ASSETs+: The Alliance for Strategic Skills addressing Emerging Technologies in Defence

June, 2023

Currently, more than three-quarters of companies in the European Union report difficulties in finding workers with the necessary skills, while only 37% of adults participate in regular training. The Defence sector is no exception to this trend. The rapid pace of technological evolution is drastically changing the labour market.

Developing educational content for the workforce of the near future is essential. Furthermore, many misconceptions surround defence activities; however, this industry consistently operates at the forefront of innovation, offering the most advanced technologies and a highly international and multidisciplinary environment.

The ASSETs+ project aims to dispel the myths and biases associated with the defence sector while designing new courses and challenges that effectively capture students' attention.

What is ASSETs+

The Alliance for Strategic Skills addressing Emerging Technologies in Defence (ASSETs+) was launched in January 2020, for a four-year period.

ASSETs+ is an **Erasmus+ project** -the European Union's programme to support education, training, youth and sport in Europe-, and member of the **Pact For Skills** a shared engagement model for skills development in Europe, whose objective is the development of competences and abilities, thus taking on, together with other participating actors, a key role in the action of European social policies.

Coordinated by the University of Pisa (Italy), the project is built on close collaboration between the Defence Industry, sectoral organizations, Higher Education Institutions, Vocational Education and Training providers and research centres, with 30 partners from 8 countries and a broad ecosystem of stakeholders.

ASSETs+ employs a blended, iterative approach that integrates data-driven analysis with human expertise

ASSETs+ aims to build a sustainable human resources supply chain for the European Defence Industry, that boosts innovation by both attracting highlyskilled young workers and upskilling its employees.

Core activities of the project:

- Develop a Defence Technology Roadmap, mapping key enabling technologies and defence-related applications. This activity entails:
  1. conducting a big data analysis of technical and scientific documents on skills for emerging technologies in defence, which will inform the design of education and training programmes;
  2. organising holistic and future-oriented brainstorming sessions, leveraging the expertise of our partners;

3. obtaining validation from industry experts to ensure alignment with the sector's needs; and
4. performing annual iterations to monitor current skillsets and identify emerging ones.

- Create a Skills Blueprint, classifying skills and job profiles for Defence technologies.
- Establish a Body of Knowledge, featuring an ontology of technologies, skills, knowledge, and jobs for defence.
- Develop a Strategy for developing human resources in the Defence sector, including an action plan on skills to enhance EU Defence capabilities.
- Design education and training programmes, by incorporating a pedagogical and technical framework for courses on Defence technologies.
- Develop education and training prototype programmes to ensure the advancement of human resources for Defence.

Technology & skills analysis

The analysis carried out within the context of the ASSETs+ project focuses on three primary technological areas in the defence sector: Robotics, Artificial Intelligence, and Autonomous Systems; C4ISTAR([1]) and Cyber Security.

The results are derived from an extensive process of data integration, incorporating information gathered through data-driven analysis, brainstorming sessions, project reviews, and validation from industry experts.

The work was also complemented by additional in-depth analyses on road mapping. Subsequently, the insights gathered led the team to develop professional profiles related to the defence sector that can be incorporated within the European Classification of competencies and occupations.

Lastly, relevant defence-related projects and initiatives at European, national, and regional levels have been monitored and mapped to provide an overview of skills development activities in the defence sector.

Education & Training

ASSETs+ is designing education & training programmes to provide trainees with new skills related to key technologies that will be expected in the Defence sector in the coming years, most notably: Artificial Intelligence, Robotics C4ISTAR and Cybersecurity.

The courses are built on active pedagogical approaches like projectbased learning, summer schools, challenges, e-learning. The ASSETs+ courses are focused on professionals (Defence & AeroSpace) as well as undergraduate and graduate students. With the perspective of implementing in different learning contexts, course providers will gather extensive information and suggestions to improve the content and format of the courses.

These free programmes are only available for partners of the ASSETs+ Consortium and members of our Network.

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[1] C4ISTAR is an acronym for Command, Control, Communications, Computers, Information/Intelligence, Surveillance, Targeting Acquisition and Reconnaissance

The ASSETs+ European Defence Challenge

The ASSETs+ European Defence Challenge is an open competition to attract young talent to the Defence industry and to encourage them to initiate a career in defence-related technologies.

All undergraduate or graduate students from all faculties in European universities, vocational education and training centres, and other institutions dedicated to education, can participate.

The topic is based on the emerging technologies and most in-demand skills, from a more technical and vertical perspective, to a more transversal one.

- I EDITION 2020-2021: Which technologies and technology bricks are particularly relevant for Europe's sovereignty in defence and security?
- II EDITION 2021-2022: Remote everything? To what extent can unmanned assets interact with humans in the field for defence operations?
- III EDITION 2022-2023: Security – threats identification and defence strategies.
- IV EDITION 2023: Leading through Complexity: Effective Management in Defence Environment.

442 students from 24 different countries and 116 different institutions, have already participated in the three previous editions of the Challenge.

Call for stakeholders

ASSETs+ primarily targets defence-related companies and defence industry representatives, individual experts and other stakeholders who have an interest in developing skills and competences in four main technologies: Artificial Intelligence, Robotics, C4ISTAR and Cybersecurity.

Why join the ASSETs+ network

- Enlarge your network in a prestigious context and enhance visibility
- Opportunity to participate in pilot implementations
- Attend the ASSETs+ courses free of charge
- Implement the ASSETs+ courses in your institution
- Develop new courses using the ASSETs+ methodology
- Help define the new ASSETs+ Sectoral Skills Strategy for the Defence sector
- Make connections and create meaningful information exchanges around the skills agenda of the Defence sector

What is required

- Voluntary involvement
- Engagement free of charge
- Optional participation in the online surveys, workshops and review of outcomes

How to join

- By simply filling out a 5 minute registration form on the ASSETs+ website https://assets-plus.eu/call-for-associated-stakeholders

ASSETs+ Consortium partners

Contact for more information:

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ASSETs+: Working to build a sustainable human resources supply chain for the European Defence Industry