

# Company Profile



# Vision & Mission

To enable people to act in an aware and timely manner in order to live better and preserve the earth.

We simplify the adoption of geospatial data in order to understand the world better.



# Company Profile

Planetek Italia is an Italian SME (Small and Medium Enterprise), established in 1994, which employs 45 men and women, passionate and skilled in Geoinformatics, Space solutions, and Earth science.

We provide solutions to exploit the value of geospatial data through all phases of data life cycle from acquisition, storage, management up to analysis and sharing.

We operate in many application areas ranging from environmental and land monitoring to open-government and smart cities as well as scientific missions and planetary exploration.

The main activity areas are:

- Satellite, aerial and drone data processing for cartography and geo-information production;
- Design and development of Spatial Data Infrastructures for geospatial data archive, management and sharing;
- Design and development of real-time geo-location based solutions, through positioning systems such as GPS/Gallileo/GNSS and indoor location systems;
- Development of software for the satellite on-board data and image processing and for ground segment infrastructures.

Planetek Italia is also a premium dealer of Hexagon Geospatial software and a data provider of satellite images.

The Planetek group consists of four companies based in Italy and Greece and is active in both national and international markets.

Planetek Italia is structured in Strategic Business Unit focused on different markets: Government & Security, European Institutions, Space Systems, Business to Business.

# The Planetek group

Parent company: Planetek Italia s.r.l. Bari

Subsidiaries: Planetek Hellas EPE Athens  
GAP s.r.l. Bari  
GEO-K s.r.l. Rome





Founded in 2006, Planetek Hellas EPE provides solutions in the field of Geomatics, involving the use of E.O. data and systems for environmental monitoring, urban planning and civil protection.

Planetek Hellas is involved in the research and in the analysis of new techniques which process and integrate remote sensing information.

The company is also active in the field of promotion of Earth Observation and Cosmic Exploration data exploitation and pursues close relations with education and research organizations inside and outside Greece.

Planetek Hellas is located in the premises of the newly born Space Cluster in Athens, which permits the company to have access to the most advanced technological infrastructure.

The company now has in its portfolio a variety of successful contracts with European Space Agency, through which it has acquired in-depth knowledge of the Agency's procedures and high quality requirements.

Planetek Hellas is very active in R&D and is coordinator of H2020 and 7<sup>th</sup> FP European Projects.

The expertise of Planetek Hellas has led the company to strengthen its specific skills related to:

- Earth Observation and Space Astronomy satellite data management, together with processing for both on-board and on ground deployments.
- Data fusion procedures for Earth Observation and Space Astronomy value added products and service deliveries.
- Spatial Data Infrastructure platform for delivery, dissemination and exploitation of geospatial products with a time-tested competence in INSPIRE compliant web deployments.



[www.planetek.gr](http://www.planetek.gr)



GAP s.r.l. is a spin-off of the University of Bari.

It develops products, processes and services of highly scientific or technological content in the field of remote sensing and related hardware and software technologies, with an emphasis on Geomatic applications.

GAP has developed specific expertise in the detection of millimeter movements of the Earth's surface by means of the analysis of interferometric data acquired by synthetic aperture radar satellite sensors, to estimate water quality via the analysis of passive satellite sensor operators in the dominion of optical radiation and in the development of environmental modelling.



[www.gapsrl.eu](http://www.gapsrl.eu)



GEO-K s.r.l. is the first spin-off of the University of Rome Tor Vergata.

Founded in 2006 its mission is to carry out research and development and provide advice, services and products in the field of image processing and optical, hyperspectral, and microwave remote sensing.

GEO-K personnel have vast experience on an international level in projects developed and promoted by the ESA and the EU Commission.



[www.geok.co](http://www.geok.co)



# Our team



Men and women, all passionate and skilled in  
Geoinformatics, Earth science, Smart city, Space  
systems and Universe exploration



**Giovanni Sylos Labini**  
**Chief Executive Officer**

He cooperated with NASA and ESA, and was director of the Italian Space Agency (ASI) Center of Space Geodesy. Chairman of AIPAS. Vice Chairman of EARSC, board member of SME4SPACE and Apulian Aerospace District. He is also Professor at Venice University (IUAV).



**Mariella Pappalepore**  
**Chief Financial Officer**

Degree in Geology, Masters in GIS and Remote Sensing. She is also Vice President of Confindustria Bari and Bat.



**Vincenzo Barbieri**  
**Chief Marketing Officer & Head of Design Lab**

Degree in Agronomy, specialized in Land planning and management. He has acquired expertise in the market of geospatial applications for central / local Public Administration and entities involved in land management.



**Sergio Samarelli**  
**Chief Technology Officer, Head of Business to Business SBU**

Degree in Electronic Engineering. He had a role in the growth of Planetek Italia, as a Technical Director of the Company. He was a lecturer of remote sensing image processing at Venice University Institute of Architecture (IUAV).



**Massimo Zotti**  
**Head of Government & Security SBU**

Degree in Economics. Responsible for the business development in the Defence market and of the Hexagon Geospatial portfolios. He is also active in several associations dealing with Open Data, Open Government and Geospatial innovation.



**Cristoforo Abbattista**  
**Head of SpaceStream SBU**

Degree in Electronic Engineering. Involved in the design and development of SDIs and Space systems. He was a lecturer of WebGIS at Venice University Institute of Architecture (IUAV).



**Stelios Bollanos**  
**Planetek Hellas Director & co-founder**

Since 2004, he is involved in different EU and ESA projects in the EO and Geomatics fields. He matured experience in the Greek and International Space Markets.

## Links & resources



[www.planetek.it/eng/company/team](http://www.planetek.it/eng/company/team)

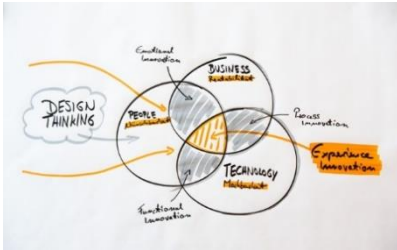
# How we do it

We adopt the principles of strategic design to create and develop solutions able to meet the requirements of our users, through the implementation of the best technologies available on the market, with full respect for economic, social and environmental sustainability.





# Design Thinking



The model we adopt in all our business activities is based on the principles of Strategic Design. The aim is to identify the best combination, over time, between the user requirements, the technological feasibility and the economic, social and environmental viability.

This model is based on the continuous development of prototypes and the progressive revision of the requirements, which lead us to develop solutions based on the real needs of our customers.

The customer is a "member" of the project team who actively participates in all project phases contributing at the implementation of solutions.

This model leads to a true partnership with our users, based on a full and mutual trust, leading to informed decisions and the highest return in terms of satisfaction.

In our software development projects we use Agile and Dev-ops methodologies.

## Quality & Certifications

Planetek Italia quality system is compliant with the International Organization for Standardization, ISO 9001 standards. Since 1998, when the company obtained its first certification, it has upgraded to the **ISO 9001:2015** Quality Certification.

Information Security Management System

Planetek Italia adopt an Information Security Management System for all the databases owned and managed by the company and for the information treatment processes, in compliance with the ISO rules defined by the **ISO/IEC 27001:2013** standard.

All the Company team is truly involved in considering the environment as a part of our production and business, and operates in accordance with Italian and European environment laws and directives. Planetek Italia adopts an Environmental Management System in conformity with **ISO 14001:2015** law and the directive CE n.1221/2009 (**EMAS III**).

Planetek Italia has always naturally considered human rights as being fundamental. Since year 2009 we have been **SA8000** certified.

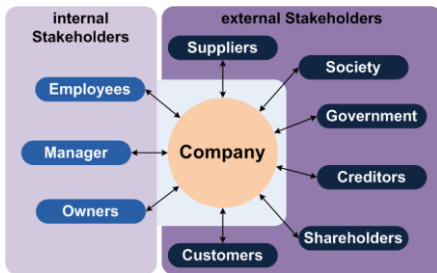


**Vincenzo Pompilio**  
Chief Quality Officer



Links & resources  [Annual reports & documents](#)

# Stakeholders



We maintain continuous relations with our stakeholders, promoting close collaboration, participating in initiatives and making our resources and expertise available to contribute to territorial and industrial growth. We are strongly committed to promoting geography and education programs to young people: traineeships, research work, workshops, meetings & events all over Italy, and sponsoring initiatives.

We are a member of Costellazione Apulia, an enterprises network active in promoting social responsibility, cooperation and new economic models.



# Memberships

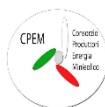
In Europe we actively participate in the development of the sector as a member of **EARSC**, European Association of Remote Sensing Companies, and **SME4SPACE** an European Space SMEs association. We are founder member of **AIPAS**, the Italian Space SMEs Association, and in Apulia Region we have an active role in the **Apulian Aerospace District**, the **Apulian Technological Aerospace District** and in the **Apulian Informatics District**.

We are founder members of the **Italian Open Data Institute**, members of **Stati Generali dell'Innovazione**, of **AFCEA** capitolo Roma, of **CPEM**, Italian Association of mini-eolic productors, and **GISIG**, Geographical Information System International Group.

Planetek Italia is a member of the Tre.e network and Horizon network involved in environmental and waste management.

Through Planetek Hellas we are a member of the **si-cluster** (Hellenic Space Technologies and Applications Cluster) and the **Hellenic Association of Space Industries (HASI)**.

SME4SPACE



# Key numbers

planetek  
italia

planetek  
hellas

founded **1994**

founded **2006**



people **45**

people **11**



Turnover M€/y **4.5**

Turnover K€/y **0.6**

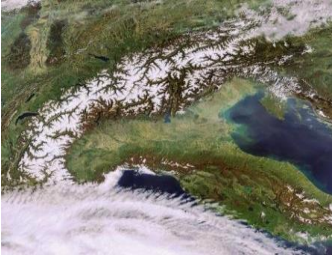


R&D investment % **15**

R&D investment % **15**



# Key technologies



## Earth observation

Satellite, aerial and drone imagery for cartography and geospatial indexes. Optical, multispectral and radar imagery.



## Location Based Systems

Design and development of real time geolocation based solutions, through positioning systems such as GPS/Gallileo/GNSS and indoor location systems.



## Space Software

Development of software compliant to space industry standards for the satellite on-board data and images processing and ground segment infrastructures development.



## GIS & Spatial Data Infrastructure

Design and development of Geographical Information System (GIS) and Spatial Data Infrastructures (SDI) compliant with INSPIRE guidelines for geospatial data archive, management and sharing. Linked open Data. Big Data.

# Key customers

## Enterprises

- Airbus Defence & Space
- Thales Alenia Space
- Telespazio / e-Geos
- OHB - CGS S.p.A.
- KPMG
- Exprivia
- Vitrociset
- Italferr
- Lotti Associati
- Studio Galli
- ADR – Aeroporti di Roma
- Ansaldo STS
- ANAS
- MM (Metropolitane Milanesi)
- SAIPEM
- Eni

## Public Institutions - International

- UE, European Union Directorates
- UE JRC, Joint Research Center
- UE EEA, European Environmental Agency
- ESA - European Space Agency ESRIN, ESTEC, ESAC
- Moroccan Ministry of Agriculture and Fisheries

## Public Institutions - Italy

- Ministry of Environment
- Ministry of Defence
- ASI – Italian Space Agency
- ISPRA, Italian Agency for Environment Protection & Research;
- IGM Military Geographic Institute
- Local Administrations: Veneto, Emilia-Romagna, Friuli Venezia Giulia, Lazio, Lombardia, Calabria, Campania, Puglia, Abruzzo, Sardegna Regions, several Provinces & Municipalities, ARPA, Parks





# Markets

Our **3** Strategic Business Units.

Strategic Business Units (SBU) are segmented by market in order to be more aware of the needs of our customers, at the same time ensuring continuity over time. The SBUs are structured to operate independently with planning, sales and production capabilities.



# Business Units

## Government & Security

It offers application solutions and services in the Public Administration market at national and international levels, and for the Defence, Educational and scientific research markets in Italy.

It provides geospatially powered solutions to the agencies and institutions of the European market such as the European Environment Agency, the European Defence Agency, the European Union (EC, REA, JRC).

It develops solutions for the Earth observation using optical and radar data from satellite, aircraft and drones.

It develops Spatial Data Infrastructures (SDI) compliant to INSPIRE, based on the Cart@net® platform, using Free Open Source and commercial software from major vendors. It offers solutions for the creation of open data geographies and metadata catalogs.

It distributes remote sensing satellite data from major international operators through the Preciso® product family.

It looks after the distribution of Hexagon Geospatial products within the Italian market.

## Business to Business

It offers solutions to companies operating in the Oil & Gas, Water, Renewable Energy, transport (railways, roads) sectors and engineering works and infrastructure activities.

Its products range from systems for business intelligence on geographic data to the creation of geo-informative products and to value-added data from Earth observation.

## SpaceStream

The target market consists of space agencies (e.g. the Italian Space Agency with the COSMO-SkyMed program, and the European Space Agency with the Sentinel program), those related to them (such as Galileo) and the major players in the aerospace market.

It develops and integrates hardware and software infrastructures for the acquisition, processing and distribution of remote sensing data along their entire chain of production: from Earth Observation to Deep Space; from the Space Segment to the Ground Segment and to the User Segment.

The main responsibilities of the SBU fall into Systems and Software Engineering with strong verticalization towards Space Mission Analysis and Design (SMAD).



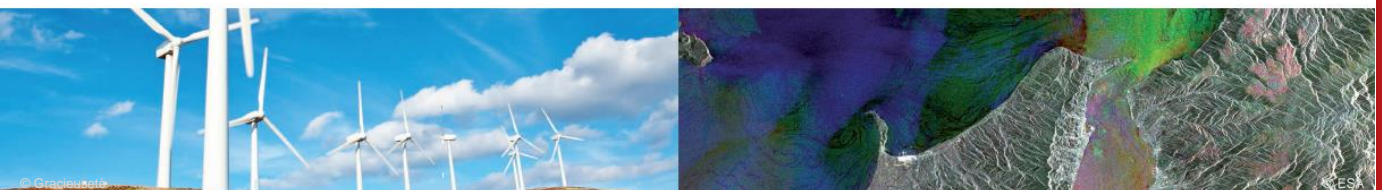
# Applications

We design solutions that are the best combination, over time, between user requirements, technological feasibility and economic, social and environmental viability.

The corner stone of our applications is our geospatial knowledge.



**From Space to applications:  
closer to users' needs**



# Solutions

Our application areas are Earth and infrastructure monitoring, open-government and smart cities, as well as scientific missions for Universe exploration.

We provide solutions in the fields of urban planning, land & coastal monitoring and protection, defence, civil protection and emergency response, tourism, agriculture, fleet monitoring, infomobility, energy (oil & gas and renewable), infrastructure engineering and transport (railways, roads).

We develop solutions for the observation of the Earth with remote sensing data from satellite, aircraft and drones.

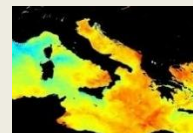
We design Spatial Data Infrastructures (SDI), compliant with INSPIRE guidelines, based on our Cart@net® platform, using Free Open Source, free and commercial software from major vendors like Hexagon Geospatial - Intergraph. We offer solutions for the creation of open data geographies and metadata catalogs.

We look after space system software for Earth Observation and Planetary Exploration missions such as ERS, Envisat, COSMO-SkyMed, Mars Express, Mars Reconnaissance Orbiter and Solar Orbiter. We provide "Ground Segment" systems and technologies to manage and process satellite data acquired by the spacecrafts' instruments. Our main activities include real-time systems, on-board processing software for the space segment, radar and optical data processing for the ground segment, mission planning and software for EGSE.

Urban Plan & Land  
Monitoring



Environmental  
Monitoring



Smart City  
GeoOpenData



Civil Protection  
Defence



Oil & Gas  
Renewable Energy



Info-Mobility  
Info-logistic



Infrastructure  
Monitoring



On board  
Software



Ground  
Segment



Cosmic  
Exploration

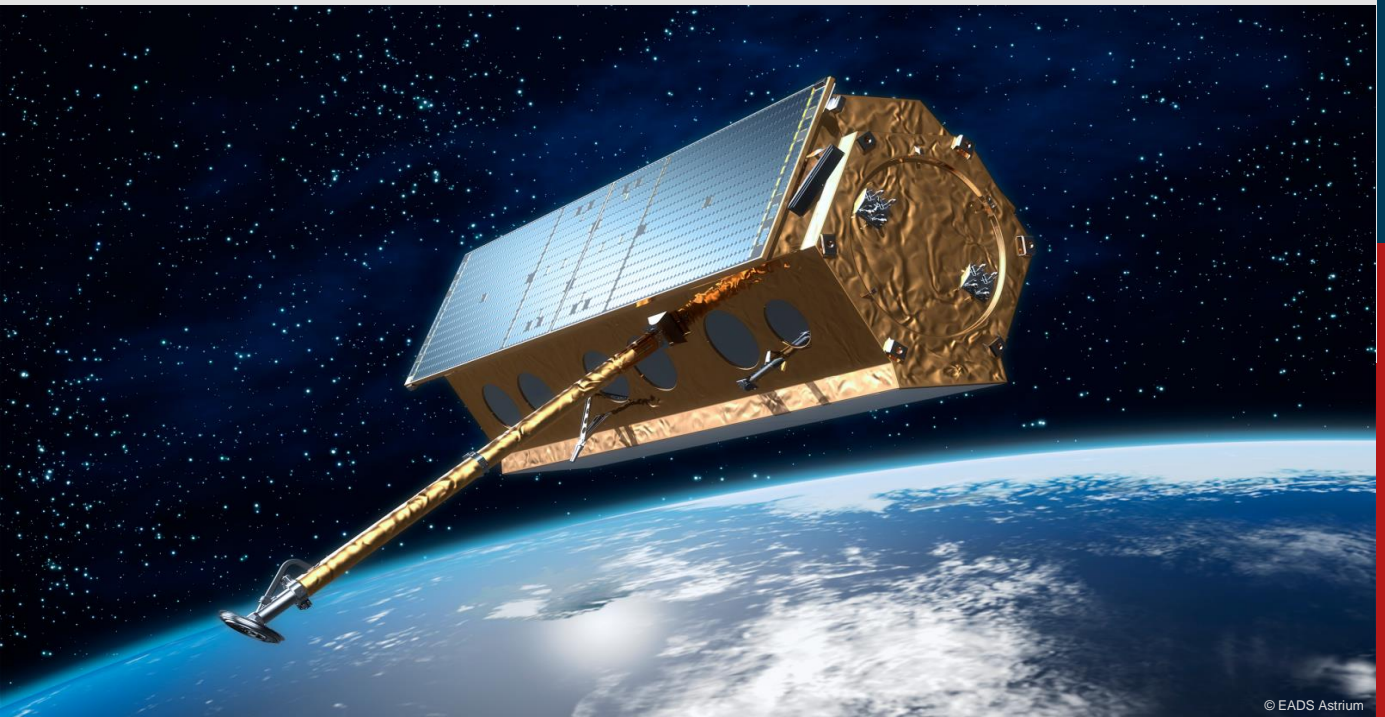




# Products

Planetek Italia is the Hexagon Geospatial Premium Dealer in Italy for GIS, remote sensing, photogrammetry, and geospatial software solutions.

The Company is also one of the main Italian satellite data resellers and value added providers.



© EADS Astrium



# Commercial Partnerships

## Geospatial software – Premium Partner



**HEXAGON**  
GEOSPATIAL

**Software:** GeoMedia, ERDAS Imagine, Imagine Photogrammetry, ER Mapper, ERDAS Apollo, Hexagon Smart M.App.

The software portfolio that combines the best photogrammetry, remote sensing, GIS and cartography technologies available. Flowing seamlessly from the desktop to server-based solutions, these technologies specialize in data organization, automated geoprocessing, spatial data infrastructure, workflow optimization, web editing, and web mapping.

[www.planetek.it/eng/products/by\\_manufacturer/hexagon\\_geospatial](http://www.planetek.it/eng/products/by_manufacturer/hexagon_geospatial)

## Satellite data



**Spot, TerraSAR-X,  
Pléiades**



**Deimos-1, Deimos-2,  
Theia, Iris (video)**



**Cosmo-SkyMed**



**RapidEye**



**WorldView-4, WorldView-3,  
WorldView-2, WorldView-1,  
GeoEye-1, QuickBird, IKONOS**

Satellite images: optical and Radar; with up to 30 cm of ground resolution; daily acquisitions; tasking on demand.

[www.planetek.it/eng/products/by\\_category/satellite\\_images](http://www.planetek.it/eng/products/by_category/satellite_images)



[www.youtube.com/GeospatialVideoTutorial](http://www.youtube.com/GeospatialVideoTutorial)



<http://geospatialnews.planetek.it>

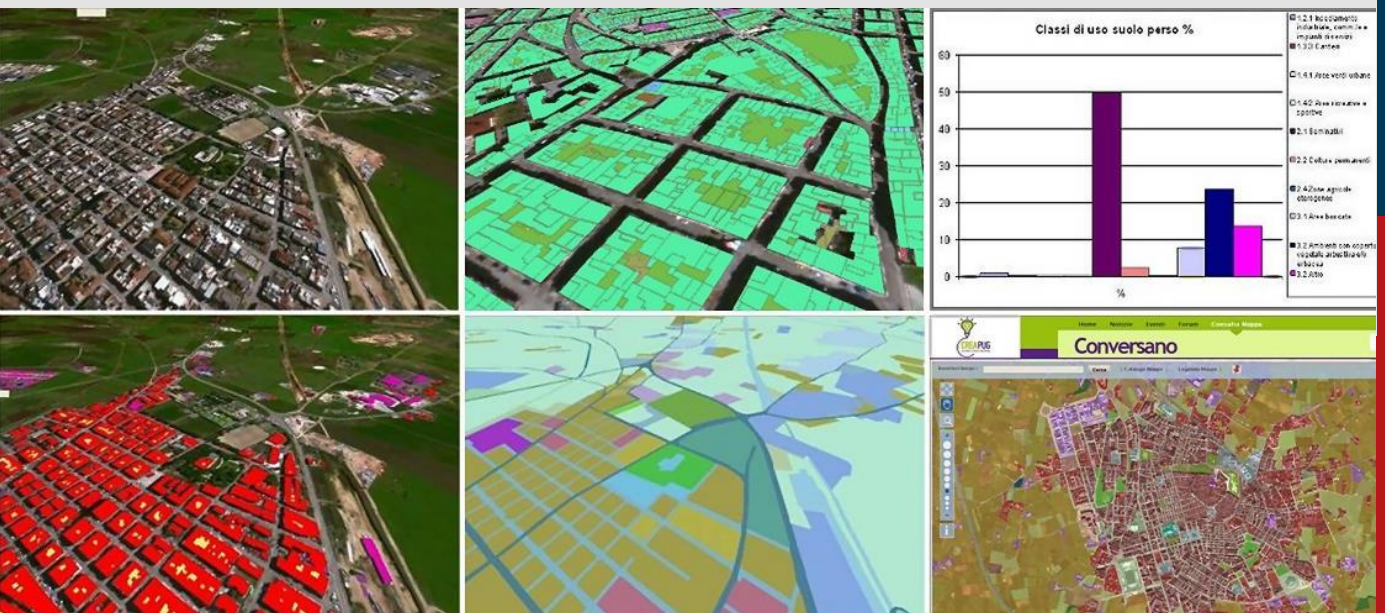
# Our Products

Planetek Italia has developed geospatial products and software solutions designed to meet user needs and exploit the value of geospatial data and services.

**Rheticus®** is an automatic cloud-based geo-information service platform for territorial monitoring.

The **Preciso**<sup>®</sup> family products are designed for Earth monitoring by imagery.

**Cart@net®** is a turnkey geospatial data and services sharing solution based on OGC standards.



# Planetek Products

## Geo-Information service



**Rheticus**® is an automatic cloud-based geo-information service platform for territorial monitoring.

[www.rheticus.eu](http://www.rheticus.eu)

## Imagery

Geo-information products, derived from satellite and remote sensing data, designed to provide cognitive frameworks that meet the specific needs of each application field.



Satellite orthoimages for the timely monitoring of changes on the territory.



Cognitive Framework for Urban Planning and monitoring of Strategic Environmental Assessment (SEA).



Urban monitoring and recognition of illegal construction.



Cognitive Framework of marine and coastal areas and public defense works.



Geospatial Indexes for Territorial Planning and Strategic Environmental Assessment. Monitoring of soil loss.



Fast acquisition of satellite imagery in emergency situations.



Landslide identification and monitoring for infrastructure planning and management.



3D maps and study of land changes for infrastructure planning and management.



Identification and characterization of optimal sites for wind power plant settlements.



Geoportal for e-Collaboration and dialogue between organizations and citizens in the planning process.

[www.planetek.it/eng/preciso\\_family](http://www.planetek.it/eng/preciso_family)

## Sharing, SDI & Linked Open Data



**Cart@net**® is the WebGIS solution for the management and consultation of large raster and vector datasets, ideal to distribute on-line catalogs of cartographic data

[www.planetek.it/eng/cartanet](http://www.planetek.it/eng/cartanet)



**LOD4SDI** is an open and reusable solution for publishing geographic data on the Web as Linked Open Data, according to the standard RDF / XML.

[www.planetek.it/eng/getlod](http://www.planetek.it/eng/getlod)



# Awards



- 2016 **Best Practices for Innovation 2016**  
Rheticus® Displacement has been awarded the “TIM Telecom award for innovation” at the **10th edition of “Premio Best Practices per l’innovazione”**.



- 2016 **EARSC European EO product of the Year**  
Rheticus® Displacement has been listed among finalists of the “Product of the Year” competition and Planetek Italia among the top 5 of the **EARSC Company Award**.



- 2016 **OPENGEODATA Italia Association AWARD**  
Best Italian company for the use of Open Satellite Data and Open Geospatial Data



- 2016 **SME Welfare Index Report 2016**  
Planetek Italia listed in the top 100 Italian companies. Its Welfare Index of was found noticeably higher than the average of the sector, with an exceptional sensitiveness for the educational & training areas, and the support to employees.



- 2015 **PREMIO INDUSTRIA FELIX 2015**  
Planetek Italia is nominated as the best company in aerospace sector and top 25 in Apulia.



- 2014 **INSPIRE Conference 2014: smeSpire Challenge AWARD**  
“Best Practices for INSPIRE” – Linked Open geospatial Data framework for data interoperability



- 2013 **INSPIRE Conference 2013: AWARD for Academic Excellence and Innovation in INSPIRE**  
Small & Medium Enterprises (SME's) for the “innovative activities in the field of INSPIRE and SDI development”.



- 2008 **ERDAS EMEA CHANNEL SALES AWARD**  
Best performing partner successfully managing to exceed ERDAS sales target.



# Success Stories

A glance at some of our benchmarks and success stories in the different markets.





# Pan European monitoring

**GIO Land:** project of European Copernicus programme aiming at producing several land cover datasets on 39 European countries.

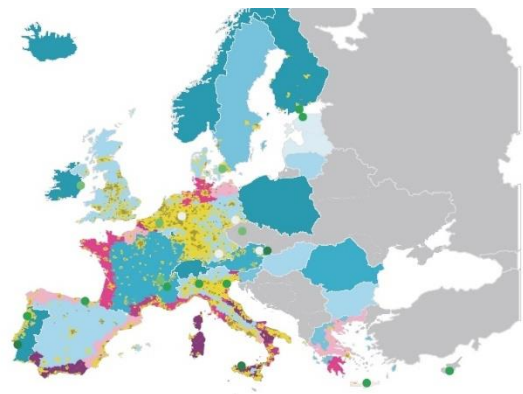
The objective of the European Copernicus programme (formerly GMES) is to provide information to users in the field of environmental and other terrestrial applications. Initial operations of the service (GIO Land) focus on four components, three of which are coordinated by the European Environment Agency (EEA).

GIO Land aims to produce land cover datasets using satellite images. In the framework of the pan-European component of the project, five high resolution layers (HRL) were produced regarding five land cover classes, in 2012. These regarded 39 European countries (32 EEA members countries plus six Balkan countries and Turkey).

Artificial surfaces, forest areas, agricultural areas (permanent grasslands), wetlands, and water bodies are the five land cover classes to be mapped. The output is composed of a series of raster maps relating to these classes.

Planetek Italia leads a consortium formed by Geoville and Planetek Hellas for the production of Lot 4: Imperviousness and forest in Southern Europe, partim West and Central Mediterranean region (1.202.046 km<sup>2</sup>).

This lot includes the following countries: Albania, Bosnia and Herzegovina, Croatia, Cyprus, Greece, Italy, Kosovo, Montenegro, Malta, Portugal (including the Azores and Madeira), Spain (including the Baleares and the Canaries).



## Similar projects

[Geoland2](#), [Soil sealing](#), [Aquamar](#), [Marcoast](#)

Client **European Environment Agency**



## Links & resources

- ➔ <http://land.copernicus.eu>
- ➔ [www.planetek.it/eng/copernicus\\_gio\\_land](http://www.planetek.it/eng/copernicus_gio_land)

# The European environmental information Geoportal

**INSPIRE Geoportal** The unique access point to global European environmental geo-information resources.

The INSPIRE Directive of 2007 aims at establishing an “Infrastructure for Spatial Information in the European Community”.

It builds upon existing infrastructures in the European Member States in order to provide access to electronically available spatial data sets held by or on behalf of Public Authorities.

In order to make these spatial data sets discoverable and accessible, the Directive requires the Member States to set up the following INSPIRE network services: discovery, view, download, transformation and invoke.

As a central European point of access to these INSPIRE network services, the European Commission has set up an INSPIRE geoportal developed by Planetek Italia in partnership with the German company lat-lon. The geoportal allows cross-border, multi-lingual and harmonized access to the Member States' INSPIRE network services.

The geoportal provides integration interfaces for discovery, view and download services from Member State portals and thus to foster the harmonization of Member States' national Geoportal implementations through the adoption of open standards and open source products.



## Similar projects

Geoportals of [Emilia Romagna Region](#),  
[Abruzzo Region](#), [Moroccan Ministry of Agriculture](#),

Client



## Links & resources

- ➔ <http://inspire.jrc.ec.europa.eu>
- ➔ [www.planetek.it/eng/inspire\\_geoportal](http://www.planetek.it/eng/inspire_geoportal)

# Cloud-based geoinformation on our Earth, for land, resources and infrastructure monitoring

Automatic cloud-based geoinformation service platform for territorial monitoring.

Geospatial information is today essential for organizations and professionals working in several industries.

More and more, huge information is collected from multiple data sources and is also free available to anyone as open data.

Rheticus® is an automatic cloud-based geoinformation service platform, designed to deliver fresh and accurate data and information on our changing world.

It is designed to deliver up-to-date, accurate maps, and historical graphical data via a user friendly dashboard.

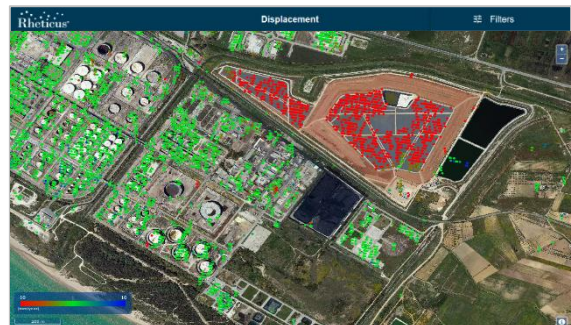
Its unique characteristics are:

- the use of Copernicus free & open satellite images,
- cloud computing
- results delivered to customer with only few mouse clicks
- payments via customized subscription packages.

Updates are done every time new data become available and, depending on the service, the refresh rate may vary from monthly to daily.

## Applications and services available

Territorial changes, urban dynamics and land use changes, ground displacements, landslides and infrastructures stability, new infrastructure and construction areas, wildfire burned areas or coastal sea waters quality.



**Users:** Infrastructures engineering and management; Civil Protection; Land & sea monitoring Authorities, etc.

# Mapping the soil loss

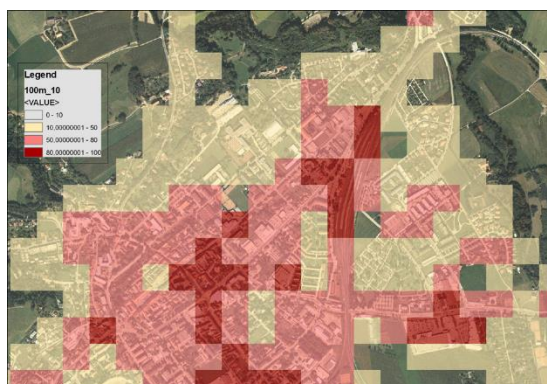
**Soil sealing:** A homogeneous map of high resolution land cover data for built-up areas, including degree of soil sealing, for 39 countries in Europe.

Among city planners and urban designers, there is a growing awareness of the environmental importance of surface permeability. Areas where the balance between permeable and impermeable areas has been lost may be prone to flooding and related environmental disasters. Many city and state governments are initiating procedures to actively regulate this balance. Furthermore, there is a need to monitor the rapid urban sprawl and all its negative effects on landscape and natural resources.

This service started in 2006 among the first operational geo-information services within the Copernicus (GMES) initiative of the EU Commission and ESA. Now this service is operational providing periodically updated maps.

The product realized is the raster datasets of built-up and non built-up areas, including degree of soil sealing in full spatial resolution (20m x 20m) for 5.8 million square km across Europe, the reference years being 2006, 2009, 2012. The datasets are available to users on all administrative levels.

Planetek Italia is a service provider for sealed area extraction over several European countries.



## Similar projects

[GIO Land](#), [Geoland 2](#)

European Environment Agency



## Clients



**ISPRA**  
Istituto Superiore per la Protezione  
e la Ricerca Ambientale

## Links & resources



[www.planetek.it/eng/soil\\_sealing](http://www.planetek.it/eng/soil_sealing)

# Near real-time monitoring

## Monitoring turbidity and water quality during dredging activities for the installation of off-shore infrastructures.

Satellite remote sensing may support the monitoring of water quality during dredging activities for the installation of new offshore infrastructures.

The use of traditional monitoring techniques (sampling at sea, measures, laboratory analysis) are certainly effective, but they present logistical and operational obstacles and long processing times, often incompatible with the need to obtain the information collected in real-time. Furthermore, field observations and measurement, although frequent, are not able to provide a complete and exhaustive spatial answer to describe all the phenomena in progress.

It integrates traditional methods with daily collections of high-resolution satellite images over the area of interest. All the monitoring phases are accurately planned: the programming of the satellite acquisitions, the data collection, the ingestion and processing. Within a few hours this method provides accurate and validated information, useful for the quantitative and spatial definition of the entity the phenomenon of dispersion of sediments during dredging operations.



### Similar projects

[Posidonia Monitoring](#), [Aquamar](#), [Coastal Water Attribute Monitoring using satellite data](#)

Client



### Links & resources

- ➔ [www.planetek.it/eng/solutions/applications/infrastructures\\_engineering](http://www.planetek.it/eng/solutions/applications/infrastructures_engineering)
- ➔ [www.planetek.it/eng/NRT\\_sea\\_turbidity\\_monitoring](http://www.planetek.it/eng/NRT_sea_turbidity_monitoring)



# Drinkable water production

## Red Tide detection and water quality monitoring in the United Arab Emirates (Arabian Gulf) in support of human health and desalination plants operation.

The coast of the United Arab Emirates in the Persian Gulf and Oman Sea hosts some of the largest desalination plants in the world (2nd producer of sea water after Saudi Arabia) and their operation is linked in two ways to the quality of the water near the coast: from one side the water they release could have an impact on the coastal ecosystem and from the other side they can be strongly affected by harmful and non-harmful algae bloom.

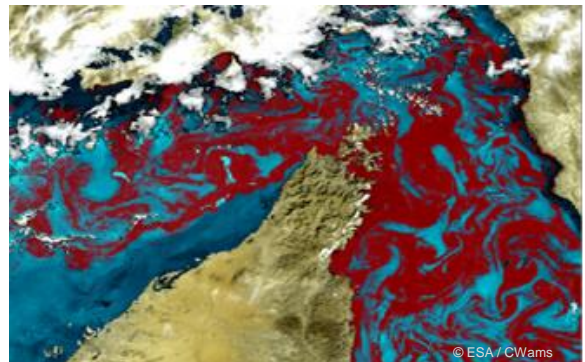
The local phenomenon known as Red Tide in the last 4 years had a relevant impact to the activities of the desalination plants, causing severe damage and halting the operations for many weeks.

The Coastal Water Attribute Monitoring using Satellite data project, funded by ESA, aims at implementing a suite of EO products and data services targeting two growing sectors: Waste Water Treatment and Desalination plants.

The main objectives of the project are:

- To define and setup feasible service and products for supporting user activities in waste water and desalination plants;
- To implement and demonstrate those products and services over two test areas chosen by the users;
- To elaborate a plan for a wide service uptake within the framework of the international obligations (e.g. European Marine Directive).

The project consortium is composed of TechWorks (Prime) and Planetek Hellas.



### Similar projects

[Park-Archipelago](#), [Aquamar](#), [Ocean Color Map](#)

Client



## Links & resources

<http://cwams.eu/>

# Discover our history

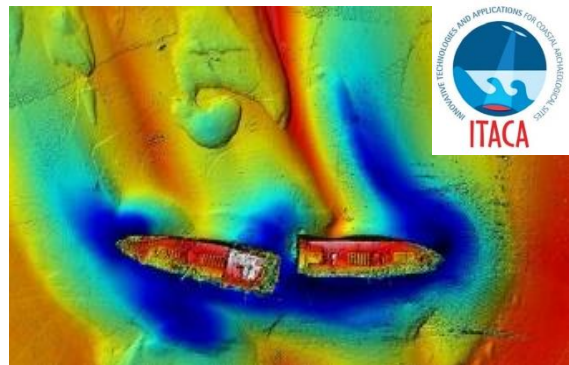
## Earth Observation and WebGIS tools to locate and monitor underwater archaeological sites in coastal zones.

The monitoring of the underwater cultural heritage is a priority of Public Authorities (e.g. Ministry of Cultural Heritage, Institutions and local entities) which deal with conservation and restoration activities. These public bodies need cost-effective, reliable and systematic survey techniques and means to accomplish their mission and everyday work.

The ITACA (Innovation Technologies and Applications for Coastal Archaeological sites) project aims to prove a management system for underwater archaeological sites in coastal regions. The discovering and monitoring service uses innovative satellite remote sensing techniques combined with image processing algorithms. The project develops a set of applications integrated in a system that pursue the following objectives:

- Search and location of ancient ship wrecks;
- Monitoring of shipwrecks, ruins and historical artefacts that are now submerged;
- Integration of resulting search and monitoring data with on-site data into a management tool for underwater sites;
- Demonstration of the system's suitability for a service.

The ITACA project, funded by 7<sup>th</sup> FP is coordinated by Planetek Hellas.



### Similar projects

[Park-Archipelago](#), [C-WAMS](#), [Aquamar](#),  
[Ocean Color Map](#)

Client



### Links & resources

➔ <http://www.itaca-fp7.eu/>

➔ <http://www.planetek.it/eng/itaca>

# Multisource 3D IMagery INTelligence

## 3D IMINT: design and implementation of a computer system able to support the targeting activities of the Italian Armed Forces.

Getting the maximum detail from imagery and from geo-information data is crucial for Imagery intelligence activities. The aim of the “3D IMINT” project is to support the targeting operational activities of the Italian FFAA. To increase the performances of targeting activities, an extensive and innovative use of remote sensing data and new generation of elaboration algorithms was introduced. A computer system integrates innovative IMINT methodologies into a sophisticated process, resulting in a significant improvement in the accurate recognition and classification of targets, by using, among others, accurate 3D coordinates.

The key elements of the project are:

- to adopt the 3rd dimension to increase information accuracy;
- to derive Ground Control Points from Satellite radar data, archived in a global catalog, to increase military operations accuracy;
- to correctly manage the geo-information assets through proper storage, updating and accessibility of the data;
- to integrate different types of data through data fusion techniques;
- to automate and integrate the entire process with benefits in terms of time and cost saving;
- to introduce standardized e-learning systems.



### Similar projects

[Geocrew](#), [G-Next](#), [Safer](#)

### Client



Stato Maggiore della Difesa

### Links & resources



[www.planetek.it/3Dimint](http://www.planetek.it/3Dimint)

# Prevention of urban and environmental crimes

## **SIMP Canosa:** Geospatial solutions to increase control and capacity of intervention on the territory.

Today geospatial knowledge represents a great resource for the administration of cities. It helps to achieve better decisions and make the cities greener, as well as to engage citizens in democratic activities and in decision-making processes, in order to safeguard citizens and the environment.

Through the use of satellite imagery, sensors, cameras, citizens interactions, and using geospatial intelligence we enable operators of the municipality and the Police forces to receive immediate information on the phenomena related to their areas, to process information, and to identify priorities; all this in a very short time, enabling quick actions and effective interventions.

The solution is based on Hexagon Geospatial Intelligence software, base maps, Earth observation data collected on a regular basis and external information sources (such as, for example, the Information System for the Environmental Protection of the Italian Police).

Users can create and maintain digital geo-located dossiers related to environmental crimes.



© Wisconsin DNR

### Similar projects

[WEOS](#), [Wastemon](#)

Client



### Links & resources



[www.planetek.it/simp\\_canosa](http://www.planetek.it/simp_canosa)

# Agriculture and fishery information sharing

## Moroccan Agriculture & Fisheries Geoportal: the Geoportal provides easy access to the wide collection of datasets owned by the Ministry.

The Millennium Challenge Account agreement signed between the Governments of the Kingdom of Morocco and the United States of America, aims at contributing to economic growth and poverty reduction in this African country. In this context the Moroccan Ministry of Agriculture and Marine Fisheries called for the realization of a Geographic Information System based on the Web.

The Geoportal developed by Planetek gives access to the information related to the MCA projects regarding fruit tree production, small scale fisheries, functional literacy and vocational training, as well as business support.

An intranet/extranet application allows the Moroccan institutions' users quick and easy access to the data and the statistical information available. A Web based Spatial Data Infrastructure which guarantees the deployment and use of GIS tools and data throughout the Departments and Agencies involved, the integration with other information systems, the centralized hosting of critical GIS functions accessible to many users, and the delivery via the Internet.

To ensure full compliance with the customer's requirements, the entire development process has followed the Design Thinking methodology.



### Similar projects

[INSPIRE Geoportal](#), [Emilia Romagna Geoportal](#)



Client

### Links & resources

[www.planetek.it/eng/moroccan\\_agriculture\\_geoportal](http://www.planetek.it/eng/moroccan_agriculture_geoportal)



# Space systems for EO and Cosmic exploration missions

## Facilitating planetary research and Cosmic exploration

Over the last few years, the increasing number of EO and Cosmic missions have brought about the need to have more performing systems able to manipulate, store, analyse, compare, share and display data acquired by different satellite platforms. One of the reasons to have tools like these available, is to facilitate planetary research and Cosmic exploration.

Planetek is strongly involved in activities focused on design and implementation of innovative technologies to solve issues related to data and products access, sharing, processing and fusion.

**spacePTS:** EGSE SW Front-End for Integration, Verification & Validation activities of a satellite payload.

**spacePDP:** Payload Data Processing framework, transferring satellite data processing from Ground to Space Segment.

**spaceOP3C:** a product that achieves high compression ratios, low data distortion, keeping a limited computation complexity suitable to the on-board constraints.

**spaceADM:** a real-time algorithm to evaluate satellite attitude based on Kalman Filter theory, provide highly precision estimates to satellite attitude.



### Similar projects

[spacePDP](#), [spacePTS](#), [spaceOP3C](#),  
[spaceADM](#), [Solar Orbiter](#)

Client



## Links & resources



[www.planetek.it/eng/space\\_software](http://www.planetek.it/eng/space_software)

# Systems for Cosmic Exploration data

Software applications for managing, storing, processing, sharing and archiving Cosmic data.

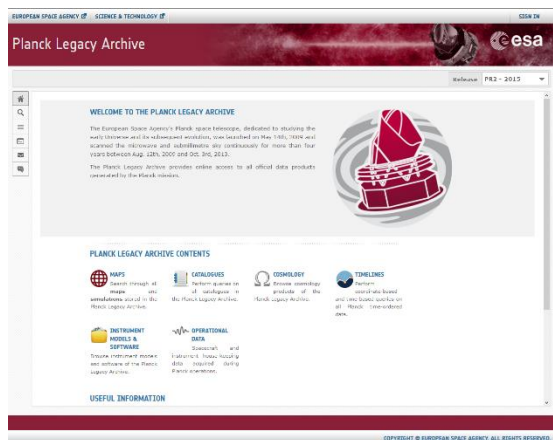
The increasing number of planetary and cosmic missions leads Space Agencies and scientific communities to require for their activities more performing systems able to handle, store, analyse, compare, share and display the data collected by different satellite platforms.

Planetek is strongly involved in activities focused on design and implementation of innovative technologies to solve issues related to data and products access, sharing, processing and fusion.

These individual solutions help scientists to portray morphologic, topographic and spectral data compositions and allow them to see the observations into a common spatial and visualization system.

**spaceSVT**: a Decisions Support System for the storage and analysis of scientific publications in the field of Universe Exploration.

**spaceSDI**: a web component designed to transform a collection of planetary data into a GeoSpatial Web Portal.



## Similar projects

[Planck Added Value Interfaces](#) - [PROC](#) - [ESA-SAPS](#)



## Links & resources

- [www.planetek.it/eng/spaceSDI](http://www.planetek.it/eng/spaceSDI)
- [www.planetek.it/eng/spaceSVT](http://www.planetek.it/eng/spaceSVT)

# Satellite Ground Segment

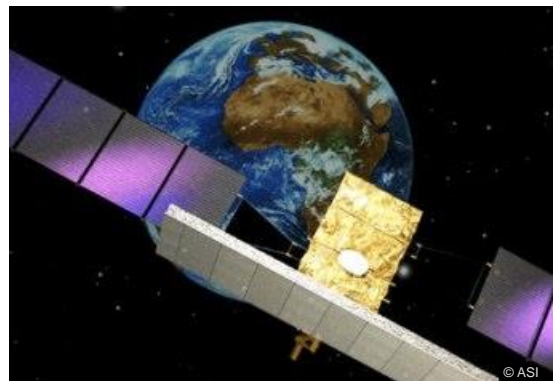
Software infrastructures for managing, acquiring, processing, archiving and disseminating satellite data.

Planetek has a sound experience in definition and implementation of software for missions, ground and space systems for EO and Planetary data. Its capabilities range from the system definition, the design and development, to the validation and the on-site delivery.

Planetek provides “Ground Segment” systems and technologies to receive and process satellite data acquired by the spacecraft’s instruments to archive, disseminate, publish and share the generated products as well as engineering consulting services for new missions definition, feasibility studies, ground control system architecture definition, requirements specification and system design.

Within Italy’s COSMO-SkyMed Second Generation constellation (CSG) of two satellites, Planetek is responsible for the design and implementation of Non-standard processors (PFMOS, PFSPF, PFCRP) and Image Quality Assessment (PFQCA Tool).

Within the Italian Space Agency’s EO mission Hyperspectral Precursor of the Application Mission (PRISMA), Planetek has the responsibility for the design and development of the full automatic L2 Processor chain in the Ground Segment.



## Similar projects

[PRISMA COSMO Second Generation](#)

Client

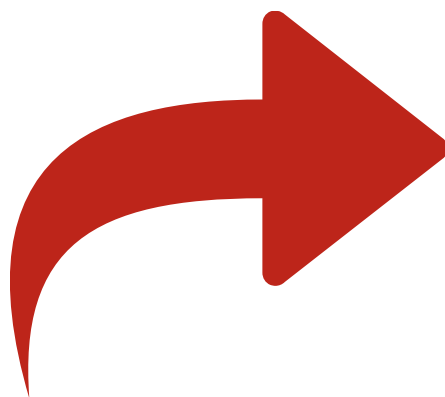


## Links & resources



[www.planetek.it/eng/cosmo\\_SG](http://www.planetek.it/eng/cosmo_SG)

# Let's keep in touch



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