ECoVEM is empowering Europe's semiconductor workforce through tailored VET and skill excellence

Best practice category	**Skills**
Stakeholder group	**Associations, trade organisations and consortia**
Value chain position	**Policy and funding**

General Information

European Cooperation platform of Vocational Excellence in Microelectronics (ECoVEM) brings together VET centres, polytechnics, industrial associations and social partners to revitalise skills in the microelectronics sector. The partners stem from Italy, Bulgaria, Germany, Cyprus, France and Spain. ECoVEM builds on and complements the strengths of national VET systems in countries with more advanced VET and supports the s advanced regions to achieve VET excellence.

ECoVEM is also tasked with countering several challenges which persist in vocational training, including digitalisation, AI, green technologies, gender equality and technology, as well as integration of migrants. The project implements innovative instructional approaches towards life-long capacity to self-regulate learning, hard skills and soft skills by using ecosystems-based theoretical models and performance support systems.

Activities and best practices

An analysis conducted by the ECoVEM partners identified the needs of the target audiences – students, trainers, future employers, practitioners, VET centres and policymakers – in terms of the required education, missing skills, and job market vacancies. EVoCEM concluded that the occupations most needed on the European semiconductor market are ATP technicians and design/microelectronics engineers. The most desired skills include the know-how of design tools and backend technologies (like test-handling, verification technologies), and hands-on experience in manufacturing processes.

Thus, the ECoVEM platform offers courses amounting to 1250h of VET curricula and short courses, with the goal of implementing the best practices approach to vocation training developed by leading VET countries. The courses are arranged by type and seek to close those gaps, covering Design and manufacturing of printed circuit boards (PCBs), Fundamentals of microelectronics manufacturing, IC design, Key competences and transversal skills, Microelectronics for greener economy, Microelectronics packaging technologies, and System design.

The system implements the 8-level European Qualifications Framework (EQF) and the European Credit System for Vocational Education and Training (ECVET) to streamline people's understanding of the comparative value of their degrees under different national systems.

By developing a more responsive and tailored VET, educational institutions can adjust to the fast changing needs of the labour market, while ECoVEM also provides its own Database of Best Practices which compile the most effective procedures in the areas of education, employability, innovation and VET, among others. Finally, to address the gender imbalance in the sector, ECoVEM runs dedicated

Challenges addressed with this practice

The practice of ECoVEM primarily addresses the challenges and needs within the semiconductor industry's skill development and workforce readiness. It revitalises skills in the semiconductor sector by bringing together various stakeholders and promoting know-how and excellence in the field.

Moreover, thanks to ECoVEM's broad market analysis, the project meets the industry and market needs by understanding the demand and providing the relevant education recommendations and training schemes for students and trainers alike. Importantly, ECoVEM takes into account advancements in AI and opportunities of green transition in its design of VET practices, ensuring that no workers are not left behind. Finally, the project standardises and modernises education by developing universal, up-to-date curricula and implementing the EQF/ECVET frameworks for ease of comparison.