

## Shaping Our New World Together

Our changing world is both extraordinary and exciting and our innovative satellite-based solutions play a vital part. Expertise in Space offers huge benefits. And we can help with the challenge of understanding, managing and operating it.

As European leaders in satellite systems and at the forefront of orbital infrastructures, at Thales Alenia Space we have a long track record in prime contractorship and project

management. We can provide you with high quality, end-to-end, turnkey systems, space and ground segments or, if you prefer, simply equipment. And if you need a company who will oversee the process from drawing board to the end of your spacecraft's life and beyond, coordinating teams and ensuring that deadlines are met, we will happily oblige.

At all times and stages, we encourage an ethos of cooperation and shared experience,

both internally and with our clients. Our support and after-sales service is second to none and we are your partners from beginning to end. At Thales Alenia Space we represent a worldwide reference for Space that affects the future of every single one of us: from meteorology to environmental monitoring, from navigation to telecommunications, from defense to science and observation.

• PAVILLON NOIR. 05/07 Crédits photos: Getty Image, Grant Faint, ESA. Written by K. Haswell

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**THALES**

**ThalesAlenia**  
A Thales / Finmeccanica Company *Space*

Unlimited Views





## Our Changing World

We live in a world that is evolving at dizzying speed where innovation drives and breakthroughs are part of everyday life. It is a world where oceans once seemed great, yet now we find our way with ease, where continents once seemed distant, yet now we are always connected. Even the air that we breathe is laden with information. It is a natural world, a world we must nurture with people whom we must protect, where conflict often prevails and disaster can strike without warning. It is a world where our pursuit of knowledge drives us ever further afield in our quest to understand not just our planet but the wider Universe that is our home. And all of this is possible thanks, in large part, to our extraordinary achievements in Space.

## Look How Far We Have Come

In little more than a generation, the launch of a satellite has gone from stopping a nation's business to guaranteeing it works like clockwork. We have made the great leap off our planet and turned the space around Earth into a wondrous and limitless operational zone in the sky with satellite-based systems enhancing our lives and creating a whole new universe of communication and knowledge. Thanks to Space we can predict climate change and get accurate weather forecasts, we can protect lives in remote parts of the world, navigate safely and send and receive that magic picture or TV program on our mobile.

## And, Together, We Can Go Much Further

At Thales Alenia Space, we believe the future is bright and we want to take you there. Our men and women are at today's cutting edge and are leading the way in tomorrow's breakthroughs. Drawing on our long tradition of expertise, innovation and excellence gained in developing space and ground systems across the whole spectrum, we are designing the future. Together with Telespazio, at Thales Alenia Space we are members of the Space Alliance between Thales and Finmeccanica, allowing us to provide you with end-to-end solutions, from systems to operations and services.



Melting ice caps affect all Earth's people and animals. "Satellite data since 1978 show that annual average Arctic sea ice has shrunk by 2.7% per decade with larger decreases in summer of 7.4% per decade." United Nations Intergovernmental Panel On Climate Change 2007.

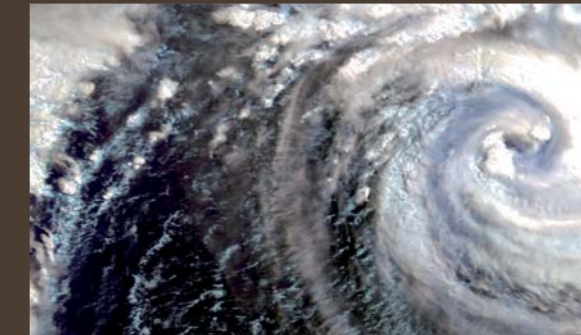
## Nurturing Our Planet

Earth is our home and protecting our home must be our greatest challenge. She lives and breathes as she has for billions of years and to save her we need to understand how she works. By collecting vital information about her atmosphere, her oceans, her ice caps and her land masses, and analyzing how life interacts with nature, we can start to build a long-term picture.

Our satellites are precious since they help to predict global climate change, so we can assess the future and make crucial decisions. They are vital in both forecasting the weather and mapping the biodiversity of our planet. All this knowledge allows us to plan our activities in a sustainable way and monitor contamination, such as marine pollution.

From Space we see things that are invisible from the ground. How else could we get a truly global picture? Like guardian angels watching over us, satellites alert us when natural disasters are a threat. The sooner we can foresee situations such as earthquakes, floods and hurricanes, the better we are able to deal with them.

At Thales Alenia Space we are proud of our position as world leader in satellites and instruments such as altimeters for measuring the change in the oceans' level and the thickness of the ice caps. Over the last 40 years we have been developing Earth Observation high resolution optical and radar systems that, in their sophistication, have far exceeded our wildest imaginings, helping us to understand our planet, support us in crisis and show us how to plan our lives.



From Space we get the big picture, affording us greater understanding of our planet and helping us to plan for a brighter future.

## Our Complete Range of Solutions:

**Siral** will measure the ice caps' evolution to enhance our understanding of climate change.

**Meris** is measuring the temperature and components of the oceans and coastal areas, thus contributing to our understanding of climate change.

**Meteosat (MSG)** and **IASI** are helping us to understand and predict the weather.

**Poseidon, Jason, AltiKa** are crucial oceanography missions to gain a greater knowledge of climate mechanisms and improve prediction models.

**Pleiades HR** and **COSMO-SkyMed** offer dual optical and radar top-notch observation capabilities.

And more...



Satellites play a vital role in assisting teams to work more efficiently during humanitarian missions.

## Protecting People

**Modern life** brings a whole set of hazards. Wars and regional conflicts lead to populations on the move. Organized crime and terrorism bring their own challenges, with the need to control borders and combat drug trafficking. On top of that, oil spills, pollution and industrial accidents can cause disasters on a catastrophic scale. When crisis strikes, it is fast and it is devastating. Communications usually go down and rescue workers on the ground are frequently overwhelmed.

**Expertise in Space** means we can help rapidly to assess the situation and react in the most efficient way. We can provide real-time information, tracking events as they unfold and assisting in locating people. Teams carry high tech satellite equipment offering sophisticated and secure communications and positioning so they can coordinate the effort to save lives. On defense and humanitarian missions, the military benefit hugely from innovations in Space technology which provide them with vital support.

**Navigation from the skies** also helps to make world transportation safer. Detection and warning systems can assist in preventing terrorist attacks on potential targets. And we can monitor the movement of hazardous goods to prevent accidents. Public Sector organizations such as Fire Departments, Police forces and NGOs also find satellite applications to be of enormous value.

**With our know-how** in Observation, Navigation and Communications, at Thales Alenia Space we are at the forefront of secure satellite systems for Defense and Security.

## Our Complete Range of Solutions:

**Syracuse, Sicral** and **Satcom BW** provide broadband and secure telecommunications for armed forces.

**Helios** and **SAR-Lupe** offer military capabilities while **COSMO-SkyMed** and **Pleiades HR** offer dual-use observation capabilities.

**Emergesat** is a quickly deployable container, combining Telecom, observation and navigation space technologies together with WiFi and GSM ones.

And more...

Observe and listen in order to anticipate;  
analyze in order to decide;  
transmit in order to take action and protect.





The Vikings were creative navigators. At sea, they would release a bird. If it flew away, they knew land was near. People have always looked to the heavens to find their way. We still do today, using satellites to guide us.

## Staying In Touch

It took man four thousand years to get from the first written word to the first telephone call. But from Alexander Graham Bell's amazing invention to the mobile phone? Just over a century. In a short space of time, how the world of telecommunications and navigation has changed!

Nowadays you can connect to the information highway whenever and wherever you please. You can watch satellite TV live on your mobile, visit a website or send photos and videos on the move. You can choose what you want to watch or listen to, download it, take it with you and play it back in your own time and place. With personal navigation, you can find your loved ones easily and you will always know where the nearest cinema is. It is a whole wide world, quite literally, in the palm of your hand.

Thanks to pioneering innovations in Space, this spectacular evolution has been made possible. And if it affects us as individuals, it also affects us as a society. Using satellites, we can connect people in remote parts of the world. And telemedicine means we can save lives in isolated communities with doctors performing operations from a distance. Now, Europe is about to get its own, high-tech satellite positioning system. Galileo will enable a fantastic array of new services, such as your car sensing if you're about to swerve off the road. Soon you'll even be able to go on-line in the airplane.

In a world that's evolving at the speed of light, innovation in communications and navigation is all about understanding the applications of tomorrow. The future is coming fast and at Thales Alenia Space, we are proud to be at the forefront.

## Our Complete Range of Solutions:

**W2A** will supply satellite TV direct to mobile phones.

**Ciel 2** will provide homes with High Definition TV services.

**Galileo** will be Europe's own new satellite navigation constellation.

**EGNOS** is Galileo's precursor and is already up and running, offering a range of improved services.

And more...

Children are studying with tele-education. Signals from Space mean we can help youngsters all over the world to learn.





We are on the brink of a new era of human exploration, with plans for a Moon Base and astronauts traveling to Mars.

## Our Quest For Knowledge, Understanding Our Universe

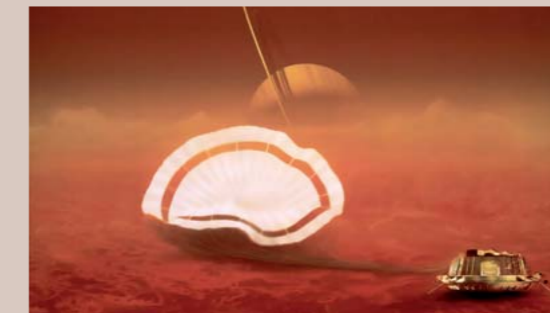
**When the Earth was flat** and the great navigators of history sailed toward that terrible pit of fire beyond the horizon, their bravery was fuelled by a thirst for knowledge and a hunger for the unknown. Today, that desire is ever greater as we drive deeper into the Cosmos in our quest to discover our origins, our destiny and the physics of our Universe.

**In Space we ask big questions** such as what is the Universe made of? Where do we come from? Is there life elsewhere? And to help answer them, we create ever more sophisticated spacecraft. Our telescopes orbiting Earth are looking deep into space, whilst our probes are on their way to other planets.

**Understanding the science** is essential for developing the finest craft. At Thales Alenia Space we collaborate with some of the world's greatest experts to design and build the very best spacecraft for these astonishing missions.

**We are at the forefront of human spaceflight** as key players in one of the most advanced technology projects in the world, the International Space Station. With our long experience of life-support systems, and transportation to Space, we are proud to be global experts in pressurized modules for human habitation.

**Helping to find the answers.** In Space we do, indeed, ask big questions. With our years of scientific and technical know-how and our passion for excellence, we contribute to the most cutting edge science of our times.



In an incredible feat of human engineering, our Thales Alenia Space-built probe, Huygens, landed on Titan, over a billion kilometers away.

## Our Complete Range of Solutions:

**Cassini-Huygens** traveled to the cold, outer reaches of the Solar System to orbit Saturn and send our lander, Huygens, to the surface of Saturn's moon, Titan.

**COROT** is studying the insides of stars and looking for other planets like our own.

**Herschel and Planck** will be the biggest infra-red observatory ever launched into Space.

**ExoMars** will rove across the red planet and analyze its surface, digging down 1m below in our search for life outside Earth.

**Venus-Express** is providing new insights into the turbulent and noxious atmosphere of Earth's sister planet.

**International Space Station:** over half the pressurized modules for human habitation are built by us at Thales Alenia Space.

And more...