



EU SPACE


European Commission: Skills in the Space sector

Overview

European Commission
DEFIS B.2 – Innovation & New Space – Space Defence

Policy framework

- ❑ **European Year of Skills**: In 2023 – 2024, to address **skills shortages**, promote **culture of lifelong learning** and foster **competitiveness** and **growth** with emphasis on the twin transition.

 - ❑ **European Skills Agenda – Pact for Skills**: Launched in 2020 to **mobilise a concerted effort among private and public partners** for **quality investment in skills** for all working age people across the Union, **respect** and uphold the following **key principles**:
 - Promoting a culture of lifelong learning for all;
 - Building strong skills partnerships;
 - Monitoring skills supply/demand and anticipating skills needs;
 - Working against discrimination and for gender equality and equal opportunities.
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Aerospace and Defence:

- Aircraft production;
- Space manufacturing and services;
- Defence products and technologies.

1. Skills pact for Aerospace and Defence, 10 November 2020
2. SPACE4GEO – Large scale skills partnership on Space Data, Services and Applications 25 April 2023



EU Space Strategy for Security and Defence

*By the end of 2024, the High Representative and the Commission, with the support of EDA, EUSPA and ESDC, should **improve the skills of public administration and industry** to further develop space services for security and defence.*

Objective	<ul style="list-style-type: none"> • Fulfill the need for skills on space for security and defence, thus avoiding / reducing future shortage of expertise, strenghtening EU know-how, enhancing the competitiveness of EU space industry. • Increase women's participation.
Added value	<ul style="list-style-type: none"> • Promote the exchange of best practices and define curricula at EU level • Build on the existing large-scale partnership for aerospace and defence skills of the Pact for Skills • Use EU initiatives (including Commission's regulations and standards) to promote equal opportunities and foster diversity and inclusivity.
Actions	<ul style="list-style-type: none"> • Mapping of space security and defence educational and training activities • Launch of the Large-Scale Skills Partnership on Space Data, Services and Applications on 25/04/2023 • Development of security/defence related programmes in the EU Space Academy • Discussion with NewSpace actors



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Ongoing Actions:

- Horizon Europe
- Space Programme
- Erasmus +

- ❑ Supports DEFIS in analysis of EU-funded projects, creation and dissemination of scientific knowledge, consultation, communication.
- ❑ EU Space Education:
 - Analyse current main curricula and courses available and the skills demanded by R&I and industry in the space sector.
 - The goal is to provide recommendations to ensure alignment between the needs and the offer under consideration of emerging trends in the sector.

- ❑ Overview of current space curricula to identify space-related education and training to improve future career pathways.
- ❑ The final output is to:
 - Provide recommendations of actions to be taken towards better alignment
 - Characterize the demand for EU space industry in next 10-15 years
 - Measure average time and costs for a degree leading to a career in the space sector



CASSINI Hackathons & Mentoring



- ❑ Every semester at 10 different locations across Europe.
- ❑ Past editions on Space for International Development & Humanitarian Aid, Space for Defence & Security, Space for Financial World and others.
- ❑ Winners get prize (depending on each local organizers).
- ❑ Participants have access to tools, training and support – data access, cloud infrastructure, code repository and others.
- ❑ 7th Edition on Environment & Green Transition to be organised on 13-15 September 2024.



CASSINI

Hackathons & Mentoring



EU Space Academy Learning Platform

Free online training to space entrepreneurs



This **free** online training is open to all individuals, start-ups, entrepreneurs and SMEs who want to learn the ins and outs of building a space application business.



It offers comprehensive training modules ranging from the **technical details** of the EU Space Programme and its various components to **practical business skills**.



Aimed at individuals at all career stages and collaborates with organizations to develop innovative solutions for the space industry.



Offers currently 27 courses covering topics such as EO, SatNav, Space Debris, Cybersecurity, etc.



New modules under development: **space for security**

Large Scale Partnership on space data, services and applications

- Leverage on the results of the [EO4GEO](#) Blueprint project on space geoinformation;
- Adopt a wider sectoral coverage to embrace the **entire downstream segment of the space economy** that includes Earth Observation, geoinformation, positioning, navigation and secure connectivity;
- Propose a set of activities for **upskilling and reskilling** on the use of space-based data, services and applications including for **security and defence needs**;
- Complementary to the existing **Aerospace and Defence skills partnership**;
- Currently **50+ partners** from academia, training centres, industry, associations, and other entities.

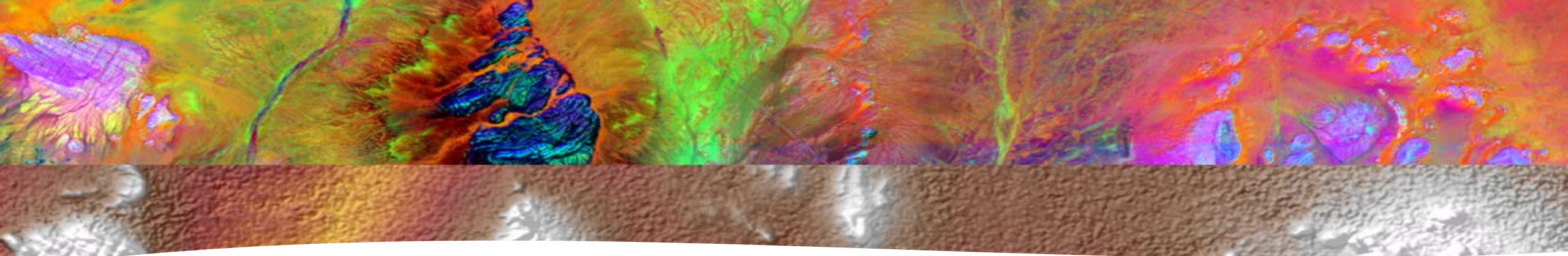


space4geo

Empowering space data users

Large Scale Partnership
on Space Data, Services and Applications





SPACE4GEO – Objectives & Commitments

- Ensure continuous **exchange** and **cooperation** among stakeholders on skills development and requirements
- Establish a shared understanding on the **skills needs** and **capacity requirements**
- **Bridge the skills gaps and mismatches** and thereby supporting **user uptake** of space data, services and applications

Specific Commitments:

- To **monitor the occupational supply and demand** to identify the skills and competences required and provide feedback on the evolving sector needs.
- To **help and guide candidate learners** in their skilling, upskilling and reskilling efforts, supporting them to access quality training.
- To facilitate and stimulate a **more integrated and inclusive approach on skills development** across different value chains (vertical sectors), including local and regional level.
- To **encourage citizens' engagement**, citizens' science practices, recognizing the space & geoinformation applications' value in everyday aspects of life, and attracting new talents for emerging professions.



- ❑ ERASMUS+ Blueprint project (2024 – 2027) for the development of **innovative resources for education and training** to bridge the gap between the supply and demand of skills in the downstream space sector.
- ❑ 28 partners from Academia, VET providers, associations of governments, and representatives of industry companies.
- ❑ **Objectives:**
 - Identify **skills gaps** and **mismatches** and define a mid- and long-term **Sector Skills Strategy** to bridge the gap between the supply and demand in the evolving downstream space sector.
 - Design and deliver **new curricula and training programmes** for the development of advanced skills in space-related fields and the provision of education and training activities.
 - Enhance **collaboration, exchange of knowledge** and **best practices** within the downstream space ecosystem.





Skills Intelligence: Assessment of the existing skills and identification of gaps.



Skills Strategy: analysis on how major trends are expected to impact skills needs, and propose list of activities, milestones and expected outputs.



Training: Development of training material related to:

- Earth Observation & Geoinformation,
- Positioning Navigation & Timing,
- Satellite Communication.



Open Space Academy: Embedding skills development in academic activities and providing guidance to candidate learners.

UNIVERSEH



- ❑ **The European space University for earth and humanity.**
- ❑ Alliance of 7 EU Universities (LU, FR, IT, PL, SE, DE, BE).
- ❑ Project bringing together European students, academics, researchers, businesses, regional and civil society stakeholders with focus on space.
- ❑ Aimed at creating a **comprehensive higher education for the New Space** by **developing courses** at partner universities.
- ❑ The project supports **entrepreneurship** and **innovation** in the space sector, offers **multidisciplinary courses**, develops digital, open science, and transferable skills, and **strengthens the European Union's global leadership in the space domain.**





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New initiatives



CASSINI Job placement scheme



- ❑ Aimed at **university students and young graduates** to give them experience through internships with particular focus on **new space** companies.
- ❑ **Space Career Launchpad** – a matchmaking platform where supply meets demand.
- ❑ **Incentive scheme** for students to carry out internship in space companies across EU.
- ❑ **Pilot phase** as a part of the STARS*EU project, featuring industry associations such as SME4SPACE and Eurospace.

Tentative launch date – June 2024

- ❑ Targeting **teenagers** (age group 14-18), to **spark interest to pursue a vocation in the space sector** by:
 - Offering an exciting **camp for cooperation, learning and sharing experiences**,
 - Providing a comprehensive curriculum where participants will learn about the **space industry**, the **use of space on Earth**, and the European space programmes.
 - Creating **international networks among young people**,
 - Organising a **hands-on competition** allowing the participants to test their new skills, create ideas for new solutions, and cooperate in teams.
- ❑ **Locally organized** with the support of local ecosystem, from companies to educational/ training entities and other relevant actors, as it is the case with CASSINI Hackathons.

Tentative date for first Space Camp – mid-2025.



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Thank you

