

# **SPACE: A new Business Opportunity for European SMEs?**

Space Conference organised by the  
SME UNION of the European People's Party

In cooperation with  
Konrad Adenauer Stiftung and Robert Schuman Fondation

**Keynote speech by J-J. Favier**  
Dep. Director Prospective and Strategy  
CNES/DSP

representing CNES and the French Ministry of Higher Education and Research

Brussels, Sept. 18<sup>th</sup> 2008

Ladies and Gentlemen,

Nowadays, every body recognises that Space has become a tool of paramount importance for countries and regions, assuring sovereignty, economic development as well as contributing to international relations, defence and security. If space activities started within Europe thanks to national initiatives, like more than forty years ago in France, today the role of the European Space agency with its 18 Members States is central. As a result many outstanding scientific missions were achieved, contributing to a better understanding of our world; applied programs in Earth Observation, Meteorology, Telecommunications are running successfully participating to the growth of our economy.

Looking from today's situation toward the future of space activities in Europe definitely assumes that the global European vision takes into considerations Europe as it is, with all its technical and economical strength but also with all its potentiality including its fully political dimension in the fast changing world. Up to now the results of the space missions allowed to better understand our environment, therefore to better measure the trend of the future evolution. Today this quantification can help the process of decision making of political

authorities. Space in Europe is entering a new era, with a new political dimension.

### **This is why Space is considered as a priority in the agenda of the French Presidency.**

The 4<sup>th</sup> Space Council -a joint meeting of the Competitiveness Council and the Ministerial Council of the European Space Agency- made a major political commitment on May 22<sup>nd</sup> 2007 when it adopted a Resolution concerning Europe's Space Policy. The policy rests on three key actors: the European Union (EU), the European Space Agency (ESA) and finally their respective Members States that is 29 European States all together.

**But the EU deserves recognition as a global actor on the international scene**, as it is implementing an ambitious, independent and coherent space policy for the benefit of humanity and is willing to work closely through multilateral international partnerships. The EU also has the means to reinforce its capability, to develop Space services of general interest corresponding to the needs of its community policies and those of its Members States as well as the expectations of its citizens and businesses, particularly SMEs.

With this in mind, the French Presidency of the EU is enabling further work on **the EU's two flagship programmes, Galileo and GMES**, but also identify themes for new EU initiatives in the Space field such as **climate change, security, competitiveness or exploration**, and aim to strengthen the position of the European Union on the international scene.

✈ **What has been done so far and what it expected before the end of this year?** An informal meeting of European ministers responsible for Space at Europe's Spaceport in Kourou French Guiana, on July 20 to 22, was organized by the French Minister for Higher Education and Research, Valérie Pécresse.

With the European Commission and ESA, the 29 invited delegations have actively contributed through very fruitful debates. This meeting allowed underlining the common view, adding to ESA, whose

legitimacy is built on all its technological and scientific programmes, an appropriate political level for steering space matters. In doing so the EU would become a global actor of the ESP, in order to:

- Define the main orientations and the political vision,
- Implement the space programmes for citizen benefits, as Galileo and GMES, for improving the quality of life,
- Develop Europe as a leading space power on the international scene, and open the ESP to the cooperation with developing countries, and especially with Africa.

On these perspectives, the European ministers asked to:

- consolidate the Earth Observation programme GMES by guaranteeing the data and services continuity, in particular through long-term funding,
- **sustain a proposal for space sector to benefit a more open and harmonized market, by considering its inclusion into the EU “Lead Market Initiative”,**
- reinforce cooperation between the European research centres on the use of standardized space data, to improve understanding of and prepare adaptation for the climate change,
- ensure the security of space infrastructures by implementing a monitoring and surveillance system of space debris,
- organise a high level political conference on a long term global vision for space exploration, opening a debate on the European role in this global endeavour.

↩ In a few days, during the 5<sup>th</sup> Space Council in Brussels, September 26<sup>th</sup>, the European Ministers will be invited to discuss and adopt a Resolution highlighting the progress made in implementing Europe's Space Policy and calling for new initiatives based on the discussions at the informal meeting in Kourou.

- ↪ Then December First and second, the Competitiveness Council may adopt conclusions concerning the GMES programme, the governance and funding issues, based on the Commission's communication.
- ↪ Finally, the ESA council at ministerial level to be held on 25 and 26 November in Den Hague should also be mentioned. This Council is an important step because some programmes will be decided and funding subscribed by the Member States, such as GMES, SSA, Mars exploration programmes, ...
- ↪ Moreover, several events are being organised for the general public and professionals :
  - The GMES Forum 2008 in Lille, yesterday and the day before was the opportunity to present the first operational services of the GMES programme. It allowed raising awareness and mobilising potential users of the programme.
  - During dedicated events in Strasbourg from October 20<sup>th</sup> to November 7<sup>th</sup>, the general public will be invited to discover European space activities, by emphasising their advantages for Earth and its inhabitants, but also by focusing on exploration of the universe.

↪ **These were the major milestones of the European Space Policy on the political agenda of the French Presidency of the European Union.**

Now what is probably of interest to you today is the impact of such a Europe's space strategy on economy. This refers to growth and employment, known as **the Lisbon strategy** for which Space can be considered as a catalyst for knowledge and innovation.

Space calls for ongoing efforts in research and innovation within numerous disciplines, especially in areas where Europe's position needs to be consolidated. The state-of-the-art technology necessary for space development is an excellent showcase for European

industry's advanced technology used in fields such as information systems, computing, or materials.

Space R&D programmes have resulted in numerous commercial technology and products. A study by the Office of Applied Economic Theory at Strasbourg's Louis Pasteur University proved, by analysing the long-term effects of the ESA programmes, that the total value of **the indirect effects generated was three times higher than the cost.**

For instance Space is in a position to contribute actively to the diffusion of information and communication technologies. It is therefore interesting to note that in the area of broadband internet access, space systems strongly complement terrestrial ones and help to face the digital divide. As a result, 25 million rural or isolated households are now connected to Internet in Europe.

Carried on the wave of an expanding market, satellite and launcher design combined with the development of spin-off applications and services have created significant economic activity and a number of highly skilled jobs. In the short term, this activity should enable the creation of new professions. Furthermore, the space sector has enormous potential to encourage young people to pursue science and engineering studies.

### **Space is also a way of strengthening the potential of European businesses, big and small**

The space sector benefits greatly from its significant contribution to the economy. On a global world scale, commercial space activities in 2005 represented a turnover of around 110 billion euros. For space activities alone, the manufacture of satellites and launch services generated an overall turnover of 11.7 billion euros. The manufacture of systems and equipment for end users (terminals, receiving stations), accounted for a market of 37.5 billion euros. Finally, the market for value added services, based on the use of space capabilities for end users, has been estimated at 61 billion euros. The total worldwide public expenditure on R&D and the development of space infrastructures reached 38.7 billion euros (of which 16.9 billion on defence investments).

In Europe, around 1,500 small and medium-sized businesses operate within the different sectors of the space economy. In 2003, a study undertaken by Bramshill Consultancy showed that these businesses devote around 23 % of their activity to Space-related aspects, representing about 3,000 jobs. The study indicated that most companies believed that their involvement in the Space sector had a positive impact on their brand image (86 %) and their ability to work with other entities (57 %), to develop innovative products (48 %) or to stake out new opportunities in other sectors (41 %). Space is therefore a great opportunity for businesses and SME's.

Space activities require tremendous public investment for mainly structural reasons. The amount of public investment has significant consequences for the space industry throughout the world. For example, government-related orders in the US account for 90 % of the industry for satellites and launchers, whereas in Europe 60 % of Space industry revenue comes from government-related orders and 40 % from the private sector. As a result, the European space industry is much more sensitive to fluctuations in a marketplace which has been proven to work in cycles.

The use of space for commercial services is growing very fast. In this area, the radio-communications sector is the one with the strongest dynamic growth, creating an important spin-off effect in services and jobs. Direct telecommunications (telephone or television), whose volume is regularly increasing, are evolving towards new multimedia services (high definition television or broadband internet access) as a result of users' direct access to high-speed connections.

Furthermore, services initially developed for institutions have now penetrated the mass market. For example, before being exploited for the general public, satellite navigation and geographical positioning first answered the needs of the military. Real-time location services are also extremely useful for businesses (such as transport companies). In these areas, the Galileo programme will provide more accurate and robust signals, while remaining compatible and

interoperable with the existing systems. Satellite positioning and timing systems accounted for about 20 billion euros in 2007 worldwide and could reach 45 billion euros in 2012 and 180 billion euros in 2025.

Similarly, Earth observation satellites, initially dedicated to meteorology, mapping or defence, are becoming information-gathering sources necessary for ensuring sustainable economic development.

The European GMES initiative and the global coordination of GEOSS<sup>1</sup> observation systems will further exploit this potential. The downstream economic sector should integrate this information in its offer of products and services, with the development of new applications. By the way, ESA estimates that the economic value of “planet stewardship” (monitoring climate change, management of the environment, operational oceanography), “precision agriculture” or “crop forecasts” (anticipating market demands) represents an annual market of 2 to 3 billion euros.

New business models using more and more space imagery for wide free distribution on internet appeared recently, opening a lot of opportunities for new businesses and services. Any new European space asset which would offer global coverage of the planet, with a good resolution and a frequent revisit, would be a tremendous advantage for new businesses and institutional use. Such initiatives do exist today in Europe (e-CORCE). They must be developed on private investments, but supported also by institutional demands.

Finally a new range of integrated application services is emerging, mixing and matching different Space technology as well as combining them with other services. For industrial groups, space information and services could be used for various sectors (as energy, chemicals, agribusiness, building, public services, ...) organised around vertical integration and distribution systems, offering clear advantages for

---

<sup>1</sup> Global Earth Observation System of Systems

controlling their activities (for example, more predictability for renewable energy production). **For its part, small and medium-sized businesses will work closely with industrial groups or in niche markets.**

## ↳ Conclusion

As mentioned before, Space in Europe is entering a new era where the EU would have to play an increasing role, first on the political scene, becoming a real global actor, but also in supporting new actions through the financial European Commission's instruments, especially in stimulating the downstream sector of integrated applications and services.

To develop the ESP with determination, the French Presidency of the EU was able to create a positive spirit of openness, team minding and construction among the national decision makers, thanks greatly to the informal Kourou meeting.

Space is clearly a tool for federating space faring nations and new comers around a same ambition, contributing to the setting up of the European identity.

In this context strong governments investments on infrastructures which are economically structuring should be maintained and even increased.

Furthermore, **a lead market in the area of downstream services must be developed.** Support for businesses hoping to exploit numerous opportunities based on the capacities of satellites, should be considerably reinforced in order to allow them to find the industrial partners or investors (especially venture capital) necessary for their development. **The Competitiveness and Innovation Programme or the Structural Funds** could be instruments aiming at supporting the downstream services during the launch of their operational phase.

These new initiatives should create favourable conditions for businesses and especially SMEs to "take off" to space and to fly smoothly on the international scene...

I thank you for your attention.