Kontiki Cooperation: PP12 Wirtschaftsförderungs-Institut (WIFI)	a) In Lithuania by PP2 Panevėžys Chamber of Commerce, Industry and Crafts b) In Poland by PP7 Chamber of Craftmanship and Enterprise in Białystok
<b>B</b> <b>Technologies water saving</b> with 80 – 100 lessons	Lead: PP6 Kontiki Cooperation: PP12 Wirtschaftsförderungs-Institut (WIFI)	a) In Lithuania by PP4 Vilnius Builder Trainings Center b) In Poland by PP7 Chamber of Craftmanship and Enterprise in Białystok
<b>C</b> <b>Greywater and rainwater utilisation technologies</b> with 80 – 100 lessons	Lead: PP10 Nordic Forum of Crafts Cooperation: PP12 Wirtschaftsförderungs-Institut (WIFI)	a) In Lithuania by PP4 Vilnius Builder Trainings Center b) In Austria by PP12 Wirtschaftsförderungs-Institut (WIFI)



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<b>D</b> <b>Technologies decentralised wastewater treatment</b> with 100 – 120 lessons	PP10 Nordic Forum of Crafts	a) In Norway by PP10 Nordic Forum of Crafts b) In Poland by PP7 Chamber of Craftmanship and Enterprise in Białystok
<b>E</b> <b>Fundamentals of the circular economy</b> with 80 – 100 lessons	PP4 Vilnius Builder Trainings Center	a) In Lithuania by PP4 Vilnius Builder Trainings Center b) In Hungary by PP6 Kontiki
<b>F</b> <b>Systemic solution-oriented consulting</b> with 60 – 80 lessons	PP8 Białystok Foundation of Professional Training	a) In Lithuania by PP2 Panevėžys Chamber of Commerce, Industry and Crafts b) In Poland by PP7 Chamber of Craftmanship and Enterprise in Białystok
<b>Evaluierung aller 5 Tests</b>	PP11 Satakunta University of Applied Sciences Evaluation reports until 30.06.2021	

Further steps

- Evaluation and completion of existing studies on prospects for economic development, education and labour markets in the Baltic Sea Region, by Partner 1 Hanseatic Parliament
  - draft by May 31, 2019
  - consultation at the 2nd Workshop
  - completion by July 31, 2019
- Analysis and implementation of surveys on qualification requirements and needs in the environmental part of the project; identification of shortcomings, by Partner 8 Białystok Foundation of Professional Training
  - draft by May 31, 2019
  - consultation at the 2nd Workshop
  - completion by July 31, 2019
- Evaluation of the analysis results and development of requirement and qualification profiles for initial vocational training, by Partner 8 Białystok Foundation
  - draft by September 30, 2019
  - consultation at the 3rd Workshop
  - completion by November 30, 2019
- Development of concepts, curricula, teaching materials and examination regulation by charged partners
  - draft concept by September 30, 2019
  - consultation at the 3rd Workshop





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- completion by May 31, 2020
- Practical testing of the training program, including the acceptance test by charged partners
  - implementation: April 1, 2020 – May 31, 2021
  - implementation report by June 30, 2021
- Evaluation of tests and completion of curricula and application notes by Partner 11 Satakunta University of Applied Sciences
  - evaluation concept by September 30, 2019
  - consultation at the 3rd Workshop
  - evaluation report by June 30, 2021
  - completion of curricula and application notes by October 31, 2021
- Examination regulations for “Environmental Consultants” and classification in BSR QF and ECVET; evaluation by Partner 1 Hanseatic Parliament
  - draft by October 31, 2020
  - consultation at the 5th Workshop
  - completion by January 31, 2021

### **3 Program comprising six further vocational training courses**

Six different advanced training courses in green technologies will be offered to trainees with vocational training and several years of professional experience, to acquire skills in water, wastewater, waste and circular economy. Selective courses are specifically tailored to the needs of the target groups “SME-owners and managers” and “SME professionals”. The imparted learning content is cross-occupational, experts and interested companies from all lines of trades will be addressed. The learning results are rated at EQF level 4-5.

The offered advanced training courses may be supplemented by an integrative program for the unemployed with relevant pre-qualifications, thus, improving their chances on the labour market.

A striking obstacle faced by SME is lack of time and permanent overburdening of their owners as well as their impossibility to release employees from work for a longer scope of time to engage them in advanced trainings. There is also particular interest in ensuring that, as far as possible, qualifications offered should match individual skills needs of the employees and, at the same time, address specific SME issues. In response to such demands, a structural concept will be applied in the project, consisting of the following items:



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- 2-3 learning phases with classroom teaching, delivered on two days per week, possibly Fridays and Saturdays,
- in between, longer on-the-job teaching periods at the trainees' workplace, covering three to four months,
- Proposal for teaching periods at the trainees workplace:
  - a) coaching by same trainers that are also delivering classroom teaching,
  - b) optional and customised e-learning options,
  - c) if possible, implementation of a specific development project within the company, in the topic area of the respective advanced training (e.g. introduction of Cradle-to-Cradle, recycling, etc.), involving as many employees as possible, thus, ensuring joint team learning.

An appropriate training method is, e.g., "Knowledge According to Individual Needs (KAIN)".

Following years of experience in advanced training of trainees in numerous European projects, the Hanse Parlament has developed and successfully tested the above-mentioned "KAIN" training method. Below is a brief explanation of this proven three-part training method that is characterised by

- a) achieving of a common knowledge base of participants with various pre-qualifications
- b) particular emphasis on individual experience of each course participant
- c) demonstration of design possibilities for changing or improving individual status of training participants in pursuing their project goals.

**Part 1: classroom teaching: duration 2 days**

Key objective: imparting knowledge - forming a common ground within the group. This training module basically consists of a 1.5-2-day workshop, during which participants learn about (usually science-based) models and (conceptually) apply instruments of project-related research for structuring and solving problems. This is intended to form a common conceptual ground for further training steps. The presented models and instruments (recommended for practical application) ideally form a common framework, mainly to better integrate existing experience of course participants in pursuing their training goals. The participants' experience may complement or modify the research proposals on structuring and solving problems. Such approach enables a desired (conceptual) adaptation of the proposed models and instruments to the individual participants' needs and specificities (given the diversity of their situations) at an early stage of the training.



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Observance of the participants' individual needs and specificities in classroom training requires a high degree of expertise and experience by trainers, including their ability to use interactive and participant-oriented didactic methods.

Another addressed focus in the first part of the training is communicating to the trainees' relevant issues with regard to planning, implementation as well as to (critical) assessment of their own projects that are processed in the second part of the training. Thus, another key objective of this part of the training is to equip the trainee with critical impulses for processing the presented models and instruments in his individual project. In a sense, application and implementation of the presented models and instruments by trainees at their work constitutes the primary focus of the second part of the training concept.

**Part 2: Teacher-assisted self-study within the trainees' company or organisation:  
duration – approx. 12-18 weeks**

Key objective: transfer and practical application of acquired knowledge in the trainees' individual job practice; special role of the trainer as consultant and coach.

In the second part of the training, trainees are tasked to apply skills and knowledge acquired in the first part of the training with respect to their individual job practice at their company/organisation, in line with the training idea. For a sustainable learning effect, it is crucial that trainees plan, implement, evaluate, document and critically reflect on their own project or their own activities with regard to improving their individual situation, basically under their respective "here-and-now" conditions.

This course phase is accompanied and assisted by trainers and their technical advice and support. Basically, trainees are on their own with respect to applying and implementing knowledge acquired in Part 1. As a rule, however, advice and support is usually required in order to properly enjoy the benefits of adaptive process of newly acquired knowledge from the training Part 1, now under real-life conditions, and to turn the project into success. Support by trainers may vary, from a rather simple general advice in the sense of passing on relevant information up to an in-depth assistance-like coaching. Normally, it is advisable to decide on case-by-case basis which type of support is best suited to enable each trainee achieving individual project goals. At this stage, it is certainly possible, if not uncommon, that in processing the models and tools presented in Phase 1, the trainees' projects may differ from their initial concepts and plans. In such case, trainers may lend a helping hand in bringing back on track "real" project goals.

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The second part of the training has a particularly welcome didactic attribute, allowing for fine-tuning improvements on the job / in one's own company, thus, ensuring high learning motivation. As a rule, this type of learning, embedded in real job conditions, involves committed personal involvement of company management and other employees, and, by joint team learning, delivers expressive multiplier training effects. Further advantages are straight implementation of the acquired new knowledge in daily job operations; project-related innovations are in the interest of corporate management; they become quickly tangible and managers feel encouraged to continue with advanced trainings for their employees, turning them into a strategic instrument of corporate management. Apart from this, this training approach meets particular needs of SMEs, which biggest barrier to good training is their lack of time. Under KAIN training method, lost working hours and work absences are almost entirely avoided.

**Part 3: Individual project presentation and reflection: duration approx. 1.5 - 2 days**

In the third part of the training, experience and insight gained will be presented and exchanged at a joint event, in emphasis on presentation of individual participants' projects. Both, the trainees and the trainers, will be tasked to review and reflect on projects presented by the participants and to analyse answers with respect to a possible contribution to sustainable training target tracking. Moreover, a further key goal may help identifying major barriers to "not-yet-a-success" and fix them in the future. The exchange of information amongst participants may provide valuable information on how to improve their own projects to be even more successful.

At this stage, trainers are tasked with the following functions:

- a) facilitating a constructive exchange amongst participants,
- b) emphasizing the shared common idea with respect to the pursuit of the general training goals,
- c) ideas on struggle-free implementation solutions for trainees' projects.

Of course, upon completing third part, subsequent longer self-study phase may follow, combined with on-the-job implementation, followed again by classroom-teaching in form of a third workshop, etc.

At the end of the training, all participants should have sufficient information and idea on how to implement and pursue the basic training idea, mostly under different real-life conditions.



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The KAIN-method places high demands on organisers, trainers and participants of advanced education measures:

#### a) Time-organisational setup and competencies of participants

For sure, a truism that in a large-scale transnational project, participants from different countries would never be able to match their time frames to enjoy joint meetings and events. Yet, planning and delivery of training to a specified target group and their participants, requires that

- participants of Part 1 are in, any case, also participating in training Part 3. Where appropriate, couples or small teams should be made available as representatives of a project team with respect to these training parts,
- participants are experienced in presenting content or in using interactive training design methods, or they are trained to meet required demands,
- participants are to a certain degree involved in decision-making or co-determination in their company/organisation with respect to pushing through their projects and receiving appropriate support from senior management.

#### b) Requirements for trainers

In various points of the above brief presentation of the training method, it became obvious that trainers assume a special role when using such a method, the significance of which is once again emphasized upon.

In fact, trainers are not only technically representing a variety of project topic areas and content, but, in their capacity of didactic-methodical specialists they are also, amongst many others, moderators, learning process companions, coaches, (time) managers, consultants, learners.

In individual cases, they shall decide on how to structure highly specialised topics that require involvement of external experts and specialists in a (detailed) field.

A special requirement for trainers is when they are in the role of a coach who may also be tasked to individually support participants in the learning process of pursuing a project.

Under the project, the presented KAIN-method or any similar teaching and learning scheme shall be developed and applied, such as to match, to the greatest possible extent, specific SME demands as well as individual trainees' needs. Such approach also encourages readiness to further education, both among SME and among participants, in as much as most of the countries involved in the project, should improve

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employee participation in professional development and upgrade trainings with respect to imparted skills and competencies. According to EU targets, at least 15 per cent of adults should participate in lifelong learning. In 2016, this figure was significantly higher in the Scandinavian countries, ranging from 19.6 percentage points in Norway to 29.6% in Sweden, while in Lithuania and Latvia it was 6.0% and 7.3% respectively. In Poland, it was the lowest rate in the BSR - 3.7% and 8.4% respectively in Germany, below the EU-28 average at 10.8% (Eurostat). Practice in Scandinavian countries has shown that their highest advanced training rates across the Baltic Sea region are achievable thanks to e-learning, self-study and individual on-the-job coaching.

Under the project, six advanced training courses of each 30 to a maximum of 50 hours of classroom teaching will be implemented:

- A Preparation and management of SME to embark on Green Economy
- B Waste reduction and recycling management
- C Wastewater treatment and recycling management
- D Water supply and water saving
- E Cradle-to-Cradle in SME
- F Energy generation from wastewater and waste

The developed curricula and teaching materials will be tested and evaluated in different countries. Thus, different national conditions are included at the stage of development and project completion, thus significantly encouraging their use in different countries.

Further Training Course	Development of Curricula until 30.04.2020 by the following partners	Tests of the curricula in the period from 01.05.2020 to 30.04.2021 in the following countries by the following partners
<b>A</b> <b>Preparation and management of SMEs for work in the Green Economy</b> (45 h lessons + self-learning and project work)	Lead: PP6 Kontiki  Cooperation: PP12 Wirtschaftsförderungs-Institut (WIFI)	a) In Lithuania by PP2 Panevėžys Chamber of Commerce, Industry and Crafts b) In Austria by PP12 Wirtschaftsförderungs-Institut
<b>B</b> <b>Waste reduction and recycling management</b> (30 - 45 h lessons + self-learning and project work)	PP4 Vilnius Builder Trainings Center	a) In Lithuania by PP4 Vilnius Builder Trainings Center b) In Hungary by PP5 IPOSZ



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<b>C</b> <b>Wastewater, treatment and recycling management</b> (30 - 45 h lessons + self-learning and project work)	PP10 Nordic Forum of Crafts	a) In Lithuania by PP2 Panevėžys Chamber of Commerce, Industry and Crafts b) In Hungary by PP5 IPOSZ
<b>D</b> <b>Water supply and saving</b> (30 - 45 h lessons + self-learning and project work)	PP12 Wirtschaftsförderungs-Institut (WIFI)	a) In Hungary by PP6 Kontiki b) In Austria by PP12 Wirtschaftsförderungs-Institut (WIFI)
<b>E</b> <b>Cradle to Cradle in SMEs</b> (30 - 45 h lessons + self-learning and project work)	PP1 Hanse-Parlament and Cooperation PP5 IPOSZ	a) In Hungary by PP5 IPOSZ b) In Hungary by PP6 Kontiki
<b>F</b> <b>Energy generation from wastewater and waste</b> (45 h lessons + self-learning and project work)	PP12 Wirtschaftsförderungs-Institut (WIFI)	a) In Hungary by PP5 IPOSZ b) In Austria by PP12 Wirtschaftsförderungs-Institut (WIFI)
<b>Evaluation of all 5 Tests</b>	PP11 Satakunta University of Applied Sciences Evaluation report until 31.05.2021	

Further steps

- Evaluation of analysis results and development of requirement and qualification profiles for further trainings, by PP8 Białystok Foundation of Professional Training
  - draft by September 30, 2019
  - consultation at the 3rd Workshop
  - completion by November 30, 2019
- Development of concepts for development, testing and evaluation of educational measures, by PP1 Hanse Parlament
  - draft by April 30, 2019
  - consultation at the 2nd Workshop
  - completion by September 30, 2019
- Development of concepts, curricula, teaching materials and examination regulation by charged Partners





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- draft Concept 30.09.2019
- consultation 3. Workshop
- completion by April 30, 2020
- Practical testing of the training program, including the acceptance test by charged Partners
  - implementation: May 1, 2020 – April 30, 2021
  - implementation report by May 31, 2021
- Evaluation of tests and completion of curricula and application notes, by Partner 11 Satakunta University of Applied Sciences
  - evaluation concept by September 30, 2019
  - consultation at the 3rd Workshop
  - evaluation report by May 31, 2021
  - completion of curricula and application notes by August 31, 2021
- Classification in BSR QF and ECVET; evaluation by Partner 1 Hanse Parlament
  - draft by October 31, 2020
  - consultation 5. Workshop
  - completion by January 31, 2021
- Development of an integrative program for the unemployed, by PP1 Hanse Parlament
  - draft by October 31, 2020
  - consultation at the 5th Workshop
  - completion by March 31, 2021

## **4 Bachelor's degree program with four modules**

SMEs need leaders and entrepreneurs with sound theoretical and in-depth practical job-related knowledge and skills. Graduates of traditional study programs are unsuitable as they lack professional practice and experience, and they need two to three years of on-the-job training upon completing their study. Thanks to dual bachelor's programs, a combination of a Bologna-compliant study with complete vocational training or professional on-hands-practice, SMEs, being the competent partner of choice for about 50 percent of the training time, may thus win much-needed junior staff as potential future managers and entrepreneurs.

In the project, module manuals for two dual bachelor's degree programs will be designed based on programs that for many years have already been successfully implemented by German universities and colleges, including





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- a) management and technology, energy efficiency and renewable energy
- b) management and business administration for SME

Both programs will be transferred to colleges and universities in 9 Baltic Sea region countries. The transfer recipients will receive comprehensive consultation on implementation of work-based learning by introduction of dual study programs delivered in colleges/universities and at SME.

Furthermore, students of technical and business study programs are expected to be trained in SME-related green technologies and skills in technologies and management in the fields of water/sewage/waste treatment and in Circular Economy. Transfer will take place under a dual system; the university study modules are interdisciplinary, while the on-the-job training in the companies will be specifically focused on SME-related occupations and branches. Learning results are rated at EQF Level 6.

The project will develop, test and evaluate four main modules, each covering 150 to a maximum of 175 teaching lessons:

- A Management & water, wastewater technologies
- B Waste management & technologies
- C Management & technologies of Circular Economy
- D Management concepts for sustainable economic activity

Testing is to be carried out by graduates or students, structured as advanced training or embedded in an existing study program. In countries where dual study programs have not yet been established, testing of the four main modules can also be performed in a conventional way, entirely at the university.

Under dual study programs, close collaboration between academia and small medium-sized enterprises is achieved. In that regard, further welcome features are active exchanges of knowledge and experience as well as implementation of manageable research and development tasks for and by SMEs. Students will implement their semester or bachelor's theses at companies where they complete their practical training. They will select topics that are particularly business-relevant, thus ensuring notable benefits to SMEs.

In the project, the Hanse Parlament is about to develop a method for both, transfer and processing of manageable SME-related R&D tasks under dual study programs. Testing and practical implementation of that method is planned during the practical testing of the main modules A-C.



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Upon completion of the project, the four modules developed in the project will be offered and implemented as part of existing bachelor's programs either as extra selective modules, as obligatory modules or as integral part of postgraduate education at colleges/universities. To this end, under this project, the Vilnius Gediminas Technical University will develop concepts for integrating the modules in individual dual study programs, including evaluation of theoretical and practical training by credit points, according to existing certified study programs and examination regulations.

Study modules	Development of Curricula until 31.05.2020 by the following partners	Tests of the curricula in the period from 01.04.2020 to 31.05.2021 in the following countries by the following partners
<b>A</b> <b>Management &amp; Technologies of the Water and Wastewater industry</b> (180 – 200 lessons)	PP3 Vilnius Gediminas Technical University & Co-operation PP11 Satakunta University of Applied Sciences	In Lithuania by PP3 Vilnius Gediminas Technical University
<b>B</b> <b>Waste Management &amp; Technologies</b> (180 – 200 lessons)	PP3 Vilnius Gediminas Technical University & Co-operation PP11 Satakunta University of Applied Sciences	In Lithuania by PP3 Vilnius Gediminas Technical University & parts PP11 Satakunta University of Applied Sciences
<b>C</b> <b>Management &amp; technologies of the circular economy</b> (200 – 250 lessons)	PP3 Vilnius Gediminas Technical University & Co-operation PP11 Satakunta University of Applied Sciences	In Lithuania by PP3 Vilnius Gediminas Technical University & parts Satakunta University of Applied Sciences
<b>D</b> <b>Management of sustainable economic activity</b> (200 – 250 lessons)	Lead: PP11 Satakunta University of Applied Sciences Cooperation: PP12 Wirtschaftsförderungs-Institut (WIFI)	In Austria by PP12 Wirtschaftsförderungs-Institut (WIFI)
<b>Evaluation of all tests</b>	PP11 Satakunta University of Applied Sciences Evaluation report until 30.06.2021	

Further steps

- Evaluation of analysis results and development of requirement and qualification profiles for Bachelor's programs by PP8 Białystok Foundation of Professional Training
  - draft by September 30, 2019
  - consultation at the 3rd Workshop
  - completion by November 30, 2019
- Development of concepts, curricula, teaching materials and examination regulation by charged Partners



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- draft concept by September 30, 2019
- consultation at the 3rd Workshop
- completion by May 31, 2020
- Practical testing of the training program, including acceptance test by charged Partners
  - Implementation 01.04.2020 – 31.05.2021
  - Implementation report 31.05.2021
- Evaluation of tests and completion of curricula and application notes by Partner 11 Satakunta University
  - evaluation concept by September 30, 2019
  - consultation at the 3rd Workshop
  - evaluation report by June 30, 2021
  - completion of curricula and application notes by August 31, 2021
- Development of a technology transfer process and handling of manageable R&D tasks in SME, by PP1 Hanseatic Parliament
  - draft by September 30, 2019
  - consultation at the 3rd Workshop
  - completion by March 31, 2020
- Implementation of sector-specific R&D tasks for SME during the testing modules A-C, by PP3 Vilnius Gediminas Technical University
  - implementation: April 1, 2020 – May 31, 2021
  - implementation report by May 31, 2021
- Classification in BSR QF and ECTS; evaluation by Partner 1 HP
  - draft by October 31, 2020
  - consultation at the 5th Workshop
  - completion by April 30, 2021
- Development of concepts for the integration of the modules into different study programs, including evaluation by credit points; by PP3 Vilnius Gediminas Technical University
  - draft by April 30, 2020
  - consultation at the 4th Workshop
  - completion by May 31, 2021

## 5 Train-the-trainer programme

In order to ensure that well-qualified teachers become available for implementation of the planned educational measures (see Chapters 2-4) in the participating countries, the project will develop a train-the-trainer program for the target groups “VET teachers and teachers of continuing and higher education institutions” that, in particular, will provide the following additional competencies and skills:

- pedagogics and cooperation in dual vocational, advanced and higher education;
  - delivery of advanced trainings; pedagogical and coaching competence following the KAIN-method (= Knowledge According to Individual Needs);
  - use of e-learning and digital media in vocational, advanced and higher education;
  - suggestions, hints and procedures on advanced training implementation, covering all three stages – preparation, implementation and evaluation.
- Learning results are rated at EQF Level 6-7.

During the project term, the train-the-trainer program will be tested and evaluated by teachers and staff of all project partners from all participating countries. Following a review and completion based on the evaluation results, the train-the-trainer program will be transferred to 18 colleges/universities in nine Baltic Sea countries, which in their turn, will receive comprehensive implementation consultation. The objective hereby is to ensure that by regular training at all transfer recipients and implementation partners across all BSR countries, well-qualified trainers are always available for the ongoing realisation of all educational project measures, in all regions of the Baltic Sea Region.

	Train the Trainer programme for teachers, trainers and lecturers in vocational education and training, further education and higher education
Duration	2 days
Development by	PP3 Vilnius Gediminas Technical University
Curriculum until	30.04.2020
Test Curriculum by	PP3 Vilnius Gediminas Technical University
Implementation Test	17. and 18. June 2020 in Vilnius
Participants	All project partners with at least 2 persons each (teachers and project staff)
Test-Report	31.08.2020
Evaluation by	PP11 Satakunta University of Applied Sciences
Evaluation Report	31.08.2020



Hanse-Parlament



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#### Further steps

- Development and testing by PP3 Vilnius Gediminas Technical University
  - draft concept by September 30, 2019
  - consultation at the 3rd Workshop
  - completion of curriculum by April 30, 2020
  - testing June 17-18, 2020 in Vilnius
  - implementation report by August 31, 2020
- Evaluation of train-the-trainer seminar by PP11 Satakunta University of Applied Sciences
  - draft of the evaluation concept by September 30, 2019
  - consultation at the 3rd Workshop
  - completion by April 30, 2020
  - evaluation report by August 31, 2020