

Session 5

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Thank you, Monsieur Paoloni, for inviting me to your Session, and allowing me to start my presentation on the Role played by European SME's in the Space Sector.

According to the European Commission, 99% of all businesses in the EU are SME's, and they constitute nearly 60 % of the total economy. Today, I would like to concentrate on small companies with less than 50 employees, and less than 10-million-Euro turnover, and their significant contribution to the Space Sector in Europe.

The set-up of small companies differs significantly from that of the large corporations. In the Space Sector, several small companies have very close connections with research establishments and universities. Indeed, some of them started life as university spin-offs. This allows them to recruit many talented PhD (doctorate) graduates.

This generates a highly skilled and motivated office environment, which stimulates creative thinking, and encourages the development of new techniques and novel technologies.

Some of these can be developed further and turned into marketable prototypes much quicker, due to the flexibility enjoyed by such small SME's, in comparison to the large companies.

Once this is achieved, these small companies have to team up with the so-called big boys, who alone have the ability, capacity and funding to turn these prototypes into mass-production & marketable products, within their own companies.

Nevertheless, a very small number of university spinoff small companies can move ahead quicker and start increasing their size and turnover substantially and significantly, subject to full backing by their government, and securing corresponding financial support.

One of the best examples is SSTL (Surrey Satellite Technology Ltd), which came up with the concept of building small satellites with inexpensive off-the-shelf components and corresponding low prices. They ended up building the first test satellite for the Galileo Project, GIOVE-A, and subsequently winning a Contract, as part of a Consortium, for the first batch of the so-called FOC satellites.

Another such company is Avanti Communications, which from small beginnings, are now a leading European operator of Satellite Communication services, and have recently launched their own HYLAS-1 Satellite.

A 3rd small company (with which I am very familiar) contributed to the early Conceptual Phase AND to the IOV Development Phase of the European Galileo Project, in collaboration with the big companies.

Similar early ideas were also proposed for GMES, a 2nd most important European Global Space project, still under development.

The same small company was also involved with proposals for the European GNSS Evolutions Programme (EGEP), at the European Space Agency (ESA), bearing in mind the development of the new US GPS III system.

Lastly, and most importantly, when the Director-General of ESA came up with the IAP (Integrated-Applications-Promotion) concept, this small company was awarded a first contract to develop the Concept, leading not just to a combination of the various space technologies, such as EO, SatCom and SatNav among themselves, but also to combining these with existing and corresponding terrestrial technologies, potentially leading to new services, for example, in Railway Modernisation.

Such small companies are now busily involved in developing new combined technologies, to improve safety-critical transportation, such as Railways and Civil Aviation. This will be followed with new ideas and technologies to improve resilience against jamming and spoofing of satellite signals, for malicious and/or illegal purposes, thus contributing substantially not only to the Economy of Europe, but also to the Safety and Security of its citizens.
