



DELIVERING EARTH OBSERVATION SERVICES



WHO WE ARE



OUR MISSION

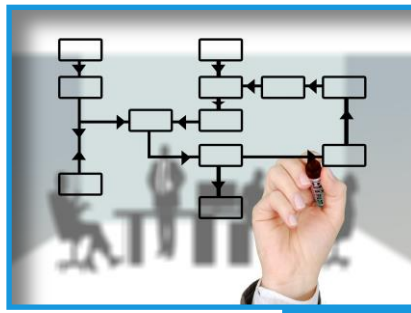
We deliver solutions to simplify Earth Observation data exploitation which enable our customers and partners tackling diverse environmental and societal challenges.



OUR EXPERTISE



**EO DATA
EXPLOITATION
AND QUALITY**



**ALGORITHMS AND
APPLICATIONS
DEVELOPMENT**



**INDEPENDENT
TEST AND
VALIDATION**



**IT SOLUTIONS AND
CLOUD COMPUTING**



**EDUCATION AND
OUTREACH
ACTIVITIES**

ACTIVITY LINES

Operations

Testing, Verification and Validation

Research Projects and Applications

Education

Earth Observation services

OPERATIONS



ESA Research and Service Support

From 2006 to 2021, Progressive Systems operated the ESA Research and Service Support whose mission was to support scientists, service developers and institutions in exploiting Earth Observation data during the R&D phase. RSS supported its customers in developing and integrating new algorithms, elaborating processing campaigns and generating and delivering value-added information.

S3 – Mission Performance Centre

The ESA and EUMETSAT Sentinel-3 Mission Performance Centre (S-3 MPC) aims at ensuring the highest quality of products for Sentinel-3 mission. Progressive Systems is part of the Consortium led by ACRI-ST whose aim is control the quality of all generated products, from L0 to L2.



TESTING, VERIFICATION AND VALIDATION



ESA Fast Prototyping

From 2014 to 2019 Progressive Systems was involved in the frame contract for developing social media and mobile applications for Earth Observation ground segment and mission operations (Fast Prototyping). It aimed at filling the gap between the general public and ESA by promoting its Earth Observation (EO) missions and emergency and monitoring services, and by highlighting the importance of EO data for the scientific community. The main role of Progressive was to gather the requirements and perform independent testing of the software deliveries released by the industrial consortium.

RESEARCH PROJECTS AND APPLICATIONS



HEALTH



Artificial Intelligence and Earth Observation data: innovative methods for monitoring West Nile Disease spread in Italy - AIDEO

Progressive Systems was a partner in the AIDEO project whose aim was to develop an innovative, scalable and accurate process to produce WND risk maps, using EO data and specific AI algorithms.

Website: www.aideo.eu



MARITIME
SURVEILLANCE



Ship detection

Progressive Systems set-up a prototype ship detection chain based on SAR observations to support the Italian Coast Guard in increasing the efficiency of its surveillance activities.

RESEARCH PROJECTS AND APPLICATIONS



EARLY WARNING AND
RISK MANAGEMENT



Fire and burnt areas detections

Progressive Systems developed a fire detection service to detect fires in near- real time and assess derived burned areas mainly based on Meteosat Second Generation data. It allowed local authorities to warn citizens and monitor the identified fires in sensitive locations.



EARLY WARNING AND
RISK MANAGEMENT



Flooded areas detection

Progressive Systems is in the position to develop maps based on Synthetic Aperture Radar acquisition, which indicate the areas affected by the floods. It supports decision making and disaster response.

RESEARCH PROJECTS AND APPLICATIONS



EARLY WARNING AND
RISK MANAGEMENT



Coastline Detection and Monitoring Tool (CoDeMinT)

Progressive Systems developed a tool in support of coastal monitoring projects and activities. The tool enables the non-expert user to extract and analyse shorelines from Landsat and Sentinel-2 imagery. CoDeMinT can be provided as a Jupyter Notebook to allow users to automatically retrieve and download input data, configure the main parameters of the detection algorithm, and quickly visualise the analysis results. The detection algorithm implemented in CoDeMinT is based on Canny Edge method [Canny E. 1986] widely used in many applications. This technique is directly applicable on any type of shoreline regardless of the terrain characteristics (white/dark sand, cliff, rocks, port, ...).

EDUCATION



Earth Observation Data Analysis Lab Programme

In the framework of the Master's degree in Data Science of the University of Rome La Sapienza and within the RSS service, Progressive Systems is in charge of the **Earth Observation Data Analysis – EODA Lab Programme**: a three-days laboratory providing an overview on the Copernicus Sentinels, the EU's constellation of satellites specifically dedicated to atmospheric, oceanic and land monitoring. The Lab offers its students the possibility of learning the most important techniques to process data and derive products for information retrieval on atmosphere, land and water which can be transformed into useful knowledge for assessing natural hazards, managing natural resources, setting up early warning mechanisms for crisis management and much more.

EARTH OBSERVATION SERVICES



EarthConsole® is a **cloud-based platform comprising a set of support services** to assist researchers, innovators and service providers in optimizing the way in which they use Earth Observation data to analyse and keep track of our planet.

www.earthconsole.eu



EARTHCONSOLE[®] SERVICES

G-BOX

**Integrated
Development and
Execution Environment**

Use G-Box for **developing algorithms** on a **cloud infrastructure** and get access to a set of tools for quick data analysis and visualization.

I-APP

**Application Integration
Service**

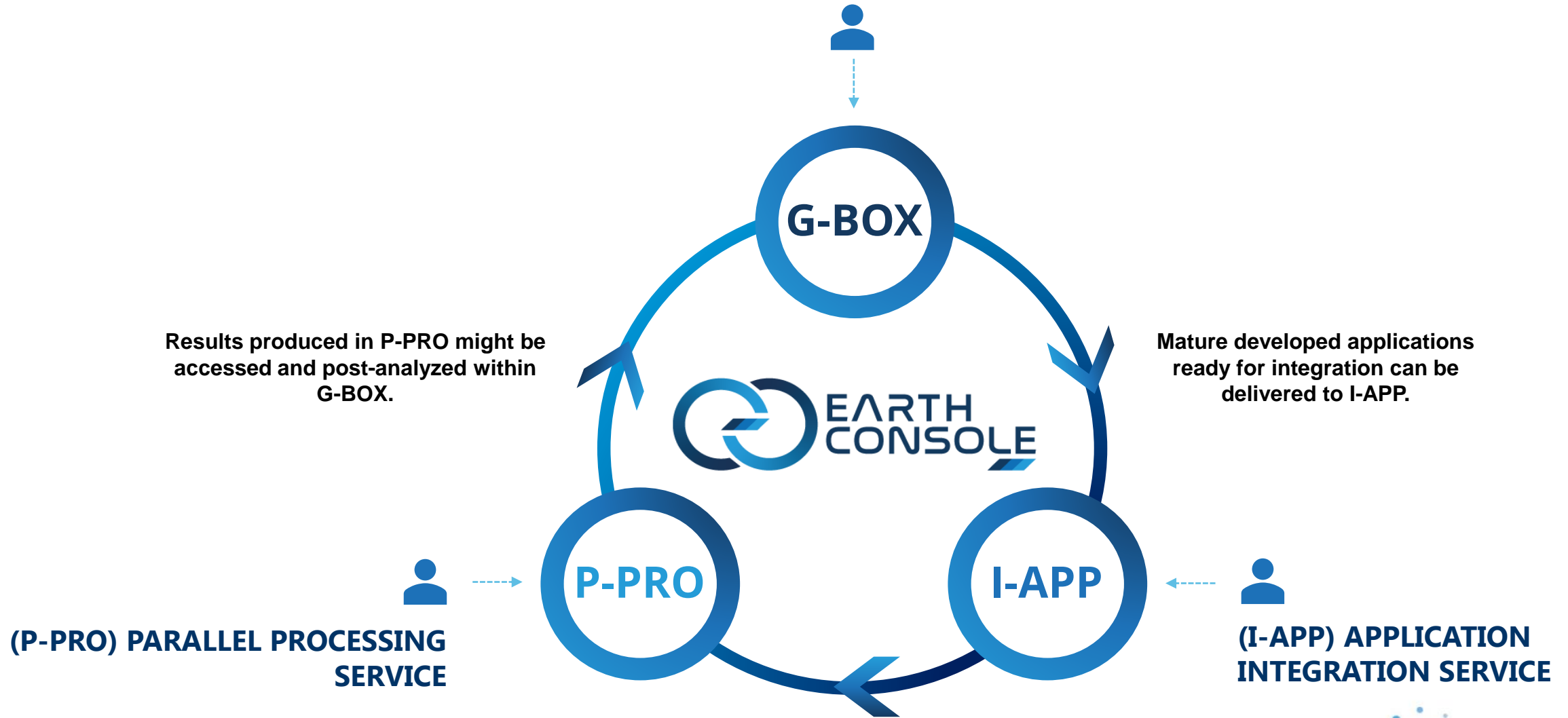
Resort to I-APP to receive **expert support to integrate your application** in the EarthConsole[®] P-PRO environment for massive processing.

P-PRO

**Parallel Processing
Service (also available
ON DEMAND)**

Perform **massive processing campaigns** in a faster and more efficient manner thanks to its cloud computing and distributed systems technologies.

(G-BOX) INTEGRATED DEVELOPMENT AND EXECUTION ENVIRONMENT



EARTH OBSERVATION SERVICES

E  **suite** is

EOsuite is a **set of services** bridging the wealth of Earth Observation data, products, tools and knowledge to **non-EO research and business domains** needing to exploit possible synergies. The services provided:

- **Expert Support** (feasibility studies, validation, consulting);
- **EO Services** (ad hoc development, turn-key solutions, platform independence)
- **Partnerships** (R&D projects, call for bids)
- **Training** (basic, advanced, customised)

E  **suite** applies to

Environmental monitoring

Early warning and disaster risk management

Precision agriculture

Virus early detection and warning

Ship detection

Etc.

E  **suite** targets



Local authorities



Research Institutions



Educational Institutions



Trainees



Startups



Investors

SOME OF OUR CUSTOMERS & PARTNERS



GET IN TOUCH

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