

Building an Applied Research facility into CoVE (BARCOVE)

Summary ERASMUS Research project on monitoring water and biodiversity.

This project has been definitively approved by Erasmus on 16 October 2022. Official start is January 2023, the project duration is 2 years.

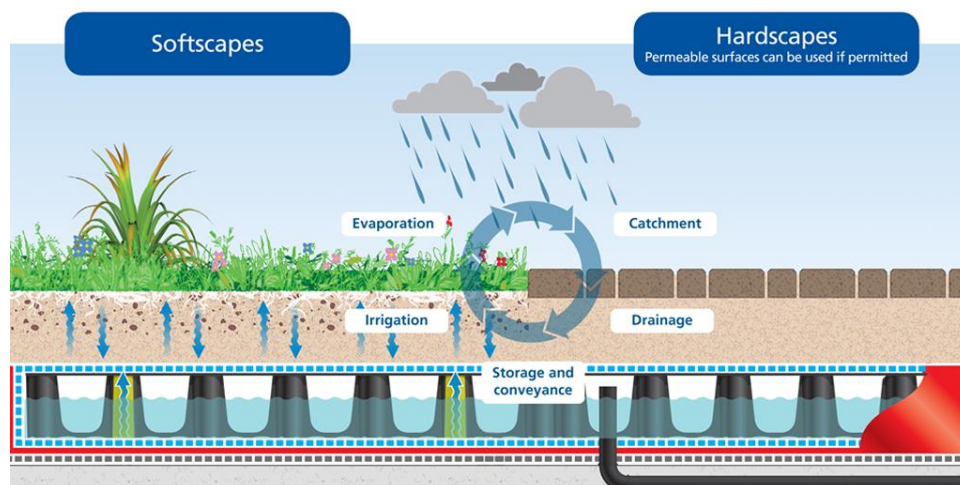
Partners in the application are:

- OKNygard Denmark and Ginkelgroep Nederland, both green companies that make a lot of green roofs
- Projar Spain, consultancy and architecture firm for green spaces and green buildings
- Green Academy Aarhus Denmark, Yuverta Netherlands, Malvesia Spain, all three green MBO schools. All schools have their own Center of Vocational Excellence (Cove) with business and social organisations. In the Netherlands the Cove is called 'Green Hotspot'.
- CIV water (Centre of Innovation, international)
- World Skills Romania

BARCOVE wants to develop an innovative and standard-setting model for school-company cooperation in vocational education and training. It focuses on applied research as a lever for scientific, technical innovation within urban space and water management. It also responds to the current challenges of vocational education, such as the constant demand for innovative technical solutions, which necessitate climate adaptation and the green transition. Finally, it is closely related to the companies' need for competent workers and to the need of the Vocational Education schools to attract highly motivated students.

The four research fields are:

1. Permeable pavement
2. Soil and Plant Properties in Technical Sustainable Drainage Systems
3. Rainwater systems
4. Green roofs





After an initial inventory and analysis of existing knowledge of applied research in VET, the project develops and implements a future-oriented and innovative VET environment, where VET students, professionals and government together develop innovative solutions for concrete and real challenges that companies in the urban space and water management.

Subsequently, BARCOVE organizes the knowledge gained from applied research into two training modules; respectively for VET teachers and employers and in a portable "Handbook".

BARCOVE directly involves about 50 professionals and VET trainers from 8 partners in 4 partner countries. In addition, approximately 50 VET students are expected to participate in the project's hackathon and subsequent development and testing of technical solutions.

The project will produce a mapping and analysis report. In addition to the proven pedagogical-innovative development concept, which will be documented both audio visually and in writing, the project develops two teaching modules with a focus on the integration of applied research in school-company collaboration. In addition, a detailed, written reference framework with the project results in a transferable context is presented. The follow-up of this research is to include adjacent VET schools such as construction, technology and facilities.

Workpackages BARCOVE

WP1 – Project management and coordination (lead: OKNYGAARD A/S)

Delivering a well-organized and transparent project that delivers what it has promised, in high quality and on time.



WP2 – Research and planning (lead: Yuverta)

Bringing everybody on the same page through relevant research and effective planning. – Working issues:

- Setting up the research and analysis process (desk research)
- Develop a catalogue of interesting practices for WP3: implementation of applied research in VET (desk research).
- Developing a catalogue of interesting practices for WP4: implementation of company-school cooperation in VET (desk research).

WP3 – Design and testing (lead: CIV Water)

Designing a model for implementing applied research into an innovative VET setting. – Working issues:

1. How can applied research based on experimental development look like in future VET on urban space and water management?
2. Where and how to use applied research - and for what purposes? **Testing the model in four concrete cases of company-VET school cooperation** within management of urban spaces and water management focusing on:
 - o 1. Permeable pavement,

- o 2. Soil and Plant Properties in technical Sustainable Drainage Systems (SuDS),
- o 3 Pressurized rainwater systems without pumps, and
- o 4. Green roofs.

Special emphasis is placed on the development of technical and digital competences of students/employees at lower EQF-levels. The methodology implies the organisation of an **international Hackathon** focusing on innovative solutions within each case topic, followed by a building process concluded by a data collection process and will take place on the national level (i.e. within the national CoVEs).

WP4 – Implementation “Book of recipes” (lead: Malvesia)

Mainstreaming our knowledge (from WP2) and our concrete experience with applied research (from WP3) into a generalized reference framework or a “Book of recipes”. Working issues:

How to integrate applied research into formalized co-operation on education between business and VET providers (e.g. into a CoVE)? Producing a practical-oriented framework and developing general recommendations on how to implement it. The framework will include experienced-based outlines on structure, organization, managerial and financial considerations as well as two training models for teachers and employers described in accordance with EQF etc. The developed courses will be available as real time, online or blended learning courses, which make use of digitalization wherever relevant/as much as possible. The courses are intended to be integrated into EPLUG and POVE Water, from where they will be offered to green and blue companies, VET schools and the respective CoVEs.

WP5 -Dissemination & Follow-up (lead: Worldskills Roemenia)

Supporting effective exploitation and valorisation of BARCOVE results during and after the project implementation. Focusing on:

1. Systematic impact evaluation,
2. Effective dissemination strategy/activities, and
3. Systematic planning for sustainability of the project.

Concrete actions are:

- Building BARCOVE into EPLUG and CIV Water
- Green Future Festival focussing on applied research in VET

