

EU-ESA relations: contribution from the European space industry

INTRODUCTION

The end of 2012 and the start of 2013 were very rich in declarations and resolutions regarding the relationship between the EU and ESA¹. Industry looks forward to the implementation of a commonly agreed scenario for its two major public customers at European level. Industry would like to point out that all European space programmes, whether they are undertaken at national, intergovernmental or EU level, are dependent upon the continuing strength of the European scientific and industrial base.

In the frame of different scenarios that are now being considered by the institutions, Industry is keen to contribute to the debate by providing its views on this crucial topic, in particular because the unsolved governance issue has affected key space programmes, and is detrimental to the European Space sector as it prevents it from developing its full potential for the benefit of public policies and economic growth.

European Space capabilities are based on solid grounds

Past ESA and Member States policies have been successful in creating a world class European Space industry, active in every domain of the space related activities. This is a major accomplishment that must be saluted.

It provides substantial grounds on which to build the future of Europe in Space. This future looks more promising thanks to the political recognition of the sector granted by the new competence in space policy given to the EU.

A new competence for the European Union

Article 189 of the Lisbon Treaty entered into force on 1 December 2009. It sets an explicit competence in Space for the European Union and gives the EU a clear legal framework to co-ordinate European efforts necessary for exploration and exploitation of Space.

This competence overlaps ESA missions as defined in Article 2 of its Convention and it enlarges the reach of European institutions in Space, potentially allowing to take advantage of the political legitimacy of the EU to promote the development of operational systems and services fulfilling EU policies and to foster the position of Europe in the international scene in Space affairs.

DIFFERENT INSTITUTIONS, COMPLEMENTARY ROLES

It is certainly not up to the private sector to define the respective roles of public institutions. Nevertheless, Industry does have expectations regarding the contribution these institutions should make to ensure the sustainability of the sector, make better use of its capacities and foster its growth. The political and institutional environment, as the “Lisbon Treaty” now defines it, represents a very promising opportunity for the European space sector, and for Europe.

The major contribution of the inclusion of space in the Treaty on the Functioning of the EU is that it allows the EU to consider the space sector as a strategic asset and a key element for independent decision-making

¹ November 2012: publication of the EC Communication “Establishing appropriate relations between the EU and the European Space Agency”; November 2012 adoption by the ESA Council at ministerial level “Towards the European Space Agency that best serves Europe”; February 2013 adoption by the Council of the EU of the conclusions on the EC Communication

and action, and to manage it accordingly. The EU can therefore now contribute to the European autonomous capability to conceive, develop, launch, operate and exploit space systems.

The role that the EU shall take in space must be built on; exploit; and strengthen the technical and managerial capabilities of ESA. The Agency's 50 years of experience have enabled – and are enabling – major scientific advances, the development of a competitive space industry and the deployment of world-class operational infrastructure (telecommunications, meteorology, launchers). Industry needs to continue to benefit from an efficient and ambitious space agency at European level, which should:

- Provide European States (EU and non-EU) with a flexible framework for investing and jointly implementing their respective policies and share the common benefits while aiming at avoiding unnecessary redundancies or distortion and contributing to world-class competitiveness and non-dependence;
- Provide European stakeholders, including in security and defence matters, with research, technology and development capabilities at European level with which to define, develop and validate new cutting-edge technologies, and to develop and procure space infrastructures responding to their requirements;
- Represent for Industry a long-term customer and partner able to support its excellence, therefore fostering the development of industrial tools, facilities, processes and skills so that Europe can rely on and sustain a coherent industry base covering both world class Prime contractors and a diversified supply chain.
- Contribute to an European space and industrial "diplomacy", by developing strategic partnerships with third countries and bringing its expertise to the "space dialogues" undertaken by the EU

In this frame, one of the main roles Industry is expecting from the EU is that it takes responsibility for the deployment and exploitation of European operational systems serving citizens and public policies. Industry considers therefore that it would greatly benefit from actions of the EU that would:

- Elaborate and implement a coherent policy of use of the European space infrastructures for EU policies needs, including in security and defence matters, and support the development of the downstream services market;
- Establish formal mechanisms at policy level to ensure that initiatives taken by the EC in sectorial policies (telecoms, security, transport, environment, trade, international relations...) are consistent – and support the EU space policy.
- Set up the entities that shall operate the infrastructures which will deliver services for the benefit of public policy and economic growth (or entrust these operations to existing competent public or private entities);
- Contribute to an industrial policy that aims at supporting the competitiveness of the sector and ensure the security of supply and European independence².

Industry believes that it is essential that the EU, ESA and their Member States propose and implement, in a coherent manner – with due respect to their respective political, regulatory and programmatic competences – instruments to support the competitiveness of the space industry on the global commercial market (institutional and private). It is also essential to contribute to the "security of supply" necessary to the independence of Europe. Political and programmatic uncertainties have major adverse effects on European industry, which needs visibility and clear working methods, and should be resolved.

PROCUREMENT POLICY

ESA and EU: Two different procurement approaches

ESA procurement policy takes into account the origin of the funds in the awarding of contracts through the Geo Return rules.

² Including by facilitating the access to new markets (while ensuring the existence of a "level playing field", which is conditional to any reciprocity in mutual opening of public procurement markets).

It also integrates key objectives of industrial policy such as preserving the industrial base or targeting R&T developments in the perspective of potential needs of its future programmes.

ESA procurement policy has proven to be successful in many respects and is not challenged for scientific and technological optional programmes based on the willingness of member States to join resources to achieve ambitious objectives.

So far, on the EC side, no specific objectives are set to the procurement process. It is fully based on open and transparent competition, although quite innovative provisions have been found in the case of the procurement related to the Galileo programme – as a result of a combination of political pressures from Member States and attempts to protect the security interests of the Union. The EC has issued a communication on Space Industrial Policy, which can give the framework of a future dedicated space procurement approach.

Need for a space specific procurement approach

To ensure the long-term sustainability of the European Space Industrial Base, the specificities of the sector have to be taken into consideration:

- Sensitive reliance of the European Space industry on a highly variable and unpredictable commercial market, unable to ensure the required stability for the industrial base;
- Very limited global open market and competition distorted by other space faring nations significantly supporting their industry through major public space programmes and adapted legislation (e.g. Buy American Act, ITAR etc.);
- Up until now, the most important parts of programmes are conducted through civil R&D agencies: i.e. prototyping, development and technology, with a very limited share of recurring business and limited technological stability;
- Structural global overcapacity of the sector where the evolution of the supply is not correlated to the level of the demand. For instance China and India are not developing national launchers because of a lack of available commercial services: Strategic independence is the driver for established or arising Space powers to develop new capacities.

Concretely, in the short term, and considering its role as the implementing body of the European Space programmes, Industry strongly encourages ESA to draw on the lessons learnt – by all stakeholders – from the current agreements for implementing EU flagship programmes. In particular, improvements in the procurement rules that could benefit EU-funded programmes should be identified, in order to include, in the forthcoming delegation agreements, the inclusion of the necessary provisions.

Basis for a European Space industrial policy

It is our belief that the challenges, but also governance solutions and strategic opportunities, mostly lie in a single overarching issue: **industrial policy**, and by way of consequence, procurement rules (contributing to implement the industrial policy). At least ESA and EC approaches should not be conflicting. In many respects, EC rules should be adapted to better cope with the above-mentioned specificities of the space sector and serve overarching political goals. Its procurement process should thus contribute to achieve most of the objectives of the EU space industrial policy³.

Moreover, in some cases such as the launchers area and potentially for many of the critical technologies to be developed in Europe to ensure its non-dependence, future European public procurements should start with a trade-off to assess whether the benefits of competition balance the drawback of “diluting” the institutional market. Moreover, innovation – perhaps the key issue for the future of Europe’s economy

³ See EC Communications “EU space industrial policy”

- Further develop a competitive, solid, efficient and balanced industrial base in Europe and support SME participation;
- Support the global competitiveness of the EU space industry by encouraging the sector to become more cost-efficient along the value chain;
- Develop markets for space applications and services;
- Ensure technological non-dependence and an independent access to space.

facing labour-intensive, low R&D competition economies – needs to be integrated in this dynamic with appropriate public axes compensating the high technical risks associated to future-oriented projects.

This is even more relevant when considering competition with non-European bidders. On a mostly captive global market, some European preference clauses are needed to help the European Space industry in reaching the critical mass as well as to offer it some steady long-term perspectives.

Based on such principles, ESA and EU procurement policies, although different by nature, should serve a common purpose.

It took considerable efforts to develop current technical skills and capacities in Europe. Failing to properly address these factors through adequate R&T funding, such competencies could be dispersed in just a few months and would be difficult to re-establish to meet the requirements of future public Space programmes.

Space, like defence, is not a stop-and-go economy: losing industrial capabilities would require immense reinvestment to reacquire, which in today's budgetary context, are simply unfathomable. Depleted industrial skills and competences would therefore need to be deemed permanently lost by decision-makers.

CONCLUSIONS: MAKING THE MOST OF THE TWO MODELS

The relations between EU and ESA are formally governed by the EC/ESA Framework Agreement signed in 2004, which has been extended in 2012 for another 4-year period. Despite the problems and tensions, these institutions are working together to deliver operational systems, even though a better co-ordination of the decision-making processes might have permitted a greater efficiency.

Industry is of the opinion that the debate on governance could move quickly and that solutions can be found that would meet both the skills and ambitions of all stakeholders as well as the need to optimise public investment, by focusing on the following objectives:

- To enable the EU to benefit from the expertise and know-how accumulated over 50 years by ESA. Concretely, to ensure that the ESA becomes the implementing body of the EU space activities (i.e. an agency that would help to frame the technical needs and that will organise the industrial activities, from procurement to acceptance), avoiding a need for duplication of competences in EU institutions.
- To give ESA the appropriate tools (legal and financial) to manage the risks⁴ linked to the management of the EU space programmes.
- To enable the EU to also benefit from the expertise and know-how accumulated by national agencies and European technical centres. One could for example imagine a system where ESA is the prime contractor but where the management is entrusted to technical competence centres (DLR, CST, CSL, CIRA, ESTEC, CNES, ONERA, TNO *etc.*) which could be put in competition; this would give access to the best technical management and a better control of costs (measures should obviously be found to prevent the risk of a technical centre of a given State being "tempted" to promote the technical solution of its domestic industry).
- To devise a process to define the future operational needs of the EU; this process could be a combination of the two following approaches:
 - A need is expressed by the EU, then "translated" into a solution developed by ESA (which implies that the EC behaves as an "educated customer" and gets involved in the development phases, such as it is the case with Eumetsat)
 - ESA "anticipates" the future needs of the EU, develops and demonstrates adequate solutions and, if considered relevant and the conditions allow, ensures their transfer into operational systems (which implies that the EC has at its disposal at least some counter-expertise capacity).
- To define the management and control procedures that must be put in place so that the EU can effectively manage the design and monitoring of the programmes it finances⁵ with the same level of efficiency that ESA Member States find in ESA and the same trust that they put in it.
- To make sure that EU rules and resources, particularly for what concerns procurement and R&D funding, takes into account the specificities of the space sector (see above) and effectively contribute to achieve the objectives of the EU space industrial policy.
- To preserve the capacity of member States (including Switzerland and Norway) to invest into space and ensure the autonomy of the European Space Agency through long term budgetary commitments. And to offer a framework for the management of technology driven developments through the "coalition of the goodwill" proper to optional programmes.

x

x

x

⁴ Risks linked to the management of industrial contracts, possible cost overruns, ownership and transfer of ownership...

⁵ Regarding the specific issue of the "contracting authority", some lessons can already be drawn from the development phase of Galileo: in the absence of a clear delegation to ESA project teams, there are risks of double layers in management, of duplicate decision-making process and of confusion in the relationship with Industry (ESA being the formal interface, but without a contracting authority). This situation causes delays and blockings in the execution of programmes since all technical actions have to be kept on hold before the contractual consequence is cleared.