

Development of Centres of Vocational Excellence (CoVEs) in the ICT Sector The example of INVESTech project

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- internationally recognized research and educational institution
- the **second-largest university in SK**
- more than 12,000 students; 680 academic staff
- education across **9 faculties & 327 study programs** focused on technical, economic, and artistic disciplines (Bachelor, Master, & doctoral study)
- a proud member of the **ULYSSEUS**
- close cooperation with educational institutions & industry
- 95 UNI partnerships with 27 countries, 281 valid agreements enabling mobility within the Erasmus+ program to 31 countries

CONTEXT: Europe at the crossroads of digital & green

- Europe facing **major transitions**: a large-scale digital transformation & a simultaneous green (climate / energy / sustainability) transition
- The **digital transition enables & accelerates the green transition** (smart grids, IoT for resource efficiency) & also creates its own challenges (energy use, e-waste).
- In 6 decades **ICT** has moved from a niche technology to a **global infrastructure & has become an innovation-enabling general-purpose technology** underpinning broad economic growth
- New technologies, new job profiles & business models emerge rapidly: **education adaptation is requested**

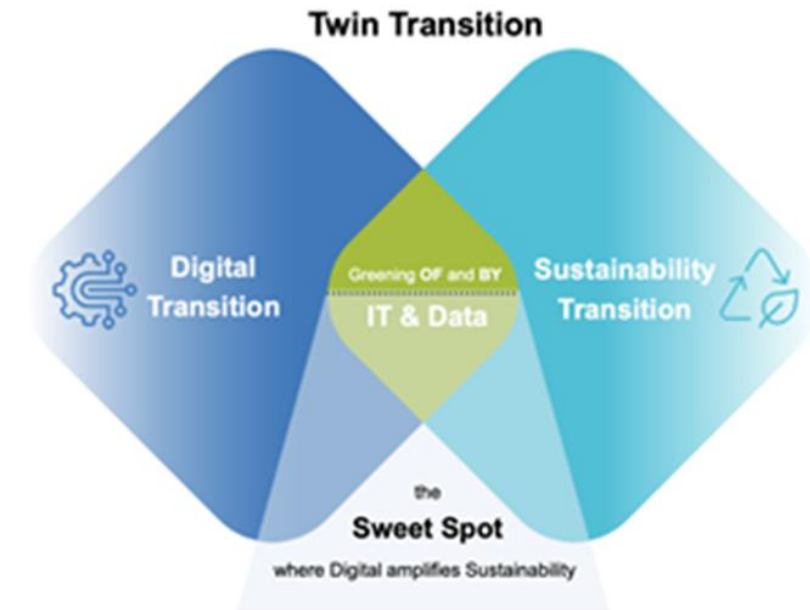


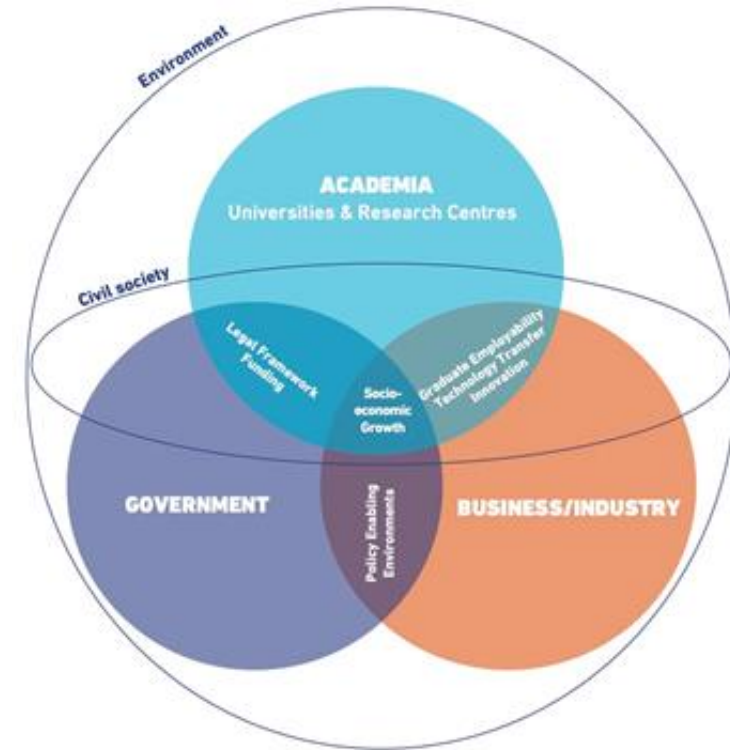
Image: Royal Schiphol Group and PA Consulting

Concept: coordinated action across

- **all levels of learning & education:** VET, HE & adult learning
- **all sectors: Quintuple Helix** approach applied to build a responsive & future-oriented skills ecosystem
 - Industry: defines real labour-market needs
 - Academia & education: develops knowledge, programmes & qualifications
 - Government: provides policy, regulation & strategic direction
 - Civil society: ensures inclusiveness & relevance for communities
 - Environment: keeps sustainability at the core of all innovations.

Implementation through **CoVEs – centres of vocational excellence**, which

- international collaborative networks, bringing together VET providers, employers, & other partners to create "skills ecosystems"
- serve as regional innovation & training hubs, turning collaboration into practical, high-quality learning pathways
- act as the operational bridge between education, industry & society, closing skill gaps required for the Twin Transition (digital + green)



<https://www.paeradigms.org/post/education-for-sustainable-development>

INVESTech project

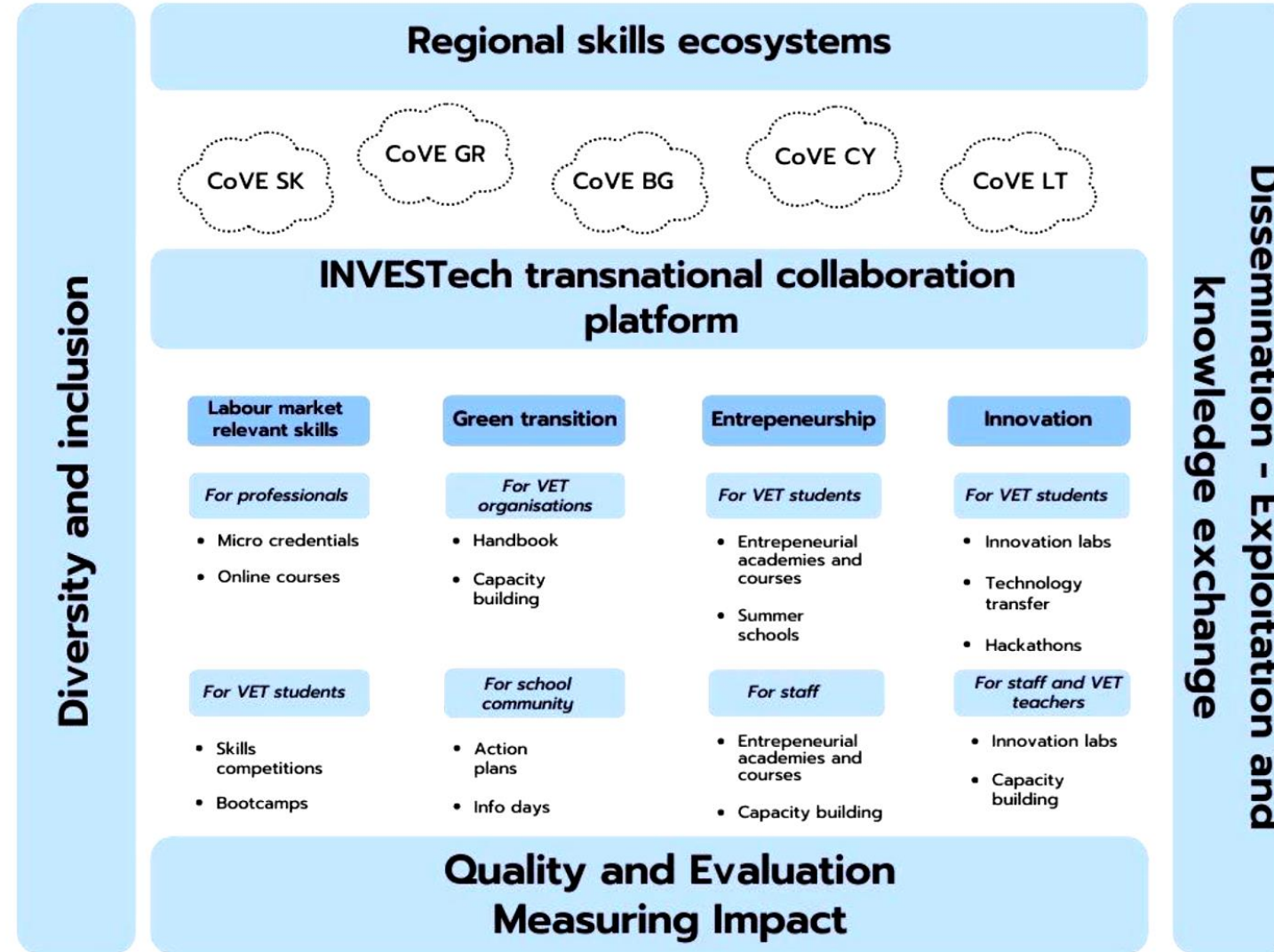
Development of Centres of Vocational Excellence (CoVEs)
in the ICT Sector



INVESTech project overview

- **Funding:** Erasmus+ CoVE initiative
- **Duration:** 1.3. 2024 – 29.2. 2028
- **Consortium:** 18 partners from Bulgaria, Cyprus, Greece, Lithuania & Slovakia
- **Coordinator:** Technical University of Košice (TUKE), SK
- **Focus:** Establishment of a **transnational CoVE in the ICT sector, supporting digital, green, and entrepreneurial skills.**
- **Main goal:** To support the establishment and development of a transnational cooperation platform of CoVEs in the field ICT
 - Create national CoVEs and connect them through a transnational platform.
 - Support innovation in teaching, learning, and industry cooperation.
 - Promote sustainability, diversity, inclusion, and micro-credentials in ICT.





Key components

Results and impact

Expected outcomes

- 5 national CoVEs + 1 transnational CoVE network.
- 12 new or updated ICT courses and microcredentials.
- 75 organisations engaged in cross-border cooperation.
- Strengthened cooperation between VET, higher education, and industry.

Impact

- Improved responsiveness of ICT education to labour market needs.
- Strengthened innovation culture in vocational institutions.
- Support for EU goals on digital and green transition.

Lessons learned & recommendations

Lessons learned

- **CoVE development** requires strong alignment among **all sectors / Quintuple Helix**
- Active **engagement** of **companies & regional authorities** is essential for relevance and sustainability.
- CoVE development must start from **real regional needs identified jointly** with employers.
- **Cross-sectoral partnerships** increase innovation and impact.
- A **clear governance model** and defined partner roles ensure efficiency and accountability.
- Continuous **communication** and **peer exchange** sustain engagement across countries.

Recommendations

- Integrate **ICT and sustainability competences** into all vocational programmes.
- Support **microcredentials and flexible learning** pathways to address fast-changing skills needs.
- Strengthen **teacher training and capacity building** in emerging ICT areas.
- Encourage **cross-border collaboration** among CoVEs to exchange resources and innovations.
- **Plan early** for long-term governance and financing beyond the project duration.

Conclusion

- INVESTech shows how CoVEs can transform vocational education in the ICT sector.
- The model links excellence, innovation, and inclusion.
 - CoVEs – international collaborative networks, bringing together VET providers, employers, & other partners to create "skills ecosystems"
 - Inclusive ICT & VET for all
 - Closing gender gaps in tech
 - Building excellence through diversity
- The approach can inspire other regions to build similar ecosystems for sustainable digital growth.

Thank you for your attention



For more information check INVESTech web