BUSINESS INNOVATION SYMPOSIUM (E6)
Public/Private Human Access to Space - Supporting Studies (2)

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THE CHALLENGE OF FUTURE SPACE SYSTEMS AND SERVICES: EFFECTIVE NSWERS TO LOCAL ISSUES WITH GLOBAL SOLUTIONS

Abstract

This paper reviews the challenges and opportunities of market growth for space applications.

Up to now, the development of space systems has been mainly driven by global or regional needs or sovereignty missions. The global dimension of satellites fits perfectly the needs of customers requiring a global coverage. Meteorology, oceanography, TV broadcast or Global Navigation Systems are good examples. In those domains, either the needs are wide enough or the communities of users are well structured. Main customers were able until now to invest in a proprietary capacity or to fund a significant part of the infrastructure.

New elements shape today's landscape:

- The budgetary constraints affecting many countries weaken this model.
- New operational needs are challenging (e.g. real time surveillance of wide areas) and require dedicated capacities, while the users demand is fragmented and spread over the world.

Meeting the performance requirements can justify a collective approach with capacity sharing. So far collective solutions have been hampered by the reluctance of the governments to share exclusive and sovereign responsibilities.

The market of space applications is thus facing a general challenge regarding future growth: cost-effective solutions can be developed and operated only if the user base is consolidated.

This paper summarises the findings of recent studies on the business cases and governance of space systems:

- The OECD study on the role of space technologies in the monitoring of global threats.
- The FRS study on the Conditions for Space Policy and Related Action Plan Consolidation in Europe.
- Astrium's contributionto the development of GMES infrastructure and services.

Assessing examples in Europe and worldwide, the paper analyses the success factors, relying on a smart combination between:

- institutional and commercial assets,
- dedicated systems and generic systems,
- national versus European or international capacities,
- with a clear governance and mandate for the coordinating entities.

Addressing these fragmented markets will likely be the main growth opportunity in the coming years, while usual domains are becoming renewal markets. There is an opportunity for the services activity: the consolidation can be partly performed on the service provider side, either institutional or private.

International cooperation plays a major role. The successful implementation of large capacities will depend on the cooperation between two, three or more stakeholders and will be a lengthy process.

In conclusion, the paper emphasises the important of raising awareness and promoting best practices.