



*European Economic and Social Committee*

**INT/809**  
**Space Strategy for Europe**

## **OPINION**

European Economic and Social Committee

**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**  
[COM(2016) 705 final]

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Consultation	European Commission, 26/10/2016
Legal basis	Article 304 of the Treaty on the Functioning of the European Union
Section responsible	Single Market, Production and Consumption
Adopted in section	09/03/2017
Adopted at plenary	30/03/2017
Plenary session No	524
Outcome of vote (for/against/abstentions)	199/02/03

## 1. Conclusions and recommendations

- 1.1 The EESC welcomes the communication of the European Commission on a "Space Strategy for Europe" and endorses the proposed guidelines. These feature a number of new elements including the opening to civil society, the focus on small and medium-sized enterprises (SMEs), the impetus to research and development and the need to ensure adequate financial flows in space activities, including through mobilisation of private capital.
- 1.2 The EESC encourages the Commission to continue on this path and to set its sights on even more ambitious horizons. The first heading of the communication is entitled: "Maximising the benefits of space for society and the EU economy" and incorporates many of the recommendations made by the Committee in its "Space and Society" project.
- 1.3 The EESC understands the dual nature of space capabilities. However, it reiterates its strong support for a space policy oriented towards **civil needs** (peace and cooperation), recognising the importance of using space monitoring systems for the purpose of public safety and security. This dual use of is one of the keys to the success of integrated and harmonised policies to safeguard the welfare of European citizens.
- 1.4 Given the excellent results to date in terms of precision and reliability , the EESC hopes that the Commission will draw up a regulation making the use of Galileo as a geo-positioning system priority and in some specific cases preferential in Europe.
- 1.5 Investments planned for the coming years are sufficient for the Copernicus and Galileo programmes, but they have to be guaranteed. Next year the debate on the new multi-annual financial framework of the Union will be opened; the Committee would like to see additional resources allocated to meet the new challenges posed by climate change, security and defence against external threats. The Horizon 2020 programme and the Structural Funds could be used to support the development activities of the space sector.
- 1.6 The EESC asks the Commission together with European Investment Bank to identify new financing options to encourage private investors to take the space sector into account. To this end, the Commission could cooperate by organising meetings, to be held at the level of the individual Member States concerned, at which banks, institutional investor, and companies would be invited to study new forms of investment, including space clusters.
- 1.7 The EESC believes that the only way to ensure long-term success of the EU Space Strategy is through the active involvement of all Member States. This can be achieved through the concrete and targeted capacity-building measures aimed at particularly assisting the Member States with emerging space capabilities and interests. Such measures may start being realised, inter alia, through the organisation of training sessions, awareness raising events, consultations (both technical and user-focused), demonstration projects, regional initiatives, synergies between advanced and emerging Member States and other measures that are tailor-made to help meet the needs of the Member States.
- 1.8 Education and public awareness-raising regarding the benefits of information and data made available through space activities are of highest importance. Including space activities in school, university and further education curricula would also be important.

- 1.9 Training technicians and engineers is crucial for the future of European industry. Strengthening the European labour market, improving the infrastructure for exercises and tests, centres of excellence and life-long learning and constantly lifting knowledge and skills to new heights that include space science must be the cornerstones of Europe's space strategy.
- 1.10 To this end, the Committee would like the Commission to test the feasibility of creating a single portal displaying all the activities being undertaken by the various organisations and agencies. The portal should be accessible to all interested members of the public and operators and should highlight the benefits of all the ongoing activities and flag up the potential opportunities in the space economy in particular for SMEs.
- 1.11 In a recent opinion on the European Initiative on Cloud Computing<sup>1</sup>, the Committee highlighted "the obstacles preventing Europe from tapping into the potential of data, particularly regarding the lack of interoperability, the fragmentation of structures and their lack of openness to other contributions and exchanges". Obviously the same problems also exist in the terrestrial infrastructure of the European space system and must be overcome as soon as possible.
- 1.12 Europe has excellent infrastructure for launching satellites, with the new generation of launchers such as Ariane and Vega making for significant savings, partly thanks to increased cooperation between Member States. The development of reusable launch vehicles will lead to a significant cost reduction and will permit access to space activities for those countries that lack the means to be able to provide efficient infrastructure in outer space.
- 1.13 There's growing interest in using small satellites for communications and monitoring systems. Even within the Earth observation market, it is expected the significant growth of small satellites market through new applications. Therefore, it will be important for EU to focus on developing mini and nano satellites in order to take advantage of this market. At the same time, it will become an opportunity not only for smaller Member States but also for private operators. The EESC underlines, however, that such an increase of less costly satellites monitoring the Earth's surface will result in enormous amounts of data. The protection of the private life of every citizen and user should be prioritised with sharp consciousness and solid regulations<sup>2</sup>.
- 1.14 Guaranteed access to and security of space infrastructure are among the priorities that the Commission will have to consider. Cooperation with other countries is essential to avoid a rush for the most favourable orbits and a lack of interest in governing the issue of space debris. Diplomatic activities related to the management of outer space must therefore be stepped up. At the same time, the EESC recommends that the EU boost innovation in cleaning up the waste in space.
- 1.15 Recent meetings at global level<sup>3</sup> have also highlighted the importance of such cooperation. They have identified four pillars: economy, society, accessibility and diplomacy. These issues have

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<sup>1</sup> [OJ C 487, 28.12.2016, p. 86](#) (point 3.5).

<sup>2</sup> See EESC opinions, [OJ C 125, 21.4.2017, p. 51](#).

<sup>3</sup> High Level Forum –Space as a driver for socio-economic sustainable development. Dubai 24 November 2016.

always been the focus of attention of the EESC, which has taken the initiative of highlighting their importance in terms of the economy and society.

- 1.16 A new approach to data use is therefore called for, facilitating access to SMEs, making citizens as well as SMEs aware of the possibility to have access without any discrimination to these big data information channels, enhancing protection against cyber attacks and continuously developing new applications through targeted initiatives drawing on the creativity of our researchers, universities and businesses. The EESC emphasises that according to the Aarhus Convention, big data usage for environment protection has to be facilitated with affordable costs.

## 2. **Gist of the Commission proposal**

- 2.1 The EU currently has the second largest public space budget at global level and is the main institutional customer for launch services in Europe. It possesses world-class space systems, with Copernicus for earth observation and EGNOS and Galileo for satellite navigation and ge-positioning. Between 2014-2020, the EU alone will invest EUR 12 billion in space activities.
- 2.2 Space technologies have become indispensable in the daily lives of European citizens. Moreover, space-based solutions bring benefits in a wide range of contexts including disaster management, agriculture, transport, energy infrastructure and global challenges. Space technologies, data and services can underpin numerous EU policies and key political priorities. Space is also of strategic importance for Europe: it strengthens its role as a global player, represents an asset for security and defence and helps boost jobs, growth and investments. Europe has a thriving satellite manufacturing industry representing around 33 % of the open world market and a dynamic downstream services sector encompassing numerous SMEs. The European space economy was estimated at EUR 46-54 billion in 2014, corresponding to 21 % of the value of the global space sector.
- 2.3 Building on Article 189 of the Treaty (TFEU), the Commission is proposing a new Space Strategy for Europe focused on four strategic goals:
  - A. Maximising the benefits of space for society and the EU economy by
    - a) Encouraging the uptake of space services and data, and
    - b) Advancing the EU space programmes and meeting new user needs.
  - B. Fostering a globally competitive and innovative European space sector by
    - a) Supporting research and innovation and development of skills, and
    - b) Fostering entrepreneurship and new business opportunities.
  - C. Reinforcing Europe's autonomy in accessing and using space in a secure and safe environment by
    - a) Maintaining Europe's autonomous access to space;
    - b) Ensuring access to radio frequency spectrum;
    - c) Ensuring the protection and resilience of critical European space infrastructure;
    - d) Reinforcing synergies between civil and security space activities.
  - D. Strengthening Europe's role as a global actor and promoting international cooperation.

### 3. **General comments**

3.1 The EESC has always been very active in supporting the Commission and stakeholders on space issues.

3.2 The EESC has set out a number of priorities in its opinions on space:

- putting in place pro-active policies for SMEs and employment support;
- involving Member States with emerging space capabilities and interests in space activities;
- substantially improving European governance;
- involving civil society in defining strategic choices;
- investing in the sector and highlighting the role of finance and investment funds;
- supporting research and development activities, promoting study programs in all levels in the field of aerospace and technology;
- developing cooperation in the space domain between European, national and regional authorities, businesses and end-users.

### 4. **Specific Comments**

#### 4.1 **Space Strategy and the MFF<sup>4</sup>: financial aspects**

4.1.1 An ambitious strategy requires an ambitious budget. According to the Commission, the EU space budget is the second largest in the world. It is a combination of the European Union budget, Member States' separate budgets for space and the European Space Agency (ESA) budget. The US budget is nearly four times greater than the EU's. It is very hard to estimate Russia and China's real expenditure in the field of space, as not all data related to their space activities is publicly available. On the other hand, when comparing space budgets as a percentage of GDP, Europe is only in sixth place.

4.1.2 The EC's ambitious goals require the mobilisation of massive investments that the public sector alone simply cannot afford. The involvement of private investors, the banking sector, investment funds and other financial stakeholders is vital to support the development of research and new applications

4.1.3 The Communication does not sufficiently highlight or support the crucial role of SMEs, and should reinforce it, in particular innovative startups. Whilst more attention is given to their strength in terms of innovation, the financial solutions proposed do not meet the sector's real needs, one of which is the chronic shortfall in funding. Given the high risks involved, the banking system is reluctant to support innovation. For many SMEs it is impossible to participate in public calls for tender, since they are often tailored specifically to large-scale players. More support should therefore be given to SMEs by introducing calls for tender for companies of this size. More open subcontracting to a wider range of SMEs for the larger projects would also be a step in the right direction. Horizon 2020 and other R&D programmes have a significant role to play, and their use should be maximised from the perspective of SMEs.

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<sup>4</sup> Multiannual Financial Framework (MFF).

4.1.4 The EESC is concerned about possible effects of BREXIT and its outcome on European space activities. The UK is one of the leading Member States in the field of space. Therefore, the EU has to consider possible ways of cooperation with the UK in the space domain.

## 4.2 Capacity building in the Member States

4.2.1 Not all EU Member States are deeply involved in space activities, and regrettably not all sectors (including private and public) see the benefits of space activities. In the public sector, for example, space activities can be used efficiently in a number of different areas, including: up-to-date territorial monitoring, monitoring of housing insulation performance, detection of illegal dump sites and much more.

4.2.2 In order to ensure EU space sector's competitiveness, it is vital to involve all Member States with emerging space capabilities and interests in this space activities, together with their stakeholders, business operators, researchers and other institutions. The Commission should envisage concrete measures.

## 4.3 Governance

4.3.1 The Committee appreciates that the recent discussion about governance, which the EESC highlighted in a number of its previous opinions, was resolved. The ESA's strategy was validated during the ESA Ministerial Council in December 2016 (incl. the allocation of budget between the different programmes for the period 2017-2021). The EU and ESA strategies do not differ any longer; they are complementary.

## 4.4 Downstream services and infrastructure requirements

4.4.1 There is an **urgent** need to establish big data centres to store, pre-process and analyse data downloaded from Copernicus. The ability to use historical data in conjunction with Copernicus is also very important for developing new tools in this area.

4.4.2 The EU has committed itself to the ambitious COP21 agreement and the Sustainable Development Goals. The EESC emphasises that satellite-based monitoring systems and big data processing facilities on the ground are key to the successful implementation of both local and global commitments. There is clearly a need for new tools related to climate change, as called for by the EESC in previous opinions, such as NAT/696<sup>5</sup>.

4.4.3 As agreed in the COP21 agreement, LULUCF<sup>6</sup> has a major role to play in absorbing current levels of CO<sub>2</sub> in the atmosphere. Forests are carbon sinks, and daily precision monitoring of the state of forests can prevent illegal felling of trees and encourage active forest management, including planting more trees with a rapid growth rate and early detection and prevention of forest fires. The current EU proposals, allowing CO<sub>2</sub> emissions in sectors such as industry or transport to be offset by using forest-based carbon sinks or through growth of forests, put a much stronger emphasis on economic, social and environmental concerns. The proposals clearly

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<sup>5</sup> EESC Opinion - Effort-sharing 2030 and land use, land use change and forestry (LULUCF), [OJ C 75, 10.03.2017, p. 103](#).

<sup>6</sup> Land-Use, Land-Use Change and Forestry (LULUCF).

highlight the urgent need for Copernicus based monitoring tools. Internationally these tools are of highest importance, as they can be used to monitor precisely the actual level of progress in mitigation and absorption in different states worldwide.

4.4.4 The EESC acknowledges that satellite-based monitoring systems and data centres are of great importance for sustainable food production in the future. In particular, there are major benefits for precision agriculture, not least because Galileo and GNSS can save fossil fuel. Moreover, software using Copernicus images in different spectrums can identify exactly those areas of fields where moisture or nutrient levels are either insufficient or excessive, enabling the amounts of water and nutrients to be adjusted, thereby saving fresh water and minimising the use of fertilisers and pesticides. This significantly enhances the sustainability of farming systems, promotes early detection and prevention of plant diseases, predicts future yields and guarantees both significant economic benefits and a very positive social and environmental impact.

4.4.5 Precision meteorology should be further developed in order to facilitate early detection and prevention or preparedness for extreme weather conditions, which can reduce food loss on farms, and also safeguard people from danger to their health and properties.

#### 4.5 **Information, Education and Awareness**

4.5.1 In 2014, the EESC launched its Space and Society project where partners stressed the need to move forward by including all of society in the debate on the importance of Europe's role in the space sector. European civil society must be properly consulted if we are to understand its expectations and needs.

4.5.2 The Commission's communication contains no reference to this strategic challenge, even though public consultation on the Space Strategy for Europe was conducted in 2016. The debate on space policies has traditionally been restricted to the major stakeholders, simply ignoring the fact that if we are to develop a consumer-oriented market, they need to know about and be aware of the advantages and opportunities that technology can offer.

4.5.3 Each major player has an individual communication strategy, but there is no common vision or strategic plan to present to the general public. The EESC believes that a strategy cannot be achieved without involving civil society stakeholders, be they public or private, in the action plan.

4.5.4 Meetings for end users should be organised at regional, national and European level. Information campaigns should also be organised, with the active participation of local authorities.

4.5.5 The EESC invites the Commission and the main partners to open a Space and Society Portal with the cooperation of public and private organisations and entrepreneurs. Information and awareness-raising should be among the top priorities of a new Space Policy, the aim of which will ultimately be to address the public's real needs.

Brussels, 30 March 2017

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President of the European Economic and Social Committee

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