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Rethinking Britain's defence space posture

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EXECUTIVE SUMMARY

- The new United States (US) Space Force doctrine signals a fundamental conceptual shift from defence to offence in military space affairs. It recognises space as a warfighting domain, positioning the Space Force as a combat service and space control as a primary objective.
- The decision of the administration of Donald Trump, President of the US, to pursue space-to-Earth strike weapons as a matter of policy, through the Golden Dome, will be transformational for the evolution of warfare.
- The United Kingdom (UK) should adjust its own doctrine and posture to remain in step with the US, and should contribute to elements of the Golden Dome. It should also focus more on counterspace and strategic space warfare systems.

The United Kingdom (UK) has traditionally operated a dual space policy model or posture: relying on American support for covering defence space requirements and on European countries for scientific cooperation in space exploration and broader technological space development, especially through the European Space Agency (ESA). However, tensions in the North Atlantic Treaty Organisation (NATO) have brought this model into question. European relations with the United States (US) are under heavy pressure. European nations are now aiming openly for autonomy in defence, and consequently in space.

From a political standpoint, Britain is trying to walk a fine line between the two. But, there is now an increasing recognition within the British defence and foreign policy community that quasi-complete reliance on the US might be untenable in the long run. What is the alternative? Entering into new forms of military space cooperation with European countries might be incompatible with maintaining alignment and close links with America in sensitive areas of defence and space.

There is a further complicating factor. The 'Golden Dome for America' – the major new space-based missile defence initiative proposed by Donald Trump, President of the US – represents a turning point in the space-strategic landscape, with potentially far-reaching consequences. How will Britain respond?

This Explainer considers the strategic options for UK space posture as His Majesty's (HM) Government faces the prospect of having to choose between turning to new forms of European defence space cooperation, continuing or even deepening the traditional bilateral cooperation with the US, or pursuing a more robust and sovereign pathway in defence space. As such, this Explainer begins by describing the current space capability baseline of the UK. Next, it considers the critical shifts occurring in US spacepower, including the Golden Dome. Then, it looks at the space component of emerging European plans for defence autonomy. Finally, it discusses what these developments mean for Britain's space posture going forwards.

Britain's spacepower baseline

The UK is undoubtedly on an upwards trajectory in terms of national security space capability development, even though the scale and pace of it remain modest and insufficient given the threats and competition. The turning point occurred around the publication of the 2021 Integrated Review, which brought about, for the first time, a major and comprehensive high-level recognition of the criticality of the space domain to Britain's strategic concerns.[1]

[1] 'Global Britain in a competitive age: The Integrated Review of Security, Defence, Development and Foreign Policy', Cabinet Office, 16/03/2021, https://assets.publishing.service.gov.uk/ (checked: 20/05/2025).

Since then, defence has increasingly looked to bolster sovereign capabilities. Aside from the **Skynet** satellite communications system, which is by far the largest and most expensive element of Britain's defence space portfolio, there has been an important focus on space-based intelligence, surveillance and reconnaissance (ISR). This effort sits under the **Istari** programme, announced in the 2022 Defence Space Strategy, which is set to deliver a constellation of satellites and supporting ground systems by 2031 (see: Box 1).[2]

BOX 1: THE ISTARI PROGRAMME

Istari is designed as a multi-sensor, multi-orbit architecture, and incorporates advanced technology for data processing and transfer. **Tyche**, the first Istari demonstrator satellite – and the UK's first-ever spy satellite, featuring an optical sensor with sub-metre resolution – was launched in August 2024 on a SpaceX rocket. Two Prometheus-2 satellites for radio signal monitoring were lost on a failed launch in January 2023, but showed that signals intelligence (SIGINT) is also part of the Istari plan. The next Istari demonstrators announced by the Ministry of Defence (MOD) – under the MINERVA project – include:

- **Titania**, which will test free-space optical (laser) communications. Originally due to launch in 2023, it is now expected in 2026;[3]
- **Juno**, another electro-optical satellite envisioned as an evolution of Tyche, with more advanced imagery sensors, due in 2027.[4] There are also indications that Juno might consist of more than one spacecraft, and that it would also demonstrate in-space Space Domain Awareness (SDA) capabilities;[5]
- **Oberon**, a two-satellite synthetic aperture radar (SAR) system incorporating an innovative folding antenna, expected in 2027.[6]

In addition, Britain is making progress towards a national space launch capability, and has joined NATO's Starlift project.[7] The **SaxaVord Spaceport** is already licensed

[2] 'Defence Space Strategy: Operationalising the Space Domain', Ministry of Defence, 02/2022, https://assets.publishing.service.gov.uk/ (checked: 20/05/2025).
[3] '£9.5m investment for military space communications', Ministry of Defence and Defence Science and Technology Laboratory, 09/08/2021, https://www.gov.uk/ (checked: 20/05/2025).
[4] 'Juno satellite procured by DE&S for advanced military tech', Ministry of Defence, 04/11/2024, https://des.mod.uk/ (checked: 20/05/2025).
[5] Olivia Savage, 'All UK Minerva satellites to launch by 2026', *Janes*, 14/12/2023, https://www.janes.com/ (checked: 20/05/2025).
[6] 'New satellite deal to boost military operations, jobs, and growth', Royal Air Force, 10/02/2025, https://www.raf.mod.uk/ (checked: 20/05/2025).
[7] 'UK to support NATO space launch capabilities and artillery supplies', Ministry of Defence, 17/10/2024, https://www.gov.uk/ (checked: 20/05/2025).

for vertical launch,[8] and a number of other spaceport projects are also in development. The 2023 Virgin Orbit launch attempt – partly supported by the US National Reconnaissance Office (NRO)[9] – failed after rocket separation, but it also occasioned the licensing of **Spaceport Cornwall** for horizontal launch. Furthermore, the UK has at least one domestic rocket manufacturer – **Orbex** – on the way to achieving an operational capability, even though more money and effort is still required.[10]

Despite its very limited set of sovereign orbital assets, on the whole, Britain also has significant capability in the less glamorous but vitally important area of space operations, i.e., the activities and equipment involved in operating and exploiting satellites in orbit. Much of this is a result of accumulated national heritage in this field given the UK's early involvement in the space domain. The Goonhilly Earth Station in Cornwall is the world's most experienced provider of lunar and deep space communications services,[11] for example, and is being developed further.[12] The MOD has been operating Skynet, directly or through embedded contractors, since 1969, and has now expanded its satellite control infrastructure through the new Hermes station.[13] The London-based Inmarsat, now part of Viasat, is one of the largest satellite operators in the world, tracing its history back to 1979.[14]

SDA is a major British space competency and a primary focus of the MOD's efforts. The US-owned, UK-operated ballistic missile early warning radar at **RAF Fylingdales** doubles as a space surveillance sensor – still potent despite its age, though soon in need of modernisation. Its integration into the US Space Surveillance Network in turn gives Britain unique access to the data output of this powerful capability. The Fylingdales radar in Yorkshire will be supplemented by **DARC** (Deep Space Advanced Radar Capability)[15] in Wales as part of a next-generation joint US-UK-Australian space surveillance system.[16]

Aside from hosting world-class SDA sensors, Britain also excels at using SDA data. At the heart of this is the civil-military **National Space Operations Centre** (NSpOC), launched in 2024, which works with an expanding array of data sources,

[8] 'SaxaVord Spaceport granted range licence by Civil Aviation Authority', Civil Aviation Authority, 25/04/2024, https://www.caa.co.uk/ (checked: 20/05/2025).
[9] Sandra Erwin, 'National Reconnaissance Office partners with UK on space mission to fly on Virgin Orbit rocket', *SpaceNews*, 10/05/2022, https://spacenews.com/ (checked: 20/05/2025).
[10] 'Scottish rocket launch boost to get Britain back into space race', Department for Science, Innovation and Technology, 29/01/2025, https://www.gov.uk/ (checked: 20/05/2025).
[11] 'Goonhilly to boost deep space communications capacity', UK Space Agency, 16/10/2024, https://www.gov.uk/ (checked: 20/05/2025).
[12] 'Designing Defence's next generation multi-satellite system', Defence Science and Technology Laboratory, 23/10/2024, https://www.gov.uk/ (checked: 20/05/2025).
[13] 'Dstl demonstrates satellite operation capability', Defence Science and Technology Laboratory, 18/11/2020, https://www.gov.uk/ (checked: 20/05/2025).
[14] 'About us', Inmarsat, No date, https://www.inmarsat.com/ (checked: 20/05/2025).
[15] 'New deep space radar will transform UK security', Ministry of Defence, 05/12/2023, https://www.gov.uk/ (checked: 20/05/2025).
[16] Lisa Sodders, 'Deep Space Advanced Radar Capability makes tremendous progress in first year', United States Space Force, 20/02/2025, https://www.spaceforce.mil/ (checked: 20/05/2025).

applying advanced analytics and data models. These capabilities are being developed further through the **Borealis** command and control and data processing capability, awarded in March 2025.[17]

America's new spacepower proposition

The creation of the Space Force was one of Trump's proudest achievements in his first term, and space remains a special priority for him and his administration.[18] US military space policy is now being transformed radically under the new Trump administration on two levels:

First, there is a fundamental conceptual shift from *defence* to *offence*. The defensive posture which characterised the Space Force under the previous US administration – which avoided any language or moves, even testing, which might be construed as 'aggressive', and focused on soft approaches at the United Nations (UN) instead – is being completely reversed.

Gen. Bradley Saltzman, Chief of Space Operations, set a new tone for American spacepower in a landmark address in early March 2025, by pointedly acknowledging *space control* – including orbital warfare, electromagnetic warfare (EW) and counterspace operations – as a core Space Force mission, and *space superiority* as the service's fundamental role.[19] This is a marked addition to the Space Force's previous and more restrained conceptual framework of 'competitive endurance' introduced in 2023.[20] The new 'Space Force Doctrine Document 1', released on 4th April 2025, has now adopted this hard-nosed view of the 'imperative of spacepower' – and the Space Force's own identity as a combat service first and foremost – as its official position.[21] The subsequent 'Space Warfighting Framework' only strengthened this message.[22] Most notably – and against the prevailing consensus among other allies, including the UK – America's new military space doctrine states unequivocally that 'space is a warfighting domain, not a collection of supporting activities'.[23]

[17] 'New UK-made space system to help protect military satellites', Ministry of Defence, 07/03/2025, https://www.gov.uk/ (checked: 20/05/2025).
[18] It is worth noting that 'Project 2025', which attracted controversy during the 2024 US presidential election, included a strongly worded section on the Space Force.
[19] C. Todd Lopez, 'Space Force's Fundamental Role: Space Superiority', US Department of Defence, 05/03/2025, https://www.defense.gov/ (checked: 20/05/2025).
[20] Greg Hadley, 'Saltzman Unveils "Competitive Endurance" Theory to Guide Space Force', *Air & Space Forces Magazine*, 07/03/2023, https://www.airandspaceforces.com/ (checked: 20/05/2025).
[21] 'US Space Force releases new capstone doctrine', Space Training and Readiness Command (STARCOM), 04/04/2025, https://www.starcom.spaceforce.mil/ (checked: 20/05/2025).
[22] 'Space Warfighting: A Framework for Planners', US Space Force, 17/04/2025, https://www.spaceforce.mil/ (checked: 20/05/2025).
[23] 'Space Force Doctrine Document 1', US Space Force, 03/04/2025, https://www.starcom.spaceforce.mil/ (checked: 20/05/2025).

The second transformative development in US military space affairs is the decision to pursue space-to-Earth strike weapons as a matter of policy. This took the form of a presidential executive order to build a 'next generation missile defence shield'.[24] While it would integrate a range of existing ground- and sea-based missile defence systems, this would be primarily an orbital architecture incorporating **space-based interceptors** (SBIs) and **sensors**. Now called the 'Golden Dome', this project echoes the 1980s' Strategic Defence Initiative (SDI), but with the advantage of stronger political backing and prioritisation,[25] as well as more mature available technologies, from processing power and sensors to materials and manufacturing. Core elements of the Golden Dome would be the sensor architecture for persistent detection, warning and precision tracking of threats anywhere on the globe, plus post-engagement assessment. All of this, which requires extremely advanced technology, is already in development under two Pentagon programmes: the Proliferated Warfighter Space Architecture (PWSA), which is being developed by the Space Development Agency, and the Hypersonic and Ballistic Tracking Space Sensor (HBTSS), which is being developed by the Missile Defence Agency.[26]

There is significant debate over the feasibility of the Golden Dome. From a technological point of view, the main concern is with boost-phase ballistic missile kinetic intercept, which only offers a 4–5 minute window to detect and strike a threat from low Earth orbit. This has implications for the size, number and deployment of the interceptor constellation in orbit, which in turn will drive cost and delivery. Most critics draw on SDI-era studies, which assumed much heavier interceptors and much higher launch costs than could potentially be accomplished today.[27] Furthermore, this is only one aspect of this extremely complex architecture, seen from one (kinetic) angle. Other aspects include midcourse intercept, non-ballistic targets or non-kinetic effects.

The strategic significance of the Golden Dome for *all* space powers – allies and adversaries – cannot be understated. There may be doubts, especially at this early stage, as to how much of this integrated space architecture will ever be deployed, and how quickly, as well as how effective it might be. But the fact that it is now US policy to deploy SBIs in orbit will have far-reaching strategic consequences,

[24] 'The Iron Dome for America', The White House, 27/01/2025, https://www.whitehouse.gov/ (checked: 20/05/2025).
[25] Unlike the SDI, which was designed primarily to alter the strategic balance in America's favour and thus pressure the Soviets into negotiations, the main impetus for the Golden Dome, as described in the Executive Order itself, is the escalating global threat from long-range non-nuclear strike vehicles including hypersonics. This aligns with the 'America first' imperative of US policy and with new conceptions of 'hemispheric defence' which have been put forward by eminent US strategists such as Prof. Stephen Rosen. See: Stephen Rosen, 'A Better Way to Defend America', *Foreign Affairs*, 14/03/2025, https://www.foreignaffairs.com/ (checked: 20/05/2025).
[26] This capability is set to be complemented by the Discriminating Space Sensor (DSS) programme for post-boost detection and warhead discrimination.
[27] See: Todd Harrison, 'How Much Would a Space-Based Missile Interceptor System Cost and Does It Make Sense?', American Enterprise Institute, 29/01/2025, https://www.aei.org/ (checked: 20/05/2025), and Michael E. O'Hanlon, 'An Iron Dome for America?', Brookings Institution, 25/03/2025, https://www.brookings.edu/ (checked: 20/05/2025), for example.

and will affect long-term calculations on all sides. In effect, the Trump administration has opened the door to the **age of space fires**.[28]

At the very least, adversaries must assume that a version of the Golden Dome will eventually be deployed; for this reason, they will have to react accordingly with similar systems or countermeasures of their own. An in-space arms race is very likely to ensue, although its shape and pace is hard to determine. Most importantly, once the principle of having weapons in space which can strike *airborne* targets is accepted – as now confirmed by the US – there is hardly anything to prevent the same type of capability being used for hitting *ground* targets from orbit. The People's Republic of China's (PRC) 2021 Fractional Orbital Bombardment System (FOBS) test has already partly normalised this notion.[29] Indeed, the new Space Warfighting Framework of the US Space Force has now explicitly defined 'terrestrial strike' as part of Counterspace Operations, noting that such strikes 'may be directed against…terrestrial counterspace forces, launch infrastructure, command and control facilities, antennas, terrestrial space domain awareness sensors and mission networks', and that they 'can be conducted by…space-based fires.'[30] Future space-to-Earth strike is now the planning assumption which armed forces everywhere will have to take into account for the long term.

The European spacepower gap

As the geostrategic environment is being radically altered by the Trump administration's new foreign policy, European countries appear to have reached a general consensus on the need for accelerated pan-continental rearmament. At the heart of this is a sense that the US might become more selective in the defence guarantees it is prepared to provide for its European allies. The requirement for European 'defence autonomy' has therefore become a growing political priority. New funds are being lined up for this purpose at a national level, but also jointly through the European Union (EU).

Parallel to this, there is also a reinvigorated debate on exactly what these funds should be spent on. So far, and drawing on lessons from Russia's full-scale invasion of Ukraine, the emphasis has been placed overwhelmingly on the conventional types of equipment and forces – from tanks and artillery to drones

[28] 'Space fires' refers to offensive or defensive actions taken against adversaries in the space domain. See: Stephen Clark, 'The US military is now talking openly about going on the attack in space', Ars Technica, 13/12/2024, https://arstechnica.com/ (checked: 20/05/2025).
[29] Even though a FOBS stays in orbit temporarily – or may not even complete a full orbit – it remains the case that it executes its attack against a ground target from an orbital position. See: Theresa Hitchens, 'It's a FOBS, Space Force's Saltzman confirms amid Chinese weapons test confusion', *Breaking Defense*, 29/11/2021, https://breakingdefense.com/ (checked: 20/05/2025).
[30] 'Space Warfighting: A Framework for Planners', US Space Force, 17/04/2025, https://www.spaceforce.mil/ (checked: 20/05/2025).

and air defence – with early analyses indicating a requirement for 50 new European heavy brigades with associated support and stockpiles of ammunition.[31] Other areas requiring urgent investment include European countries' airborne EW capabilities,[32] as well as 'enablers' such as airlift, air-to-air refuelling, and airborne warning and control. Finally, there is now also a serious conversation about a potential European-only nuclear deterrent.[33]

There has been comparatively little discussion, however, about how the space layer of this future European defence capability will look in conditions of 'autonomy' from any kind of US space support. The question of Europeans potentially engaging in high-intensity combat operations against a peer enemy without access to the suite of space capabilities now provided to allies by exquisite US systems – especially in the ISR, SDA and missile launch detection categories, not to mention launch and counterspace – is not being debated properly. European nations have almost no competencies or capabilities in the area of space warfare for deterrence or orbital warfighting purposes, let alone in space-based missile defence technologies.

Since the recent difficulties in transatlantic relations, references to space requirements have generally been limited to the question of developing a European version of Starlink, either through Eutelsat OneWeb or through the IRIS^2 system.[34] The only other notable intervention has been from Andrius Kubilius, European Commissioner for Defence and Space, who has publicly floated the prospect of a new EU ISR 'satellite network to provide military intelligence', which would offer high revisit rates and high resolution.[35]

Space's relatively modest profile in European defence conversations is a critical oversight given the growing importance of spacepower in military operations, but it is not surprising. As previous research by the Council on Geostrategy has determined, 'there is no such thing as "European" spacepower' – rather, different countries run distinct *national* space programmes governed by separate agendas.[36] For a plethora of reasons – both economic and political – Europeans remain reluctant to share sensitive information and technology on a systematic basis, which prevents the development of joint space systems

[31] Alexandr Burilkov and Guntram B. Wolff, 'Defending Europe without the US: first estimates of what is needed', *Bruegel*, 21/02/2025, https://www.bruegel.org/ (checked: 20/05/2025).
[32] Justin Bronk, 'Airborne Electromagnetic Warfare in NATO: A Critical European Capability Gap,' Royal United Services Institute (RUSI), 19/03/2025, https://static.rusi.org/ (checked: 20/05/2025).
[33] See: Adérito Vicente, 'Why Europe Needs a Nuclear Deterrent: A Critical Appraisal', Wilfried Martens Centre for European Studies, 01/10/2024, https://www.martenscentre.eu/ (checked: 20/05/2025), and James Rogers and Marc DeVore, 'The case for a British sub-strategic nuclear deterrent,' *Britain's World*, 07/04/2025, https://www.britainsworld.org.uk/ (checked: 20/05/2025).
[34] IRIS^2 is a secure multi-orbit space broadband system, which is projected to include some 290 satellites. See: 'IRIS^2: the new EU Secure Satellite Constellation', European Commission, No date, https://defence-industry-space.ec.europa.eu/ (checked: 20/05/2025).
[35] Andy Bounds, 'EU explores new military intelligence satellites to cut reliance on US', *Financial Times*, 15/03/2025, https://www.ft.com/ (checked: 20/05/2025).
[36] Gabriel Elefteriu FRAeS, 'The role of space power in geopolitical competition', Council on Geostrategy, 30/01/2024, https://www.geostrategy.org.uk/ (checked: 20/05/2025).

requirements at a pan-European level. Additionally, the EU and ESA have traditionally downplayed the security aspects of their space projects, in line with the European ethos of 'normative' or 'civilian' power. The current geopolitical crisis will certainly prompt changes to this status quo, but it remains unclear how far and how fast these will go. Consequently, British policy makers should remain clear eyed of the limitations to the emergence of a genuinely European spacepower.

Implications for Britain: Three dilemmas

As the transformation of the global strategic space environment accelerates, HM Government's planning for the future of UK spacepower must engage with three fundamental challenges or dilemmas:

1. **Whether to seek to loosen the tight links to the US.** From a capability point of view, the UK's current space posture is heavily US-oriented. In fact, in no other operational domain are the British Armed Forces so deeply reliant on American support as in space.[37] At present, this dependency extends virtually to all major categories of space capability except strategic communications (provided by Skynet). So far, this has worked to strengthen the strategic alignment between the two nations in the military field, but in the evolving geopolitical environment, it presents Britain with its **first major dilemma**. The spectrum of options includes retaining (or doubling down on) the current US-focused posture, pivoting to new allies (principally Europeans) and expanding UK sovereign space capabilities.

2. **Whether to switch to a more aggressive posture.** From the point of view of strategic intent, Britain's space posture has also been, in recent years, aligned with that of the US and NATO in declaring space an operational domain, and in acknowledging the need for 'effective operational space control capability'.[38] But – again, similar to the restrained US stance under the Biden administration – the UK has adopted a soft-edged position on the *warfighting* element of space control. It has tended to avoid the term altogether, preferring to emphasise 'diplomatic and potentially legal efforts to reduce space threats' as part of an 'integrated space control strategy', as well as

[37] Gabriel Elefteriu FRAeS, 'Why should Britain invest in military spacepower?', Council on Geostrategy, 17/10/2024, https://www.geostrategy.org.uk/ (checked: 20/05/2025). It must be stressed that other elements of UK military power, particularly in the air domain but also in relation to the nuclear enterprise, are also critically dependent on many US-built systems (with the associated requirements for support). However, the space domain dependency is unique in scale and depth.
[38] See: 'UK Space Power Doctrine Joint Doctrine Publication 0-40', Ministry of Defence, 01/09/2022, https://assets.publishing.service.gov.uk/ (checked: 20/05/2025).

leveraging 'allies' and other non-domain responses – in unspecified ways – for space 'deterrence'.[39] Now, with the US Space Force shifting to a much more aggressive posture, refocused on developing counterspace capabilities and openly pursuing space superiority,[40] the question is whether Britain is willing to follow the American lead and adjust its own posture along similar lines. This constitutes the **second dilemma** facing UK space posture.

3. **Whether to focus on space strike technologies.** The **third dilemma**, in this context, involves the way in which Britain will choose to respond and posture itself with respect to the twin challenges of the advent of space fires and of advanced space-based tracking technology for future missile defence. At first glance, this may seem the least urgent of the issues under consideration. After all, the operational deployment of any SBIs is merely theoretical at this stage, as the Golden Dome is not even a funded programme. As for the current missile threat to the UK, this primarily comes from the Russian Northern Fleet, and can arguably be addressed through a layered, multi-domain defence which may not require space support.[41] However, the point with these twin challenges is that they are longer-term problems, which will likely become much more important over time, but which require key posture decisions to be made in advance.

Recalibrating Britain's space posture

Any strategically coherent recalibration of UK space posture must address all three described key dilemmas simultaneously. Britain's spacepower baseline (determined by existing dependencies), coupled with the observable trends in the conduct of war, suggest a vital need for continued close alignment with the US, but one increasingly focused on a different set of priorities than have been focused upon until now – complemented by an acceleration of British sovereign capability development and by new collaborations with European countries and actors in specific areas, subject to conditions.

From a capability perspective, the UK-US space relationship should begin to concentrate more on strategic space-based warfare systems, both for certain types of in-space combat operations and space-to-Earth strike/missile defence. This is the frontier of (military) space technology, which will become crucial to

[39] See: 'Defence Space Strategy: Operationalising the Space Domain', Ministry of Defence, 02/2022, https://assets.publishing.service.gov.uk/ (checked: 20/05/2025).
[40] Thomas Newdick, 'Space Force Chief "Enamoured By Systems That Deny, Disrupt and Degrade" Satellites', *The War Zone*, 11/03/2025, https://www.twz.com/ (checked: 20/05/2025).
[41] See: William Freer, 'The requirement for air and missile defence', Council on Geostrategy, 13/03/2025, https://www.geostrategy.org.uk/ (checked: 20/05/2025).

next-generation space warfare, and in which America has a unique advantage. European nations have no involvement in any of this. There is simply no realistic pathway for Britain to access and develop substantial competencies in these areas other than by staying close to the US Space Force, and indeed by seeking to contribute to the development of Golden Dome. This recommendation is also prompted by the increased prominence of long-range strike campaigns in 21st century warfare, and the proliferation of increasingly sophisticated missile threats, especially hypersonics.

In terms of the UK's own sovereign capabilities, the three priority areas for accelerated development and razor-sharp focus in the coming years should be **ISR** (including SIGINT and the addition of infrared missile warning satellites to the Istari programme), **launch** and **counterspace** (including kinetic options and Rendezvous and Proximity Operations (RPO)-capable systems). This approach – alongside a doctrinal alignment with the new offensive dispensation of the Space Force – would place Britain in a position to participate in and contribute to elements of Golden Dome capabilities – for example, in space logistics, for the resupply and reconstitution of the orbital segment – which would be essential to UK national security in the years and decades to come.

Collaboration with European nations should focus, pragmatically, on areas where their efforts can reinforce or complement key British programmes – such as ISR, launch and SDA – and where there are real prospects of effective programme delivery. At this stage, it remains unlikely that the EU – except possibly France – will embark upon significant counterspace capability development, let alone sophisticated and expensive space-based support architectures for future missile defence. However, a new ISR constellation, optimised for defence purposes, might be initiated, and could be of interest to Britain as well.

It bears restating that the recalibration of UK space posture must take into account both the requirements of future space warfighting and those of the future terrestrial battlefield. For example, Global Navigation Satellite System (GNSS) signal jamming, progress in quantum compass development,[42] and advances in computer vision and Light Detection and Ranging (LiDAR), alongside other techniques for autonomous systems navigation, mean that reliance on Global Positioning System (GPS) technology for military operations is likely to decrease in the coming years. Conversely, the expected increased use of robots in land warfare requires a new level of precision and refresh rates in satellite mapping of the battlefield, expanding the demand for space-based ISR.[43]

[42] 'Un-jammable quantum tech takes flight to boost UK's resilience', *UK Research and Innovation*, 13/05/2024, https://www.ukri.org/ (checked: 20/05/2025).
[43] Yurii Marchenko, 'Ukraine's First Robot-Only Assault – Meet the Fighters Who Pulled It Off', *United 24 Media*, 03/03/2025, https://united24media.com/ (checked: 20/05/2025).

Conclusion

With major disruptions affecting geopolitics and the space domain – particularly regarding US spacepower – it is now time to consider strategic adjustments to UK defence space posture. The starting point remains a deep British dependency on American spacepower. But, the progress made across Britain's defence space portfolio in recent years – in terms of kickstarting the development of more sovereign space systems – means that now HM Government does have some room for manoeuvre in terms of altering the focus of the US partnership, as well as reassessing its own capability priorities.

Spacepower is set to become ever more critical to strategic advantage into the 2030s. The US, especially through its renewed emphasis on space superiority and on deploying SBIs, is likely to remain the world's pre-eminent space power for the foreseeable future. Unlike in most other domains, the UK does not have any comparative or alternative options among European countries to the vital relationship with the US in space. At the same time, UK space posture must evolve. The solution presented in this Explainer balances the reality of American spacepower with the strategic space interests of Britain (and its capacities), while also allowing for enhanced collaboration with Europe.

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