Beyond Exploration 2026

23/24/25 September

Legend

- Agriculture & Food
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- Industrial Diversification and Transition to the Space Sector
- Networking Events
- Resources Exploitation and Sustainability
- Space Laws
- Space Physiology, Healthcare, Wellness, Pharmacy
- Space Sciences & Earth Applications
- Unmanned Operations – Human and Autonomous Exploration

Wednesday 23 September
10:30 - 11:45

Exploration Arena, Hall C1

Space Sciences & Earth Applications
Click here

Beyond the Lab: Space It Up! and the new perspectives of the Italian space industry

Organized by: SCARL Space It Up!

Language: English

The panel presents the main results achieved within Space It Up!, the SCARL established as a Hub for the homonymous project funded by the Italian Space Agency (ASI) and the Ministry of University and Research (MUR), which since 2024 has brought together universities, research centres and companies around the shared objective of **developing technologies for the advancement of the Italian space sector**, making the supply chain competitive on the international stage.

Building on the results developed in the first 24 months since the project's launch, the session proposes a collective reflection on how **space research** represents a tangible value for industry: not only for those who have always operated in the sector, but also for those who are now exploring how to enter it and benefit from it through non-traditional application pathways that are taking shape precisely thanks to initiatives such as this one. The reflection will include examples of new entry routes into the sector identified through Space It Up!, with particular focus on artificial intelligence-based tools.

Five different voices – from universities and research centres to businesses, from startups to institutions – will engage in dialogue around the project's key themes to outline Italy's direction in the space sector and the opportunities that have opened up for the new profiles wishing to be part of it.

Wednesday 23 September
16:00 - 17:30

Decortech Conference Arena, Hall B5-D5

Cross-Cutting Events
Click here

Advanced ceramics: a materials platform for next generation aerospace and beyond

Organized by: Institute of Science, Technology and Sustainability for the Development of Ceramic Materials (ISSMC) of the National Research Council (CNR), in collaboration with TECNA

Language: English

To what extent might the advanced ceramics and their composite variants emerge as game-changing leaders in next-generation aerospace extreme-environment technologies and beyond? This contribution is meant to introduce a non-professional audience to some of the current frontier topics on advanced ceramics manufactured as bulk or composite, for aerospace and beyond. It is expected that the potential of advanced ceramics for extreme-environment technologies can be unlocked by leveraging their favorable property combination of exceptional thermophysical properties like high melting point, lightness and strong resistance to chemical degradation and oxidation under extreme conditions.
To refer to something that is widely talked about today, speed is the name of the game when it comes to modern aerospace priorities. Aerospace engineers have long sought materials able to thrive where airflow becomes plasma and oxidation accelerates beyond intuition. Governments around the world are investing “mountains of money” to develop components capable of enabling airborne vehicles to travel fast worldwide. While such ambition has been a nebulous dream for decades, recent advancements in ultra-high temperature ceramic matrix composites bring that dream closer to reality.

Wednesday 23 September
16:30 - 17:15

Main Stage, Hall C1

Cross-Cutting Events
Click here

Non-Space Companies and the LEO Economy: Making Business with Microgravity

Organized by: ESA Technology Broker

Language: English

This panel will explore how non-space companies can access and leverage microgravity environments to develop innovative products, processes and services. Representatives from ESA, ASI, industry and Commercial Service Providers will present concrete opportunities enabled by the programmes made available by the European Space Agency and the Italian Space Agency.
The discussion will highlight the main benefits of microgravity for research and commercial applications, including accelerated R&D cycles, novel material properties, and unique biological processes. Practical aspects such as access conditions and support mechanisms will be addressed, alongside real use cases and emerging business models. Particular attention will be given to high-potential sectors such as agrifood, advanced materials, and life sciences, showcasing how companies can translate microgravity-based experimentation into viable market opportunities on Earth and in orbit.

Wednesday 23 September
18:00 - 19:00

South Hall

Networking Events
Click here

BEX Opening Aperitif

Language: English

Keynote Speech: Visionaries, Creatives, Storytellers of Tomorrow
A unique talk exploring how imagination, creativity and narrative shape the future of space and innovation, inspiring new perspectives across sectors.

Following: opening aperitif

Thursday 24 September
10:00 - 11:00

Exploration Arena, Hall C1

Agriculture & Food
Click here

Space and Urban Farming: Growing Life Beyond Earth, Innovating for Our Planet

Organized by: ENEA - National Agency for New Technologies, Energy and Sustainable Economic Development

Language: English

Significant know-how has already been developed by academia and industry in the field of controlled environment agriculture, soilless cultivation systems, and space farming technologies. The round table aims to highlight the current state of the art in research and technological development for food production in extreme, isolated, and resource-constrained environments, together with the related innovation and investment opportunities for terrestrial applications both in space and on Earth.
The round table will focus on the prospects and challenges of advanced cultivation systems designed to ensure food autonomy, resource efficiency, and psycho-physical well-being in remote and confined environments, The event will include a focus on the experiences developed at Concordia Station in Antarctica, recognised by ESA as one of the closest terrestrial analogues to long-duration human missions in isolated environments.
Technologies such as hydroponics, aeroponics, vertical farming, and fully controlled environment agriculture are increasingly demonstrating their strategic value for producing fresh food while minimising water, nutrient, energy, and land consumption. These systems have important applications for climate-resilient agriculture, urban and peri-urban farming, remote infrastructures, and future exploration scenarios.
Despite major advances in research and industrial development, transforming these technologies into autonomous, scalable, and highly reliable systems for long-duration operations in isolated environments remains a significant challenge. In this context, Concordia Station represents a unique international testbed for validating closed-loop cultivation systems, resource recovery strategies, crew well-being approaches, and sustainable food production technologies under extreme environmental conditions.
The round table will explore how soilless cultivation, biofortified crops, circular resource-management technologies, and controlled environment agriculture can contribute both to supporting human life in space habitats and isolated environment and to generating valuable innovations for sustainable agriculture on Earth.
The session will feature a live connection with Concordia Station in Antarctica, offering a real-time perspective from one of the world's most extreme and isolated research environments.

Thursday 24 September
10:00 - 10:45

Diotallevi 1 Room, South Hall

Cross-Cutting Events
Click here

From Space to Earth and Back: Business Opportunities and ESA Funding Instruments

Organized by: ESA Technology Broker

Language: English

During the panel, space and non-space companies will present their technology transfer projects, highlighting the de-risking instruments made available by European Space Agency through the Spark Funding Open Calls, in collaboration with the Italian Space Agency.
Lessons learned at both programme and project level will be shared alongside concrete success stories, spanning applications in sport and well-being, agrifood and smart cooking, transportation, and technical textiles.

Thursday 24 September
10:00 - 11:00

Main Stage, Hall C1

Unmanned Operations – Human and Autonomous Exploration
Click here

Technology Transfer between Space and Deep-Sea Ecosystems: Analogies and Differences in Space and Underwater Innovation

Organized by: BEX – Beyond Exploration Expo, in collaboration with ASI – Italian Space Agency

Language: English

Space and underwater environments share many technological and operational challenges including extreme conditions, remote operations, autonomy, safety, communications, life-support systems, robotics, monitoring systems and mission planning. Despite their different physical and regulatory contexts, both domains increasingly rely on advanced infrastructures, resilient systems and data-driven operational capabilities.
This session will explore the growing technological convergence between space and maritime domains, with a particular focus on deep-sea ecosystems, highlighting how methodologies, technologies and know-how can be exchanged, adapted and integrated across domains. The discussion will also address emerging opportunities for industrial collaboration, cross-domain innovation and dual-use applications.

Thursday 24 September
11:00 - 13:30

Diotallevi 1 Room, South Hall

Unmanned Operations – Human and Autonomous Exploration
Click here

Empowering Public Security and Emergency Management trough Satellite data and Unmanned Systems

Organized by: BEX Scientific Technical Committee

Language: English

Risk prevention and decision support in complex scenarios — including natural emergencies, public safety and investigative activities — have greatly benefited from the intelligent use of satellite data, integrated with aerial, ground, surface and underwater drone systems.

The event will serve as a platform for dialogue among institutions, operators and stakeholders, with the aim of enhancing synergies between space, autonomous technologies and public security, strengthening the effectiveness of national prevention, response and resilience capabilities.

Thursday 24 September
11:30 - 13:00

Main Stage, Hall C1

Entrepreneurship, Economy & Finance
Click here

Where Capital Meets Space Innovation

Organized by: BEX – Beyond Exploration Expo, in collaboration with Plug and Play Tech Center

Language: English

Introduction & Concept
The space economy is unlocking cross-sector opportunities, yet a structural gap between innovation and capital persists.
Space Finance Arena bridges this gap: a deal-oriented platform connecting startups, SMEs, investors, financial institutions and insurers. Not a conference, but a business activation environment where investment opportunities are shaped and partnerships take form.

Why this format is different
A deal-driven platform that brings together venture capital, banks, insurance and public institutions, combining reverse pitching, real founder experiences and a strong focus on bankability, scalability and cross-border opportunities across Europe.

Objectives
- **for companies**: access capital and strategic partners, better understand investment criteria, and strengthen credibility and investment readiness.
- **for investors**: access qualified deal flow and identify scalable opportunities.
- **for banks**: explore new financing models and engage with high-growth sectors.
- **for insurance players**: position within an emerging market and develop solutions for space-related risk and underwriting.

Program

Market Landscape & Capital Mapping
Overview of investment dynamics, capital stack and key trends.

Roundtable: How Space Startups Really Get Funded
Discussion on investment criteria, timelines and funding strategies.

Founder Case
One or two real-life examples of start-ups and scale-ups among those present, who will share their journey of growth and fundraising, including the challenges, mistakes and lessons learnt.

Investor Reverse Pitch
Investors present ticket size, sectors and access to deal flow.

ESA INCUBED current and upcoming funding opportunities
Eligibility criteria, co-funding mechanisms and real case examples from the InCubed programme for startups, SMEs and non-space companies.
At the end of the session, participants will have the opportunity to request a direct meeting with ESA within the Innovation District.

Q&A

Following Networking Lunch

Thursday 24 September
14:00 - 16:15

Main Stage, Hall C1

Industrial Diversification and Transition to the Space Sector
Click here

Advanced Manufacturing for Space: From Earth Qualification to In-Orbit Production

Organized by: BEX Scientific Technical Committee

Language: English

The workshop explores the concrete pathways through which non-space companies can access the Space Economy, combining regulatory, industrial, and technological aspects.

It will examine the main requirements for entering the sector - including certifications, standards, insurance aspects, and risk management - alongside examples of technology transfer from advanced industries such as automotive and motorsport.

The objective is to provide a clear and practical guide for companies interested in diversifying into the space sector, highlighting both the enabling conditions and the opportunities offered by skills and technologies already developed on Earth.

Keynote speech

1st Session: From Market to Space: Essential Accreditation Elements
Analysis of the key requirements for accessing the space sector, including certification processes, insurance frameworks, and risk management for companies operating in the Space Economy.

2nd Session: From Racing to Aerospace: Technology Transfer in Composites, Light Alloys and Additive Manufacturing
Analysis of the transfer of technologies and capabilities from the automotive and motorsport sectors to aerospace, with a focus on advanced materials, additive manufacturing, and solutions for extreme environments.

Thursday 24 September
14:00 - 15:30

Diotallevi 1 Room, South Hall

Space Physiology, Healthcare, Wellness, Pharmacy
Click here

Biospace economy. New opportunities for Physiology, Healthcare, Wellness, Pharmacy - Session I

Organized by: CNR ISOF - Institute for Organic Synthesis and Photoreactivity of the National Research Council

Language: English

After decades of human activity largely confined to low Earth orbit, space exploration is once again moving toward deep space. With the successful completion of the Artemis II mission and the planning of future missions to Mars, human presence beyond Earth orbit is becoming a concrete objective. Achieving this ambition requires addressing **unprecedented challenges that extend well beyond engineering and propulsion, placing biomedical and physiological questions at the center** of space exploration strategies.

Prolonged exposure to cosmic radiation, combined with the effects of microgravity, has profound impacts on multiple organs and physiological systems. Sustained living and working in space therefore demand a new level of understanding, monitoring, and control of the biological processes that govern human health under **extreme and potentially lethal conditions**. These challenges are redefining priorities for space missions and, at the same time, opening new markets and innovation pathways on Earth.

As a result, space-related technologies are rapidly expanding in scope and impact, creating strong momentum across materials science, advanced manufacturing, and enabling technologies aimed at preserving, monitoring, and enhancing human health and wellbeing. **Innovations originally driven by space life sciences are now converging with biotechnology, medicine, and pharmaceutical research**, generating transformative opportunities for both in-orbit applications and terrestrial healthcare systems.

The event aims to foster a high-level dialogue among academia, SMEs, and major industry players on how the integration of materials science, advanced manufacturing, physiology, bioengineering, and technologies can:
1) ensure astronaut safety and wellbeing during long-duration microgravity and deep-space missions;
2) offer new opportunities in this emerging BioSpace economy for companies already proficient in the Healthcare, Wellness, Pharmacy business.
Beyond showcasing selected success stories, the session will highlight how existing industrial capabilities and research approaches can be translated into new applications enabled by microgravity and space conditions. The discussion will connect **spaceflight and infrastructure providers with biomedical, pharmaceutical, and biotechnology stakeholders**, while also addressing the downstream benefits for healthcare on Earth with a focus on radiation-shielding materials, health-monitoring sensors and telemedicine systems, AI-driven data analysis, bioelectronics, in-space biomanufacturing, and cell-based assays.

The event will be structured into two interactive sessions. Each session will open with short, inspirational talks designed to set the scene and stimulate discussion, followed by a moderated panel and open Q&A aimed at encouraging exchange, cross-sector collaboration, and concrete industrial perspectives.

Thursday 24 September
14:00 - 15:30

Exploration Arena, Hall C1

Unmanned Operations – Human and Autonomous Exploration
Click here

From Space to Field: remote sensing data for innovative, sustainable and competitive agriculture

Organized by: Confagricoltura

Language: English

Agriculture is undergoing a technological revolution, where data represents the new means of production for a proactive, sustainable and competitive farming sector. According to the latest studies, the Italian Agriculture 4.0 market is growing again after the decline of 2024, reaching 2.5 billion euros (+9%), driven by software solutions such as FMIS and DSS and by investments in connected machinery. Despite this, the level of digital maturity remains uneven: only 9% of companies are digitally mature, while 58% are still lagging behind, also due to dependence on public incentives (only 21% would invest without subsidies).

In this context, remote sensing is confirmed as a key enabler of the digital, ecological and energy transition envisaged by Europe. Through prescription maps, vegetation indices and multispectral analyses, remotely sensed data allow companies to move from reactive practices to personalised strategies, preventing critical issues and improving productivity and quality.

The conference aims to explore how these technologies can overcome the barriers to adoption (costs, skills, resistance) and maximise return on investment. Following two introductory presentations and the testimony of a pioneering agricultural company, the round table will provide a space for discussion on how to translate data into concrete actions, from acquisition to field application.

Thursday 24 September
16:00 - 17:00

Pitch Arena, Hall C1

Beyond Tech Communication
Click here

Innovation Communication Lab – From Technology to Market

Organized by: Confindustria - Technical Group for Internationalization

Language: English

Communicating, storytelling, presenting and selling innovation.
Innovation Communication Lab is a strategic, business-oriented and hands-on experience, not just theoretical.
Its goal is to support companies, startups and research centers in transforming complex technologies into clear, valuable and market-ready propositions – facilitating partnerships, investments and market growth.

The 1-hour session will be structured into four focused micro-tutorials:
1. Communicating Complex Technologies: turning complexity into value
2. Storytelling Innovation: crafting compelling innovation narratives
3. Presenting Innovation: delivering effective pitches
4. Selling Innovation: from lab to market

Thursday 24 September
17:00 - 18:30

Main Stage, Hall C1

Networking Events
Click here

Space cocktail

Language: English

Set within the House of the Astronaut project, the Space Cocktail offers a unique platform for engagement, storytelling, and networking among key decision makers and sector visionaries.

The event will feature a scientific dissemination intervention, curated by the I.I.S. Lazzaro Spallanzani Institute of Castelfranco Emilia, which will present their cutting-edge "Space Eat Up" project, a sensory and scientific experience blending space exploration with culinary innovation. The project, highlights the role of food in space travel, with expert contributions from designer Francesco Bombardi and astronaut nutritionist Stefano Polato.

At 5:00 PM, the Space Cocktail experience will begin, offering guests a unique opportunity to explore space-inspired culinary delights. Highlights include the iconic Gagarin tubes and freeze-dried products used by astronauts. Participants will also enjoy the "Ultraviolet Cocktail," paired with other products that have actually traveled to space.

Thursday 24 September
17:15 - 18:00

Diotallevi 1 Room, South Hall

Unmanned Operations – Human and Autonomous Exploration
Click here

Debate: Regulatory Developments and Potential Operational and Training Impacts in the Drone Sector

Organized by: Drone and Advanced Air Mobility Observatory (Politecnico di Milano), ENAC - Italian Civil Aviation Authority

Language: English

Discussion on regulatory frameworks and the distinctions between autonomous and automated systems, offering a strategic perspective on medium- and long-term developments and their implications, starting from the training of crews and personnel involved in mission management.

Friday 25 September
10:00 - 11:30

Main Stage, Hall C1

Emerging Professions
Click here

Italy Aerospace Competences: Soft Skills and Complexity Management

Organized by: Alma Mater Studiorum – University of Bologna and Tecnopolo Forlì-Cesena

Language: English

Aerospace is not just a high-tech sector: it is a production infrastructure of complexity. In this context, skills can no longer be understood as a simple sum of technical knowledge, but rather as a systemic capability to integrate knowledge, manage uncertainty, and coordinate complex production networks.

The future of aerospace skills in Italy increasingly lies at the intersection of hard and soft skills: engineers able to engage in dialogue, designers capable of orchestrating complex processes, and professionals who combine technical depth with relational intelligence. This roundtable aims to open a discussion on this transformation, exploring how to rethink education, organizations, and skills development models from an evolutionary perspective.

Friday 25 September
10:00 - 11:00

Exploration Arena, Hall C1

Resources Exploitation and Sustainability
Click here

Space for Energy or Energy for Space?

Organized by: ENEA - National Agency for New Technologies, Energy and Sustainable Economic Development

Language: English

Advanced energy systems are a strategic enabler for space and defence missions, where lightweight design, reliability, long operational life, and performance under extreme or hazardous conditions are essential. This session brings together Small and Medium-sized Enterprises (SMEs), research and development organisations, regulatory and policy driven bodies, and large industrial players to address the full innovation and deployment chain of next generation energy solutions.

The discussion will focus on advanced and nuclear-based energy systems for space, including radioisotope power systems and compact nuclear reactors for long duration and deep space missions, alongside advanced batteries, advanced PV, hybrid architectures, and high efficiency power electronics. Particular attention will be given to the potential benefits and challenges of integration and distribution, in the perspective of a multi-source energy system with manyfold energy uses.

Research and development bodies will address technology maturation, testing, and validation, while regulatory and policy actors will contribute with perspectives on safety frameworks, certification, strategic autonomy, and alignment with European and defence policies. Large enterprises and system integrators will highlight industrial scalability, supply chain resilience, and system level integration into complex platforms. The session aims to foster cross actor collaboration in order to accelerate innovation, de-risk deployment, and strengthen European competitiveness in critical space and defence energy technologies.

Complementing this hardware-focused framing, long-duration and deep-space missions require energy systems to operate with limited or no ground intervention. This positions the digital, AI-driven layer as a necessary part of the discussion.

From the opposite direction, Earth Observation products and the computer-vision and machine-learning pipelines that exploit them will be discussed as critical input for forecasting and diagnostics of terrestrial renewable plants.

Friday 25 September
10:00 - 11:30

Diotallevi 2 Room, South Hall

Space Laws
Click here

Space law: what actions for a viable scenario?

Organized by: CIRA - Italian Aerospace Research Center

Language: English

Recently, space has been seeing a significant expansion of human activities. Over the past five years, business volume has increased by an average of around 9% annually, outpacing global GDP growth and reaching a market value of over USD 600 billion in 2025 (source: *Space Industry Statistics & Facts 2026 | SpaceNexus*). At the same time, the number of objects launched into space has increased by a factor of ten over the last decade (source: *The Growth of the Space Economy*).

This growth is expected to continue in the coming years, as this new domain promises substantial economic returns through the provision of services increasingly in demand by the general public, as well as through new potential prospects that are beginning to emerge, such as the colonisation of the Moon.

As the economy expands, so do the actions and interactions between individuals, companies and states — and, with them, the possibility of disputes. Moreover, unrestricted business activity in the space sector, if not properly regulated, could generate risks for society as a whole, as well as dangers for individuals or even for multiple sovereign states.

At the same time, regulation in this field cannot be purely restrictive. Beyond the economic prosperity that the Space Economy promises to generate — which naturally leads legislators to view it favourably — there is a strong likelihood that overly burdensome regulation will lead to a shift in investment towards more accessible jurisdictions.

These brief considerations offer a first sense of the complexity of a new universe that must be managed and that, by its very nature, can only be shared among different state systems. Ultimately, the uniqueness of space activities means that the only segment that can truly be governed is the terrestrial one. Once objects are inside orbits or beyond, in the so-called deep space, they tend to escape any single jurisdiction, unless that jurisdiction is collective.
These are the themes that the speaker and panellists will explore, covering legal, legislative, industrial and defence-related perspectives, with the aim of helping to clarify certain aspects of a complex process that is still far from being fully resolved.

Friday 25 September
10:30 - 12:00

Diotallevi 2 Room, South Hall

Cross-Cutting Events
Click here

The Future of Satellite Market

Organized by: Emilia-Romagna Region

Language: English

The satellite industry is undergoing an unprecedented transformation, moving from an era of static, government-owned infrastructure to a dynamic ecosystem dominated by private players and massive constellations.
Going a little deeper into this transformation, the satellite market is shifting toward data-driven and service-based models, reshaping how value is created and captured across the value chain. In this evolving context, small and medium-sized enterprises (SMEs) are increasingly moving beyond traditional subcontracting roles and may emerge as key actors capable of innovation and value creation.
This contribution focuses on how SMEs might position themselves along the vertical integration–outsourcing spectrum. Rather than replicating fully integrated models, they may consider selectively internalizing high-value activities—such as software, payloads, edge computing, and data analytics—while relying on external partners for standardized components. This raises the question of whether such approaches can enable SMEs to act both as niche innovators and as flexible integrators within complex systems such as satellite constellations.
More broadly, it highlights how SMEs may operate within value chains traditionally dominated by vertically integrated firms, exploring their potential role as both contributors to large-scale industrial systems providing modular components and autonomous actors in increasingly scalable and innovation-driven satellite markets.
This workshop will attempt to answer this question, trying to understand on the one hand whether this market is sustainable for an SME and where it could concretely land, both in terms of technological evolution and management evolution.

Friday 25 September
11:30 - 13:00

Exploration Arena, Hall C1

Beyond Tech Communication
Click here

Space Voices: Where Creators, Community and Industry Meet

Organized by: BEX – Beyond Exploration Expo

Language: English

At BEX, creators and science communicators don't just tell stories– they build bridges between industry and people, between space and everyday life.
This non-conventional session brings together the voices that shaped BEX's pre-event narrative, alongside exhibiting companies and the communities they engage and inspire.
More than storytelling, the conversation explores the evolving role of space communicators as enablers of real opportunities - connecting people with careers, business pathways and scientific innovation.
Together, creators and companies will define a new kind of influence: one that goes beyond visibility to activate engagement, unlock potential and turn curiosity into concrete action.
Because the future of space will not be shaped by technology alone, but by those who can make it visible, understandable - and truly accessible to all.

Friday 25 September
11:30 - 13:00

Diotallevi 1 Room, South Hall

Space Physiology, Healthcare, Wellness, Pharmacy
Click here

Biospace economy. New opportunities for Physiology, Healthcare, Wellness, Pharmacy - Session II

Organized by: CNR ISOF - Institute for Organic Synthesis and Photoreactivity of the National Research Council

Language: English

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Friday 25 September
12:00 - 13:00

Main Stage, Hall C1

Cross-Cutting Events
Click here

AI and resilience at the frontier of space operations

Organized by: CINECA, Bruno Kessler Foundation

Language: English

The space economy is generating data on an unprecedented scale, and artificial intelligence is emerging as a key technology for transforming this information into operational and scientific value. The central question is therefore how AI is supporting space mission design, autonomous operations and downstream applications, opening up new opportunities for cross-sector innovation. In this context, ensuring the integrity and resilience of AI-driven systems is emerging as an increasingly central strategic and industrial challenge.

The session brings together scientific, industrial and institutional perspectives to understand where Europe stands, which application domains hold the greatest promise, and how synergies between actors from sectors not traditionally associated with space can contribute to building an intelligent and sovereign infrastructure.