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Subject:	<i>Preparation of the Competitiveness Council of 29 November 2016</i> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Space Strategy for Europe – Policy debate

I. INTRODUCTION

1. In 2014, under the Italian Presidency¹, and in 2015, under the Luxembourg Presidency², inputs from the Council side were provided towards the definition of a long-term European space vision.

¹ Doc. 15396/14 and doc. 16502/14 (Exchange of views and Council Conclusions).

² The Luxembourg Presidency organised Informal meeting of EU and ESA Ministers in charge of Space.

In November 2015, the Commission announced in its Work Programme 2016 its intention to develop a Space Strategy for Europe. Consequently, in spring 2016, the Commission launched its public consultation and a series of related events in order to obtain stakeholders' views on the policy priorities, challenges and opportunities that could shape such a future Space Strategy for Europe.

2. In the first semester of 2016, under NL Presidency, the Space Working Party discussed issues relevant to a future strategy at several meetings in order to give input to the Commission's thinking. Moreover, a policy debate on the "Uptake of space data" took place at the Council (Competitiveness) on 26-27 May 2015. In addition, an EU-ESA informal Space Ministerial Meeting, under the auspices of the Presidencies of the European Union and the ESA Ministerial Council, took place on 30 May 2016, in order to provide additional input on substance to a coherent European space policy.
3. The Slovak Presidency then focused on the topic of 'Uptake of Space Data' from the point of view of its very tangible benefits for Member States and European citizens. The Presidency wishes to maintain and broaden discussions on this topic with industry and SMEs, as well as underpinning the crucial role of young researchers in promoting the topic of space.
4. On 26 October 2016, the Commission issued its Communication on "A Space Strategy for Europe", in order to foster new services and to promote Europe's leadership in space. The strategy is articulated around four strategic goals: 1) Maximising benefits of space for society and the EU economy, 2) Fostering a globally competitive and innovative European Space sector, 3) Reinforcing Europe's autonomy in accessing and using space in a secure and safe environment, and 4) Strengthening Europe's role as a global actor in space and promoting international cooperation.

5. The Strategy also underlines that the relations between the EU and ESA will be one of the cornerstones of success. Therefore, in conjunction with the Space Strategy release, in the afternoon of 26 October 2016, a joint statement EU-ESA on "Shared Vision and Goals for the Future of Europe in Space" was signed by the Commission on behalf of the EU and by ESA. The purpose of this joint statement is to emphasise the intention of the EU and ESA to reinforce their cooperation in the future and further develop it, in order to achieve their common ambition and goals for Europe to remain a world-class actor in space and a partner of choice on the international scene.

II. BACKGROUND

6. Market conditions for space industry and services

The global space landscape is changing fast notably due to internationalisation and globalisation of the space sector triggered by the multiplication of players both public and private. Compared to Europe, competitors often benefit from higher budgets, including more mature private investments markets, higher support from the institutional actors, larger demand on the domestic markets, enhanced synergies between the civil and defence sectors. Competition is becoming more acute. Shifts in technologies and disruptive innovations (e.g. miniaturisation, Commercial Orbit Transportation Services) are also challenging the traditional business models in the sector. New business models are appearing e.g. launch services and satellite procurement bundled together, lower cost access to space. These dynamics heavily impact the whole value chain of the space sector.

These challenges could be addressed by mitigating technical barriers linked to EU flagship space programmes (e.g. big data for Copernicus, chipsets for Galileo); improving general market conditions by unleashing existing possibilities in growth-oriented Union policies (e.g. single market, digital market, capitals union), programmes and tools (e.g. innovation supported through Horizon 2020 and synergies with Investment Plan, COSME, ESIF); addressing the demand and supply sides of the value chains through thematic and cluster approaches. A good set of rules for public procurements should be developed.

7. **Uptake of space data**

Space data and space images, applications and services, products coupled with the rapid development of the digital economy, offer enormous potential benefits for more effective and efficient public policies, as well as opportunities for science, the private sector – especially in the business of value adding - and society. Many of these activities can be improved through the use of space data. It is worth noting that the largest impact can be found outside of the space domain.

As the EU space programmes (Galileo and EGNOS, Copernicus) gradually unfold their operational capability, a wealth of data and services is becoming available for the economy and society. European companies and users in general should be able to reap the benefits of the large public investments made over several decades into European Space programmes. In particular, the market for Earth observation and space data and images has boomed in the last two or three years with the new Sentinel missions under Copernicus. This is bringing benefits to public administrations in EU Member States and more and more to private companies in different fields, and end users and European citizens too.

Copernicus enables value chains such as agriculture, forestry, urban monitoring, insurance, ocean monitoring, oil & gas, renewable energies and air quality. Some examples of benefits include 5% of productivity gain for fish farmers, by monitoring toxic algal blooms; 60% higher precision for analysis of the impact of trans-boundaries pollutants on air quality; or €170 million of forecast market for pastures insurance against natural hazards (from 2025)³.

Galileo-enabled applications include location based services, agriculture, transportation (aviation, maritime, rail, road), and surveying and timing. They bring consumer solutions with high volume chipsets typically used in smartphones, tablets and other consumer devices, along with emerging solutions for the Internet of Things (IoT), in-vehicle navigation, or business to business (B2B) technology solutions⁴.

³ Report on the socio-economic impact of Copernicus (2016), prepared by PwC for the European Commission - ISBN 978-92-79-59011-5 - doi 10.2873/01661.

⁴ European GNSS Agency - GNSS Market Report- March 2015 - issue 4 (https://www.gsa.europa.eu/system/files/reports/GNSS-Market-Report-2015-issue4_0.pdf).

To underpin the space economy and facilitate the envisaged socio-economic impact, there are actions to be considered at European, national, regional and local levels.

At the same time, it is important to maintain a forward-looking approach and prepare the new generations of the space programmes, on a user-driven basis, and to address emerging needs.

8. **Research & Development**

Space research and development is a fundamental element for the space sector - research activities can be considered as "services" - and Horizon 2020 has an instrumental role to play.

It is essential to intensify feedback loops between policy and research as well as support the development, evolution and uptake of space programmes. The European space industrial competitiveness should be strengthened by means of underpinning European non-dependence in critical space technologies and systems, fostering a sustainable supply chain and promoting access to export markets, facilitating innovation, business opportunities and industrial capacity, as well as supporting close, effective links between education, research, and innovation.

9. **Access to Space**

Independent, reliable and cost effective access to space at affordable conditions for the EU, ESA and their respective Member States, based on the availability of European competitive world-class launch systems and operational capacities, is of strategic importance. Europe needs to ensure its freedom of action and autonomy. It needs to have access to space and use it safely. Access to space is a strategic and a political objective. The main challenges in this respect are:

- a) Guaranteeing the continuity of autonomous, reliable and cost-efficient access to space at affordable conditions for the EU, ESA and their respective MS, based on both the availability of a set of adequate and competitive world-class launchers and a European space port;

- b) Sustaining European space industry leadership on the global commercial launch services market in order to maintain, and improve, the necessary launch rate for system reliability (tools, skills) and cost-effectiveness;
- c) Creating favourable conditions in Europe for the development of a small satellites market and a low-cost launch capability (space and ground segment).

10. **Space and security**

Space services can strengthen the EU's and Member States' capacity to tackle growing security challenges and improve the monitoring and control of flows which have security implications. Pursuing synergies in space, security, and defence activities, where appropriate, could reply to existing and emerging needs in this field.

11. **Governance and Financing**

The EU and ESA should have a convergent approach on fundamental aspects (basis of the governance are the delegation agreements and arrangements deriving from the Programs Regulation) and follow a pragmatic approach in support of the priorities of the European space policy. There is a need to take into account, without prejudging their mid-term review, the programs developments beyond 2020. The priority should be the use of resources in the most synergic and complementary manner.

Adequate financing, both at public and private level, is essential in order to ensure the continuity of the EU space programmes, to exploit in full the potential of space and to maintain and develop the role of the EU as a global player in space.

III. QUESTIONS FOR THE POLICY DEBATE:

In the light of the overall context described above, the Presidency invites the Council (Competitiveness – Space part) on 29 November 2016 to address the following questions:

- 1) To what extent the actions and measures proposed by the Commission in its space strategy for Europe are appropriate to foster the European space economy and to ensure that the benefits of the EU space activities and EU flagship programs, Galileo and Copernicus, and the data they are generating reach the citizens and create growth and jobs? How can such measures be matched at national and regional levels to maximise their effect?
- 2) Given the strategic importance of space capacities, to which extent the measures proposed by the Commission contribute to "reinforcing Europe's autonomy in accessing and using space in a secure and safe environment"? In this respect, how to support a competitive European industrial base within Europe and in the global market and with a view to preserving and enhancing the European access to space, the access to the data utilisation as well as the European capacity for critical technologies and systems, the tenets of autonomy?