

ALTEN IN SPACE

World leader in Engineering & IT Services



ALTEN

We are the ones who are building the world of tomorrow today.

As a world leader in Engineering & IT Services, ALTEN supports the growth strategy of its clients in innovation, R&D & IT systems.

€ 3,78 billion in revenue in 2022

54,100 employees & 47,500 of whom are engineers

6,500 clients worldwide

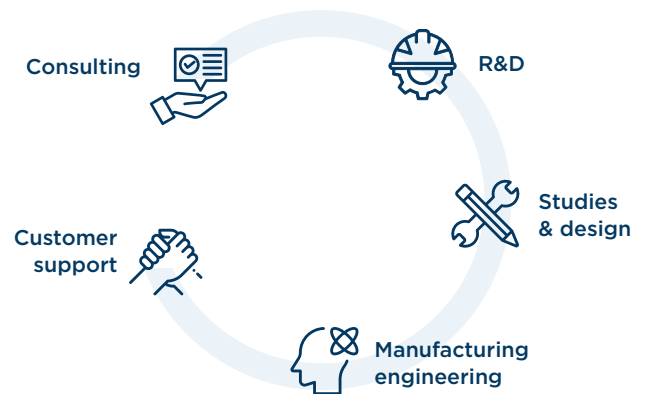
30+ countries

Our business sectors:



A KEY PARTNER

ALTEN is involved in all phases and areas of the product life cycle:



SERVICE OFFERING

Five levels of commitment to meet clients' needs:

Fixed-price project

Fixed-price project with a commitment to results

Commitment to results: Control, quality, time, delay, fixed price

Work units service contract

Service contract with a commitment to results and performance

Commitment to results: Deliverables industrialization & productivity gains

Service contract

Service contract with a commitment of providing resources and to achieve performance goals

Service level agreement: Service level commitment & delegation of project management

Globalization

Gathering on a single contract covering several consulting projects

Commitment of providing resources: Teams of consultants delivering a wide range of expertises, thanks to a unique contract

Consulting

Commitment of providing resources

Commitment of providing resources: Delivery of specific & flexible expertise

We are home to those committed to having a positive impact.

65 M€ in revenue in 2022
750+ engineers
10+ operating in 10+ countries worldwide

Our main clients

AIRBUS DS

BLUE ORIGIN

ARIANEGROUP

THALES

CNES

RAYTHEON

ULA

EUTELSAT

RUAG

BALL AEROSPACE

ALTEN'S ADDED-VALUE



Global partner



Multi-specialists in mechanics, embedded system (electronics and software), integration and IT ground segment



Digital in IT skills & Networks (Agile, Big Data, AI, Cloud, Cybersecurity, UX/UI design ...) and Ground segment



Expertise in AIT (Assembly, Integration & Test), Electrical and avionics architecture design, Simulation and validation of optical instruments



Thanks to its technical expertise, ALTEN is involved throughout the satellite and launcher life cycle, with a historical presence of more than 20 years in key environments such as space electronics and AIT.

ALTEN'S EXPERTISE

— ALTEN is involved in the complete value chain of the space sector. We support our customers throughout studies, development, manufacturing and operations as one of the top suppliers.

Structures

Propulsion

On-board avionics & platform

Control, operating or launch centers

Spacecraft architecture

Payload & instruments

Flight physics & trajectography

Assembly, integration & tests (AIT)

Data processing services

ALTEN'S FUNCTIONAL SECTORS

Launchers

— Reducing launch costs is a major driver for competitiveness in the space industry. With its technical expertise (structure, propulsion, flight mechanics, etc.), ALTEN is taking part in various development projects to meet the challenges of more flexible and competitive launchers.

Satellites

— ALTEN has over 20 years of expertise in the field of spatial electronics and systems engineering, from designing the embedded electronics to software development and final satellite integration. ALTEN is also acting in the satellites market transformation by supporting the “New Space” players on constellations and small-sats.

Ground operations

— ALTEN is involved in the ground segment architecture and in the deployment of tools to optimise its clients' operations of the various installations for communication with satellites. To complete the scope of space system life cycle, ALTEN also supports its clients in data processing.

ALTEN'S MAIN PROJECTS

Electric / Electronic

— ALTEN offers **end-to-end** support on electrical & electronics activities. Our **strong experience** in the space sector, close to its main actors, allows us to manage the **whole development cycle of space products and satellites**:

- Feasibility **studies**, Systems specifications & cascading requirements, Analyses/simulations & Justifications
- Electrical System **design**: Batteries, Solar Panels, Power management systems, avionics, microchip-based boards
- Flight Model **Installation & Validation**

Embedded software

— ALTEN has a wide experience in software design, real-time validation and critical software, especially on **On-Board SW development** (basic & applicative) with implication on **18 satellites programs** and more than **20 components developed** (Platform, SCAD & payload). ALTEN is mainly recognized for its expertise in:

- **For OBSW components**: Requirement Based Engineering, design, code & validation
- **Software Product Assurance** based on ECSS & DO178B

Mechanical

— ALTEN manages **Mechanical Design & Analysis** activities with the strategy to cover the **full scope of products** (Satellite, Launchers, Instruments, Means) with strong Service Centers able to **innovate** and to achieve **costs savings**:

- **Launch Vehicles Components and Ground Support Equipment**
- **Satellites** Mechanical Service Centers
- Product Architectures
- **Design & accommodation:** Instruments, Antennas, Structures, Satcom
- **MGSE/OGSE** development
- Mechanical & Thermal **Analysis**
- Vibrations & **Environments tests**
- **Tools** development, **3DX support**
- **AIT** Satcom and optical instrument

IT / Software / Data processing

— ALTEN innovates in **digital transformation of Ground Segment** to extract **greater value fom spatial data**.

ALTEN supports its customers in delivering satellite services based on:

- **The analysis of environmental data**
- **Observation of oceans and continental waters**
- **Monitoring of land and maritime activities**

ALTEN is responsible for the **optimal operability** of platforms, supporting the integration tests, corrections and maintenance.

AIT

— Thanks to **20+ years of experience** in Space AIT programs and its **CoC of 150+ AIT FTE**, ALTEN supports the main satellites manufacturer with a **multi-skill approach**:

- **Mechanics: Assembly, Vibration tests**
- **Electronics: Integration, Signals controls**
- **Optics: Instruments alignments & performances**
- **Telecom: RF transmission (uplink/downlink)**
- **Quality: Methods & Process, controls**
- **Management: AIT planification & coordination**

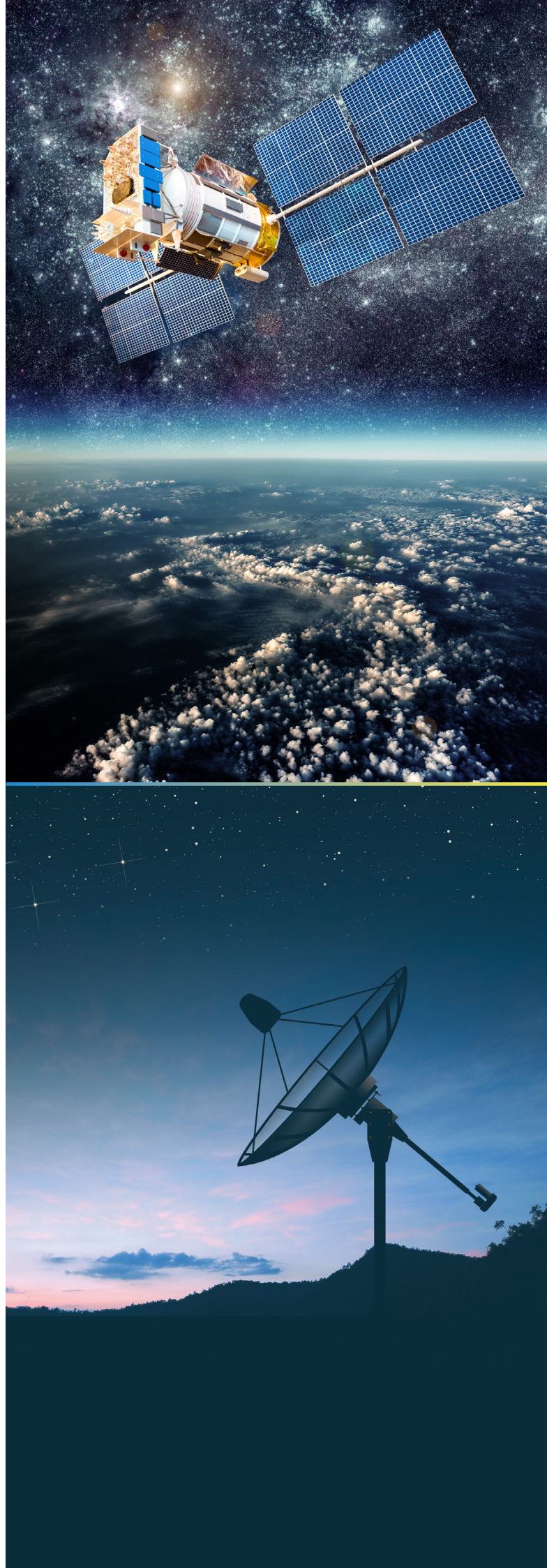
This core-business activity is delivered for **Observation, Telecom, Scientifics Satellites and SmallSat**.

Cybersecurity

— Involved in cybersecurity projects around the world supporting ALTEN's clients mainly in:

- **Integration:** system administration, integration of Cisco IDS (intrusion detection system), transverse integration between IDS & malware analyser
- **Deployment:** system installation & deployment of its components, system support & maintenance
- **System validation and integration:** redaction of functional test plans, workload tests, integration follow up, tests campaigns, installation, redaction of user or administration documentation

ALTEN has also developed and applied Training & Certification programs with our partners.



“

The AIT supplier (ALTEN)
is responsible for the assembly,
integration and testing of the satellite,
they are fully responsible of the AIT.

Overall, we are very satisfied, they work
with quality, and what is pleasant in the
collaboration, both on technical and
human side, is the relationship based on
trust.”

Client's testimonials
by **Thomas Huens, CNES (RAIV TARANIS)**

TO LEARN MORE ABOUT OUR
VISION, COMMITMENT, OPPORTUNITIES,
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alten.com



CONTACT US
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