1. Sector Overview

Italy is a major global player in space science, satellite technologies and the development of mobile systems for exploring the Universe. The industry accounts for 32 large enterprises and 94 SMEs that employ some 35,000 people and generate an annual turnover in the region of €4.5 billion.

The industry is characterised by clusters of MNEs and SMEs located primarily in the regions of Piedmont, Lazio, Lombardy and Tuscany. ESA’s ESRIN Earth Observation Unit is based in Rome, while in the North and South there are major and internationally renowned players of the calibre of SELEX E.S., Telespazio, Vitrociset, E-GEOs, Thales Alenia Space, Compagnia Generale per lo Spazio and AVIO.

Italy, through its national space agency, Agenzia Spaziale Italiana (ASI), is the 3rd largest contributor to the European Space Agency (ESA). ASI coordinates Italy’s participation in national and international space programmes and manages an annual budget of €820 million for programmes which focus on: robotic exploration, launcher development, earth observation and human space flight. The scientific and technological developments which are a direct result of participating in these programmes benefit a wide range of sectors which include telecommunications, civil protection, defence, environmental monitoring and natural resource management.

The Italian Ministry for Innovation, University and Research has allocated €7.2 billion to ASI’s plan for 2010-2020 which will focus on: Earth Observation, deep space observation and robotic exploration, access to space, microgravity and human exploration, technology and telecommunications. Italy is an important partner, supplier and technology contributor on the International Space Station (ISS) and EO is a priority with national programmes such as CosmoSkyMed and European programmes such as ENVISAT and GMES.

ASI is headquartered in Rome and manages assets such as the Italian Centre for Aerospace Research (CIRA) and operational centres including the Centre for Space Geodesy (CGS) in Matera (Italy) and the stratospheric balloon launch site at Trapani (Sicily). ASI also has access to its own spaceport, the Broglio Space Centre in Kenya.

ASI engages in bilateral - and multilateral collaboration through ESA - with the Canadian Space Agency. Canada and Italy, in fact, have long been partners in the space sector and there are a good number of Canadian companies that are active in the Italian market and in third markets in collaboration with Italian enterprises.

2. Market and Sector Challenges & Opportunities

Many Canadian companies are actively conducting, and pursuing further, business in the Italian aerospace market, ranging from large multi-nationals such as Bombardier, Pratt & Whitney Canada, CAE and Bristol Aerospace, to smaller firms that are engaging in long lasting partnerships, supply relationships and innovation partnerships with their Italian counterparts.
Specifically as regards the space sector - and given Canada’s special status as a Cooperating State within the European Space Agency (ESA) - there are significant opportunities for Canada in terms of supply contracts, research collaboration and technology transfer. Participation in European space programmes through the direct collaboration with EU member states will therefore bring important industrial returns and enhance scientific developments in Canada in this sector.

Space activities are strategic for the European Union and international cooperation is a cross-cutting priority of its “Horizon 2020” research and innovation programme which will run from 2014-2020. Under “Horizon 2020” Space has been allocated €1.5 billion over 7 years and it is expected that for each call for proposals during this timeframe there will be €120 million allocated to projects. The funding process is competitive and generally 5 European nations take 90% of total funding (Germany, France, Italy, UK and Spain), that said, historically the programmes have involved the participation of more than 80 non-EU countries.

The first calls under “Horizon 2020” will focus on GPS applications associated with the Galileo satellite (European Global Navigation Satellite System - EGNSS) and on Earth Observation (Global Monitoring for Environment and Security - GMES) with subsequent calls focusing on themes including: robotics and exploration, advanced space systems, space situational awareness, space science, earth observation and navigation and telecommunications.

In order to be a part of this important technology development programme, Canadian space innovators are therefore encouraged to participate in events that are organised in Europe in advance of space calls and to develop networks and establish linkages with leading European space sector players that represent partners on these and on other international space programmes.

**Market Entry**

Canadian space sector players wishing to enter this market are encouraged to nurture direct contact with large groups that play an active role in major international space programmes in order to become a part of their global value chain. In addition, partnerships with SMEs supplying these groups will also provide opportunities for joint ventures and bids, R&D cooperation, supply and technology transfer agreements.

As a means of demonstrating a long-term commitment to the market, Canadian organisations may also wish to engage the services of a local agent which will enable the gathering of market intelligence and ensure a constant in-market presence and timely responses on commercial bids and opportunities.

**3. Sub-Sector Identification**

The following sub-sectors and fields have been identified as being the most promising in terms of supply and technology partnership opportunities for Canadian enterprises and research organisations:

- Robotics & Exploration
- Near Earth Robotics: in-orbit servicing, re-fuelling, maintenance, in-orbit demonstration and validation studies
- International Exploration agenda: Moon, Asteroid, Mars and beyond
- Advanced Spacecraft Systems
- Access to space: new fuels, propulsion systems
- In-space transportation: on-board power supply, habitats, electrical propulsion
- Satellites, ground systems, navigation & communications (antennas, electronics, payloads)
- Composites & advanced materials and structures
- Technologies for non-dependence: the ability of the EU to become less dependent on US technologies which are subject to
- ITARs (International Traffic in Arms Regulations), chip sets and radiation hardened equipment
- Space Situational Awareness
- Space surveillance and tracking systems
- Active mitigation of space debris
- Space Science
- Life sciences research on the International Space Station
- Medicine & Biotechnology
- Earth Observation, Navigation & Telecommunications
- European Global Navigation Satellite System (EGNSS)
- Earth Observation and remote sensing
- Geo-spatial Analysis and Intelligence
- Intelligence, Surveillance and Reconnaissance (ISR)

Major Italian Space Sector Players

**Italian Centre for Aerospace Research (CIRA)**

*CIRA* is the national research centre for aerospace. The centre has public and private sector shareholders (including ASI, research bodies, local government and aeronautics and space industries) and is home to internationally recognized and unique test facilities and air and space flight laboratories.

**AVIO**

*AVIO* plays a strategic role in the space sector globally and is a worldwide leader in the design, development and manufacturing of propulsion systems for space launch vehicles. AVIO is the prime contractor and systems analyst for the European launcher Vega and participates in Europe’s largest satellite launcher programme Ariane 5.

**Thales Alenia Space**

*Thales Alenia Space* (a joint venture between Thales and Finmeccanica) operates in the design, integration, testing, operation and commissioning of innovative and high performance satellite technologies and complex space systems for the civil and defence sectors. The satellites and payloads designed by Thales Alenia Space set the global standard for space systems that provide communications and navigation services, monitor the environment and the oceans to help better understand climate change and drive scientific progress. Thales Alenia Space is a leading supplier on the International Space Station and a pivotal player in space systems designed to explore the Universe.

**ALTEC**

*Advanced Logistics Technology Engineering Center* is the Italian centre of excellence for the provision of engineering and logistics services to support operations and utilization of the International Space Station and the development and implementation of planetary exploration
missions. ALTEC is a public-private company owned by the major European space company, Thales Alenia Space (51%), the Italian Space Agency ASI (29%) and the public consortium ICARUS (20% – formed by Piedmont Local Government and Finmeccanica). ALTEC services include engineering and logistics support, astronauts training, support to experiments in biomedicine, the processing of scientific data and ground segment space programme management. Based in Turin, ALTEC has liaison offices at NASA and ESA.

SELEX E.S.

SELEX E.S., a Finmeccanica company, is a key player in the European Space industry and provides a wide range of innovative products for Earth Observation, scientific missions, planetary exploration, navigation and telecommunication space programmes. In particular, Selex develops and produces qualified space optical assemblies, altitude sensors, RF equipment, photovoltaic assemblies, power conditioning and distribution equipment and robotic arms. Selex partners on the most important space programmes including: GALILEO, GMES, Cosmo-Skymed, ExoMars and ESA and NASA scientific missions.

Telespazio

Telespazio is jointly owned by Finmeccanica and the Thales Group and is a world leader in satellite services. Telespazio covers the whole space value chain through four business units: Satellite Systems & Applications, Satellite Operations, Geoinformation and Networks & Connectivity and activities include: the design and development of space systems, the management of launch services, in-orbit satellite control, Earth Observation services, integrated communications, satellite navigation and localization and scientific programmes. Telespazio manages space infrastructure including the Fucino Space Centre (the world’s largest civilian teleport) and is a partner on major space programmes including Galileo, EGNOS, Copernicus, COSMO-SkyMed, SICRAL and Göktürk.

CGS

CGS (a subsidiary of OHB AG) provides space systems and integration solutions for institutional and commercial space markets. The company offers satellite systems for scientific and application missions, structures and mechanisms for space transportation vehicles (USV) and scientific payloads for experiments in microgravity conditions, deep space and planetary exploration applications. CGS supplies facilities and payloads to the International Space Station for experiments in microgravity conditions (internal laboratories, external platforms and ground support equipment), solutions and services for remote sensing data exploitation (for ASI and ESA) and ground stations for satellite missions and ground segment for launchers. Other solutions include micro, mini, and small satellites, physics and microgravity and VEGA launch pads, satellite ground stations and Ariane launchers. CGS offers planetary exploration services including mission studies, GNC guidance, navigation and control, surface mobility, vehicles, and in-situ science.

E-GEOS

E-GEOS is a leading international player in the geo-spatial business. Owned by the Italian Space Agency (20%) and Telespazio (80%), E-GEOS offers a wide range of products and services in the Earth Observation and geo-spatial application domains, based on both optical and radar satellites as well as on aerial surveys. E-GEOS and its subsidiary GAF/Euromap operate their own data processing services at the Earth Observation Space Centres of Matera, Italy (radar and optical) and Neustrelitz,
Sitael

SITAEL provides a wide range of products powering improvements in space mission capabilities. SITAEL provides specialized design, development, production and qualification services for instruments, payload electronic equipment and rad-tolerant microelectronic devices ensuring compliance to highly critical space mission requirements. SITAEL also provides turn-key microsatellite based solutions for Earth Observation applications and services.

Italian Space Sector Associations

Aerospace and Defence Industries (AIAD)

AIAD is the Italian industry association promoting and representing the interests of 112 aerospace, defence and space companies.

Association of Space-based Applications and Services (ASAS)

ASAS promotes space-based services and applications transferring technological innovation "from Space to Earth". ASAS’s member base is involved in important research programmes including Earth Observation, Telecommunications, GIS and Navigation.

Association of Small-Medium Space Enterprises (AIPAS)

The Italian association for SMEs operating in the space sector, AIPAS represents 50 space companies, including 2 consortia, with a total of 1,400 employees and €150 million in turnover.

Canadian Government Contacts

The Canadian Trade Commissioner Service in Italy
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Regional Offices in Canada

To locate the regional office in your province, see Trade Offices in Canada.

Useful Internet Sites

- Foreign Affairs, Trade and Development Canada
- Canadian Trade Commissioner Service
- Canadian Manufacturers & Exporters
- Enterprise Europe Network Canada
- Enterprise Europe Network
- Horizon 2020 Research & Innovation
- European Commission, Enterprise & Industry, Space Theme

Major Events
• **ESA organised/sponsored conferences, symposia and workshops**
  
  • **ILA Berlin Air Show, Germany**  
    Date: July 2014
  
  • **Farnborough Air Show, UK**  
    Date: December 2014
  
  • **Aeromart Toulouse, France**  
    Date: December 2014
  
  • **Aeromart Montréal, Canada**  
    Date: April 2015