SPACE

Beyond limits

GMV is a private engineering and technology group, being one of the strongest players in the Space domain. It is a premier provider worldwide for space organizations and agencies, and the major satellite manufacturers and operators.

With over 35 years of experience behind it and nearly 500 satellites carrying its technology, GMV can safely claim to be a technological partner of cast-iron dependability, capable of meeting the most stringent needs under the strictest quality standards. It had achieved CMMI Level 5 certification, covering the whole range of activities and services within the Space sector.

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gmv.com

gmv®
INNOVATING SOLUTIONS

ACTIVITIES

Flight Segment

- System-engineering and mission analysis
- Guidance, Navigation and Control (GNC) systems
- Autonomy and robotics
- Satellite and mission simulators
- Ground validation and testbeds
- Onboard software and independent validation
- Data simulators and processors for earth observation and astronomy instruments

Navigation

- Engineering and algorithms of satellite navigation systems
- Major systems of processing and generation of Global Navigation Satellite System signals
- Precise positioning solutions and augmentation systems

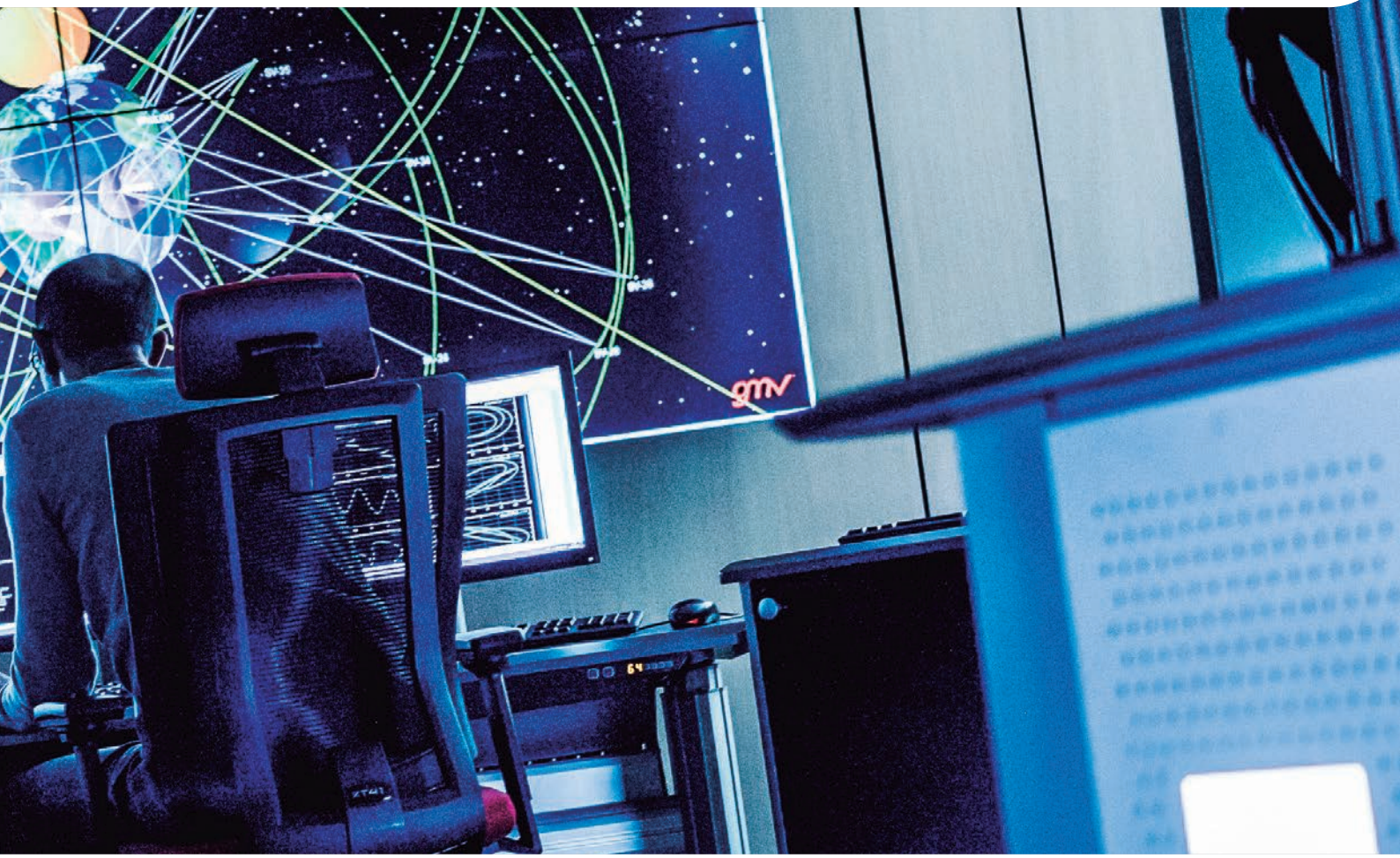
Ground Segment

- Design and integration of complete ground segment
- Satellite control centers
- Flight dynamics systems
- Mission planning systems
- Ground Stations Monitoring and Control
- Security Facilities
- Networks and cibersecurity
- Payload configuration, planning and optimization systems for telecommunications missions
- Science-mission operations centers

Data Processing

- Instrument processors for earth-observation and science missions
- Quality-control and calibration systems
- Space applications, solutions and services (e.g. security, land, agriculture, forestry, maritime,...)

Operational support for space missions of all types



SOME KEY PROJECTS

ESA

After more than 35 years of ongoing collaboration, GMV has become one of the main suppliers of the European Space Agency (ESA) and has provided its specialist services and solutions for almost all of ESA's missions at any of the operating centers (ESOC, ESTEC, ESRIN, EAC, ESAC, ECSAT).

GSA

GMV is a relevant contractor of the European Union's flagship space programs, EGNOS/ GALILEO and COPERNICUS. On this, GMV is leading ground segment satellite/constellation and mission control activities.

EUMETSAT

GMV is one of the main suppliers of control centers, flight dynamics systems, mission-planning systems, payload data processing and support services of EUMETSAT. Good examples are its contributions to the missions EPS, Sentinel 3, Jason, MTG and EPS SG; in the latter two GMV is the prime contractor of the complete ground control segment, including the ground stations in the case of the EPS-SG mission.

NASA

The US space agency has selected GMV's mission planning products for the LRO (Lunar Reconnaissance Orbiter) moon mission and its flight dynamic systems for NOAA's GOES-R mission. GMV also provides mission satellite control technology for the Landsat and TDRS missions.

EUTELSAT

EUTELSAT is currently the world's third biggest satellite operator. GMV is the main supplier for the ground segment of EUTELSAT's satellite fleet, including the satellite control center, flight dynamics systems, ground stations monitoring and control, network and access security and payload management and configuration.

CNES

GMV is a framework-contract supplier of CNES's systems and services, contributing to the development and maintenance of the orbital dynamics systems used by this agency, including the next-generation SIRIUS system. GMV is also providing mission-analysis and operational-engineering expertise plus onboard software development capabilities.

DLR

GMV is one of DLR GSOC and DLR GfRs' main suppliers of engineering and operational services for the Galileo and Columbus missions, the latter representing Europe's biggest contribution to the International Space Station.

SPACE EXPLORATION

GMV is playing a standout role in the major technological challenges represented by space-exploration missions such as Exomars and Moon missions.

GALILEO/EGNOS

GMV is one of the companies that has made the biggest contribution to the development and deployment of the European Union's flagship space program. In EGNOS and Galileo GMV is responsible for the processing core and fundamental, performance-affecting and system-enabling components in the ground structure. Equally noteworthy is GMV's leadership in important centers such as the GNSS Service Center (GSC), Galileo's Time and Geodetic Validation Facility (TGVF), the SAR Signal Return Center (RSLP) and the Galileo Reference Center (GRC), and highly contributing to the Galileo Security Monitoring Center (GSMC), together with the development of the technology required for the future PRS user terminals. In addition GMV is priming the Galileo Ground Control System (GCS) development and maintenance, having direct responsibility on the critical systems like Spacecarft & Constellation Control, Key Management and Flight Dynamics Facilities.

COPERNICUS

GMV is making a notable contribution to the European Union's Copernicus program, including satellite simulators, instrument processors, control centers, orbital dynamics, mission planning systems and precise orbit-determination services. GMV is also leading a European Commission framework contract for definition of the next generation of Copernicus.

TELECOMMUNICATIONS

In 2010 GMV became the world's number one independent supplier of ground control systems for commercial telecommunications satellite operators, holding onto this ranking ever since. Over 250 satellites of the main operators on the five continents are being operated today with GMV's control systems. This number will soon be notably increased with the current deployment of new mega-constellations (e.g. oneweb).

SPACE TRAFFIC MANAGEMENT

GMV is playing a key role in ESA's space surveillance program, with a standout leadership of operations and datacenters. GMV is likewise leading development of the Spanish Space Surveillance Center and the associated contribution to the EU program. Lastly, GMV is providing anti-collision and safety services within the commercial market.

TECHNOLOGY

GMV is playing a crucial role in technology-developing space missions such as PROBA-3 (formation flying), AIM (asteroid impact), and OPS-SAT. In space robotics too, GMV is leading the European Union's PERASPERA R&D program.

NEW SPACE

GMV is now driving some of the main New Space initiatives. It is developing ground segment concept for thousand-strong satellite constellation. It is also the technology partner of PLD SPACE providing the full avionics component of the future MIURA's micro-launchers.