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REPORT

on a space strategy for the European Union that benefits its citizens
(2011/2148(INI))

Committee on Industry, Research and Energy

Rapporteur: Aldo Patriciello

PR_INI

SOMMAIRE

Page

MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

on a space strategy for the European Union that benefits its citizens (2011/2148(INI))

The European Parliament,

– having regard to Title XIX, Article 189, of the Treaty on the Functioning of the European Union relating to research and technological development and space policy, referring in particular to the drawing up of a European space policy in order to promote scientific and technical progress, industrial competitiveness and the implementation of European Union policies,

– having regard to the Commission Communication of 3 March 2010 entitled 'Europe 2020 – A strategy for smart, sustainable and inclusive growth' (COM(2010)2020),

– having regard to its resolution of 16 June 2010 on EU 2020[1],

– having regard to the Commission Communication of 28 October 2010 entitled 'An Integrated Industrial Policy for the Globalisation Era – Putting Competitiveness and Sustainability at Centre Stage' (COM(2010)0614),

– having regard to its resolution of 9 March 2011 on an Industrial Policy for the Globalised Era[2],

– having regard to the Commission Communication of 4 April 2011 entitled 'Towards a space strategy for the European Union that benefits it citizens' (COM(2011)0152),

– having regard to the Council Conclusions of 31 May 2011 entitled 'Towards a space strategy for the European Union that benefits its citizens',

– having regard to the Commission White Paper of 11 November 2003 entitled 'Space: a new European frontier for an expanding Union: An action plan for implementing the European Space policy' (COM(2003)0673),

– having regard to Decision 2004/578/EC of 29 April 2004 on the conclusion of the Framework Agreement between the European Community and the European Space Agency[3],

– having regard to the Commission's Report 'Mid-term review of the European satellite radio navigation programmes' (COM(2011)0005),

– having regard to its resolution of 8 June 2011 on the mid-term review of the European satellite navigation programmes: implementation assessment, future challenges and

[1] P7_TA(2010)0224.
[2] P7_TA(2011)0093.
[3] OJ L 261, 6.8.2004, p. 63.

financing perspectives[1],

– having regard to its resolution of 20 June 2007 on the financing of the European programme of satellite radionavigation (Galileo) under the Interinstitutional Agreement of 17 May 2006 and the multiannual financial framework 2007-2013[2],

– having regard to the Commission Communication of 29 June 2011 entitled 'A budget for Europe 2020' (COM(2011)0500),

– having regard to Regulation (EC) No 683/2008 on the further implementation of the European satellite navigation programmes (EGNOS and Galileo)[3],

– having regard to the Commission Communication entitled 'Global Monitoring for Environment and Security (GMES): we care for a safer planet' (COM(2008)0748),

– having regard to the Commission Communication entitled 'Global Monitoring for Environment and Security (GMES): Challenges and Next Steps for the Space Component (COM(2009)0589),

– having regard to Regulation (EU) No 911/2010 of 22 September 2010 on the European Earth monitoring programme (GMES) and its initial operations (2011 to 2013)[4],

– having regard to Regulation (EU) No 912/2010 setting up the European GNSS Agency[5],

– having regard to the Commission Communication entitled 'Action Plan on Global Navigation Satellite System (GNSS) Applications' (COM(2010)0308),

– having regard to Rule 48 of its Rules of Procedure,

– having regard to the report of the Committee on Industry, Research and Energy and the opinions of Committee on the Environment, Public Health and Food Safety and the Committee on Transport and Tourism (A7-0431/2011),

A. whereas Article 189 TFEU gives the European Union an explicit role in drawing up a European space policy, in order to promote scientific and technical progress, industrial competitiveness and the implementation of its policies;

B. whereas space policy is a key element of the Europe 2020 strategy and an integral part of the flagship initiative on industrial policy;

C. whereas satellite communication services are already at the service of EU governments and citizens;

D. whereas it supports the objectives of a smart, sustainable and inclusive economy, by

[1] P7_TA(2011)0265.
[2] OJ C 146E, 12.6.2008, p. 226.
[3] OJ L 196, 24.7.2008, p. 1.
[4] OJ L 276, 20.10.2010, p. 1.
[5] OJ L 176, 20.10.2010, p. 11.

creating highly skilled jobs, providing commercial outlets, stimulating innovation and improving citizens' well-being and security;

E. whereas space is of strategic importance for Europe and a key element for its independent decision-making and action;

F. whereas the European space industry has a consolidated turnover of EUR 5.4 billion and employs over 31 000 highly skilled people;

G. whereas the European satellite communications sector is a fundamental element for sustaining a healthy European space industry as more than half of the European industry turnover is derived from producing or launching telecommunications satellites;

H. whereas the European Parliament has consistently given its full support to the European GNSS, implemented through the Galileo and EGNOS programmes, aiming at improving the everyday life of European citizens, ensuring Europe's autonomy and independence, and acquiring a significant share in the worldwide high-tech market dependent on satellite navigation;

I. whereas the EU is currently dependent on the American Global Positioning System (GPS), with activities accounting for roughly 7% of GDP relying on this system, and given that Galileo is expected to offer advantages compared to the American GPS system, such as improved accuracy, global integrity, authentication and guarantee of service, as well as to give the Union strategic autonomy; taking note of the importance that the Galileo can have in order to improve competitiveness and quality of many services in Europe;

J. whereas increased programme costs, due among other things to inaccurate cost forecasts and inadequate cost management strategies, mean that the current budget can only fund the deployment of Initial Operating Capacity (IOC);

K. whereas the Commission has submitted a proposal for the financing of Galileo under the 2014-2020 multiannual financial framework, but the framework does not include financing for the GMES programme, which thus puts the future of this programme seriously at risk;

L. whereas, before a decision is made on a further financial commitment from the EU budget in the next multiannual financial framework, a clear and detailed assessment of all the possible technical options and related costs and benefits for both Galileo and GMES programme needs to be presented by the Commission;

M. whereas GMES is also an European-led flagship programme at the service of European citizens, supplying geo-information to assist the public institutions in the implementation of policies including environmental management, risk management and protection of citizens; whereas the GMES programme must guarantee continuous access to information on the environment and security issues based on permanent space-based observation and in-situ infrastructures, making the best possible use of the resources available in Europe;

N. whereas the continued existence of a competitive, high-tech space industry supported by

an ambitious R&D programme and additional activities, space exploration, the security of space infrastructure and international cooperation are key aspects of a successful space policy;

O. whereas, as pointed out by the Commission, independent access to space must be ensured so the European space policy objectives can be achieved;

P. whereas European industrial know-how is of key importance for a successful space policy and a crucial role is played by major European programmes in European integration and competitiveness;

Objectives of a European space strategy

1. Welcomes the Commission's Communication entitled 'Towards a space strategy for the European Union that benefits its citizens' as the first step towards a comprehensive and user-driven European Union space policy serving the interests of its citizens, its policies and its diplomacy; believes the European Union should focus its efforts on the development of downstream space services for the benefit of the citizens and aiming at improving policy-making and its implementation; considers that the adequate use of space programmes such as Galileo and GMES would lead to significant savings for the sectors involved and downstream benefits to regions and local communities;

2. Considers it important that space policy is a realistic policy aimed at improving the everyday lives of European citizens, enabling new economic growth, fostering innovation potential and supporting world class scientific progress; stresses that space solutions relying on state of the art technologies and a competitive European industrial base are vital to address today's important societal challenges, such as natural disasters, resources and climate monitoring, to develop the telecommunications sector and to foster relevant applications in the fields of climate change policies, land-use planning, environment management, agriculture, maritime safety, fisheries and transport;

3. Notes the important role of satellite networks in achieving total coverage of the EU with broadband internet by 2013, thus helping to meet the EU Digital Agenda targets;

4. Welcomes the Commission's intention of drawing up a space policy specifically tailored to the sub-sectors of the industry; emphasises, in that connection, that this policy should be coordinated not only with the ESA and the Member States, but also with the European Parliament;

5. Considers that the European Union is responsible for coordinating and consolidating national space policies and programmes with a view to establishing a coherent European approach in cooperation with all relevant stakeholders; stresses that such an approach should aim at supporting a solid, competitive and independent European industrial base and consolidate an industrial policy which is capable of conceiving, developing, launching, operating and exploiting space systems in the medium and long term, including financial and legislative mechanisms;

6. Welcomes the objectives of the strategy in terms of strengthening Europe's space infrastructure and providing more support for research in order to increase the

technological independence of Europe's industrial base, encourage cross-fertilisation between the space sector and other industrial sectors and stimulate innovation as the engine of European competitiveness;

7. Notes, however, that, whilst the Commission communication identifies priority areas of action, they remain in part somewhat vague; stresses that they should be made clearer and that an assessment of all the technical options and related costs, risks and benefits, and of the social implications, should be given, including all possible impacts on the European Union's industrial base and European industrial policy; points out that a European space programme should focus on areas of European added value and avoid dispersion of efforts or duplications with activities undertaken by the ESA;

8. Stresses the need for clear governance in relation to space policy, making optimal use of the skills available in Europe, with effective supervisory and coordination mechanisms, in order to harmonise priorities and ensure the sound management of resources derived from national funding and from the European Union, the ESA and other European agencies dealing with space and of significance to the EU;

9. Notes that the seven Space Councils to date have made only one passing reference to transport in Europe and that the significance of space policy for transport has not been given detailed consideration in the deliberations of the Space Councils as reflected in their outcomes of proceedings;

10. Stresses the need for a greater understanding of the dependence on space of essential sectors and encourages the Member States and the Commission to promote the importance of space;

11. Recalls that the transport sector has a key role to play in achieving the EU 20-20-20 targets in CO_2 emissions and energy consumption as well as the objectives of the Europe 2020 strategy and that sustainable growth cannot be achieved without an efficient transport sector;

12. Considers that a space strategy for the European Union is necessary to ensure that space technology contributes fully to safer and more efficient traffic management and traffic control across all transport modes;

13. Agrees with the Commission that Europe must maintain independent access to space to be able to achieve its established objectives in carrying out its space policy and continue to benefit from the spin-offs from space applications; therefore encourages the Commission to put forward specific proposals in the strategic area of launch vehicles, in particular by giving them special attention in the context of industrial policy in the space sector;

14. Stresses the particular importance of space launches in the context of space policy and emphasises the need for fresh European political impetus in this regard, given the critical financial situation currently facing the launch sector across the globe;

Flagship Galileo and GMES projects

15. Considers that Galileo is one of the European Union's flagship programmes as well as

being the first satellite navigation system in the world designed for civilian use, and could enable the Union to remain independent in a strategically important field;

16. Calls on the Commission to duly complete the legislative and financial framework, particularly with regard to the establishment of a financial framework for 2014 - 2020, an approach on effective governance, Galileo services and rules on responsibility; stresses, in this connection, with a view to making Galileo operational and being ready to fully exploit it, the need to:

    - lay down the principles governing the management of future Galileo activities,

    - streamline the whole organisational structure of the programme;

17. Believes that IOC capable of providing initial services should be completed by 2014 at the latest to ensure that Galileo does indeed become the second GNSS constellation of reference for receiver manufacturers; welcomes the launch on 21 October 2011, from Europe's Space Port in Kourou, of two operational in-orbit validation satellites;

18. Is convinced that the aim of Full Operating Capacity (FOC), based on a constellation of 27 satellites plus a suitable number of spare satellites and adequate ground infrastructure, is a prerequisite in order to attain the added value of Galileo in terms of authentication, high precision and uninterrupted service and therefore to reap the economic and societal benefits; fears that Galileo could lose its lead if the system is not completed in time and if the marketing and internationalisation of services are not carried out in an appropriate manner; believes that clear and unambiguous support from all European institutions for achieving FOC is needed to convince users and investors of the EU's long-term commitment;

19. Considers that the financing plan to be adopted for Galileo needs to be such as to ensure that long-term needs are able to be met and continuity is provided, including with regard to operating**,** maintenance and replacement costs;

20. Urges the Commission and the EU GNSS Agency (GSA) to put much more effort into raising awareness of GNSS among potential users and investors, promoting the use of GNSS-based services, as well as identifying and concentrating the demand for these services in Europe;

21. Is strongly convinced that additional funding for GNSS can only be secured if awareness of the costs and benefits for the EU economy and society brought by GNSS is raised considerably among decision-makers and the wider public; applauds the introduction of concrete initiatives, such as the annual Galileo Masters competition for ideas;

22. Points out that EGNOS is a real, operational programme; is convinced of the necessity to fully exploit this programme and make use of its applications in practice; draws attention to the importance of the EGNOS system covering the whole of the EU, with a view to consolidating the common market, and emphasises the need to expand that system in southern, eastern and south-eastern Europe, the Mediterranean region, Africa and the Arctic;

23. Stresses that Galileo and EGNOS are instrumental in the creation of a Single European Sky and for the further development of safe and cost-effective air traffic management in Europe, and therefore calls for the setting of an ambitious and firm timetable, along with stable financing of research and innovation, which will ensure technological progress and the growth of industrial capacity, and also for the facilitation of SME access to financing, with a view to implementing both programmes as a precondition for a timely launch of the Single European Sky, the latter being a vital strategic step towards furthering European integration and strengthening the European common market;

24. Considers that promoting the use of EGNOS and Galileo in civil aviation is a strategic requirement for the implementation of SESAR, especially as regards its use for landing procedures and at small airports;

25. Calls on the Member States to reconfirm their commitment to EU space projects, such as SESAR, which will prove vitally important for future growth and jobs across various sectors;

26. Calls on the Commission and the Member States to guarantee transparency in financing and cooperation between military and civil space-use strategies;

27. Underlines that Galileo and EGNOS are vital for efficient and environmentally-sustainable road traffic management, road-use fee collection systems, eCall and real time tracking systems, and future digital tachographs;

28. Emphasises that surveying dangerous and polluting goods transport should be a priority within satellite-based observation and navigation systems;

29. Considers that GMES is also a European Union flagship programme playing a key role in earth observation; underlines the importance of GMES's contribution to achieving Europe 2020 objectives and to supporting growth and the green economy, as well as long-term investments in technology and infrastructure; reaffirms the importance of GMES as an essential tool in combating climate change and environmental degradation; notes that, through the acquisition and analysis of information at national, regional and global level, GMES will allow the extraction of precise and useful data for: atmospheric, marine and land monitoring, civil protection, risk prevention, early warning systems, emergency management and recovery operations following environmental, natural or man-made disasters, maritime and costal surveillance, agricultural development, water and soil management and regional planning, making use of innovative environmental assessment and reporting technology capable of combining spatial and in-situ data;

30. Urges the Commission to complete the legislative framework and put forward a proposal for effective governance of the different levels of development and management of the programme by drawing on the expert knowledge held by public bodies in the EU, including EU agencies, and by the private sector, for the development and coordination of user-driven services; urges the Commission and the other institutions to include financing for GMES in the multiannual financial framework for 2014-2020; reiterates that inclusion of GMES funding in the multiannual financial framework would avoid wasting investment to date in the Seventh Framework Programme of Research in the field of services and information; points out that the lack of a financing plan providing long-term

economic support will mean that investment made to date has been fruitless; believes that asking the Member States to continue to cover the costs of the launch and annual maintenance of the programme would lead in the long term to greater costs, disparity of access to resulting information and benefits for European citizens, a likely temporary suspension of the programme itself, subsequent interruption in data provision, and ultimately a dependence on non-European space infrastructure, placing the sector-related industries in a precarious economic situation;

31. Underlines that the costs relating to GMES are already covered until 2013, totalling EUR 3 billion (approximately EUR 2.3 billion for the satellites and EUR 700 million for related services) and that it is estimated that the programme's operational costs for the period 2014-2020 will average EUR 850 million per year; calls on the Commission to promote public-private partnership and attract more private-sector capital;

32. Calls on the Commission to propose a long-term governance and financing plan based on the examination of all possible options and to establish an operational organisation securing the proper management and the provision of data from the services in order to perpetuate the current success of the programme and to achieve its objective of being fully operational as from 2014; takes the view that this should be coupled with a common European data policy to ensure open access and availability of existing data; believes it is important to establish the agreements to be put in place with national agencies in order to maximise the interoperability, continuity and governance of the system; considers it necessary to ensure that distinctions are made on the one hand between scientific use and commercial use and on the other between the ESA's development activities and the deployment, operations and systems development activities which require European structures and specific competences;

33. Acknowledges the social benefits to users of GMES services, for whom continuity and sustainability are of the essence if they are to derive maximum advantage from the observation infrastructures offered by the programme;

Secure Space to Achieve Security and Defence Objectives

34. Supports the discussions being held by the Commission on strengthening the 'security' component of the GMES programme with regard to the monitoring of borders, support for the European Union**'**s external action, maritime surveillance, complex emergencies, humanitarian aid and civil protection, etc., taking account of the sensitivity of the data being handled and the need to protect privacy and other citizen's rights;

35. Believes that space policy should also include policies on the security of critical European space infrastructure and on the safe recovery of disused equipment; recognises the increasing dependence of the European economy, policies and society on space infrastructure and stresses that space infrastructure as critical infrastructure is essential for strengthening the autonomy of European decision-making; considers that the creation of a European Space Situational Awareness system would help protect critical European space infrastructure against the risks of collisions between spacecraft or with space debris or near-Earth objects, plus the risks associated with space meteorology; believes that the creation of all new European programmes should be based on existing capacity, skills and infrastructure, which have required investment on the part of each of the Member States,

and should develop current capacity where there are gaps;

36. Considers that maximum use of satellite communication services will directly support the competitiveness of European manufacturing industry, foster the industrial base in Europe and respond to the following key policy objectives:

- Achieving total coverage of the EU with broadband Internet, including for next-generation services, as satellite networks are an essential component of the mix of technologies needed to meet EU Digital Agenda's targets;

- Implementing sustainable, safe and intelligent transportation on land, at sea and in the air;

- Maximising the EU contribution to cooperation programmes with developing countries and enhancing the EU contribution to the achievement of the Millennium Development Goals;

- Ensuring an adequate EU role in responding to future disasters within and outside the EU;

Boosting Research and Innovation

37. Considers that the European Union needs a solid knowledge and technological base to make the best possible use of space-related applications for the benefit of its citizens, if it is to act independently and have a competitive space industry capable of competing under fair conditions with non-European ones; stresses that a legislative, administrative and financial framework is essential if industry is to invest in research and innovation; believes that the EU needs to invest to ensure guaranteed European access to space and orbital infrastructure;

38. Stresses the importance of a research and innovation strategy in the area of space policy which ensures technological progress, industrial development and EU competitiveness and creates jobs in the EU; considers that a European R&D policy for space must ensure the availability of needed technologies with the appropriate maturity and the required level of non-dependence, and at competitive conditions; calls on the Commission to draw up a strategic agenda in order to ensure consistency between the efforts of the European Union in the field of R&D and those of the ESA and the Member States concerning all necessary technologies, skills and double sources needed to achieve competitiveness, European independence, access to international markets and reduction of risks for European programmes;

39. Considers it necessary to establish mechanisms and programmes to boost the market for applications and services derived from the Galileo/EGNOS and GMES programmes, as well as the telecommunications sector and services that co-employ different space services, so as to effectively meet citizens' needs;

40. Considers, furthermore, in order to strengthen European independence and competitiveness, that it is necessary, at affordable conditions, to retain autonomy in terms of access to space, favouring the use of European launchers and transporters and verifying

the suitability of operational and industrial organisation in relation to joint requirements, and therefore encourages the Commission to make concrete proposals for the strategic launch vehicles sub-sector, inter alia by paying particular attention to this sector in the space industrial policy;

41. Calls on the Commission to appropriately address financial and practical requirements in future research framework programmes; considers in particular that research and development of space-related applications should be integrated as key enabling technologies for the different sectoral research areas such as climate change, environment, transport, agriculture, etc., rather than in a separate space theme;

42. Asks the Commission to examine, in cooperation with the ESA, options for space exploration, indicating the potential costs and benefits; considers in this connection that a joint strategy should be developed with international partners through a cooperation agreement based on the general consensus of all stakeholders and with reasonable contributions from the European Union;

International Cooperation

43. Reiterates that international cooperation for peaceful purposes is a basic value of the European Union and is at the heart of its policies; considers that international cooperation should promote European technology, infrastructure and services, scientific, technical and industrial excellence, optimal data access for European users, knowledge sharing and interoperable development of applications useful for meeting the great societal challenges that Europe and the world are currently facing; points out that the European Union should be a leader in the space field and maintain a substantial strategic role at world level, particularly in the international negotiations on the Space Situational Awareness System and space exploration; stresses that work in the space policy sector may be made more effective through industrial cooperation and sharing of investment in major programmes, such as the International Space Station;

44. Stresses the importance of ensuring an adequate EU role in responding to future disasters within and outside the EU;

45. Calls on the Commission to draw up an international cooperation strategy, in collaboration with the Member States and the ESA, in order to strengthen dialogue in the space policy field with strategic partners (the United States, the Russian Federation and Japan) and explore the possibility of establishing a similar dialogue with other emerging powers such as China, India and Brazil;

46. Reminds the European Union’s policy makers that the greater part of the world’s institutional markets are unfortunately not open to international competition and that the international competition envisaged must be based on conditions that make fair trade possible;

47. Points out that international cooperation, although desirable, particularly with regard to research, must be reciprocal and of mutual benefit; regrets that our main space competitors’ institutional markets are closed to foreign industries, including European industries;

Relations between the European Union and the ESA

48. Points out that, pursuant to Article 189 TFEU, the European Union should establish appropriate relations with the ESA so as to define their mutual responsibilities and avoid any overlapping of their roles or investment;

49. Considers that the growing involvement of the European Union in the space sector calls for its relations with the ESA and the national agencies to be redefined, taking account of the fact that the technical and planning expertise developed by the ESA and the national agencies are essential to maintaining the technological capacity and the competitiveness of European industry at a high level, and that the European Union could concentrate on the operations, the development and the continuity of the space systems that it needs, as well as on the international expansion of markets and on users' requests;

50. Calls on the Commission to fulfil its political leadership and supervisory role vis-à-vis organisations which act on its behalf;

51. Instructs its President to forward this resolution to the Council and the Commission.

EXPLANATORY STATEMENT

1. Introduction

Article 189 of the Lisbon Treaty gives the European Union an explicit role in drawing up a policy on the exploration and exploitation of space in order to promote scientific and technical progress, industrial competitiveness and the implementation of its policies. Space policy is a key element of the Europe 2020 strategy and an integral part of the flagship initiative on industrial policy. It supports the objectives of a smart, sustainable and inclusive economy, by creating highly skilled jobs, providing commercial outlets, stimulating innovation and improving citizens' well-being and security.

The proposals put forward by the Commission in COM(2011)152 represent a first step towards a comprehensive European Union space strategy. It is necessary, however, to establish a coherent European approach in cooperation with industry and, in the medium- and long-term, to establish financial and legislative mechanisms in order to boost European industry and enable the necessary continuity to support ambitious, competitive projects within an international framework.

Whilst the Commission strategy identifies priority areas of action, they remain in part somewhat vague. They should be made clearer and an assessment of all the technical options and related costs and benefits should be given. Clear governance also needs to be established in relation to space policy, with effective supervisory and coordination mechanisms, in order to harmonise priorities and resources derived from national funding and from the European Union, the ESA and the EDA.

2. Flagship Galileo and GMES projects

a) Galileo

The Galileo programme is Europe's initiative for a state-of-the-art global satellite navigation system, providing a highly accurate, guaranteed global positioning service under civilian control. Discussions on a European system started in the late nineties and in 1999 the Council called on the Commission to develop a global system managed by public civil authorities[1]. After the failure of negotiations on a public-private partnership, the Parliament and the Council in 2008 decided to complete the constellation using EU budget[2].

While providing autonomous navigation and positioning services, the system established under the Galileo programme will at the same time be interoperable with GPS and GLONASS, the two other global satellite navigation systems. The fully deployed system will consist of 30 satellites and the associated ground infrastructure.

Based on the award of the contracts for the first order of satellites, the launch services, the system support services and the operations, the European Commission announced that three

[1] Council Resolution of 19 July 1999 on the involvement of Europe in a new generation of satellite navigation services - Galileo-Definition phase, OJ C221 of 3.8.1999.
[2] Regulation (EC) No 683/2008 of 9 July 2008 on the further implementation of the European satellite navigation programmes EGNOS and Galileo, OJ L196 of 24.7.2008.

initial services will be provided from 2014 onwards: an initial Open Service, an initial Public Regulated Service and an initial Search and Rescue Service. The Safety-of-Life Service and the Commercial Service will be tested as of 2014 and is supposed to be provided as the system reaches full operational capability.

Your rapporteur calls on the Commission to duly complete the legislative and financial framework by the end of 2011, particularly with regard to the establishment of a financial framework for 2014 - 2020. He fears that the total costs of the project will exceed the Commission's proposed EUR 7 billion [1] based on calculations made in the context of the mid-term review of the European satellite radio navigation programmes[2].

b) GMES

In 2001, the EU started the GMES programme. It will provide earth observation data for climate change monitoring and for global security through the Sentinel satellites. Earth observation applications serve a variety of purposes in fields such as natural resource management, energy, land monitoring, environment, cartography, natural hazard prevention, agriculture and food security, meteorology and homeland security.

Your rapporteur calls on the Commission to complete the legislative framework and clarify the approach on effective governance. He is disappointed that the Commission has not proposed including financing for GMES in the multiannual financial framework for 2014-2020. He fears that the lack of a financing plan providing economic support could mean investment made to date has been fruitless.

3. International Cooperation

With the launch of the first Chinese COMPASS satellite in 2007 we can expect soon a new navigation system in orbit (the fourth global one after GPS, GLONASS and Galileo). India is building up its regional system (IRNSS – Indian Regional Navigation Satellite System) and Japan its Quasi-Zenith System (QZSS). Our competitors have become stronger and we can assume that they are advancing dynamically. In order for Galileo to become the second global GNSS of choice for chip manufacturers, it is crucial to as soon as possible make early services available and to have a long term commitment about the future financing of Galileo.

The main challenge for the international activities of the GNSS programmes will be to ensure the compatibility and interoperability with Galileo, to access global GNSS-related resources and set worldwide standards, to ensure security of the space segment and network of ground stations, while ensuring a stricter control of sensitive GNSS technologies developed with European funding, to join in an international effort to develop innovative applications of supra-national interest. An important objective will be to create market opportunities for the European GNSS technology and applications industries.

Your rapporteur calls on the Commission to draw up, in close collaboration with the Member States and in consultation with the ESA, an international cooperation strategy, in order to strengthen dialogue in the space policy field with strategic partners (the United States and the

[1] COM (2011) 500 final, Part I, page 29.
[2] Resolution of 8.6.11

Russian Federation) and explore the possibility of establishing a similar dialogue with other existing and emerging powers, such as China, Japan, the Republic of Korea, Brazil, India and the Republic of South Africa.

4. The economic importance of the European space industry

The European space industry has a consolidated turnover of EUR 5.4 billion and employs over 31 000 highly skilled people. The 11 main operators of satellites in Europe use 153 communication satellites, employ 6 000 people and have an annual turnover of EUR 6 billion. Their activities also have a spin-off effect on a further 30 000 jobs. It is estimated that, already, 6-7% of GDP in Western countries, i.e. EUR 800 billion in the EU, is dependent on satellite radio navigation.

Markets for space services are seeing rapid growth. For example, the annual turnover worldwide for GNSS applications is expected to reach around EUR 240 billion by 2020. Moreover, as a result of the advantages of Galileo and EGNOS compared with the other competing systems, they are expected to generate economic and social benefits worth around EUR 60-90 billion over the next 20 years.

According to the OECD, the global market for commercial earth observation data, which amounted to USD 735 million in 2007, could reach some EUR 3 billion in 2017.

A Space Situational Awareness system would help reduce the quantifiable losses estimated to be caused to European space equipment by collisions with debris and by weather conditions in space, which, on the basis of the data available, amount to around EUR 332 million a year on average.

It is almost certain that these costs represent only a small fraction of the unquantified effects and costs that may be entailed by the lack of a European Space Situational Awareness system. For example, in an emergency situation, the loss of a satellite may lead to the loss of critical satellite communication capacity, which in turn may result in human lives being lost. The destruction or total failure of a satellite could seriously disrupt economic activity (the banking sector being increasingly reliant on satellite communications) and, as a result of the loss of the relevant services, have an impact on clients' activities. At present there are no reliable figures enabling the value of these losses to be estimated. It is also impossible to quantify the consequences of objects circulating close to the earth falling and hitting the earth.

27.10.2011

OPINION OF THE COMMITTEE ON THE ENVIRONMENT, PUBLIC HEALTH AND FOOD SAFETY

for the Committee on Industry, Research and Energy

towards a space strategy for the European Union that benefits its citizens
(2011/2148(INI))

Rapporteur: Salvatore Tatarella

SUGGESTIONS

The Committee on the Environment, Public Health and Food Safety calls on the Committee on Industry, Research and Energy, as the committee responsible, to incorporate the following suggestions in its motion for a resolution:

1. Recalls that the Lisbon Treaty introduces a new article (Article 189) that provides for the drawing-up of a European space policy, with the aim of promoting scientific and technical progress and industrial competitiveness via research activities, technological development and exploration; considers that EU space policy must not promote militarisation of space;

2. Considers that the adequate use of space programmes would lead to significant savings for the sectors involved and downstream benefits to regions and local communities;

3. Underlines the importance of the space programmes Galileo and EGNOS, which are key to optimising the application of the space policy to benefit European citizens; calls for a speedy development of these programmes;

4. Reaffirms the importance of GMES, the Earth observation system, as an essential tool in combating climate change and environmental degradation; notes that, through the acquisition and analysis of information at national, regional and global level, GMES will allow the extraction of precise and useful data for: atmospheric, marine and land monitoring, civil protection, risk prevention, early warning systems, emergency management and recovery operations following environmental, natural or man-made disasters, maritime and costal surveillance, agricultural development, water and soil management and regional planning, making use of innovative environmental assessment and reporting technology capable of combining spatial and in-situ data; underlines the importance of GMES's contribution to achieving Europe 2020 objectives and to

supporting growth and the green economy, as well as long-term investments in technology and infrastructure, which are the priorities of the European Union and all Member States strongly committed to environmental policy;

5. Regrets the complete exclusion of the GMES programme from the Commission's proposed Financial Framework for the period 2014-2020, and believes that asking the Member States to continue to cover the costs of the launch and annual maintenance of the programme would lead to long-term greater costs, disparity of access to resulting information and benefits for European citizens, a likely temporary suspension of the programme itself, subsequent interruption in data provision, and ultimately a dependence on non-European space infrastructure, placing the sector-related industries in a precarious economic situation;

6. Underlines that the costs relating to GMES are already covered until 2013, totalling EUR 3 billion (approximately EUR 2.3 billion for the satellites and EUR 700 million for related services) and that it is estimated that the programme's operational costs for the period 2014-2020 will average EUR 850 million per year; calls on the Commission to promote public-private partnership and attract more private-sector capital;

7. Reiterates that inclusion of GMES funding in the 2014-2020 Multiannual Financial Framework would avoid wasting investment to date in the Seventh Framework Programme of Research in the field of services and information;

8. Acknowledges the social benefits to users of GMES services, for whom continuity and sustainability are of the essence if they are to derive maximum advantage from the observation infrastructures offered by the programme;

9. Reiterates that the GMES programme is a priority of the European space policy and as such should be included in the European budget, hereby enabling Europe to keep its '2020' commitments while combating climate change;

RESULT OF FINAL VOTE IN COMMITTEE

Date adopted	26.10.2011
Result of final vote	+: 57 –: 2 0: 0
Members present for the final vote	János Áder, Elena Oana Antonescu, Kriton Arsenis, Sophie Auconie, Pilar Ayuso, Paolo Bartolozzi, Sergio Berlato, Martin Callanan, Nessa Childers, Chris Davies, Bairbre de Brún, Esther de Lange, Anne Delvaux, Bas Eickhout, Edite Estrela, Jill Evans, Karl-Heinz Florenz, Elisabetta Gardini, Gerben-Jan Gerbrandy, Françoise Grossetête, Satu Hassi, Jolanta Emilia Hibner, Dan Jørgensen, Karin Kadenbach, Christa Klaß, Holger Krahmer, Jo Leinen, Peter Liese, Linda McAvan, Radvilė Morkūnaitė-Mikulėnienė, Miroslav Ouzký, Gilles Pargneaux, Antonyia Parvanova, Andres Perello Rodriguez, Mario Pirillo, Pavel Poc, Anna Rosbach, Oreste Rossi, Daciana Octavia Sârbu, Carl Schlyter, Horst Schnellhardt, Richard Seeber, Theodoros Skylakakis, Claudiu Ciprian Tănăsescu, Salvatore Tatarella, Anja Weisgerber, Åsa Westlund, Glenis Willmott, Sabine Wils, Marina Yannakoudakis
Substitute(s) present for the final vote	Inés Ayala Sender, Matthias Groote, Romana Jordan Cizelj, Philippe Juvin, Riikka Manner, Jiří Maštálka, Michail Tremopoulos, Andrea Zanoni
Substitute(s) under Rule 187(2) present for the final vote	Peter Šťastný

13.10.2011

OPINION OF THE COMMITTEE ON TRANSPORT AND TOURISM

for the Committee on Industry, Research and Energy

towards a space strategy for the European Union that benefits its citizens
(2011/2148(INI))

Rapporteur: Artur Zasada

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 in its motion for a resolution:

1. Notes that the seven Space Councils to date have made only one passing reference to transport in Europe and that the significance of space policy for transport has not been given detailed consideration in the deliberations of the Space Councils as reflected in their outcomes of proceedings;

2. Stresses the need for a greater understanding of the dependence on space of essential sectors and encourages the Member States and the Commission to promote the importance of space;

3. Recalls that the transport sector has a key role to play in achieving the EU 20-20-20 targets in CO_2 emissions and energy consumption as well as the objectives of the Europe 2020 strategy and that sustainable growth cannot be achieved without an efficient transport sector;

4. Considers that a space strategy for the European Union is necessary to ensure that space technology contributes fully to safer and more efficient traffic management and traffic control across all transport modes;

5. Stresses that Galileo and EGNOS are instrumental in the creation of a Single European Sky and for the further development of safe and cost-effective air traffic management in Europe, and therefore calls for the setting of an ambitious and firm timetable, along with stable financing of research and innovation, which will ensure technological progress and

the growth of industrial capacity and also for the facilitation of SME access to financing, with a view to implementing both programmes as a precondition for a timely launch of the Single European Sky, the latter being a vital strategic step towards furthering European integration and strengthening the European common market;

6. Draws attention to the importance of EGNOS covering the whole of the EU, especially in those areas of the EU where the system is failing to operate adequately, in order to strengthen the single aviation market, and stresses the need to expand that system in the south, east and south-east of Europe;

7. Considers that promoting the use of EGNOS and Galileo in civil aviation is a strategic requirement for the implementation of SESAR, especially as regards its use for landing procedures and at small airports;

8. Calls on the Member States to reconfirm their commitment to EU space projects, such as SESAR, which will prove vitally important for future growth and jobs across various sectors;

9. Calls on the Commission and the Member States to guarantee transparency in financing and cooperation between military and civil space-use strategies;

10. Underlines that Galileo and EGNOS are vital for efficient and environmentally-sustainable road traffic management, road-use fee collection systems, eCall and real time tracking systems and future digital tachographs;

11. Emphasises that surveying dangerous and polluting goods transport should be a priority within satellite-based observation and navigation systems;

12. Recalls the relevance of the GMES programme for the sustainable development of transport and transport safety, especially in the context of maritime transport and maritime surveillance; believes that the European Union must continue to play an active role in the financing and development of GMES and therefore deplores the fact that its funding is not maintained in the next 2014-2020 Multiannual Financial Framework; calls on the Commission and the Council to maintain the EU's financial support within the Multiannual Financial Framework and to identify, together with the Council and Parliament, innovative means of financing GMES, including the use of project bonds;

13. Calls for the funding, development, implementation and viability of innovative space technology-based transport applications and services to be guaranteed, with a view to deriving maximum benefit from European investment in the technological potential of space and meeting the needs of users and the general public;

14. Emphasises the importance of stepping up industrial cooperation with third countries in the field of space policy, especially with the USA, Japan, Russia, China, India, Brazil, Argentina and Chile, and with the countries of Africa and the Middle East;

15. Considers that the EU should be in the vanguard of the space sector, continuing to play a significant strategic role on the international scene, and therefore calls for the development of its coordinating capability in the field of space exploration, and for

additional support for research and the development of technology, with a view to making Europe more independent technologically and ensuring that members of the public and sectors of the economy other than the space industry share the benefits of innovation in this field;

16. Agrees with the Commission that Europe needs to maintain independent access to space in order to be able to achieve its space policy aims and to derive lasting benefit from space applications in fields such as transport policy; therefore encourages the Commission to make concrete proposals for the strategic launch vehicles sub-sector, which is facing a critical situation, paying particular attention to it in the proposed space industrial policy;

17. Stresses the importance of European involvement in ensuring security in space via the European Space Situational Awareness System as well as in space exploration via the International Space Station, since both – protecting the critical European space infrastructure from the risk of collision with spacecraft or space debris and technology spill-over resulting from space exploration – could benefit transport sectors on Earth, especially aviation;

RESULT OF FINAL VOTE IN COMMITTEE

Date adopted	11.10.2011
Result of final vote	+: 37 –: 2 0: 0
Members present for the final vote	Inés Ayala Sender, Georges Bach, Izaskun Bilbao Barandica, Antonio Cancian, Michael Cramer, Ryszard Czarnecki, Philippe De Backer, Luis de Grandes Pascual, Christine De Veyrac, Saïd El Khadraoui, Ismail Ertug, Carlo Fidanza, Knut Fleckenstein, Jacqueline Foster, Mathieu Grosch, Dieter-Lebrecht Koch, Jaromír Kohlíček, Georgios Koumoutsakos, Werner Kuhn, Jörg Leichtfried, Marian-Jean Marinescu, Gesine Meissner, Mike Nattrass, Hubert Pirker, David-Maria Sassoli, Vilja Savisaar-Toomast, Olga Sehnalová, Debora Serracchiani, Brian Simpson, Keith Taylor, Silvia-Adriana Ţicău, Georgios Toussas, Giommaria Uggias, Thomas Ulmer, Peter van Dalen, Artur Zasada, Roberts Zīle
Substitute(s) present for the final vote	Dominique Riquet
Substitute(s) under Rule 187(2) present for the final vote	Margrete Auken

RESULT OF FINAL VOTE IN COMMITTEE

Date adopted	23.11.2011
Result of final vote	+: 45 –: 0 0: 3
Members present for the final vote	Jean-Pierre Audy, Ivo Belet, Bendt Bendtsen, Jan Březina, Maria Da Graça Carvalho, Giles Chichester, Pilar del Castillo Vera, Vicky Ford, Adam Gierek, Norbert Glante, Robert Goebbels, Fiona Hall, Jacky Hénin, Edit Herczog, Kent Johansson, Romana Jordan Cizelj, Lena Kolarska-Bobińska, Béla Kovács, Philippe Lamberts, Angelika Niebler, Jaroslav Paška, Aldo Patriciello, Anni Podimata, Herbert Reul, Teresa Riera Madurell, Paul Rübig, Amalia Sartori, Francisco Sosa Wagner, Konrad Szymański, Patrizia Toia, Evžen Tošenovský, Ioannis A. Tsoukalas, Vladimir Urutchev, Kathleen Van Brempt, Alejo Vidal-Quadras, Henri Weber
Substitute(s) present for the final vote	Satu Hassi, Jolanta Emilia Hibner, Yannick Jadot, Ivailo Kalfin, Seán Kelly, Holger Krahmer, Werner Langen, Alajos Mészáros, Mario Pirillo, Vladimír Remek
Substitute(s) under Rule 187(2) present for the final vote	Cristian Silviu Buşoi, Anna Hedh