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From: Presidency

To: Permanent Representatives Committee/Council

Subject: *Preparation of the Council (Competitiveness (Internal Market, Industry, Research and Space)) 27-28 May 2019*

Strengthening Europe's role as a global actor and promoting international cooperation, space diplomacy and contributing to building the global space governance

- *Policy debate*

I. INTRODUCTION

1. Activities in space were initially developed to demonstrate one Nation's sovereignty and technological excellence. Ever since, space data and services have been a crucial part of our everyday lives: they enable many of the things we do and take for granted, be it using a mobile phone or checking the weather forecast, or improving emergency services [see Annex for further examples of the use of EU space programmes]. Space is instrumental for every country and for the Union as a whole as it offers decision-makers the necessary information to deal with a variety of issues.

2. In an evolving global environment where new actors are developing strong capacities and playing a more active role, Europe must work together to promote its position as a leader in space, increase its share on the world space markets, and seize the benefits and opportunities offered by space. In this context, the Commission adopted on 26 October 2016 a Communication¹ on a Space Strategy for Europe whose purpose is to set out the overall strategic vision for the Union's activities in space, while ensuring proper coordination and complementarity with the activities pursued by the Member States and the European Space Agency (ESA).
3. The Space Strategy for Europe sets 4 strategic goals: 1) maximizing the 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; 4) strengthening Europe's role as a global actor and promoting international cooperation. Achieving the fourth goal of having a stronger role on the world stage is a sine qua non to meet the other three strategic goals.

¹ COM(2016) 705 final.

II. SPACE ECONOMY²

4. Space is a long-term driver for innovation and creates new opportunities to address global challenges. The global space economy reached EUR 309 billion in 2017, having grown on average by 6.7% p.a. between 2005 and 2017. This is almost twice the average yearly growth of the global economy of 3.5%. European space industry has historically been at the forefront and space economy still boasts academic and scientific excellence but the space sector is evolving very quickly and new business models are emerging. The European space sector employs over 231 000 professionals, with an estimated value of €53-62 billion in 2017. Europe manufactures one third of all the world's satellites. In 2016, according to Eurospace, the space manufacturing industry posted sales worth €8.2 billion. Nonetheless, as the EIB report³ highlights, the European space sector is at risk of missing the next wave of space innovation unless it seizes the opportunity to stimulate more investment in the new space sector.

III. INTERNATIONAL COOPERATION

5. Space activities are global by nature. They frequently have global objectives and encompass heavy and risky expenses which cannot be borne by one investor alone. Typically, they are pursued on the basis of mutual interest with no exchange of funds. International Cooperation is continuing to be a key determinant of the European Space Policy, since many major problems have become global and can only be solved on a global level, space technologies providing an important tool in tackling such problems.

² According to the OECD Space Forum, “the Space Economy includes all public and private actors, involved in developing and providing space-related products and services, ranging from research and development, the manufacture and use of space infrastructure (e.g. ground stations, launch vehicles and satellites) to space-enabled applications (navigation equipment, satellite phones, meteorological services, etc.) and the scientific knowledge generated by such activities.”

³ https://www.eib.org/attachments/thematic/future_of_european_space_sector_en.pdf

6. International cooperation is an important tool to reinforce the European space sector. Interoperability and compatibility of our systems with other systems offer many new opportunities for space-based applications development. The development of international standards enable the uptake by the market of those new applications. Finally, promoting our systems and industry internationally broadens economic gains for European companies. Such cooperation is a complementary activity and strengthens the image of the Union as a global player.

IV. SPACE DIPLOMACY

7. Space diplomacy is an emerging realm, alongside cyber diplomacy and science diplomacy. These three are intertwined and should be considered in a coordinated way on a case by case basis, contributing to the toolbox of diplomatic instruments, means and objectives.
8. Space diplomacy should be thought of as spanning three different realms:
- The use of diplomacy to pursue the space-related objectives of the Union;
 - The use of diplomacy to ensure the affordability, accessibility and sustainability of the access of EU and its Member States to space services when these cannot be provided in sufficient quantity, quality or in the appropriate circumstances by EU space capabilities;
 - The use of EU space assets in order to pursue diplomatic objectives of the Union, such as humanitarian aid, verification of compliance with sanctions and restrictions, or incentivizing constructive behaviour through access to EU space capabilities.

V. RESPONSIBLE BEHAVIOUR IN OUTER SPACE

9. One of the challenges facing the international community for the next 50 years is ensuring that the existing normative framework remains fit for purpose in the face of the rapid diversification of the space sector. How the existing framework responds to emerging issues such as space debris mitigation, space traffic management, and space resource mining are matters that Member States, in cooperation with the relevant Union institutions, will address through the institutional structure of the UN. Safety, security and sustainability of outer space activities are of the utmost importance, aiming to ensure that all the international actors continue to preserve outer space as a global commons.
10. Technological developments and the arrival of new players in recent years underline that the Union needs to ensure free access to and build strategic autonomy in space, together with its Member States and other international relevant actors, such as the European Space Agency.

VI. CONCLUSION

11. International cooperation is more important than ever before. It not only offers the Union benefits in economic, commercial, technological and scientific terms, but it also allows it to contribute to the welfare of the global economy.
12. The growing political and commercial interest in space requires, among others, that the Union fully integrates its space policy into its international action and proactively engages in ongoing discussions on global space governance.
13. The Union together with the Member States must respond to this evolving context quickly, in order to enhance its position at the forefront of global space powers in the 21st century. Strategic choices that will be made in upcoming months, at a time when the future of Europe is under discussion, will have a lasting impact, beyond the space sector, on our economy, our sovereignty and our security.

14. A global and coherent approach must be adopted, as all aspects are intertwined: increased public and private investment, support for European autonomy in terms of access to space, more European governance, with an increased involvement of both companies (through partnerships) and citizens (through more ambitious communication on the benefits of space).

VII. QUESTIONS FOR THE POLICY DEBATE

15. In the context described above, the Member States are invited to exchange views on the following questions with regard to strengthening Europe's role as a global actor and promoting international cooperation, space diplomacy and contributing to building the global space governance

1. *A large number of EU initiatives and policies currently rely on space-enabled solutions and assets to achieve the strategic objectives of the Union. Every initiative in Space, even the smallest one, leads to a broad number of developments not only in space area but in other sectors as well and at all levels. This might be seen as an "innovation butterfly effect".*

How can space initiatives carried out at local, regional, national and European level be better coordinated and encouraged in order to ensure that they expand and have a ripple effect, both within the European economy and at global level?

2. *Europe must react quickly and define independently its own ambitions in fields such as the use of space resources, space logistics and transportation, space debris and space security.*

How could Member States work together to define the Union's own ambition in Space and to consolidate and strengthen Europe's global role? What could be the international contribution of the Union in the above-mentioned areas?

Annex – Examples of the use of EU space programmes

The EU programmes already proved their efficiency and valuable transformation of our lives, not only domestically, but also globally:

- **Responding to natural disasters:** In 2017, Copernicus maps showing the extent and magnitude of damage helped rescue teams deal with forest fires (Italy, Spain, Greece, Portugal), earthquakes (Mexico), hurricanes (countries hit by hurricanes Harvey, Irma and Maria), and floods (Ireland, Germany), amongst others.
- **Saving lives at sea:** The Copernicus programme supports the European Coast and Border Guard Agency's work in the Mediterranean. The satellite data helps the agency to spot unsafe vessels and rescue vulnerable people. Galileo can be used on all the merchant vessels worldwide, bringing increased accuracy and more resilient positioning for safer navigation.
- **Search and Rescue:** A new Galileo service reduces the time it takes to detect a person equipped with a distress beacon to less than 10 minutes in a variety of locations including at sea, in mountains or deserts, and in urban areas. It confirms to the person that help is on the way.
- **Monitoring oil spills:** The European Maritime Safety Agency (EMSA) uses Copernicus data for oil spill and vessel monitoring.
- **Landing of airplanes:** 350 airports in almost all EU countries are currently using EGNOS, making landing in difficult weather conditions more secure, thus avoiding delays and re-routing.
- **Road safety:** From April 2018, Galileo is integrated in every car model sold in Europe, supporting the eCall emergency response system. From 2019, it will be integrated in digital tachographs of lorries to ensure the respect of driving time rules and improve road safety.

Agriculture: 80% of farmers using satellite navigation for precision farming are EGNOS users. Copernicus data is also used for crop monitoring and yield forecasting.