ESA Education programme:

Inspiring and Engaging the next generation !

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ESA Education Programme - Objectives and Relevance

School - **STEM programme:** to use space as a teaching and learning context to enhance youngsters' literacy, skills and competences, as well as core values and attitudes in STEM; to inspire and to motivate young people to pursue studies and careers in STEM.

University - **ESA Academy:** to equip the future workforce with 21st century skills and competences; to enhance the employability and to stimulate creativity, innovation and entrepreneurship.

"The challenge is to offer European talent attractive opportunities within Europe and to adapt higher education curricula to the skills required for the future. In this respect, ESA is strongly committed to working with its partner organisations to increase the number of European students in STEM fields by 20%, by means of much stronger inspirational outreach."

Today's Programme structure

ESA Education Programme

STEM

- Primary
- Secondary

esa academy

- University

Teachers & school pupils

esero

Space is the context

Students

Space is the subject

ESA STEM programme

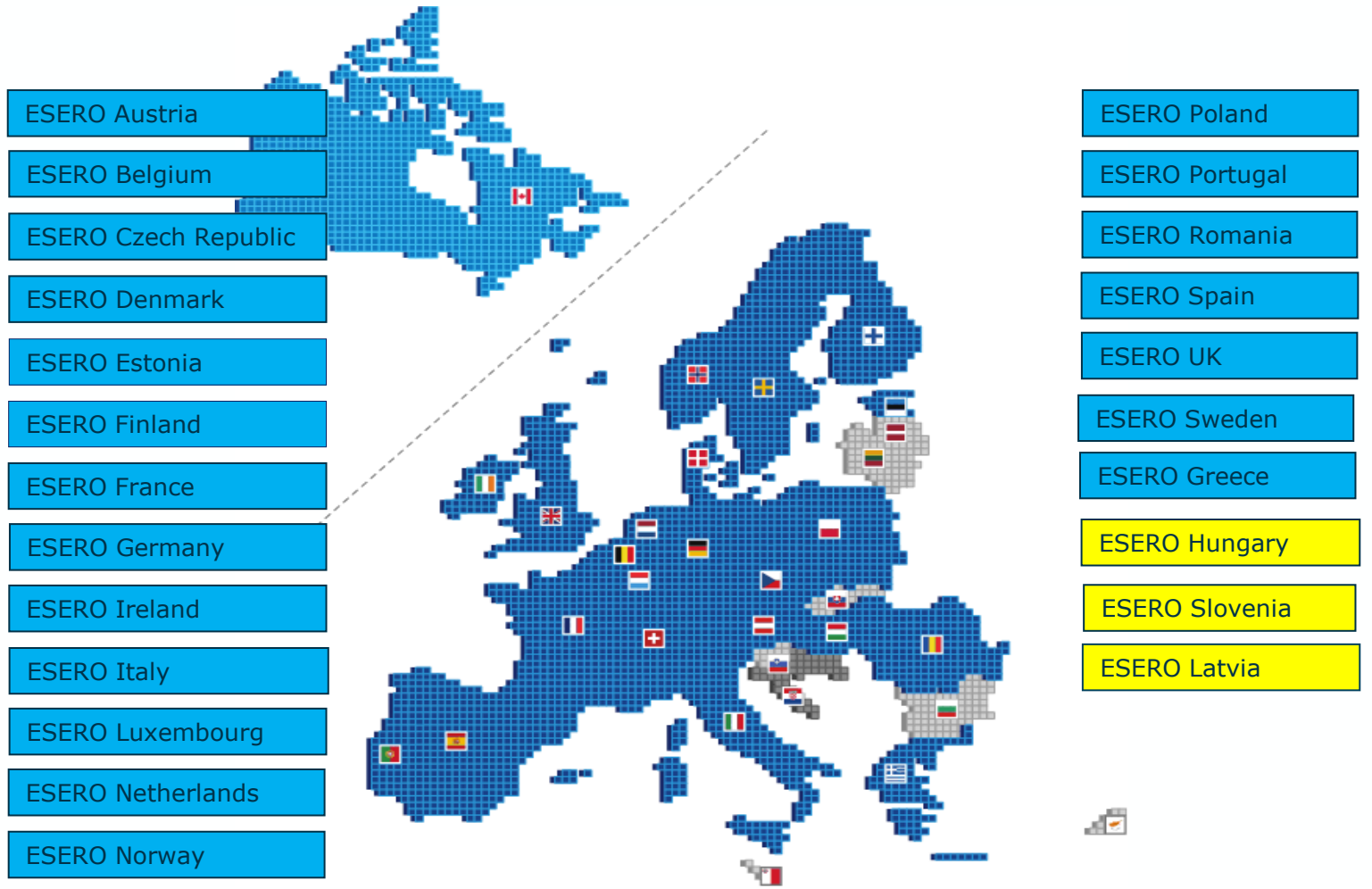
	National component	International component
Formal	• National teacher training • Tailored classroom resources • National participation in ESA-led school projects • National school projects	• International teacher training (ESEC and online) • ESA-led school projects • Management of ESA/ESERO Working Groups Pan-European classroom resources, incl. school-projects) • Management of individual ESERO contracts • Various collaborations (e.g. ISEB, EIROForum, UN/FAO, etc…)
Informal	• Various ad-hoc national collaborations led by ESA with ESERO support (e.g. astronaut missions, …)	• ESA Kids • Various collaborations (e.g ECSITE,…)

ESERO Network

- Est. 2006
- **20 ESERO**

Operational

Launch expected in 2023



International school-level school projects

- Multidisciplinary school projects
- Recurring every school year!
- Tailored at national level to the national needs

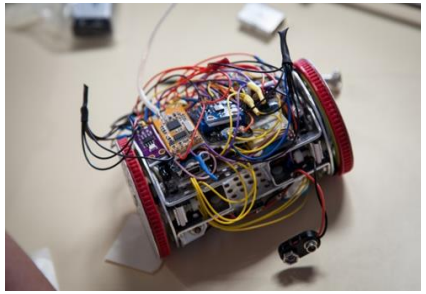
→ MISSION X
TRAIN LIKE AN ASTRONAUT

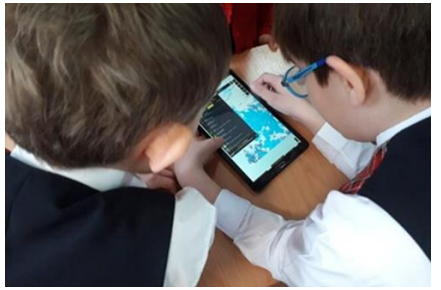
ASTRO PI

→ CANSAT

CLIMATE DETECTIVES

→ MOON CAMP






esa

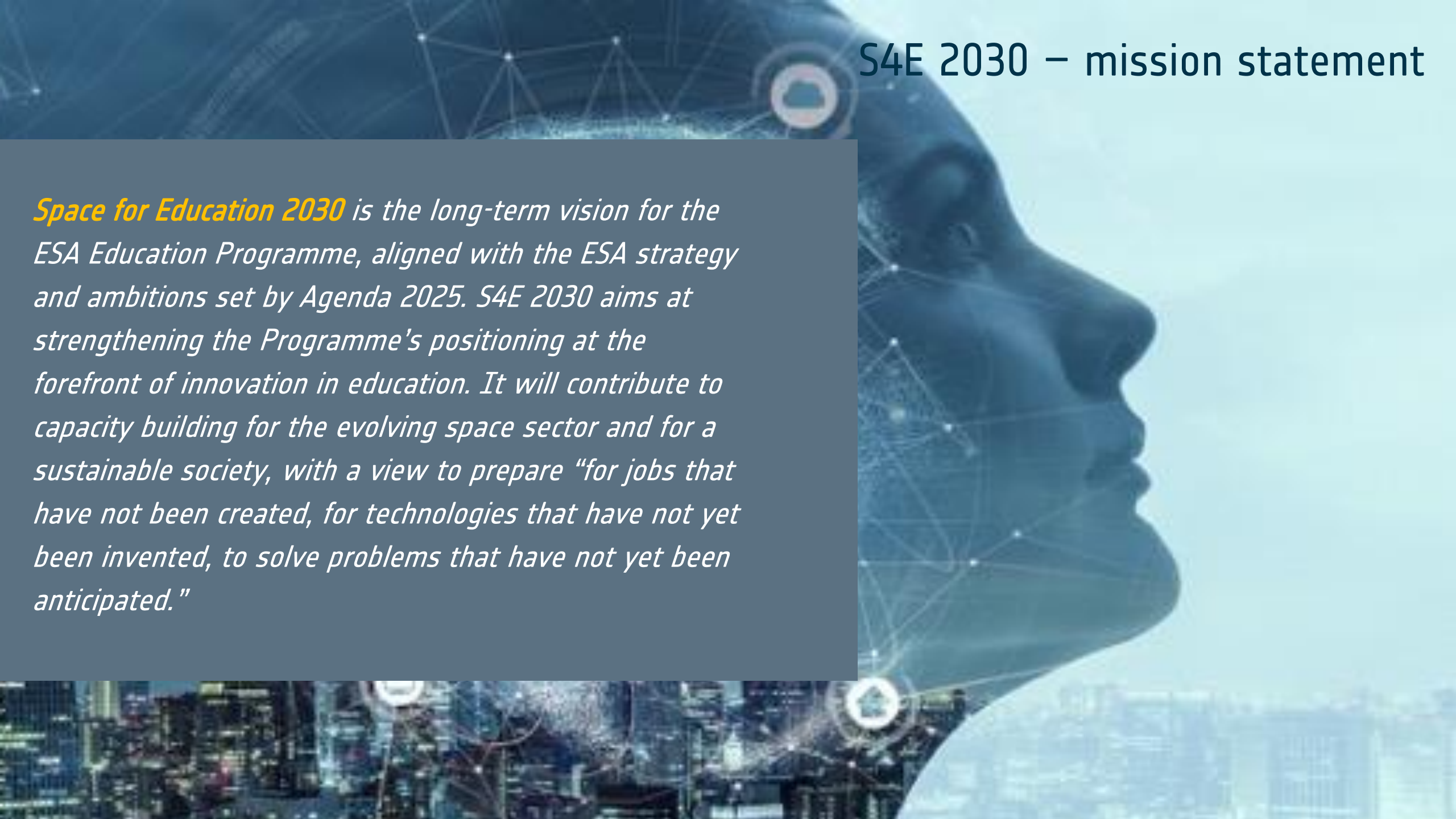

teach with space
esa
teach with space

Figures impact ESERO Project 2021

	Member States	Students	Teachers
ESERO training	AT, BE, CZ, DE, DK, ES, FI, FR, IE, IT, LU, NL, NO, SE, PT, RO, PL, UK	1,976,280 through the trained teachers	49,407
ESERO events	AT, BE, CZ, DE, DK, ES, FI, FR, IE, IT, LU, NL, NO, SE, PT, RO, PL, UK	201,320	23,139
ESERO promotion channels (online)	AT, BE, CZ, DE, DK, ES, FI, FR, IE, IT, LU, NL, NO, SE, PT, RO, PL, UK	--	601,801
Total ESERO outreach	AT, BE, CZ, DE, DK, ES, FI, FR, IE, IT, LU, NL, NO, SE, PT, RO, PL, UK	2,177,600	674,347

Future evolution

S4E 2030 – mission statement



Space for Education 2030 is the long-term vision for the ESA Education Programme, aligned with the ESA strategy and ambitions set by Agenda 2025. S4E 2030 aims at strengthening the Programme's positioning at the forefront of innovation in education. It will contribute to capacity building for the evolving space sector and for a sustainable society, with a view to prepare "for jobs that have not been created, for technologies that have not yet been invented, to solve problems that have not yet been anticipated."

STEM Programme: we're evolving

- A programme keeping STEM didactics innovation at its core, continuing to pursue **R&D in the application of the real practice of science in education**, promoting **interdisciplinarity**, reinforcing **role modelling** and **career awareness as linked to 21st century skills** and to the **emerging workforce skill needs**
- An enlarged, diversified audience: in the formal education thread, **opening to early-ages education** (3-6 y/o); expanding to the **non-formal education settings**; explicitly addressing **diversity**; **engaging parents** as key players in the education path of their children; reinforcing the link between **education and inspiration** taking benefit from informal education
- New subject knowledge, skills and competences: reinforcing **AI, coding, robotics, climate & environmental sciences; adding cybersecurity, entrepreneurship and system thinking through the use of downstream space themes and societal challenges,** and more
- New methods: integration of didactics-sound **e-learning, serious gamification** and **new technologies (AR/VR)** in the delivery of learning activities
- **Collaboration** with ESA Programmes, HR, Communication, national space actors, special communities & NGOs, and high-visibility/high-impact international partnerships
- Increased impact: **opportunities for higher numbers of participants**
- Maximum possible synergy across activities

ESA Education links & contacts

- **ESA Education web portal: www.esa.int/education**
- **ESERO national contacts: www.esa.int/education/esero**

Social Media

- **ESA Education on Facebook: Facebook.com/ESAEducation**
- **ESA Education on twitter: @ESA_Education**
- **ESA Education on flickr: ESA_events**
- **ESAKids web portal: www.esa.int/kids**
- **ESAkids facebook and twitter: PaxiESAKids, #Paxi_ESAKids**