



PRESS KIT

Satellite services for French Defence

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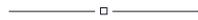


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Defence





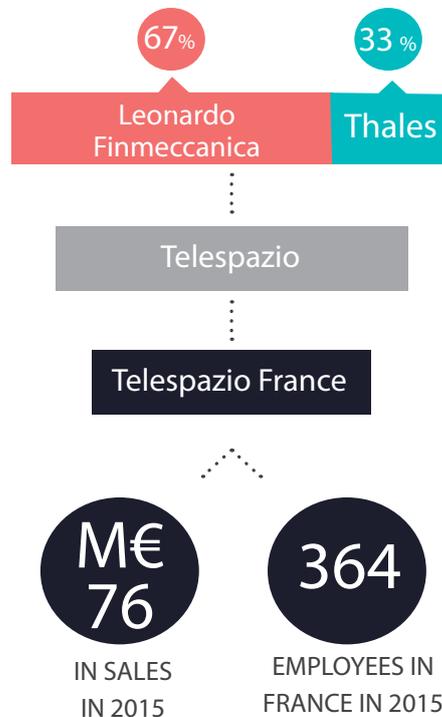
TELESPAZIO FRANCE,

LEADING THE WAY IN SATELLITE SERVICES

As a key player in space infrastructure operations for more than 30 years, Telespazio France supplies value-added satellite services and applications for geoinformation, navigation and telecommunications.

Telespazio France is the French subsidiary of Telespazio, a joint venture of Leonardo and Thales.

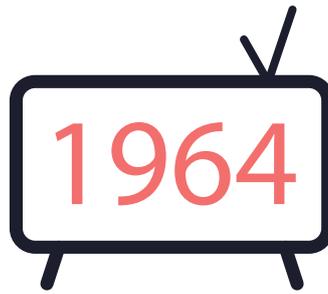
Based in Toulouse and chaired by Jean-Marc Gardin, Telespazio also has facilities in Paris, Bordeaux, Kourou and Libreville.



Group Figures › 632 M€ in sales in 2015 and 2.500 employees around the globe

MORE THAN **200** LAUNCH CAMPAIGNS FROM THE 3 PADS AT THE GUIANA SPACE CENTRE

MORE THAN **60** SATELLITES SUSTAINED WITH THROUGH-LIFE SUPPORT SERVICES



FIRST LIVE SATELLITE TV BROADCAST IN 1964 FROM THE TOKYO OLYMPIC

Five years later, pictures of Man's first steps on the Moon were broadcast live. Much later, the world's first radar Earth-observation constellation (COSMO-SkyMed) entered service: throughout its history, Telespazio has been a prime mover behind game-changing advances and ground-breaking technology disruptions.



THE WORLD'S FIRST
GEOINFORMATION
CLUSTER



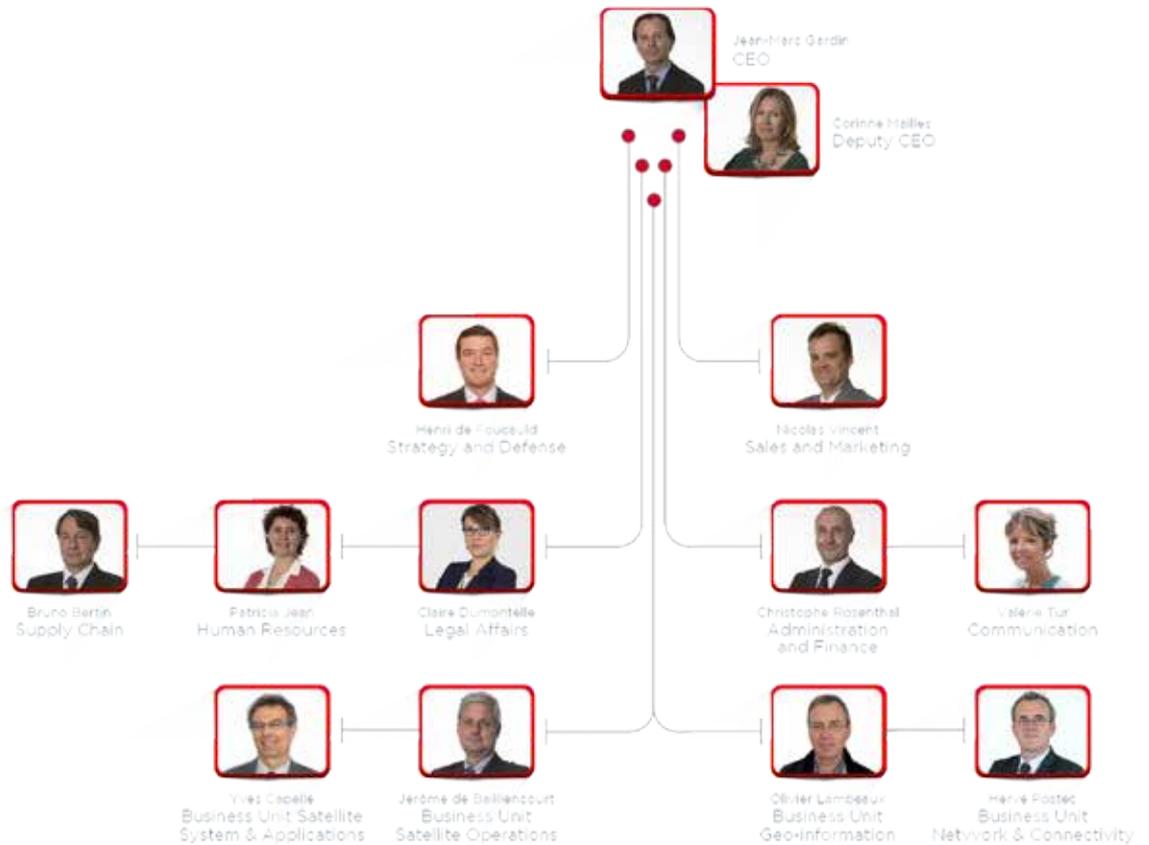
A LOCATION-BASED SERVICE
PLATFORM LEVERAGING
GALILEO FOR URBAN
MOBILITY



PROVEN SOLUTIONS FOR PROFESSIONALS
IN DEMANDING MARKETS SUCH AS
RETAIL, ENERGY, INDUSTRY AND LOCAL
GOVERNMENT

EXPERT, RENOWNED GOVERNANCE

Co-led by Chairman & CEO Jean-Marc Gardin, also Deputy CEO of the Telespazio Group, and Deputy CEO Corinne Mailles, Telespazio France's management team boasts a wealth of high-level experience in space and its applications.





TELESPAZIO

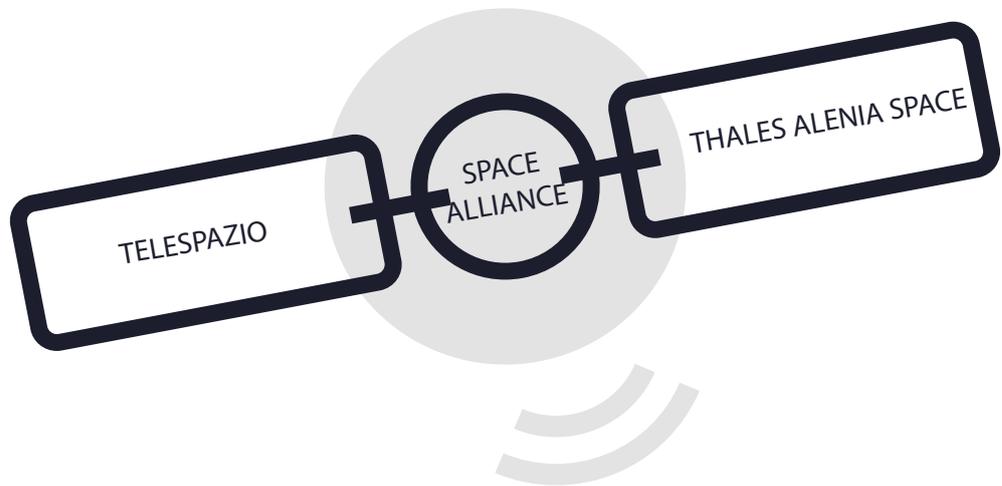
AT THE HEART OF THE SPACE ALLIANCE

In 2005, French firm Thales and Italian firm Leonardo-Finmeccanica merged their space businesses within the Space Alliance, a partnership between Thales Alenia Space, a world leader in space infrastructures, and Telespazio, a major supplier of space services.

The intent of the Space Alliance is to pool the two firms' talents and resources to offer optimized integrated solutions. The Space Alliance has unique potential to move into vertical markets, spanning the entire value chain from conception and fabrication to operations and services.

Together, Thales Alenia Space and Telespazio present an unmatched value proposition geared to growing demand for turnkey solutions.

The Space Alliance underpins combined offerings embracing systems and services for businesses and civil and military customers.



The Space Alliance,
from conception
and fabrication
to operations and
services

A FULL RANGE OF SATELLITE SERVICES

encompassing 4 areas of expertise



SPACE SERVICES AND INFRASTRUCTURES, SATELLITE OPERATIONS

Telespazio France is the historic partner of the French space agency CNES and launch operator Arianespace in mainland France and French Guiana, operating their ground infrastructures and satellites.

Our operations teams have been working at Europe's spaceport in Kourou, French Guiana, for more than 30 years. Today, we have more than 150 experts attached to our French Guiana facility maintaining and operating its ground infrastructures and support equipment.

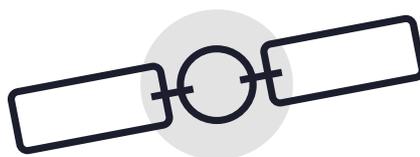


With a 150-strong team on site,
Telespazio France is the Kourou
launch base's premier industry partner

From launch support to orbital positioning, Telespazio France is tasked with operating the tracking, telemetry and control systems for the Ariane 5, Soyuz and Vega launchers. Telespazio France is also in charge of operating all of the spaceport's telecommunications systems.

In Toulouse, Telespazio France maintains CNES's network of ground stations and performs stationkeeping and mission operations for the vast majority of its satellites, assuring a high level of service.

Our teams have been working with the experts at the Toulouse Space Centre since 1988 to help them accomplish their telecommunications, Earth-observation and science missions, contributing notably to the success of flagship missions such as ATV resupply flights to the International Space Station or the ChemCham instrument on the Curiosity Mars rover.



As the number one industry partner of ESSP (European Satellite Service Provider), the European company in charge of operating EGNOS, the precursor to Europe's Galileo satellite navigation system, Telespazio France is tasked with maintaining and sustaining the signal reception and processing equipment at some 50 ground stations around the globe.

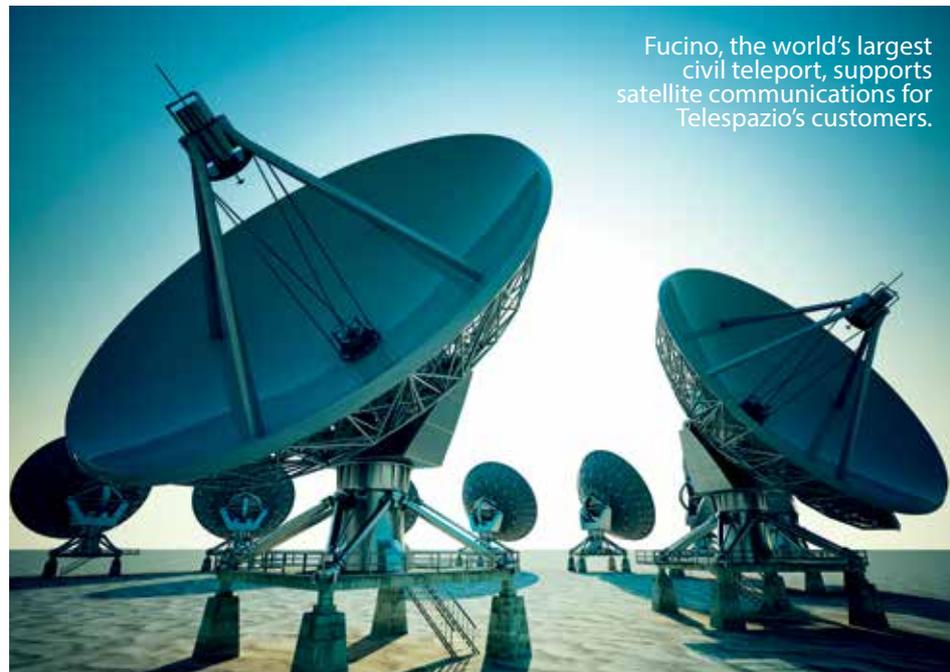
Telespazio France is also, most often working alongside Thales Alenia Space, the operator of trust for the French defence community, for which our operators control several telecommunications satellites in Maisons-Laffitte and sustain the associated anchorage systems, as well as operating the user terminal for radar Earth-observation missions in Creil.



TELECOMMUNICATIONS, NETWORKS AND CONNECTIVITY

Telespazio has been a world leader in satellite telecommunications since the very first live satellite TV broadcasts in 1964. Today, Telespazio France continues to draw on this heritage of innovation and on its expertise in new digital technologies to develop innovative and unique services delivering high added value, notably for the media, retail, energy, construction and oil and gas sectors.

With its seven teleports around the globe, including the world's largest civil teleport in Fucino, Italy, and agreements with every satellite operator, Telespazio offers comprehensive coverage through M2M communication and back-up solutions all over Europe, high-availability broadband in Africa and emergency systems and communications.



Fucino, the world's largest civil teleport, supports satellite communications for Telespazio's customers.

Telespazio France provides effective, reliable, global broadband connectivity solutions where terrestrial infrastructures are lacking or insufficient to meet the needs of local institutions, the military, big corporations and small and mid-tier firms.

Telespazio France develops, deploys and operates satellite solutions to bridge the digital divide, bringing mobile telecommunications and Internet connectivity to underserved areas.

Leveraging its mature VSAT technology, Telespazio France has developed a turnkey offering for institutional, defence and key account customers, allowing them to communicate high volumes of data securely across all of their networks. Telespazio France also offers complementary and innovative solutions through its exceptional network of partners to enable media to deliver and broadcast digital content.

With its resources, expert teams and partners, Telespazio France deploys and operates solutions geared toward any kind of permanent or temporary connectivity.



GEOINFORMATION

Through its involvement in Europe's Galileo, EGNOS and Copernicus programmes, Telespazio France occupies a strategic position in the field of geoinformation, hazard management and security applications and services, as well as providing 24/7 real-time operational services.



Telespazio France offers a range of products and services for monitoring the environment and infrastructures, for mapping and for managing geodata.

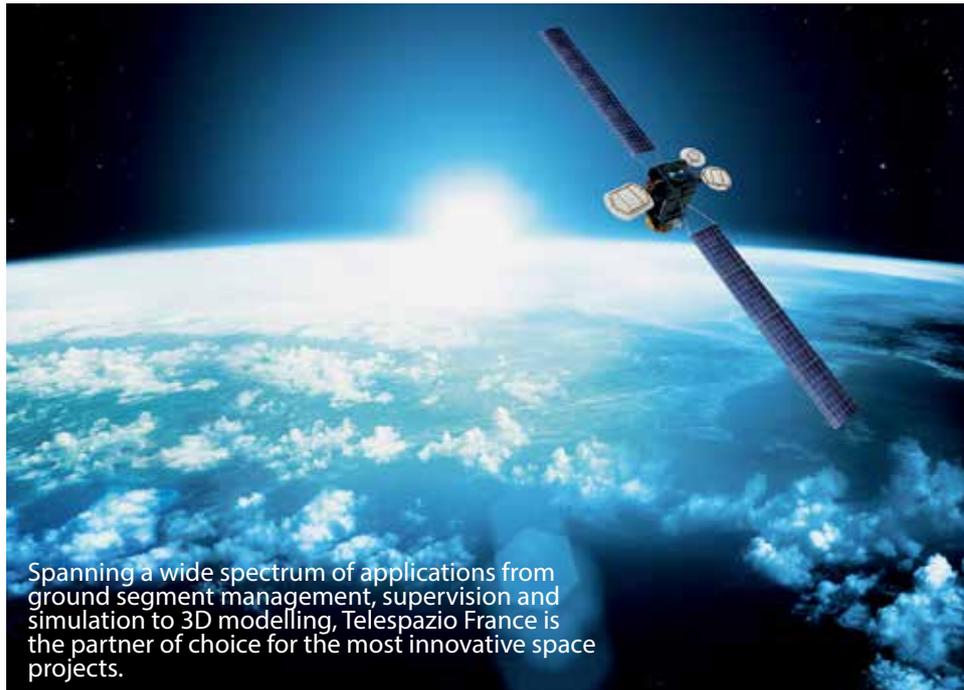
Telespazio France's full portfolio of services gives businesses and government agencies unrivalled resources for monitoring their regions of influence and interest, meeting their needs without having to call on outside expertise and integrating seamlessly and easily with their methods and tools.



SATELLITE SYSTEMS, APPLICATIONS AND NAVIGATION

To meet market demand and ready for new digital capabilities, Telespazio France is able to draw on its expertise and a library of tried-and-tested solutions.

Telespazio France develops unmatched professional visualization, simulation and supervision software solutions for the aerospace and defence markets.



Built around innovative software applications supporting mobile platforms and developed from user requirements using agile engineering methods, these turnkey, customizable solutions are designed for complex environments and situations where security and reliability are paramount.

Telespazio France is one of the few market players able to conduct end-to-end development of 3D simulators of orbital satellites and subsystems, and for maintenance training (like, for example, the virtual maintenance tool developed for the NH90 helicopter on behalf of NAHEMA, the NATO Helicopter Management Agency).

Telespazio France uses this software expertise and the experience it has acquired from the GPS, EGNOS and Galileo satellite navigation systems to develop and operate dedicated platforms for businesses and government that deliver high levels of precision and availability.



BROAD EXPERTISE AND INNOVATION

for French Defence

In a global geostrategic landscape fraught with tension, the safety of people, property and the environment is a top priority for governments. Telespazio France has developed reliable, satellite-based expertise, solutions and services geared to France's defence requirements, offering the agility and performance needed to conduct missions.

COMSAT NG

Developed and built by a consortium of Thales Alenia Space (65%) and Airbus Defence & Space (35%) for DGA, the French defence procurement agency, this programme is set to give French armed forces effective, latest-generation assets to succeed the Syracuse 3A and 3B military satellites currently in orbit. With COMSAT-NG, France will be able to call on a system delivering better performance and new operational services as early as 2021. Telespazio France is a top-tier supplier of Thales Alenia Space for COMSAT-NG, for which its responsibilities include satellite operations.

SYRACUSE - SICRAL - ATHEDA-FIDUS

Telespazio France is conducting satellite operations and sustaining the anchorage systems on the ground for the Syracuse, Sicral and Athena-Fidus contract, overseen by Thales Alenia Space.

Telespazio is also closely involved in coordinating national centres in France, Italy and the United Kingdom for temporary available satcom capacity that France sells to NATO under the NSP2K contract.

COSMO-SkyMed - French Defence User Ground Segment

At the heart of France's CMOS military satellite observation centre in Creil, Telespazio France maintains and sustains the French Defence radar user ground segment.

Before each pass of the COSMO-SkyMed constellation, a Telespazio France team checks that satellite tasking tools are in correct working order, and subsequently delivers raw data collected to end-users.

TELECOMSAT

Telespazio France has been selected under the Telecomsat contract by DIRISI, the French joint forces infrastructure networks and information systems directorate, to sustain the French Navy's shipborne satellite communications systems and land teleports in metropolitan France and French overseas territories.

Telespazio France is in the process of putting together an industrial organization comprising its own resources and a network of top-level partners to accomplish these missions in metropolitan France, French Guiana, Martinique, Réunion, New Caledonia and French Polynesia.

TRIMARAN 2, Space remote sensing supporting naval operations

The French Navy has been looking into ways of leveraging space remote-sensing technologies to complement its surveillance assets for many years now. Growing pressure on its maritime territories coupled with tight budgets is forcing it to adapt its resources and modus operandi while preserving its ability to perform naval missions effectively.

Drawing on its expertise in custom satellite-based solutions and services, Telespazio France is working in partnership with Airbus Defence & Space to offer the French Navy Trimaran 2, an optimized, reliable and effective maritime surveillance service.



Trimaran 2 was built on the lessons learned and validated by public stakeholders during the Trimaran pilot phase developed and operated in the French Guiana and Antilles maritime zones under the aegis of the Secretary General of the Seas. The demonstrator deployed in France in 2014 enabled modelling and testing of a single portal concept providing access for several agencies to a bouquet of satellite-based maritime surveillance services.

The result of close cooperation between two leading European service providers, the Trimaran 2 portal gives the French Navy access to optical and radar imagery, as well as to SAT-AIS data, thus providing a formal operations loop, instant handling and fast response independent of geographic and time constraints.

Calling on a constellation of latest-generation satellites and Telespazio France's team of photo-interpretation experts, Trimaran 2 provides strategic support to maritime zone commanders across the world's oceans, giving them the operational tools they need to carry out their missions at sea: search and rescue; prevention of trafficking, illegal immigration and terrorism; detection of pollution and toxic discharges; surveillance of protected maritime areas; and efforts to combat illegal gold panning in French Guiana.

CONTACT

Telespazio France Toulouse
26, Avenue J.F Champollion - BP 52309
31023 Toulouse cedex 1

Valérie Tur
Corporate Communications
+ 33 6 63 75 50 47
valerie.tur@telespazio.com

Julie Delhoume
Press Officer
+33 6 82 91 83 92
julie.delhoume@telespazio.com