

# **Finnish contribution to European Space Programmes**

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# Finland 2025

**The world's most attractive  
and agile space  
business environment which  
benefits all  
companies operating here**



## Finland 2025

The world's most attractive and agile space business environment which benefits all companies operating here







Finland is an attractive operating environment for the developers and adapters of the space sector. We have supportive legislation and a comprehensive field of easily approachable operators. Our companies base their operations on versatile expertise and are global leaders in producing and applying space solutions.

ICEYE offers timely and reliable radar satellite imaging for a variety of industries.

Space Systems Finland supports its customers in designing and developing complex industrial applications such as data processing applications, control systems and test automation solutions.

# Prerequisites for entering the market

## Measures

**PILOT PROJECTS** Business Finland increases the attractiveness of the sector by enabling and encouraging experimental pilot projects.

**ENABLING** The Ministry of Economic Affairs and Employment, the Ministry of Transport and Communications and Business Finland open opportunities provided by space to a larger group of enterprises.

Business Finland identifies and facilitates the international opportunities to utilise Finnish space solutions and space data and facilitates investments in Finland.

**FINANCING** The Ministry of Economic Affairs and Employment, Business Finland, Finnvera and Tesi facilitate patient financing for space infrastructure projects by attracting foreign financing and by developing public funding opportunities.

**REFERENCES** The authorities make acquisitions through which the enterprises in the space sector will receive their first reference. Business Finland will continue the financing of preparations for innovative public procurements.

**LEGISLATION** The authorities ensure that the national legislation supports business and does not unnecessarily limit it and that the permit processes related to space activities work smoothly (authorisation for space activities, export licences, radio licences).

The authorities involved, together with the security authorities, form a common opinion on ground station investments and implement the necessary amendments in legislation in consideration of national security.

## Goals by 2025



The turnover of enterprises producing satellite technology (upstream) has grown 25-fold (current estimate EUR 20 million). The turnover of enterprises applying space technology and space data (downstream) has grown 10-fold (current estimate EUR 300 million).\*



Utilisation of information and signals based on space activities is an everyday part of the business of Finnish companies irrespective of the sector. Fifty new space sector companies have been established here.



Finnish companies and research organisations are involved in designing, implementing and utilising the space infrastructure jointly determined by the public and commercial sector, as well as its validation and ground segment.



Finnish operators are leading and attractive partners in the best international projects of the sector.



Finnish companies in the space sector have gathered a total of MEUR 300 of capital from abroad. The Finnish operating environment of the space sector attracts the best experts to the country. Ten notable foreign space companies have established an operative unit in Finland.



The authorities make 1% worth of reference procurements out of their annual procurements. The procurement plan is published in advance annually. The authorities have adequate satellite capability in their use.



The needs for amendments to national legislation have been analysed from the viewpoint of national security by 2021.





VISION

The enterprises and research organisations operating in Finland resolve the challenges of sustainable growth by means of top-class space activities in close cooperation with the operators of the target market and the scientific community around the world.

The space business employs more than 230,000 people in the EU area. One third of the world's satellites are manufactured in Europe.

# International impact

## Measures

**SPACE ADMINISTRATION** The Ministry of Economic Affairs and Employment updates the tasks and composition of the Finnish Space Committee and enhances its activities. In addition, the ministries foster the establishment of a centralised space administration.

**INTERNATIONAL REPRESENTATION** The Finnish Space Committee maps out the Finnish representatives in international bodies, expert groups and standardisation organisations and coordinates the nomination and activities of the representatives in the future.

**MARKETING** Ministries, agencies, enterprises and research organisations market Finnish space knowhow together and ascertain its visibility internationally, and actively and systematically promote the access of Finns to influential positions in international organisations.


**INTERNATIONAL REGULATIONS** The ministries involved participate in determining the international regulations in the EU, COPUOS and through other international cooperation, promoting especially the sustainable use of space, new business opportunities and security aspects.

**ESA PROGRAMMES** The Finnish ESA delegation, enterprises and research organisations are active in the creation and planning of ESA's new programmes and missions, utilising especially the small satellite/IOD type or other agile solutions that are quick and inexpensive to develop. The Ministry of Economic Affairs and Employment and Business Finland analyse the possibilities for additional funding for ESA's optional programmes.

**EU SPACE PROGRAMME** The Ministry of Economic Affairs and Employment and the Ministry of Transport and Communications will impact the development of the EU space programme in the direction of promoting sustainable use of space, new innovations and new business opportunities. The goal is also taken into account during the forthcoming EU Presidency of Finland.

**IMPROVED COVERAGE** The Ministry of Transport and Communications promotes the resolution of coverage problems concerning Finland and Arctic areas and better availability of remote sensing materials and data communications links.

## Goals by 2025

 The central operations of the space administration have been put together by 2020. The effectiveness and impacts of centralisation is assessed in 2023.

 Finland is represented by the right parties in the most important international bodies and expert groups and especially in the space activities of the EU (space programme + research programme). A centralised space administration coordinates the opinions of Finland.

 Finnish companies and research organisations participate actively in selected working groups of standardisation and industrial organisations (e.g. ISO, 3GPP, Eurospace, EAK, ECSS).

 The accuracy of satellite navigation has been improved by 2022 to match the level of Central Europe, and more remote sensing data than today is available from the Arctic areas. The availability of data communications in Arctic areas based on satellites has been promoted through international cooperation.

 Finnish companies and research organisations participate to a significant extent in the optional ESA programmes and new Finnish companies are involved. Finland's overall return from ESA's programmes meets the targets.



# Research

## Measures

**JOINT PROJECTS** Business Finland, research organisations and companies promote business-oriented joint projects between companies operating in the upstream and downstream sectors and research organisations in the fields of communication, navigation and remote sensing.

**FUNDING** Business Finland's offering includes funding for cooperation which promotes growth and improves expertise in space sector companies and research organisations. The Academy of Finland promotes high-quality, influential and responsible research in the space sector which is based on competition and supports the creation of cooperation networks in the high-quality projects it is financing.

**SUSTAINABLE DEVELOPMENT** Research organisations and funding agencies take the UN's goals for sustainable development into account in allocating research and funding.

**COMPETENCE** The Ministry of Economic Affairs and Employment, the Ministry of Transport and Communications and the Ministry of Education and Culture ensure that the ministries continue to cooperate to improve expertise base in Finland.

**TRAINING** To ensure an adequate expertise base, institutions of higher education will strongly focus on versatile education which serves the needs of the space sector.

## Goals by 2025



There are a larger number of high-quality joint projects ongoing between Finnish and foreign research organisations and enterprises.



Finnish companies and research organisations have a leading role in ESA and EU projects.



Finland is the home of leading applied research in the space sector, including in the areas of satellite navigation, remote sensing and data communications satellites, as well as the environment and climate change.



The operators of the space sector have no lack of expertise which would hamper their operation.

Companies and research organisations operating in Finland renew the utilisation of space in a sustainable way and participate in the best space projects.

Centre of excellence for research in sustainable space conducts research on central scientific matters from the viewpoint of sustainable utilisation and develop sustainable technologies with the aim of improving the international competitiveness of Finnish space expertise.



BUSINESS FINLAND VISION

# FINLAND DEFINING THE FUTURE

Together, we make Finland the most attractive  
and competitive innovation environment,  
where world class success stories are created

We are the most wanted partner for our customers  
to innovate and grow globally



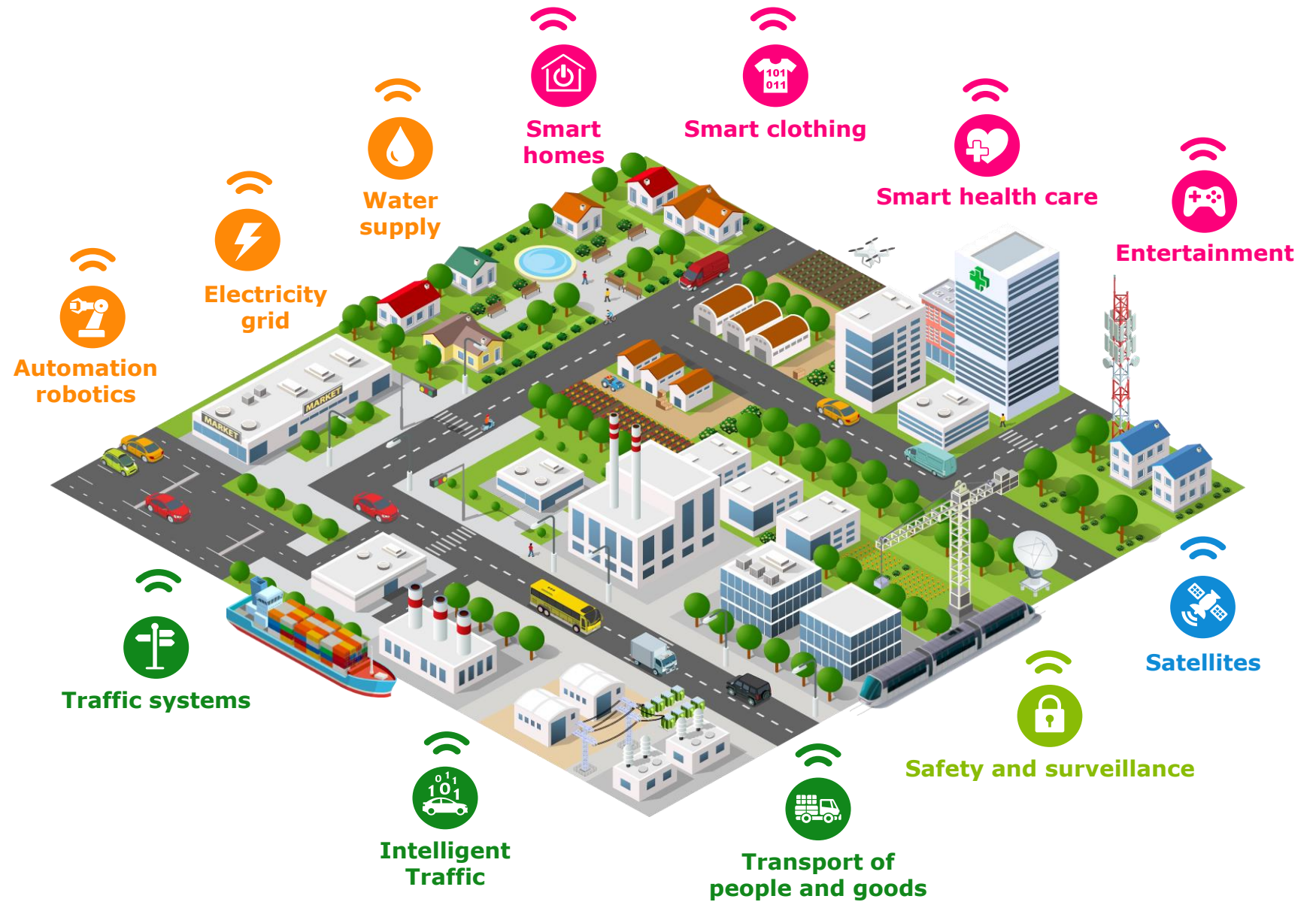


**FOR FINLAND  
WITH FINLAND  
We Catalyze New,  
Sustainable Growth  
through Innovation, and  
International Collaboration**

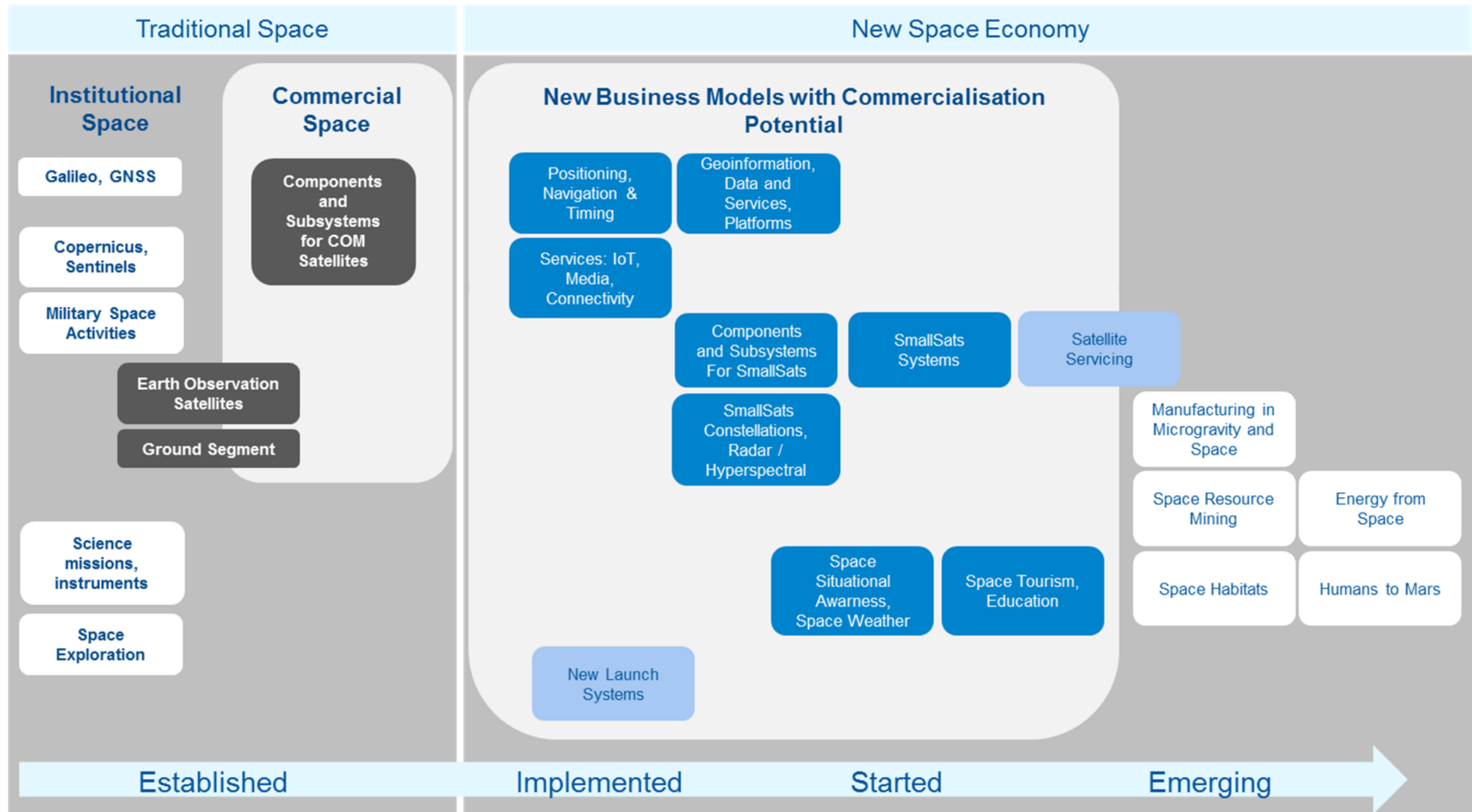
## **STRATEGIC INTENT**

- 1** | Global Growth for Companies
- 2** | World Class Ecosystems and Competitive Business Environment

# DIGITAL INFRA-STRUCTURE IS OUR NEW CRITICAL INFRA-STRUCTURE!







Modified from Space Tec report "NewSpace – New Business Models at the Interface of Space Industry and Digital Economy", 2016

*Space19*





# Global Challenges

- climate change
- migration
- mobility
- communication
- energy
- shortage of resources
- demographic development
- conflicts and catastrophes
- health
- ...curiosity

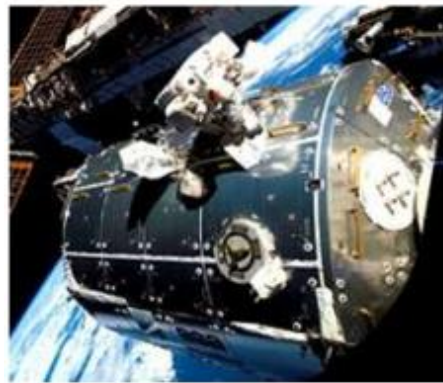
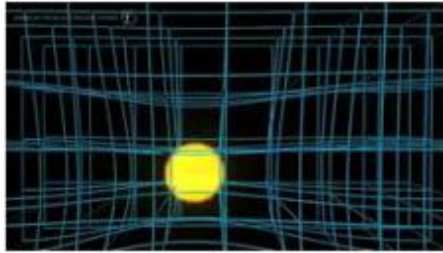


## → Space:

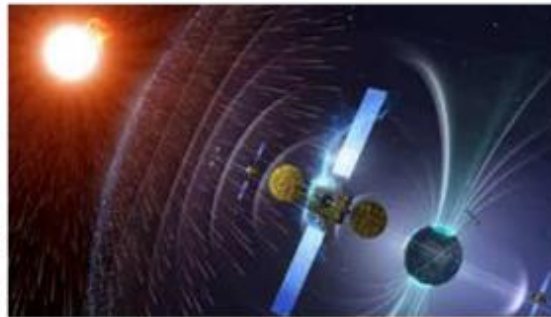
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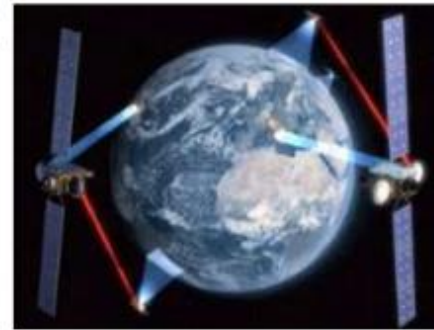
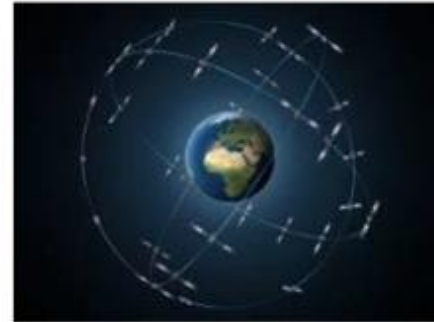
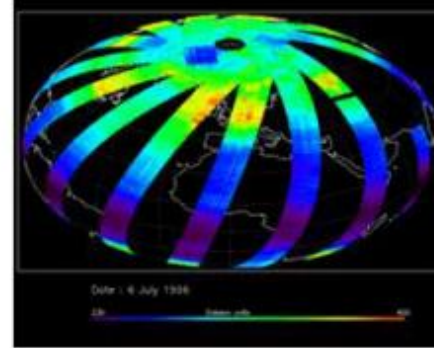
## Science and Exploration



## Safety and Security



## Applications



## Enabling and Support (transp., tech, & ops)



# Four Programmatic Pillars of the Agency



## European Space Programmes benefits from the strong Finnish innovation, technology and business ecosystems

- Wireless technology ecosystem and extensive R&D know-how and capabilities
- High-value/quality/reliability manufacturing capabilities
- Radiation testing capabilities for electronics
- Strong cybersecurity cluster
- World leading know-how in hyperspectral imaging, pattern recognition and image analytics
- know-how in surveying natural resources and environment
- High-speed/capacity data infrastructure and connections abroad, excellent location for data centers, low electricity price
- Strong IPR-protection, stable legislation and regulation
- Funding for ecosystems and networks
- Attractive NSE-related development in Finland: HX Industrial Participation, Smart Mobility, Digital Trust, Autonomous Systems...



# FINNISH SPACE EXPERTISE ON THE MAP

A light gray world map is centered in the background. The country of Finland is highlighted in a solid dark blue color, making it stand out from the rest of the map.

A new global transition phase is currently taking place where the space industry players, roles, and ways of doing things are changing. The **New Space Economy** program aims to exploit the growth potential of international space business.

Business Finland's New Space Economy program offers funding, networks and export services for developing international space related business.

Discover Finnish space know-how at  
[www.spacefinland.fi](http://www.spacefinland.fi)  
[www.businessfinland.fi/en/space](http://www.businessfinland.fi/en/space)