

# CALL FOR PARTNERS

**Basque VET & Higher VET schools are looking for partners for upcoming Erasmus+ KA210-VET and KA220-VET projects.**

## Interested?

Each project's concept note includes a contact email to reach out directly.

## How to Join

1. **Choose** a project from the concept notes.
2. **Contact** the Project Coordinator to express your interest.
3. **Draft Together:** Accepted partners ( by the coordinator) will join the coordinator for a project drafting session:

 January 27–29

 Crescendo CVO, Vaartdijk 86, 2800 Mechelen

## Important Info

- Participants cover their own travel, accommodation, and meals (Erasmus+ KA1 funds can be used).

*Organised by: TKNIKA*

## **CONCEPT NOTES**

1. **Building an Institutional Framework for Emotional Well-Being and Resilience Across European VET Centres (VET-WELL)** *by CIFP Armeria Eskola LHII*
2. **BioTECH4ALL HUB . Biotechnology for All - STEAM Network for Vocational Education in Europe** *by CIFP Don Bosco LHII*
3. **VETGastroTech+ Intergeneracional: FoodTech and intergenerational sustainable cooking skills for VET** *by ESHBI*
4. **HOSSKILLS II – Hospitality Meets Creativity & Tech** *by CIFP Galdakao Ostalaritza eskola LHII*
5. **The DIGI-IVET Toolkit: A Blueprint for Micro-Credentials in European IVET** *by CIFP Hernani Berrikuntza Eskola LHII*
6. **Acquisition of Skills in the manufacture of products using boilermaking, assembly and welding techniques from environmentally sustainable plastic material** *by Centro Formación Somorrostro*
7. **Advanced Picking 4.0: ROS2 and Artificial Vision for Next-Generation Industrial Robotics** *by Centro Formación Somorrostro*
8. **BIOCIRCULAR 3D** *by CIFP Tartanga LHII*

# 1

Project Title	<b>Building an Institutional Framework for Emotional Well-Being and Resilience Across European VET Centres (VET-WELL)</b>
Organisation name	<b>CIFP Armeria Eskola LHII. Eibar. Basque Country</b> <a href="https://armeriaeskola.eus/">https://armeriaeskola.eus/</a>
Background	<p><b>Context and rationale of the project:</b> VET students often face stress, anxiety, and difficulties in emotional regulation that impact learning, motivation, and their smooth transition into the workplace. Supporting emotional well-being is essential not only for academic success but also for personal growth and professional integration.</p> <p><b>Challenges, Needs, and Gaps:</b></p> <ul style="list-style-type: none"> <li>• Students, teachers, families, and local SMEs frequently lack the training, tools, or resources to identify and address emotional difficulties effectively.</li> <li>• The growing diversity in classrooms over recent years adds an additional layer of complexity to supporting students' well-being.</li> <li>• Many VET centres do not have a structured framework to systematically promote psychological safety and resilience across all learning and work environments.</li> </ul> <p><b>Alignment of the project with Erasmus+ priorities:</b> This project focuses on priority 1, "inclusion and diversity", and will seek to contribute to priorities 2, 3 and 4 in the activities developed.</p>
Project objective/ project objectives	To enhance the emotional well-being of VET students by creating a structured, multi-stakeholder framework that fosters psychological safety, resilience, and supportive learning and work environments, incorporating best practices from different countries.

	<p><b>Objectives:</b></p> <ol style="list-style-type: none"> <li>1. Empower students with knowledge, skills, and strategies to manage stress, anxiety, and emotional challenges effectively.</li> <li>2. Equip educators, families, and SMEs with tools, training, and guidance to identify, prevent, and respond to emotional difficulties and foster emotional well-being.</li> <li>3. Promote collaboration and awareness among all stakeholders to build inclusive, supportive, and resilient educational and workplace environments.</li> </ol>
WPs/ planned activities	<ul style="list-style-type: none"> <li>• WP1: Management</li> <li>• WP 2: Alignment and Framework Development</li> <li>• WP 3: Pilot Implementations</li> <li>• WP 4: Evaluation and Transnational Learning</li> <li>• WP 5: Dissemination and Sustainability beyond project completion</li> </ul>
Target groups	<ul style="list-style-type: none"> <li>• Students</li> <li>• Teachers and educators</li> <li>• Families</li> <li>• Local SMEs</li> <li>• VET Centre Management and Staff</li> <li>• Policy makers/VET authorities</li> </ul>
Expected outcomes	<ul style="list-style-type: none"> <li>• Institutional Framework: A structured, multi-stakeholder framework to promote emotional well-being in VET centres, adaptable across European contexts.</li> <li>• A set of piloted tools to enhance emotional well-being: workshops, peer-support programs, guidelines, school activities and awareness campaigns</li> </ul> <p>Expected impact:</p> <ul style="list-style-type: none"> <li>• Enhanced Student Well-Being: Students show improved resilience, emotional regulation, and coping strategies, leading to greater engagement and successful transition to the workplace.</li> <li>• Empowered Educators and Families: Teachers, educators, and families are better equipped with</li> </ul>

	<p>practical tools and guidelines to support students' emotional needs.</p> <ul style="list-style-type: none"> <li>• SME and Workplace Engagement: Local SMEs gain knowledge and resources to create psychologically safe and supportive environments for apprentices and future workers.</li> <li>• Policy Adoption by VET Authorities: Emotional well-being practices are integrated or adopted by VET authorities, influencing policies and strategies.</li> </ul>
Partners	<p><b>Desired Partner Profiles:</b> VET/HIGHER VET/ UAS institutions that want to develop a holistic institutional framework to approach the emotional wellbeing of their students.</p> <p><b>Expected Roles and Competencies:</b> Partners will assist in the definition, execution and assessment of the main actions, tasks and pilots to be carried out.</p> <p>Contributions from several actors familiar with VET/HIGHER VET institutions (e.g. teachers, school counselors, psychologists or social educators), as well as families, students, SME's and VET authorities required.</p>
Project timeline	12-24 months
Contact information	<p><b>Irati Markuerkiaga</b>, International Coordinator,  <a href="mailto:intpro@armeriaeskola.eus">intpro@armeriaeskola.eus</a></p> <p>international@tknika.eus</p>

## 2

Project Title	<b>BioTECH4ALL HUB</b> Biotechnology for All - STEAM Network for Vocational Education in Europe
Background	<p><b>Who we are:</b></p> <p><b>CIFP Don Bosco LHII</b> is a public Integrated Vocational Training Center, offering a wide range of initial, intermediate, and advanced vocational training programs, as well as various specialization courses in diverse fields: automotive, electronics, mechatronics, computer science, welding, food processing, chemistry, and more.</p> <p>We also provide extensive training for employment aimed at workers and the unemployed.</p> <p>Our aim is the integral development of our students:</p> <ul style="list-style-type: none"> <li>• Technical, technological and social.</li> <li>• Multilingual.</li> <li>• Dual.</li> <li>• Flexible. Adapted to different student profiles.</li> </ul> <p>To carry out our mission we encourage active collaboration between social agents, companies and the centre.</p> <p>That is why our daily work is:</p> <ul style="list-style-type: none"> <li>• Sustainable: Environmental, social and economic sustainability are fundamental principles for us.</li> <li>• Innovative: We continually improve in order to offer quality training that adapts to changes in society.</li> <li>• Interpersonal relations at the core: Trust, empathy, solidarity and respect between people that promote teamwork are crucial to ensure the well-being of the educational community.</li> <li>• Committed: we approach the work with motivation, closeness and a critical-constructive point of view.</li> <li>• Aiming for fairness and equal opportunities: We seek the integration of all people and equal opportunities. Diversity is our wealth.</li> </ul> <p><b>The Erasmus+ idea:</b></p> <p><b>Context and Rationale:</b>  <b>Biotechnology</b> has established itself as a <b>strategic sector</b> with high added value, capable of generating quality employment and contributing significantly to Europe's economic and technological development. Its relevance goes beyond the economic sphere: in a context marked by climate change and environmental crises,</p>

	<p>biotechnology emerges as a <b>key tool to address global challenges</b>, offering innovative solutions in areas such as bioremediation, sustainable resource management, and the more efficient and environmentally friendly production of food and energy.</p> <p>However, the development of a skilled workforce in biotechnology relies on well-trained educators who can prepare highly qualified operators and professionals. Currently, <b>access to quality biotechnology training is limited</b>, as laboratory reagents and materials are often expensive and not widely available. This gap restricts the opportunities for both educators and students to acquire hands-on experience, hindering the broader adoption of biotechnology education across Europe.</p> <p>Gender imbalance remains a persistent challenge in both vocational training and scientific and technological fields, especially in highly qualified and technical professions. Yet, evidence—and our direct experience in vocational training—shows that women are more interested in biology-related disciplines than in other STEM fields. In this sense, biotechnology represents a pathway with <b>great potential to attract women</b> to innovative, highly valued, and increasingly in-demand scientific and technological careers that are innovative, better valued, and increasingly in demand.</p> <p>While <b>multilingual teaching</b> models are increasingly promoted in European vocational education, their full potential is often limited when applied within a single classroom or institution. Students may study in a second or third language, yet rarely encounter <b>authentic communication needs</b>, as they interact mostly with teachers and peers who share the same mother tongue.</p> <p><b>Digital transformation</b> is profoundly reshaping our societies, economies, and labour markets. Across all sectors, digital technologies are driving innovation, increasing efficiency, and creating new professional profiles that require advanced digital competences. In biotechnology in particular, <b>digitalisation and artificial intelligence</b> are playing an increasingly decisive role (for instance, through AI-assisted protein optimisation and generative AI for <i>de novo</i> protein design) opening new frontiers for research, innovation, and industrial application. Within Vocational Education and Training (VET), fostering digital competences is therefore essential to ensure that both teachers and students are equipped to engage with these emerging technologies, aligning training provision</p>
--	---

	<p>with the evolving needs of the biotechnology sector and with Europe's wider digital transition.</p> <p><b>Challenges, needs and gaps:</b></p> <ol style="list-style-type: none"> <li><b>1. High-quality, practice-based biotechnology training:</b> This project will provide students with high-quality, practice-based biotechnology training <b>aligned with real industry needs</b>, enhancing their <b>employability</b> and technical competences. At the same time, we will strengthen the link between education and the biotechnology industry — a key strategic sector for Europe — by helping to ensure the availability of a highly qualified workforce capable of supporting Europe's transition towards a knowledge-based, sustainable, and globally competitive bioeconomy.</li> <li><b>2. Collaborative European network of VET centres:</b> We will establish a collaborative European network of VET centres working together to design and produce innovative, affordable, and <b>open-source educational and laboratory materials</b>. Specifically, this network will provide DIY laboratory toolkits embedded in Challenge-Based Learning activities.</li> <li><b>3. Female participation in advanced technological fields:</b> We aim to solidify the strong female participation observed in biotechnology training by integrating a <b>gender and STEAM approach</b> into all these educational materials and activities that we will design. In this way, the project will contribute to strengthening this trend of female participation in advanced technological fields.</li> <li><b>4. Transnational collaboration among vocational training students:</b> This project will not only create opportunities for transnational collaboration among teachers to design and produce educational and laboratory materials, but it will also apply the same collaborative philosophy to the challenge-based learning activities proposed for students. By working together in digitally connected, multilingual networks across countries, vocational training students can apply their <b>language skills in meaningful contexts</b>, develop intercultural competence, and fully realize the pedagogical value of multilingual education. This approach ensures that multilingual learning is not merely a theoretical exercise, but a practical and socially relevant skill that enhances both academic achievement and career readiness</li> <li><b>5. Digital tools and communication technologies:</b> Digital tools and communication technologies will play a fundamental role in BioTECH4ALL HUB, enabling close collaboration</li> </ol>
--	---



between teachers from different countries and supporting the implementation of challenge-based learning activities for students. These tools will help overcome physical distance by **facilitating real-time cooperation within the network**. Furthermore, the project will directly promote the development of digital skills in both educators and students, fostering essential abilities for a digitally connected European context.

### Alignment with Erasmus+ Programme Priorities:

#### INCLUSION AND DIVERSITY

BioTECH4ALL HUB aims to democratise access to biotechnology education in Europe by providing open-source materials and challenge-based learning opportunities. Any VET centre, regardless of its resources or the language spoken, can access the learning packages and challenges—ensuring no student or educator is left behind due to economic or linguistic barriers.

- The use of open-access resources (EduBox-style) and universal design means the curriculum and laboratory challenges are accessible to all, including those from rural or underserved areas and migrants—groups identified in Erasmus+ as priorities for inclusion.
- The project intentionally fosters female participation in advanced technological fields, building on Erasmus+ priorities to reduce gender gaps and promote diversity in STEM. Culturally-relevant curricula and visible role models encourage young women to take an active role in biotechnology.
- BioTECH4ALL HUB's most ambitious feature is its collaborative, transnational learning network. By supporting multilingual group work and valuing the multicultural skills that many migrants bring, the project rewards and develops linguistic and intercultural competencies. Multilingual learning is not just a tool, but a recognized asset—directly enhancing inclusion and diversity, and supporting Erasmus+ recommendations.

#### DIGITAL TRANSFORMATION

The HUB platform is designed for collaboration, learning, and networking, including digital labs, forums, MOOCs, and virtual meetings—directly addressing the digital transformation goals of Erasmus+ and the Digital Education Action Plan.

- Students and educators build advanced digital skills, from remote collaboration to using AI-assisted tools (like protein design algorithms), aligning with the EU's push for digital upskilling in VET and higher education.
- We will also prepare biotechnology training in virtual environments. This is because, on the one hand, equipment and reagents are not always available and are expensive. On

the other hand, it will provide DIY training for teachers in the network.

## ENVIRONMENT AND FIGHT AGAINST CLIMATE CHANGE

Biotechnology—as promoted by BIO4ALL—offers innovative solutions for environmental remediation, resource management, and sustainable food and energy production. BIO4ALL directly answers Erasmus+ calls for action-oriented, green education.

- The project's challenge-based learning prepares students to use biotechnology for real-world environmental solutions, giving them agency as sustainability change-makers and supporting Erasmus+ green priorities.

## PARTICIPATION IN DEMOCRATIC LIFE, COMMON VALUES AND CIVIC ENGAGEMENT

By building a European network of open collaboration with co-created, open-source materials and challenge-based activities, BIO4ALL cultivates the next generation of scientific citizens.

- The methodologies used (open science, collaboration, democratic participation) echo Erasmus+ values of civic engagement, intercultural understanding, and shared European identity.
- Students are not passive recipients, but collaborators and innovators, empowered to drive scientific and social change in a sustainable society—fulfilling the civic priorities of Erasmus+.

## References

1. *Priorities of the Erasmus+ Programme - European Union.* (2022).  
<https://erasmus-plus.ec.europa.eu/programme-guide/part-a/priorities-of-the-erasmus-programme>
2. *Programme priorities - Erasmus+.* (2020).  
<https://erasmus-plus.ec.europa.eu/about-erasmus/programme-priorities>
3. *Partnerships for cooperation - Erasmus+ - European Union.* (2024).  
<https://erasmus-plus.ec.europa.eu/programme-guide/part-b/key-action-2/partnerships-cooperation>
4. *Erasmus+: inclusive, digital and green.* (2022).  
<https://erasmusplus.org.ua/en/opportunities/erasmus-inclusiveness-and-environmental-friendliness/>
5. *The EU Commission's study on Erasmus+ projects.*  
<https://www.indire.it/en/2022/07/13/educational-inclusion-the-eu-commissions-study-on-erasmus-projects/>

	<p>6. <i>Inclusion and diversity - SALTO. (2022).</i>  <a href="https://salto-et.net/public/files/site/ita_overview_may_2022.pdf">https://salto-et.net/public/files/site/ita_overview_may_2022.pdf</a></p>
Project objective/ project objectives	<p><b>BioTECH4ALL HUB</b> aims to <b>democratise access to biotechnology</b> education in Europe by providing DIY laboratory toolkits and micro-training in virtual environments. These resources are embedded in <b>Challenge-Based Learning</b> activities, enabling VET students from different countries to collaborate in <b>multilingual, digitally connected STEAM networks</b>.</p>
WPs/ planned activities	<p><b>WP1: MANAGEMENT</b></p> <p>This WP1 will ensure the <b>effective coordination, monitoring, and administration</b> of the project.  It will cover:</p> <ul style="list-style-type: none"> <li>• technical</li> <li>• financial</li> <li>• administrative management</li> <li>• communication among partners</li> <li>• preparation of interim and final reports</li> </ul> <p>The WP will also establish <b>mechanisms for internal evaluation, quality assurance, and risk management</b> to ensure smooth implementation and timely delivery of results.</p> <p><b>Regular coordination meetings</b> will be held to monitor progress, address potential challenges, and strengthen collaboration among partners.</p> <p><b>WP2: EMPOWERED TEACHERS TO EMPOWER STUDENTS</b></p> <p>This WP2 focuses on training and upskilling teachers to empower them as drivers of innovation in biotechnology education and in challenge-based, STEAM-oriented learning environments. Training activities will combine technical, digital, and pedagogical content, including:</p> <ul style="list-style-type: none"> <li>• <b>Biotechnological training:</b> <ul style="list-style-type: none"> <li>○ Protein purification processes, protein design and optimisation.</li> <li>○ PCR and Tag protein design, and advanced types of PCR and design principles.</li> <li>○ Cloning process design (recombinant DNA technology).</li> </ul> </li> </ul>

- **Pedagogical training:**
  - Active challenge-based learning.
  - STEAM approach.
  - Gamification, AI and VR as tools in active learning.
- **Training in digital tools for biotechnology and Network-based collaboration:**
  - Artificial Intelligence (AI) for biotechnology
  - Virtual Reality (VR) applications in biotechnology training
  - Network-based collaboration (organisation, management, digital tools, and platforms)
  - Meetings and collaborative work in virtual environments and the metaverse.

The goal is to equip teachers with the technical and digital competences needed to guide students through advanced, practical, and collaborative biotechnology learning experiences.

### **WP3: FROM PAPER TO THE LAB /FROM SILICO TO THE LAB**

This WP3 focuses on the **development, testing and validation of real laboratory experiments** using accessible, DIY-type reagents, ensuring reproducibility and educational feasibility.

Main activities will include:

- **Design and laboratory implementation of enzyme manufacturing processes.**
- **Design and test of experiments using DIY reagents.**
- **Evaluation, quality control (QC), and quality assurance (QA) of laboratory materials and activities.**

This WP represents the transition from theoretical and *in silico* design to practical *in vitro* application, ensuring that developed experiments are pedagogically effective and scientifically sound.

### **WP4: DIY BIOTECHNOLOGY EDUCATIONAL TOOLKIT**

This WP4 aims to **develop, test, and validate the pedagogical component of the kit for advanced biotechnology learning** in vocational training. It establishes a collaborative learning context and methodology, based on challenges and with a STEAM approach, in which students will network with vocational training

	<p>centers from other countries. The laboratory practice will be complemented with training in virtual environments.</p> <p>Activities will include:</p> <ul style="list-style-type: none"> <li>• <b>Design of transnational challenges</b> aligned with participants' curricula.</li> <li>• <b>Design of training in virtual environments</b></li> <li>• <b>Project management design:</b> establishment of clear communication channels, dynamic collaboration frameworks, trust-building events, management strategies, and digital tools.</li> <li>• <b>Design of evaluation activities:</b> for both student assessment (grades) and challenge performance evaluation.</li> <li>• <b>Pilot testing / Proof of concept:</b> implementation and evaluation of a challenge as a networked student activity, coordinated between the participating VET centers.</li> <li>• <b>Evaluation, quality control (QC), and quality assurance (QA)</b> of the didactic and communication materials.</li> <li>• <b>Development of a micro-credential system</b> recognising competences acquired by both teachers and students within the network</li> </ul> <p>The final toolkit will serve as an open and replicable resource for other institutions, ensuring the long-term sustainability and scalability of the project.</p> <p><b>WP5 DISSEMINATION</b></p> <p>This WP5 will ensure the visibility, dissemination, and sustainability of the project's outcomes.</p> <p>Activities will include:</p> <ul style="list-style-type: none"> <li>• Creation and maintenance of a project webpage</li> <li>• Publication of newsletters, articles, and updates</li> <li>• Participation in conferences, workshops, and multiplier events</li> <li>• Promotion of results through social media and European platforms (EPALE, School Education Gateway, etc.)</li> </ul> <p>A clear communication and exploitation strategy will be implemented to ensure that project results - such as the educational toolkit, training methodologies, and microcredentials - have a lasting impact beyond the project's lifetime.</p>
Target groups	<ul style="list-style-type: none"> <li>• <b>Students:</b> students in general, women, learners in</li> </ul>

	<p>multilingual learning models.</p> <ul style="list-style-type: none"> <li>• <b>Teachers:</b> biotechnology teachers, teachers interested in teaching biotechnology, and, more broadly, anyone wishing to train in biotechnology or in its teaching.</li> <li>• <b>Vocational education and training centres</b></li> <li>• <b>Educational institutions</b> in the fields of biology and chemistry</li> <li>• <b>Biotechnology companies</b> located near the VET centre</li> <li>• The <b>local community</b></li> <li>• The <b>environment</b></li> </ul>
Expected outcomes	<ol style="list-style-type: none"> <li>1. Empowered teachers to empower students.</li> <li>2. Think Globally Act Locally. OpenSource protein manufacturing network.</li> <li>3. Key for life &amp; Key for lab. Key biotechnology reactivities (enzyme, protein ...) production protocols. Expected production &amp; purification protocols for enzymes.</li> <li>4. DIY biotechnology toolkit.</li> <li>5. Biotechnological challenges using an active challenge-based learning methodology with STEAM approach.</li> <li>6. Biotechnical training in virtual environments.</li> <li>7. A sustainable European network of VET centres working together on transnational Challenge-Based Learning activities, fostering collaboration among students in multilingual, digitally connected STEAM communities.</li> </ol>
Partners	<p>We are seeking mainly for VET schools that are teaching biotechnology/biochemistry related studies or want to incorporate biotechnology/biochemistry related knowledge to their training offer. Other associated partners will be considered too, as NGO, research institutions, universities or SME. Any expertise on biotechnology process development or biochemistry knowledge (PCR, cloning, gene editing, protein synthesis &amp; purification) will be welcomed, but it is not mandatory.</p> <p>Depending partners we expect different roles:</p> <ul style="list-style-type: none"> <li>• <b>VET schools.</b> Development of project, educational kit development, manufacturing process development, networking.</li> <li>• <b>NGO.</b> Should be working on STEAM educational projects in developing countries or EEA, and/or knowledge and technology transfer to developing countries.</li> <li>• <b>Research institutions, universities or SME.</b> Would offer knowledge on biotechnology process development and technical guidance.</li> </ul>
Project timeline	3 years

		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	WP 1												
	WP 2												
	WP 3												
	WP 4												
	WP 5												
Contact information	Please contact: <a href="mailto:edurne.chocarro@donbosco.eus">Edurne Chocarro Ubiria</a> , Principles of Biotechnology Teacher, <a href="mailto:edurne.chocarro@donbosco.eus">edurne.chocarro@donbosco.eus</a> <a href="mailto:jon.eletxigerra@donbosco.eus">Jon Eletxigerra Erentxun</a> , Biotechnological Production Teacher, <a href="mailto:jon.eletxigerra@donbosco.eus">jon.eletxigerra@donbosco.eus</a> <a href="mailto:international@tknika.eus">international@tknika.eus</a>												



3

Project Title	<b>VETGastroTech+ Intergeneracional: FoodTech and intergenerational sustainable cooking skills for VET</b>
Background	<p>ESHBI is a VET school in the gastronomy field built on a multidisciplinary approach. Its mission is to serve as a hub of knowledge and a driving force in developing top-level professionals across all areas that make up the hospitality sector. To achieve this, the school not only offers official and continuous training programs, but also operates its own restaurant and an in-house R&amp;D department known as the Basque Food Laboratory.</p> <ul style="list-style-type: none"> <li>GastroTech VET+ responds to the need to align VET in hospitality/food with the digital and green transitions, while preserving culinary heritage through intergenerational collaboration.</li> </ul>
Project Objective/ Project objectives	<ul style="list-style-type: none"> <li>Promote European food culture as a means of strengthening common values and civic engagement.</li> <li>Promote healthy habits and well-being through nutritional education and physical activity.</li> <li>To facilitate the intergenerational exchange of culinary knowledge and experiences.</li> <li>Accessible, <i>senior-friendly</i> and inclusive learning design</li> </ul>
WPs/ Planned activities	<p>Activities</p> <ol style="list-style-type: none"> <li>Cooking Workshops Talks and Seminars on Intergenerational Nutrition and Health: Cultural and Gastronomic Exchange; Mentoring Programs, Flipped Learning Events and conferences</li> <li>Content development, Integration of digital technologies.</li> <li>Focus on sustainability: Inclusion of vulnerable groups Transnational collaboration. Impact Evaluation and Measurement Continuous Evaluation.</li> <li>Certification of competencies:</li> </ol>
Target groups	<p>By involving a wide range of audiences, the project will contribute to strengthening the social fabric, inclusion and improving the quality of life of the participants.</p> <ol style="list-style-type: none"> <li>VET teachers and trainers.</li> <li>Vocational Education and Training Students (EFP)</li> <li>Young people in general.</li> <li>Elderly people in the community.</li> <li>Professionals in the field of nutrition and professionals in the Horeca sector.</li> <li>Healthcare professionals</li> </ol>



	<ol style="list-style-type: none"> <li>7. Community in general: families and local and European organizations.</li> <li>8. Vulnerable groups.</li> <li>9. Social institutions and political agents.</li> </ol>
Expected results	<ul style="list-style-type: none"> <li>• Improvement in the eating habits and well-being of the participants.</li> <li>• Strengthening intergenerational ties and a sense of community.</li> <li>• Increased knowledge and appreciation of European gastronomic diversity.</li> <li>• Increased civic participation and community engagement.</li> <li>• Development of transversal competences in VET students.</li> <li>• The project seeks to have a positive impact, promoting health, well-being, social inclusion and intergenerational cohesion.</li> </ul>
Partners	<ol style="list-style-type: none"> <li>1. Local and European organisations dedicated to culture, health and sport.</li> <li>2. Educational and senior centers.</li> <li>3. Experts in nutrition, cooking and sports professionals.</li> <li>4. Experts in the development of digital tools.</li> </ol> <ol style="list-style-type: none"> <li>1. <b>Vocational Education and Training (VET) Institutions:</b> <ul style="list-style-type: none"> <li>• <b>Functions:</b> <ul style="list-style-type: none"> <li>○ <b>Curricular integration:</b> Incorporate cooking workshops, nutrition talks and sports activities into the VET curriculum.</li> <li>○ <b>Provision of students and trainers:</b> Facilitate the participation of students and trainers in project activities.</li> <li>○ <b>Evaluation and monitoring:</b> Collaborate in the evaluation of the educational and training impact of the project.</li> <li>○ <b>Evaluation and analysis:</b> Conduct studies and analyses on the impact of the project on the health and well-being of the participants.</li> <li>○ <b>Development of methodologies:</b> Develop innovative methodologies for the evaluation of the project.</li> <li>○ <b>Publication of results:</b> Publish the results of the project in academic journals and conferences.</li> </ul> </li> </ul> </li> <li>2. <b>Cultural and Gastronomic Organizations:</b> <ul style="list-style-type: none"> <li>• <b>Functions:</b> <ul style="list-style-type: none"> <li>○ <b>Content development:</b> Provide knowledge about European culinary and cultural traditions.</li> <li>○ <b>Event Organization:</b> Help organize cultural and gastronomic events.</li> <li>○ <b>Cultural promotion:</b> Promoting cultural diversity and appreciation of food traditions.</li> </ul> </li> </ul> </li> </ol>

	<p><b>3. Technology Companies:</b></p> <ul style="list-style-type: none"> <li><b>Functions:</b> <ul style="list-style-type: none"> <li><b>Development of digital tools:</b> Create applications and online platforms for the monitoring of eating habits and the organization of virtual workshops.</li> <li><b>Technical Support:</b> Provide technical support and training in the use of digital tools.</li> <li><b>Innovation:</b> Introduce technological innovations that improve the implementation and monitoring of the project.</li> </ul> </li> </ul> <p><b>4. Civil society organizations:</b></p> <ul style="list-style-type: none"> <li><b>Functions:</b> <ul style="list-style-type: none"> <li><b>Social inclusion:</b> Ensure that the project is accessible to people with fewer opportunities.</li> <li><b>Community Support:</b> Provide support and resources to vulnerable participants.</li> <li><b>Promotion of participation:</b> Encourage the active participation of all social groups in the project.</li> </ul> </li> </ul> <p><b>5. Local and regional authorities:</b></p> <ul style="list-style-type: none"> <li><b>Functions:</b> <ul style="list-style-type: none"> <li><b>Logistical support:</b> Provide resources, spaces and permits necessary for the project activities.</li> <li><b>Promotion and dissemination:</b> To assist in the promotion and dissemination of the project at local and regional level.</li> <li><b>Funding:</b> Provide additional financial and logistical support.</li> </ul> </li> </ul>
Project Timeline	2 years.
Contact Information	<p>Igor Ozamiz Goiriena.  <a href="mailto:ozamizigor@escuelahosteleria.com">ozamizigor@escuelahosteleria.com</a>  <a href="mailto:international@tknika.eus">international@tknika.eus</a></p> <p><a href="http://www.escuelahosteleria.com">www.escuelahosteleria.com</a>  <a href="http://www.basquefoodlaboratory.com">www.basquefoodlaboratory.com</a>  <a href="http://www.restaurantelaescuela.com">www.restaurantelaescuela.com</a>  <a href="mailto:international@tknika.eus">international@tknika.eus</a></p>

# 4

Project Title	<b>HOSSKILLS II – Hospitality Meets Creativity &amp; Tech</b>
Background	<p>CIFP Hostelería Ostalaritza Galdakoa LHII provides high-quality education in gastronomy and food industries, combining practical and collaborative learning following the ETHAZI model.</p> <p>It features modern facilities, workshops, and a public restaurant where students apply their skills, along with professional internships and international programs like Erasmus+.</p> <p>The school supports students' and alumni's professional and entrepreneurial development, connecting them with job opportunities, specializations, and complementary activities to advance their careers in gastronomy and hospitality.</p> <p><a href="http://www.hosteleriaaldakao.com">www.hosteleriaaldakao.com</a></p> <p>Building on the achievements of the first HOSSKILLS project (2023–2025), which developed an innovative digital learning platform and six digital training kits for the hospitality sector, <b>HOSSKILLS II aims to expand, strengthen and future-proof the project.</b></p> <p>The new phase responds directly to emerging European challenges i:</p> <ul style="list-style-type: none"> <li>○ the need to <b>develop green skills</b> and accelerate sustainability in VET;</li> <li>○ the importance of <b>media literacy, critical thinking and ethical digital communication</b>;</li> <li>○ the need to ensure <b>full accessibility and inclusion</b> in all learning experiences;</li> <li>○ the relevance of <b>digital transformation</b> and hybrid learning environments;</li> <li>○ and the central role of VET in fostering <b>participation in democratic life and European identity</b>.</li> </ul> <p>HOSSKILLS II connects VET schools from hospitality, audiovisual arts, marketing, creative media and technology to co-create the next generation of digital learning resources. The project will act as a bridge between traditional hospitality education and the creative–tech sector, fostering interdisciplinary work, innovation and social impact.</p> <ul style="list-style-type: none"> <li>● <b>HOSSKILLS x Creative Skills Lab</b></li> </ul>

	<p>The <b>HOSSKILLS x Creative Skills Lab</b> will be the core space where interdisciplinary collaboration takes place. It will serve as a transnational laboratory that:</p> <ul style="list-style-type: none"> <li>○ brings together VET learners and teachers from hospitality, audiovisual production, social media, marketing and IT;</li> <li>○ promotes <b>learning-by-doing</b>, co-creation and project-based collaboration;</li> <li>○ develops <b>accessible, inclusive and sustainability-oriented digital materials</b>;</li> <li>○ integrates <b>green hospitality practices</b>, media literacy and digital citizenship;</li> <li>○ and uses virtual classrooms to support hybrid, cross-border teamwork.</li> </ul>
Project objective/ project objectives	<p>HOSSKILLS II will pursue the following objectives:</p> <ul style="list-style-type: none"> <li>● <b>Upgrade and expand the existing HOSSKILLS digital kits</b> with new audiovisual, interactive and accessible content co-created by hospitality and creative/tech students.</li> <li>● <b>Establish the Hospitality x Creative Skills Lab</b> as an interdisciplinary space promoting teamwork, creativity, sustainability and digital innovation in VET.</li> <li>● <b>Develop green skills for hospitality</b>, embedding sustainability, eco-responsible practices and environmental awareness throughout the learning materials.</li> <li>● <b>Strengthen media literacy and ethical digital communication skills</b>, enabling learners to identify misinformation and build responsible online strategies.</li> <li>● <b>Enhance inclusion and accessibility</b> by designing materials usable by learners with fewer opportunities or special needs.</li> <li>● <b>Promote active European citizenship</b> through digital storytelling, collaborative challenges and cross-border participation.</li> <li>● <b>Improve teacher's competences</b> in digital pedagogy, storytelling, hybrid learning, accessibility and green education.</li> <li>● <b>Reinforce the HOSSKILLS platform</b> as an open European resource that integrates virtual classrooms and supports long-term sustainability after the project.</li> </ul>
WPs/ planned activities	<ul style="list-style-type: none"> <li>● Co-creation of new multimedia learning resources (videos, guides, social media templates).</li> <li>● Training workshops for teachers and students on content creation and online communication.</li> <li>● Piloting of updated HOSSKILLS kits in real classroom and workshop settings.</li> </ul>

- Integration of digital badges and micro learning modules into the platform.
- Joint dissemination through coordinated social media campaigns and a final showcase event.

### Work Packages

#### WP1 – Project Management & Quality Assurance

- Overall coordination and financial management.
- Implementation of a **Sustainability & Green Action Plan** (monitoring carbon footprint, eco-friendly practices).
- Inclusion, accessibility and data protection measures.
- Internal evaluation and risk management.
- Quality monitoring

#### WP2 – Multimedia Production & Content Upgrade (Creative Skills Lab)

- Co-creation of high-quality videos, tutorials, infographics and interactive guides.
- Development of **green hospitality modules** (waste reduction, energy management, sustainable menu design, circular economy).
- Integration of **media literacy and critical thinking tasks** addressing fake food news, manipulated reviews and digital safety.
- Creation of **accessible content** following UDL and WCAG standards (captions, alternative formats, inclusive design).
- Cross-country virtual collaboration sessions among students and teachers.

*This work package will be implemented through the **HOSSKILLS x Creative Skills Lab**, an interdisciplinary workspace connecting VET schools from hospitality, audiovisual, communication, and technology sectors. The Lab will operate as a **co-creation hub** where students and teachers collaborate to produce high-quality digital learning resources, including training videos, infographics, and interactive guides, directly linked to the six original HOSSKILLS modules.*

*The Creative Skills Lab will follow a **learning-by-doing methodology**, combining classroom-based work with project-based collaboration between partner schools. Each partner will run local lab sessions and share results during online exchanges.*

	<p>WP3 – Digital Communication &amp; Dissemination</p> <ul style="list-style-type: none"> <li>○ Creation of digital campaigns and storytelling initiatives promoting sustainability, inclusion and European values.</li> <li>○ Social media content co-produced by students (reels, guides, branding templates).</li> <li>○ Dissemination activities with local hospitality SMEs, VET networks and community stakeholders.</li> <li>○ Communication guidelines on ethical, inclusive and responsible digital content.</li> <li>○ Public showcase of results through an online festival and transnational events.</li> </ul> <p>WP4 – Platform Development &amp; Innovation</p> <ul style="list-style-type: none"> <li>○ Expansion of the HOSSKILLS platform with: <ul style="list-style-type: none"> <li>▪ <b>virtual classrooms,</b></li> <li>▪ collaborative workspaces,</li> <li>▪ accessibility features,</li> <li>▪ micro-learning modules,</li> <li>▪ digital badges.</li> </ul> </li> <li>○ Integration of tools for hybrid learning, online discussions and digital citizenship activities.</li> <li>○ Development of content layouts that support easy navigation, multilingual access and cross-device usability.</li> </ul> <p>WP5 – Evaluation, Impact &amp; Sustainability</p> <ul style="list-style-type: none"> <li>○ Evaluation of learning outcomes, digital competences, green competences and media literacy.</li> <li>○ Measurement of inclusion impact and accessibility improvements.</li> <li>○ Sustainability and exploitation plan covering <b>3–5 years after the project.</b></li> <li>○ Recommendations for mainstreaming the Creative Skills Lab model in other VET schools.</li> <li>○ Creation of a final methodological guide.</li> </ul>
Target groups	<p>The project will support:</p> <ul style="list-style-type: none"> <li>• VET learners in hospitality (cooking, restaurant service, bakery, pastry).</li> </ul>

	<ul style="list-style-type: none"> <li>• VET learners in audiovisual arts, marketing, communication and IT.</li> <li>• Learners with fewer opportunities (rural background, migrant origin, socio-economic disadvantage, special needs).</li> <li>• Teachers requiring upskilling in digital, green or media literacy competences.</li> <li>• Local hospitality SMEs benefiting from the digital tools and visibility.</li> </ul>
Expected outcomes	<ul style="list-style-type: none"> <li>• <b>6 updated and fully accessible digital training kits</b> with green, media literacy and EU citizenship components.</li> <li>• <b>1 Methodological Guide</b> on the Hospitality x Creative Skills Lab.</li> <li>• <b>3 short training modules</b> for teachers and students (green skills, digital storytelling, media literacy).</li> <li>• <b>Virtual classrooms</b> integrated into the platform for hybrid international collaboration.</li> <li>• Strengthened cooperation between hospitality, creative and tech VET families.</li> <li>• Increased digital, green and transversal competences among learners.</li> <li>• Broader visibility and attractiveness of VET.</li> <li>• A sustainable, open and continuously updated European learning platform.</li> </ul>
Partners	<p>The consortium will involve:</p> <ul style="list-style-type: none"> <li>• VET hospitality schools.</li> <li>• VET institutions specialised in audiovisual production, social media, marketing or IT.</li> <li>• Local hospitality businesses (as associated partners).</li> </ul> <p>Roles include:</p> <ul style="list-style-type: none"> <li>• Co-creating multimedia content and training materials.</li> <li>• Leading workshops and Lab sessions in their areas of expertise.</li> <li>• Supporting platform development, dissemination and sustainability.</li> </ul>
Project timeline	24–36 months, depending on final agreement and distribution of responsibilities.

Contact information	Joseba Sola Lana Ostalaritza Eskola Galdakao <a href="mailto:internacionalizacion@hosteleriagaldakao.com">internacionalizacion@hosteleriagaldakao.com</a> international@tknika.eus



# 5

Project Title	<b>The DIGI-IVET Toolkit: A Blueprint for Micro-Credentials in European IVET</b>
Background	<p><a href="#">Hernani Gizarte Berrikuntza LHII</a> provides crucial Initial Vocational Education and Training (IVET) to a student body predominantly composed of migrants, preparing them for the local industrial sector. The key challenges are threefold: 1) Ensuring these IVET students <b>achieve core digital competencies</b>, 2) Providing flexible, recognizable learning pathways that <b>validate smaller skill units</b>, and 3) Creating <b>innovative, scalable pedagogical tools for integration</b>. There is a critical need to modernize IVET delivery through digitalization and micro-credentialing to enhance <b>inclusion, motivation, and employability</b>.</p> <p>Alignment with Erasmus+ Priorities: This project directly and strongly addresses:</p> <ul style="list-style-type: none"> <li>• <b>Digital Transformation:</b> Integrating a dedicated Moodle platform as the project's digital backbone.</li> <li>• <b>Innovation in VET:</b> Pioneering a system of micro-credentials for soft skills, language, and digital literacy within IVET.</li> <li>• <b>Inclusion and Diversity:</b> Tailoring this innovative system to the specific needs of migrant IVET learners.</li> <li>• <b>European Education Areas:</b> Ensuring the micro-credentials are developed and recognized in partnership with international VET schools.</li> </ul>
Project objective/ project objectives	<p>Objectives with Erasmus+ Priorities:</p> <ul style="list-style-type: none"> <li>• <b>Digital transformation:</b> Integrating a dedicated Moodle platform as the project's digital backbone.</li> <li>• <b>Innovation in VET:</b> Pioneering a system of micro-credentials for soft skills, language, and digital literacy within IVET.</li> <li>• <b>Inclusion and Diversity:</b> Tailoring this innovative system to the specific needs of migrant IVET learners.</li> <li>• <b>European Education Areas:</b> Ensuring the micro-credentials are developed and recognized in partnership with international VET schools.</li> <li>• <b>To co-design, with European partners, a suite of digital micro-credentials targeting key competences for migrant IVET students (e.g., "Digital Communication,"</b></li> </ul>

	<p>"Intercultural Collaboration," "Basic Technical Basque," "Workplace Safety 4.0").</p> <ul style="list-style-type: none"> <li>• To develop, pilot, and implement a <b>collaborative Moodle</b> platform to host these micro-credentials, facilitating blended and distance learning.</li> <li>• <b>To enhance the digital pedagogical skills</b> of IVET teachers in using the Moodle platform <b>and assessing micro-credentials</b>.</li> <li>• <b>To create a scalable, transferable, and quality-assured model for digital micro-credentials in IVET</b> that can be adopted by other European VET institutions.</li> </ul>
WPs/ planned activities	<ul style="list-style-type: none"> <li>• <b>WP1: Co-Design of Micro-Credential Framework:</b> <ul style="list-style-type: none"> <li>- Partners will collaboratively define learning outcomes, assessment criteria, and digital badge designs for the micro-credentials.</li> </ul> </li> <li>• <b>WP2: Moodle Platform Development &amp; Content Creation:</b> <ul style="list-style-type: none"> <li>- Setting up a dedicated, multilingual Moodle instance.</li> <li>- Co-creating interactive learning modules and assessment tools for each micro-credential.</li> </ul> </li> <li>• <b>WP3: Piloting and Implementation:</b> <ul style="list-style-type: none"> <li>- Short-term joint staff training events (TTAs): "Digital Pedagogy and Micro-Credential Management in Moodle."</li> <li>- Blended Mobility of Learners: Virtual collaboration on the Moodle platform, culminating in physical project weeks where students work in international teams to solve challenges and earn micro-credentials.</li> </ul> </li> <li>• <b>WP4: Quality Assurance &amp; Transferability Toolkit:</b> <ul style="list-style-type: none"> <li>- Creating the main project output: "The DIGI-IVET Toolkit: A Blueprint for Micro-Credentials in European IVET," including guidelines, quality criteria, and implementation steps.</li> </ul> </li> </ul>
Target groups	<ul style="list-style-type: none"> <li>• Primary: <b>Students in Initial VET</b> programmes at the partner schools.</li> <li>• Secondary: <b>IVET Teachers</b>, trainers, and mentors.</li> <li>• Tertiary: <b>Other VET providers</b> across Europe (as future adopters).</li> </ul>
Expected outcomes	<p>A <b>fully functional, collaborative Moodle platform</b> with at least 5 piloted micro-credential courses.</p> <ul style="list-style-type: none"> <li>• At least 50 IVET students and 20 teachers trained in using the platform and achieving/minting micro-credentials.</li> <li>• The <b>"DIGI-IVET Toolkit"</b> (Open Educational Resource) providing a clear pathway for other schools to replicate the model.</li> <li>• A <b>sustainable network</b> of VET schools committed to</li> </ul>

	<p>recognizing the jointly developed micro-credentials, increasing their value.</p> <ul style="list-style-type: none"> <li>Increased <b>motivation and certification for migrant IVET students</b> through the accumulation of formal and informal learning recognitions.</li> </ul>
Partners	<ul style="list-style-type: none"> <li>IVET Schools from at least 3 different EU countries, facing similar integration or digitalization challenges.</li> <li>Expert partners in Moodle platform development and instructional design.</li> <li>Organizations with <b>expertise in credentialing</b> (e.g., national qualification authorities, innovative VET schools already using micro-credentials).</li> <li><b>NGOs/SMEs to help validate</b> the relevance of the micro-credentials to the labour market.</li> </ul>
Project timeline	<p>Duration: 24 months</p> <ul style="list-style-type: none"> <li>Phase 1 (M1-6): Framework &amp; Platform Design (WP1, WP2)</li> <li>Phase 2 (M7-18): Piloting, Training &amp; Mobility (WP3 core)</li> <li>Phase 3 (M19-24): Analysis, Toolkit Finalisation &amp; Dissemination (WP4)</li> </ul>
Contact information	<ul style="list-style-type: none"> <li>We are seeking VET schools and expert organizations interested in pioneering digital micro-credentials for inclusion.</li> </ul> <p>For expressions of interest, please contact Itsaso Ortega Otazo at <a href="mailto:erasmus@hernanilanh.eus">erasmus@hernanilanh.eus</a>. <a href="mailto:international@tknika.eus">international@tknika.eus</a></p>

# 6

Project Title	<b>Acquisition of Skills in the manufacture of products using boilermaking, assembly and welding techniques from environmentally sustainable plastic material</b>
Background	<p>Centro Formación Somorrostro  <a href="https://www.somorrostro.com/eu/">https://www.somorrostro.com/eu/</a></p> <ul style="list-style-type: none"> <li>There is a clear gap between the academic world and the labor market in the area of boilermaking and welding. The companies that are now working on plastic boilermaking request that our welding and boilermaking students receive a training in this field, due to the differences with the conventional boilermaking.</li> </ul>
Project objective/ project objectives	<ul style="list-style-type: none"> <li>To facilitate the entry of the welding and boilermaking students to the labour market by providing them with knowledge and skills to work in the plastic boilermaking sector.</li> <li>To provide a requalification for active workers.</li> <li>Improve curricula and offer from the schools.</li> </ul>
WPs/ planned activities	<ul style="list-style-type: none"> <li>Gather the needs identified by different European companies of the field of plastic boilermaking.</li> <li>Analyze the training on boilermaking offered in different countries, in order to evaluate how to eliminate the existing training gap.</li> <li>Design a specific learning unit about plastic boilermaking.</li> <li>Develop the training material needed to teach the previously mentioned learning unit.</li> <li>Test the designed training, evaluate and correct if necessary.</li> <li>Dissemination of the created material.</li> </ul>
Target groups	<ul style="list-style-type: none"> <li>Students, trainers, and any other worker/stakeholder</li> </ul>
Expected outcomes	<ul style="list-style-type: none"> <li>Training material</li> <li>Training platform</li> <li>Training for trainers</li> </ul>
Partners	<ul style="list-style-type: none"> <li>Company to provide assessment and training.</li> <li>Other entities (associations)</li> <li>Other VET centers with expertise in this field. And someone with knowledge on platform creation.</li> </ul>
Project timeline	<ul style="list-style-type: none"> <li>24 months</li> </ul>
Contact information	<ul style="list-style-type: none"> <li>Contact emails:  <a href="mailto:europa@somorrostro.com">europa@somorrostro.com</a>  <a href="mailto:international@tknika.eus">international@tknika.eus</a> </li> </ul>

# 7

Project Title	<b>Advanced Picking 4.0: ROS2 and Artificial Vision for Next-Generation Industrial Robotics</b>
Background	<p>Centro Formación Somorostro  <a href="https://www.somorostro.com/eu/">https://www.somorostro.com/eu/</a></p> <ul style="list-style-type: none"> <li>• In 2025, we are witnessing a transformative convergence robotics and advanced computer vision technologies that is revolutionizing industrial robotics. This is exemplified by cutting-edge humanoid robots like Unitree's H2 "Destiny Awakening" with its 31 degrees of freedom and lifelike movement capabilities, and XPeng's next-generation IRON humanoid robot powered by three Turing AI chips delivering 2,250 TOPS of computing performance for advanced perception and decision-making. In this field, ROS2 has emerged as the definitive middleware for robotics development, enabling up to 90% faster commissioning and 50% cycle time reduction in industrial applications. This represents a critical milestone in the journey toward truly autonomous and versatile robotic systems that can adapt to dynamic production environments.</li> <li>• The integration of artificial intelligence with ROS2 has reached unprecedented levels, where AI-driven robotics now work alongside human employees, handling both repetitive tasks and complex problem-solving scenarios.</li> <li>• Computer vision technology has evolved beyond simple object detection to enable robots to perceive, interpret, and assist in dynamic industrial systems, significantly enhancing automation capabilities while minimizing human error. Recent advancements announced in late 2024 have streamlined the incorporation of visual intelligence into ROS2-based robotic systems, making these technologies more accessible for educational and industrial applications.</li> <li>• Industry 4.0 in 2025 represents the dawn of fully integrated smart manufacturing, where factories continue to integrate intelligent robots that make production lines faster, safer, and more adaptable to changing market demands.</li> <li>• The robotics landscape is advancing rapidly, driven by innovative middleware like ROS2 and powerful simulation platforms such as Gazebo Harmonic, which are essential for training the next generation of technicians and engineers. This convergence of ROS2, computer vision, and AI-driven analytics enables real-time data processing, predictive maintenance, and process optimization that</li> </ul>

	<p>were previously unattainable in traditional manufacturing environments.</p> <ul style="list-style-type: none"> <li>• This project aims to prepare vocational education students for this technological revolution by developing practical competencies in ROS2 and computer vision systems, while fostering collaboration between VET centers and local industries to enhance competitiveness and create a highly skilled workforce ready for the factories of tomorrow.</li> </ul>
Project objective/ project objectives	<ul style="list-style-type: none"> <li>• To develop practical training modules focused on ROS2 and computer vision for collaborative robots in industrial picking applications</li> <li>• To create an open-source educational platform with real-world case studies demonstrating ROS2 integration with vision systems</li> <li>• To train VET teachers in cutting-edge ROS2 and computer vision technologies, enabling them to transfer these competencies to students</li> <li>• To establish partnerships with local industries for practical implementation of developed solutions, improving their industrial processes through Industry 4.0 concepts</li> <li>• To develop replicable guidelines and training materials that can be adopted by other VET centers across Europe</li> </ul>
WPs/ planned activities	<ul style="list-style-type: none"> <li>• Setup and configuration of ROS2-based robotic workstations with industrial-grade cameras</li> <li>• Development of modular training content focused on ROS2 nodes, computer vision algorithms, and robot integration (retos, etc).</li> <li>• Creation of a comprehensive MOODLE platform with video tutorials, simulation exercises, and assessment tools.</li> <li>• Organization of teacher training workshops with industry experts on ROS2 and computer vision applications.</li> <li>• Implementation of pilot projects in partner companies to validate training materials and demonstrate real-world impact.</li> <li>• Development of a ROS2 simulation environment for remote learning and skill development.</li> </ul>
Target groups	<ul style="list-style-type: none"> <li>• VET students in Automation and Robotics programs</li> <li>• VET teachers and trainers in industrial automation</li> <li>• Industry professionals from partner companies</li> <li>• Other VET centers interested in adopting ROS2 and computer vision curricula</li> </ul>
Expected outcomes	<ul style="list-style-type: none"> <li>• Complete ROS2 and computer vision training curriculum with practical exercises</li> <li>• Interactive MOODLE training platform.</li> <li>• Training program for VET teachers in ROS2 and computer vision.</li> <li>• Functional ROS2-based robotic picking systems installed.</li> </ul>

	<ul style="list-style-type: none"> <li>• Case studies documenting successful industry implementations.</li> <li>• Replicable guidelines for other VET centers to adopt this training approach.</li> </ul>
Partners	<ul style="list-style-type: none"> <li>• VET centers with robotics laboratories.</li> <li>• ROS2 development companies offering technical expertise and certification.</li> </ul>
Project timeline	<ul style="list-style-type: none"> <li>• 24 months</li> </ul>
Contact information	<ul style="list-style-type: none"> <li>• Contact emails:  <a href="mailto:europa@somorrostro.com">europa@somorrostro.com</a>  <a href="mailto:international@tknika.eus">international@tknika.eus</a> </li> </ul>

Project Title	BIOCIRCULAR 3D
Background	<p><b>CIFP Tartanga LHII</b> is a public Vocational Training centre, located in Erandio, close to Bilbao.</p> <p>The centre offers 15 VET and polytechnic programmes, three specialisation courses, and three Grade C certificates across several professional fields, including Electricity and Electronics, Administration, IT, Image and Sound, Health, Environment, and Social and Community Services</p> <p>CIFP TARTANGA LHII is deeply connected to the business world, collaborating with companies on innovation and experimentation projects and allocating resources to maintain and strengthen these partnerships. The centre provides non-regulated training to a significant number of workers and actively contributes to the assessment and recognition of professional competencies.</p> <ul style="list-style-type: none"> <li>• <b>Context and rationale of the project.</b></li> </ul> <p><b>3D bioprinting and biofabrication</b> emerge as transformative technologies. They combine additive manufacturing, biotechnology, and materials science to create <b>bio-based or biocompatible structures</b>, such as <b>tissue scaffolds, biosensors, and environmentally friendly materials</b>. Beyond biomedical applications, bioprinting offers <b>new opportunities for circular innovation</b> — using renewable biomaterials, valorising biological waste, and designing sustainable solutions for water filtration, air purification, or biodegradable components.</p> <p>However, most <b>VET centres</b> lack the knowledge, equipment, and interdisciplinary approach needed to teach and apply these concepts. There is a clear need for <b>new training models</b> that connect <b>biotechnology, manufacturing, and environmental sciences</b> through the lens of the <b>circular economy</b>. This project aims to fill that gap by developing innovative curricula, pilot experiences, and a European network that promotes sustainable innovation across the VET sector.</p> <ul style="list-style-type: none"> <li>• <b>Challenges, needs, gaps, the project seeks to address.</b> <ul style="list-style-type: none"> <li>– Lack of VET training that integrates 3D bioprinting and circular economy principles.</li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>– Limited collaboration between educational institutions, research centres, and industry.</li> <li>– Shortage of interdisciplinary teaching materials and hands-on learning opportunities.</li> <li>– Need to demonstrate the environmental and economic value of bio-based manufacturing solutions.</li> </ul> <ul style="list-style-type: none"> <li>• <b>Alignment of the project with Erasmus+ priorities.</b> <ul style="list-style-type: none"> <li>– Supporting the <b>Green Transition</b> through circular economy and sustainable innovation.</li> <li>– Promoting <b>digital and technological transformation</b> in VET.</li> <li>– Strengthening <b>transnational cooperation</b> and interdisciplinary learning.</li> <li>– Embedding <b>green and innovation skills</b> to meet future labour market needs.</li> </ul> </li> </ul>
Project objective/ project objectives	<ul style="list-style-type: none"> <li>• Promote sustainable innovation through training in 3D biofabrication and circular economy principles.</li> <li>• Establish a European network for learning, knowledge transfer, and applied research among VET centres.</li> <li>• Develop open training modules and learning resources that link biotechnology, additive manufacturing, and environmental engineering.</li> <li>• Encourage the creation of practical prototypes — from tissue scaffolds to water filtration systems — to demonstrate circular biofabrication concepts.</li> </ul>
WPs/ planned activities	<p><b>WP1: Project management</b>          The objectives are to ensure efficient project coordination, transparent communication among partners, quality assurance, and continuous evaluation of progress and impact.</p> <p><b>WP2: Circular Economy Applied to VET</b>          The objective is to integrate circular economy principles into VET curricula through practical, applied approaches to sustainability and lifecycle analysis.</p> <p><b>WP3: Training in Sustainable Bioprinting</b>          The objective is to train VET students and teachers in 3D bioprinting with sustainable, biodegradable, and bio-based materials.</p> <p><b>WP4: International Collaborative Laboratories</b></p>

	<p>The objectives are to create transnational learning environments for students and teachers to design, prototype, and test circular biofabrication solutions.</p> <p><b>WP5: Dissemination, Impact, and Sustainability</b>          The objectives are to disseminate project results widely, assess impact, and ensure the sustainability and replicability of outcomes beyond the project lifetime.</p>
Target groups	<ul style="list-style-type: none"> <li>• Students and teaching staff from vocational training programs in biotechnology, chemistry, additive manufacturing, and environmental studies.</li> <li>• Educational institutions, companies in the sector, innovation organizations and any other stakeholder (biotechnology, additive manufacturing, circular economy, environmental)</li> </ul>
Expected outcomes	<p>Innovative training modules on 3D bioprinting and the circular economy.</p> <p>Multilingual open digital educational materials.</p> <p>European network of vocational training centers and sustainable laboratories.</p> <p>Good practice guide for sustainable innovation.</p>
Partners	<ul style="list-style-type: none"> <li>• Vocational training centers or Universities of applied sciences specialized in additive manufacturing and 3D bioprinting.</li> <li>• Vocational training centers specialized in environmental sciences</li> <li>• Centers or institutes with expertise in circular economy and sustainability.</li> <li>• Centers or companies specialized in water treatment and biotechnology.</li> <li>• NGOs or SMEs involved in green innovation and technology transfer</li> <li>• Research centers in additive manufacturing and bioprinting</li> </ul>
Project timeline	<ul style="list-style-type: none"> <li>• 36 months</li> </ul>
Contact information	<ul style="list-style-type: none"> <li>• <a href="mailto:Maier.amor@tartanga.eus">Maier.amor@tartanga.eus</a></li> <li>• <a href="mailto:international@tknika.eus">international@tknika.eus</a></li> </ul>