

HUCO Labs: Towards creating a seamless European training village between HVET, business and universities

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Universities of Applied Sciences (UAS) play a central role in strengthening Europe's innovation capacity by translating applied research into tangible benefits for industry, regions, and society. However, many institutions still struggle to systematically demonstrate how demand-driven research activities translate into educational innovation, workforce resilience, and societal impact. In particular, the integration of applied research competencies into higher education curricula remains fragmented, often disconnected from regional innovation ecosystems and labour-market needs. The HUCO Labs project connects Higher Vocational Education and Training, Universities, and Companies to strengthen research-driven and innovation-oriented competencies for mid-level technicians. Its goal is to better align education, applied research, and labour-market needs across Europe.

This contribution presents the HUCO Labs competence framework as an applied research outcome that explicitly bridges research, education, and innovation in technical and professional higher education. It is suitable for participants from companies, higher education executives as well as higher education policy makers. Developed within a European cooperation context, the framework identifies and structures future-oriented competences required for professionals operating at the intersection of applied research, industry collaboration, and societal transformation. It consolidates six established European competence frameworks (including DigComp, GreenComp, EntreComp, RECAPHE, AIComp, and NextSkills) into four integrated competence domains: Innovation, Digital Transformation, Green Transformation, and Management.

Methodologically, the TRIComp framework is grounded in a mixed-methods applied research design, combining a rapid evidence assessment of European policy-aligned frameworks with empirical validation through a European stakeholder (universities and businesses) survey and expert interviews across industry, higher vocational education and training, and applied R&D. This demand-driven approach ensures that competence development is informed not only by policy priorities, but also by real-world innovation practices and regional skill needs.

The framework's key contribution lies in its practical applicability for UAS. It provides a structured basis for embedding applied research competences into curricula, designing work-based learning pathways, and strengthening the link between research activities and educational practice. By treating research not as a standalone academic activity but as a transversal competence embedded

across innovation, digitalisation, sustainability, and management, HUCO Labs offers a concrete model for aligning educational provision with industry and societal challenges.

The HUCO Labs ecosystem is conceived as a “European Village for Technicians” that enables partners to share infrastructures, laboratories, and equipment to jointly support training, applied research, and innovation. It promotes structured mobility for students and educators across countries, and increases the transferability and uptake of new curriculum models across Europe. The ecosystem also attracts new institutions, companies, and public bodies, fostering long-term cooperation that links skills development, applied research, and regional innovation policies.

The session will demonstrate how competence-based applied research frameworks can support UAS in evidencing their impact on innovation ecosystems, enhancing collaboration with external stakeholders, and responding to the twin green and digital transitions. Participants will gain insights into how demand-driven research outcomes can be translated into curriculum design, institutional strategy, and regional engagement, contributing to a more competitive, resilient, and socially responsive European higher education landscape.