GMV IN 1985

- Established in 1984
- Spanish & European presence
- Number of staff: 7
- Turnover: 130 k€
- Markets:
  - Space (approx. 100% ESA)
- Areas of activity:
  - Mission analysis
  - Orbit determination
  - SW development

Spanish Space sector:
- No. Of companies: 7
- No. Of staff: < 200
- Turnover: < 20M€
  (approx. 100% ESA)
GMV IN 2009

- Worldwide presence
- Customers in 5 continents
- Subsidiaries in Spain, US, Portugal, Poland, Korea and Malaysia
- Number of staff: 1,050
- Turnover: 95 M€

Markets:
- Space
- Aeronautics
- Defense
- Security
- Transportation
- Healthcare
- Communication
- IT

Areas of activity:
- Systems integration
- Engineering
- Consultancy
- Services provision

Spanish Space sector:
- No. Of companies: 37
- No. Of staff: < 2,200
- Turnover: < 360 M€
  (20% outside EU)
QUITE AN ACCOMPLISHMENT IN 25 YEARS

3 K€ Investment
A handful of young engineers
100% Space

95 M€ Turnover
1,000 staff
44% in Space sector

Sustained growth through corporate profit investment
DIVERSIFICATION OF ACTIVITIES

In the Space sector:
- GNSS ground segment
- Satellite Control Centers
- Flight Dynamics
- Mission planning
- Mission analysis
- Science Operations Centers
- AOCS & GNC
- Payload data processing ground segments
- ...

...and outside the Space sector:
- C4I and military intelligence systems
- Intelligent transportation systems
- Security systems
- ITC for public admin. & large corporations
- Avionics embedded SW
- Simulation for healthcare...
GEOGRAFICAL EXPANSION OF SPACE ACTIVITIES

- Key supplier in most space market segments: Commercial telecommunications, Earth observation, Global Navigation Satellite missions, Scientific missions, Space Transportation & Exploration, and Applications
TECH TRANSFER CASE TO THE HEALTHCARE SECTOR

- Virtual reality-based simulators for surgical training
- Surgical planning systems
- Anatomic modeling and visualization
- Tele-assistance systems
- Vehicle localization and management systems
- Handicapped people assistance
TECH TRANSFER CASE TO THE HEALTHCARE SECTOR

- **InsightArthroVR®**, virtual reality simulator for arthroscopy training
  - Includes haptic feedback through specific devices
  - Incorporates high quality anatomic modeling
  - Advanced GUI
- Allows arthroscopy training for knee and shoulder, and will incorporate ankle, elbow, wrist and hip
- Formal training method
- Adaptive learning and objective evaluation
TECH TRANSFER CASE TO THE TRANSPORTATION SECTOR

- Transit transportation fleet management systems
- Electronic fare collection systems
- On demand transport management system
- Rail transport management systems
- Service Planning Software
- Fleet Management systems and services
- GNSS-based electronic fare collection systems
- AIS/VTS systems for maritime transportation
- DGPS Coastal networks for maritime transport
TECH TRANSFER CASE TO THE TRANSPORTATION SECTOR

- GPS
- Antena GPS
- Wireless Comms
- BASE STATION
- Odometer
- Door Detection
- Information panel
- Loudspeaker
- Driver's Console
- Passenger Counting
- Ticketing & driver interface
- Ticket Validation
- Onboard Computer
- CONTROL CENTER
- BASE STATION
TECH TRANSFER CASE TO THE SECURITY SECTOR

- Surveillance systems
- Access control systems
- Advanced security systems
- Emergency and Crisis management systems
- 112 Centers
- Automatic Location and Fleet Management Systems for security vehicles and individuals
- CCTV passenger surveillance system
- Systems for the inspection and surveillance of fishery and merchant vessels in international waters
- Maritime traffic monitoring systems
- Environmental monitoring systems
TECH TRANSFER CASE TO THE SECURITY SECTOR

- Maritime Security System (GSE MARISS)
  - Implementing a service to provide the Port authorities with an information product integrating SAR derived ship position with simultaneous AIS coastal in order to detect vessels not reporting their position to shore, though exceeding the size threshold of the AIS IMO regulation
  - The use of the new information product will allow Port authorities to improve the awareness of maritime threats approaching the coastline and perform optimum planning of coastal zones patrolling aircrafts missions.
TECH TRANSFER CASE TO THE COMMERCIAL SPACE SECTOR

- #1 European and a world-class supplier of GCS’s to GEO telecom operators
- Developed global offering through advanced truly multi-mission solutions based on mature product lines:
  - hifly®, focusSuite, smart rings and flexplan
- Strong experience in consolidating operations and deep knowledge of this market segment:
  - GMV experience spans over 13 years controlling GEO satellites. GMV systems selected to support operations of over 150 (!) telecom satellites worldwide
- Independent supplier with intimate knowledge of satellite platforms from Boeing Satellite Systems, EADS Astrium, Lockheed Martin, NPO/PM, Orbital Science Corp., Space Systems Loral and Thales Alenia Space
AN IMPRESSIVE TRACK RECORD OF MISSIONS SUPPORTED BY GMV

SCC: Satellite Control Centre (real time monitoring & control)
FDS / MPS: Flight dynamics / Mission Planning System
MA: Mission analysis
PMR: Payload management & reconfiguration
PDS/SOC/GMS: Payload Data Segment / Science Operations Centre, Ground Mission Segment
<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>2008 Space Sales</th>
<th>2007 Space Sales</th>
<th>Total 2008 Sales</th>
<th>Total 2007 Sales</th>
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<tbody>
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<td>1</td>
<td>Lockheed Martin Corp.</td>
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<td>United Space Alliance</td>
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TECH TRANSFER AND THE VIRTUOUS CIRCLE IN GMV

The involvement in the Space sector presented GMV with an excellent opportunity to:

- Start a viable and sustainable technological business
- Invest in people with talent: bring in and offer an exciting professional career to excellent people
- Develop methodologies for project management and system engineering
- Focus on and develop capabilities, know-how and competitive product development to address global competition
- Acquire new technologies: TIC, GNSS, Command & control, GIS, Simulation...
- Foster and pioneer Space applications in other sectors: eg GNSS
- Bring our know-how and products into the global commercial Space sector and to other National Space programs
- Transfer acquired know-how and technologies to different markets
Thank you