



CTNA turns 10!

Cluster Tecnologico Nazionale Aerospazio





**The National Aerospace Technological Cluster (CTNA)
is the leading competitiveness cluster
in national aerospace research and innovation ecosystem.**

Our Mission



Mobilise the excellence of the industrial and innovation system on strategic themes



Promote the knowledge exchange



Optimise the use of available public economic resources



Improve the ability to attract investments and talents



Boost sustainable economic growth



Who we are

The CTNA is a non-profit Public-Private Association.

- 15 Regional Technological Districts from 14 Italian regions: Abruzzo, Basilicata, Campania, Emilia Romagna, Lazio, Liguria, Marche, Lombardia, Piemonte, Puglia, Sardegna, Toscana, Umbria, Veneto.
- 2 Large Industries (Leonardo and Avio Aereo)
- 3 National Research Centres (CNR, CIRA, INGV)
- 1 The Federation of Aerospace and Defence Industries (AIAD)
- 1 The Italian Space Agency (ASI)



The Italian Aerospace sector in a snapshot

Region	Name of the cluster	SMEs	Large ind.	Univ.	RTOs	Total	Turnover B€	Employees including supply chain
Abruzzo	Dominio ICTA Aerospazio Abruzzo	15	2	1	3	21	na	3500
Basilicata	CLAS Cluster Lucano Aerospazio	21	2	1	4	28	na	900
Campania	DAC Distretto Tecnol. Aerospaziale Campania	119	22	5	13	159	2,8	13000
Emilia Romagna	IR41 Cluster Tecnologico Aerospaz. Emilia Romagna	27	1	2	1	30	0,5	2000
Lazio	Lazio Innova Distretto Tecnol. Aerospaz. Lazio	250	24	5	10	289	5	23500
Liguria	SIIT Distretto tecnologico ligure sistemi intelligenti	200	14	1	4	219	na	6000
Lombardia	Lombardia Aerospace Cluster	209	11	4	2	227	6	16500
Piemonte	Distretto Aerospazio Piemonte	280	9	3	6	298	3,9	14800
Puglia	DTA Distretto Tecnologico Aerospaziale Puglia	80	9	3	6	98	1,5	7000
Sardegna	DASS Distretto Aerospaziale Sardegna	17	5	2	3	27	na	2013
Toscana	Gate 4.0 Advanced Manufacturing 4.0	30	6	3	4	43	0,35	2500
Umbria	Umbria Aerospace Cluster	25	3	1	-	29	0,4	3100

The data refers to **September 2021** and do not include the new members, associated in 2022

Each Regional Technological District promotes its individual strengths, all of which contribute towards strengthening Italian aerospace competencies.

Our Activities

CTNA's strategic vision in terms of technology scenarios and future perspectives is described in the **Three-year Action Plan**.

Developing Technological Roadmaps

Aeronautics Roadmap



The aeronautics sector will have to face particularly complex challenges, having to propose solutions capable of satisfying demanding objectives such as reducing the environmental impact and the other priorities of the EU Framework (2021-2027), combining them in a highly competitive context and strongly affected by the pandemic and geopolitical crisis.

The three objectives on which Cluster CTNA focuses its efforts are:

Environmental sustainability: the new aircrafts and helicopters will have reduced emissions thanks to innovations from the aeronautical, engine and systems industries.

Digitalisation: Digital transformation will improve aerial platforms, air traffic management, the production and operations chains. This includes cyber security.

Competitiveness and Safety: the architectures of the new generations of products will have to be competitive on international markets, while continuing to guarantee high safety standards.



Space Roadmap

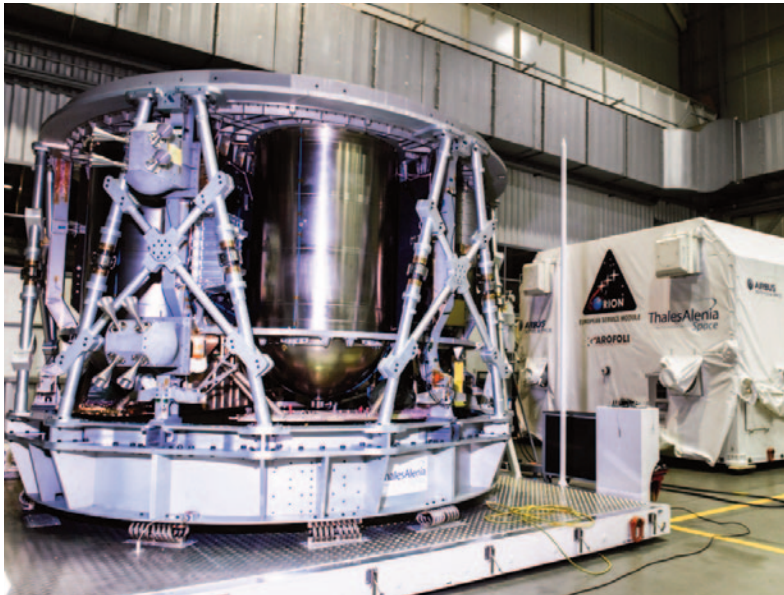
Italy is one of the very few countries in the world to have a complete value chain in the space domain.

The space roadmap has been developed in line with the strategy of the Italian Space Agency, the National Research Programme (PNR), the European Space Agency and European Commission Programmes.

The CTNA aims to seize the significant growth opportunities offered by **The Space Economy**:

Emerging Technologies development to support Italian space priorities.

Value chain creation, advancing the “enabling” space infrastructures (upstream), to lead the generation of innovative “enabled” products and services (downstream).




6 Working groups, so many challenges!

- Reduced Crew Operations / Single Pilot Operations
- Innovative propulsion for Regional class aircraft
- New Design & Manufacturing, Assembly, Integration and Test methodologies
- Advanced Data Acquisition, Transmission and Processing Systems
- Technologies for Robotics
- Integrated Services and Applications on Earth Observation, Navigation and Telecommunication

Planning for Aerospace Education

The CTNA has launched a number of projects aimed at stimulating interest in technical-scientific disciplines (STEM), including their integration with arts and creativity (STEAM) by young students, with a specific focus on girls, and the wider public in order to spread the aerospace culture and highlight professional opportunities.



Space Dream: a national cultural event that has already involved 20.000+ students. Students are provided with a platform with papers, videos, testimonies and experiments concerning physics, space and technological applications. Based on what they have learned, they prepare a work of arts which is evaluated by an independent commission.

Space Olympic Games: an initiative for students promoted as part of the National Space Day, established by the Presidency of the Council of Ministers on December 16, 2021, where classes compete on space-themed tests and problems.

In the near future, there is the creation of the "CTNA Aerospace Academy", in which all the initiatives for students from primary school to universities are collected in a sort of "academy of talents".

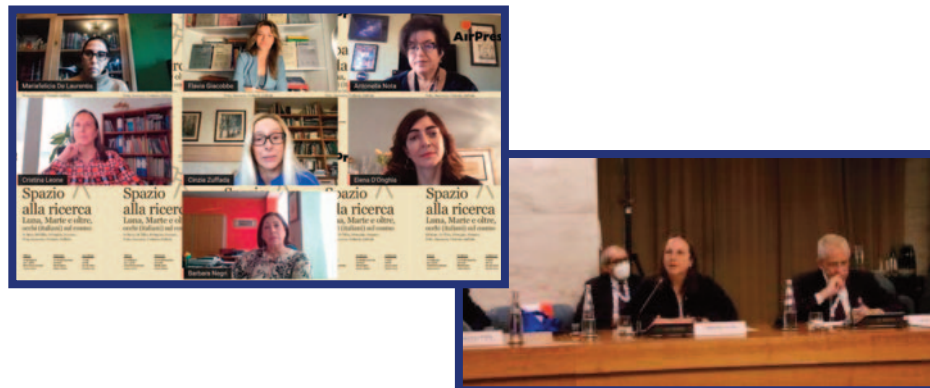
Students can dream to become astronauts, design the next airplane, manage a spacecraft from mission control or explore the Moon.



Events & Networking

CTNA events and workshops offer the opportunity to intervene on topics of strategic importance for business and development, to expand the CTNA network with innovation stakeholders and high-level decision makers.

- **From May 2022:** Roadshow among the CTNA Regional Technological Districts to discuss with the local administrations, large enterprises, SMEs and academia on the prospects of aerospace, enhancing the excellence of the territories and strengthening synergies at national level.
- **September 2022:** IAC Conference
- **June 2022:** High-level Panel with the space agencies of the IILA member countries.
- **February 2022:** Live talk on Space Research: Moon, Mars and beyond, (Italian) eyes on the cosmos.
- **January 2022:** Panel Debate on Space Economy for the competitiveness and social development of the country, in the frame of Next Generation EU.





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