

Reach for the Stars: Bridging Italy's Potential in Space with Its Foreign and Security Policy

by Karolina Muti

Italian capabilities, expertise and potential in the space sector are not widely known. Among state actors, Rome has actually been a pioneer in the field, boasting a long tradition that started in 1964 when Italy became the third country, after the Soviet Union and the United States, to send a nationally manufactured satellite into orbit.¹

From an industrial standpoint, Italy is among the few countries whose companies cover the whole space value chain.² In Europe, Rome is ranked second for total number of assets in orbit and is currently the third contributor to the European Space

Agency (ESA).³ An Italian astronaut, Samantha Cristoforetti, has recently become the first European woman to take command of the International Space Station (ISS).⁴

The Italian Space Agency (ASI) is active in the so-called "space diplomacy", fostering scientific cooperation with actors across the globe. Rome was also one of the first countries to join the Artemis programme in 2020, an initiative led by NASA which aims to complete a new crewed moon landing by 2025.

Despite Italy's potential in this sector, much can still be done to make the

¹ Giancarlo La Rocca and Alessandro Marrone, "Italy and Space, a Strong Position to Enhance", in Alessandro Marrone and Michele Nones (eds), "The Expanding Nexus between Space and Defence", in *Documenti IAI*, No. 22|01 (February 2022), p. 62, <https://www.iai.it/en/node/14669>.

² The Italian space industry covers all the components of the upstream, midstream and downstream, in all the main technological domains.

³ Italian Space Agency, *CM22, Sullo spazio l'Italia si conferma protagonista in Europa*, 23 November 2022, <https://www.asi.it/?p=36865>.

⁴ European Space Agency, *ESA Astronaut Samantha Cristoforetti Becomes First European Female ISS Commander*, 14 September 2022, https://www.esa.int/Science_Exploration/Human_and_Robotic_Exploration/Minerva/ESA_astronaut_Samantha_Cristoforetti_becomes_first_European_female_ISS_commander.

most of the country's space capabilities, including for the benefit of its foreign and security policy (FSP). Such effort should focus firstly on the three key strategic directions of Italian FSP: Europe, the transatlantic alliance and the Wider Mediterranean.

A strategic sector

From agriculture to the prediction of extreme weather events and climate change effects to geospatial positioning and tracking services for navigation like the GPS, a wide range of sectors are dependent to some extent on space technology.

In the military sector, satellites are key for intelligence, reconnaissance and surveillance. In contemporary warfare, they not only provide intelligence, but are indispensable for planning, including at tactical and operational levels. Space assets are being used in an unprecedented way in the ongoing conflict in Ukraine,⁵ with Elon Musk's SpaceX almost playing a geopolitical role in its own right.

In this context, Italy has ample room for improvement to better employ its influence, capabilities and expertise in different dimensions: national, European, transatlantic and regional, in the wider Mediterranean.

National space governance

At the national level, in the last decade, a number of reforms of domestic

⁵ Giancarlo La Rocca, "Il fronte spaziale della guerra in Ucraina", in *AffarInternazionali*, 27 May 2022, <https://www.affarinternazionali.it/?p=98311>.

space governance⁶ increased the strategic relevance of the sector from an institutional standpoint. Changes included the establishment, in 2021, of an Interministerial Committee for policies related to space and aerospace research (COMINT),⁷ as well as making the Prime Minister's Office directly responsible for the management and coordination of space issues, with a dedicated structure established in 2022.⁸ The Ministry of Defence (MoD) also established a General Space Office (*Ufficio Generale Spazio*) and a Command for Space Operations (*Comando Operazioni Spaziali*). The recent MoD-ASI agreement on projects and research of common interest⁹ takes civil-military synergies a step further.

Despite its high potential, Rome still suffers from persistent difficulty in formulating a coherent space strategy as well as in maximising its influence in European fora. On the one hand, the reform of domestic governance assigned responsibilities to the government as the highest political authority, encouraging a less fragmented and inter-agency approach through the involvement of twelve ministries in the COMINT;

⁶ Notably, the approval of Law No. 7 of 11 January 2018: *Misure per il coordinamento della politica spaziale e aerospaziale e disposizioni concernenti l'organizzazione e il funzionamento dell'Agenzia spaziale italiana*, <https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:2018;7>.

⁷ Comitato Interministeriale per le politiche relative allo Spazio e alla ricerca aerospaziale.

⁸ Ufficio per le politiche spaziali e aerospaziali.

⁹ Italian Space Agency, *Ministero della Difesa e Agenzia Spaziale Italiana firmano un accordo quadro nel settore spaziale*, 10 November 2022, <https://www.asi.it/?p=36114>.

on the other hand, though, the ever-changing landscape of Italian politics (and governments) may undermine the continuity and implementation of any space strategy.

As far as investment is concerned, Italy used the opportunity offered by the EU Recovery Fund to allocate considerable resources for space activities (more than 2 billion euro for 2022–2026). Moreover, since 2019, Rome has more than doubled its contribution to the ESA budget. These are important steps that reflect the growing recognition of the strategic nature of the sector. Yet, much has still to be done to ensure that Italy remains engaged in such a fast-paced technological sector, where rapid and informed decision-making is key.

Rome should carefully consider how its space vocation matches developments at the transatlantic and European levels, and how space can benefit relations with key partners across the globe, also seeking synergies with Italian interests in the foreign, security and defence sectors.

Italy and space in Europe

Currently, the EU is in a crucial phase of developing its space power, and the related institutional architecture, with a growing role for the European Commission. In recent years, this process has accelerated through a number of initiatives.

In May 2021, an agency dedicated to the implementation of the EU Space Programme – the EUSPA – was

established in Prague.¹⁰ In February 2022, the European Commission presented a so-called “space package”, encompassing a Joint Communication on an EU approach to space traffic management (STM) and a space-based secure connectivity system to be developed between 2023–2027.¹¹

The EU Strategic Compass published in March 2022¹² marks a new level of ambition and awareness in EU space policy. It includes a number of new initiatives: from an EU Space Strategy for Security and Defence to be presented by 2023 and new investment in protecting EU space assets from intentional and non-intentional threats to the development of secure governmental satellite communications.

Against this backdrop, Italy should proactively engage in all phases of development and drafting of the EU Space Strategy for Security and Defence, to ensure that it has a say in shaping a common EU vision on the matter, building on the positive experience of engagement in the Strategic Compass preparation. As a key Mediterranean country, Rome should also push for the EU Space Strategy to be aligned with the ongoing update of the EU Maritime Security Strategy.

¹⁰ EUSPA, *About EUSPA*, updated 17 October 2022, <https://www.euspa.europa.eu/node/51>.

¹¹ European Commission website: *Space: EU Initiatives for a Satellite-based Connectivity System and an EU Approach on Management of Space Traffic*, <https://europa.eu/!QK8rMj>.

¹² Council of the European Union, *A Strategic Compass for Security and Defence*, 21 March 2022, <https://www.eeas.europa.eu/node/410976>.

In the ESA¹³ framework, the last Ministerial Conference took place in Paris in November 2022, just a month after the new government led by Giorgia Meloni had been sworn in, with Minister of Enterprises and Made in Italy Adolfo Urso having been recently appointed as the government representative for space activities and COMINT. During the ESA conference, Italy increased by 20 per cent its contribution that, as a whole, now accounts for 18.2 per cent of the total ESA budget.¹⁴ Rome will lead the Mars exploration mission ExoMars and signed a joint statement with France and Germany on the future usage framework for European launchers. Synergies with the UK emerged on the new Moonlight programme, part of the European contribution to Artemis; together with the partnership for the development of the next-generation Tempest fighter jet, this may be the next step in post-Brexit bilateral (and traditionally solid) cooperation in aerospace between Italy and the UK.¹⁵

¹³ The European Space Agency's main goal is the peaceful exploration and use of space, through research, exploration, and technology projects carried out together with its 22 member states that contribute to the ESA's budget. ESA was founded in 1975 and is not an EU institution. It is a separate, European space organisation with different membership (including the UK, Norway and Switzerland). The Agency however cooperates with the European Commission and the recently established EUSPA.

¹⁴ Ottavia Credi, "L'Italia protagonista europea nello spazio", in *AffarInternazionali*, 19 December 2022, <https://www.affarinternazionali.it/?p=101867>.

¹⁵ Michele Nones, "L'aereo da combattimento Tempest cambia gli equilibri globali", in *AffarInternazionali*, 22 December 2022, <https://www.affarinternazionali.it/?p=101864>.

Italy and space in NATO

Rome's international approach is firmly grounded in multilateralism, with both transatlantic relations and European integration as the key elements of Italian FSP. In space, the "work in progress" status in the establishment of a new space governance at the European level could be a window of opportunity to foster better coordination between NATO and the EU, compared to more consolidated policy areas, notwithstanding the need for the EU to develop its own approach and protect its interests in space.

In 2019, NATO declared space as a new operational domain and adopted a space policy, and at the 2021 Brussels Summit, recognised that "attacks to, from or within space [...] could lead to the invocation of Article 5" of the North Atlantic Treaty.¹⁶ Unlike in the past, however, the alliance does not have its own space assets. The few allies that have space capabilities make them available through pooling and sharing – and this includes Italy.

Space is consistently mentioned in the new NATO Strategic Concept,¹⁷ published in June 2022 during the Madrid Summit, and is also now included as an area for cooperation between NATO and the EU in the recent EU–NATO Joint Declaration.¹⁸ In this

¹⁶ NATO, *NATO's Approach to Space*, 6 October 2022, https://www.nato.int/cps/en/natohq/topics_175419.htm.

¹⁷ NATO, *NATO 2022 Strategic Concept*, June 2022, <https://www.nato.int/strategic-concept>.

¹⁸ European Council, *Joint Declaration on EU–NATO Cooperation*, 10 January 2023, <https://europa.eu/!C9TWXG>.

context, Italy, a country with a long tradition of strong transatlantic and European bonds, and a pioneer in space activities, could mediate and proactively engage the two organisations to reach a common vision and align on issues where a shared approach would benefit collective security, such as protection of space assets or STM.

Such an approach would be in line with the aforementioned Joint Communication on an EU approach to STM that envisages the establishment of international partnerships and engagement at the multilateral level on STM.¹⁹ Furthermore, the Joint EU–NATO Declaration identifies, as an area for cooperation, critical infrastructure protection. The latter should encompass space assets, which, as stated in the EU Strategic Compass, EU member states pledged to protect.

For Rome, this role of mediator could have additional value, considering the growing importance of space cooperation with the United States,²⁰ a recent example being human lunar exploration under the Artemis programme²¹ or the launch of Italy's COSMO-SkyMed second-generation satellites by SpaceX.²²

¹⁹ European Commission, *Space: EU Initiates a Satellite-Based Connectivity System and Boosts Action on Management of Space Traffic for a More Digital and Resilient Europe*, 15 February 2022, https://ec.europa.eu/commission/presscorner/detail/en/IP_22_921.

²⁰ Federico Borsari, "Aligning US-Italy Relations in Earth Orbit", in *CEPA Articles*, 15 June 2022, <https://cepa.org/?p=625>.

²¹ Italian Space Agency, *Artemis Mission: Signed Agreement between ASI and NASA*, 16 June 2022, <https://www.asi.it/en/?p=32183>.

²² Stephen Clark, "Launch of Italian Radar

Italy and the Wider Mediterranean

Finally, space (for example, Earth observation, a sector in which Italy has substantial experience) could be part of a comprehensive approach to the Wider Mediterranean²³ that focuses on providing partners with their own capabilities in areas that can positively impact the development-security nexus in the region, such as agriculture, water scarcity, extreme weather events and natural disaster prediction.

Stability and security in the Wider Mediterranean are particularly important for Italian and European interests. The region suffers from an array of humanitarian, development and security challenges that are only expected to worsen with the advancing threats of the climate emergency. In the last 40 years, for instance, the average number of natural disasters tripled in North Africa, notably floods. Earth observation applications, including the EU Copernicus Programme data, have been used for recovery and mitigation.²⁴ Helping partners by supporting the development or use of space assets and services to improve the well-being of societies can lead to improvements in overall security and stability.

Satellite Shifts from Arianespace to SpaceX", in *Spaceflight Now*, 5 October 2021, <https://spaceflightnow.com/?p=53641>.

²³ The Wider Mediterranean refers to the region from the Gibraltar Strait to the Gulf of Aden, including North Africa and the Middle East.

²⁴ NATO Strategic Direction South Hub, *MENA Space Capabilities and Security Challenges: Applications to Disaster Management. Study Day Proceedings*, October 2022, https://thesouthernhub.org/systems/file_download.ashx?pg=2190.

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Such an endeavour only makes sense provided that it does not strengthen corrupt and authoritarian regimes, as often occurs with cooperation projects in the region. At a time when Russian and Chinese influence is growing in the Wider Mediterranean, and both the EU and NATO are focused on other priorities, Italy could use its leverage in the space sector to cultivate long-term partnerships benefitting both human security in the region and Rome's own interests.

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