

# It Is Time to Embrace the European Union's Strategic Autonomy in Space

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## Abstract

This article discusses why and how the United States should pivot from holding a long-standing skeptical view toward the European Union's (EU) strategic autonomy (SA) initiatives in the space domain to embracing them. The article first highlights how the EU has advanced its research and development in space. It then discusses how the strategic environment has changed, specifically with NATO declaring space an operational domain, the US supporting greater interoperability with European allies and partners within its *National Defense Strategy*, Russia's growing threat to the Baltics, and Europe's increased appetite to leverage space for defense purposes. The article then recommends how the United States could embrace and further the EU's space initiatives by leveraging Washington's power within NATO—all while remaining cognizant of Europe's waning views of the US defense industrial base. Finally, the article demonstrates how the United States, European Union, and NATO could all benefit from America's pivot in this burgeoning domain.

## Introduction and Background

Over the past two decades, the European Union has taken significant steps to assume greater responsibility in strengthening its security and building its defense industrial base. In 2016, the bloc codified this effort in its "Global Strategy." Within this strategic document, the European Union introduced the concept of *strategic autonomy* (SA) as it relates to European security and defense. Although the strategy recognized that NATO exists to defend its members—most of which are European—from external attack, it stressed that Europeans must be better equipped, trained, and organized to contribute decisively to such collective efforts, as well as to act autonomously if and when necessary.<sup>1</sup> Since the European Union announced its SA plan, its member states have aggressively collaborated on 47 new defense projects within the EU's Permanent Structured Cooperation (PESCO) framework and process.<sup>2</sup> These projects are largely focused in the areas of space; air; land; maritime; cyber; training; logistics; and command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR).<sup>3</sup>

Specifically within the space domain, the PESCO projects aim to enhance space-based ballistic missile early warning systems, military use of the Galileo Global Navigation Satellite System (GNSS), and space situational awareness (SSA).<sup>4</sup> For example, France is leading the Timely Warning and Interception with Space-based Theater Surveillance (TWISTER) project with support from Spain, Finland, Italy, and the Netherlands. This project will enable Europeans to better detect, track, and counter missile threats through a combination of enhanced capabilities for space-based early warning and endoatmospheric interceptors.<sup>5</sup> France is also leading the EU Radio Navigation Solution (EURAS) project. Belgium, Germany, Spain, Italy, and Poland have a supporting role in this initiative, which will promote the development of EU military positioning, navigation, and timing capabilities and leverage the GNSS public-regulated service.<sup>6</sup> Additionally, Italy and France co-lead the European Military Space Surveillance Awareness Network (EU-SSA-N) project, which calls for developing an autonomous, sovereign EU military SSA capability that is interoperable, integrated, and harmonized with the EU Space Surveillance and Tracking (SST) support framework.<sup>7</sup> Together, the EU-SSA-N and SST will detect, catalogue, and predict movements of space objects and debris orbiting earth and alert spacecraft operators in an effort to mitigate the risk of collision.<sup>8</sup> In another initiative, Germany is leading Austria, Greece, France, Portugal, and Romania in the Geo-Meteorological and Oceanographic (GEOMETOC) Support Coordination Element (GMSE) project that will leverage data derived from member states' meteorological, environmental monitoring, and oceanographic satellites to support military operations.<sup>9</sup> Finally, Spain is leading Germany, France, Italy, Portugal, and the Netherlands in the Strategic Command and Control (C2) System for Common Security and Defense Policy (CSDP) Missions and Operations project, which will leverage satellite communications and remote sensing to execute missions and operations where the European Union takes a leading role in conflict prevention, peacekeeping operations, and crisis management.<sup>10</sup>

These initiatives are clearly indicative of the EU's desire to assume greater responsibility in the collective defense of Europe. One may think the United States would welcome or even encourage EU member state collaboration to enhance the security of Europe; however, for the better part of 20 years, US administrations have largely met such initiatives with reservations and mixed views. Pres. Bill Clinton took a firm stance that EU defense initiatives must not decouple the United States from Europe, duplicate NATO structures and capabilities, nor discriminate against NATO members that do not belong to the EU.<sup>11</sup> The George W. Bush administration was also critical of such initiatives, while the Obama administration was somewhat more supportive.<sup>12</sup> In recent years, the Trump ad-

ministration has raised concerns that the initiatives may limit US influence in Europe, harm alliance interoperability, and steal market share from American defense contractors in the European market.<sup>13</sup>

### **Why Washington Should Support the EU's Strategic Autonomy**

If the United States were to reassess the strategic environment, as it pertains to the transatlantic alliance, the analysis may lead America to reconsider its long-standing unenthusiastic position on the EU's SA defense initiatives, particularly those in the space domain. Below, are several reasons why it is an opportune time to embrace such initiatives:

#### ***NATO's Newest Operational Domain: Space***

In December 2019, 29 heads of state and government from each NATO member state met in London. One of the key deliverables of the meeting was NATO declaring space a new military operational domain—joining air, land, sea, and cyberspace.<sup>14</sup> With the declaration, NATO will begin strengthening capabilities in the space domain. According to NATO's recently published military strategy, NATO has no intention to put weapons in space and does not seek to become an autonomous space actor.<sup>15</sup> Instead, NATO will serve as a forum for allies to share relevant information to increase interoperability and to ensure the alliance's operations receive necessary support from national space capabilities.<sup>16</sup>

Although some argue NATO is slow to respond to changes in the operational environment, such critics should consider NATO's aggressive response to the burgeoning cyberspace domain before passing judgment. In 2014, the allies made cyberdefense a core part of collective defense, declaring that a cyberattack could lead to the invocation of the collective defense clause, commonly referred to as Article 5, of NATO's founding treaty.<sup>17</sup> Moreover, in 2016, the allies recognized cyberspace as a new military operational domain and further pledged to enhance the cyber defenses of their national networks and infrastructure as a matter of priority.<sup>18</sup> Since then, NATO has created cyber rapid reaction teams to respond to cyberattacks, established a Cyberspace Operations Center to adapt and respond to the evolving threat landscape, and integrated sovereign cyber capabilities into alliance operations and missions.<sup>19</sup>

NATO, specifically the EU member states within the alliance, both collectively and individually, have unquestionably built capacity in a short period within the cyberspace domain. These efforts have enhanced the collective defense of Europe. Arguably, if NATO were to build capacity and leverage its member states' capabilities in the space domain as quickly as it did in the cyberspace domain, the

United States could indirectly further enhance the collective defense of Europe by welcoming, shaping, and informing such initiatives in a manner that complements NATO's deterrence efforts.

### ***US National Defense Strategy Alignment***

The 2018 US Department of Defense (DOD) *National Defense Strategy (NDS)* has three distinct lines of effort (LOE): (1) rebuilding military readiness while building a more lethal joint force, (2) strengthening alliances and attracting new partners, and (3) reforming the DOD's business practices for greater performance and affordability.<sup>20</sup> Specifically, within the first line of effort, the DOD called for deterring aggression in Europe by modernizing key capabilities, which includes prioritizing investments in resilience, reconstitution, and operations to assure its space capabilities.<sup>21</sup> Also, within the second line of effort, the DOD calls for deepening interoperability with European allies and partners, fortifying the transatlantic alliance, and expecting NATO members to fulfill their commitments to increase defense and modernization spending.

If the United States were to support the European Union's SA initiatives in the space domain, it would advance both LOEs. By investing and modernizing EU space domain initiatives, the United States would indirectly support NATO's collective defense, as 22 EU member states are also NATO allies. Furthermore, by making a small investment in EU space initiatives, Washington can allocate more funds toward highly innovative and exquisite national space assets than if it were to autonomously develop space capabilities for the European theater. Furthermore, by informing and shaping EU SA space domain initiatives, the United States can ensure the systems are interoperable, complement NATO's collective defense, and support US European Command's (EUCOM) operational plans. Additionally, for those EU member states that are also NATO allies, their investments in EU SA space initiatives counts toward their NATO burden sharing goal of 2 percent of gross domestic product and 20 percent of defense expenditures for either major equipment or research and development.<sup>22</sup> As noted by Senator Marco Rubio (R-FL), the EU's SA might be one of the best chances of bringing about increased European defense spending and more capabilities, which would be to the benefit of European security.<sup>23</sup> Finally, as many EU space initiatives are dual-use in nature, the United States stands to gain political equity, good will, and capabilities that further other national interests. Ultimately, supporting EU SA initiatives in the space domain would fortify the NATO alliance, strengthen Europe's collective defense, and increase assurance among US allies and partners in the region.

### ***Relevance to the Russian Threat***

From 2016–2019, the RAND Corporation and National Defense University (NDU) explored the most significant security challenges facing the Baltic States through focused strategic research and a series of multinational, interactive theater war games.<sup>24</sup> One of the recommendations resulting from the war games was for NATO to adapt an overall strategic concept that seamlessly transitions from deterrence through countering Russia's gray-zone activities onto conventional war.<sup>25</sup> As part of the suggestion, the authors recommended NATO invest in technologies that can revolutionize the potency of frontline states' hedgehog defenses, such as small warheads, 3-D manufacturing, drones, task-specific artificial intelligence, robust cyber capabilities, and inexpensive space capabilities.<sup>26</sup> More specifically, the authors recommended NATO and its regional partners should also invest in low-cost and commercially available micro and cube satellites to create a resilient space-based intelligence, surveillance, and reconnaissance (ISR) capability.<sup>27</sup> Although the RAND and NDU studies were myopic in nature, focusing on only one Russian scenario, the importance and utility of leveraging interoperable space-based assets to provide early warning indications of an impending Russian attack along a different axis of advance cannot be overstated. EU SA initiatives in the space domain could complement NATO's collective defense in the Baltics and elsewhere along its eastern flank.

### ***Europe's Growing Appetite to Leverage Space for Security and Defense Purposes***

After the European Space Agency (ESA) was established in 1973, it became one of the world's leading organization for civil space cooperation, eventually growing to 22 nation-state members.<sup>28</sup> Similar to NASA, ESA was initially focused on exploring space for exclusively peaceful objectives, using space research and technology for scientific purposes and operational space application systems.<sup>29</sup> However, with the continuous militarization of space, ESA has begun cooperating with the European Defense Agency (EDA) on several defense initiatives since 2014.<sup>30</sup> In January, French Air Force general Michel Friedling, head of France's new Space Command, expressed his concern over the vulnerability of ESA's Galileo, European Geostationary Navigation Overlay Service (EGNOS), and Copernicus satellite systems because they are used for both civilian and military purposes.<sup>31</sup> EU policy makers have also begun to drop their opposition to linking Europe's civilian space assets with defense elements.<sup>32</sup> Indicative of this paradigm shift, the European Commission recently created a new branch, the Director General of Defense Industry and Space (DEFIS), which was long resisted by

London while Britain was an EU member.<sup>33</sup> Even during recent EU budget negotiations, the chair of the EU's European Parliament's Subcommittee for Security and Defense, MEP Nathalie Loiseau stated, "Europe needs to work on the space dimension of the EU military space network, finalize the space program, and needs the budget to have the right means to do it."<sup>34</sup> This tenor has also been reflected in the work of the EU's Satellite Center (SatCen), a decentralized agency founded in 1992, which provides geospatial and imagery intelligence derived from member state and commercial satellite providers to a myriad of users and partners, including the EDA and units performing EU missions and operations.<sup>35</sup> It is clear, that in the absence of NATO having any dedicated space assets, the European Union has the will, intent, and burgeoning capabilities in the space domain that NATO and the United States should consider leveraging toward the collective defense of Europe.

### ***European Off-Putting Perception of US Defense Industrial Base***

The European Union has consistently run a massive annual trade deficit in terms of defense imports and exports with the United States. Between 2011–2015, more than three-quarters of international defense contracts in the European Union went to US firms.<sup>36</sup> This topic has become a point of contention among prominent European leaders, recently prompting French defense minister Florence Parly to make a point that the mutual-defense provision of the NATO treaty does not require European countries to buy American fighter jets, stating "It's called Article 5, not Article F-35."<sup>37</sup> On a more macro level, the combined arms exports of EU member states accounted for 27 percent of the global total in 2014–2018, while the United States alone accounted for 36 percent.<sup>38</sup> In 2019, four of the top five largest defense contractors were US firms.<sup>39</sup> Further compounding matters, Europe's defense spending has historically been plagued with redundancies and inefficiencies.<sup>40</sup> As a matter of fact, the European Union was largely driven by economic factors in adopting its SA defense initiatives—specifically the desire to develop a robust European defense industry.<sup>41</sup> It is true that US foreign military sales may decrease if the United States supports EU SA defense initiatives; however, there are other factors America should consider. By informing and shaping the space domain initiatives with the EU, US defense firms could ensure interoperability, pursue joint ventures, and offset research and development costs.

### **How the US Can Support the EU's Initiatives**

If one believes the current strategic environment, as it pertains to the transatlantic alliance, warrants the United States supporting, fostering, and possibly even

investing in EU SA defense initiatives in the space domain, how should it proceed? Guided by the *NDS*, US actions should naturally align with two of the three *NDS* LOEs.

### ***Strengthen Alliances and Attract New Partners LOE***

The European Union and NATO have a history of collaborating on matters of security and defense. In 2003, they instituted the Berlin Plus arrangement, which established a cooperative framework that allowed the European Union to coordinate and deconflict planning efforts with NATO for EU-led military missions.<sup>42</sup> Since the European Union announced its SA Plan, the European Union and NATO have made two joint declarations. This first declaration, in 2016, called for enhancing cooperation on cybersecurity and cyber defense as well as countering hybrid threats and illegal migration.<sup>43</sup> Two years later in 2018, the organizations issued a second declaration where they agreed to cooperate on initiatives in military mobilization; counterterrorism; resilience to chemical, biological, radiological, and nuclear (CBRN)–related risks; and promoting the women, peace, and security agenda.<sup>44</sup>

From a security and defense standpoint, the United States has greater leverage with NATO than with the European Union. The United States is the largest contributor to NATO and has commanded Allied Command Operations (ACO), the military arm of NATO, since the inception of the alliance. Through NATO, Washington should support the European Union's pursuit of SA initiatives in the space domain and encourage the alliance to pursue an opportunity to build upon the 2003 Berlin Plus arrangement and the joint declarations of 2016 and 2018. Washington, by proxy of NATO, can leverage the existing policy to proactively inform and shape EU SA projects in the space domain. As part of this effort, NATO should assign a contingent of senior military leaders to the European Union and charge them with the responsibility of ensuring EU SA initiatives in the space domain enhance NATO's collective defense. If done properly, EU SA projects in the space domain can enhance the European Union's agility to surge forces for missions outside of NATO's charter such as migration control, law enforcement, and counterterrorism, while simultaneously enhancing NATO's collective readiness, posture, and deterrence.

### ***Rebuilding Military Readiness while Building a More Lethal Joint Force LOE***

Similar to NATO, EUCOM and the US defense industrial base could benefit from informing and shaping EU SA initiatives in the space domain. As part of

the aforementioned NATO contingent assigned to the European Union, EUCOM should appoint a group of US military and civilian experts who are steeped in space operations support to civil and military missions. These experts would serve three functions. First, from an operational standpoint, they would encourage the European Union to prioritize SA projects in the space domain that fulfill outstanding capabilities gaps needed to execute EUCOM's theater operations, contingency plans, and support globally integrated operations (GIO). Second, from an acquisition perspective, the US members of the contingent should evaluate the SA projects in the space domain and seek opportunities to either procure capabilities not offered by the US space industrial base and/or identify projects the European Union might consider entering as a joint venture with a US firm. This would enable the DOD to focus on developing highly innovative capabilities designed to gain a competitive advantage over near-peer adversaries while simultaneously supporting the burgeoning European defense industry. Finally, the experts should advise the European Union on dual-use opportunities of the SA projects in the space domain.

### **Counterargument**

Some may argue that leveraging US power within NATO to influence EU SA initiatives in the space domain, for the purpose of pursuing US national interests, is riddled with problems or is not the right approach for the United States. There is a risk the European Union would not welcome a contingent, or would see it through the lens of US-centric overtures or suggestions. Within the European Union, there may not be a consensus to pursue initiatives in the space domain that improve NATO's collective defense, particularly by Austria, Finland, Malta, Sweden, Cyprus, and Ireland, who are members of the EU but not NATO, and are therefore by definition not protected by Article 5. Finally, if the European Union and NATO fielded dual-use space-based systems, there is a question of which body would prioritize the use or assume operational control of those systems during times of peace, crisis, or war.

Although these are valid concerns, transparency and candidness on the part of the United States would bode well if it were to pursue assigning personnel to a NATO contingent. If the European Union was not initially receptive to the idea of working with a NATO contingent with US representation, the United States should first try selling the proposal's benefits, namely, the dual-use potential of space-based assets, catalyst to the burgeoning European industrial base, and autonomy gained by relying less on US defense capabilities. If not yet persuaded, the United States should acknowledge the risk America would assume under such an arrangement, specifically, relying on a trade union for defense capabilities, de-



pending on member state contributions to PESCO's European Defense Fund (EDF) that pays for SA projects, and US defense contractors losing market share in Europe. If none of these convinces the European Union to work with the contingent, the United States should offer to make an annual contribution to the EDF in exchange for some form of collaborative arrangement. Finally, if all the aforementioned approaches fail to convince the European Union to collaborate with NATO and the United States on space domain initiatives, Washington should abandon the effort and pursue bilateral arrangements with advanced spacefaring nations in Europe that will further America's national interests as well as that of its cooperating allies and/or partners.

## **Conclusion**

Since 2016, the European Union has demonstrated a will, intent, and capability to exploit the space domain for civil and military use under its Strategic Autonomy Plan—particularly in the areas of ballistic missiles, early warning systems, dual-use spacecraft, SSA, satellite communications, and remote sensing. Since then, NATO has declared space as a military operational domain, the United States has professed investing in space capabilities while fortifying the NATO alliance a priority, Russia has developed capabilities to exploit NATO's absence in the space domain, and the European Union has made a concerted effort to breathe life into its burgeoning defense industrial base that has long been dwarfed by that of the United States. Holistically, these elements of the operational environment suggest the United States should reconsider its traditional unenthusiastic view of EU security and defense initiatives, particularly in the space domain. The United States should consider exploiting standing NATO–EU policy, while leveraging US influence within NATO by assigning a senior team of military and civilian leaders/experts steeped in space operations to the European Union to shape, inform, and possibly invest in EU SA initiatives in the space domain. From a military standpoint, such an effort would enable the United States to ensure such initiatives are interoperable with US space systems, complement NATO's collective defense, and support EUCOM's operational plans and role in GIO. Diplomatically, US support would bolster security assurance among its European allies and partners, build the European defense industrial base, and signal relevance and credibility to an European Union that has recently shown signs of fracturing in the aftermath of the Brexit. From an economic perspective, US support may lead to dual-use secondary and tertiary benefits for all nations involved, while simultaneously enabling the DOD and US defense contractors to procure technologies or offset research and development costs through pursuing joint ventures with European defense firms—partially offsetting market share loss by US defense contractors in

Europe. From an information standpoint, US support would positively reinforce security and defense burden sharing among European nations, further deter Russian aggression, and enable the United States to gain influence among non-NATO EU members without endorsing the expansion of NATO, which would otherwise escalate tensions with Russia. Finally, such an approach, if done under the veil of NATO, would give the European Union exactly what it is seeking: a stronger European defense industrial base, the image of a more autonomous Europe, and capabilities Europe can leverage for missions outside of NATO's charter. In summary, the current operational environment suggests the timing is right for the United States to leverage its position within NATO to inform, shape, and invest in EU SA initiatives in the space domain to advance America's national interests, enhance the common defense of Europe, and strengthen the transatlantic alliance across all elements of national power.

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**Notes**

1. European External Action Service, "Shared Vision, Common Action: A Stronger Europe—A Global Strategy for the European Union's Foreign and Security Policy" (Luxembourg: Publications Office of the European Union, June 2016), 20, <https://op.europa.eu/>.

2. European External Action Service, "The European Union's Global Strategy: Three Years On, Looking Forward" (Luxembourg: Publications Office of the European Union, 2019), 13, <https://eeas.europa.eu/>.

3. "Member States Driven PESCO," accessed on 28 March 2020, <https://pesco.europa.eu/>.

4. "European Military Space: EU Pursuing Space-Based Early Warning, PNT, and SSA Projects Under PESCO Initiative," *SpaceWatch Global*, November 2019, <https://spacewatch.global/>.

5. "Member States Driven PESCO - Timely Warning and Interception With Space Based Theater Surveillance," accessed on 28 March 2020, <https://pesco.europa.eu/>.

6. "European Military Space: EU Pursuing Space-Based Early Warning."

7. "European Military Space: EU Pursuing Space-Based Early Warning."

8. European Union Space Surveillance and Tracking, "What IS EUSST?." accessed on 28 March 2020, <https://www.eusst.eu/>.

9. "Member States Driven PESCO - Geo-Meteorological and Oceanographic (GEOME-TOC) Support Coordination Element (GMSCE)," accessed on 28 March 2020, <https://pesco.europa.eu/>.

10. "European Military Space: EU Pursuing Space-Based Early Warning."

11. William Drozdiak, "U.S. Tepic on European Defense Plan," *Washington Post*, 7 March 2000, A01, <https://www.washingtonpost.com/>.

12. Erik Brattberg, "How Washington View New European Defense Initiatives," Carnegie Endowment for International Peace, 3 March 2020, <https://carnegieendowment.org/>.
13. Brattberg, "How Washington View New European Defense Initiatives."
14. Paul Belkin, "2019 NATO Leader's Meeting: In Brief," Congressional Research Service, 12 December 2019, 1, 3.
15. "NATO: Ready for the Future; Adapting the Alliance (2018–2019)" (Brussels: NATO OTAN, 29 November 2019), 7.
16. "NATO: Ready for the Future," 7.
17. Laura Brent, "NATO's Role in Cyberspace," *NATO Review*, 12 February 2019, <https://www.nato.int/>.
18. Brent, "NATO's Role in Cyberspace."
19. "NATO: Ready for the Future," 7.
20. US Department of Defense, "Summary of the 2018 National Defense Strategy of the USA: Sharpening the American Military's Competitive Edge" (Washington, DC: Department of Defense, 2018), 5.
21. US Department of Defense, "Summary of the 2018 National Defense Strategy," 6.
22. "NATO: Ready for the Future," 14.
23. Jack Thompson, "European Strategic Autonomy and the US," *CSS Analyses in Security Policy* 248 (September 2019), 3.
24. David A. Shlapak and Michael Johnson, *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics* (Santa Monica, CA: RAND Corporation, 2016), 2, <https://www.rand.org/>.
25. Robert M. Klein, Stefan Lundqvist, Ed Sumangil, and Ulrica Petterson, "Baltics Left of Bang: The Role of NATO with Partners in Denial-Based Deterrence," *Strategic Forum* 301 (November 2019), 1, <https://inss.ndu.edu/>.
26. Klein, Lundqvist, Sumangil, and Petterson, "Baltics Left of Bang," 10.
27. Klein, Lundqvist, Sumangil, and Petterson, "Baltics Left of Bang," 11.
28. James Clay Moltz, *Crowded Orbits - Conflict and Cooperation in Space* (New York: Columbia University Press, 2014), 69.
29. European Space Agency (ESA), "ESA Facts," accessed 28 March 2020, <https://www.esa.int/>.
30. European Defense Agency (EDA), "EDA Information Sheet on Space," 21 September 2018, <https://www.eda.europa.eu/>.
31. Alex Brzozowski, "Budget Battle Hampers EU in Space," *EURACTV*, 22 January 2020, <https://www.euractiv.com/>.
32. Brzozowski, "Budget Battle Hampers EU in Space."
33. Brzozowski, "Budget Battle Hampers EU in Space."
34. Brzozowski, "Budget Battle Hampers EU in Space."
35. European Union Satellite Centre, "EU SatCen Annual Report 2018 - Preparing for the Future" (Luxembourg: Publication Office of the European Union, 2019), 10.
36. Charlotte Gifford, "Europe is Losing the Battle to Unite Its Military Efforts," *European CEO*, 23 March 2020, <https://www.europeanceo.com/>.
37. Alina Polyakova and Benjamin Haddad, "Europe Alone – What Comes after the Transatlantic Alliance," *Foreign Affairs* 19, no. 5 (July/August 2019), 116.

38. Aude Fleurant, Peter Weseman, Siemon Wezeman, Nan Tian, and Alexandria Kuimova, "Trends in International Arms Transfers, 2018" (fact sheet, SIPRI, March 2019), 3, 6, <https://www.sipri.org/>.
39. "Top 100 Defense Companies for 2019," *Defense News*, 22 July 2019.
40. Polyakova and Haddad, "Europe Alone," 116.
41. Dominik P. Jankowski, "NATO at 70: Toward European Strategic Responsibility," *World Politics Review*, 2 April 2019, <https://www.worldpoliticsreview.com/>.
42. Kristin Archick, *The European Union: Questions and Answers* (Washington, DC: Congressional Research Service, 9 September 2019), 9, <https://fas.org/>.
43. Archick, *The European Union: Questions and Answers*, 9.
44. European External Action Service, "The European Union's Global Strategy: Three Years On, Looking Forward," 11.

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