

**4th Conference on EU Space Policy  
'Benefits for citizens and society'  
European Parliament, Brussels  
8 November 2011**

**Session 2: Industrial policy and innovation**

**Eric Morel de Westgaver  
Director of Procurement, Financial Operations and Legal Affairs  
European Space Agency (ESA)**

Ladies and gentlemen,

Space and innovation share a long history. The extremely hostile environment, the very high dependability and long duration, the low power consumption, the low weight and high thermal insulation, and the complexity of the systems have made space a driver for innovation, and innovation key in space programmes.

However, in space, there is no second chance. Innovation that is not mature enough creates risks that, if not mastered, may result in additional costs during the development and, in critical cases, in failure when in orbit.

This maturation process during which innovative technologies are climbing the steep 'Technology Readiness Level ladder' is a key mission of space agencies. ESA initiated a harmonisation process between space agencies several years ago and has involved industry through Eurospace to ensure that all Euros are used in full, at a time when economic resources are scarce.

This process is also key to ensure that technology harmonisation leads to a larger market for industry. The upstream industry remains a relatively small sector, highly concentrated in a few industrial holdings, with the largest four companies concentrating more than 70% of the workforce. Barriers for SMEs, which account for less than 8% of the total workforce, are quite significant.

The sectors where innovation is totally unbridled however are applications and new services. Space has proven to be an enabling sector for services and economic growth on the ground for European citizens. Many ground applications today make use of the existing space infrastructures and have come up with innovative solutions that now provide excellent services for Europe's citizens: climate and environmental monitoring, navigation and security, to just name a few rapidly-expanding areas. The service industrial sector and

the opportunity for innovation are by far more distributed over all European countries, and the barriers for SMEs are less important.

However, nobody can ask industry to invest in creating services if there is no absolute guarantee that operational space systems will continue to fly. This is certainly the key role for the institutional actors. The example from the field of meteorology shows that public services need this guarantee of existence of the required space infrastructure, simple access to data, and the timely preparation of the next generation and its funding. In that field, it has taken 15 years to reach the level of consolidation needed.

We need mature technology innovation in space and we need the long-term guarantee of the operation of the space infrastructure to enable innovation in services on ground, but we need also modern and imaginative institutional schemes for the programmes of tomorrow.

A good model for the future of services in space is the European Data Relay System programme. Under a Public-Private-Partnership venture, ESA has brought together a nationally-funded and extremely innovative payload, a new platform developed through an ESA programme, and a world-class operator to create a new service of fast, reliable and seamless transfer of large quantities of data in real time and on demand. One of the aims is to provide a rapid crisis-mapping for emergency services during natural disasters.

The Public-Private-Partnership concept developed for the EDRS programme, with an operator, space industry and a national space agency collaborating with ESA, is a model for the future.

In a time of financial constraints amid an economic crisis, the key factors for innovation are harmonisation between the European institutional actors to mature the technologies Europe needs, support of new services based on space infrastructures whose existence is guaranteed, and new and modern institutional schemes allowing agencies, space industry and operators to join forces and share risks to create the services of tomorrow.

Thank you.