Project concept
Platform of Vocational Excellence Water Scale-up (PoVE Water Scale-up)

Framework	: The European Education and Culture Executive Agency (EACEA) - Erasmus+ The Platforms for Centres of Vocational Excellence initiative (ERASMUS-EDU-2021-PEX-COVE)
Working title	: *Platform of Vocational Excellence Water - scale up (PoVE Water scale up)*
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context and background

Platform of Vocational Excellence Water Scale-up (*PoVE Water Scale-up*) builds on and further innovates the infrastructure that was prepared, pilot tested and implemented in the Erasmus+ Sector Skills Alliance project **Pilot Platform of Vocational Excellence Water** (Pilot PoVE Water). Pilot PoVE Water succeeded in tough competition and was one of the five only selected Pilot projects for Vocational Excellence. Pilot PoVE Water paved the way for the ambitious vision the *PoVE Water Scale-up* project has on further integrating Vocational Excellence in the Water sector, thus ensuring high quality skills and competences that lead to quality jobs and careers, meeting the needs of an innovative, inclusive and sustainable economy. The results that were developed under Pilot PoVE Water will form an integral part of the Scale-up project and will be used to expand PoVE Water both geographically and in quality. *PoVE Water Scale-up* will facilitate PoVE Water in the process of becoming a worldwide point of reference for Vocational Education in the Water sector, embedding sustainability and digitalisation in all activities.

About the applicant

The applicant of the project is CIV Water. CIV Water was founded in 2011 as one of the first Centres of Innovative Craftmanship in the Netherlands and is, led by VET institute Friesland College, a joint initiative of educational partners, industry and (semi-) government in the water sector in Friesland. The rapid changing sector of water supply (including sewerage, waste management and remediation activities) demands competent, well-educated and proactive craftsmen with a mindset that sparks innovation. CIV Water focusses on educating vocational employee's and students in the water sector in Friesland and beyond. At its core mission, CIV Water drives innovation in education by co-developing education programmes within the triple helix of education, industry and society. CIV Water identifies the existing and emerging labour market needs in the water sector (demand side) and enhances the responsiveness of initial (students) and continuing (professionals) vocational education and training systems to the labour market needs (supply side).

About the call

The Erasmus+ call for ERASMUS-EDU-2021-PEX-COVE is a European Grant that supports the development of Centers of Vocational Excellence (CoVEs). CoVEs bring together a wide range of local partners, such as providers of vocational education and training, employers, research centres, development agencies, and employment services (among others), to develop "skills ecosystems" that contribute to regional, economic and social development, innovation, and smart specialisation strategies. Projects that apply can receive up to 4 million Euro funding for the entire consortium. Partners need to co-fund 20% of the total costs. Projects last 4 years.

a bottom-up approach to Vocational Excellence

PoVE Water Scale-up addresses the main general objectives of the call as it facilitates the further development of PoVE Water to be established as a world-class reference points for vocational training in the Water sector. It brings together the Interregional CoVEs Water that share a common interest in the Water sector, digitalisation, stakeholder involvement and sustainability.

Continuing on the lessons learned in the pilot project, *PoVE Water Scale-up* will take the next step in the **bottom-up approach to Vocational Excellence** in the European Water sector. This is demonstrated in the way the partnership is set-up and how the project is managed. Rather than applying an organisational style where the goals, projects and tasks are determined and communicated by applicant beneficiary FC-CIV Water, *PoVE Water Scale-up* implements a structure of autonomous teams that work on a interregional level and are united in their vision and ambition under the umbrella of PoVE Water. This bottom-up approach gives room and flexibility to address the cultural differences and respects Europe's rich cultural and linguistic diversity. This is also demonstrated in the application process, where all interregional CoVEs Water where invited to set goals and grow the network of their interregional CoVE Water as they find best fit to interregional contexts. Being the lead partners, FC-CIV Water will, backed by the support community Learning Hub, PBT-Katapult and EfVET, facilitate the partners in their journey of becoming a self-sustainable and self-operating Interregional CoVEs Water.

Continuing to build on the national CoVE Water's in NL, MT, CZ and LV that were set up in the pilot project, each COVE expands by including neighbouring countries in the partnership. The following four CoVE's Water are, united under the international PoVE Water umbrella, operating self-managing teams:

- **CoVE Water West-EU / Benelux**: involving VET providers, Industry representatives and scientific research partners from the Netherlands and Germany.
- **CoVE Water Mediterranean**: involving VET providers, Industry representatives and scientific research partners from Malta and Spain.
- **CoVE Water Baltics**: involving VET providers, Industry representatives and scientific research partners from Latvia and Estonia.
- **CoVE Water Central EU**: involving VET providers, Industry representatives, scientific research partners and informal educational partners from the Check Republic.

Each CoVE Water is an integrative part of **skills ecosystems**, contributing to regional development, innovation, inclusion, and smart specialisation strategies. The set-up of the regional consortia also reflects the close cooperation with other education and training providers, the Water industry and the Water scientific community, thus empowering VET (EQF3-5) to take a central position in regional **knowledge triangles** (EQF3-8). The activities of WP2 (CoVE Water) and 3 (PoVE Water) reflects this approach.

PoVE Water Scale-up objectives

PoVE Water Scale-up will further integrate Vocational Excellence in the Water sector, thus ensuring high quality skills and competences that lead to quality jobs and careers, meeting the needs of an innovative, inclusive and sustainable economy. *PoVE Water Scale-up* will facilitate PoVE Water in the process of becoming a worldwide point of reference for Vocational Education in the Water sector.

To achieve the ultimate goal of the project, the following objectives are defined:

- Expand the holistic approach to Vocational Excellence in the European Water sector by securing a central role of VET in the regional Water Sector Innovation Ecosystems and further developing strong and enduring relationships between VET providers, the full spectrum of education & research policy makers and water industry stakeholders such as waterboards, utility companies and water technology companies.

- To further integrate regional VET providers in frameworks of regional development, innovation and smart specialisation strategies, creating synergies between the policies of the CoVE Water quadruple helix stakeholders.

- To expand PoVE Water geographically in a sustainable way (environmentally and economically) in line with the EU Green deal by setting up CoVE Water networks that operate on interregional level.

- Drive innovation in water related VET education on a regional and European level by developing contemporary learning materials with a strong focus on Digital learning experiences, Augmented Reality and Virtual Reality.

- Ensure that current and future water sector professionals (young people and adults) have the professional work attitude, knowledge and key skills & competences that the rapid changing European water industry demands.

- Increasing student and teachers competence for international mobilities online and blended form in Water related education.

- Establishing international mobilities of students in VET and higher education, educators, triple helix representatives to become common part of cooperation in Water related education.

- Building EU and global recognition for PoVE Water as a World Wide Point of Reference for VET in the water sector.

- To future proof the workforce for the Water sector and avoid a brain- & skillsdrain by securing current and increasing future students in water related studies.

work packages and tasks

PoVE Water scale-up intends to develop the following results and activies.

WP1, CIV Water, LHF	Management and coordination (management)
Result 1.1	Project & Partner Contracts
Result 1.2	Project Management Handbook (CIV + LHF supervise the work on EU level, RC + support team supervise on regional level)
Result 1.3	Project team with clear roles and responsibilities (Regional Captains (RC) and RC supportteam, Steering Committee (SC), Pedagogical staff, digital expert per organisation
Result1.4	Internal online workspace
Result 1.5	Minutes of the 9 full International PoVe Water partner meetings
Result 1.6	Minutes of the Bi-Monthly interregional CoVE Water meetings with ALL relevant stakeholders from the Skills ecosystems
Result 1.7	Minutes of the quarterly online International PoVE Water partner meetings
Result 1.8	8 Interim and 1 final activity & financial reports
Result 1.9	4 Dissemination reports
Result 1.10	Process and quality Evaluation Strategy (1), Tools (2) and Assessment Reports (4) (PRG involvement / subcontracted external evaluator)
WP2, P….	Further strengthening, developing and geographical upscaling of the 5 Interregional CoVEs Water
Result 2.1	Strong link of CoVEs Water to research partners (Universities, research centers) / 1 Academic publication per CoVE Water per year
Result 2.2	Strong links to industry partners (Water industy professionals, sector respresentatives) / 2 workbased learning opportunities per CoVE Water per year
Result 2.3	Strong link to policy makers (Local and Regional governments, Sector lobbyists, Regional Development Agencies) / 1 funding application per CoVE Water per year
Result 2.4	2 new partners per interregional COVE Water (10 new organisations in total)
Result 2.5	Stakeholder feedback loops (connected to R1.10)
WP3, P….	Upscaling and further developing and strengtening the International PoVE Water
Result 3.1	Community of inspiration and knowledge of Water related innovative VPET and Vocational Excellence (database of inspirational examples and success stories)
Result 3.2	Academic PoVe Water publication (1 per year)
Result 3.3	Admission of 2 new Interregional CoVE Water networks to join the POVE Water
Result 3.4	Funding applications for International PoVE Water cooperation beyond the current partnership
Result 3.5	A solid COVE benchmark community
WP4, P…	International Mobilities
Result 4.1	
Result 4.2	
Result 4.3	
Result 4.4	
WP 5, P…	Development of Water related Learning teaching training material
Result 5.1	Futureproof VET curricula aligned to job profiles pertaining to the water industry for regional use (EN, NL, CZ, MT, LV)
Result 5.2	Professional Online platform with learning content
Result 5.3	Library of Digital AR/VR learning experiences

WP 6, P…	**Water sector Recruitment, retainment, reputation**
Result 6.1	**Water sector Recruitment, retainment, reputation strategy (e.g. connected to 7 worlds of water).**
Result 6.2	**Water sector Recruitment, retainment, reputation tools (water sector promotion materials for primary schools, powerpoints, socials, etc)**
Result 6.3	**Best practise guide of water sector joint activities accros multiple education levels (the continuous learning curve) (e.g. source to sea journey, girls day)**
WP7, P…	**Impact evaluation (evaluation)**
Result 7.1	**Impact evaluation methodology and plan**
Result 7.2	**Baseline measurement questionnaire for target groups**
Result 7.3	**Impact measurement questionnaire for target groups**
Result 7.4	**Impact analysis and evaluation**
WP8, P….	**Reputation Buidling of International PoVE Water (Global and EU recognition of PoVE Water as a high quality platform) (=Impact & Dissemination)**
Result 8.1	**Sustainable International PoVe Water Brand Strategy and Campaign**
Result 8.2	**Engaging and contemporary International PoVe Water branding tools (logo, website, brochures, socials, infographs, animated video's)**
Result 8.3	**Outreach of PoVe Water brand to …. relevant Water Skills ecosystem representatives**

n e e d s

Within the preparatory project *Pilot PoVE Water*, the founding partners of PoVE Water and initiators of PoVE Water Scale-up cooperated to lay down an infrastructure for Vocational Excellence in the participating regions and preparing the European cooperation platform. By implementing the actions of the preparational project, which included Vocational Excellence scanning, (further) development of regional CoVEs Water in NL, MT, CZ, LV and UK, set-up of the PoVE Water European cooperation platform and a systematic and in-depth Impact evaluation of the target groups involved (VET students, VET teachers, Industry stakeholders and the broader quadruple helix networks), the partners gained in-dept knowledge and valuable insights on the need for Vocational Excellence in the European Water sector. The necessity to expand the PoVE Water network and further nourish the platform with contemporary learning and teaching methods, state of the art Water sector vocational educational materials and international mobility opportunities for VET students is particularly high. In addition, the highly innovative *PoVE Water* network has the potential to become that worldwide point of reference for Vocational Excellence and ought to grow geographically.

Following the EACEA call for CoVE initiatives, PoVE Water Scale-up is firmly anchored by policy on Vocational Excellence in the European Pillar of Social Rights. PoVe Water Scale-up supports the implementation of the European Skills Agenda, (in particular the Pact for Skills), the European Education Area, the Council Recommendation on VET as well as the Osnabrück Declaration. Details are described the previous section '1.1-Background and general objectives'. In addition, the need for PoVE Water Scale-up is (firmly anchored by EU policy on Water sector development and the pilot project):

- **Water is essential for life**. The European water sector provides clean, safe and healthy drinking water and ensures that waste water is returned to nature in a way that preserves

our environment. With the EU Green Deal at the full attention of the European Union and the aim to boost efficient use of resources by moving to a clean, circular economy as one of its main action points, the Water sector should be a priority sector for developing Vocational Excellence. The Water Industry must be well equipped to face the numerous changes in the coming years due to rapid urbanisation, severe climate changes, rising customer demands and emerging digital technologies. These challenges rise beyond an Regional scope and should be addressed on European and even International level.

- **In comparison to other sectors, European cooperation (on strategic level AND for vocational student exchanges) is even more pressing for the Water sector as the environment is changing in such a rapid way that knowledge exchange and sharing of experiences is crucial**. Where long periods of draught and immense rainfall in short periods was ones a challenge of the Mediterranean only, Western Europe is dealing with this matter progressively more and can learn from Mediterranean best practise. The other way around, innovations that were developed in the Western EU (e.g. solutions to keep and reuse water in Green houses without an excess of salt in the water) can benefit Mediterranean partners as they struggle with environmental care and biodiversity when transforming salty groundwater into freshwater for agriculture.

- **Local water-related issues (such as described above) do not come together spontaneously at EU level.** Many local problems are best addressed through cooperation between Vocational operators, i.e. the people in the field, as they have the best knowledge on what happens on local level. VET is thus a crucial partner and needs to have a front seat in the regional water innovation ecosystems. VET is in a favoured position to be the linking pin between innovation ecosystems and "escalate" problems and challenges they experience to research & innovation partners and Water industry clusters. When truly having VET in an operational position on board of the innovation ecosystems, they will act as an extra sensor for spotting opportunities for cooperation and solutions in Europe. This contributes to a further reduction in the fragmentation that often occurs in the water sector in Europe.

- **The holistic approach to Vocational Excellence in the Water sector in Europe needs further developing**. Pilot PoVE Water research (Pilot PoVE Water - Impact evaluation, Baseline questionnaire analysis) has shown that only 43% of teachers, students and Water sector representatives found that their regional VET school played an important part of the water innovations structures and regional strategies in the water industry. These Water sector specific findings are supported by multisectoral research of Cedefop in their project 'Changing nature and role of vocational education and training (VET) in Europe'.

- **There is still a vast gap between the skills and competencies that Water sector professionals and newly graduated VET students desperately need but currently lack according to Water Industry**. According to the *Pilot PoVE Water* research, future water sector professionals should possess the following skills and competences: curiosity for new developments in their profession, lifelong learning, professional attitude, pro-activeness, pioneering, networking skills, digital skills, teamworking, independent / self-reliant, responsible, reliable, flexible, eager to learn, (mechanical) problem solver, people centred, multi-skilled, expert knowledge, leadership and aspiration to grow and lead, ability to transfer practical experience, language skills, supportive, confident and empowered.

- **The education system needs new technologies in order to stay relevant in the ever-changing world and be effective at realizing its mission. Virtual & Augmented Reality is the next logical step in the evolution of the Education System.**

In line with the strategic priorities of the **Digital Education Action Plan** (2021-2027), PoVE Water Scale-up aims to engage VET students and VET educators (teachers and Industry professionals actively participating in the hybrid learning environments) in the path to digital transformation by jointly creating VR and AR learning experiences. Instead of following the traditional school-college-university path, people more and more learn in different ways and lifelong learning becomes ever more important. The growing lack of skilled teachers and the Covid19 pandemic that changed education for ever, strengthens the POVE Water vision that Augmented and Virtual Reality can provide long term solutions for education. And in addition to the more practical side of the matter, the **VR and AR** technology make lectures, books and exercises more interactive, interesting and engaging and are therefore a feasible solution for seizing **students**' focus and attention. Statistics confirm that **students** remember 90% of the material if it is learned through experience.

- **Students, Educators and even Triple Helix representatives in Water management lack international experience.** Based on the initiative European Education Area Erasmus+ programme for period 2021-2027 is stating that "Spending time in another country to study, to learn and to work should become the standard, while speaking two other languages in addition to ones' mother tongue should be the norm." (Erasmus+ Programme Guide 2021). Findings in impact evaluation of the pilot PoVE Water project showed, that internationalisation is underdeveloped in all regions. Institutions do not have internationalisation strategies. Specifically international mobilities need to be encouraged for all stakeholder groups at all regions. Acquiring knowledge, skills and competences can me strengthen in international context.

target groups

Pilot PVE Water is primarily aimed at VET education. In addition it targets the world of work in the water sector. Target groups are:

- Students in the water sector, both initial training of young people as well as continuous up- and re-skilling of adults/professionals.
- Staff of vocational education organisations, both teachers of educations in the water sector and VET management and boards to ensure commitment of the triple helix cooperation.
- Triple helix stakeholders within education, industry and society (the water industry, research centers, universities of applied science, (semi) governmental institutions and water sector representatives).