



Plenary sitting

A8-0250/2017

5.7.2017

REPORT

on a Space Strategy for Europe
(2016/2325(INI))

Committee on Industry, Research and Energy

Rapporteur: Constanze Krehl

CONTENTS

	Page
MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION	3
OPINION OF THE COMMITTEE ON FOREIGN AFFAIRS	14
OPINION OF THE COMMITTEE ON THE INTERNAL MARKET AND CONSUMER PROTECTION	18
OPINION OF THE COMMITTEE ON TRANSPORT AND TOURISM	23
OPINION OF THE COMMITTEE ON FISHERIES	30
INFORMATION ON ADOPTION IN COMMITTEE RESPONSIBLE	37
FINAL VOTE BY ROLL CALL IN COMMITTEE RESPONSIBLE.....	38

MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

on a Space Strategy for Europe (2016/2325(INI))

The European Parliament,

- having regard to Article 4, and to Article 189 of Title XIX, of the Treaty on the Functioning of the European Union (TFEU),
- having regard to the Commission communication of 26 October 2016 entitled ‘Space Strategy for Europe’ (COM(2016)0705),
- having regard to the Commission communication of 28 February 2013 entitled ‘EU space industrial policy’ (COM(2013)0108),
- having regard to the Commission communication of 4 April 2011 entitled ‘Towards a space strategy for the European Union that benefits its citizens’ (COM(2011)0152),
- having regard to the Commission communication of 14 September 2016 entitled ‘Connectivity for a Competitive Digital Single Market – Towards a European Gigabit Society’ (COM(2016)0587) and the accompanying Commission staff working document (SWD(2016)0300),
- having regard to the Commission communication of 14 September 2016 entitled ‘5G for Europe: An Action Plan’ (COM(2016)0588) and the accompanying Commission staff working document (SWD(2016)0306),
- having regard to the Commission proposal of 14 September 2016 for a Directive of the European Parliament and of the Council establishing the European Electronic Communications Code (COM(2016)0590),
- having regard to the Commission communication of 14 June 2010 on an Action Plan on Global Navigation Satellite System (GNSS) Applications (COM(2010)0308),
- having regard to the Paris Agreement, Decision 1/CP.21 and the 21st Conference of the Parties (COP21) to the UNFCCC and the 11th Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP11) held in Paris, France from 30 November to 11 December 2015,
- having regard to Regulation (EU) No 377/2014 of the European Parliament and of the Council of 3 April 2014 establishing the Copernicus Programme and repealing Regulation (EU) No 911/2010¹,
- having regard to Regulation (EU) No 1285/2013 of the European Parliament and of the Council of 11 December 2013 on the implementation and exploitation of European satellite navigation systems and repealing Council Regulation (EC) No 876/2002 and

¹ OJ L 122, 24.4.2014, p. 44.

Regulation (EC) No 683/2008 of the European Parliament and of the Council¹,

- having regard to Decision No 541/2014/EU of the European Parliament and of the Council of 16 April 2014 establishing a Framework for Space Surveillance and Tracking Support²,
- having regard to Regulation (EU) No 512/2014 of the European Parliament and of the Council of 16 April 2014 amending Regulation (EU) No 912/2010 setting up the European GNSS Agency³,
- having regard to the relevant Council conclusions and to the ministerial ‘Declaration of Amsterdam’ of 14 April 2016 on cooperation in the field of connected and automated driving,
- having regard to the The Hague Manifesto on Space Policy of June 2016,
- having regard to the joint statement on shared vision and goals for the future of Europe in space by the European Union and the European Space Agency, signed by the Commission and the Agency on 26 October 2016,
- having regard to its resolution of 8 June 2016 on space capabilities for European security and defence⁴,
- having regard to its resolution of 8 June 2016 on space market uptake⁵,
- having regard to its resolution of 10 December 2013 on EU Space Industrial Policy, releasing the Potential for Growth in the Space Sector⁶,
- having regard to its resolution of 19 January 2012 on a space strategy for the European Union that benefits its citizens⁷,
- having regard to its resolution of 7 June 2011 on transport applications of Global Navigation Satellite Systems – short- and medium-term EU policy⁸,
- having regard to the study of January 2016 on Space Market Uptake in Europe⁹,
- having regard to Rule 52 of its Rules of Procedure,
- having regard to the report of the Committee on Industry, Research and Energy and the opinions of the Committee on Foreign Affairs, the Committee on the Internal Market and Consumer Protection, the Committee on Transport and Tourism and the Committee

¹ OJ L 347, 20.12.2013, p. 1.

² OJ L 158, 27.5.2014, p. 227.

³ OJ L 150, 20.5.2014, p. 72.

⁴ Texts adopted, P8_TA(2016)0267.

⁵ Texts adopted, P8_TA(2016)0268.

⁶ Texts adopted, P7_TA(2013)0534.

⁷ OJ C 227 E, 6.8.2013, p. 16.

⁸ OJ C 380 E, 11.12.2012, p. 1.

⁹ Space Market Uptake in Europe, Study for the ITRE Committee, Directorate-General for Internal Policies, Policy Department A, 2016, ISBN 978-92-823-8537-1.

on Fisheries (A8-0250/2017),

- A. whereas the benefits of space for society are manifold and can lead to a more competitive economy for Europe by stimulating the development of many new products and services, and by supporting agriculture, forestry, fisheries and maritime transport; whereas satellite technology can lead to better access to communication technologies, high-resolution Earth observation systems that allow for the exchange of information in real-time, a rapid response to natural disasters, and more effective border and security controls;
- B. whereas space technologies, data and services can support a variety of EU public policies and key political priorities, such as boosting the Digital Single Market, stimulating the European economy and tackling climate change;
- C. whereas space is not a cost for European citizens but an investment, and whereas an ambitious space strategy can ensure the EU's autonomy and positioning in the strategic area of space, while also boosting growth, competitiveness and the creation of jobs in space-related manufacturing, operations and downstream services;
- D. whereas the political decisions taken by Parliament and the Council in 2007 resulted in the allocation of a budget for the European satellite navigation programmes – the European Geostationary Navigation Overlay Service (EGNOS) and Galileo – and provided for an agreement on the governance structure of the programmes;
 - 1. Welcomes the Commission communication entitled 'Space Strategy for Europe' and endorses the Commission's full commitment to maximising the economic and societal benefits of space, increasing the use of space technologies and applications to support public policies, fostering a globally competitive and innovative European space sector, reinforcing Europe's autonomy in space, and strengthening Europe's role as a global actor as well as international cooperation in space;
 - 2. Reminds the Commission that it is imperative to ensure the continuity of EU space programmes and to reflect on the future evolution of Galileo and Copernicus, in particular in order to create a positive and predictable investment climate in the downstream sector; considers that this can only be achieved if public funding of the space flagship programmes, and a downstream data infrastructure, is guaranteed in the long term, whilst recognising the need for significant private sector involvement;
 - 3. Highlights the achievements in space of the Member States, the European Space Agency (ESA) and the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) using new technologies, exploration missions, and Earth-observation and meteorology capabilities;
 - 4. Believes that it is necessary to evaluate the Galileo and Copernicus programmes before the Commission presents its new legislative proposals as part of the next MFF; considers that this evaluation should address, among other matters: the future role of the European GNSS Agency (GSA) in Galileo and its potential role in Copernicus; how to simplify the GSA's relationship with the ESA; and the current split between the agency's core and delegated tasks; urges the Commission, in this regard, to ensure that

the GSA has the capacity to take on new tasks before any are conferred upon it;

5. Stresses that the outcome of the evaluation should also feed into future discussions on the relationship between the EU and the ESA, taking into account the joint EU-ESA statement signed on 26 October 2016; calls on the Commission to study, in cooperation with the ESA, different options by which the complicated institutional landscape in European space governance can be simplified, thereby improving the allocation of responsibilities in the interests of greater effectiveness and cost efficiency;
6. Stresses that the GSA should be adequately staffed to safeguard smooth functioning and exploitation of the European GNSS programmes; asks the Commission to review the adequacy of resources allocated to the GSA, taking into consideration its current and future tasks; considers that the staffing policy and procedure should be adapted in light of the new tasks conferred on the GSA, in compliance with the Interinstitutional Agreement of 2 December 2013;
7. Stresses that in order to meet current and future challenges, the next EU budget should include a space budget larger than the current one to support the entire value chain (space and ground segment, Earth observation, navigation and communications), to be ensured in the course of the upcoming MFF review; reiterates that the successful development of downstream markets depends in particular on the timely implementation and continuous evolution of the Galileo and Copernicus programmes, the adequate financing of which should be a priority; emphasises the need to preserve and develop the European added value and unique contribution of the EU space programmes when making budgetary decisions in the next MFF;
8. Invites the Commission to examine the possibility of taking advantage of synergies between EU space programmes, so as to increase effectiveness and cost efficiency; believes also that the exchange of information between the EU agencies involved in EU space policy should be intensified in order to achieve further synergy effects; points out that the fields of activity are increasingly converging; calls on the Commission to publish an annual report on the nature and extent of cooperation among the EU agencies;
9. Stresses the importance of identifying and addressing any existing obstacles to the functioning of the internal market in the area of space-based products and services;

Maximising the benefits of space for society and the EU economy

10. Highlights the fact that space programmes and their services are key assets in policy areas and economic sectors such as energy, climate, environment, security and defence, health, agriculture, forestry, fisheries, transport, tourism, the digital market and mobile communications, regional policy and local planning; believes that there is a huge potential in tackling challenges such as migration, border management and sustainable development; highlights also the importance of a European space strategy for a comprehensive EU maritime policy; notes also the significant benefits to society of the economic use of remote sensing satellites and systems;
11. Calls on the Commission to accelerate the full economic exploitation of the Galileo, EGNOS and Copernicus programmes by: setting adequate targets for market uptake;

improving access to, and the processing of, Copernicus data in order to enable enterprises, particularly SMEs and start-ups, to develop applications based on space data; ensuring better integration with other digital services – such as intelligent transport systems, the European railway traffic management system, river information services, SafeSeaNet as well as conventional navigation systems – and enlarging the potential of space solutions; stresses the benefits to citizens and businesses of satellite navigation and earth observation data and services;

12. Welcomes the Commission's actions in procuring cloud platforms for Earth observation data, to ensure that Europe reaps the full economic benefit of its flagship space programmes and to establish sustainable user access and competence building; urges the Commission to speed up its work in this area so that the first data platforms can be operational in 2018; believes that all tenders for these platforms should be open to private actors;
13. Asks the Commission to evaluate the functioning of the Copernicus Entrusted Entities, in particular with a view to simplifying and streamlining their tendering procedures, in order to make it easier for SMEs to apply;
14. Stresses the need to 'space proof' legislation, and reiterates its request, made in its aforementioned resolution on space market uptake, for the Commission to carry out a systematic 'space check' before it tables any new legislative and non-legislative proposals; calls on the Commission to remove barriers to the use of space technologies by the public sector, e.g. for monitoring compliance with new and existing European legislation; believes that public policy can be improved considerably by using space technology, building on examples such as eCall and the digital tachograph; asks the Commission and the Member States to stimulate uptake of space technology by European, national, regional and local authorities, for example by buying European Earth observation data or services to meet policy objectives;
15. Points to the pilot project on cleaner space through deorbiting and innovative materials for space equipment, which is designed to test the feasibility and effectiveness of a future Joint Technology Initiative (JTI) applied to the space sector; recognises that adequate resources, both public and private, are essential to ensuring the sustainability and competitiveness of the European space sector, and to developing the role of the EU as a global player in space;
16. Believes that the contribution of Copernicus in tackling climate change should be developed further; calls on the Commission to establish, as soon as possible, the Copernicus-based capacities to monitor greenhouse gas emissions, including CO₂ emissions, that are currently being developed under Horizon 2020¹, with a view to addressing the needs enshrined in the COP21 agreement, and to allowing the efficient implementation thereof; supports the development of future satellites dedicated to the monitoring of CO₂ and methane;
17. Welcomes the Galileo declaration of initial services of 15 December 2016; stresses that the widespread use of the Galileo signal is a precondition for the development of a

¹ https://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-leit-space_en.pdf p.48.

strong downstream market for space-based applications and services, and that adequate measures – including, where appropriate, regulatory ones – should be taken to make full compatibility with Galileo and EGNOS the standard for devices sold in the EU, and to encourage the take-up of Galileo- and EGNOS-ready devices on the global market; invites as well the Commission to consider measures to strengthen the competitiveness of the European GNSS downstream industry;

18. Calls on the Commission to ensure that GNSS-based clocks in critical infrastructure are Galileo- and EGNOS-ready, which is highly relevant from a security perspective;
19. Highlights the ability of satellites to provide uninterrupted, very high-capacity connectivity, in particular in remote areas and outermost regions, which is essential for overcoming the digital divide, for the development of high-speed networks and for the expansion of the Internet of Things networks, enabling services such as autonomous driving, smart fleet and freight management, e-governance, e-learning and e-health applications; emphasises the complementarity of terrestrial and space-based technologies for delivering very high-capacity networks; insists that the Commission recognise this and take appropriate account of the contribution of satellites in this domain; stresses as well the need to reserve adequate frequency bands for the operation of such satellite services; calls for this to be addressed in the current legislative work on telecommunication networks, with adequate investments made in R&D; believes as well that the Space Strategy for Europe should be implemented in coordination with the Commission's digital strategies, with the support of Member States and industry, so as to promote effective and demand-driven use of satellite communications in order to foster ubiquitous connectivity in the whole of the EU;
20. Underlines the important role of the European Structural and Investment Funds (ESIF) in stimulating downstream space markets, most importantly through public procurement, including in countries that do not yet have a large space sector, noting that this should be addressed in the ongoing discussions about the future of cohesion policy; supports the introduction of targeted capacity-building measures to assist the Member States and regions with emerging space capabilities; highlights the fact that the regional dimension is essential in bringing the benefits of space to citizens, and that the involvement of local and regional authorities can create synergies with smart specialisation strategies and the EU Urban Agenda; supports, therefore, an increased involvement of regional and local authorities in a successful EU space policy, including the Outermost Regions and Overseas Countries and Territories; underlines the fact that the Committee of the Regions should be a member of the Copernicus user forum in order to highlight the importance of regional and local actors as users of Copernicus data;
21. Stresses that users such as SMEs and local and regional authorities are still not sufficiently aware of funding opportunities, including those made available by the European Investment Bank, for projects with links to Galileo or Copernicus, and that the targeted dissemination of information about these opportunities should be improved without delay;
22. Acknowledges the role of space technologies, and of the two EU flagship space programmes, in making land, maritime, air and space transport smarter, safer, more

secure and sustainable, and integrated in strategic future sectors such as self-driving and connected cars, and unmanned aerial vehicles; believes that the Space Strategy can contribute to meeting new transport needs of secure and seamless connectivity, and more robust positioning, intermodality and interoperability; encourages the Commission to include transport stakeholders in the dialogue with the space sector so as to ensure transparency, and to facilitate the uptake of European space technology in the transport market with a view to enhancing the competitiveness of EU transport services on the European and global market; asks the Commission and the Member States to pay attention to the development of space tourism;

23. Calls on the Commission to support the implementation of EGNOS-procedure landings for smaller airports, but also for larger airports; reiterates the financial advantages and the increased accuracy, resilience and safety that EGNOS could provide for the use of safety-critical applications such as aircraft landings, and reiterates the importance of extending EGNOS coverage to south-eastern and eastern Europe, as a priority, and further to Africa and the Middle East; considers as well that Galileo could play a key role in air traffic control as cornerstone for the transition from radar-based to satellite-based surveillance;
24. Stresses, furthermore, the importance of aircraft equipped with space-based Automatic Dependent Surveillance-Broadcast (ADS-B) technology, and of mandating operators to equip aircraft with ADS-B, in order to ensure accuracy and reliability in real-time tracking of aircraft and to save fuel;
25. Stresses the importance of EU space programmes for marine and maritime issues, fishing activities and the blue economy in general, for example in: tackling illegal, unreported and unregulated fishing; surveying and assessing the state and health of the oceans and fish stocks; supporting fish farm productivity; facilitating maritime research; and providing search and rescue services as well as satellite connections for on-board medical equipment; points, in this regard, to the need for space-based ocean surveillance capacities and good coordination between Galileo, EGNOS and Copernicus services;

Fostering a globally competitive and innovative European space sector

26. Stresses that the success and competitiveness of the space sector, and the development of breakthrough technologies, are highly dependent on research and innovation; calls for the enhancement and extension of the dedicated space budget line under Framework Programme 9; highlights the importance of full cooperation between the EU, the ESA and the Member States to ensuring efficiency and avoiding duplications, in particular in areas where several actors provide research funding; believes that research and innovation should be stimulated and financed to benefit a broad array of space technologies; urges the Commission to extend the use of the SME instrument for scaling-up business opportunities in space-based products and services, both within Horizon 2020 and in future Framework Programmes;
27. Calls on the Commission, in the context of public procurement, to ensure fair treatment of EU enterprises vis-à-vis enterprises from third countries, specifically by taking into

consideration the prices that companies charge to other customers worldwide, in an effort to ensure that rules are respected and that market players abide by fair practices, with a view to ensuring a level playing field; points out that the European space industry is facing increasingly fierce international competition; welcomes the Commission's proposal to strengthen the use of innovative procurement schemes;

28. Highlights the importance of reinforcing the European industrial base, and of guaranteeing the EU's strategic autonomy, by diversifying sources of supply and making the best use of multiple EU providers; considers, therefore, that the involvement of industry at all levels needs to be promoted in a balanced way, and calls on the Commission to support the European space sector throughout the value chain; believes that space clusters can play a useful role in a space-industrial strategy;
29. Calls on the Commission to support the Europe-wide development of new space business models and technologies capable of revolutionising the sector and reducing costs (e.g. European technologies that make it possible to send small satellites into space, such as reusable balloons or launchers);
30. Asks the Commission, with a view to creating a level playing field for space businesses, to consider the situation and needs of SMEs when determining the duration of public contracts in the area of space infrastructure and services;
31. Emphasises the need to invest more decisively in education and training of European citizens in the area of space, including in order to be able to fully exploit the opportunities created by space during the shift to a digital society; highlights the importance of space policy achievements in inspiring future generations and fostering a sense of European identity; stresses, therefore, the need to continue and expand a coordinated approach for European space education that can attract young people to pursue careers in space science and technology;
32. Stresses that participation in ESA's optional programmes, in the framework of which European businesses and universities or research institutes can participate in preparing cutting-edge technologies for space missions and systems, is a basic and fundamental tool for developing the capacity of the European space industry; stresses that involvement in such programmes opens the way to entrepreneurship in this area, and to accessing highly technology- and knowledge-intensive scientific projects, which can also have a positive impact in the transport sector;

Reinforcing Europe's autonomy in accessing and using space in a secure and safe environment

33. Recalls that EU space programmes are of a civil nature and reiterates its commitment to the non-militarisation of space; recognises nonetheless the strategic dimension of the space sector for Europe and the need to improve synergies between civil and security / defence aspects, and to make use of space capacities to meet security and safety needs, also taking account of the geopolitical environment and the Common Security and Defence Policy; believes that the Commission should analyse synergies between European space programmes and the European Defence Action Plan proposed in

November 2016 to ensure overall coherence in this strategic field;

34. Calls on the Commission to aggregate the demand of institutional customers from the European Union and the Member States to ensure an independent, cost effective and reliable access to space through the use of the European launchers Ariane, Vega and their future evolutions; believes that this is of utmost strategic importance for contingency and crisis management functions and for a resilient European security and defence policy;
35. Supports the objective of the Commission to assess different ways to support European launch infrastructure facilities, where this is needed to meet EU policy objectives and needs, in terms of autonomy, security and competitiveness; stresses, consequently, the strategic importance of the European Spaceport based in Kourou (French Guiana) and the need to pay close attention to the economic and social benefits for the territory in which it is located;
36. Recalls that the notion of independent access to space cannot be dissociated from the independent capacity of Europe to conceive, develop, launch, operate and exploit space systems;
37. Notes a lack of visibility as to the continuation of the launch vehicle programme in Europe beyond the next three to four years (Ariane 6 and Vega C), and as to the financial situation for this programme; expresses concern at the lack of any mid- to long-term launch programme; urges the Commission to come forward with a work programme for launch vehicles in Europe for the next 20 years;
38. Calls on the Commission to encourage the development of alternative launching technologies and the inclusion of eco-design principles in all launchers and space assets;
39. Considers that in the next generation of satellite systems the security of the Galileo infrastructure, including the ground segment, and the dual-use capacity of Galileo and Copernicus should be developed further, along with better precision and encryption; recalls that the Galileo Public Regulated Service' (PRS), restricted to government-authorised users, could play an important role in the future for responding to evolving threats, particularly in the event of a crisis;
40. Draws attention to the vulnerability of space infrastructure to interference or attack from state and non-state actors and to a range of other threats, including collisions with space debris or other satellites; reiterates the importance of securing critical infrastructure and communications as well as the development of resilient technologies; recognises the growing significance of space and space-based technologies for dual use, particularly in communications, intelligence, surveillance and reconnaissance, disaster response and arms control, and underlines the vital importance of space capabilities in the fight against terrorism; further encourages investments to speed up the development of new space capabilities and technology; believes it necessary to enhance capabilities to address emerging threats in space, which would in turn strengthen the ability of Europe's space sector to respond to changing markets, actors and technologies;
41. Calls on the Commission to mitigate the risks presented by space debris by enhancing

current space surveillance and tracking (SST) services with the aim of setting up a programme for an independent system capable of recognising threats posed by space debris to European space infrastructure, underpinning measures to avoid collisions and, in the longer term, actively removing debris; supports the plan to extend the scope of EU SST to allow space-based weather forecasts, and proposes an additional focus on near-earth objects to counter the potentially catastrophic risk of any such object colliding with Earth; emphasises that capabilities and expertise in these fields, including those available at the ESA, should be built on and expanded; reaffirms the need to provide as much open data as possible in order to foster research and innovation;

42. Recalls the growing importance of cybersecurity for space programmes, and notes that this problem is particularly serious given that a large part of our economy relies on space-related services; calls on the Commission to mitigate the risks for EU space assets by taking adequate measures, including, where appropriate, the use of encryption, for the protection of space-related infrastructure against cyber-threats; asks, furthermore, the Commission to ensure that all relevant agencies have contingency plans in place for possible cyber-attacks;
43. Considers the planned Govsatcom initiative as a promising measure to ensure access to secure, efficient and cost-effective services for European institutional actors, addressing user needs in a wide range of areas, while, at the same time, stimulating growth, competitiveness and innovation throughout the whole European satellite telecommunications sector; calls on the Commission, if the impact assessment is sufficiently positive, to design the planned Govsatcom initiative in a cost-effective way – which may include the pooling and sharing of capabilities, or the purchasing of services from certified commercial communication satellites – and to ensure that the initiative creates significant added value and avoids duplicating existing structures;
44. Underlines the importance of a comprehensive European space policy, aimed at effectively contributing to enhancing the Common Foreign and Security Policy by means of providing relevant institutions with independent intelligence, such as real-time situational awareness;

Strengthening Europe's role as a global actor and promoting international cooperation

45. Calls on the Commission to promote EU space assets and space industrial capacity in all relevant aspects of its external relations;
46. Believes that ensuring a peaceful and safe space environment will require engagement with international partners to promote norms of responsible behaviour and sustainability, notably in relation to space exploration, and calls on the Commission to work closely with the EEAS and the Member States in this regard;
47. Highlights the need for international coordination on space traffic and debris management, which are bound to increase owing to the planned installation of so-called 'mega-constellations' and to the congestion of near-earth orbits that may result from the continued lowering of satellite launch costs;
48. Asks the Commission to monitor existing private sector objectives in areas such as space mining and to consider what impact these could have on the current legal

framework and, in particular, the Outer Space Treaty; considers that the basic principles of the Treaty should be upheld and that it is necessary to avoid a race for depletable resources in space; urges the Member States to work toward a coordinated European approach, and calls on the Commission to take the lead in brokering a consensus; recognises that space is the common heritage of mankind;

49. Strongly welcomes the Commission's intention to use economic diplomacy to open up new business opportunities for the European space industry; stresses that European players in third-country markets should be supported by the Commission and, where relevant, Member State authorities, either individually or through the ESA, and by bodies such as the European Aviation Safety Agency (EASA); recommends that plans for such coordinated support be drawn up in advance;

Ensuring effective delivery

50. Highlights the fact that Parliament should play an active role in the development of EU space policy and that it should be involved in all exchanges conducted by the Commission, the Council, the EEAS and the ESA on space-related topics;
51. Considers that democratic support is important for investing in space; calls on the Commission to present a well-designed and comprehensive communication strategy about the benefits of space technologies for citizens and businesses; urges the Commission, in implementing this strategy, to base it on the following three pillars, each addressing an important audience group: (a) raising awareness with the public of the necessity of investments in space; (b) informing SMEs and entrepreneurs about the opportunities of the space flagship programmes; (c) including space in education in order to close the skills gap; asks the Commission to present Parliament with a roadmap on the creation of this communication strategy as soon as possible;
52. Calls on the Commission to draw up a timetable for the implementation of the measures proposed in the strategy, to report regularly on its implementation, to propose legislation where necessary and to devise additional concrete and tangible actions needed to achieve in a timely fashion the aims outlined in the strategy;
53. Instructs its President to forward this resolution to the Commission, the Council, the governments and parliaments of the Member States and the European Space Agency.

OPINION OF THE COMMITTEE ON FOREIGN AFFAIRS

for the Committee on Industry, Research and Energy

on A Space Strategy for Europe
(2016/2325(INI))

Rapporteur: Geoffrey Van Orden

SUGGESTIONS

The Committee on Foreign Affairs calls on the Committee on Industry, Research and Energy, as the committee responsible, to incorporate the following suggestions into its motion for a resolution:

1. Recognises the growing significance of space and space-based technologies in security and defence operations, particularly in communications, intelligence, surveillance and reconnaissance, including border and maritime surveillance, disaster response and arms control, as well as in commercial and civil activities, and underlines the vital importance of space capabilities in the fight against terrorism; further encourages investments in order to speed up the development of new space capabilities and technology;
2. Draws attention to the vulnerability of global security, infrastructure and space-based communications technologies to interference or attack from state and non-state actors, to cyber attacks and offensive space weapons research, as well as to space debris or satellite collision; reiterates the importance of securing critical infrastructure and communications as well as the development of resilient technologies and the revision of the 1967 Outer Space Treaty in order to take into account technological progress made since the 1960s;
3. Warns of offensive space weapons research being conducted by countries such as Russia, North Korea, and Iran, and the risks this could pose to vital infrastructure and communications as well as to current and planned space-based systems;
4. Recalls that in order to maintain and strengthen the security, defence and stability of Europe it is important to prevent the export of sensitive space technology to countries which threaten regional or global security and stability; supports investment in and the development of launching capabilities, such as Vega C or Ariane 6, in order for European countries to have autonomous and reliable access to space;
5. Calls for the EU to gain more autonomy in space-related fields; believes, in this regard, that cooperation with Russia, for example in the launch of the Galileo and Copernicus

satellites, could undermine the security of sensitive space-based systems;

6. Encourages investment in protective measures for space technologies, assets, and capabilities, in the context of both EU-supported programmes and Space Surveillance and Tracking (SST);
7. Believes pre-existing bilateral relationships between European countries and the major friendly space powers, including the United States, India, and Japan, should be utilised where appropriate in order to strengthen shared security and defence interests, and to enhance vital capabilities in and consolidate the essential means of detection, deterrence and response to emerging threats in space in order to improve space policy, which would enhance the ability of Europe's space sector to respond to changing markets, actors and technologies, and to promote compliance with treaties and conventions relating to outer space activities;
8. Encourages Member States to renew efforts at the United Nations to reach agreement on the proposed Code of Conduct for Outer Space Activities, with a view to promoting international principles for responsible, transparent and peaceful norms of behaviour and ultimately achieving enhanced safety, security and sustainability and preventing weaponisation in space; stresses that this should be done by emphasising that space activities should involve a high degree of care, due diligence, and appropriate transparency, with the aim of building confidence among actors, given the rapid growth in space activities over recent years with over 70 countries owning satellites and nine countries possessing orbital launch capability;
9. Recognises that investments in research and development on space capabilities generate a very high economic return and the dual-use synergies in space programmes and between the civil and defence aspects; encourages the development of dual-use systems consistent with the space security objectives of EU Member States and underlines the need to promote peaceful behaviour in space; notes, furthermore, that some Member States already operate dual-use satellite systems supporting both civil and government/military operations, and draws attention to the risk of hacking that dual-use systems entail; encourages industry and operators to provide highly secure systems with a clear distinction between public and non-public use;
10. Recognises that with the exception of the Galileo Public Regulated Service (PRS) and Copernicus, responsibility for the development of civilian and military space capabilities remains at a national level; notes that the European Union's objectives in the field of security and defence are achieved in part through the Administrative Arrangement between the intergovernmental European Space Agency and the European Defence Agency.

INFORMATION ON ADOPTION IN COMMITTEE ASKED FOR OPINION

Date adopted	30.5.2017
Result of final vote	+: 54 -: 6 0: 3
Members present for the final vote	Michèle Alliot-Marie, Nikos Androulakis, Petras Auštrevičius, Mario Borghezio, Victor Boștinaru, Klaus Buchner, James Carver, Fabio Massimo Castaldo, Javier Couso Permuy, Andi Cristea, Arnaud Danjean, Georgios Epitideios, Knut Fleckenstein, Anna Elżbieta Fotyga, Eugen Freund, Michael Gahler, Iveta Grigule, Sandra Kalniete, Manolis Kefalogiannis, Janusz Korwin-Mikke, Eduard Kukan, İlhan Kyuchyuk, Ryszard Antoni Legutko, Sabine Lösing, Ulrike Lunacek, Andrejs Mamikins, Ramona Nicole Mănescu, David McAllister, Tamás Meszerics, Francisco José Millán Mon, Javier Nart, Pier Antonio Panzeri, Demetris Papadakis, Alojz Peterle, Tonino Picula, Kati Piri, Julia Pitera, Cristian Dan Preda, Jozo Radoš, Jordi Solé, Jaromír Štětina, Dubravka Šuica, Charles Tannock, Miguel Urbán Crespo, Ivo Vajgl, Geoffrey Van Orden, Anders Primdahl Vistisen, Boris Zala
Substitutes present for the final vote	Laima Liucija Andrikienė, Angel Dzhambazki, Neena Gill, Ana Gomes, Marek Jurek, Antonio López-Istúriz White, David Martin, Norica Nicolai, Soraya Post, Marietje Schaake, Jean-Luc Schaffhauser, Igor Šoltes, Bodil Valero, Marie-Christine Vergiat
Substitutes under Rule 200(2) present for the final vote	Vladimir Urutchev

FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

54	+
ALDE	Petras Auštrevičius, Iveta Grigule, Ilhan Kyuchyuk, Javier Nart, Norica Nicolai, Jozo Radoš, Marietje Schaake, Ivo Vajgl
ECR	Angel Dzhambazki, Anna Elżbieta Fotyga, Marek Jurek, Ryszard Antoni Legutko, Charles Tannock, Geoffrey Van Orden, Anders Primdahl Vistisen
EFDD	Fabio Massimo Castaldo
PPE	Michèle Alliot-Marie, Laima Liucija Andrikienė, Arnaud Danjean, Michael Gahler, Sandra Kalniete, Manolis Kefalogiannis, Eduard Kukan, Antonio López-Istúriz White, David McAllister, Francisco José Millán Mon, Ramona Nicole Mănescu, Alojz Peterle, Julia Pitera, Cristian Dan Preda, Vladimir Urutchev, Jaromír Štětina, Dubravka Šuica
S&D	Nikos Androulakis, Victor Boştinaru, Andi Cristea, Knut Fleckenstein, Eugen Freund, Neena Gill, Ana Gomes, Andrejs Mamikins, David Martin, Pier Antonio Panzeri, Demetris Papadakis, Tonino Picula, Kati Piri, Soraya Post, Boris Zala
VERTS/ALE	Klaus Buchner, Ulrike Lunacek, Tamás Meszerics, Jordi Solé, Bodil Valero, Igor Šoltes

6	-
ENF	Jean-Luc Schaffhauser
GUE/NGL	Javier Couso Permuy, Sabine Lösing, Miguel Urbán Crespo, Marie-Christine Vergiat
NI	Georgios Epitideios

3	0
EFDD	James Carver
ENF	Mario Borghezio
NI	Janusz Korwin-Mikke

Key to symbols:

+ : in favour

- : against

0 : abstention

9.6.2017

OPINION OF THE COMMITTEE ON THE INTERNAL MARKET AND CONSUMER PROTECTION

for the Committee on Industry, Research and Energy

on a Space Strategy for Europe
(2016/2325(INI))

Rapporteur: Evelyne Gebhardt

SUGGESTIONS

The Committee on the Internal Market and Consumer Protection calls on the Committee on Industry, Research and Energy, as the committee responsible, to incorporate the following suggestions into its motion for a resolution:

- A. whereas the Commission, in its communication entitled ‘Space Strategy for Europe’ notes that the European space industry is increasingly part of the global value chain and develops innovative products and services, particularly products related to the Internet of Things, which are also highly relevant to undertakings outside the space sector and can be adapted for consumer use;
- B. whereas space is not a cost for European citizens but an investment, and an ambitious EU space strategy can ensure Europe’s autonomy and positioning in the strategic area of space, while also boosting growth, competitiveness and the creation of jobs in space-related manufacturing, operations and downstream services;
 1. Calls on the Commission to encourage the competitiveness and innovation of the space sector through formulas that rely not only on structural and investment funds, but also on the private sector in the areas where its involvement is important; stresses that ambitious research in the area of space should be fostered through a generous and forward-looking approach that takes into account the fact that guaranteeing infrastructure and services in the long term is vital in order to create a positive investment climate in the downstream sector, and that also finds ways, both financial and non-financial, to offer support to research activities in the fields of industrial and applied science and to fundamental space research, which has a direct impact on applied technology and provides the sector with highly-qualified workers – the most important innovation factor of all;
 2. Calls for the Commission to analyse the functioning of the space-related market, both in the launcher and space assets sector and in the services that use them; calls on the

Commission to ensure that the framework is fit for a competitive approach that encourages European suppliers to reach towards other markets;

3. Underlines that the use of the results of public research in space technologies by wider society has the potential to bring competitive and cross-cutting solutions to different key EU political priorities, thereby helping to bring together and give coherence to the policy solutions offered, especially in the areas of climate change, the sustainable management of resources, migration, border control, connecting people in remote regions of the Union, and the need for uninterrupted connectivity in future 5G networks;
4. Calls on the Commission to ensure the proper funding of and to set viable measures and targets for the market uptake of the EGNOS, Galileo and Copernicus programmes and to support the development of applications that harness the potential of space data and downstream services in order to promote the creation of an integrated and unified single market in this sector, especially since the potential of space solutions has not yet been fully exploited and the space sector needs to be better connected to other policies and economic areas at EU and Member State level; highlights, in this context, that the use of space technology has the potential to boost growth and jobs;
5. Calls for the Commission to encourage the development of alternative launching technologies and the inclusion of ecodesign principles in all the launchers and space assets;
6. Notes that all space systems are based on information technology, which has been increasingly exposed to unauthorised software access that can severely jeopardise the reliability of data, including satellite pictures, geo-positioning information and satellite communications;
7. Calls on the Commission, therefore, to work with the High Representative of the Union for Foreign Affairs and Security Policy and those Member States which are also signatories to the 1967 Outer Space Treaty and the related Space Liability Convention, to promote international principles of responsible behaviour in outer space based on the recognition that space is a common heritage of mankind, and to work towards universal acceptance of the Outer Space Treaty and the Moon Treaty within the framework of the United Nations and other relevant multilateral fora;
8. Underlines the urgent need to plug the regulatory gap in Article 2 of the Space Liability Convention and to ensure that states which tolerate, fund, encourage or incite computer attacks on space systems shall be made directly liable; stresses that states which do not comply with this obligation should be deemed to be directly liable within the meaning of Article VI of the Outer Space Treaty;
9. Calls on all Member States to ensure the extensive use of strong encryption in all space assets and ground facilities and to take all measures to ensure the security of communications and the resilience of the infrastructure;
10. Notes that the economic use of remote sensing satellites and systems has become an everyday reality, and has brought significant benefits to society;
11. Stresses the need to ensure that the marketing of remote sensing systems provides benefits

for consumers and businesses, particularly SMEs, in the EU; stresses, moreover, that in view of the need to ensure a proper, functioning internal market and to promote the security, safety and economic development of space activities, it is necessary to introduce uniform rules in order to prevent divergent rules from creating distorted competition in the internal market or uneven security threats; calls for the establishment of a legal framework with uniform rules that enable the data obtained by remote sensing systems to be available in the internal market for reuse in processes that create added value, and that protect that data against unauthorised access.

INFORMATION ON ADOPTION IN COMMITTEE ASKED FOR OPINION

Date adopted	8.6.2017
Result of final vote	+: 29 -: 2 0: 1
Members present for the final vote	Dita Charanzová, Carlos Coelho, Anna Maria Corazza Bildt, Daniel Dalton, Nicola Danti, Evelyne Gebhardt, Sergio Gutiérrez Prieto, Robert Jarosław Iwaszkiewicz, Liisa Jaakonsaari, Antonio López-Istúriz White, Morten Løkkegaard, Jiří Pospíšil, Virginie Rozière, Christel Schaldemose, Olga Sehnalová, Igor Šoltes, Ivan Štefanec, Catherine Stihler, Róza Gräfin von Thun und Hohenstein, Mylène Troszczynski, Anneleen Van Bossuyt
Substitutes present for the final vote	Lucy Anderson, Pascal Arimont, Lidia Joanna Geringer de Oedenberg, Kaja Kallas, Julia Reda, Marc Tarabella, Lambert van Nistelrooij, Sabine Verheyen
Substitutes under Rule 200(2) present for the final vote	Georges Bach, Peter Jahr, Markus Pieper

FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

29	+
ALDE	Dita Charanzová, Kaja Kallas, Morten Løkkegaard
ECR	Daniel Dalton, Anneleen Van Bossuyt
ENF	Mylène Troszczynski
PPE	Pascal Arimont, Georges Bach, Carlos Coelho, Anna Maria Corazza Bildt, Peter Jahr, Antonio López-Istúriz White, Jiří Pospíšil, Ivan Štefanec, Róza Gräfin von Thun und Hohenstein, Lambert van Nistelrooij
S&D	Lucy Anderson, Nicola Danti, Evelyne Gebhardt, Lidia Joanna Geringer de Oedenberg, Sergio Gutiérrez Prieto, Liisa Jaakonsaari, Virginie Rozière, Christel Schaldemose, Olga Sehnalová, Catherine Stihler, Marc Tarabella
VERTS/ALE	Julia Reda, Igor Šoltés

2	-
PPE	Markus Pieper, Sabine Verheyen

1	0
EFDD	Robert Jarosław Iwaszkiewicz

Key to symbols:

+ : in favour

- : against

0 : abstention

2.6.2017

OPINION OF THE COMMITTEE ON TRANSPORT AND TOURISM

for the Committee on Industry, Research and Energy

on a Space Strategy for Europe
(2016/2325(INI))

Rapporteur: Gesine Meissner

SUGGESTIONS

The Committee on Transport and Tourism calls on the Committee on Industry, Research and Energy, as the committee responsible, to incorporate the following suggestions into its motion for a resolution:

1. Acknowledges the role played by space technologies in making land, maritime, air and space transport smarter, safer, more secure, sustainable and integrated; welcomes the Commission's communication and believes it can contribute to meeting new transport needs of secure and seamless connectivity, more robust positioning, intermodality and interoperability;
2. Points out that space and access to space are dependent, first and foremost, on means of transport (satellites, launch vehicles, rockets); recognises that this means space technologies and space services (satellite data, geolocation) are of strategic interest in numerous sectors, such as transport, telecommunications, agriculture and defence;
3. Stresses that the transport sector offers high potential for emerging, innovative business opportunities in the downstream sector concerning safety, environmental efficiency, data streaming, navigation, search and rescue services and traffic supervision and management, among others; highlights that businesses rely on access to data and cooperation between universities, scientists and the public and private sectors;
4. Points out that training and professional skills development have an important role to play in making the EU space sector genuinely independent and self-contained; calls on the Commission to provide continuing support under Horizon 2020 and future research and development programmes for actions to promote education, training, and the dissemination of findings in space-related fields;
5. Stresses that participation in European Space Agency (ESA) optional programmes, in the framework of which European businesses and universities or research institutes can

participate in preparing cutting-edge technologies for space missions and systems, is a basic and fundamental tool for developing the capacity of the European space industry; stresses that involvement in such programmes opens the way to entrepreneurship in this area, and to access to highly technology- and knowledge-intensive scientific projects, which can also have a positive impact in the transport sector;

6. Acknowledges the potential of the EU space programmes GALILEO and the European Geostationary Navigation Overlay Service (EGNOS) and the need to promote the use of their data, and to create market opportunities through the screening and possible recast of existing legislation and a systematic space-programmes-compatibility check;
7. Calls on the Commission to support the Europe-wide development of new space business models and of technologies, which are revolutionising the sector and reducing costs (for example, European technologies that make it possible to send small satellites into space, such as reusable balloons or launchers);
8. Notes that the EU's transport sector, particularly in traffic management, tracking systems and satellite-based observation, depends on space technology and its ability to accurately determine a position at any moment; stresses the advantages of more accurate and precise satellite tracking and positioning through the use of technologies such as the Single European Sky Air Traffic Management Research Joint Undertaking (SESAR) in the aviation sector and the Global Navigation Satellite System (GNSS) in the maritime sector;
9. Highlights the importance of GALILEO Public Regulated Services (PRS) to support the Member States' government authorities with public safety and emergency services, particularly in the event of a crisis;
10. Reiterates the success of programmes such as eCall and the digital tachograph following regulations making the implementation of positioning services based on GNSS mandatory and believes that the space strategy will improve road safety; notes that satellite data are potentially important for autonomous driving;
11. Supports the Commission's Governmental Satellite Communications (Govsatcom) initiative to ensure reliable, secure and cost-effective satellite communication services for European and Member State institutions and infrastructures; emphasises its importance for transport, in particular arctic maritime transportation, air traffic management and the control and command of unmanned flying vehicles;
12. Considers that the strategy should lead to independent and secure access to space services and data, and technological non-dependence on third countries; recognises, however, that international partnerships are a success factor for European industry and that cooperation with other global strategic partners can help to avoid duplication and/or overlapping of research and development and thereby contribute to more efficient investments; calls on the Commission and the Member States, therefore, to pursue international cooperation programmes, including with other agencies and bodies in non-member countries, in order to promote domestically built European space technology and its competitiveness on the global market through the development and implementation of a genuine economic diplomacy strategy for the sector;
13. Calls on the Commission to implement the space strategy swiftly to allow the transport

sector to benefit immediately from improved maritime surveillance, multimodality, passenger travel experience, parcel delivery, civil drones' navigation and autonomous driving, and to improve safety, with due regard to privacy and data protection; believes that the GALILEO and EGNOS programmes can greatly contribute to the proper enforcement of EU transport legislation; is convinced that satellite navigation systems should be integrated to an even greater extent into other digital services, such as Intelligent Transportation Systems (ITS), the European Railway Traffic Management System (ERTMS), River Information Service (RIS) SafeSeaNet, as well as conventional navigation systems;

14. Calls on the Commission to support the EU space sector in anticipating the full deployment of GALILEO and welcomes the Commission's intention to take concrete measures, including regulatory ones, to ensure GALILEO market up-take, incentivising the development of fully compatible and interoperable European devices, such as chipsets and receivers, and insists that these measures should cover all transport modes (air, road, rail, maritime and inland waterways);
15. Believes that regulatory provisions to ensure the compatibility with GALILEO of certain transport infrastructure receivers, not least in strategic future sectors such as self-driving and connected cars and unmanned aerial vehicles (UAVs), are needed to promote the implementation of European space solutions in the transport sector;
16. Considers that, for the future generation of satellites systems, the security of the GALILEO infrastructure should be further developed;
17. Emphasises that the accuracy and integrity provided by EGNOS is essential for air, maritime, rail and road navigation; reiterates that EGNOS should be extended to South-Eastern and Eastern Europe as a priority to achieve full-EU coverage, and also extended further to Africa and the Middle East;
18. Reiterates the financial advantages and the increased accuracy, resilience and safety that EGNOS could provide for the use of safety-critical applications, such as aircraft landings, as well as for flight tracking and reducing flight cancellations and noise; calls, therefore, on the Commission to ensure that EGNOS is implemented at all European airports;
19. Stresses the importance of the Copernicus programme for transport and passenger safety, particularly in the field of ship routing services, the development of urban transport networks and the monitoring of air pollution; shares the view of the Commission on the necessity of further facilitating and promoting the use of Copernicus data and calls on the Commission to continue extending its infrastructure;
20. Considers that the dual-use capacity of GALILEO and Copernicus and better precision and encryption should be further developed;
21. Recalls that it is crucial to speed up the transformation of air traffic control from the current radar- to satellite-based surveillance, as real time surveillance can be guaranteed only for 30 % of our planet and considers that GNSS technology could play a key role in this transition;
22. Stresses, furthermore, the importance of space-based Automatic Dependent Surveillance-

Broadcast (ADS-B) equipped aircraft and of mandating operators to equip aircraft with ADS-B in order to ensure accuracy and reliability of the real time tracking of aircraft, as well as fuel savings;

23. Stresses the importance of protecting European space infrastructure, and therefore supports the establishment of Space Surveillance and Tracking (SST) services on a fully operational basis; emphasises the high importance of adequate surveys and avoidance for the reduction of space pollution in general and waste in particular; stresses, in this respect, the importance of the pilot project on cleaner space through deorbiting and the use of innovative materials for space equipment to limit the growth in orbiting debris and to identify sustainable long-term replacement solutions for space materials through innovation; reiterates that this pilot project is aimed at testing the feasibility and effectiveness of a future JTI applied to the space sector, with the aim of attracting investment;
24. Notes a lack of visibility in relation to the continuation of the launch vehicle programme in Europe beyond the next three to four years (Ariane 6 and Vega C) and the financial situation for this programme; expresses concern at the lack of any mid- to long-term launch programme; urges the Commission to come forward with a work programme for launch vehicles in Europe for the next 20 years;
25. Stresses that the European space industry is facing unfair and increasingly fierce competition on the international market, with third country institutional markets closed to European players, which puts them at a disadvantage;
26. Believes that, in these proven circumstances of non-reciprocity in the opening-up of institutional markets in the highly strategic sector of satellite launches, the EU must also, together with its partners, give preference to European launch vehicles on its institutional markets for satellite launches under European programmes;
27. Supports the Commission's proposal to aggregate demand on the part of European institutional customers to ensure independent, cost-effective and reliable access to space; suggests strongly that the Commission become a prime institutional customer in the European launcher sector and investigate means of supporting European launch infrastructure to ensure that the EU space sector can compete effectively with other global actors;
28. Calls on the Commission to take account of the synergies between GALILEO and Copernicus and, where appropriate, its other space activities, in order to achieve their cost-effective implementation (e.g. use of the current capabilities of the European Global Navigation Satellite Systems Agency, GSA) and with a view to maximising the benefits for the European economy; asks the Commission to encourage investments in space activities in the transport sector through smart financing (e.g. the European Fund for Strategic Investments, EFSI) and that they are appropriately funded in the next Multiannual Financial Framework (MFF); calls on the Commission to safeguard the financing for the upgrading of the GALILEO, EGNOS and Copernicus infrastructure, and for supporting the downstream and upstream GNSS applications and Earth observation activities within the budgets for Framework Programme (FP) 9 (including the Joint Technology Initiative Space) and European GNSS programmes in the next MFF 2014-2020;

29. Calls on the Commission to stimulate and support greater involvement of SMEs and start-ups in space activities and space-related research; encourages the Commission to include transport stakeholders in the dialogue with the space sector to facilitate the uptake of European space technology in the transport market, and also to ensure transparency; calls on the Commission to make available to European transport stakeholders the scientific space research and data related to transport in order to foster the broader use of new innovative technologies, thus enhancing the competitiveness of transport services on the European and global markets;
30. Asks the Commission and the Member States to pay attention to the increasing development of space tourism.

INFORMATION ON ADOPTION IN COMMITTEE ASKED FOR OPINION

Date adopted	30.5.2017
Result of final vote	+: 40 -: 1 0: 1
Members present for the final vote	Daniela Aiuto, Lucy Anderson, Inés Ayala Sender, Georges Bach, Izaskun Bilbao Barandica, Deirdre Clune, Michael Cramer, Andor Deli, Ismail Ertug, Jacqueline Foster, Bruno Gollnisch, Tania González Peñas, Dieter-Lebrecht Koch, Merja Kyllönen, Miltiadis Kyrkos, Bogusław Liberadzki, Marian-Jean Marinescu, Georg Mayer, Gesine Meissner, Jens Nilsson, Markus Pieper, Salvatore Domenico Pogliese, Christine Revault D'Allonnes Bonnefoy, Dominique Riquet, Massimiliano Salini, David-Maria Sassoli, Claudia Schmidt, Jill Seymour, Claudia Țapardel, Keith Taylor, Pavel Telička, Wim van de Camp, Janusz Zemke, Kosma Złotowski
Substitutes present for the final vote	Jakop Dalunde, Kateřina Konečná, Peter Kouroumbashev, Patricija Šulin, Evžen Tošenovský
Substitutes under Rule 200(2) present for the final vote	Barbara Kudrycka, Maria Noichl, Flavio Zanonato

FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

40	+
ALDE	Izaskun Bilbao Barandica, Gesine Meissner, Dominique Riquet, Pavel Telička
ECR	Jacqueline Foster, Evžen Tošenovský, Kosma Złotowski
EFDD	Daniela Aiuto
ENF	Georg Mayer
GUE/NGL	Tania González Peñas, Kateřina Konečná, Merja Kyllönen
PPE	Georges Bach, Deirdre Clune, Andor Deli, Dieter-Lebrecht Koch, Barbara Kudrycka, Marian-Jean Marinescu, Markus Pieper, Salvatore Domenico Pogliese, Massimiliano Salini, Claudia Schmidt, Wim van de Camp, Patricija Šulin
S&D	Lucy Anderson, Inés Ayala Sender, Ismail Ertug, Peter Kouroumbashev, Miltiadis Kyrkos, Bogusław Liberadzki, Jens Nilsson, Maria Noichl, Christine Revault D'Allonnes Bonnefoy, David-Maria Sassoli, Flavio Zanonato, Janusz Zemke, Claudia Țapardel
Verts/ALE	Michael Cramer, Jakop Dalunde, Keith Taylor

1	-
EFDD	Jill Seymour

1	0
NI	Bruno Gollnisch

Key to symbols:

+ : in favour

- : against

0 : abstention

27.4.2017

OPINION OF THE COMMITTEE ON FISHERIES

for the Committee on Industry, Research and Energy

on a Space Strategy for Europe
(2016/2325(INI))

Rapporteur: Ricardo Serrão Santos

SUGGESTIONS

The Committee on Fisheries calls on the Committee on Industry, Research and Energy, as the committee responsible, to incorporate the following suggestions into its motion for a resolution:

- A. whereas the 1998 Baveno Manifesto created the Global Monitoring for Environment and Security programme with the objective of determining Europe's global monitoring role in the field of the environment and security; whereas since 2012 this initiative has been named Copernicus;
 - B. whereas the political decisions taken by Parliament and the Council in 2007 resulted in the allocation of a budget for the European satellite navigation programmes European Geostationary Navigation Overlay Service (EGNOS) and Galileo and provided for an agreement on the governance structure of the programmes;
 - C. whereas Galileo will be part of the Space System for the Search of Vessels in Distress-Search and Rescue Satellite-Aided Tracking (COSPAS-SARSAT) search and rescue satellite system;
 - D. whereas fishing is a high-risk job, where accidents can always happen and the survival of the fisherman usually depends on receiving medical attention as quickly as possible;
 - E. whereas, in order to have a better analysis of the stocks and of the marine environment more and swifter data is needed;
1. Welcomes the Space Strategy for Europe, which is of great importance for marine and maritime issues and fishing activities and has great potential for developing human activity at sea and preserving the marine environment;

2. Recognises the importance of the Space Strategy for Europe for the coordinated action of administrative bodies and other stakeholders;
3. Calls attention to the lack of any mention of the relationship between Air and Sea, as the absence of the words ‘ocean’ and ‘marine’ demonstrates;
4. Recognises that space technologies, data and space-based services ‘already contribute to a number of public policies and economic sectors’ including control of fishing activities, forecast and monitoring of shipping routes and detection and monitoring of oil spills and other pollutants, search and rescue operations at sea, illegal fishing and piracy;
5. Recognises that allowing public authorities to benefit from more permanent and responsive space-based ocean surveillance capacities will allow them to respond more quickly and to make substantial savings by better targeting their actions, especially while combating illegal, unreported and unregulated (IUU) fishing;
6. Underlines the importance of using the newest technology and encouraging the development of new systems to monitor and combat IUU fishing more effectively;
7. Emphasises the importance of Galileo and EGNOS for maritime security and navigation through their role in strengthening and improving other international systems and contributing to Europe’s technological independence;
8. Reminds the Commission of the importance of better coordination between Galileo and EGNOS and the related Copernicus services also in terms of improving safety;
9. Recognises the necessity of developing secure satellite communication systems to meet existing and future needs within the European maritime community, including maritime surveillance based on Remotely Piloted Aircraft Systems, which depend heavily on satellite communications;
10. Welcomes the Commission’s Governmental Satellite Communications initiative (GOVSATCOM);
11. Emphasises the importance of Copernicus in fully understanding the climate and weather, the oceans’ natural biological processes and aggressive anthropogenic interventions, all of which are crucial issues for fisheries;
12. Welcomes the recent launch of the Copernicus Marine Service’s ‘Ocean State Report’, an effort on the part of 80 European scientific experts from more than 25 institutions as a step forward in the development of regular annual reporting on the state and health of the global oceans and European seas;
13. Emphasises the need to make imagery data easily available to different industries, various governmental agencies, international organisations, local planners and private users, including ocean surface temperature charts for fisheries as well as data on the marine environment; stresses that the Copernicus Marine Environmental Monitoring System, provided by Mercator Ocean, the Copernicus Atmosphere Monitoring System and the Copernicus Climate Change Service, provided by the European Centre for Medium-Range Weather Forecasts, should have specific tools for European fishermen and be available in

all relevant European languages;

14. Emphasises the need to reinforce substantially educational and training tools that allow for full use of the benefits created by space-related tools;
15. Considers that the development of space technologies will make it possible to survey and assess fish stocks more effectively in future;
16. Considers that the Space Strategy for Europe needs to show more ambition in relation to climate change and its impact on the marine environment;
17. Recognises the importance of the Copernicus Relay and Copernicus Academy networks in fostering stakeholder engagement, bringing the regional user dimension to the table and increasing the reach of efforts to promote the uptake of Copernicus data and services;
18. Recognises that the swifter and more precise provision of data will lead to the increased productivity of fish farmers thanks to the monitoring of harmful algal bloom;
19. Recognises the importance of ensuring that future scientific activities better integrate space technological capacities with other policy areas addressing global and societal challenges;
20. Agrees that the potential of Galileo, EGNOS and Copernicus has not yet been fully explored and recognises the potential of an alliance between the public and private sectors on the issue of space strategy;
21. Emphasises that space technology as well as its in situ components require large budgets and that it is essential to continue to allocate the necessary resources to this sector in the EU budget;
22. Stresses that the EU's space industry provides employment for more than 200 000 specialists, generates an added value of at least EUR 46 billion and contributes to socioeconomic innovation and exploration in fisheries and the blue economy;
23. Encourages the centralised acquisition of satellite data and the establishment, in this context, of a dedicated centralised purchasing system to encourage data sharing and generate economies of scale; regards as good practice the acquisition of data by the European Maritime Safety Agency for the benefit of the various Union agencies, including the European Fisheries Control Agency;
24. Notes that the Commission proposes to 'encourage the uptake of space solutions', in particular by providing technical support in using innovative and cross-border procurement for space solutions;
25. Stresses the importance of constantly improving search and rescue capabilities and encourages, therefore, the further integration of the Galileo satellite into these types of systems;
26. Considers that the consolidation of existing and future capacities into a genuine European space-based maritime surveillance system, which will benefit a number of institutional users and whose services could be commercially exploited for export, could be a textbook

case of the Commission's innovative ambitions in the space sector;

27. Supports the development of high-speed and reliable satellite connections for medical equipment, both for vessels and search and rescue teams, who should be able to communicate with hospitals, by sending and receiving medical data in order to decide on the best course of action as quickly as possible;
28. Recalls that the Outermost Regions and Overseas Countries and Territories offer an extraordinary dimension and geographic possibilities to Europe, allowing for the development of deployment stations, monitoring facilities and ground-truthing systems all around the globe; regrets that the Outermost Regions and Overseas Countries and Territories are not mentioned in the Strategy;
29. Emphasises that priorities for the public use of space, including observation, should be related to the legislative needs of European initiatives such as the 'Marine Strategy' Framework Directive;
30. Acknowledges the potential offered by space infrastructures and derived services in efficiently contributing to the objectives of international ocean governance, e.g. in implementing the COP21 agreement and mitigating the impact of climate change on oceans, coastlines and ecosystems, fighting marine litter or promoting maritime spatial planning (MSP) at global level;
31. Recalls the importance of ensuring 'the needs of various EU agencies', such as the European Maritime Safety Agency and the European Fisheries Control Agency, and emphasises that these institutions shall also contribute to the fulfilment of the objectives of the Space Strategy for Europe; insists on cooperation and the sharing of satellite information between the agencies of the Union, particularly the European Maritime Safety Agency, the European Fisheries Control Agency and the European Border and Coast Guard;
32. Calls on the European Fisheries Control Agency to make full use of its new enhanced powers by providing surveillance and communication services that use state-of-the-art technology, in particular space-based infrastructures, in order to detect vessels carrying migrants and to prevent disasters at sea;
33. Emphasises the potential of satellite-enabled applications to improve fisheries control and help safeguard the marine environment;
34. Recalls that one of the major assets for the private sector in space exploration is the development of patents and proprietary information, which should be emphasised in the development of the Space Strategy for Europe;
35. Recalls that technological and industrial development are major assets for the Space Strategy for Europe, and considers that they are not fully explored in the Strategy;
36. Stresses that the forthcoming ninth Framework Programme (FP9) for the period after 2021 must include among its objectives both the integration of the EU's space strategy, fisheries and blue growth and the involvement of specialised knowledge institutions in these fields;

37. Alerts to the fact that the rapid development of new technologies that rely on augmented intelligence, cognitive computing and neural systems, are not mentioned in the Space Strategy for Europe;
38. Considers that the Space Strategy for Europe encompasses only the near future, and lacks ambition with regard to possible new, visionary and mobilising projects, including for the benefit of intelligent fisheries management;
39. Considers that Europe must become a world leader in the field of ‘blue’ space technology by further rolling out, deploying and improving:
- Copernicus, which is important with a view to saving lives at sea and in connection with flooding,
 - Galileo, Europe’s worldwide satellite navigation system,
 - EGNOS, a European Differential Global Positioning System, which already provides navigation services to users at sea in connection with the safety of human lives,
 - ‘blue’ drones controlled using satellite data, which can be deployed for rescue operations at sea, on the coast and in the Union’s inland waters, such as by the winner of the Satnav Prize in 2015.

INFORMATION ON ADOPTION IN COMMITTEE ASKED FOR OPINION

Date adopted	25.4.2017
Result of final vote	+: 16 -: 1 0: 3
Members present for the final vote	Marco Affronte, Clara Eugenia Aguilera García, Renata Briano, Alain Cadec, Richard Corbett, Linnéa Engström, Sylvie Goddyn, Carlos Iturgaiz, António Marinho e Pinto, Gabriel Mato, Norica Nicolai, Ulrike Rodust, Remo Sernagiotto, Ricardo Serrão Santos, Isabelle Thomas, Ruža Tomašić, Peter van Dalen
Substitutes present for the final vote	Jens Gieseke, Verónica Lope Fontagné
Substitutes under Rule 200(2) present for the final vote	John Stuart Agnew

FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

16	+
ALDE Group	António Marinho e Pinto
ENF Group	Sylvie Goddyn
PPE Group	Alain Cadec, Jens Gieseke, Carlos Iturgaiz, Werner Kuhn, Verónica Lope Fontagné, Gabriel Mato, Jarosław Wałęsa
S&D Group	Clara Eugenia Aguilera García, Renata Briano, Richard Corbett, Ulrike Rodust, Ricardo Serrão Santos
Verts/ALE Group	Marco Affronte, Linnéa Engström

1	-
EFDD Group	John Stuart Agnew

3	0
ECR Group	Remo Sernagiotto, Ruža Tomašić, Peter van Dalen

Key to symbols:

+ : in favour

- : against

0 : abstention

INFORMATION ON ADOPTION IN COMMITTEE RESPONSIBLE

Date adopted	21.6.2017
Result of final vote	+: 54 -: 1 0: 0
Members present for the final vote	Pilar Ayuso, Bendt Bendtsen, Xabier Benito Ziluaga, José Blanco López, David Borrelli, Cristian-Silviu Buşoi, Jerzy Buzek, Angelo Ciocca, Edward Czesak, Jakop Dalunde, Christian Ehler, Fredrick Federley, Francesc Gambús, Adam Gierek, Theresa Griffin, Françoise Grossetête, András Gyürk, Rebecca Harms, Hans-Olaf Henkel, Eva Kaili, Kaja Kallas, Krišjānis Kariņš, Seán Kelly, Jaromír Kohlíček, Peter Kouroumbashev, Zdzisław Krasnodębski, Constanze Krehl, Miapetra Kumpula-Natri, Werner Langen, Janusz Lewandowski, Paloma López Bermejo, Olle Ludvigsson, Florent Marcellesi, Edouard Martin, Angelika Mlinar, Csaba Molnár, Dan Nica, Angelika Niebler, Aldo Patriciello, Morten Helveg Petersen, Miroslav Poche, Michel Reimon, Herbert Reul, Paul Rübig, Anne Sander, Algirdas Saudargas, Davor Škrlec, Dario Tamburrano, Patrizia Toia, Evžen Tošenovský, Vladimir Urutchev, Kathleen Van Brempt, Henna Virkkunen, Lieve Wierinck, Flavio Zanonato, Carlos Zorrinho

FINAL VOTE BY ROLL CALL IN COMMITTEE RESPONSIBLE

54	+
ALDE Group	Fredrick Federley, Kaja Kallas, Angelika Mlinar, Morten Helveg Petersen, Lieve Wierinck
ECR	Edward Czesak, Hans-Olaf Henkel, Zdzisław Krasnodębski, Evžen Tošenovský
EFDD Group	David Borrelli, Dario Tamburrano
ENF Group	Angelo Ciocca
GUE/NGL Group	Jaromír Kohlíček
PPE Group	Pilar Ayuso, Bendt Bendtsen, Jerzy Buzek, Cristian-Silviu Buşoi, Christian Ehler, Francesc Gambús, Françoise Grossetête, András Gyürk, Krišjānis Kariņš, Seán Kelly, Werner Langen, Janusz Lewandowski, Angelika Niebler, Aldo Patriciello, Herbert Reul, Paul Rübig, Anne Sander, Algirdas Saudargas, Vladimir Urutchev, Henna Virkkunen
S&D Group	José Blanco López, Adam Gierek, Theresa Griffin, Eva Kaili, Peter Kouroumbashev, Constanze Krehl, Miapetra Kumpula-Natri, Olle Ludvigsson, Edouard Martin, Csaba Molnár, Dan Nica, Miroslav Poche, Patrizia Toia, Kathleen Van Brempt, Flavio Zanonato, Carlos Zorrinho
Verts/ALE Group	Jakop Dalunde, Rebecca Harms, Florent Marcellesi, Michel Reimon, Davor Škrlec

1	-
GUE/NGL Group	Paloma López Bermejo

1	0
GUE/NGL Group	Xabier Benito Ziluaga

Key to symbols:

+ : in favour

- : against

0 : abstention