

AN EU SPACE STRATEGY AT CITIZENS' SERVICE – KEY MESSAGES

1. SPACE AS A RESPONSE TO POLITICAL CHALLENGES

Space policy is driven by three main imperatives: societal (citizens' well-being depends on space); economic (space generates knowledge and is a motor for innovation) and strategic (space contributes to the EU's projection as a global actor).

Space policy builds on Member State and ESA experience and takes on a new political dimension after the entry into force of the TFEU.

2. PRIORITY ACTIONS FOR AN EU SPACE POLICY

2.1. Satellite radio navigation: Galileo and EGNOS

Both systems are key components of the EU space policy. They will be examined in detail in a mid-term evaluation report to be adopted by the Commission in 2010. Following this communication, **a new legislative proposal will be tabled in 2011**. The Commission remains committed to complete within a reasonable timetable the Galileo constellation and put in place a new governance scheme.

2.2. Space at the service of environment and the fight against climate change: GMES

2.2.1. *Ensure the operation of GMES*

Following the adoption of the GMES 2011-2013 Regulation, the challenge will be to ensure its **rapid implementation in partnership with Member States and to prepare the new operational programme for 2014 and beyond**.

The €107 millions for 2011-2013 do not cover all funding needs.

2.2.2. *Responding to the societal challenge of climate change*

GMES is the main space contribution of the Union to tackle climate change. It is necessary to complete the space observation infrastructures to implement and monitor mitigation and adaptation policies by **adding a "climate change" service to GMES**, which will exploit existing data series.

2.3. Space at the service of security and defence

2.3.1. *The "S" (security) dimension in GMES*

The **"S" in GMES must be reinforced**. It will be necessary to determine how existing capacities (civil and military) can contribute to GMES, in particular for strategic surveillance of wide geographical areas and tactical surveillance of limited areas. It will be necessary to combine different space technologies and adequate resolutions and improve response times in order to better respond to security missions.

2.3.2. The security dimension of space policy

In line with the spirit of common security and defence policy, the Union security needs may be covered by either national capacities used in a coordinated manner or by the development by the Union of its own capacities.

The Union must reinforce its partnership and dialogue with Member States in order to ensure that security missions do not depend on third countries' assets and to guarantee the continuity of missions undertaken by Member States themselves.

The Union could coordinate national infrastructures under conditions to be determined together with the Member State owners of such infrastructures and identify additional requirements in order to better respond to crisis management and external intervention operational needs.

To this end, the Union could play a role in the development of new infrastructures necessary for the acquisition of autonomous capacities in this area. The possibility to use commercial capacities for security missions must be part of this reflection.

2.3.3. Protect space infrastructure

Space infrastructures are critical infrastructures.

The development of an SSA system involves the amalgamation of existing capacities, the acquisition of those currently missing as well as the operation and maintenance of the system. Some space infrastructures and capacities as well the SSA system itself have a dual nature. It is for the Union to define the organisation and governance of SSA that takes into account this dual nature and ensures the sustainable exploitation of the system. The organisation of the SSA system may be based on a structure that allows a variable participation of Member States and include entities adapted to their mission and constraints.

The contribution of the Union to the setting up of the SSA system has been estimated by ESA at 130 million euros for the period 2014-2020.

2.4. Competitiveness: space as an integral part of the Europe 2020 strategy

2.4.1. Space industrial policy at the service of competitiveness

The Commission considers necessary to define in the short term and in close cooperation with ESA and the Member States a space industrial policy that takes into account the specific needs of space sub-sectors. The main objectives of such policy would be: the development of a solid and balanced industrial basis with increased presence of SMEs; greater competitiveness at global level combined with non-dependence in strategic sub-sectors (such as launchers) and the development of a market for space products and services.

To this end the Union, the Member States and ESA should use the instruments at their disposal in a coordinated manner. These instruments are mainly:

- An improved regulatory framework, including the possible opening up of national procurement to competition across EU Member States and a better coordination at European level (including the exploitation of synergies between military and civil industrial capacities) ;
- Support for research and innovation;
- Financial instruments (for example, as regards the EU, structural funds and EIB interventions) ; and
- Procurement policy.

Procurement policy plays a critical role given the sector's dependence on public demand. As regards Union programmes, procurement should be organised in a manner that allow the upstream identification of the procurement objects to be funded by such programmes, the procedures to be applied (including the recourse to pre-commercial procurement) and define the selection and award criteria to be applied. If proven necessary, the Commission could propose adjustments of its existing Financial Regulation.

2.4.2. Stimulate research and innovation

Support for space research will be defined as part of the preparation of the next Framework Programme for Research and Technological Development.

A large share of the benefits from investment in space, both for the space sector and beyond, is linked to its impact on innovation. The 6th Space Council of May 2009 emphasised "the need to mobilise existing innovation support mechanisms at European, national and regional level, and consider new support instruments". To mobilise the investment/innovation mechanisms will allow better exploitation of space infrastructures by stimulating the market for applications and services stemming from Galileo/EGNOS and GMES. In return, ambitious space objectives will stimulate innovation.

2.5. Space exploration

Space exploration is inextricably linked to the political identity the Union wants for itself.

The Union's involvement would facilitate establishing a closer link between space exploration and societal and economic challenges by bringing together the interests of different Member States and ensuring a more efficient use of resources. By speaking with one voice at international level, Europe would reinforce its identity and its political weight at global level.

A consultation involving the Union, ESA and their respective Member States as well as international partners has led to the identification of four major priority themes for space exploration: essential technologies, exploitation of the International Space Station, access to space and the creation of a high level international forum.

In concrete terms, the Union needs to identify and support the development of essential technologies for exploration (including those which are not specific to the space sector) by means of the Framework Programme for Research and Technological Development but also in the context of the actions referred to below, and to encourage a joined-up approach with non-space sectors.

Presence in the ISS should be extended to all countries of the European Union, with the EU establishing a body of astronauts which would complete the ESA astronaut body.

If the European Union is to enjoy autonomous access to space, this implies the need for a strengthened European capacity to lead independent missions from the European space port in Kourou.

Finally, there is a need to create a high level international forum in order to identify the areas of space exploration open to international cooperation, to strengthen the political dimension of international discussions on space exploration and to promote synergies.

Besides the support for space exploration through the Framework Programme for Research and Technological Development, the main cost would be generated by the Union's presence in the ISS and by access to space. The cost has been estimated at 400 million euros per year between 2014 and 2020.

The Union must ensure it has the means to coordinate European efforts and to be a credible representative at the international level: this must be done as part of a strategy defined by ESA within a framework of cooperation with its partners.

3. THE INTERNATIONAL DIMENSION OF THE UNION'S SPACE POLICY

In space matters, international cooperation is unavoidable.

The Commission will ensure that space is better integrated into the Union's external policy. In particular the Commission wants to ensure that the necessary expertise and infrastructures are put at the service of Africa and that existing cooperation is strengthened.

4. TOWARDS A MORE ADAPTED ORGANISATION

4.1. Strengthen partnership with Member States

Member States do not have the same ambitions, budgets and technical capacity. In most Member States space activities are primarily seen as research activities. Space is not seen as a national or European subject.

While some effort is made to find complementary uses and synergies, this does not result in a cohesive approach which is necessary to be a space actor on the global stage. The European Union has the authority to strengthen the political dimension of space, in particular in the area of security and defence. By virtue of Article 189 of the Treaty, the Union has the mandate and the capacity to coordinate the action of its Member States in order to embody the political face of European space policy at international level.

In this way, Member States decided to give a space dimension to the Competitiveness Council. This institutional development which is part of a strengthened partnership between Member States and the EU should promote technical synergies as well as greater coherence in the planning and management of activities.

4.2. Changes in the relationship between the European Union and ESA

The Lisbon Treaty commits the Union to "establish any appropriate relations with the European Space Agency". The European Union's growing involvement in space requires a re-evaluation of its relations with ESA and a gradual change in the way ESA operates in order to take full advantage of both the political and technical capacities of the two organisations.

The political dimension of space means that European action must not be exclusively or primarily guided by technical or scientific considerations. It is necessary to identify and amalgamate user needs in order to ensure that space capacity fully responds to the needs of the European citizen. This is the task of the European Union according to the European Space Policy adopted in 2007.

Operational entities have been established in different areas such as meteorology (EUMETSAT which derives from ESA) to address user needs. The Commission must strengthen the interface with these entities. The Union could also take these as examples when it comes to implementation of Galileo and GMES.

For its part, ESA embodies strong technical and management capacities. It could therefore support development of new space infrastructures both within the framework of intergovernmental programmes and programmes funded by the Union.

The evolution of the role played by the space actors will also bring about a pragmatic evolution of ESA, taking account of the fact that in the medium term it will remain the financial centre of gravity for research and development and that the European Union is the political and operational centre of gravity with its own financial resources.

In this way ESA could evolve towards a "hybrid" organisational model: on the one hand to ensure coexistence of military and civil programmes and on the other hand to ensure coexistence of an intergovernmental wing and a Union wing. The model should be flexible enough to take account of the financial resources which the different actors will mobilise in the future. The model should also be flexible enough (on the basis of variable geometry) to allow Switzerland and Norway to participate in certain programmes while allowing for a limited participation of some Member States (permanent structured cooperation for space by analogy with the provisions of Article 42.6 of the TEU).

The model should be evolutionary. For certain programmes (Galileo and GMES), ESA already operates *de facto* as a Union agency. ESA would continue to enjoy, as necessary, management structures for the exclusive purpose of Union Programmes; it would have "chambers" which are subject to Union rules. In this way its programmes would be able to coexist with Union programmes, each having a distinct management mode.

Over time this could lead to ESA becoming a *sui generis* agency of the European Union with its own legal personality. It would cover research and operational activities and would ensure partnership with Member States. It would be in a position to join up space policy with other sectoral policies of the Union.

This model would retain ESA's strong points, would avoid a proliferation of space actors outside research and would allow Europe to be an efficient and visible actor.

These developments imply that the framework agreement between the Union and ESA would have to be revisited before it expires in 2012.

4.3. Better coordination of management programmes

The Commission is proposing enhanced space programme planning by means of greater coordination of the work of Programme Committees (such as Galileo or GMES) in areas of common interest.

The Commission is also proposing, in the context of revising relations between the EU and ESA, to set up mechanisms allowing for greater cohesion in ESA and Commission decision-making procedures.

Finally, the Commission is proposing to integrate space activities led by Member States into programme planning discussions, in order to promote synergies and to provide a coherent response to the needs of users and citizens.

At the technical level, it will be necessary to avoid duplication and to promote technical synergies in particular where several actors are concerned. At the operational level, it is essential for final success to ensure a fully joined up approach between the project and operational phase.

5. TOWARDS A EUROPEAN SPACE PROGRAMME

Article 189 of the Lisbon Treaty gives the Union a legal framework to put in place its space strategy at the service of the citizen. At the moment there is a different legal basis for Galileo and the space theme of the Framework Programme for Research and Technological Development. A complementary programme is therefore needed to cover other space activities of the Union.

The Commission is studying the possibility of proposing such a Programme in 2011, taking account of reactions to this Communication.