

# SECURING THE HEAVENS

BRIEF / 9  
Apr 2021

## How can space support the EU's Strategic Compass?

by

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### INTRODUCTION

It may be customary to begin an analysis on space by referencing famous sci-fi productions such as Star Trek. Yet terms such as 'final frontier' or 'to boldly go where no man has gone before' are outdated. Today, space is used for countless civil and military applications and it is an increasingly contested and congested political and technological arena. While it is true that space is not yet home to photon torpedoes or deflector shields, reality is starting to catch up with the sci-fi world. Consider that the United States took the decision in December 2019 to create a 'Space Force' and in September 2020 France created an 'Air and Space Force', which followed on from the creation of a Space Command in 2019. Germany too took the decision in September 2020 to create an 'Air and Space Operations Centre'. A month later, NATO created its first-ever Space Centre in Germany and in 2021 it was decided that France would host the new NATO Centre for Excellence in military space. Additionally, other EU countries such as Italy have established space-defence capacities and on 8 March 2021 France started its first-ever military space exercise, Aster X 2021.

### Summary

- › Despite political and industrial divergences between EU member states, space will play an indispensable role in the Strategic Compass. Space is a strategic enabler that can enrich the EU's approach to crisis management, resilience, capabilities and partnerships, and the Compass is an opportunity to upgrade the status of space and defence within the context of the EU's broader space policy.
- › In line with the EU's Threat Analysis presented in November 2020, any response to geopolitical rivalry, military threats, crisis management, climate change, failed states, globalisation and critical supply and communications requires robust space imaging, surveillance, tracking, communication, positioning and navigation capacities.
- › The Strategic Compass could lead to initiatives such as the development of a dedicated EU Space and Defence Strategy, investing in existing EU space bodies, financing counter anti-satellite weapon technologies, deploying space attachés in EU delegations, capitalising on the EU Government Satellite Communications programme (GovSatCom) and the Galileo Public Regulated Service (PRS) and more.

Behind this drive is something rather more serious than sci-fi, of course. The combination of cheaper commercial launchers and the rise of private companies with an interest in space, earth-based technological shifts such as the introduction of 5G and 6G and the rise of new space powers such as China, India, the United Arab Emirates and more, give EU member states reason to reflect on the political — and not just economic — importance of space. In fact, it is safe to say that without space much of the EU's economic power and vitality would no longer be sustainable. Therefore, any disruption to space-based infrastructure would directly imperil the EU's economic and political health<sup>(4)</sup>. This is indeed the primary risk that emerges from the 'weaponisation of space' by the EU's rivals: a trend that is increasingly supported by new technologies such as Anti-Satellite Weapons (ASATs). Nevertheless, although the EU is not a latecomer to space and defence most member states still view space as a largely civil domain where maritime safety, environmental monitoring, agricultural sustainability and transportation can be supported. The EU's emphasis on the economic dimension of space under the 2016 EU Space Strategy is hardly surprising given that in 2017 the European space economy was valued between €53-62 billion and it employed more than 230 000 high-skilled professionals<sup>(2)</sup>.

Space is, therefore, a core part of the EU's high-skilled economy, but it is increasingly important for the EU's security and defence too. Permanent Structured Cooperation (PESCO) and the European Defence Fund (EDF) are already being mobilised to finance and develop space capabilities for EU security and defence. Existing tools such as Copernicus and Galileo are also being used for a range of security-related tasks such as search and rescue, border management, and even Common Security and Defence Policy (CSDP) missions and operations. However, for all of these steps forward there remains a need to better link space and defence to meet the threats of the next 5-10 years. The EU's forthcoming Strategic Compass on security and defence is an opportunity to find ways of enhancing the linkages between space and defence and of evolving the EU's space strategy generally. The aim of this Brief is to outline the major space threats before making concrete suggestions on how space, as a cross-sectoral and multi-domain enabler, can support each of the Strategic Compass' baskets related to crisis management, resilience, capabilities and partnerships.

## **The Strategic Compass offers the EU an opportunity to rethink its approach to space and defence.**

## **OUT OF ORBIT?**

The EU's civilian and military deployments already rely on space-based assets to ensure their operational vitality. Without the vital link between space and earth, the Union's freedom of military and civilian action would be greatly curtailed. Today, tools and bodies like Copernicus and the EU Satellite Centre (SatCen) support tasks such as crisis response, border management, disaster monitoring, counter-terrorism, cross-border state disputes, humanitarian aid delivery, etc. The importance of space-based assets for EU security and defence is undeniable and the EU Capability Development Plan (CDP) has long identified space as a key capability domain<sup>(3)</sup>. However, the Strategic Compass offers the EU an opportunity to rethink its approach to space and defence at a time when a number of partners and rivals are seeking to utilise space for broader geopolitical ends. Thus far, the EU Global Strategy has called for the need to maintain 'the autonomy and security of [EU] space-based services' and permanent earth observation<sup>(4)</sup>. What is more, the Council Conclusions of 14 November 2016 also stressed that autonomous access to space is vital for EU security and defence<sup>(5)</sup>. Clearly, a repeated call for autonomy in space does not, in itself, give civilian and military planners much to go by when integrating space into mission and operations concepts, exercises and scenario planning or capability development and research plans.

Even though the 2016 EU Space Strategy points to threats such as the proliferation of space debris, volatile space weather, cyber threats and critical infrastructure vulnerabilities, the document is largely geared to the economic dimension of space and the competitiveness of Europe's space industry<sup>(6)</sup>. It says relatively little about security and defence. This is concerning as growing geopolitical threats over the next 5-10 years will seriously challenge the EU's autonomy in space and earth. In particular, space is a geopolitical realm and three existing and growing interconnected trends should concern the EU: weaponisation, congestion and disruption.

## **Weaponisation**

Trends towards miniature and swarm satellites, reusable and micro launchers, advanced propulsion, quantum encryption, artificial intelligence and robotics are greatly enhancing accessibility to and use of space. However, the pace of technological and industrial innovation raises questions about whether certain dual-use technologies launched into space could pose a military threat. In particular, the possession of ASATs by the United States, China, Russia and India contributes to the idea of a 'weaponisation of space'.

Although at various stages of development, ASATs can include high-power microwaves, jammers, directed energy, robotics, chemical sprays and hit-to-kill vehicles<sup>(7)</sup>. According to the 2019 French Space Defence Strategy<sup>(8)</sup>, aggressive actions using ASATs are becoming more frequent. For example, a Russian satellite loitered near a French-Italian 'Athena-Fidus' military satellite in 2018.<sup>(9)</sup> Furthermore, there is evidence that direct-ascent ASATs are responsible for creating thousands of pieces of space debris (e.g. one ASAT test in 2007 hit a weather satellite to create 3 200 pieces of debris<sup>(10)</sup>). The use of ASATs should concern the EU not just because satellites are relied upon for military communications, intelligence, surveillance and reconnaissance as well as missile defence, but because the EU cannot entirely trust the broader geopolitical motivations of those states developing ASATs.

## Congestion

Space congestion has long been a concern. Consider that from 1990–1995 there were 711 objects launched into outer space by Russia, China, the United States, EU, Japan and the United Kingdom combined (the EU counted for 6% of these total launches). From 2016–2020, however, 2 521 objects were launched by the same group of countries and actors (the EU counted for 6.7% of these total launches)<sup>(11)</sup>. Of course, with this growing congestion comes an increased risk of space collisions. However, increased space debris and assets can also provide cover for space-to-space and ground-to-space hybrid attacks on satellites by lowering the chances of attribution<sup>(12)</sup>. Although it may appear relatively simple to track space debris and objects, it is not. In fact, astrodynamics studies<sup>(13)</sup> continue to show the limits of multi-target tracking because of a large amount of data and the challenge of simultaneously predicting the trajectories of thousands of space objects (including small pieces of debris that may still significantly damage satellites). Without modern and effective space surveillance and tracking (SST) capabilities, it will be harder for the EU to defend against unintentional accidents and/or malicious activities. Today, the EU does not have collective ASAT early warning capabilities. This is especially the case given that the EU does not have its own space-based SST capabilities, and it must presently rely on earth-based sensors.

## Disruption

Beyond ASATs, there will remain risks from cyber intrusions of space infrastructure and orbital/terrestrial jamming and spoofing technologies that can be used to disrupt space-to-earth communications and signals. Given that there is always a time lag in space-terrestrial data download and transfers, there

already exists a risk that encryption and authentication protocols can be hacked, damaged or interfered with or that telecommand and telemetry functions can be damaged. Ensuring secure flows of data and information is of great importance for civilian and military uses. For example, even a half second error in positioning, navigation and timing (PNT) can result in vehicles and weapons systems being kilometres off target and maladjusted timing sequences could imperil tasks such as air-to-air refuelling or maintenance, recalibration and repair. Furthermore, space and earth-based space infrastructure could become the target of malicious activities. On the one hand, commercial satellites could be 'hijacked' and transformed into 'suicide satellites'<sup>(14)</sup>. On the other, the EU's Space Surveillance and Tracking earth-based sensor network includes 12 radars, 34 telescopes and four lasers based in places as far as Argentina, Australia, Japan and South Africa<sup>(15)</sup>. These installations are potential targets for criminal and state-based malicious actors.

Space assets therefore come with an inherent vulnerability, where any disruption to these assets could plunge civil and military actors into 'operational darkness' and there could be economic and political costs too. Given the intense geopolitical competition underway on earth and in space, it cannot be discounted that some mixture of weapons, congestion and/or disruptions will not be used to inflict a strategic blow on the Union in the future. Even without the assumption of malicious attacks, greater space congestion, debris and space weather could lead to accidental collisions and/or communications blackouts<sup>(16)</sup>. Either way, the importance of space cannot be denied. Even beyond strictly military and strategic considerations, any disruption to the EU's space assets could greatly curtail its broader security interests and resilience. For example, increased extreme weather events and sea level rises and decreases are likely to place more frequent demands on earth observation capacities and monitoring of CO<sub>2</sub> levels. Moreover, the transition to the digital economy and the roll-out of 5G and 6G networks will also place greater strains on space through the introduction of new satellite constellations.

## A RE-ENTRY POINT?

It should not be inferred from the challenges and threats outlined above that the EU is a latecomer to space-defence initiatives. For example, the new EU Space Programme (EUSP) worth €13.2 billion will enable the Directorate General for Defence Industry and Space (DG DEFIS) to modernise Galileo and Copernicus through the development and launching of the next-generation of satellites — each of these flagship programmes will be indispensable from a security and defence perspective. Additionally, through

the EUSP the Commission will invest in secure digital connections and support the development of quantum encrypted communications and a broadband satellite constellation. The Commission also intends to use the EUSP to support the European launcher industry in such a way as to promote new propulsion technologies and it will use the new CASSINI initiative to invest €1 billion in space start-ups and innovation. Moreover, the EUSP will be used to enhance the Space Surveillance and Tracking framework and to ensure that international regulations are sufficiently geared to giving the EU autonomy over space tracking technology standards<sup>(47)</sup>. Finally, steps to transform the European Global Navigation Satellite Systems (GNSS) Agency into the EU Agency for the Space Programme (EUSP Agency) will further enhance the Union's ability to protect and secure Galileo and European GNSS services<sup>(48)</sup>. Overall, the EUSP will empower the Union to diminish the effects of congestion and disruption in space.

Aside from the planned investments under the EUSP, however, there are also direct investments in space-defence capabilities being made under the European Defence Industrial Development Programme and the Preparatory Action on Defence Research. Under these preparatory programmes for the EDF, the European Commission has invested approximately €63 million from 2017–2020 in R&D projects for quantum secure communications ('Quantaquest'), an autonomous positioning, navigation, and timing (PNT) system in GNSS denied areas ('Optimise'), persistent earth observation with Artificial Intelligence and automated processors and sensors ('Peoneer'), a very high resolution optical capability for microsatellites ('Optisse') and — building on the EU Radio Navigation Solution (EURAS) under PESCO — defence-specific requirements for Galileo's Public Regulated Service (PRS) ('Geode'). In addition to these projects, the Commission delivered an action plan on synergies between the civil, space and defence sectors on 22 February 2021 in a bid to ensure that EU funds can support vital value chains, disruptive technologies and digital transformation across the three sectors<sup>(49)</sup>.

Under PESCO, there are currently five projects that specifically address space and defence such as a military space surveillance capacity ('EU-SSA-N'), military PNT under the future Galileo PRS ('EURAS'), a space-based early warning and interception system for ballistic missile defence ('Twister'), support and coordination system for military geo-meteorological and oceanographic tasks ('GMSCE') and a satellite-enabled strategic command and control system for CSDP missions and operations ('ESC2'). Many of the 47 PESCO projects will also rely on space assets as a strategic enabler<sup>(50)</sup>. In addition to its role in the PESCO Secretariat, the European Defence Agency (EDA) is also involved in space and defence initiatives. Not only is the EDA part of a Joint Task Force on critical supplies in the space sector along with the Commission and the European Space Agency (ESA), but the Capability Development

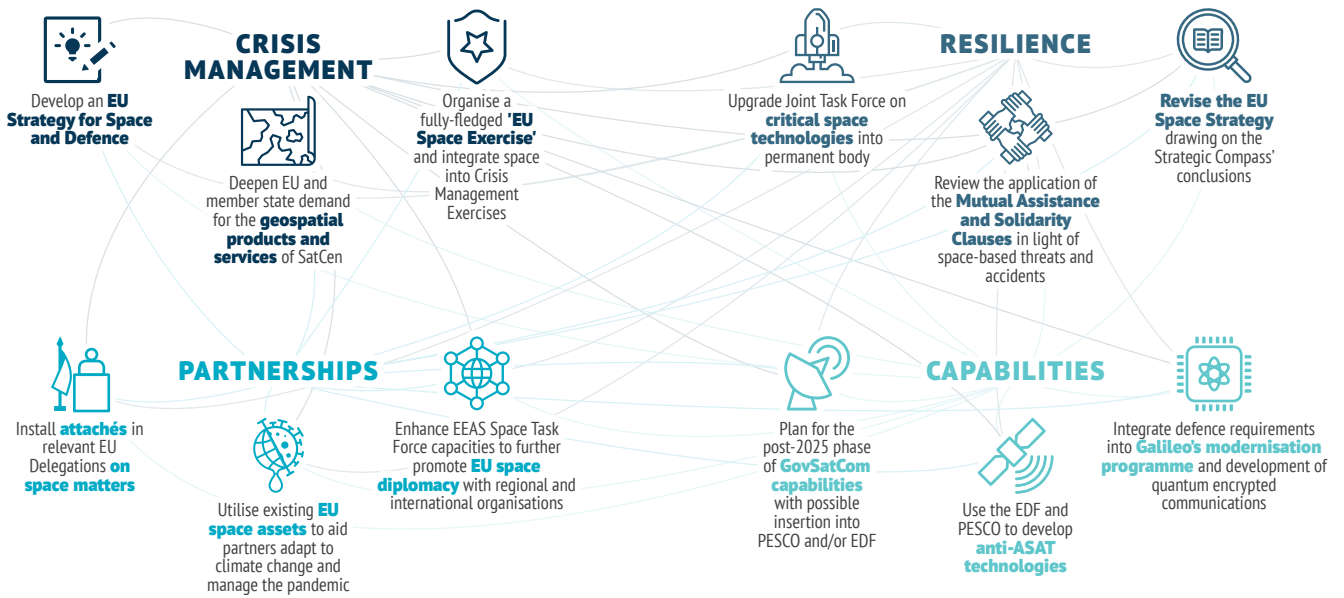
Plan (CDP) and the Coordinated Annual Review on Defence (CARD) stress the importance of investments in space-defence capabilities. The Agency has also been tasked with studying the feasibility of military PNT and Government Satellite Communication (GovSatCom), and it analyses the long-term development of space-defence technologies as part of the Overarching Strategic Research Agenda (OSRA) initiative.

Additionally, the Union can also draw on existing institutional tools to ensure that CSDP is supplied with geospatial intelligence and that the EU's efforts in space diplomacy and multilateralism are supported. Here, the SatCen and European Union External Action Service (EEAS) Space Task Force play a vital role. With regard to SatCen, it already plays a crucial role in supporting core CSDP operations such as EUNAVFOR MED IRINI with geospatial intelligence and it supports the UN Support Mission in Libya (UNSMIL) too. Keep in mind that demand for SatCen products and services has been on the rise since 2009, and in 2019 alone the Centre delivered over 3 000 products to EU member states, EU institutional actors, international partners and six specific CSDP missions and operations<sup>(24)</sup>. The Centre is an important part of the EU's operational readiness and effectiveness, but it also is a key asset in the space diplomacy conducted by the EEAS Space Task Force as the Centre provides intelligence products to partners like the African Union (AU), International Atomic Energy Agency (IAEA), the Organisation for Security and Cooperation in Europe (OSCE), the Organisation for the Prohibition of Chemical Weapons (OPCW) and the United Nations (UN) in aid of humanitarian assistance, disaster monitoring, etc. Finally, SatCen plays an important role within the EU Space, Surveillance and Tracking (EUSST) consortium which contributes to the EU's security from and in space.

Despite the EU's current space-defence initiatives, however, the Union is still not adequately prepared to counter threats and challenges such as weaponisation, congestion and disruption. There is more to do to ensure that the EU can effectively tackle space threats and challenges, including a need to: (1) dedicate more high-level political attention to space and defence and encourage more unity between member states on the defence aspects of space; (2) invest in cutting-edge space-defence technologies to keep up with rapid industrial and innovation evolutions; and (3) ensure the political coordination of the EU's existing space efforts and to further integrate defence requirements within them. Rather opportunely then, the Strategic Compass arrives at a time when there is a need to more fully integrate space into EU security and defence. A first, rather obvious, observation is that space is relevant to all four baskets of the Compass — crisis management, resilience, capabilities and partnerships —, although there is a need to be precise about how it does so. The next section shows how this is the case while

## Space and the Strategic Compass

Some options for the four baskets



also outlining new possible approaches to space and defence at the EU level.

## A LANDING ZONE?

If we are right about the three trends outlined earlier, there will be a need to advance how the EU thinks and acts in relation to space, security and defence. There is scope in each of the four baskets of the Strategic Compass to advance this thinking.

### Crisis management

Future battlefields and conflict zones will be comprised of a multitude of actors such as states, proxies, terrorists and different techniques such as cyber threats, disinformation, the use of cheap technologies, etc. In such a conflict environment, the ability to connect military forces and civilian actors will continue to be of paramount importance but data and information — both its use and security — will come to dominate conflict and warfare in new ways. Space is already an indispensable enabler for EU crisis management missions and operations, but existing and future EU space-based assets are likely to be subjected to space- and ground-based electronic warfare, kinetic capabilities and cyber threats. This calls for the modernisation and possible expansion of existing satellite constellations and greater EU capacity to track and sense hostile actions in orbit and on earth. However, it also calls for more effective operational planning and

preparedness by fully integrating space into existing future Crisis Management Exercises (CME) and pushing ahead with a dedicated 'EU Space Exercise'. The Strategic Compass could lead to having a dedicated CME on space that would assist EU member states better understand space threats, identify space capability gaps, plan for future geospatial and intelligence demands, enhance mission and operation training and devise tactical guidance to ensure the EU's strategic autonomy in space. Any 'EU Space Exercise' would also send an important political signal to partners and allow the EU to better coordinate the various tools, bodies, mechanisms and initiatives that relate to space and defence.

More than an exercise, however, the Strategic Compass could elevate space and defence to a political level through the development of an 'EU Space and Defence Strategy'<sup>(22)</sup>. This is needed more than ever today as there are various space initiatives that can be drawn together at the EU level and given more coherence from a strategic perspective. Consider the potential that could be unlocked by giving greater strategic direction to and streamlining the activities of the EU Space Programme, the EDF, SatCen, the EDA, PESCO, the EEAS Space Task Force, EUSST, etc. A 'Space and Defence Strategy' could better guide EU military and civilian structures and crisis management deployments, and contribute to framing the Union's needs for space situational awareness, space exercises, guiding the further elaboration of Galileo's PRS and GovSatCom services and providing impulses for capability programmes under the EDF and PESCO. Such a Strategy could help ensure that future Commission initiatives under the EUSP (e.g. satellite constellations and quantum encryption)

can better respond to defence requirements. Above all else, such a Strategy would serve as a key single referent for all space-related EU bodies and help sometimes unclear or overlapping competences.

Furthermore, such a Strategy would also invite a much-needed reflection on the future evolution of SatCen, especially in light of future operational demands. In particular, there is a need to ensure that SatCen continues to be a pillar of the EU's strategic autonomy. This begins with a recognition that greater resources will be required to ensure that the Centre has the cutting-edge technologies it requires to conduct vital geospatial intelligence in a more geopolitically tense environment. It is likely that over the next 5-10 years the Centre's role in the provision of intelligence for CSDP missions and operations (and for EU security and defence more broadly) will increase further, especially if the Union enhances its operational visibility. In this respect, the full suite of EU bodies should make greater use of SatCen as it offers services on earth observation, space tracking and more. The Compass could therefore assist in identifying future trends with regard to product demand and technological needs. Without a sustainable footing, the SatCen risks not keeping up with increasing demand for geospatial intelligence products.

## Resilience

The resilience of the EU will, of course, have to combine different EU instruments and bodies that relate to and are enabled by space including digital communications, critical infrastructure, maritime security and more. In essence, resilience relates to the protection of critical supplies of resources and technologies and the safety of infrastructure nodes and networks. Space has a role to play in both of these dimensions, but without space resilience will be unattainable. Here, the Strategic Compass can draw on existing initiatives such as the forthcoming review of the EU Directive on critical infrastructure protection, the action plan on civil, space and defence synergies, EUSP, Horizon Europe and the EU action plan on raw materials. A key task will be ensuring that the specific requirements of security and defence are not lost as investments are made and policies are crafted. Working with bodies such as DG DEFIS, the EDA and the ESA, the Compass could emphasise the importance of the Joint Task Force on critical defence supplies and the task force could even become a more permanent entity. The principle of critical supply security for space could also be embedded in any 'EU Space and Defence Strategy'.

In addition to the important issue of critical supplies, however, is a need to better prepare for space-relevant security contingencies. Even though the June 2019 Council Conclusions on security and defence call for a discussion on the lessons learned following the 2015

activation of the Mutual Assistance Clause (Article 42.7 TEU), the scope of this exercise could be expanded to future scenarios that depend on space. However, as a basic step, any comprehensive approach to space and defence would have to clarify the position of space within the Mutual Assistance (Article 42.7 TEU) and Solidarity Clauses (Article 222 TFEU). To date, even though Article 42.7 can be triggered following an act of armed aggression on the territory of a member state, it is not clear if the clause applies in case of an aggressive attack on EU or member state space-based assets. Similarly, even though Article 222 TFEU is wider in its territorial application it does not currently appear to apply to space even if it does refer to airspace and critical installations<sup>(23)</sup>. Such a situation could be addressed over the next few years through the aforementioned 'EU Space Exercise' or other such scenario exercises, especially given that space-based acts of aggression, space weather and impact events from space debris or small solar bodies could have devastating effects on EU security.

## Capabilities

The challenge of developing space-defence capabilities is one that rests on wider EU efforts contained under the EUSP and at a national level with member state military space programmes. We have seen how PESCO and EDF are already financing and developing space-relevant capabilities but there is scope to go further. The 2020 CARD report has rightfully pointed to the fact that defence requirements are still not systematically addressed in wider space initiatives and EU member states' space-defence efforts continue to be largely fragmented<sup>(24)</sup>. Space-defence capabilities developed over the next 5-10 years within and outside the EU framework will inevitably prioritise interconnected communications, signalling and sensing networks, especially within the context of future defence programmes such as the Future Combat Aircraft System (FCAS). However, given that third powers are developing ASATs that do not strictly contravene the 1967 Outer Space Treaty<sup>(25)</sup>, the EU should consider investing in anti-ASAT technologies such as specialised propulsion and decoy capacities to enable satellite collision avoidance, signals intelligence technologies to better track transmission signals and electromagnetic waves, as well as special coatings and covers to ensure satellites can be camouflaged. There is also a need to ensure that EU ground sites are secure and impervious to physical and cyber-attacks. Furthermore, SatCen is another capability that needs to be enhanced as a strategic asset in the defence and space interlink.

Over the next 5-10 years, two specific capability areas will require greater political ambition: Galileo's PRS and EU GovSatCom. In terms of Galileo, the dual-use PRS will eventually provide EU armed forces and governments with a highly accurate, encrypted, secure and

autonomous PNT capacity. EU projects such as Geode already address the need for defence-specific requirements in the Galileo PRS, but ultimately it is up to EU member states to ensure the coherence of their specific space-defence requirements. GovSatCom will also be a vital EU project for the next few years, especially as the United States, China and Russia are all modernising their military intelligence and communications systems. During the first phase of the GovSatCom programme up to 2025, part of a total €442 million under the EUSP will be used to pool and share satellite communication capacities and services and to standardise equipment<sup>(26)</sup>. However, there is a need to already plan for the post-2025 period as future investments will be required to address technology gaps and to ensure consistency with the next EU multiannual financial framework in 2028. We should not discount phase II of the GovSatCom initiative becoming a possible contender for a future PESCO and/or EDF project.

## Partnerships

Partnerships are a way for the EU to strengthen international norms and to ensure that the standards promoted internationally do not disfavour the Union's strategic, industrial and technological interests<sup>(27)</sup>. It may not be easy for the EU to convince other space powers to share its view on the responsible use of space, so partnerships with like-minded third states become indispensable elements of securing the Union's interests and values in space. What is more, space partnerships can also help strike up beneficial relationships on space research and innovation. While recognising the technological and political autonomy of the EU in space matters, there is scope to enhance EU-NATO cooperation on space<sup>(28)</sup>. Beyond exchange of information, the EU could increase its cooperation with new NATO space bodies and initiatives. There is also scope to enhance the Strategic Partnership Agreements (SPA) with Japan and Canada, especially as the SPAs already recognise the importance of space<sup>(29)</sup>.

A hallmark of the EU's partnerships on space will be the continued provision of products and services of space programmes such as Copernicus. The EEAS Space Task Force has long promoted SatCen products and services with partners such as the AU, IAEA, OPCW, OSCE and UN. The European Commission has also long made use of Copernicus and Galileo under the Civil Protection Mechanism, especially for tasks related to disaster relief. Keeping in mind that space connects to a range of security concerns such as climate change and the pandemic, it is necessary for the EU to ensure that it can meet future demand from partners for PNT and earth observation products and services, especially within the context of the EPF and the Roadmap on climate

change and defence<sup>(30)</sup>. Meeting this demand starts with the provision of more resources for the Space Task Force and SatCen, but the Strategic Compass could also provide a rationale for the deployment of attachés to specific EU delegations to serve as a visible interlocutor on space matters. Such attachés could double-up with existing defence attachés, but what is clear is that they should work hand-in-hand with the EU's Special Envoy for Space, the Space Task Force and other relevant bodies like SatCen and DG DEFIS.

## IN DEFENCE OF SPACE

The next 5-10 years will see an evolution of space-based threats and challenges because traditional and new space powers like China, India, Russia and the United States will increasingly use space to undergird their military power. The likelihood is that, without maintaining and extending its autonomy in space, the

Union will be exposed to greater military risk in space and on earth. The Strategic Compass will no doubt view space as a key strategic enabler, but space has a wider application to EU policy and key challenges such as the digital and green transitions. In this respect, the Strategic Compass is the EU's first real opportunity to craft an EU Space and Defence Strategy that

can simultaneously link various policy domains while also enhancing the visibility and importance of space for security and defence. After 2022, and on the back of the Compass, there may very well be recourse to revise the EU Space Strategy too. Other strategies such as the existing Connectivity Strategy with Asia and/or the EU Maritime Security Strategy could also benefit from the work conducted under the Compass. New strategies on the Indo-Pacific may also benefit from a more coherent EU approach to space and defence.

However, while the EU will be focused on the Strategic Compass in 2021 it should not lose sight of the bigger geopolitical picture. The Union has been bold in developing capabilities such as Galileo and Copernicus and years of investment have ensured that today it has an autonomous space capacity. The Space Programme and the Strategic Compass allow for yet another opportunity for bold EU strategic thinking and investments in space. The EU cannot afford to be unprepared to counter the weaponisation, congestion and disruption of space. Space is vital for the EU's way of life on earth and this requires a clear-eyed emphasis on technological advancement and secure space capabilities. Of course, none of the potential ideas presented in this Brief can become reality without political ambition and EU member states are notoriously divided on space. As far as the Strategic Compass is concerned, however, it should be guided by the principle that there can be no

## strategic autonomy on earth without strategic autonomy in space.

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