Facts and Figures press release – 14TH June 2018

THE STATE OF THE EUROPEAN SPACE INDUSTRY IN 2017

OVERVIEW – THE EUROPEAN SPACE MANUFACTURING INDUSTRY IN 2017

A strategic sector, embedded in the larger aerospace and defence industry, the space manufacturing industry designs, develops and builds space systems (launchers, spacecraft and the related professional ground segment[1]) for public and private customers in Europe and across the Globe.

The space industry is at the higher end of an important value-added stream of commercial and public/strategic services. Space value added services and their user ground segment (e.g. Copernicus, Galileo, Broadcast and broadband services, geo-information...) generate socio economic benefits and support the development of Europe.

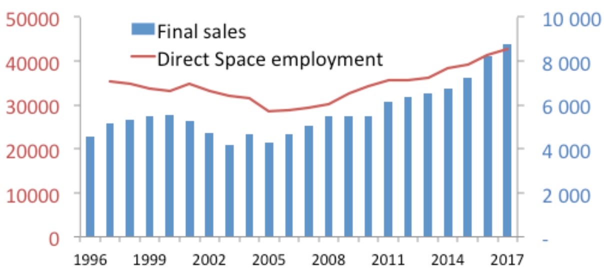
KEY FACTS

Final sales[2] worth 8.76 B€ (+6,2%) - **Direct industry employment 42 664FTE (+3,2%)**. Women represent about 21% of space industry employees, with similar levels of responsibility and qualification as male employees.

The European space sector is facing an unprecedented long series of growing sales. Growth of sales to European customers was very important (+703 M€) compensating largely the decrease in exports (-188 M€).

- Growth on European market segments was supported mainly by increased commercial sales, including European private operators (+339 M€) and operational launcher systems (+107 M€).
- Military customers also represented a segment in growth (+197 M€)
- Sales to ESA remained globally stable, with a notable reduction of launcher development sales, compensated by growth in satellite applications (mostly Earth Observation and Navigation).
- On export markets, the main segment in decrease was the segment of private satellite operators (-241 M€).

EUROPEAN SPACE INDUSTRY SALES (CURRENT M€ -RIGHT)& EMPLOYMENT (FTE - LEFT)



EUROPEAN SPACE INDUSTRY SALES BY MAIN CUSTOMER SEGMENT (CURRENT M€)

As with previous years, the improvement of sales has supported the growth of employment in the sector, although not proportionally. In the past decade, the average value of final sales per worker has improved by 37%.

EUROPEAN INSTITUTIONAL PROGRAMMES - THE CORE BUSINESS OF THE EUROPEAN SPACE INDUSTRY

Institutional programmes promoted by European governments represent 59% of European industry's business (worth 5,1 B€). This segment, while still in growth, exhibits a slower pace than in previous years.

European institutional programmes address missions in the public service domain, such as meteorology, science, defence and security, communications, exploration, human space flights…European institutional programmes are of paramount importance for the European space industry; by addressing all programmatic and technology areas they ensure sector readiness; they pave the way to future operational and/or commercial applications. With regard to defence programmes, they are still under-represented in space programmes in Europe. Currently managed through national initiatives they hardly create the critical budget mass for Europe to stay abreast with its partners/competitors in space (such as Russia, China and the USA).

ESA is the main promoter of European space programmes, with the funding provided by its 22 Member states, Eumetsat and the EU. **ESA as the main procurement and development agency in Europe is the major customer of the space industry** (40% of total industry sales, 67% of European institutional customers). In 2017 sales to ESA remained almost stable with the effect of reduced sales in the launcher development programmes evenly compensated by growth of sales in Earth Observation (Copernicus) and Science programmes.

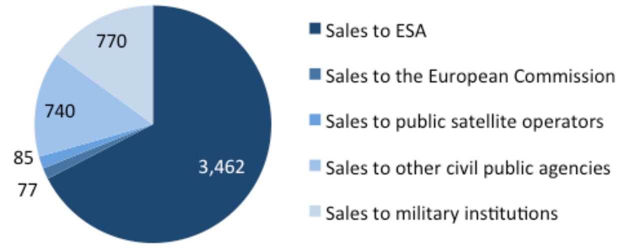
Note that ESA is in charge of procurement and technical management of two EC-funded programmes: Copernicus (former GMES) and Galileo. These represent approximately 500 M€. Similarly, ESA manages the Meteosat development programmes and procurements on behalf of Eumetsat. This represented approximately 150 M€.

[1] According to standard definitions the space manufacturing industry does not include service activities such as that of satellite operators (Eutelsat, Inmarsat...) or launch service providers (Arianespace). These entities are customers to the manufacturing industry.
[2] Eurospace measures industry sales to final customers invoiced in the year. This measure ensures that intermediate sales are eliminated to avoid double counting.

Sales to national agencies have slightly decreased in 2017 (-34M€), while military programmes have more than compensated the loss on national civil programmes (+197 M€).

Direct procurement by the European Commission (including grants) is in decrease at 77 M€.

EUROPEAN SPACE INDUSTRY SALES (CURRENT M€) – EUROPEAN INSTITUTIONAL CUSTOMERS ONLY – 2017



Details by procuring entity - European institutional programmes M€	
ESA *(of which. EU and Eumetsat delegated programmes)*	3 462 (500+150)
European Commission FP7/H2020 mostly	77
Public Satellite Operators (Eumetsat)	85
Civil Public Space Agencies	740
Military Institutions	770

COMMERCIAL MARKETS – DRIVING COMPETITIVENESS

Commercial markets represent 41% of industry sales in 2017 (worth 3.5 B€).

Commercial market segments

The commercial satellite systems segment (2 B€) is mostly composed of telecommunications systems (1.7 B€ in growth in 2017) and to a lesser extent of Earth observation (0.2 B€). The two main customers of satellites application are private entities outside of Europe with 0.6 B€ and private operators in Europe with 0,7 B€.

- In the commercial telecommunication segment, customers are mostly civil customers (94%).
- In the commercial EO market, most sales are exports (98%).

The operational launch system segment (and related industrial services at launch site) grows from 873 M€ in 2016 to 989 M€ in 2017.

- Arianespace and the launcher supply chain are tightly linked by the technical and commercial performance of the European launch systems (Ariane 5 and Vega).
- All industry sales to Arianespace (945 M€) are accounted for as domestic, but the high proportion of non-European customers of Arianespace gives this market segment a significant international component, requiring permanent efforts of competitiveness, from a commercial and technical point of view.

Ground systems and services, worth 252 M€, also contribute to the trade balance of the EU with 156 M€ of exports.

Recent trends

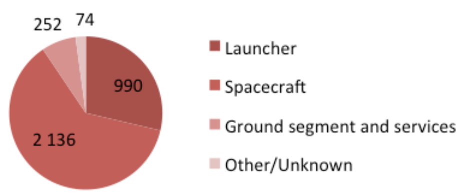
Telecommunications system sales seem to have transitioned from a rapid growth between 2005 and 2010, to a slower pace after 2011, and a slow decrease since 2013. Commercial telecommunications markets are at the crossroads, broadband markets have yet to develop significantly, and technical alternatives in MEO and LEO now compete with GEO solutions. The impact of mega-constellations on European industry will have to be assessed in the coming years.

Commercial and exports markets for Earth observation systems are providing continued opportunities for our industry. While, Europe has maintained world leadership on this export segment for the last decade, it can hardly compensate alone the uncertainties on commercial communications markets.

ISS servicing in the context of the NASA commercial procurement initiatives has provided European industry export opportunities in the frame of the Orion and Cygnus programmes.

EUROPEAN SPACE INDUSTRY SALES – COMMERCIAL MARKET BY CUSTOMER SEGMENT - 2017 - M€

EUROPEAN SPACE INDUSTRY SALES – COMMERCIAL MARKET BY PRODUCT SEGMENT - 2017 - M€



This analysis has been performed by Eurospace Space Industry Markets Working Group that monitors European space market situations and provides support to the annual Eurospace facts & figures survey.

