

Liga Baltina

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Advancing Skills Intelligences: Methodological insights from the assets and skills pulse projects

As labour markets evolve under the pressure of technological innovation and shifting strategic priorities, the capacity to generate timely, precise, and sector-relevant skills intelligence has moved from an analytical luxury to a practical necessity. The presentation provides insights into methodological and technological advances in skills intelligence developed through two EU funded projects: (i) [ASSETs+ project](#) focused on emerging technologies in defence-related sectors; and (ii) [SkillPulse project](#) which builds a broader framework for anticipating skills shortages across Europe.

Both projects apply novel approaches to skills data: combining diverse data sets (ranging from online job advertisements and the European Jobs and Skills Survey, to training curricula and expert inputs) using natural language processing and machine learning to extract, align, and interpret complex skills information. The presentation explores how these projects operationalise new methodologies to better align education and training systems with future labour market realities.

The ASSETs+ project used the combination of these methods to construct a dynamic Defence Technology Roadmap. This roadmap identified technology clusters, from AI and robotics to autonomous systems and cybersecurity, and classified them by maturity and defence relevance. Building on this, the project developed a multi-layered Skills Blueprint, mapping relationships among job profiles, technical and transversal skills, and enabling technologies. These insights informed the creation of over 40 targeted training programmes, including pilot courses at EQF levels 4 to 7, tailored for both current professionals and future entrants.

The SkillPulse project addresses an important challenge in European skills policy: the lack of consistent, replicable indicators for identifying skill shortages across countries and time. Building on the European Skills and Jobs Survey (ESJS2), SkillPulse developed an indicator of potential skill shortages, which was then benchmarked against real-time labour market data from Lightcast. This approach enables the distinction between labour and skill shortages, and captures changes in skill demand with greater temporal granularity.