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Financial Support for Space-Based Assets and Services**

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Financing Space Programmes

From space, we look out at outer space as well as towards Earth. We also have science in space, for instance on board the International Space Station. All of these programmes need financial support, primarily institutional financial support – and some even require it. But not all space programmes need financial support in the same way. If we categorise space activities according to their objective, there are substantial differences:

- Space for knowledge, as well as space for mankind and planet Earth rely exclusively on institutional funding,
- Space for competitiveness as well as space for applications and services may rely on private funding as well. This is in fact where industry and operators may contribute to PPPs: the public party develops technology and infrastructures, arriving even at a pre-operational demonstration of services, while the private party may co-fund the development, enjoying the benefits of Intellectual Property Rights and of a possible market demand for recurring flight units, and/or may run the exploitation of space infrastructure and the provision of related services.

ESA has been involved in all the possible types of financial support:

- Full ESA funding, as for exploration optional programme missions,
- Public-Public partnerships, as for scientific mandatory missions, where Member States usually contribute scientific payloads in kind, or for GMES Sentinels and Galileo IOV satellites, where the partnership has been with the EU (we urge that this continues for GMES in the next EU Multi-Annual Financial Framework, as it is currently planned for Galileo),
- Public-private partnerships, as for telecom products developed in the frame of the ARTES programme, where industry is called to co-fund, or for telecom platforms where – as in the case of Alphabus – industry has been co-funding the development, together

with the French national space agency, or for mission exploitation where telecom operators have been systematically involved in the exploitation of all recent missions, such as Avanti for Hylas, Inmarsat for Alphasat, Hispasat for the Small GEO, and more recently Astrium Services for EDRS.

- In some cases, the EIB has been behind successful partnerships between ESA and industry and operators, making such arrangements feasible through loans to the private party. Notable examples of this are the support provided to Arianespace for Soyuz at CSG and to Inmarsat for Alphasat, the latter actually through a joint EC-EIB Risk Sharing Finance Facility.

The ESA intergovernmental system, with its geo-return mechanism and its competition-based industrial policy, has demonstrated its ability to generate competitive products while preserving attractiveness for Member States, given the perspective of a guaranteed return. This perspective in fact implies success in building industrial capacities where they have to be created, a key feature that EU Member States that are not yet Member States of ESA have appreciated when considering joining ESA.

But space has been and will remain a risky and challenging business, and financial support will also be capable of overcoming difficulties - such as handling potential cost over-runs - that could arise during the development of space programmes. And ESA has specific instruments, laid out in its Convention, in support of this and in full recognition of its R&D role.

The issue is not about confrontation or a simple comparison between an intergovernmental, ESA-type funding and Community-type funding. Those schemes have co-existed for years, and will surely co-exist in the future, although complementarity and implementation modalities have shown some margin for improvement. The issue is rather which model to base the cooperation on. We favour a model where ESA undertakes research and infrastructure development, through its own instruments, taking into account, in the case of application programmes of EU interest, EU requirements in the definition phase, and relying on a long-term commitment and financial support for operations by the EU during the exploitation phase. For the EU, this phased complementarity implies making decisions well before it ever needs to begin financing operations. Under the control and funding of ESA and EU Member States, such a model may lead to a European leadership in policies making use of space, thereby complementing Europe's already-established leading role in space technologies and infrastructure, built with national and ESA space programmes, which needs to be maintained and reinforced.

In this context, ESA has welcomed wholeheartedly the entry into force of the Lisbon Treaty and its Article 189 on the EU's space competence, interpreting that as an opportunity to do more for citizens and society through space activities, and not to do the same differently. Financial instruments, in this regard, are clearly key enabling elements of the evolution of the space sector in Europe, crucial in its ability to support innovation and growth at the service of citizens and institutional policies.

This complementarity-based model becomes even more evident when we consider that industrial policy objectives, as clearly stated in the Resolution of the 7th Space Council, are

common, namely: “to support the European capability to conceive, develop, launch, operate and exploit space systems; strengthen the competitiveness of European industry for both its domestic and export markets; and promote competition and a balanced development and involvement of capacities within Europe.” This means that the financial support instruments, and in general rules for implementation, may be different but that they have to lead to achieving the same common goals.

The landscape of financial instruments for space shall not remain static: it has to evolve and seize opportunities importing instruments that have worked successfully in other areas into the space sector. In this regard, we look with extreme interest to the availability for the space sector of project bonds or, more generally, financial instruments for debt and equity, as considered by the EU in support of the achievement of Horizon 2020’s policy objectives.

Challenges and Opportunities

Space is a strategic asset - for the EU, ESA and their Member States, and thus for their citizens. This has to be taken into account when addressing financial support to space programmes.

At ESA, we are currently preparing our proposals for the upcoming Ministerial Council, in 2012. There is enormous pressure from markets, governments and citizens towards budget deficit reduction and spending control. This might affect public policy regarding research and innovation in turn.

Faced with this turmoil, we remain confident nevertheless, since it is generally recognised that in order to recover from severe economic downturn, it is necessary to invest in a competitive and innovative economy and in research, and space is at the forefront of research and innovation, with its ability to promote science as well as applications.

In late 2008, a few weeks after the financial crisis began, the ESA Council at Ministerial Level entrusted record investments to ESA, about 10 billion euros, recognising that ESA is a formidable vector for innovation and growth, supporting European science, industry and economy.

So it is our responsibility at ESA, which is primarily a R&D organisation, to propose research and innovation for the benefit of our society, but it is also our Member States’ responsibility to grant the necessary financial support, allowing us to do so, in growing partnership with national agencies, industry and operators, and in complementarity with the EU.