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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL  
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**Space Strategy for Europe**

Space matters for Europe.

Europe — the Member States, the European Space Agency (ESA), the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) and the EU — has achieved many successes in space with breakthrough technologies and exploration missions, such as ESA's Rosetta mission, unique Earth observation and meteorology capabilities, such as Meteosat, and world-leading commercial telecommunications and launch systems with the Ariane family and Vega. Europe represents today the second largest public space budget in the world<sup>1</sup> with programmes and facilities spanning different European countries. Between 2014-2020, the EU alone will invest over EUR 12 billion in space activities. It owns world-class space systems with Copernicus<sup>2</sup> for Earth observation, EGNOS<sup>3</sup> and Galileo<sup>4</sup> for satellite navigation and geo-positioning. With 18 satellites currently in orbit and over 30 planned in the next 10-15 years, the EU is the largest institutional customer for launch services in Europe.

Space technologies, data and services have become indispensable in the daily lives of European citizens: when using mobile phones and car navigation systems, watching satellite TV or withdrawing cash. Satellites provide immediate information when disasters, such as earthquakes, forest fires or floods strike, allowing emergency and rescue teams to better coordinate their efforts. Agriculture benefits from improved land use. Transportation and energy infrastructure is safer and can be more efficiently managed thanks to satellite technologies. Global challenges due to growing populations, increased demand for resources and climate change require information about our planet which space based solution can provide more easily.

Space technologies, data and services can support numerous EU policies and key political priorities, including the competitiveness of our economy, migration, climate change, the Digital Single Market and sustainable management of natural resources. Space is also of strategic importance for Europe. It reinforces Europe's role as a stronger global player and is an asset for its security and defence. Space policy can help boost jobs, growth and investments in Europe. Investing in space pushes the boundaries of science and research. Europe has a world-class space sector, with a strong satellite manufacturing industry, which captures around 33 % of the open world markets, and a dynamic downstream services sector with a large number of SMEs. The European space economy, including manufacturing and services, employs over 230 000 professionals and its value was estimated at EUR 46-54 billion in 2014, representing around 21% of the value of the global space sector<sup>5</sup>.

The overall international space context is changing fast: competition is increasing; new entrants are bringing challenges and new ambitions in space; space activities are becoming increasingly commercial with greater private sector involvement; and major technological shifts are disrupting traditional industrial and business models in the sector, reducing the cost of accessing and using space. The combination of space data with digital technologies and other sources of data open up many business opportunities for all Member States.

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<sup>1</sup> Consolidated space budget (Member States, EU, ESA and EUMETSAT) estimated at EUR 7 billion in 2015.

<sup>2</sup> European Earth Observation Programme.

<sup>3</sup> European Geostationary Navigation Overlay Service, which augments the GPS signals over Europe.

<sup>4</sup> European Global Navigation Satellite System, similar to the GPS.

<sup>5</sup> Socioeconomic impacts from space activities in the EU in 2015 and beyond, PwC study, June 2016.

Europe must work together to promote its position as a leader in space, increase its share on the world space markets, and seize the benefits and opportunities offered by space. Building on Article 189 of the Treaty (TFEU), the Commission is therefore proposing a new Space strategy for Europe focused on four strategic goals.

## **1. MAXIMISING THE BENEFITS OF SPACE FOR SOCIETY AND THE EU ECONOMY**

The potential of space solutions has not yet been fully exploited, and nor have the wider possibilities offered by space data. The space sector needs to be better connected to other policies and economic areas at EU level and in all Member States. The potential of the EU space programmes Copernicus, EGNOS and Galileo must be better exploited. The Commission's aim is to optimise the benefits that space brings to society and the wider EU economy. Achieving this means boosting demand among public and private users, facilitating access to and use of space data, and stimulating the development and use of innovative downstream applications. It also means ensuring the continuity and user-driven development of EU space programmes.

### **1.1. Encouraging the uptake of space services and data**

Data and services derived from space systems, including satellite images, geo-positioning information and satellite communications, already contribute to a number of public policies and economic sectors: from environmental protection to transport safety, precision farming, control of fishery stocks, monitoring of shipping routes and detection of oil spills, to urban and regional planning. The potential areas of application are huge and they are not yet fully exploited. The Commission will thus encourage the use of space services, data and applications in EU policies whenever they provide effective solutions. It will make sure that EU legislation is supportive of their uptake and will undertake regular reviews to identify barriers and new opportunities, including administrative simplifications.

The Commission will take concrete measures, including regulatory ones where justified and beneficial<sup>6</sup>, to introduce Galileo in specific markets or areas, such as mobile phones, European critical infrastructure and aviation. New chipsets and receivers put on the European market should be Galileo and EGNOS compatible. To support the effort of industry the Commission will put in place a voluntary labelling and certification scheme.

In the longer term, the Commission will encourage the uptake of space solutions through standardisation measures and roadmaps, and by integrating space into future strategies addressing, for example, autonomous and connected cars, railways, aviation and unmanned aerial vehicles (drones). The Commission will release a European radio navigation plan to facilitate the introduction of global navigation satellite system applications in sectoral policies.

This effort should be supported by accompanying measures at national and regional level. The Commission, together with the GSA<sup>7</sup> and others, will organise awareness-raising campaigns, set up support networks (for example, Copernicus Relays and the Copernicus Academy) and

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<sup>6</sup> Possible legislative proposals will be subject to Commission better regulation requirements, in line with Commission's Better Regulation Guidelines, SWD(2015) 111.

<sup>7</sup> The European Global Navigation Satellite System (GNSS) Agency (GSA) is an EU agency responsible for the exploitation of EGNOS and Galileo.

provide technical support in using innovative and cross-border procurement for space solutions.

Copernicus is one of the leading providers of Earth observation data. However, technical barriers currently prevent users from fully exploiting the data and information Copernicus delivers. Therefore, the Commission will improve access to and exploitation of space data enabling their cross-fertilisation with other sources of data, facilitating the integration with digital research infrastructures, in complementarity with the European cloud initiative. More specifically, the Commission will strengthen the dissemination of Earth observation data generated by Copernicus. It will launch several enabling platform services offering access to additional datasets and online processing capabilities in which European industry will take a leading role. These measures will open up new business opportunities for European industry, including SMEs and start-ups, and will allow research institutions, public authorities and companies to develop and benefit from space solutions. As space data often need to be exploited jointly with non-space data to deliver its full potential for end users, the Commission will pay particular attention to the interoperability of datasets, building on the INSPIRE Directive<sup>8</sup> and the European Interoperability Framework.

Stronger links with the commercial downstream sector are essential to develop tailor-made applications, reach out to new users and connect space with other sectors. The Commission will therefore put in place framework conditions to foster these links. It will define clear limits between the free Copernicus core information services and commercial downstream applications. It will also introduce an ‘industry test’ to check the ability of downstream suppliers to provide a reliable and affordable service.

Space and satellite communications can also improve connectivity for Europe’s digital society and economy. Satellites can provide cost-effective solutions in particular to connect assets and people in remote and offshore areas, or as part of the future 5G networks, where numerous applications and services using space data will also require uninterrupted connectivity. The Commission will work with Member States to promote long-term cooperative frameworks that encourage the interworking of satellite and terrestrial technologies and bring together the respective business communities.

***Main actions: The Commission will:***

- *promote the uptake of Copernicus, EGNOS and Galileo solutions in EU policies where justified and beneficial, including in the short term, with measures introducing the use of Galileo for mobile phones, and critical infrastructure using time synchronisation.*
- *facilitate the use of Copernicus data and information by strengthening data dissemination and setting up platform services, promoting interfaces with non-space data and services.*
- *stimulate the development of space applications with a greater involvement of new actors from different domains.*
- *together with Member States and industry, promote the efficient and demand-driven use of satellite communications, so as to foster ubiquitous connectivity in all Member States.*

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<sup>8</sup> Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community, OJ L 108, 25.4.2007, p.1.

## 1.2. Advancing the EU space programmes and meeting new user needs

The private sector will only use and invest in space solutions if users and businesses are confident that services and data provided by Copernicus, EGNOS and Galileo will continue in the future. The Commission therefore confirms its commitment to the stability of the EU space programmes and to strengthening the systems' competitive advantages, through features such as authentication and high accuracy for Galileo. In a changing environment and fast-evolving market, these systems must continue to develop to ensure that they deliver state-of-the-art services with greater efficiency and robustness.

The Commission will implement the third generation of EGNOS to bring improvements and cover additional sectors such as maritime. This will make EGNOS more attractive and help it become a key part of radio navigation in Europe. The Commission's aim is to reinforce the second generation of Galileo and Copernicus as a major reference at global level. This will require the continuous improvement of current services and infrastructure.

Additional services will be considered to meet emerging needs in specific priority areas, including (i) climate change and sustainable development, to monitor CO<sub>2</sub> and other greenhouse gas emissions, land use and forestry, and changes in the Arctic<sup>9</sup> with Copernicus; and (ii) security and defence to improve the EU's capacity to respond to evolving challenges related to border controls and maritime surveillance with Copernicus and Galileo/EGNOS. This expansion will take account of new technological developments in the sector, the need to ensure adequate level of security of the infrastructure and services, the availability of different data sources and the long-term capacity of the private sector to deliver appropriate solutions.

The Commission will upgrade user consultation processes and set up dedicated user platforms to ensure that developments are driven by user needs, including for security-related requirements. Where this may be more efficient and would leverage available funding, and taking due account of past experiences, the Commission will explore alternative business models (public-public, public-private partnerships or buying services).

### ***Main actions: The Commission will:***

- *remain committed to the stability of the EU space programmes and prepare the new generations, on a user-driven basis, to continue delivering state-of-the-art services. To this end, the Commission will explore alternative business models and take account of technological progress.*
- *address emerging needs related, in particular, to climate change/sustainable development and security and defence.*

## 2. FOSTERING A GLOBALLY COMPETITIVE AND INNOVATIVE EUROPEAN SPACE SECTOR

The European space industry is facing tougher global competition. Security of supply and industry's ability to export its products are impacted by high dependence on non-European critical components and technologies. Innovative industrial processes are revolutionising the sector. Space activities are increasingly open to private investment in the areas of satellite communications, Earth observation and even launchers. Space is now part of a global value chain that increasingly attracts new companies and entrepreneurs, so-called 'New Space',

<sup>9</sup> In line with the integrated European Union policy for the Arctic (JOIN(2016) 21 final).

which are pushing the traditional boundaries in the space sector. This opens up new opportunities to develop innovative products, services and processes which can benefit industry in all Member States, creating new capacities and adding value in and outside the space sector.

Europe needs to maintain and further strengthen its world-class capacity to conceive, develop, launch, operate and exploit space systems. To ensure this, the Commission will support the competitiveness of the whole supply chain and actors from industry to research organisations. It will also foster the emergence of an entrepreneurial ecosystem, opening up new sources of financing, creating new business opportunities, and making sure this will benefit businesses in all Member States.

## **2.1. Supporting research and innovation and development of skills**

Space research activities at EU level should address all segments of the space industrial value chain in a balanced way and promote technology-transfer/cross-fertilisation with other, non-space sectors. They should facilitate access to space data for research and innovation programmes in order to create conditions for major research breakthroughs and reach out to numerous market segments.

In the context of EU research programmes, the Commission will give priority to action addressing the vulnerability of European supply chains by supporting the development of critical space components, systems and technologies associated with technological non-dependence. It will support long-term R&D needs, including breakthrough disruptive technologies, low-cost and alternative access to space, and in-orbit servicing. It will also support the development of new industrial processes and production tools, and improve support to technological maturity, including in-orbit demonstration and validation activities, to reduce time to market.

The Commission will also seek to ensure that future research activities better integrate space research with other policy areas addressing global and societal challenges. It will encourage horizontal synergies and multidisciplinary approaches that allow the cross-fertilisation of ideas and spinning-in/off of space and non-space technologies. This will be done in collaboration with existing initiatives, such as the European technology platforms and joint technology initiatives. Linking space research more closely with basic research will support the exploitation of scientific space data from European space science and exploration missions and the development of scientific instrumentation. It will also foster cooperation between scientific, engineering and industrial teams.

In addition, the Commission will organise regular dialogues with industry and other innovation actors, including the research community and users of applications and services, to better address their competitiveness needs. The Commission will facilitate the use of intellectual property rights owned by the EU, including patents and copyrights, to stimulate innovation and economic growth.

With the European Structural Investment Funds the Commission will support research and innovation in Member States and regions which have identified space as a priority in their smart specialisation strategies and will facilitate cross-border cooperation among their research and innovation actors.

As part of the New Skills Agenda for Europe, the Commission will launch a dedicated sector skills alliance for space/Earth observation gathering key stakeholders from industry, research, universities and public authorities to tackle new skills requirements in the sector. The Commission will foster closer cooperation with the European Institute of Innovation and Technology and its knowledge and innovation communities and will strengthen activities and projects to promote space in education and sciences.

***Main actions: The Commission will:***

- *step up its efforts to support space R&D activities, in cooperation with Member States and ESA, and review its strategic approach to boosting the competitiveness of the European space sector.*
- *strengthen the use of innovative procurement schemes to stimulate the demand-side of innovation<sup>10</sup> and explore new approaches to leverage private sector investments and partnerships with industry<sup>11</sup>*
- *together with Member States and ESA, promote the use of common technology roadmaps<sup>12</sup> to ensure greater complementarity of R&D projects.*
- *include space/Earth observation in the blueprint for sectoral cooperation on skills addressing new skills requirements in the sector.*

## **2.2. Fostering entrepreneurship and new business opportunities**

Enabling measures and capacity building in all Member States and at European level are needed to create the right ecosystem and a favourable regulatory and business environment that incentivises the private sector to be more risk-prone and encourages businesses to develop innovative products and services.

The Commission will support European space entrepreneurs in starting and scaling up across the single market, for example by exploring a 'first-client' approach. It will also promote access to finance for space in the context of the Investment Plan for Europe and Union funding programmes<sup>13</sup>. The Investment Plan and the European Fund for Strategic Investments, in particular, can play an important role in supporting innovative projects and the Commission will engage in a dialogue with the EIB/EIF<sup>14</sup> on this matter. It will also explore synergies with the upcoming Fund of Funds when it comes to start-ups. The Commission will also encourage awareness-raising and outreach activities to inform the space industry and local financial intermediaries about the opportunities offered by EU initiatives and programmes.

The emergence of a business- and innovation-friendly ecosystem will also be supported at European, regional and national levels by establishing space hubs that bring together the space, digital and user sectors. The objective is to open up space to non-space entrants and non-space industries, including innovative European ICT entrepreneurs and user sectors such as energy, transport and others. This can build on existing instruments within the

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<sup>10</sup> For example, pre-commercial procurement and public procurement of innovative solutions.

<sup>11</sup> For example, public private partnerships based on contractual arrangements or stemming from a joint technology initiative.

<sup>12</sup> Such as those from the ESA space technology harmonisation process.

<sup>13</sup> Notably Horizon 2020, COSME, the European Structural Investment Funds.

<sup>14</sup> European Investment Bank / European Investment Fund.

Commission, ESA's business incubation centres and initiatives in the Member States (for example, innovation clusters and boosters). The Commission will support exchange of best practices and common specifications, and build capacity allowing all Member States to benefit from the space sector.

The Commission will also enhance its support for SMEs, start-ups and young entrepreneurs through business incubators and the use of prizes and competitions, such as the Copernicus and Galileo Masters. Initiatives will cover the various cycles of business development (for example, space technology accelerators providing support at an early stage (pre-seed money), and supporting new ideas and their development).

***Main actions: The Commission will:***

- *step up support to space entrepreneurs through EU funding programmes to facilitate further financing of investments in the space sector.*
- *engage in a dialogue with the EIB and EIF on the support of investment in the space sector as part of the overall Investment Plan for Europe .*
- *support space start-ups, including by exploring synergies with the upcoming Fund of Funds, and facilitate the emergence of space hubs and clusters across Europe.*

### **3. REINFORCING EUROPE'S AUTONOMY IN ACCESSING AND USING SPACE IN A SECURE AND SAFE ENVIRONMENT**

Space capacities are strategically important to civil, commercial, security and defence-related policy objectives. Europe needs to ensure its freedom of action and autonomy. It needs to have access to space and be able to use it safely. Access to the radio frequency spectrum must be guaranteed and protected from interference in full complementarity with the Radio Spectrum Policy's aim of maximum spectrum usage efficiency.

Space is becoming a more contested and challenged environment. New competitors — both public and private — are emerging around the world, partly spurred by the reduced costs of developing and launching satellites. Growing threats are also emerging in space: from space debris to cyber threats or the impact of space weather. These changes make greater synergies between civil and defence aspects increasingly relevant. Europe must draw on its assets and use space capacities to meet the security and safety needs of the Member States and the EU.

#### **3.1. Maintaining Europe's autonomous access to space**

The Commission will work with the ESA, Member States and industry to ensure that Europe maintains autonomous, reliable and cost-effective access to space.

In the next 10-15 years the EU plans to launch more than 30 satellites for its Galileo and Copernicus programmes, notably in the class of the future European-built launchers such as Ariane 6 and Vega C, making the EU the largest European institutional customer. The Commission will therefore aggregate the launch service needs of EU programmes and act as a smart customer of European reliable and cost-effective launch solutions.

It is crucial that Europe continues to have modern, efficient and flexible launch infrastructure facilities. In addition to measures taken by Member States and ESA, the Commission will consider ways to support such facilities within its areas of competence, for example through



its contracts for launch services or other instruments where this is needed to meet EU policy objectives or needs.

The Commission will further complement the efforts of Member States, ESA and industry in addressing long-term research and innovation needs, including low-cost access to space for small satellites; advanced manufacturing; breakthrough concepts (such as re-usability); mitigating environmental impacts; and providing regular opportunities for European in-orbit validation services for new technologies and products to be used in space.

The Commission will also encourage the development of commercial markets for low-cost small launch systems or for commercial space activities such as spaceflight or suborbital space tourism, promoting the appropriate regulatory frameworks as needs arise.

***Main actions: The Commission will consolidate EU support for autonomous access to space by:***

- *aggregating demand for launch services to provide visibility to industry and reduce implementation costs;*
- *supporting research and innovation efforts, in particular to ensure Europe's ability to react to and anticipate disruptive changes (re-usability, small launchers);*
- *considering ways to support European launch infrastructure facilities where this is needed to meet EU policy objectives or needs;*
- *encouraging the development of commercial markets for new space activities.*

### **3.2. Ensuring access to radio frequency spectrum**

Frequencies are necessary to operate space systems, be they commercial or institutional, throughout their lifetime and for the delivery and uptake of space-based services. European satellite systems and operators must be ensured access to spectrum that is protected from interference from other systems.

The Commission will take into account the specific requirements of space systems when coordinating frequency allocation at European and international level, while aiming to maximise the efficiency of scarce resource usage.

### **3.3. Ensuring the protection and resilience of critical European space infrastructure**

The proliferation of space debris remains the most serious risk to the sustainability of space activities and will continue to be addressed at European and international level. The EU has dealt with this issue through the implementation of the EU space surveillance and tracking (SST) support framework which has now started delivering operational services based on a pool of Member States' capacities.

The Commission will reinforce the SST support framework to improve the performance and geographical coverage of sensors. It will consider extending its scope to address other threats and vulnerabilities, for example cyber threats or the impact of space weather on satellites and on ground infrastructure such as transport, energy grids and telecommunication networks.

In the long term, this SST model could evolve into a more comprehensive space situational awareness service, building on existing activities in the Member States and ESA, and taking into account international cooperation frameworks, particularly with the US.

The Commission will engage with the user sectors concerned to develop responses to space weather risks and alerts. It will work with ESA and EUMETSAT to support research and promote international efforts in this domain.

***Main actions: The Commission will:***

- *enhance the current EU SST services and consider comprehensive space situational awareness services (such as space weather, cyber alerts). In doing so, it will work to establish partnerships, particularly with the US.*
- *help raise awareness of space weather risks at European and international level, and of the emerging cybersecurity risks to critical European space infrastructure.*

### **3.4. Reinforcing synergies between civil and security space activities**

Space services can strengthen the EU's and Member States' capacity to tackle growing security challenges and improve the monitoring and control of flows which have security implications<sup>15</sup>. Most space technologies, infrastructure and services can serve both civilian and defence objectives. Although some space capabilities have to remain under exclusive national and/or military control, in a number of areas synergies between civilian and defence can reduce costs, increase resilience and improve efficiency. The EU needs to better exploit these synergies.

This will be a key theme of the European defence action plan, which is expected to highlight space's crucial enabling role for civilian and defence capabilities. The EU and Member States' institutional actors, including those providing security services to citizens, increasingly rely on satellite communication services for their missions and infrastructure, but the critical security and defence needs are not fully met today. The Commission is therefore working with the European Defence Agency and ESA to assess the demand for and feasibility of a new initiative providing resilient satellite communication services for governmental and institutional security users.

It will also assess further the potential of Copernicus and Galileo/EGNOS to meet EU autonomy and security needs and improve the EU's capacity to respond to challenges related to migration, border control and maritime surveillance. To this end, the Commission will strengthen security requirements when developing these systems and will reinforce synergies with non-space observation capacities (e.g. unmanned aerial vehicles).

***Main actions: The Commission will:***

- *propose a Govsatcom initiative to ensure reliable, secured and cost-effective satellite communication services for EU and national public authorities and infrastructure.*
- *strengthen security requirements when developing EU space systems.*

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<sup>15</sup> As emphasised in 'A Global Strategy for the EU's Foreign and Security Policy' issued in June 2016 by the High Representative of the Union for Foreign Affairs and Security Policy and Vice-President of the European Commission.

#### **4. STRENGTHENING EUROPE'S ROLE AS A GLOBAL ACTOR AND PROMOTING INTERNATIONAL COOPERATION**

Europe's efforts to meet the three strategic goals above will be undermined unless the EU achieves a fourth goal: taking a much stronger role on the world stage.

Access to and use of space is shaped by international rules or standards and by a governance system aimed at guaranteeing the long-term, sustainable use of space for all nations. Most space science and exploration projects are also global in character. Cutting-edge space technology is increasingly developed within international partnerships, making access to such projects an important success factor for researchers and industry. Access to global markets and ensuring a global level playing field is also vital for European industry and businesses.

Increased human activity in space and the rapid growth of new entrants is testing the UN conventions on outer space to the limit, including on issues of space traffic management and mining. Europe should be among the leaders in navigating global challenges such as climate change or disaster risk reduction, while promoting international cooperation and building the global governance or appropriate legal frameworks for space.

The Commission will therefore work alongside the High Representative and Member States in promoting international principles of responsible behaviour in outer space in the framework of the United Nations and other appropriate multilateral fora. The EU should lead the way in addressing the challenges posed by the multiplication of space actors, space objects and debris in line with the UN conventions related to space.

In addition, the Commission will use EU space programmes to contribute to and benefit from international efforts through initiatives such as the Global Earth Observation System of Systems (GEOSS) and the Committee on Earth Observation Satellites (CEOS) with Copernicus or the Search and Rescue initiative (COSPAS-SARSAT) with Galileo. It will also support the EU's neighbourhood and development policies, as it already does in Africa with Copernicus and EGNOS, and the monitoring of sustainable development goals. It will contribute to international dialogue on space exploration together with Member States and ESA, promoting common European positions.

Through its trade policy instruments and economic diplomacy, the Commission will seek to establish a level playing field for European industry by addressing market access barriers and promoting convergence of dual use export controls, and actively promote European space technologies, solutions and know-how in non-EU countries. This should open up new business opportunities for European industry and promote the EU as an attractive place and partner for research and investment. The Commission will further support space business internationalisation by mobilising existing instruments<sup>16</sup> to help European companies, particularly clusters and networks of SMEs, access external markets.

The Commission will strengthen its bilateral and multilateral space policy dialogues pursued closely with Member States. In cooperation with ESA, EUMETSAT and GSA it will review the strategic objectives of existing dialogues and set up new ones reflecting changing EU priorities. Further, it will actively promote EU space programmes and seek mutually

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<sup>16</sup> For example, the COSME cluster internationalisation instrument, EIB loans or export credits.

beneficial partnerships for data exchanges under Copernicus and reciprocal participation in research programmes.

***Main actions: The Commission will:***

- *pursue space dialogues with strategic international partners, ensure that space policy is duly taken into account in EU export control dialogues with third countries, use economic diplomacy and, trade policy instruments to assist European companies active in global markets and to address societal challenges.*
- *foster the EU's contribution to international initiatives such as the Group on Earth Observation and CEOS.*
- *together with the other EU institutions and Member States, engage with international partners to promote responsible behaviour in outer space and preserve and protect the space environment for peaceful use by all nations.*

## **5. ENSURING EFFECTIVE DELIVERY**

The measures listed above are designed with one key criterion in mind: practical delivery. They are designed to promote partnerships between the Commission, Member States, ESA and GSA, together with all other relevant agencies such as EUMETSAT, stakeholders, industry, research and user communities.

Relations between the EU and ESA will be one of the cornerstones of success. ESA, with its technical excellence, expertise, capacity and know-how, is an important partner on which the Commission will continue to rely. In the light of the mid-term evaluation of the EU space programmes in 2017, the Commission will examine potential improvements in governance and simplification measures, for example through a single Financial Framework Partnership Agreement with ESA, which would streamline the applicable rules and reinforce transparency and accountability requirements.

The Commission will continue its successful collaboration with EUMETSAT given its crucial role in the delivery of Copernicus. The role of the GSA will also be strengthened regarding the exploitation of Galileo and EGNOS and to increase their market uptake. The Commission will consider extending the GSA's responsibilities in certain security-related tasks to other EU space activities.

The Commission will pursue its role in ensuring that the needs of various EU agencies, such as the EEA<sup>17</sup>, EFCA<sup>18</sup>, EMSA<sup>19</sup>, the European Border and Coast Guard Agency and others representing the sectoral policies in need of space solutions are met. It will work closely with the EEAS, the EDA and the EU SatCen, together with Member States and ESA to explore possible dual-use synergies in the space programmes.

Starting in 2017 the Commission will roll out this strategy and initiate a regular structured dialogue with stakeholders to ensure effective delivery and monitor progress.

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<sup>17</sup> European Environment Agency.

<sup>18</sup> European Fisheries Control Agency.

<sup>19</sup> European Maritime Safety Agency.

## **6. CONCLUSION**

The potential of space for Europe and the world is enormous. Europe faces huge global challenges which require global responses.

Europe must contribute to this collective responsibility. No single Member State can do this alone. The EU, alongside its Member States and ESA, must act as a global stakeholder to promote and preserve the use of space for future generations.

The EU cannot afford to fall behind in this domain. It must remain in the first rank, building on Europe's talents and expertise, capitalising on its investments and anticipating the opportunities of tomorrow.

The Commission invites the European Parliament and the Council to discuss and support this strategy, and to steer its effective implementation, in close cooperation with all relevant stakeholders.