



**European Defense:
Strategic Choices for
2030**

TASK FORCE

The Donald C. Hellmann Task Force Program

2020



HENRY M. JACKSON SCHOOL OF INTERNATIONAL STUDIES

TASK FORCE 2020

UNIVERSITY OF WASHINGTON

European Defense: Strategic Choices for 2030

Faculty Advisor

Ambassador John Koenig

Evaluator

Jan Techau

Director of the European Program and Senior Fellow at the German Marshall Fund of the United States

Task Force Authors

Christine Munson

Bridget Keaton

Lanna Do

John Monahan

Jack Baylor

Claire Tanaka

Melina Schmidt

Alexia Lin

Brenton Riddle*

Arwa Mokdad

Sydney Janeway*

Reegan O'Keefe

*Design team

Coordinator

Christine Munson

Editors

Bridget Keaton

Claire Tanaka

Acknowledgments

We would like to thank our guest speakers that took the time to come to Rome to talk to our class this quarter. Our guests imparted an abundance of knowledge on the EU, NATO and current events that are pertinent to the topic of defense.

Maria Assimakopoulou, Special Advisor to Fipra International

Enrico Letta, Former Italian Prime Minister

Alessandro Minuto-Rizzo, Former NATO Deputy Secretary General

Claus Sorensen, Former Director General of EU Directorate of Humanitarian Affairs

Additionally, we would like to thank **Professor Marie Anchooguy** for overseeing and help organize Task Force Rome 2020. She imparted much wisdom and insight over our work this quarter.

Lastly, we would like to give a special thanks to our faculty advisor, **Ambassador John Koenig**. We express our sincerest gratitude for his guidance, expertise and encouragement. This Task Force was made possible by the knowledge and support he gave this quarter.

Acronyms

BEMIP	Baltic Energy Market Integration Plan
Brexit	Britain's Exit from the European Union
CARD	Coordinated Annual Review on Defence
CBCA	Cross-Border Cost Allocation decisions
CDP	Capability Development Plan
CEF	Connecting Europe Facility
CERT-EU	Computer Emergency Response Team for the EU
CESEC	Central South Eastern Energy Connectivity
CI	Critical Infrastructure
CIIP	Critical Information Infrastructure Protection
CIP	Critical Infrastructure Protection
CIPR	Critical Infrastructure Protection and Resilience
CIWIN	Critical Infrastructure Warning Information Network
CSDP	Common Security and Defense Policy
CSIRT	Computer Security Incident Response Teams
DoD	United States Department of Defense
DSO	Distribution System Operators
ECI	European Critical Infrastructure
EDA	European Defence Agency
EEA	European Economic Area
EEAS	European External Action Service
ENISA	European Network and Information Security Agency
EPCIP	European Program for Critical Infrastructure Protection
ERN-CIP	European Reference Network for Critical Infrastructure Protection
EU	European Union
EUBG	European Union Battlegroup
EUGS	2016 European Union Global Strategy
EUMS	European Union Military Staff
EURATOM	European Atomic Energy Community
GDP	Gross Domestic Product

IAEA	International Atomic Energy Agency
ICT	Information and Communication Technology
INF	Intermediate-Range Nuclear Forces Treaty
IOT	Internet of Things
JCPOA	Joint Comprehensive Plan Of Action
LANDSEC	Expert Group on Land Transport Security
LNG	Liquefied Natural Gas
MoD	European Ministry of Defense
MS	Member States
NATO	North Atlantic Treaty Organization
NFU	No First Use
NIS	Network and Information Systems
NNWS	Non-Nuclear Weapons State
NPR	Nuclear Posture Review
NPT	Nuclear Non-Proliferation Treaty
NRF	NATO Response Force
NWS	Nuclear Weapons State
OSRA	Overarching Strategic Research Agenda
PCI	Project of Common Interest
PESCO	Permanent Structured Cooperation
PSC	Political and Security Committee
QDR	Quadrennial Defense Review
SDR	Strategic Defense Review
New START	Strategic Arms Reduction Treaty
TEN-E	Trans-European Networks for Energy
TEN-T	Trans-European Networks for Transport
TPP	Trans-Pacific Partnership
TSO	Transmission System Operator
UNODA	United Nations Office of Disarmament Affairs

Table of Contents

Introduction	1
Chapter One: Common Defense.....	2
1.1 A European Union Strategic Defense Review	4
1.1.1 The Current European Union Defense Structure	5
1.1.2 The U.S. Quadrennial Defense Reviews	8
1.1.3 Making a European Union Strategic Defense Review	10
1.1.4 Conclusion	13
1.2 A New European Union Headline Goal	14
1.2.1 EU Battlegroups	16
1.2.2 The Concept	17
1.2.3 Basic features of EU Battlegroups	18
1.2.4 The Challenges	19
1.2.5 Eurocorps	20
1.2.6 Improving EUBG’s Capabilities and Complementarity	22
1.3 Defense Integration via Procurement	24
1.3.1 A Failure to Integrate Defense Infrastructure	25
1.3.2 Solutions to Air Superiority Shortcomings	28
1.3.3 The Framework of PESCO and EDF	29
1.3.4 Potential Successes of PESCO	31
1.3.5 Benefits of Vertically Integrating European Arms Procurement	32
Chapter Two: Nuclear Deterrence.....	34
2.1 Greater Autonomy Needed	34
2.2 The Need for a Nuclear Deterrent	35
2.2.1 The Decline of Arms Treaties	35
2.2.2 Russian Threat Perception	36
2.2.3 Other Regions	38
2.2.4 The Transatlantic Alliance and the EU Rebuilding Capability	39
2.3 Autonomous Nuclear Deterrence	41
2.3.1 French Enterprise	41
2.3.2 German Initiative	43
2.3.3 British Collaboration	46
2.4 Strategic Choices	47
2.4.1 Nuclear Policy: Diversification	47
2.4.2 Nuclear Policy: Operations	48
2.4.3 Nuclear Policy: Global Partnership	49
2.4.4 Final Note	49
Chapter Three: Critical Infrastructure Protection and Resilience	52
3.1 EU Critical Infrastructure Protection and Resilience State of Play	52
3.2 Electricity	54
3.2.1 Implications of New Electrical Energy Management Technologies	55
3.2.2 Grid Resilience Achieved Through Interconnection	56
3.2.3 Looking to the Future	57
3.3 Gas/Oil	58

3.3.1	Gas and Oil Supply Dependency on Russia	59
3.3.2	Exploring Alternative Gas Pipelines	60
3.3.3	Securing Energy Supply	61
3.4	Cyber Risks of Information and Communication Technology	62
3.4.1	Cyber-Related European Agencies and Programs	63
3.4.2	Landscape of Cyber Threats	64
3.4.3	Trends in Electrical Infrastructure and Cyber Threat Implications	65
3.4.4	Increasing EU Agility in Time of Rapid Technological Development	67
3.5	Transportation	68
3.5.1	Road and Rail Vulnerability	69
3.5.2	Security by Design Approach and Risk Assessments	70
3.6	Crisis Response	71
3.6.1	Crisis Preparation Through CIWIN	71
3.6.2	Benefits of Regional Simulations	72
3.7	Conclusion	73
Chapter Four:	Building Popular Support	75
4.1	Creating Urgency and Unity	76
4.1.1	European Disunity in Security Aims	76
4.1.2	A Normative War	76
4.2	Shifting Transatlantic Relations	79
4.2.1	The United States' Role in European Security	81
4.2.2	European Opinion on Achieving Strategic Autonomy	82
4.2.3	Retreating U.S. Actions on World Stage	83
4.2.4	EU v. U.S. Perspectives on Multilateralism and Use of Force	84
4.3	Public Opinion and Defense	86
4.3.1	Disinformation	88
4.3.2	Improving EU Anti-Disinformation Effort	89
4.4	An EU Campaign to Support Increased Defense Capacities	91
4.4.1	Inciting Youth Action via Brand EU	93
Works Cited	98

Introduction

The rise of great power competition and the erosion of a rules-based order pose a growing threat to Europe's prosperity and security. Because of this changing environment, the European Union needs to enhance its security and defense capabilities. Distinct and strategic measures should be taken for the EU to achieve a higher level of defense capabilities and to create a more autonomous and secure Union.

While the EU currently possesses the economic and technological capabilities needed to create a stronger common defense, it hesitates to take necessary action. This Task Force presents recommendations that would enable a stronger collective response to potential threats and expand EU defense capabilities. While defense has historically been an area in which individual member states have acted with sovereignty, the authors of this report believe that presenting unified strategic responses would be more effective than independent national responses. In this report, recommendations will be made that would lead to a stronger and more unified EU defense strategy.

Since the creation of the Common Security and Defence Policy (CSDP) in 1999, relevant institutions of the EU have evolved slowly and unevenly; however, the rapidly transforming global environment demands that Europeans take swift steps to make critical defense decisions. More specifically, NATO's troubled political cooperation and recent uncertainty surrounding the transatlantic Alliance give urgency to develop defense approaches at the EU level.

This report lays out a set of proposals designed to address issues that arise from the present EU security environment. *European Defense: Strategic Choices for 2030* describes how a more autonomous EU can be accomplished, at least in part, and recommends steps that will lead to a more secure Europe. Most importantly, the level of EU ambition in the realm of security should increase. The EU, NATO and Europe should take concrete action towards achieving the goal of autonomy and collaboration. By strengthening its autonomous defense, the EU would be better equipped to take on security challenges in coordination with NATO and anticipate future developments.

As the European Union faces the challenges of a rapidly changing world, many security issues arise. This report presents the issues of Common Defense, Procurement, Nuclear Deterrence, Critical Infrastructure and Popular Support as a guide for how the EU should prepare themselves for their future defense capabilities.

(1) Common Defense

**Jack Baylor, Lanna Do, Bridget Keaton,
John Monahan and Christine Munson**

*“Ambition is never modest. If modesty means to have middling success,
then I can only say that I am not interested.”*

— Emmanuel Macron

The world is becoming a more dangerous place. With the erosion of global norms, there is a newfound urgency for the European Union to enhance its security and defense capabilities. While change can be a slow process in the EU, it is critical that action is taken for a more secure future. Moving forward, the threat perception should become more focused and consolidated, the level of ambition should be increased and the relationship between the EU and NATO more connected. This chapter will outline measures that the EU should take to achieve a higher level of defense capabilities through a more unified system.

Within the European Union today, there is a complex divide between member states regarding threat perception, especially the threat from the East. Historically, Moscow has taken aggressive means to dominate neighbors and occupy territories. This aggression escalated with the war in Georgia in 2008, the Russian annexation of Crimea in 2014 and support for separatists in Eastern Ukraine. These recent invasions, combined with other, deeper historical events, have increased fear for many living in Central and Eastern European “front-line” member states such as Finland, Poland and the Baltic States, which, therefore, favor a stronger NATO presence to deter Russian interference. In some Western and Southern member states, however, public opinion regarding the significance of this threat and how to tackle it is in direct opposition, and many believe a NATO or U.S. presence creates a heightened risk to European security.¹ Bringing the people of the EU together to create a unified defense mindset should be a target for the near future.

¹Stephanie Pezard, et al., *European Relations with Russia: Threat Perceptions, Responses, and Strategies in the Wake of the Ukrainian Crisis*, (Santa Monica, CA: RAND Corporation, 2017), https://www.rand.org/pubs/research_reports/RR1579.html.

Moving forward, a consolidated threat perception will be needed to undergird cohesive strategic actions with the goal of creating a safer European Union.

On September 26, 2017, President Emanuel Macron of France spoke at Sorbonne University in Paris to outline the goals for the future of EU security. He called upon the EU to work towards greater autonomy that would create a stronger system of defense.² While the EU has found success in accomplishing less ambitious goals, it has not been as successful in realizing larger goals in the defense realm. These larger goals remain purely aspirational, as reflected in the *European Global Strategy* published in 2016, and hardly represent specific strides towards a stronger defense system. Macron hopes to push the EU beyond aspirational and vague goals into a realm of action. Speaking to *The Economist* two years after his speech at Sorbonne, Macron used harsher language: “NATO is suffering from brain death. Europe needs to develop a military force of its own. The EU thinks of itself as just a market, but it needs to act as a political bloc, with policies on technology, data and climate change to match”.³

Macron called for the EU, Europe and NATO to take big strides in concrete action towards achieving the goal of autonomy and collaboration. Even now, the EU has the economic and technological capability to adopt stronger defense policies but hesitates to take the necessary political decision. The level of ambition used in EU security should be taken to a higher level. This includes implementing a Periodic Defense Review, increasing military personnel at its disposal and strengthening the system of defense procurement. In making these aspects of common defense stronger, the EU will be better equipped to protect itself against both terrorism and outside threats, symmetric and asymmetric.

Lastly, cooperation between the European Union and NATO must be strengthened. NATO is a “common, principled, adaptable and effective institution that helps allies in North America and Europe look after their defense requirements”.⁴ As great power competition unfolds between powerful nations, the individual European countries within

² Pierre Briançon, “5 Takeaways from Macron's Big Speech on Europe's Future,” *POLITICO*, October 2, 2017, <https://www.politico.eu/article/5-takeaways-from-macrons-big-speech-on-europes-future/>.

³ “A Continent in Peril,” *The Economist*, November 09, 2019, 9, <https://search.proquest.com/docview/2313054468?accountid=14784>.

⁴ Sven Biscop, *EU-U.S. Consensus and NATO-EU Cooperation - New Perspectives on Shared Security: NATO's Next 70 Years*. (Brussels: Carnegie Europe, 2019), <https://carnegieeurope.eu/2019/11/28/eu-u.s.-consensus-and-nato-eu-cooperation-pub-80416>.

both NATO and the EU are too small to tackle security issues alone. Cooperation, cohesive action and integration are needed. Currently, there is mounting uncertainty regarding America's strategic commitment to European defense, amplifying the risk of profound change in defense and security roles moving forward. In recognition of this risk, the EU should work together in the Union's Permanent Structured Cooperation (PESCO) to strengthen security and defense capabilities for EU countries individually, with the EU and for NATO as a whole.⁵ By strengthening European Union autonomy in defense, the EU would be better equipped to take on security challenges to complement NATO's work and anticipate future developments.

As the European Union strives to tackle the challenges of a changing world, many security planning issues arise. There are numerous challenges to bring each country on board with a more capable and autonomous system of defense, but the benefits of unifying threat perceptions, increasing the level of ambition and working in cooperation with NATO will prove to increase security and defense for the EU in its entirety. This chapter will describe how this may be accomplished, at least in part, and continue to progress towards a more secure Europe.

(1.1) A European Union Strategic Defense Review

EU defense initiatives have a history of lacking a comprehensive strategic culture and reliable approaches to combat security challenges. Although basic institutional structures for defense exist, their ineffectiveness and failure to be adequately developed and utilized are major shortcomings of European capability. The current environment surrounding security partnerships in the Middle East, North Africa, Asia and the Atlantic creates uncertainty for the future of European peace and stability.⁶ Rebalancing the European approach with the goal of enhanced defense, deterrence and strategic autonomy is necessary for the protection of EU Member States (MS) and falls in line with European security interests.

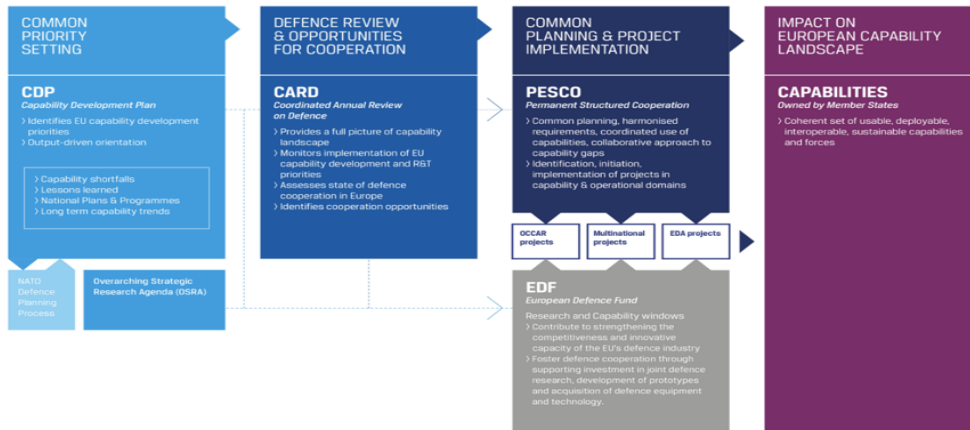
⁵ Biscop, *EU-U.S. Consensus and NATO-EU Cooperation*.

⁶ Javier Solana, *On the Way Towards a European Defence Union - A White Book as a First Step*, (Belgium: European Parliament Committee on Foreign Affairs and the Sub-Committee on Security and Defence, 2016), 16.

(1.1.1) The Current European Union Defense Structure

The establishment of new EU institutions has embodied the EU’s main effort towards defense enhancement. At the September 2002 EU Defense Convention, MS agreed to create "an intergovernmental basis of a European Armaments and Strategic Research Agency...[whose] initial tasks would be to ensure the fulfillment of operational requirements by promoting a policy of harmonized procurement by the Member States and support research into defence technology".⁷ As a result of the conference, the European Defence Agency (EDA) was created to pursue the basic principles of the Common Security and Defence Policy (CSDP) and to strengthen EU autonomous defense capabilities. Since the formation of the EDA, various institutions have been developed to aid the management of territorial defense, cybersecurity, naval capability and more. These institutions include the Permanent Structured Cooperation (PESCO), the Coordinated Annual Review of Defence (CARD) and the Capability Development Plan (CDP). Below, Figure 1 illustrates the relationship and process between these defense institutions, with the addition of the European Defence Fund (EDF) that exists separately from the EDA.

Figure 1: European Defense Agency Graphic on CDP, CARD, PESCO and EDF Relationship
A coherent approach from priorities to impact



Source: "Coordinated Annual Review on Defence (CARD)," European Defence Agency, accessed February 7, 2020, [https://www.eda.europa.eu/what-we-do/our-current-priorities/coordinated-annual-review-on-defence-\(card\)](https://www.eda.europa.eu/what-we-do/our-current-priorities/coordinated-annual-review-on-defence-(card))

⁷ European Defence Agency, "The Birth of the Agency," accessed February 7, 2020, <https://eda.europa.eu/our-history/mb/birth-agency-2001-2004.html>.

The EU takes a comprehensive approach towards crisis management, peace-keeping operations and strengthening of international security through the principles outlined in the CSDP.⁸ Tangible results, however, have been modest. Statistics show that "although the EU posts a lengthy list of past and present missions, the majority of these were small in scale and impact, and the most successful tend to involve either NATO or a clear lead nation (often France) that commits its own resources and prestige".⁹ Although the objectives set forth in the CSDP streamline defense initiatives for the EU, collective MS involvement has been insufficient for substantial security enhancement. The EU can no longer allow NATO or single lead nations to guide European defense operations; instead, all MS must step up.

Current EU defense institutions should be implemented in a coherent and coordinated manner, ensuring that they complement one another.¹⁰ PESCO, for example, acts as a "framework and process to deepen defence cooperation between EU MS".¹¹ Enlarged cooperation between EU defense institutions would involve PESCO communication with not only CARD as Figure 1 depicts, but perhaps the CDP as well. As the Trump administration continues to cast doubt on the U.S. commitment to the transatlantic Alliance, the shortcomings of European defense institutions, such as CSDP, CARD, PESCO, and the EDF require extensive review.

The Coordinated Annual Review on Defense

Each year, a review on EU defense convenes and provides general information about current or pending missions and security initiatives to attending MS. Instead of pursuing a strategic review on the capabilities and interinstitutional collaborative efforts of all EU defense sectors, CARD is utilized as "the cornerstone of recent initiatives and an essential

⁸ European External Action Service, "The Common Security and Defence Policy (CSDP)," last modified March 5, 2018, https://eeas.europa.eu/topics/common-security-and-defence-policy-csdp/431/common-security-and-defence-policy-csdp_en.

⁹ Seth Johnson, *A Europe that Protects? U.S. Opportunities in EU Defense*, (Cambridge: Belfer Center, 2019) <https://www.belfercenter.org/publication/europe-protects-us-opportunities-eu-defense>.

¹⁰ Jorge Domecq, *Coherence and focus on capability priorities: why EDA's role in CARD, PESCO and EDF matters*, (Madrid: Elcano Royal Institute, 2018), 1, http://www.realinstitutoelcano.org/wps/portal/rielcano_es/contenido?WCM_GLOBAL_CONTEXT=/elcano/elcano_es/zonas_es/europa/ari54-2018-domecq-coherence-focus-capability-priorities-why-eda-role-card-pesco-edf-matters.

¹¹ European Defence Agency, "About PESCO," accessed February 27, 2020, <https://pesco.europa.eu>.

intermediate step in the EU capability development process".¹² Within the EDA, CARD offers a more non-binding attempt at increased coordination between MS in PESCO and less of a policy or actionable step.¹³ The process of CARD begins with initial information being given to MS from the EDA, bi-lateral dialogue and consolidated information based on these individual meetings.¹⁴ While an effective tool for data sharing, CARD does not provide a pragmatic approach to defense enhancement. MS are also given the option to control their information flow to CARD.¹⁵ Such voluntary data contribution limits the effectiveness of the defense report and prevents transparency between all MS. During CARD trial period, the EU acknowledged that CARD was "unlikely to produce tangible effects unless in conjunction with the EDF and PESCO".¹⁶ Once fully established, the CARD, PESCO and EDF reported 74 actions taken for EU security enhancement.¹⁷ Of these 74 actions, no perceptible results have been produced for European security, while MS cooperation for defense planning continues to stagnate.¹⁸ The gaps between CARD as a strategic review, PESCO and the EDF reinforce European reliance on NATO and the U.S. for defense and security.

European Union Collaboration

Another fundamental reason for the shortfalls in EU defense the low level of collaboration among MS.¹⁹ In a 2019 "policy game," the Körber-Stiftung think tank discussed possibilities of European defense in the circumstance that the United States was to withdraw from the NATO. Due to weak European defense capabilities, countries that felt most vulnerable would "conclude bilateral arrangements with the U.S". and split into separate factions.²⁰ To avoid this possibility, MS should collaborate for a strengthened

¹² European Defence Agency, "Coordinated Annual Review on Defence," accessed February 7, 2020, [https://www.eda.europa.eu/what-we-do/our-current-priorities/coordinated-annual-review-on-defence-\(card\)](https://www.eda.europa.eu/what-we-do/our-current-priorities/coordinated-annual-review-on-defence-(card)).

¹³ Johnson, "A Europe that Protects?"

¹⁴ European Defence Agency, "Coordinated Annual Review on Defense."

¹⁵ Kamil Mazurek, *European offensive in defense sphere - EDF, PESCO and CARD*, (Casimir Pulaski Foundation, November 2018): 20, https://pulaski.pl/wp-content/uploads/2018/11/European_offensive_in_defense_sphere_EEDF_PESCO_and_CARD.pdf.

¹⁶ Mazurek, *European offensive in defense sphere*, 22.

¹⁷ European Commission, "EU Defence: Towards a European Defence Union," accessed February 13, 2020, https://ec.europa.eu/info/sites/info/files/towards-a-european-defence-union_en.pdf.

¹⁸ Mazurek, *European offensive in defense sphere*, 22.

¹⁹ Solana, *On the Way Towards a European Defence Union*, 22.

²⁰ Liana Fix, Bastian Giegerich, and Theresa Kirch, *European Security in Crisis: What to expect if the US withdraws from NATO*, (Hamburg: Körber-Stiftung, 2019), 1, accessed February 10, 2020. https://www.koerber-stiftung.de/fileadmin/user_upload/koerber-stiftung/redaktion/koerber-policy-game/pdf/2019/Koerber-Policy-Game_What-to-expect-if-the-US-withdraws-from-NATO.pdf.

system of European peace and defense. An intensive strategic defense review would provide guidance to increase European defense capabilities and support a stronger, more collaborative EU. The need for increased European strategic autonomy is pertinent to the eroding world order. In 2018, Angela Merkel stated publicly, "The times in which we could fully count on others are somewhat over. That means that we, Europeans, have to take destiny into our own hands".²¹ Equal engagement by every MS would strengthen EU capabilities, not only in resources, but also in priority setting and decision making, thereby reducing dependence on NATO.

(1.1.2) The U.S. Quadrennial Defense Reviews

Where the EU has fallen short on implementing effective defense institutions and organizing strategic defense reviews, the U.S. has been successful, providing a model for how the EU should move forward. Beginning in 1997, the U.S. QDR was "conducted in the year after each presidential election, allowing new administrations to write the documents that will provide guidance for the next four years".²² The U.S. Department of Defense (DoD) used the 2012 Defense Strategic Guidance to responsibly and realistically take steps to balance major elements for defense and outlined how the QDR should be adjusted in the future.²³ Prior to the first QDR publication, the U.S. struggled to make significant steps towards increased defense capabilities. So, to tackle the challenges, policy makers "established the reviews principally to advance organizational changes in agencies, strengthen congressional and other external support for agencies, and facilitate legislative oversight of agencies".²⁴ The value of a formal review by a government agency is exemplified in the capabilities of the U.S. military "to conduct highly complex operations thousands of miles away in austere, hostile environments".²⁵ By formalizing the priorities

²¹ Alexandra Brzozowski and Claire Stam, "In Strasbourg, Merkel brings European army one step further," *EURACTIV*, November 13, 2018, <https://www.euractiv.com/section/future-eu/news/in-strasbourg-merkel-brings-european-army-one-step-further/1289644/>.

²² ASUA's Institute of Land Warfare, "The 2010 Quadrennial Defense Review: Refocusing Priorities," accessed February 18, 2020, <https://www.ausa.org/sites/default/files/DR-10-2-The-2010-Quadrennial-Defense-Review-Refocusing-Priorities.pdf>.

²³ Martin E. Dempsey, *Quadrennial Defense Review 2014*, (Washington D.C.: Department of Defense, 2014), IV.

²⁴ Jordan Tama, "The politics of strategy: why government agencies conduct major strategic reviews," *Journal of Public Policy*, no. 1 (May 2015): 3, <https://doi.org/10.1017/S0143814X15000148>.

²⁵ Heritage, "Introduction: An Assessment of U.S. Military Power," last modified October 30, 2019, <https://www.heritage.org/military-strength/assessment-us-military-power>.

and planning process, the U.S. DoD has been able to effectively articulate strategies suited to current security concerns.

The most useful component of the QDR for the United States is arguably the ability to address major threats and challenges in a constantly changing environment. Strategic planning and "sustained execution are needed to anticipate and navigate" the complexity facing nations today.²⁶ Strategy should focus on key military threats because they pose the most danger to nations, while also rebalancing military remedies because they incur the highest costs.²⁷ It is important to recognize that resources are finite and prioritization through strategy is a fundamental aspect of defense reviews.²⁸ When analyzing the U.S. QDRs, agency leaders have found that structured planning may "serve as a useful vehicle for institutionalizing priorities and asserting greater control of agency units".²⁹ The U.S. QDRs not only helped DoD agencies form better interinstitutional cooperation, but also enabled them to benefit from a bolstered reputation and increased legitimacy in decision-making processes.³⁰ In the case that the QDR does not produce major strategic realignment, it has helped the Pentagon refine its forces for the distinctive challenges of the world and "ensure that defense funds will be available when the need for peace operations and humanitarian interventions arises".³¹ As shown on the following page in Figure 2, defense reviews have been effective mechanisms for the U.S. DoD by guiding predictions on security. The QDR sets the framework for new defense strategies, promotes new ideas and concepts from a wide range of experts, underscores the need to transform defense institutions to meet future threats and adopts more efficient practices for increased defense.³²

²⁶ Matt Boland, Troy Thomas and Danny Werfel, "Four Steps to High-Impact Strategic Planning in Government," Boston Consulting Group, May 17, 2018, <https://www.bcg.com/publications/2018/four-steps-to-high-impact-strategic-planning-in-government.aspx>.

²⁷ Matthew Fay, "The Good, the Bad, and the Ugly of the National Defense Strategy," Niskanen Center, January 30, 2018, <https://www.niskanencenter.org/good-bad-ugly-national-defense-strategy/>.

²⁸ Fay, "The Good, the Bad, and the Ugly."

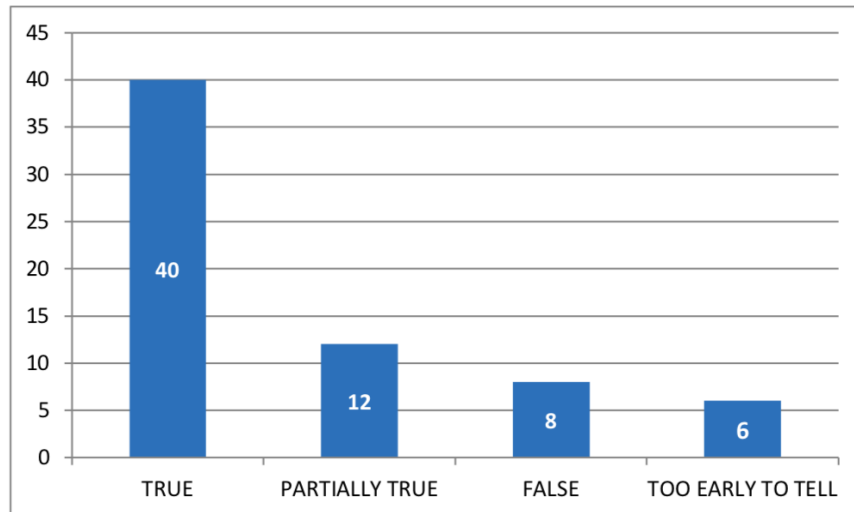
²⁹ Tama, "The politics of strategy," 4.

³⁰ Tama, "The politics of strategy," 5.

³¹ Michael E. O'Hanlon, *The Pentagon's Quadrennial Defense Review*, Brookings Policy Brief Series, April 1, 1997, <https://www.brookings.edu/research/the-pentagons-quadrennial-defense-review/>.

³² United States General Accounting Office, *Quadrennial Defense Review: Future Reviews Can Benefit from Better Analysis and Changes in Timing and Scope*, GAO-03-13 (Washington, DC, 2002), <https://www.gao.gov/products/gao-03-13>.

Figure 2: Track Record of Predictions in Defense Reviews



Source: "Quadrennial Defense Review: Future Reviews Can Benefit from Better Analysis and Changes in Timing and Scope," *United States General Accounting Office*, November 4, 2002, <https://www.gao.gov/products/gao-03-13>.

Today, the EU faces parallel challenges in defense capabilities as the U.S. once did. As stated before, EU defense agencies were built to enhance security, but fell short of adequate results. In both the U.S. and EU, government leaders struggled to change their institutions' attitude surrounding increased defense and were unable to drive major progress toward policy changes.³³ Major threats from geopolitical powers, climate change, technological innovation, terrorism and other dangers need to be approached in a coordinated manner. A periodic EU strategic defense review would address these threats and refocus the necessary institutions on a more interoperable path.

(1.1.3) Making a European Union Strategic Defense Review

The creation of a European Strategic Defense Review (SDR) would require adjustments from the U.S. QDR due to institutional differences, varying national priorities and a European-based security environment. It might work as follows.

The European Commission would lead the defense review, based on its experience in producing strategic and management plans. However, the European Commission has previously produced only two strategic documents: the 2003 European Security Strategy

³³ Boland, "Four Steps."

and the 2016 European Union Global Strategy (EUGS). Neither document has produced the same level of detail as U.S. periodic defense strategies or the QDR.

CARD, PESCO and the EDF should interlock to create concrete outputs in response to MS capability priorities. The level of ambition should be increased to "fill existing critical defence gaps in Europe and create tangible, operational outcome in the form of an improved pool of forces and defence assets".³⁴ Modeled on the European Commission's five year term, an EU SDR should follow the same periodic cycle. Alongside the Commission, the Political and Security Committee (PSC) would monitor the international situation, recommend strategic approaches to the Council based on the EU SDR research, "provide guidance to the Military Committee and ensure political control and strategic direction of crisis management operations".³⁵ The EDA's position as secretariat to PESCO and CARD, alongside the European External Action Service (EEAS) and the EU Military Staff (EUMS), constitutes this institution as the best prepared to conduct the SDR and report to the PSC.³⁶ With the review's demand for an extensive network and inter-institutional collaboration, the EDA's 12 Capability Technology groups (CapTechs) formed from MS experts can provide intelligence and research to the process.³⁷ For strategic guidance, the EDA can leverage its expertise in all CSDP defense institutions, the CDP and Overarching Strategic Research Agenda (OSRA).

Information sharing between MS in PESCO is currently optional; this is a problem and contributes to the failure of CARD. In the case of an EU SDR, information gathering would fall into place. The foundations for this dialogue are already present among institutions; the EDA, "supported by the EUMS, is currently engaged in bilateral dialogues with MS".³⁸ Once this dialogue is further developed under an EU SDR, it will increase transparency between MS and foster trust, which is necessary for strategic defense progress. The resulting information sharing would result in a comprehensive report compiled by the EDA and CARD.³⁹

³⁴ Domecq, *Coherence and focus*, 2.

³⁵ European Council, "Political and Security Committee," accessed February 21, 2020, <https://www.consilium.europa.eu/en/council-eu/preparatory-bodies/political-security-committee/>

³⁶ Domecq, *Coherence and focus*, 2.

³⁷ Domecq, *Coherence and focus*, 2.

³⁸ Domecq, *Coherence and focus*, 3.

³⁹ Domecq, *Coherence and focus*, 3.

Additional inter-institutional cooperation under the EU SDR would require PESCO participation. PESCO is essential to the planning process because the institution "was initiated based on EU Treaties, which makes it a permanent element of [the] European defense landscape".⁴⁰ Moreover, PESCO's specialization and experience make it valuable to an EU SDR. However, the shortfall of PESCO is that the institution is rooted within its own agencies and lacks involvement in the broader European foreign affairs field, namely the European Commission.⁴¹ The EDA would support PESCO project implementation while taking note of each mission's pragmatic approach to defense enhancement. PESCO's roles in the SDR would be to engage the European Ministries of Defense (MoD) in defense capability projects "based on ambitious and binding commitments".⁴²

Coordination with the EDF will also be necessary for the EDA to run a successful SDR. Reiterating the limited resources available for defense capabilities, cooperation with the Fund would "supplement and amplify national investments in defence research, in the development of prototypes and in the acquisition of defence equipment and technology".⁴³ The plans for defense budget and procurement will be discussed in the next section. Relevant to the EU SDR, however, is acknowledging how the EDF would function with the EDA to increase defense capabilities.

An integral diplomatic institution of the EU, the EEAS would be of paramount importance to an EU SDR. A key aspect of the EEAS in an EU SDR would be the institution's ability to "work closely with the foreign and defence ministries of the MS of the EU... It also has a strong working relationship with the United Nations and other International Organisations".⁴⁴ Transparency between the EEAS and international organizations during the process of an EU SDR is imperative to maintaining strong partnerships and alliances, especially the transatlantic Alliance. The function of the EUMS in the EU SDR would be to "strengthen the diplomatic leverage" of the EDA during the review, provide necessary

⁴⁰ Mazurek, *European offensive*, 21.

⁴¹ Mazurek, *European offensive*, 21.

⁴² Domecq, *Coherence and focus*, 3.

⁴³ Domecq, *Coherence and focus*, 4.

⁴⁴ European External Action Service, "About the European External Action Service," last modified November 11, 2019, https://eeas.europa.eu/headquarters/headquarters-homepage/82/about-european-external-action-service-eeas_en.

Communications and Information systems, situation assessment and concept development.⁴⁵

(1.1.4) Conclusion

Currently, EU defense initiatives fall short of meaningful institutional interoperability and strategic planning. In order to achieve strategic autonomy as outlined in the CSDP, "the importance in translating Europe's defense ambitions into action cannot be stressed enough".⁴⁶ A periodic strategic defense review, modeled on the framework of the U.S. QDR, should be used to develop and align EU defense capabilities. Strategic planning and defense reviews set the basis for new defense strategy and emphasize military transformation.⁴⁷ Using current EU defense institutions, inter-institutional strategic planning and execution would develop organizational cooperation for the common goal of enhanced EU capabilities. The European Commission would provide a final assessment of the EU SDR in its entirety while the EDA would collaborate with the PSC, CARD, PESCO, EEAS and EUMS. Strategic guidance and planning would aid the EDA in meeting EU ambitions for defense capabilities efficiently and effectively. In doing so, European defense capability cooperation would provide a more reliable mechanism for autonomous common defense, able to meet a higher level of ambition of MS.

Section Policy Recommendation

- ◆ The EU should develop and implement a periodic strategic defense review modeled on the U.S. QDR.

Case Study: Brexit's Impact on EU Defense Strategies and Abilities

On January 31, 2020, the United Kingdom left the EU to begin a new path as an independent European partner, affecting all future relations between the UK and the EU. Despite this historic change, the two will remain deeply intertwined as they still share the same strategic environment and threats to peace and security. Additionally, for most EU member states, the UK remains an ally in NATO. For these reasons, the EU

⁴⁵ European External Action Service, "The European Union Military Staff," accessed February 27, 2020, https://eeas.europa.eu/headquarters/headquartershomepage_en/5436/The%20European%20Union%20Military%20Staff%20.

⁴⁶ European External Action Service, "The European Union Military Staff."

⁴⁷ United States General Accounting Office, *Quadrennial Defense Review*.

should work to establish strong defense bonds with the UK. Working with the UK on overall European defense will lead to a more secure Europe, ensuring cooperation on current and future threats.

Because the UK is one of Europe's biggest military powers, its departure from the EU will have substantial consequences for EU defense strategy. To the EU, the UK brought its understanding of global affairs, security and defense policy and conflict resolution. Prior to Brexit, the UK was also one of only two member states possessing full-spectrum military capabilities, including nuclear deterrence. These distinctive customs and capabilities will be missed by a Union that must now confront a multi-polar environment marked by growing great-power competition.

The EU relies on NATO and the CSDP for defense strategy and ability. While Brexit will not greatly affect NATO's defense capabilities as the UK will remain a member, it will affect EU defense capability. The UK was a large military force in the EU, however, it had a history of constraining EU defense integration. This is evidenced by the UK's deference to NATO, its small contribution to the CSDP and its decision to opt out of PESCO. For these reasons, Brexit may allow for further integration of the EU while simultaneously reducing the EU's capacity for autonomous action.

Even after Brexit, the interests of both the EU and the UK to combat common challenges such as terrorism, cyber-warfare and human rights will remain intact. Given the shared strategic environment and threats between the UK and the EU, it is vital to the future safety of Europe and the success of EU defense strategies that the UK and EU establish strong defense bonds. They should continue to collaborate to promote a peaceful Europe, protected against future threats.

(1.2) A New European Union Headline Goal

The European Union is facing new threats and challenges that have put European security at risk. With a combination of internal and external factors – from terrorism, cyberattacks, and Russian meddling in national institutions to the recent departure of Britain from the EU, there is a need for increased defense measures. National efforts within the EU have proven to have limited effect – as do the collective measures taken thus far to address security and defense. Member states in many instances remain skeptical about new defense initiatives, in part due to competing interest and national defense schemes.⁴⁸ Given the impact of global geopolitical upheaval on Europe, the EU is at a crucial juncture

⁴⁸ Erik Brattberg and Tomáš Valášek, *EU Defense Cooperation: Progress Amid Transatlantic Concerns*, (Washington, D.C.: Carnegie, 2019), https://carnegieendowment.org/files/WP_Brattberg_Valasek_EU_Def_Coop_v3.pdf.

to generate new synergies in military capabilities. Europeans agree and welcome the establishment of a greater Common Defense and Security Policy among EU members.⁴⁹ However, the EU's emphasis has remained on projecting soft power, rather than implementing a truly cohesive security and defense plan, or "hard power". In 2016, Federica Mogherini, High Representative of the Union for Foreign Affairs and Security Policy and Vice-President of the European, expressed in the foreword for the European Union Global Strategy (EUGS) that:

The European Union has always prided itself on its soft power – and it will keep doing so, because we are the best in this field. However, the idea that Europe is an exclusively 'civilian power' does not do justice to an evolving reality. For Europe, soft and hard power go hand in hand.⁵⁰

Given the current shift of great power competition, the attention given to hard power is not enough. The success of the EUGS lies in fulfilling the priorities set forth in the 'Defense' section of the CSDP.

This section will recommend drafting a new EU Headline Goal that aims to move towards a more collective security strategy through a multi-dimensional approach that bridges the current gap in defense capabilities and planning. The new Headline Goal will strive to increase the level of ambition that addresses shortfalls in the EU's ability to complete tasks, with solutions to be implemented effectively over time. Continued review and adoption of a Headline Goal on Security and Defense will give the EUGS a framework to align and synchronize increased EU intervention capabilities and a greater role in territorial defense. There has been a renewed enthusiasm for EU cooperation on security and defense, and much progress has been made toward creating a set of tools and framework for strengthening defense capabilities. However, it is time to reexamine the

⁴⁹ David Bachmann, et al., *More European, More Connected and More Capable: Building the European Armed Forces of the Future*, (Munich Security Conference, 2017), https://securityconference.org/assets/02_Dokumente/01_Publikationen/MSCEuropeanDefenceReport2017.pdf.

⁵⁰ John Kerry, "Remarks with EU High Representative Federica Mogherini," (Brussels: 2016), <https://2009-2017.state.gov/secretary/remarks/2016/06/259074.htm>

Headline Goal set forth in 2010 and implement a doctrinal shift for strategic autonomy in security by 2030.

Currently, much of the Headline Goal 2010 leaves uncertainty regarding interoperability, deployability, sustainability and decision-making. The Battlegroup concept is regarded as an integral part of the Headline Goal 2010. Today, there are two EU Battlegroups that stand by as a military rapid reaction force poised for deployment, should the EU MS agree on which ‘emerging crisis and conflict around the world’ requires such intervention. However, the Battlegroup is not a completely flawless concept. This section intends to examine the concept of EU Battlegroups and discuss how such an initiative can mutually reinforce the larger NATO Response Force (NRF). With particular attention to the Eurocorps, it serves as a prime example of how its unique framework is essential to European defense.

(1.2.1) EU Battlegroups

EU Battlegroups are multinational military units, integral to the EU’s rapid reaction capacity, that respond to emerging crises and conflicts in its peripheries. However, issues relating to national defense policies, deployability and sustainability have prevented them from being effective. This chapter reviews Battlegroups as another tool available to the CSDP for rapid response, focusing on two questions: how do they function? And what could their role be in the future? Recently, concerns have arisen that the EUGS does little to employ EU Battlegroups (EUBG), based on the idea overemphasizing them risks diminishing rapid response.⁵¹ However, the Battlegroup initiative aimed at correcting the shortcomings of the European Rapid Reaction Force by advocating smaller, but more rapidly deployable, mobile and self-sustainable, readiness forces. While the EU has taken steps to strengthen cooperation on security and defense in some respects, it has yet to develop procedures that assess and certify high readiness joint packages (Battlegroups).

Currently, member states’ commitments to the EUBG is voluntary. This implies that individual member states create Battlegroup packages and are responsible for offering a complete package formed by a Framework nation (rather than by consensus as in the

⁵¹ Yf Reykers, “EU Battlegroups: High costs, no benefits,” *Contemporary Security Policy* 38, 3 (2017), DOI: [10.1080/13523260.2017.1348568](https://doi.org/10.1080/13523260.2017.1348568)

Eurocorps framework) or by a multinational coalition of member states. However, these packages provide member states too much flexibility. While the original intention was to enable member states flexibility in forming their own Battlegroup package and allow for greater military cooperation and integration, this is currently not taking place within the EU. Rather, it is creating a process that is disjointed, uneven and in many cases reflects geopolitical diversity.⁵² Today, EU military operations vary widely, with some operations reporting over 3,000 EU troops but others deploying a few hundred.⁵³ Additionally, the EU should enable Battlegroups to take part in medium and large-scale missions through a permanent HQ.

(1.2.2) The Concept

For over two decades, the availability of deployable military rapid response forces has generally been regarded as an essential element for a stronger Europe. At the December 1998 Anglo-French summit in Saint Malo, the leaders of France and the United Kingdom called on the EU to develop a “capacity for autonomous action, backed up by credible military forces, the means to decide to use them and a readiness to do so, in order to respond to international crises”.⁵⁴ This led to the EU’s first Headline Goal, which included the capability to develop and deploy a force of 60,000 soldiers within a period of 60 days and sustain this force in the field for at least one year. In February 2003, another UK-France bilateral declaration further developed this approach and concluded that a dramatic shift in European defense was necessary to improve its rapid reaction capacity. It subsequently became evident that developing the capacity for a European Rapid Reaction Force was an EU priority.

In June 2003 during Operations Artemis, a potential EU military rapid response force was successfully tested. This was the first autonomous EU-led military operation to the Democratic Republic of the Congo that helped stabilize security conditions and alleviate the humanitarian crisis. While it showed the EU’s ability to operate with a small force of

⁵² Hugo Meijer, and Marco Wyss, *The Handbook of European Defence Policies and Armed Forces*, first ed, (Oxford: Oxford University Press, 2018), DOI:10.1093/oso/9780198790501.003.0023.

⁵³ Majer and Wyss, *The Handbook*.

⁵⁴ “Joint Declaration issued at the British-French Summit,” (Saint Malo: Foreign and Commonwealth Office of the United Kingdom, 1998), https://www.cvce.eu/content/publication/2008/3/31/f3cd16fb-fc37-4d52-936f-c8e9bc80f24f/publishable_en.pdf.

1,500 personnel at a significant distance of 6,000 km from Brussels, it also demonstrated the necessity for further development of rapid response capabilities. Determined to build on this experience, European leaders (actively supported by France, the UK and Germany) put forward the 'Battlegroup Concept' on February 10, 2004. By January 1, 2007, the EU Battlegroups reached Full Operational Capability.

(1.2.3) Basic Features of EU Battlegroups

The Battlegroup concept aimed to correct the shortcomings of the European Rapid Reaction Force. Based on a French-British-German initiative, the concept was developed by the EU Military Staff (EUMS) and later agreed upon by the EU Military Committee (EUMC) in June 2004. It advocated for a smaller but more rapidly deployable, mobile and self-sustainable higher-readiness force than the first Headline Goal. To this end, it recommended:

- Battlegroups are to be based upon the principle of multi-nationality
- Battlegroups are to be made up of a combined-arms, battalion-sized force
- Two Battlegroups are always on standby on a six-month rotational basis
- They are deployable within 10 days following a Council decision and able to sustain operations for 30 days (extendable up to 120 days if appropriately resupplied)
- Battlegroups are designed to operate within the typical UN Chapter VII mandates to restore international peace and security⁵⁵

EUBG are not intended for fully fledged, long-term operations; rather, they are the minimum size force need for a standalone operation or as a spearhead to prepare the ground for more comprehensive, future operations. The EU Battlegroup Concept intended to provide the Union with full operational capability, enabling it to respond rapidly to emerging crises through military means. Further, an EU Battlegroup could be formed by a 'Framework Nation' or by a multinational coalition of associated member states with deployable Force Headquarters.⁵⁶ While there is no precise composition for an EU Battlegroup 'package', interoperability and military effectiveness (including a deployable

⁵⁵ Anna Barcikowska, "EU Battlegroups, Ready to Go?" European Union Institute for Security Studies, November 2013, https://www.iss.europa.eu/sites/default/files/EUISSFiles/Brief_40_EU_Battlegroups.pdf.

⁵⁶ Barcikowska, "EU Battlegroups."

force headquarters, pre-identified operational and strategic enablers and accelerated decision-making) are listed as key criteria for pressing its development.

The initiative thus far has drawn commitments from 27 EU Member States (EUMS), generating a total of 18 Battlegroups. Developed to be mutually reinforcing with the larger NATO Response Force, both aim to provide rapid military capabilities and interoperability. The NRF was established in 2002 as a high readiness force comprising of air, land, maritime and Special Forces units capable of rapid deployment. It was designed to participate in the full range of NATO missions ‘including contributing to the preservation of territorial integrity, making a demonstration of force, peace support and disaster relief operations, protection of critical infrastructure, security operations and, as part of a larger force, conducting initial entry operations’.⁵⁷ Conversely, the type of missions for which the NRF and EUBG were intended for are complementary.

(1.2.4) The Challenges

While the EUBG concept reached Full Operational Capability on January 1, 2007, no Battlegroup has ever been deployed. This is partly because there has never been a time where all 27 EUMS have agreed on the generation of a Battlegroup package. Thus, Europe does not have a fully functioning force under a single command structure and the concept has been stationary since its creation 13 years ago, as “political deadlock has prevented them from being deployed”.⁵⁸ Challenges resulting from resource constraints and lack of political will and commitment also hinder the EUBG’s credibility and effectiveness.

While the EUBG’s are structured for potential success, they are also criticized for possible duplication with NRF and NATO’s Readiness Action Plan.⁵⁹ Although EUBGs are built on the same structure as that of NATO’s reaction forces, they are much smaller in scale; only 1,500 troops are involved in each EUBG compared to the 40,000 of the NATO Very High Readiness Joint Task Force (VJTF). The fact that EUBGs lack in troop size and resources

⁵⁷ “Purpose,” NATO Response Force, NATO, last updated January 10, 2019, https://www.nato.int/cps/en/natolive/topics_49755.htmf

⁵⁸ Michael Vincent, “EU Battlegroups: The European ‘army’ that politicians can’t agree how to use,” *ABC News*, November 16 2018, <https://www.abc.net.au/news/2018-11-17/the-european-army-that-has-never-been-in-a-fight/10506466>.

⁵⁹ Vincent, “EU Battlegroups.”

calls into question their significance for missions such as conflict prevention, initial stabilization, crisis management or peacekeeping. This observation may help redefine the scope of actions of the EUBG and to find a niche in which to enhance hard power.

Confusion regarding the EU's defense strategy and tasks raises questions about the incorporation of rapid response capability. The EUGS identifies crisis management and stabilization in Europe's peripheries as core tasks.⁶⁰ However, territorial defense is explicitly left to NATO.⁶¹ Yet, the Global Strategy states an "appropriate level of ambition and strategic autonomy" is paramount for the EU to pursue its security interests.⁶²

Despite occasional bilateral and collective initiatives, European Union members fail to promote a strong autonomous European security and defense mechanism. The EU and its CSDP lacks the impulse to deploy forces to the most dangerous zones or in an expeditious manner. This tendency to wait or stall is detrimental to development of cohesive rapid action forces.

(1.2.5) Eurocorps

The Eurocorps Headquarters (HQ), located in Strasbourg, France, is sponsored by Belgium, France, Germany, Luxembourg and Spain. Eurocorps' strategic element is that its HQ has a different international military status and is available to NATO through a technical arrangement with Allied Command Operations (ACO). Eurocorps' model provides a proven framework, capable of attaining a multinational, fully deployable and highly autonomous HQ, which is readily able to plan and deploy military operations across the European spectrum by commanding assigned forces to the benefit of international organizations like the EU and NATO.⁶³

While Eurocorps is not an EU institution, it provides its framework nations with a HQ, enhancing legitimacy and providing a stronger European vocation. It may be a conduit for EUMS to continue to raise combat and deterrence capabilities and maintain momentum in

⁶⁰ European Commission, "Shared Vision, Common Action: A Stronger Europe," June 2016, https://eeas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf.

⁶¹ Claudia Major, *The Role of Capabilities in the Transatlantic Defense Relationship*, (Carnegie Europe, 2019), 3 https://carnegieendowment.org/files/9-30_Major-EU.pdf.

⁶² Major, *The Role of Capabilities*, 7.

⁶³ EUROCORPS, "About EUROCORPS," accessed February 27, 2020, <https://www.eurocorps.org/readiness/european-battle-group/>.

member states (Belgium, France, Germany, Greece, Italy, Luxemburg, Poland, Romania and Spain).⁶⁶

The Eurocorps framework could be beneficial because it deploys mission-tailored response forces that are similar to NATO. Eurocorps should help develop new defense synergies and investment in critical military capabilities and infrastructure. More importantly, it should provide greater political cohesion and cement a common European strategic culture. For such arrangement, Eurocorps' HQ would be responsible of the EUBG's command and control center.

(1.2.6) Improving EUBG's Effective Capabilities and Complementarity with NRF

With the creation of a Headline Goal 2030, the EU can address shortfalls within the framework of EU Battlegroups. The EU should look towards the Eurocorps' model, as it can provide insight to solve Europe's defense and security issues, especially regarding cooperation. Recently, the current Commanding General of Eurocorps, Lieutenant General Laurent Kolodziej, emphasized its competence: "The Eurocorps is particularly experienced because of its duality, i.e. it can be deployed for both the EU and NATO, and is therefore ideally suited for the current NRF mission".⁶⁷ On January 8, 2020, Eurocorps officially took over the command of the NATO Response Forces LAND. This marks the EU's lead in defense and should act as a catalyst for future expansion in inter-operability, deployability and sustainability.

A Headline Goal 2030 should place greater emphasis on Eurocorps as a model by the EEAS to increase its role in operations both in the EU and NATO by increasing Eurocorps involvement in NATO stand-by periods essential to both NRF and the EU. Typically, NRF forces only conduct training and knowledge development to improve operational effectiveness within the NRF community. However, within the Eurocorps, forces contributed by the EU can be evaluated by their combat effectiveness and operational readiness in relation to tasking.

⁶⁶ EUROCORPS. <https://www.eurocorps.org/>.

⁶⁷ Eurocorps, "Eurocorps takes command of the NATO Response Forces LAND," January 8, 2020, <https://www.eurocorps.org/2020/01/08/eurocorps-takes-command-nato-response-forces-land/>

Section Policy Recommendation

This section has identified the following list of specific objectives to address as part of a Headline Goal 2030:

- ◆ Directing the European Union External Action Service (EEAS) to draft a new Headline Goal to address an emphasis on the Eurocorps as a model to increase EUBG involvement in NATO stand-by periods essential to both NRF and the EU.
- ◆ Enhance European Union Training Mission's (EUTM) to strengthen its relations with European institutions.
- ◆ Establish EUROCORPS as the rapidly deployable HQ for EU operations.
- ◆ Increase EUBG early and rapid response deployability.
- ◆ Develop quantitative benchmarks and mandates that national forces meet to deploy in the field and for multinational training.

Case Study: The History and Future of EU and NATO Relations

The EU-NATO relationship is a strategic European partnership founded on principles of coherence, transparency and equality. Both groups share common values, norms and principles regarding European Defense leading to a strong collaboration between the two. However, this has lowered the incentive for the EU to strengthen their own defense strategies. Recently, transatlantic tensions have caused NATO to lose political credibility, putting European defense in jeopardy. The EU needs to strengthen its defense strategy and capability to increase EU defense autonomy.

In May 2003, a NATO-EU Capability Group was established to ensure the mutual reinforcement of NATO and EU capability development efforts.⁶⁸ The 2003 Berlin Plus Agreement allowed the EU to use NATO assets and capabilities for EU-led crisis management operations.⁶⁹ In July of 2004, the European Defense Agency (EDA) was created to further coordinate work within the EU on defense capabilities, armaments cooperation, acquisition and research. This group played an important role in ensuring

⁶⁸ NATO, "Relations with the European Union," last modified August 12, 2019, https://www.nato.int/cps/en/natohq/topics_49217.htm.

⁶⁹ Javier Solana, Angel Saz-Carranza, María García Casa, and Jose Francisco Estébanez Gómez, *On the way Towards a European Defence Union - A White Book as a first step* (Belgium: European Parliament, 2016), https://www.europarl.europa.eu/RegData/etudes/STUD/2016/535011/EXPO_STU%282016%29535011_EN.pdf.

transparency and cohesion between NATO's work on Smart Defense and the EU's Pooling and Sharing Initiative.⁷⁰

More recently, NATO and the EU have worked to establish a specific set of shared responsibilities. In December 2016, NATO foreign ministers endorsed 42 measures to advance how NATO and the EU work together.⁷¹ These measures were approved by the EU. The measures included: bolstering resilience to hybrid threats, increasing cooperation between NATO's Operation Sea Guardian and the EUNAVFOR Operation Sophia in the Mediterranean, exchanging information on cyber threats and sharing best practices on cybersecurity, enhancing coherence of defense planning processes, and increasing efforts to support local capacities of partner countries in the sectors of security and defense. In December 2017, 32 new measures were taken to further increase NATO-EU cooperation. These new measures included three new areas: military mobility, information-sharing in the fight against terrorism and promoting the role of women in peace and security. Military mobility was enhanced to ensure that forces and equipment could move quickly across Europe if needed, which entailed procedures for rapid border crossing, sufficient transport assets and infrastructures such as roads, railways, ports and airports. Information-sharing to aid the fight against terrorism included strengthening coordination of counter-terrorism support for partner countries.

Given the history of the NATO and EU relationship and long-standing reliance on the defense guaranty of the United States, the EU has stalled on enhancing development of its own autonomous defense. In the next 10 years, the EU should begin to rely less on NATO and increase its own defense capabilities. The EU needs to begin developing more autonomously and take coherent steps towards security and defense development. If done in collaboration with NATO, a more autonomous EU should lead to enhanced relations between the Union and NATO. In fact, many of the steps that would increase EU autonomous capability would also strengthen NATO.

(1.3) Defense Integration via Procurement

Over the past several decades, Europe has been in a period of unplanned disarmament. The lack of an organized procurement framework, especially in the EU, has led to a lowered level of interoperability, defense integration and defensive efficiency even while military expenditure has increased. This has limited the EU's potential to support both its foreign security interests and its own continental defense. This chapter will examine a

⁷⁰ NATO, "Relations with the European Union."

⁷¹ NATO, "Relations with the European Union."

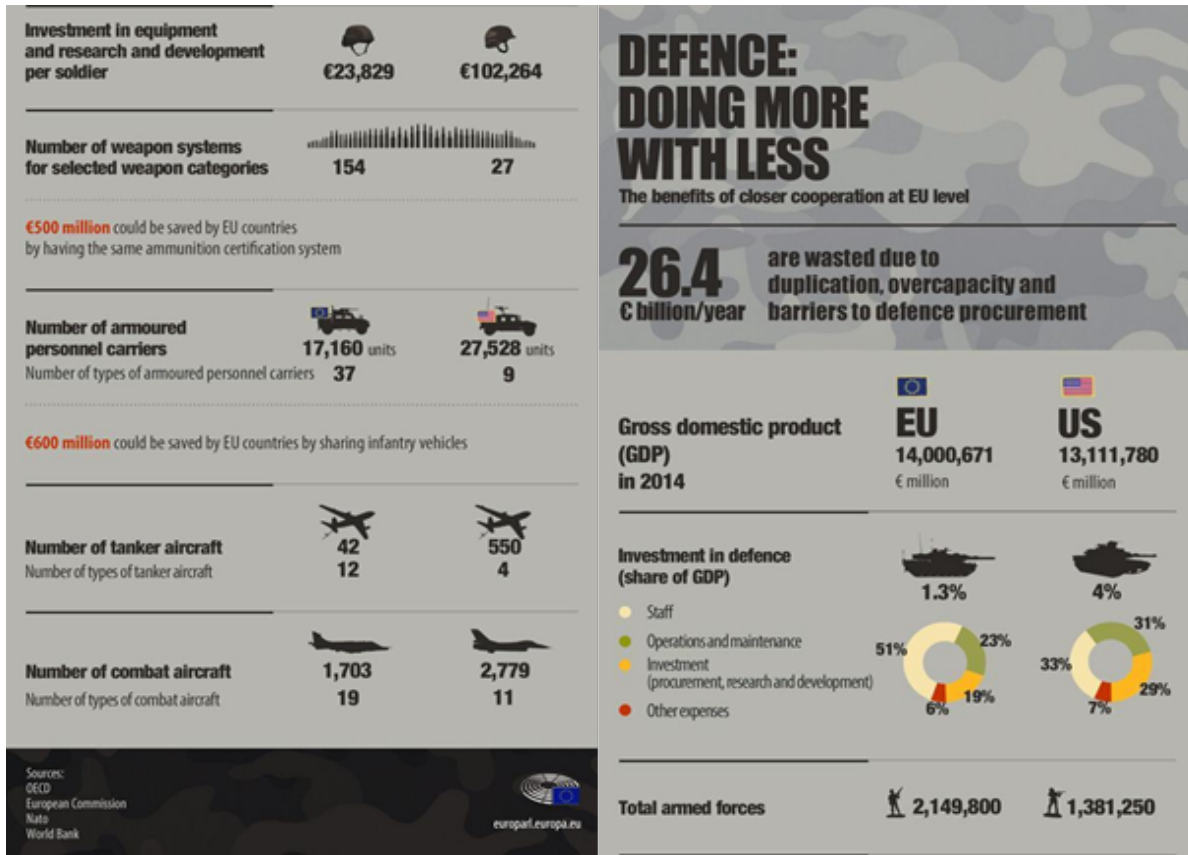
case study highlighting the severe ramifications of EU coordinated procurement failure and the way in which the EU has set out to ameliorate these concerns.

(1.3.1) A Failure to Integrate Defense Infrastructure

Despite the long-term efforts of NATO, interoperability between European Member State militaries is severely lacking in comparison to the world's other leading militaries. Within the context of the CSDP, it is possible to compare Europe's defense capabilities with those of the United States. Further aiding in this comparison is the fact that the U.S. and EU have nearly identical GDP's and together make up almost the vast majority of NATO. When comparing the hypothetical capabilities of a combined EU Member State force to the US and China, while the EU may have resources and expenditure on par with others, their effectiveness is limited. Analyzing the graphic on the following page shows that the many shortcomings inherent in the current system of procurement. They manifest in an overabundance of distinct weapons systems in the European arsenal;⁷² the more weapons systems there are, the more difficult it is to fully integrate a larger military force. The 154 distinct weapons systems that various EU Member States use compared to the United States' 27, highlights the fact that while GDPs are nearly identical, the defense efficiency of Europe is grievously lacking.

⁷² European Parliament, "Defense: is the EU creating a European army?" News, June 24, 2019, <https://www.europarl.europa.eu/news/en/headlines/security/20190612STO54310/eu-army-myth-what-is-europe-really-doing-to-boost-defence>.

Figure 4: Breakdown of EU Defense Interoperability



Source: “EU Army Myth: What Is Europe Really Doing to Boost Defence?: News: European Parliament.” EU army myth: what is Europe really doing to boost defence? | News | European Parliament, June 24, 2019.

This highlights a clear necessity for an increased degree of interoperability, which as defined by the RAND corporation is “... a measure of the degree to which various organizations or individuals are able to operate together to achieve a common goal. From this top-level perspective, interoperability is a good thing, with overtones of standardization, integration, cooperation, and even synergy”.⁷³ Reducing wasteful diversity in the EU arsenal would bring it closer towards the U.S. in terms of military efficiency and general operational capabilities. It would furthermore allow all European militaries to ‘speak the same language’ in an operational capacity and more effectively defend European interests both on the continent and abroad.

⁷³ Myron Hura, Gary W. McLeod, Eric V. Larson, James Schneider, Dan Gonzales, Daniel M. Norton, Jody Jacobs, Kevin M. O’Connell, William Little, Richard Mesic, and Lewis Jamison, *Interoperability: A Continuing Challenge in Coalition Air Operations*, (Santa Monica, CA: RAND Corporation, 2000), https://www.rand.org/pubs/monograph_reports/MR1235.html. Also available in print form.

*Case Study: How Failure to Integrate Procurement Has Affected European
Airspace Defense Capabilities*

For the past decade, European airspace defense capabilities have been in a period of unplanned disarmament. The fourth-generation fighter jets which decades ago allowed Europe to match the operational capabilities of both the Americans and Soviets are the very same which are in use today. France is almost entirely dependent on the Rafale and the Mirage 2000, while Germany's fleet is dependent on the Tornado and Eurofighter 2000. Most significantly, Germany's air force is entirely dependent on the Tornado for nuclear strike capabilities, which is a NATO commitment. Within the next five years, the Tornado which first entered service in 1979 will be entirely obsolete, leaving Germany with no means of carrying American warheads and deploying them effectively. Outside of Germany and France most European countries are still flying variations of the American F-16 or F/A-18, the Russian MIG-29, or the Swedish Gripen. Within the context of a broader air campaign, none of the aforementioned fighters will be able to operate without "an extensive and protracted campaign to roll back the air defense threat".⁷⁴ The lack of a fifth generation fighter jet in Europe's most vital arsenals drastically reduces Europe's capabilities both abroad and within Europe's own airspace.

The lack of effective stealth prevents any operations in areas with a significant threat of air to ground defenses. Should Europe continue to involve itself in small scale conflicts this is clearly a nonissue, but should the need arise for operations in any state that possesses robust air defense capabilities, the chance that Europe would be able to establish strategic air control is severely limited. Russian S-400 anti-air missile systems have proliferated rapidly since their introduction in 2007. This system has either been adopted or is planned to be adopted by China, Turkey, Saudi Arabia, Iran, Egypt and Iraq.⁷⁵ Many of these states exist in regions where the European Union and its member states have a vital interest in security and should be readily able to deploy to and operate within. Compounding this capabilities gap is the fact that both China and Russia have fifth-generation fighter jets, those being the Chinese J-20 and the Russian Su-57.⁷⁶ Both of these fighters currently have an immense upper hand over anything the Europeans are able to field. In the event of a major conflict, air superiority is paramount to accomplishing the broader mission. The trickle down effect that the loss of air superiority has on a military campaign cannot be overstated.

⁷⁴ Goure, Dan. "Germany's Choice for a Tornado Replacement Could Undermine NATO." *Defense News*, July 6, 2018. <https://www.defensenews.com/smr/nato-priorities/2018/07/06/germanys-choice-for-a-tornado-replacement-could-undermine-nato/>.

⁷⁵ "Seven Countries Now Deploy Russian S-400 Technologies - Over Half a Dozen More Have Shown Interest in Purchases." *Military Watch Magazine*, July 15, 2019. <https://militarywatchmagazine.com/article/seven-countries-now-deploy-advanced-russian-s-400-technologies-over-half-a-dozen-more-have-shown-interest-in-purchases>.

⁷⁶ James, Deborah L, and Daniel Goure. "The Implications of Fifth-Generation Aircraft for Transatlantic Airpower: A Primer." *Atlantic Council*, October 7, 2019. <https://www.atlanticcouncil.org/in-depth-research-reports/report/the-implications-of-fifth-generation-aircraft-for-transatlantic-airpower-a-primer/>.

An army without air superiority is not only at risk of attacks from the enemies airforce, but also cannot carry out air strikes and bombing campaigns against their adversaries.

(1.3.2) Solutions to Air Superiority Shortcomings

France and Germany are currently working jointly on a sixth-generation aircraft in an attempt to leapfrog straight from fourth generation. This project is an attempt to create a pan-European, domestically-produced fighter which all European states would be able to use with the intent of bolstering air superiority capabilities. The Future Combat Air System (FCAS), however, is not slated to be operational until 2040. While the intention of this project is sound, its timing and historical context raise serious questions. Moreover, the rhetoric surrounding this project seems quite similar to the rhetoric used when the development of the Eurofighter began in 1983. This joint venture between Airbus, BAE Systems and Leonardo promised to be exactly what Dassault and Airbus are currently promising the FCAS to be: a pan-European air superiority system which would rival those of its contemporaries. The Eurofighter never became that and is currently plagued with countless issues. Routinely, the German fleet of Eurofighters is rendered inoperable due to various technical problems.⁷⁷ While the FCAS project is still in the distant future, Airbus's history of delivering inoperable, over-budget military aircraft well behind schedule, such as the Eurofighter and the A400M, is grounds for skepticism that the FCAS will be delivered on time and as promised.

Regardless of whether the FCAS makes good on the promises which Airbus and Dassault have made, the immediate necessity for a fifth-generation fighter is still paramount in securing European air-superiority capabilities. Unlike France and Germany, Italy, the Netherlands, and soon Spain, have all purchased the United States' Lockheed Martin F-35 to close the gap between their air superiority capabilities and the air defense systems in countries in which they could be expected to operate. It is recommended that France and Germany procure a small number of F-35's as a stop-gap measure until the FCAS program

⁷⁷ Christopher Woody, "Germany Has a 'Massive Problem' That Has Reportedly Knocked Almost All of Its Eurofighter Typhoon Fighter Jets out of Commission," Business Insider, May 4, 2018, <https://www.businessinsider.com/german-military-fighters-jets-not-ready-for-combat-2018-5?IR=T>.

is operable in order to ameliorate the shortcomings of European air superiority capabilities.

Recognizing that the EU's combined military forces are well behind those of the U.S. and China, the EDA utilizes procurement benchmarks to set definitive procurement spending goals for each member state. The EDA evaluates participating states on the following benchmarks:⁷⁸

1. Equipment procurement (including R&D/R&T) should be 20% of total defense spending.
2. European collaborative equipment procurement should be worth 35% of total equipment spending.
3. Defense Research & Technology should reach 2% of total defense spending.
4. European collaborative defense R&T should count for 20% of total defense R&T spending.

(1.3.3) The Framework of PESCO and EDF

Within the EU, the framework which currently exists to address Europe's capabilities problem is the PESCO. Established in 2017, PESCO follows through on guidelines set forth by the Lisbon Treaty of 2007 and serves to deepen defense cooperation between EU member states by arranging them into optional projects, which are binding once committed. These projects are joint ventures between EU member states to invest, plan, develop and operate defense capabilities.⁷⁹ The objective is to achieve a coherent full spectrum of defense capabilities to increase both the integration and interoperability of all EU member states militaries.- Strategically, this should enhance the EU's ability to defend its citizens at home and function as a global security force abroad. Economically, this should streamline the procurement process and slim down on inefficient defense spending.⁸⁰

⁷⁸ European Defence Agency, "Benchmarks," accessed February 26, 2020, <https://www.eda.europa.eu/info-hub/defence-data-portal/Benchmarks>.

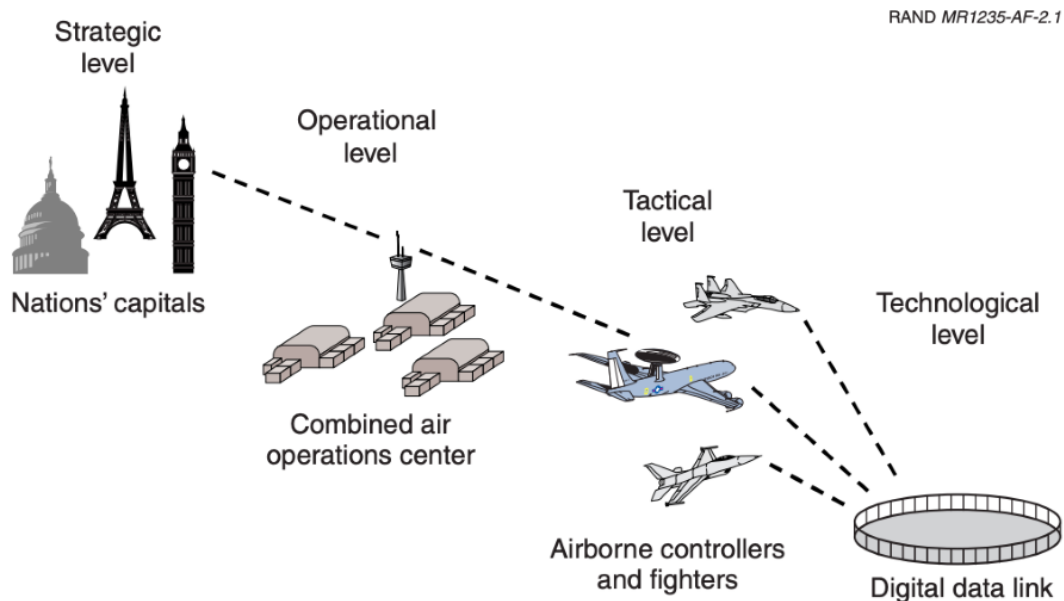
⁷⁹ PESCO Member States Driven, "About PESCO," accessed February 26, 2020, <https://pesco.europa.eu/>.

⁸⁰ PESCO Member States Driven, "About PESCO."

Following the 2009 Lisbon Treaty, the need for PESCO was not immediately apparent, but in the decade since, the necessity for the procurement framework which PESCO provides has become clear, as protracted conflicts have sprung up near EU borders. This indicates the need for a more integrated and efficient EU defense. Compounding this are the defense challenges created by increasingly unreliable allies. Both Brexit and the fact that the United States has voiced skepticism of its commitment to NATO make autonomous European defense increasingly pertinent.

The mechanism which funds this is the European Defense Fund, which was launched in 2017 in tandem with PESCO. The EDF is responsible for offering grants to the collaborative research projects that come out of PESCO and other EU defense research institutions. Following the year 2020, the EDF will have an operating budget of €5.5 billion annually. Over the next seven years, €13 billion of those funds will be contributed directly to PESCO projects. Given that PESCO is still a very young framework, many of the projects being completed through it have yet to become operational. In its present state, PESCO serves EU Member States working on small and rather isolated projects. However, the scope of PESCO will evolve and expand as PESCO itself grows. With the planned seven-year budget expansion, PESCO is intended to shift towards more planned and

Figure 5: Diagram of Interoperability Ecosystem



Source: Rand, *Interoperability*

impact-based cooperation activities.⁸¹ Ultimately, the goal is to secure a more coherent European defense apparatus that is both integrated and interoperable.⁸²

By examining the RAND corporation's breakdown of the various levels of interoperability, it is apparent that the EU's interoperable capabilities suffer at almost every stage.⁸³ Conflicts, such as Libya, highlight a strategic and operational level of failure, as different countries operate with entirely different objectives. Europe's failure to agree on air superiority procurement capabilities exemplifies failure at a more tactical level that has strategic implications. The fact that before PESCO, research and development was done on mostly a national basis highlights failure at the technological level. PESCO is a solution which works from the bottom up, first by enabling a multilateral approach to R&D which brings on smaller European countries that otherwise would be unable to participate. It then allows the countries involved to directly benefit from the product of those projects, influencing the tactical level by equipping Europe's armies with shared technology. The tactical advantage conferred by having a few ubiquitous weapons systems is immense and underscores the entire objective of the PESCO framework. Moreover, the operational level benefits from a positive feedback loop as the command structures are versed in similar capabilities.

(1.3.4) Potential Successes of PESCO

Of the PESCO projects currently in development, two appear to be promising examples of European cooperation in the defense research field: the EuroDrone project and the Tiger Mark III attack helicopter. The Medium Altitude Long Endurance Remotely Piloted Aircraft System (MALE RPAS) is a joint venture between the four largest militaries in the EU: France, Germany, Spain and Italy. MALE RPAS will operate in support of Intelligence, Surveillance, Target Acquisition and Reconnaissance missions (ISTAR).⁸⁴ The Tiger Mark III (MkIII) is an update of the previous iteration of the Tiger attack helicopter and will

⁸¹ European Commission, "EU Budget For The Future," June 13, 2018, https://ec.europa.eu/commission/sites/beta-political/files/budget-may2018-eu-defence-fund_en_0.pdf

⁸² PESCO, "About."

⁸³ Hura, *Interoperability*.

⁸⁴ OCCAR, "MALE RPAS - Medium Altitude Long Endurance Remotely Piloted Aircraft System," MALE RPAS, accessed February 26, 2020, <https://www.occar.int/programmes/male-rpas>.

possess new avionics, mission and weapons systems in an effort to keep the Tiger model on par with the next generation of battlefield capabilities.⁸⁵

(1.3.5) Benefits of Vertically Integrating European Arms Procurement

Currently, European countries prefer to fulfill arms procurement requirements with their own national procurement systems that are founded mainly on domestic manufacturers and suppliers. This has led to the current situation, where every European state has distinct weapons systems.⁸⁶ European interoperability woes arise in part because there simply has not been a pan-European procurement framework in the past. One of the last areas in which countries are willing to pool sovereignty is military affairs. There are significant security advantages to keeping arms production domestic as there is no risk that the supply of arms can be cut off. Purely from an economic sense, however, the EU has the potential to save €26.4 billion by pooling their resources.⁸⁷ It is a matter of weighing the economic benefits of pooled resources with the security benefits of domestic arms production.

It can be argued that security and integration via procurement may be precisely what will keep the EU intact and secure. Not only is it fiscally wise to pool resources to more efficiently procure arms and conduct security-based R&D, it is also a strategic necessity. The alternative, in a world of increasing great power competition and eroding international norms, could be a less influential and ultimately less safe Europe. It is therefore in the interest of the EU to continue with the framework established by PESCO and expand upon it in the future, gradually broadening its scope to be more inclusive of larger projects. This will in turn allow Europe to catch up with the rest of the world in terms of arms procurement and technology.

Considering that military equipment typically remains in service for several decades, it should be understood that procurement is a matter of gradualism. PESCO is a very small step on the road towards capability expansion of the European Union. In regard to

⁸⁵ Airbus, "Airbus Helicopters Tiger to Get a New Set of Claws," September 27, 2018.

<https://www.airbus.com/newsroom/press-releases/en/2018/09/airbus-helicopters-tiger-to-get-a-new-set-of-claws.html>.

⁸⁶ European Parliament, "Infographic: MEPs Want to Boost European Defence by Increasing Cooperation," News, March 16, 2017, <https://www.europarl.europa.eu/news/en/headlines/security/20170310STO66196/infographic-meps-want-to-boost-european-defence-by-increasing-cooperation>.

⁸⁷ European Parliament, "Infographic."

military, the past several decades has been a period of unplanned European disarmament. In order to reverse this trajectory and increase military efficiency, EU Member State militaries should heed these recommendations.

Section Policy Recommendation

- ◆ Utilize the €13 billion which have been pledged through the EDF in an efficient manner, finding programs which have both a high chance of completion and strategic relevance.
- ◆ Increase the level of ambition of PESCO projects to foster better cooperation between small and large EU member states.
- ◆ Prioritize essential military equipment which is at least interoperable, such as battle tanks, armored personnel carriers, tanker aircraft and fighter jets.
- ◆ Increase overall procurement budget to fall between that recommended by the EDA (20%) and that of the United States (29%) to enable better defense procurement.

(2) Nuclear Deterrence

Melina Schmidt and Claire Tanaka

“We have no choice but to accept that we live in an imperfect world and to realistically and honestly face the problems which this brings. [...] Europeans must collectively realize today that without a legal framework, they could quickly find themselves at risk of another conventional and even nuclear arms race on their soil. They cannot stand by.”

— Emmanuel Macron

(2.1) Greater Autonomy Needed

In a shifting geopolitical landscape characterized by declining commitments to treaties, rising great power competition and uncertainty regarding the future of the North Atlantic Alliance, an EU consensus on the issue of a common nuclear deterrent is urgent. This debate is characterized by high degrees of political and historical sensitivity, complexity and division on both government and public levels, causing European leadership to turn a blind eye to the debate, and also leaves citizens with “a strong feeling of powerlessness, of inability to change the outcome”.^{88, 89} Overcoming these obstacles is vital, however, as the current security environment and lack of EU cohesiveness in nuclear deterrence lends to an uncertain and insecure future.

After the Cold War, international players agreed to combat the risks of proliferation while accepting only peaceful uses of nuclear energy. Two of the most significant treaties that enshrined these values were the Intermediate-Range Nuclear Forces Treaty (INF) of 1987 and the New Strategic Arms Reduction Treaty (New START) of 2010, bilateral agreements between the United States and Russia that capped nuclear weapons deployment. These two agreements helped curb nuclear competition and provide assurance that there would

⁸⁸ Manuel Lafont Rapnouil, Tara Varma, and Nick Witney, “Eyes Tight Shut: *European Attitudes towards Nuclear Deterrence*,” European Council on Foreign Relations, published December 2018, https://www.ecfr.eu/specials/scorecard/eyes_tight_shut_european_attitudes_towards_nuclear_deterrence.

⁸⁹ Benoît Pelopidas, *The Next Generation(s) of Europeans Facing Nuclear Weapons: Forgetful, Indifferent, but Supportive?* (EU Non-Proliferation Consortium Non-Proliferation Papers), 12, accessed March 1, 2020, <https://www.nonproliferation.eu/wp-content/uploads/2018/09/the-next-generation-s-of-europeans-facing-nuclear-57.pdf>.

not be a nuclear war or proliferation. Two agreements helped curb nuclear competition and provide assurance that there would not be nuclear war or proliferation.

However, these assurances are now being fundamentally tested. Russia has recently shown increased aggression westward and has changed its military strategy to put a heavier emphasis on its nuclear arsenal. Additionally, Iran has already begun moving to violate its commitments under the multilateral Joint Comprehensive Plan of Action (JCPOA), ushering in questions about a potential race towards nuclear proliferation in the Middle East. A coherent EU nuclear policy will be vital in addressing these risks and other factors that are contributing to an uncertain future for the European security environment.

For almost seventy years, Europe has been protected under the U.S. nuclear umbrella; however, the uncertainty of the future of the transatlantic Alliance has raised questions about this security guarantee. The Trump Administration has voiced concerns with American NATO membership and has, at times, expressed interest in leaving the Alliance. Europe should therefore contemplate the risk that it could lose the U.S. deterrent against Russia and other nuclear powers. Through collaboration and initiative, the EU has the ability to build a nuclear deterrent, and it is past time to begin discussing this crisis and possible remedies in earnest.

(2.2) The Need for a Nuclear Deterrent

The world is undergoing many geopolitical shifts, causing an erosion of global norms. Europe finds itself in the midst of this change, prompting questions of its security and defense reliability. The decline of nuclear arms treaties, changing Russian military strategy, trends of proliferation and uncertainties surrounding NATO all call on Europe to pursue an autonomous nuclear deterrent in order to reverse its increasingly precarious security position.

(2.2.1) The Decline of Arms Treaties

Upon its inauguration on December 8, 1987, the INF Treaty was considered a landmark in nuclear arms and non-proliferation negotiation. It successfully created a strict verification

regime and decreased the nuclear arsenals of the U.S. and Soviet Union.⁹⁰ It additionally demonstrated a consensus on the risks of nuclear war and a shared conviction towards a mutual obligation on disarmament as stated by Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).⁹¹ However, after much back and forth between the U.S. and Russia on suspected violations of treaty obligations, the U.S. formally withdrew on August 2, 2019.⁹² For Europe, this means a shift in military balance favoring Moscow and an increasingly uncertain security landscape as the limits on Russian proliferation decrease.⁹³

With the demise of the INF Treaty, New START is the only remaining nuclear arms control regime. If it expires on February 5, 2021 without an extension or replacement, both U.S. and Russian nuclear arsenals will no longer be restricted and the world may enter an age without treaties. This poses a significant threat to Europe. New START allows for predictability of the Russian force size and enhances security through its rigid verification regime and assured second-strike capability allowance.⁹⁴ Without these codes of restriction, Russia will no longer face any controls over enlarging, upgrading and deploying its nuclear arsenal.

(2.2.2) Russian Threat Perception

Russia is a growing threat for the European Union due to its geographic proximity, increasing nuclear capabilities and evolving nuclear doctrine. The 2018 U.S. Nuclear Posture Review found that “Russia has demonstrated its willingness to use force to alter the map of Europe and impose its will on its neighbors, backed by implicit and explicit nuclear first-use threats”.⁹⁵ Additionally, Moscow stationed nuclear-capable Iskandar missiles and completely reconstructed the ammunition storage facilities at Kaliningrad in

⁹⁰ Arms Control Association, “U.S.-Russian Nuclear Arms Control Agreements at a Glance,” last reviewed August 2019, <https://www.armscontrol.org/factsheets/USRussiaNuclearAgreements>.

⁹¹ U.S. Department of State, “Intermediate-Range Nuclear Forces Treaty (INF Treaty),” accessed January 27, 2020, <https://2009-2017.state.gov/t/avc/trty/102360.htm#text>.

⁹² Arms Control Association, “The Intermediate-Range Nuclear Forces (INF) Treaty at a Glance,” last reviewed August, 2019. <https://www.armscontrol.org/factsheets/INFtreaty>,

⁹³ Jacek Durkalec, “European Security without the INF Treaty,” NATO Review, published September 30, 2019, <https://www.nato.int/docu/review/articles/2019/09/30/european-security-without-the-inf-treaty/index.html>.

⁹⁴ Alexander Vershbow, “The Case for Extending New START,” Atlantic Council, published February 5, 2020, <https://www.atlanticcouncil.org/blogs/new-atlanticist/the-case-for-extending-new-start/>.

⁹⁵ Amy F. Woolf, 2020, *Russia’s Nuclear Weapons: Doctrine, Forces, and Modernization*, CRS Report No. R45861, (Washington D.C.: Congressional Research Service), <https://fas.org/sgp/crs/nuke/R45861.pdf>.

2018 and 2019, respectively.⁹⁶ This is especially significant because the missiles' alleged range is 500 km, which could reach Poland, Estonia, Latvia and Lithuania, and if equipped with the 9M729 cruise missile, would be able to reach the entirety of Europe.⁹⁷ Taken together with Moscow's first-use rhetoric and evident interest to lower the threshold for first use, these developments indicate that Russia hopes to counterbalance NATO overall conventional forces superiority.⁹⁸ Backed by a large nuclear arsenal, this assessment of Moscow's position should not be taken lightly.

Figure 6: Assumed Range of the New Russian Ground-Launched Cruise Missiles



Source: Pifer, Steven. "Multilateralize the INF Problem." Brookings, March 21, 2017.
<https://www.brookings.edu/blog/order-from-chaos/2017/03/21/multilateralize-the-inf-problem/>.

This shift in Russian military doctrine is exemplified by the conflicts in Georgia and Ukraine. The Russo-Georgian War, annexation of Crimea and separatist war in Donbas are considered to reflect the desire "to create buffer zones between the Russian Federation and the EU/NATO structures" by creating frozen conflicts in both countries, preventing them from joining the EU and NATO.⁹⁹ For Moscow, Ukrainian and Georgian attempts at

⁹⁶ Maria Domańska, et al., *Fortress Kaliningrad: Ever Closer to Moscow* (Warsaw: OSW Centre for Eastern Studies, 2019), 71, accessed February 8, 2020, https://www.osw.waw.pl/sites/default/files/Report_Fortress_Kaliningrad_net_0.pdf

⁹⁷ Domańska, et al., *Fortress Kaliningrad: Ever Closer to Moscow*, 74.

⁹⁸ Congressional Research Service, *Russia's Nuclear Weapons*, 4.

⁹⁹ David Matsaberidze, "Russia vs. EU/US through Georgia and Ukraine," *Connections: The Quarterly Journal* 14, no. 2 (2015): 81.

EU membership were seen as Western encroachment into its sphere of influence and something necessary to prevent.¹⁰⁰ This extension of Russian power through military means is an important consideration for a European security strategy, especially in the context of the current state of transatlantic relations and European deterrence.

In a hypothetical situation of a U.S. withdrawal from NATO, Russia would be able to radically redefine the security landscape of Europe in its favor. According to the 2019 Koerber “Policy Game”, after the U.S. withdrawal from the Alliance, Putin will step in and begin offering bilateral security and reinsurance treaties to European states.¹⁰¹ Without the security of the American nuclear umbrella or consensus among EU members on a common nuclear deterrent, the bilateralization of security will begin, resulting in the fragmentation of Europe and potential proliferation among European countries.¹⁰² While hypothetical, this risk, paired with Moscow’s shifting military and nuclear doctrine, provides a bleak outlook for Europe.

(2.2.3) Other Regions

In addition to Russia, there are several other countries that have nuclear arsenals or have hinted at developing one. While these countries do not pose the same threat to the European Union as Russia, it is important to understand them within the wider phenomenon of increasing potential proliferation.

Turkey and Iran have both signaled interest in nuclear weapons. In his September 24, 2019 address to the UN, President Erdogan of Turkey expressed that the power balance between Nuclear Weapons States (NWS) and Non-Nuclear Weapons States (NNWS) is inherently tipped towards NWS, while also expressing interest in obtaining nuclear weapons.^{103, 104} Iran additionally has a missile and nuclear program of intense proliferation concern as it is a volatile country, and its commitments under the JCPOA are in danger of

¹⁰⁰ Pezard, *European Relations with Russia*, 56.

¹⁰¹ Liana Fix, Bastian Giegerich, and Theresa Kirch, *European Security in Crisis: What to expect if the US withdraws from NATO*, (Hamburg: Körber-Stiftung, 2019), 4, accessed February 10, 2020, https://www.koerber-stiftung.de/fileadmin/user_upload/koerber-stiftung/redaktion/koerber-policy-game/pdf/2019/Koerber-Policy-Game_What-to-expect-if-the-US-withdraws-from-NATO.pdf.

¹⁰² Fix, Giegerich, and Kirch, *European Security in a Crisis*, 2.

¹⁰³ UN GAOR, 74th Sess., 3rd plen. Mtg., U.N. Doc A/74/PV.3 (September 24, 2019), 19, <https://undocs.org/en/A/74/PV.3>.

¹⁰⁴ Shannon Bugos, “Turkey Shows Nuclear Weapons Interest,” Arms Control Association, October 2019, <https://www.armscontrol.org/act/2019-10/news/turkey-shows-nuclear-weapons-interest>.

collapsing; Tehran has already reduced its commitments as a warning to Europe and the U.S. and has even threatened to withdraw from the NPT. Given the regimes involved and their vicinity to Europe, the possibility of a Turkish or Iranian nuclear weapon should be factored into a European defense strategy.

The phenomenon of proliferation of nuclear weapons, the expressed interest in obtaining them and the instability of the JCPOA are cause for concern that some states may more actively pursue nuclear weapons programs. The nuclear weapons of Pakistan, India, North Korea and, allegedly, Israel may be harbingers of a wider phenomenon of proliferation. In the Middle East, potential proliferation depends largely on the future of Iranian nuclear weapons.¹⁰⁵ Within this context, Saudi Arabia, the United Arab Emirates, Egypt and Turkey are all considered to be “most likely to go for a latent or actual nuclear weapons capability”.¹⁰⁶ While this is not certain, it is important to note due to the region’s proximity to the European continent and a general risk of proliferation in the case of the JCPOA’s demise.

(2.2.4) The Transatlantic Alliance and the EU Rebuilding Capability

During this time of treaty decline and rising Russian threat perception, the future of the transatlantic Alliance is uncertain. President Donald Trump has threatened to pull out of the Alliance because he feels the U.S. is disproportionately shouldering the financial burden.¹⁰⁷ While it is difficult to assess Trump’s threats, they inevitably prompt questioning of the credibility of the American nuclear deterrent, which has important implications for European security. Per the Brussels Summit Declaration issued in 2018, NATO is reliant on U.S. forward-deployment and nuclear sharing agreements, meaning it is reliant on the U.S. to provide its continental deterrent.¹⁰⁸ Without the U.S. guarantee, Europe would no

¹⁰⁵ Robert Einhorn and Richard Nephew, *The Iran Nuclear Deal: Prelude to Proliferation in the Middle East?* (Washington, D.C.: Brookings, 2016), 29, accessed February 10, 2020. https://www.brookings.edu/wp-content/uploads/2016/05/acnpi_20160531_iran_deal_regional_proliferation.pdf.

¹⁰⁶ Einhorn and Nephew, *The Iran Nuclear Deal*, 32.

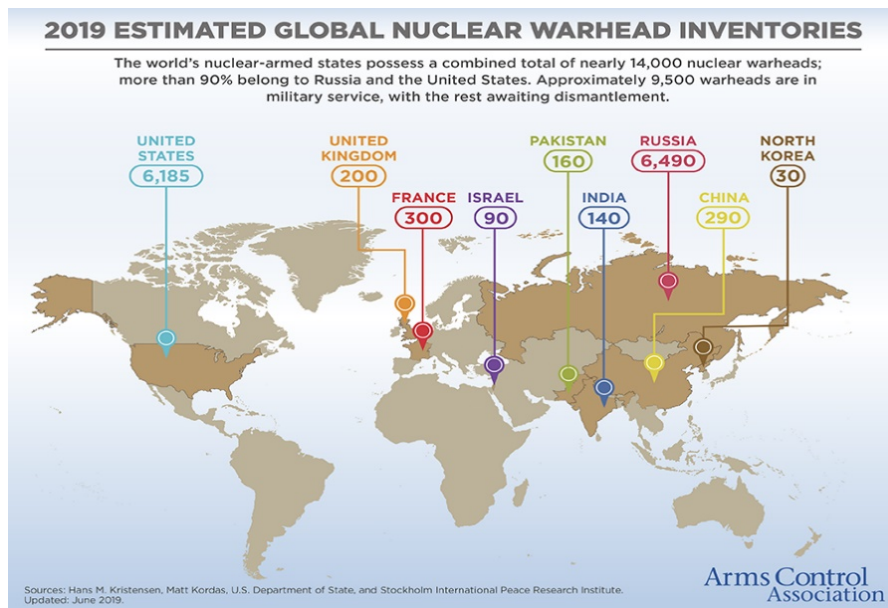
¹⁰⁷ Donald Trump and Jens Stoltenberg, “Remarks by President Trump and NATO Secretary General Stoltenberg After 1:1 Meeting,” London, December 3, 2019, <https://www.whitehouse.gov/briefings-statements/remarks-president-trump-nato-secretary-general-stoltenberg-11-meeting-london-united-kingdom/>.

¹⁰⁸ NATO, “Brussels Summit Declaration Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in Brussels, 11-12 July 2018,” July 11, 2018. https://www.nato.int/cps/en/natohq/official_texts_156624.htm.

longer have a deterrent against Russia. Given Russia's changing strategy, it will be important to address this issue in a timely manner.

NATO's challenges with nuclear deterrence have been exposed by the Ukraine crisis, namely the fact that Europe is not prepared for Russian nuclear operations.¹⁰⁹ The question that arises from the events of 2014 is whether or not NATO has enough weapons between its three nuclear weapons states (NWS) to effectively deter Russia, or if NATO should have "a clearer ability to fight a limited nuclear war" in order to prove its capabilities.¹¹⁰ The first question becomes more pressing in the event of a U.S. withdrawal from NATO. In addition, NATO is facing a lack of consensus, decline in quality of leadership and lax commitment to necessary sacrifices.¹¹¹ While this can be partially attributed to the wider geopolitical changes of the 21st century, it is important to note the transformation of the security environment it seeks to uphold and how it gives direction to a common European Union defense strategy.

Figure 7: Estimated Global Inventory of Nuclear Weapons in 2019



Source: "Nuclear Weapons: Who Has What at a Glance." Arms Control Association. July 2019.

¹⁰⁹ Jacek Durkalec, and Matthew Kroenig, "NATO's Nuclear Deterrence: Closing Credibility Gaps," *Polish Quarterly of International Affairs* 25, no. 1 (2016): 42.

¹¹⁰ Durkalec and Kroenig, "NATO's Nuclear Deterrence," 42.

¹¹¹ John Nomikos and A Th. Symeonides, "NATO and the Future, 2016: Five Questions and Answers," *The Polish Quarterly of International Affairs* 25, no. 1 (2016): 88.

(2.3) Autonomous Nuclear Deterrence

It is important for the security of the continent that all EU member states participate in discussion regarding a common EU nuclear deterrent. France, Germany, and the United Kingdom are all major players and face different challenges in this pursuit. However, they also possess unique assets that can benefit a common cause. At the moment, France is in possession of a powerful nuclear arsenal, Germany holds the necessary financial resources and political influence, and the UK, another powerful NWS, remains a NATO ally and still pledges to partner with the EU for security and defense related purposes. The EU would have to develop a common nuclear deterrent by increasing ambition and strategic collaboration.

(2.3.1) French Enterprise

After Brexit, France remains the only NWS in the EU. Exports of nuclear material and corresponding safety expertise constitute a significant share of French revenue streams, signaling that even political pressure may not offset the economic and strategic benefits of protecting the nuclear power industry. Historically, France has taken pride in retaining national control over its ability to strike – ‘force de frappe’ – and to this day remains outside of NATO’s nuclear planning group and similar fora.¹¹² At the same time, France has also experienced “huge delays and price overruns” in keeping nuclear power plants up-to-date.¹¹³ Paris’ unilateral decision in 1995 to resume nuclear and thermonuclear tests was met with harsh criticism and further highlights the unlikelihood of French nuclear defense policy to ever be fully integrated in the European Common Defense and Security Policy (CSDP).

There are nonetheless powerful reasons for France to share the financial, managerial, and ethical burden of nuclear armament with other member states. While the French have the expertise and experience required to create atomic weapons by themselves, it is the supply of fissile material that is the greatest challenge.¹¹⁴ Since it is not necessary for the

¹¹² Barbara Lippert, Nicolai von Ondarza, and Volker Perthes, “The Nuclear Question,” in *European Strategic Autonomy – Actors, Issues, Conflicts of Interests* (Berlin: SWP – German Institute for International and Security Affairs, 2019), 20.

¹¹³ Agence France-Presse, “French nuclear power plant is seven years late and costs have tripled” *The Local*, October 29, 2019, <https://www.thelocal.fr/20191028/french-nuclear-power-plant-is-seven-years-late-and-costs-have-tripled>.

¹¹⁴ Todd S. Sechser, “Nuclear security: The enduring challenge of nuclear weapons,” *Foreign Policy Association – Great Decisions* (2017), 106, accessed January 30, 2020, <https://www.jstor.org/stable/44215467>.

EU to develop a particularly large nuclear arsenal for deterrence purposes, it is “fundamentally conceivable” for France to ‘Europeanize’ and expand its existing arsenal by accepting financial contributions and procuring materials from other members of the EU and European Economic Area (EEA).¹¹⁵ As an alternative to conventional nuclear testing, which is extremely hazardous to populations and the environment, as well as provocative to other nations, advanced “simulation systems” may be used to ensure the reliability of the weapons.¹¹⁶ However, these technologies require significant funding and France has limited financial means.

Since Germany’s reunification in 1990, French presidents – Emmanuel Macron included – have shown themselves to be open to an approach toward collective nuclear responsibility. In France’s 2017 ‘Defense and National Security Strategic Review’, Macron notes that his country has already “laid the foundations for [Europe’s] strategic autonomy”, implying that other member states should contribute to advancing this idea. France’s Strategic Review identifies nuclear deterrence as the “cornerstone” of its defense strategy, which must be sustained in the long-term to protect Europe and its Western allies.¹¹⁷

To keep up with a world in where “nuclear multi-polarity” is emerging, European nations will need to show strength by pooling together critical resources.¹¹⁸ Jacques Chirac, President of France from 1995-2007, had justified nuclear tests with this European dimension in mind. Chirac claimed that a time would come in which the EU “might want the French deterrent to play a role in its security”.¹¹⁹ While suggestions have circulated that his comment could have been made to simply deflect criticism, they cloud the relevance of engaging in a nuclear debate today as the need for a common deterrent materializes. Moreover, the close bilateral relationship between France and Germany

¹¹⁵ Lippert, von Ondarza, and Perthes, “The Nuclear Question,” 20.

¹¹⁶ French Ministry of Armed Forces, *Defense and National Security Strategic Review*, Strategic Review Committee, Paris: 2017, accessed February 13, 2020.

¹¹⁷ French Ministry of Armed Forces, *Defense and National Security Strategic Review*.

¹¹⁸ Rapnouil, Varma, and Witney, *Eyes Tight Shut*, 3.

¹¹⁹ Stuart Croft, “European Integration, Nuclear Deterrence and Franco-British Nuclear Cooperation,” *International Affairs* 72, no. 4 (1996): 772, accessed January 30, 2020, <https://www.jstor.org/stable/2624121>.

cannot stagnate if the “momentum of the European construction” is to be carried into the future.¹²⁰

(2.3.2) German Initiative

A primary barrier to realizing a ‘Euro-deterrent’ is arguably the persistent lack of German popular support. Although Germany is technologically capable of producing atomic bombs, weapons of mass destruction remain taboo. The country has strictly and consistently renounced the manufacture, possession and command of nuclear weapons by the terms of the 2+4 Agreement and in accordance with the NPT.¹²¹ In an effort to move toward renewable energy sources and away from nuclear production, Germany has taken steps to “phase-out” nuclear energy. This is now in its final stages, with the pledge of shutting down all nuclear plants by 2022.¹²² This long-term movement toward renewable energy sources, known as ‘Energiewende’, complements the strong public reaction against nuclear power that has been ongoing since the 1970s, largely fueled by the Chernobyl and Fukushima disasters.¹²³ However, to entirely disregard the potential use of nuclear capabilities will put the country in a vulnerable position from a security standpoint if transatlantic relations continue to deteriorate or if other global nuclear powers attempt to intimidate the EU.

Not only is the German economy the largest in Europe, but it also wields the most political clout within the EU. However, Germany’s strength relies on a strong, resilient and integrated continent; an attack on the norms and values of the EU is a direct attack on Germany itself. For this reason, it is important for Berlin to accept a role of elevated leadership to protect its future. For the fourth consecutive year, Germany enjoyed the “world’s largest current account surplus” in 2019 with \$276 billion in savings.¹²⁴ Minister of

¹²⁰ Yves Boyer, “France and the European Security and Defense Policy: A leadership role among equals,” *Sicherheit und Frieden/Security and Peace*, Vol. 18, no. 2 (2011): 73. Accessed January 30, 2020, <https://www.jstor.org/stable/24231260>.

¹²¹ Michel Fortmann and Stephanie von Hlatky, “Nuclear Weapons in Today’s Europe: The Debate That Nobody Wants,” in *European Security since the fall of the Berlin Wall* (Toronto: University of Toronto Press, 2011), <https://www.jstor.org/stable/10.3138/j.ctt2ttk9m.7>.

¹²² Kerstine Appunn, “The history behind Germany’s nuclear phase-out,” *Clean Energy Wire*, January 2, 2018, <https://www.cleanenergywire.org/factsheets/history-behind-germanys-nuclear-phase-out>.

¹²³ Appunn, “The history behind Germany’s nuclear phase-out.”

¹²⁴ Rene Wagner and Thomas Seythel, “Germany to Run World’s Largest Current Account Surplus in 2019,” *Reuters*, September 13, 2019, <https://www.reuters.com/article/germany-economy-trade/germany-to-run-worlds-largest-current-account-surplus-in-2019-ifo-idUSL5N2641DF>.

Finance Olaf Scholz commented that this would allow Germany to seek additional avenues for foreign investment. Utilizing its advantageous economic position, Germany could help alleviate the financial burden on France without compromising its own national stance on denuclearization. However, it is critical for the country to also take on a role of political leadership to retain control over its resources, balance French power and market an autonomous nuclear policy to other member states. Although many member states remain highly skeptical of relying on fellow Europeans for defense, they could benefit from a strong German stance. Ultimately, the prospect of a Europeanized nuclear deterrent relies on the ability of member states to establish a higher degree of trust over the course of this decade.

To promote confidence between states, the EU would need to convince German leaders to sincerely engage in the nuclear debate and develop strategies that can create unity and understanding between Germany and smaller, less influential EU member states (e.g. Malta, Cyprus, Finland, etc.). Specifically, states who have been a part of the EU enlargement process may lack a fundamental sense of belonging. These member states may resist a common European nuclear deterrent for fear of lacking a voice in the decision-making process. Former Soviet satellite states (e.g. Poland, Bulgaria, etc.) may fear that a Euro-deterrent could provoke aggression from the East. A feasible option for Berlin to promote integration by cultivating greater mutual trust is to explore the role of ‘servant leadership’.¹²⁵ To be a ‘servant leader’, Germany should actively work towards balancing the conflicting interests of other EU members. There would be a need to create an effective platform and comfortable atmosphere for multilateral exchange, promote a middle ground in disputes and form alliances. Germany should also restrain some of its own national goals and interests to empower and represent states which find themselves on the EU’s periphery.¹²⁶ Essentially, it may need to invest more than others to ensure the success of the EU as a whole.

In 2016, German Minister of Defense Ursula von der Leyen initiated the publication of an updated ‘Weißbuch’ to guide the foreign policy of Germany and its allies for the coming years. The Weißbuch expresses explicit concern for the de-stabilizing consequences of

¹²⁵ Leon Mangasarian and Jan Techau, *Führungsmacht Deutschland – Strategie ohne Angst und Anmaßung* (Munich: dtv, 2017), 7.

¹²⁶ Techau, “The Servant Leader.”

the Arab Spring, the attempted 2016 coup d'état in Turkey and the Russian annexation of Crimea in 2014, and emphasizes the need for a stronger security policy, particularly in light of the suspension of German compulsory military service in 2011. It also acknowledges how the disadvantageous nature of fragmented, nationalized security policies across Europe add significant costs and strain on an already limited defense budget.¹²⁷ While it is strategically necessary to retain a certain extent of sovereign control over sensitive weaponry and key technologies, the German Ministry of Defense presents itself to be open to taking on greater responsibilities in the realm of a 'Europeanized' defense and deterrence policy.

Due to Germany's pacifist post-war constitution, its national psyche based on collective trauma and stringent compliance with international norms, it is significantly limited in its capacity to support the expansion of a European nuclear arsenal. German leaders appear to recognize that the nuclear debate can no longer be ignored and that a paradigm shift might be in order.¹²⁸ At this time, Berlin finds itself under extraordinary pressure to ensure internal and external harmony, domestic prosperity, and political freedoms.¹²⁹ It would also have to address the unwavering public enthusiasm for disarmament, even though the deteriorating relationship with the United States has already led Europeans to start imagining a world without the protection of a U.S. nuclear umbrella. It has become increasingly necessary for Germany to demonstrate the will to take on additional responsibilities within the EU framework, to contribute to collective European defense efforts that include a powerful deterrent and to initiate conversations with fellow member states to adequately represent their interests.

If done in a sensible and diplomatic manner, German initiative would create a positive synergistic effect of further European integration, stability, and security — an outcome that appeals to Germany's core interests above all else. It is evident that "European solidarity has gradually been eroding since the end of the Cold War", which can be considered an existential threat to the European Union as well.¹³⁰ Divided and defenseless, member states would only invite illiberal and nationalist nuclear powers to

¹²⁷ Techau, "The Servant Leader."

¹²⁸ Techau, "The Servant Leader."

¹²⁹ Leon Mangasarian and Jan Techau, *Führungsmacht Deutschland – Strategie ohne Angst und Anmaßung*, (Munich: dtv, 2017), 9.

¹³⁰ Von Hlatky and Fortmann, "Nuclear Weapons in Today's Europe," 84.

undermine the EU's efforts of fostering a more democratic, free, and peaceful continent. To make up for the vacancy left by the United Kingdom and doubts about America's commitment, a change in the status quo is simply unavoidable.

(2.3.3) British Collaboration

Britain is a strategically invaluable partner to the European Union. The size of the British nuclear arsenal is close to that of the French, making it a significant contributor to a possible European nuclear umbrella. The British decision to leave the Union underlines that it is now more important than ever to strengthen diplomatic ties with the UK, to foster a relationship of close cooperation and trust, and to negotiate a common nuclear policy. London has consistently supported the resumption of nuclear testing by France and reaffirmed its resolute commitment to the Franco-British nuclear alliance following Brexit.¹³¹ The 2010 Lancaster House treaties had already ratified a new defense relationship between the two nations that is “rooted in collaboration on nuclear weapons technology”.¹³² The treaties lay the foundation for the expansion of French capabilities and suggest that the pursuit of greater European nuclear autonomy is a mutual goal. At a time when experts evaluate the U.S.-UK's ‘special relationship’ to be at a “post-war low”, it is just as much in the British interest to avoid defense-related isolation by strengthening ties with its closest partner and working closely with the EU.¹³³

Although it will take time for additional agreements to be arranged, British politicians have already speculated that the UK could remain a part of the European Atomic Energy Community (EURATOM) for years to come. Switzerland joined EURATOM in 2014 as an associated participant, which is a route that London can pursue as well.¹³⁴ As the British stance toward the EU is developing in the coming years, EU leadership will need to assess the extent to which the UK can operate as its ally and partner. Potential avenues for the British to participate in a “special status” EU+1 security arrangement exist; however, this is an unlikely option for London to pursue and it would complicate the decision-

¹³¹ Richard G. Whitman, “The UK AND EU Foreign, Security and Defence Policy After Brexit: Integrated, Associated or Detached?” *Cambridge University Press: National Institute Economic Review* No. 238 (November 2016), R43-R50. Accessed February 10, <https://www-jstor-org.offcampus.lib.washington.edu/stable/44396753>.

¹³² Whitman, “The UK AND EU Foreign, Security and Defence Policy After Brexit.”

¹³³ Gideon Rachman, “US-UK relations: strains in the ‘greatest alliance’” *Financial Times*, July 12 2019, <https://www.ft.com/content/887e27f2-a486-11e9-974c-ad1c6ab5efd1>.

¹³⁴ Whitman, “The UK AND EU Foreign, Security and Defence Policy After Brexit.”

making process. In the past, the UK has frequently vetoed EU foreign policy initiatives and Brexit has mitigated the complexity of reaching consensus within the Union. Still, a British nuclear partnership would generate the greatest net benefit for EU member states and the security of Europe as a whole. The most realistic and favorable option is for the UK to remain an associated partner.¹³⁵ The EU should seek to imitate the EU-Norwegian relationship, in which the UK would not have a direct influence on EU foreign policy, but would abide by close cooperation and synchronization. It is vital for European leadership to pursue this goal of fostering a British alliance in order to support a common nuclear deterrent.

(2.4) Strategic Choices

The development of a common European nuclear deterrent with long term goals will require a joint and cohesive nuclear policy that is agreed upon by all actors and which employs a medium for all member states to express their interests. While it would be in the EU interest to continue to negotiate non-proliferation agreements through the NPT, it should also decide on a strategy that considers the funding and procurement of resources, the effective administration of operations, the establishment of necessary safeguards, and a method for crisis decision-making.

(2.4.1) Nuclear Policy: Diversification

A key component of deterrence is to prevent an enemy attack from destroying all nuclear warheads in one strike. For this reason, a diversified arsenal is crucial.¹³⁶ A nuclear triad in the U.S. or Russian style is unnecessary for defense purposes; a land-based deterrent may also evoke territorial disputes and public backlash. Additionally, nuclear warheads stationed in the Baltic region (e.g. near Finland, Kaliningrad Oblast and former Soviet satellite states) could beget a security dilemma. U.S. nuclear warheads stored within the borders of NATO's nuclear sharing states (Germany, Belgium, the Netherlands, Italy and Turkey) also demonstrate the inherent risks of, and insufficient rationale behind, land-based deterrents. Studies have shown that U.S. nuclear weapons stationed abroad do not actually fulfill a reliable role of deterrence, and are actually more harmful to strategic

¹³⁵ Whitman, "The UK AND EU Foreign, Security and Defence Policy After Brexit."

¹³⁶ Sechser, "Nuclear security," 112.

interests than beneficial. For example, the attempted military coup in Turkey threatened the air-base in which nuclear warheads were stored, even though there were not “any aircraft [...] capable of delivering them” if needed.¹³⁷ In light of these considerations, sea-based deterrents in the North Sea or Mediterranean would be ideal, including submarine-launched missiles, as they are difficult to locate and to destroy.

(2.4.2) Nuclear Policy: Operations

To cover the expenses of a ‘Europeanized’ nuclear arsenal, it will be necessary to increase the EU’s 2021-2027 financial budget for external action. For a larger budget to be a viable option, the EU should enact a form of taxation on member states. The tax may be proportional to the respective GDP per capita, in exchange for entitlement to nuclear participation and planning. To initiate any action, it is important to first create a medium that allows member states to reach a majority consensus. A constructive course of action would be to fund a study, research project or special task force to investigate and identify a suitable decision-making platform for a timely European crisis-response; fundamental innovation will be necessary to realize this goal. It is critical to develop an executive council or a similar platform as early as possible, as EU operations continue to lack the capacity to orchestrate divergent national interests during a collective security crisis that demands an immediate reaction (such as nuclear warfare).

Since the International Atomic Energy Agency (IAEA) only inspects civilian nuclear facilities, there will be a significant demand for the European Atomic Energy Community (EURATOM) to take on additional responsibilities and manage nuclear power plants intended for military use. Although it exists under the governing body of the EU, EURATOM remains legally independent from the EU Parliament, making the organization a durable asset in the event of a crisis. Its autonomy allows EURATOM to pursue a lasting agenda irrespective of domestic political changes and to operate without significant bureaucratic time delays. EURATOM should therefore expand its scope to execute, manage and supervise the process of material creation and to enforce operational safety standards.

¹³⁷ Sechser, “Nuclear security,” 113.

In addition, the ‘no-first-use’ (NFU) policy as outlined in the NPT should not be adopted, as doing so would eliminate the leverage that the EU acquires from a nuclear deterrent to deflect nuclear blackmail or other geo-political threats. However, the EU should commit to a policy of ‘utmost restraint’ to counter further international proliferation and arms races, while signaling defense as its primary objective.

(2.4.3) Nuclear Policy: Global Partnership

In order to negotiate future arms control agreements with nuclear powers and discourage proliferation, the EU should increase its commitment to global engagement through diplomatic missions. It is critical to strengthen communication and cooperation with NATO allies and other NWS, as well as with the United Nations Office for Disarmament Affairs (UNODA). While a moderate ‘Euro-deterrent’ would grant EU member states greater autonomy in their strategic planning and more leverage on the international playing field, it could not entirely substitute for the U.S.-led nuclear umbrella provided by NATO. The decline in nuclear arms control treaties has de-stabilized the global political environment to a point at which international relations ought to be prioritized to address conflicts of interest and foster positive multilateral ties.

(2.4.4) Final Note

The decision to consider autonomous nuclear deterrence capabilities is not easy. 2020 should mark the beginning of a lengthy and complicated debate that is nevertheless pivotal to the future of European security. As difficult and ambitious as the initial step may appear, European leaders and representatives – particularly of France and Germany – will have to find a way to start the conversation and navigate opposition. The EU can preempt future challenges by overcoming this inhibition to adapt to a changing geo-political climate. Through early investment in research and by encouraging member states to take on additional responsibilities, a foundation would be built that would not only support the necessary expansion of nuclear facilities, but it would also promote trust and further integration within the EU. It is collective responsibility and a cohesive decision-making procedure that will allow the Union to maintain its position as a ‘great power’ in the global arena.

Related Policy Recommendations

A common nuclear policy is necessary for a European deterrent to be effective. If the assumption is made that early inhibitions can be overcome and a productive conversation regarding autonomous nuclear deterrence can be launched by the EU's major players in the coming years, the following suggestions could form elements of a credible and attainable nuclear policy. To address these recommendations would be beneficial in realizing the goal of greater autonomy.

- ◆ Use existing French capacities to expand and enhance production of a competitive nuclear arsenal; 'Europeanize'.
- ◆ Increase EU's 2021-2027 financial budget for external action beyond Ursula von der Leyen's proposed 30% increase to fill Brexit budget gap and provide support in early stages of development.
- ◆ Negotiate a nuclear tax for member states by GDP/capita to cover costs of enlarged protectorate.
- ◆ Encourage Germany to take on greater responsibilities in the decision-making process of expanding autonomous deterrence through financial investment and organizational cooperation.
- ◆ Designate management, regulation and operational safety measures to a reformed EURATOM (European Atomic Energy Community); negotiate agreement with UK to remain in EURATOM for shared materials.
- ◆ Compartmentalize supply-chain to maintain checks and balances, to avoid security dilemma, and to encourage trade across member states; procurement only from EEA (European Economic Area) member states.
- ◆ Station sea-based deterrents (in North Sea and/or Mediterranean – not the Baltic Sea) to avoid territorial disputes and provocation by signaling purely defensive intent.
- ◆ Require majority vote for nuclear action; uphold NPT 'utmost restraint' policy.
- ◆ Work closely with the International Atomic Energy Agency (IAEA) to ensure safeguards against misuse and promote transparency.

- ◆ Engage in diplomatic missions to negotiate future arms control agreements with nuclear powers and discourage proliferation.
- ◆ Strengthen communication and cooperation with NATO allies and countries participating in nuclear sharing.

(3) Critical Infrastructure Protection and Resilience

Alexia Lin and Brenton Riddle

“Critical infrastructure is vital for the functioning of modern societies. Without reliable supplies of energy or predictable transportation, our current way of life would not be possible.”

— *European Commission Migration and Home Affairs*

(3.1) EU Critical Infrastructure Protection and Resilience State of Play

The EU faces a growing call for improved internal governance due to transnational threats that range from natural disasters to terrorism, managerial error and interstate aggression. A significant target for malign actors is critical infrastructure, which are assets that are vital for society to function.

The changing security environment requires the EU to expand its Critical Infrastructure Protection and Resilience (CIPR) policy to combat all malicious threats. While the EU currently applies an “all-hazards approach” with terrorism as the top priority to address critical infrastructure protection.¹³⁸ The past decade has been characterized by an increase in hybrid warfare in which malign actors apply political, physical and economical pressure on states. This beyond terrorism approach has been made more detrimental by the cascading effect wherein the whole Information Technology (IT) system is compromised by a vulnerability that spreads throughout the CI.¹³⁹ It is a growing belief that investment in Projects of Common Interest (PCI) will bolster EU security through establishing shared interest amongst MS. In the current state of European affairs, two key sectors, energy and transportation, have traditionally been the focus of security efforts. While other sectors such as health, food, water and finance have been added as areas that need protection, this chapter focuses on the CI sectors of energy, ICT and transportation because of their interconnectedness and importance. Updating the 2008

¹³⁸ Christer Pursiainen, “The Challenges for European Critical Infrastructure Protection,” *Journal of European Integration* 31, no. 6 (November 2009): 733, <https://doi.org/10.1080/07036330903199846>.

¹³⁹ Raphael Bossong, “Critical Infrastructure and Critical Information Infrastructure Protection: The New Frontier of EU Internal Security,” in *Challenges and Critiques of the EU Internal Security Strategy: Rights, Power and Security*, ed. by Maria O’Neill and Ken Swinton. (Newcastle upon Tyne, UK: Cambridge Scholars Publishing), 2017, 56.

directive to add crisis response capabilities that address cyber threats and cross-border extreme events would secure the EU against adversarial threats. As per the recommendation made in the 2019 European Commission's evaluation of the 2008 European Program for Critical Infrastructure Protection (EPCIP) directive, the EU's critical infrastructure (CI) security policy needs to be updated in the contemporary context of EU defense to ensure a safer Europe.¹⁴⁰

Case Study: NATO's Role in EU's CIPR

Article Three of NATO's treaty outlines that resilience and the capacity to resist and recover from adversarial aggression is a national responsibility.¹⁴¹ Additionally, NATO has indicated that continued operation of civil CI when the Alliance is under threat is essential for supporting military operations.¹⁴² As such, the resilience of the energy, communication and transportation sectors was highlighted in the seven baseline requirements for civil preparedness during the 2016 NATO Warsaw Summit. The increasing privatization of CI has led to a decrease in resilience, because the economic pressure for efficiency has eliminated redundancy and back-up plans.¹⁴³ Private ownership also makes it harder for NATO to obtain necessary access to CI during hostile scenarios.¹⁴⁴

NATO has supported cross-border coordination, cyber defense and information-sharing initiatives amongst countries to improve crisis response and resilience under the changing threat environment. An example of NATO's role in developing the EU's CIPR is the sponsorship of the 2016 tabletop exercise in Vilnius that promoted stakeholder dialogue.¹⁴⁵ NATO has also cooperated with the EU, especially in terms of infrastructure, through the EDA's Military Mobility Symposiums. In sum, robust CI resilience is essential to the collective defense of the Alliance. The EU should continue to foster the adoption of best CIPR practices in member states to improve NATO's capabilities to combat adversarial threats.

¹⁴⁰ European Commission, *Commission Staff Working Document Evaluation of Council Directive 2008/114 on the Identification and Designation of European Critical Infrastructures and the Assessment of the Need to Improve Their Protection*, SWD(2019) 308 final, July 23 2019, 44, 50, https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20190723_swd-2019-308-commission-staff-working-document_en.pdf.

¹⁴¹ North Atlantic Treaty Organization, "Resilience and Article 3," NATO, updated December 3, 2019, https://www.nato.int/cps/en/natohq/topics_132722.htm.

¹⁴² North Atlantic Treaty Organization, "Resilience and Article 3."

¹⁴³ North Atlantic Treaty Organization, "Resilience and Article 3."

¹⁴⁴ Jamie Shea, "Resilience: A Core Element of Collective Defence," NATO, updated March 30, 2016, <https://www.nato.int/docu/review/articles/2016/03/30/resilience-a-core-element-of-collective-defence/index.html>.

¹⁴⁵ Tiziana Melchiorre, *Recommendations on the Importance of Critical Energy Infrastructure (CEI) Stakeholder Engagement, Coordination and Understanding of Responsibilities in Order to Improve Security* (Vilnius: NATO Energy Security Centre of Excellence, 2018), 34, https://enseccoe.org/data/public/uploads/2018/04/d1_2018.04.23-recommendations-on-the-importance-of-critical-energy.pdf.

(3.2) Electricity

Functioning power grids underpin domestic livelihoods, industry, and national operations. Homes, factories and cars, are shifting to use more electrical sources as opposed to traditional combustive means. Furthermore, the European energy mix is seeing an overall increase in the share of renewable energy. The increased reliance on electrical energy requires heightened attention be directed towards the security of grids through resiliency and protective measures.

The EU's power grids are evaluated on the grounds of their security of supply. The *2016 European Union Agency for Network and Information Security (ENISA) Taxonomy Report* ranks threats that could disrupt the EU power grid. In this report, ENISA emphasized cyberattacks as the top concern because of the increased vulnerability of power grids associated with open network Information Technology.¹⁴⁶ A recent example reflecting the growing concern around cyber vulnerabilities is the 2015 infiltration of a Ukrainian Transmission System Operator (TSO) via IT (Section 3.4.3). Ultimately, the cyberattack halted electrical distribution for six months, impacting upwards of 225,000 people. The drastic ramifications associated with the disruption of power grid transmission lines and computer-operated systems is why major stakeholders must have a framework to continually address the threats posed to these systems.

To address concerns of security and resiliency, the EU has pushed towards increasing cross-border electrical interconnections and digitizing its power grids. Further cross-border energy integration and development lowers prices for electrical consumption and improves the resiliency of the overall electrical system by embedding Member States in an energy network where assistance can be better received when needed. As for grid digitization, trends towards smart devices and the use of open network Information Technology (IT) to improve system efficiency have implications for the European risk landscape that are not yet fully understood. The EU has taken a series of actions to address security concerns in these times of transition for power grid operations, including

¹⁴⁶ Rossella Mattioli and Konstantinos Moulinos, *Communication Network Interdependencies in Smart Grids* (Heraklion: European Union Agency for Cybersecurity, 2015), 6, <https://doi.org/10.2824/949547>.

the formation of ENISA in 2004, the TEN-E policy enacted in 2013, and the 2013 formation of High-Level Groups.

The risk-based and comprehensive approach of Europe to electrical energy management has made it effective to date. However, the overall scheme could be improved through streamlining processes and standardizing security efforts amongst Member States as to increase EU agility in its threat response.

(3.2.1) Implications of New Electrical Energy Management Technologies

Grid digitization is making grids more efficient. In the process of incorporating Internet of Things (IoT), a two-way communication is established between supplier and consumer, and the power grid becomes more decentralized making it better able to avert and recover in times of crisis. Grid digitization has drawn attention from EU Member States, because not only is it a means of meeting EU carbon regulations through increasing the capacity for integrating renewable energy, but it is also an opportunity to increase the security of operation for electrical infrastructure. The protection of smart grids is a matter of protecting customer data and preventing blackouts, power overloads, or even cascading effects that could cause a power outage across national borders.¹⁴⁷ Directed by the EU in 2014, given the technical changes as microgrids decentralized operations, ENISA was tasked with setting standards for smart grid cybersecurity.¹⁴⁸ After conducting its research and evaluations, ENISA determined that the outstanding differences existing amongst Member States served as too significant of a hurdle to create pan-European cybersecurity recommendations for smart grid technologies.¹⁴⁹ The initiative to address the need for uniform cybersecurity protections for smart grids has not been taken back up by the EU Commission.

Avoiding critical cascade effects should be an identified element of all EU proceedings in the energy sector. Loosely correlated with smart grid development, new control-flow and monitoring technology integrated in systems allows for near instantaneous action to be taken by Transmission System Operators (TSO) and Distribution System Operators (DSO)

¹⁴⁷ Mattioli and Moulinos, *Communication Network Interdependencies*, 6.

¹⁴⁸ European Union Agency for Cybersecurity, "Smart Grids," updated June 28, 2016, <https://www.enisa.europa.eu/topics/critical-information-infrastructures-and-services/smart-grids>.

¹⁴⁹ Hans Baars, et al., *Smart Grid Security Certification in Europe* (Heraklion: European Union Agency for Cybersecurity, 2014), 36, <https://doi.org/10.2824/36179>.

to isolate threat damage and avoid cascade effects. While control-flow technology may be a means of halting cascade effects, their prevalence on grid systems is still minimal and it remains unknown as to how cyber threats could infiltrate these technologies and override operations.¹⁵⁰ As explained later in Section 3.4.3, while the power grid system may improve its control of operations, the inherent use of open-network IT communication pathways still increases the risk exposure of grid systems, regardless of all internal software safeguards. Therefore, all future projects that incorporate IT into an energy-related system regardless of their association with a smart grid should continually be viewed with a degree of skepticism.¹⁵¹

(3.2.2) Grid Resilience Achieved Through Interconnection – Europe’s TEN-E Policy

Enacted in 2013, the EU’s TEN-E regulatory policies have been the backbone of directing cross-border electrical energy projects throughout Europe.¹⁵² The TEN-E policy was designed to promote the interdependence of MS through identifying and providing investment for Projects of Common Interest (PCI). PCIs are infrastructure-related projects that have mutual cross-border interest and gains which work toward the TEN-E initiative of MS interconnection.¹⁵³ In the first-wave of EU-supported PCIs in 2013, “of 248 projects, 137 were in electricity, including 52 electricity interconnections, out of which 37 projects involved MS that [had] an interconnection level below 10%”.¹⁵⁴ In this context, the TEN-E policy seeks to promote the security and resilience of Europe’s power grids and to reduce transmission barriers for the internal energy market. The target outlined in the TEN-E policy called for all MS to achieve 10% interconnection of their grids with Europe’s internal energy market by 2020, and 15% interconnection by 2030.¹⁵⁵ The benefit of regional

¹⁵⁰ Lars Fischer, et al., *Study on the Evaluation of Risks of Cyber-Incidents and on Costs of Preventing Cyber-Incidents in the Energy Sector*, Ecofys, October 2018, 11, https://ec.europa.eu/energy/sites/ener/files/evaluation_of_risks_of_cyber-incidents_and_on_costs_of_preventing_cyber-incidents_in_the_energy_sector.pdf.

¹⁵¹ Fischer et al., *Study on the Evaluation of Risks of Cyber-Incidents*, 3-7.

¹⁵² European Commission, *Communication on Strengthening Europe’s Energy Networks*, COM (2017) 718 final, EUR-Lex, November 23, 2017, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52017DC0718>.

¹⁵³ The European Parliament and the Council of the European Union, *Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on Guidelines for Trans-European Energy Infrastructure*, L 115/39, EUR-Lex, 41, April 17, 2013. <http://data.europa.eu/eli/reg/2013/347/oj>.

¹⁵⁴ *Building the European Energy Union*, (Rome: The European House - Ambrosetti S.p.A, 2015), 46, http://www.ambrosetti.eu/wp-content/uploads/Building-the-European-Energy-Union_Full-Report_ENG.pdf.

¹⁵⁵ European Commission, *COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL Achieving the 10% Electricity Interconnection Target Making Europe’s Electricity Grid Fit For 2020*, COM(2015) 82 final, EUR-Lex, May 25, 2015, 15, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2015%3A82%3AFIN>.

cooperation and grid interconnection is a more reliable and resilient electrical grid, also capable of providing lower wholesale electricity prices to a greater number of consumers.¹⁵⁶

Following a 2015 revisit to TEN-E policy, the EU sought to further improve regional cooperation on power grid development. At this time, *Four High Level Groups* had been identified as critical clusters for fostering further regional cooperation around development and risk mitigation efforts. The four High Level Groups of the EU's TEN-E initiative include the Baltic Energy Market Integration Plan (BEMIP), Interconnection for South-West Europe, Central South-Eastern Energy Connectivity (CESEC) and the North Seas Energy Cooperation. Great gains have been made within High-Level Groups, including the INELFE project between Spain and France that doubled electrical interconnectivity and the Nordbalt link between Sweden and Lithuania (700 MW capacity).¹⁵⁷

The reality of cross-border infrastructure operations requires more coordination between member states, specifically on the fronts of risk mitigation and crisis response. Despite EU funding, barriers still exist in cross-border collaboration due to differing managerial styles and countries' unwillingness or inability to invest considerable funds in Cross-Border Collaboration Allocation (CBCA) – a common theme reflected both here and in the case of ENISA struggling to create a universal certification scheme for smart grids (Section 3.2.1). In this area, there is potential for the future creation of an EU-sponsored toolbox that aids in the facilitation of multilateral cooperation and the reconciliation of national approaches during the interconnecting process. The agility of the EU in navigating crisis circumstances can be improved in an ever-changing landscape of power grid technology by setting dates to regularly revisit strategies and standards.

(3.2.3) Looking to the Future

The biggest threat facing European power grids comes from cyberspace, rather than overt physical forms of aggression from malicious actors. Both cyber and physical damages to existing power grid infrastructure can overload systems and result in wide-

¹⁵⁶ European Commission, *Achieving the 10% Electricity Interconnection Target*, 3-4.

¹⁵⁷ European Commission, *Communication on Strengthening Europe's Energy Networks*, 4-5.

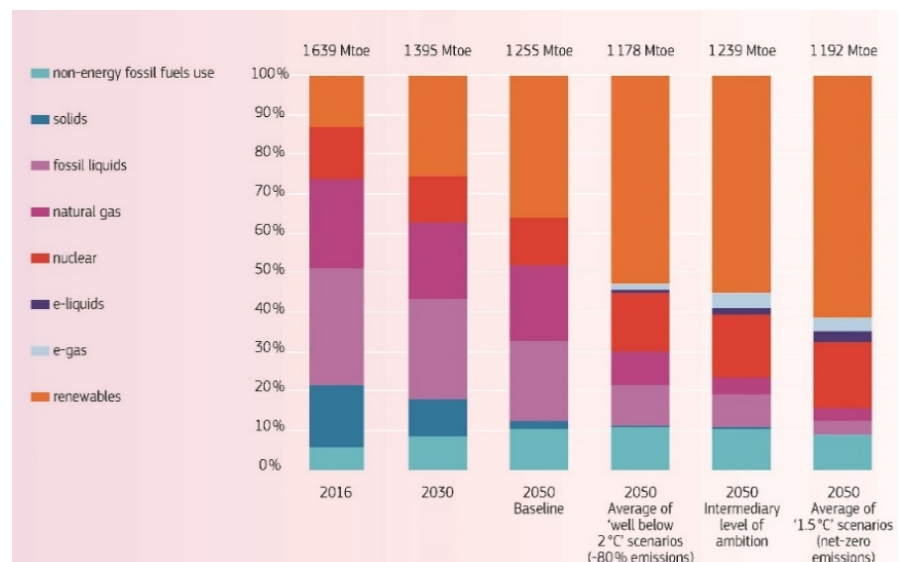
ranged collapse of a power grid in the case of the cascading effect. As such, the EU must keep a risk-based and comprehensive approach as it moves towards digitizing its grids. Security of supply should remain the top priority in future procedures. Furthermore, the EU should continue building resilience through interconnecting MS electrical infrastructure by channeling more resources towards cross-border cooperation. Given further research and development, the incorporation of new control-flow monitor technology and cyber defensive devices throughout power grid networks also function as a means of improving system security. By outlining better regulatory practices for all MS, Europe will improve its ability to protect against future attacks.

(3.3) Gas/Oil

As Figure 8 illustrates, the EU's energy mix is dominated by non-renewable energy sources. Lacking domestic production and reserves, the EU is heavily dependent on gas/oil imports to fulfill its energy demands. Considering the CIPR diversification principle,

the EU should secure its gas/oil supplies by expanding and integrating its pipeline facilities. The other principal approach of gas and oil CIPR is for the EU to wean itself non-renewable energy sources to meet its 2050 carbon neutral goal and move towards a state of stronger energy autonomy.

Figure 8: Gross EU Inland Consumption of Energy



Source: Directorate-General for Climate Action, European Commission, *Going Climate-Neutral by 2050*. Luxembourg, 16 July 2019, 10, fig. 1, <https://doi.org/10.2834/02074>.

(3.3.1) Gas and Oil Supply Dependency on Russia

The EU has historically been dependent on external gas sources through long-term bilateral contracts from foreign companies, especially from Russia.¹⁵⁸ During the Cold War, stability was guaranteed because the Soviet Union sacrificed its domestic energy security to uphold European gas contracts.¹⁵⁹ However, Russia has now indicated that supplying to its domestic market will be prioritized over providing to external customers.¹⁶⁰ It is noteworthy that Central and Eastern European MS have been more vulnerable to their large neighbor because of their historical connections to the Soviet Union.¹⁶¹ Nonetheless, experts worry that Russia has a strategic advantage over the whole EU.¹⁶² Given the member states' dependency on Russian gas, the EU should consider strengthening its relationships with other gas supplying countries.

Due to easier transportation and storage, oil supply alternatives are becoming more readily available. The EU maintains 120 days of oil stocks, which is beyond the International Energy Agency's 90 days requirements to combat possible shocks.¹⁶³ Security of oil supply is therefore easier to achieve in comparison to guaranteeing gas provision. Nevertheless, lacking self-sufficient reserves, the EU relies on global markets for oil to serve its energy demands. In particular, the MS are reliant on oil imported from Russia, Norway and OPEC nations.¹⁶⁴ However, Europe's dominant indigenous production of oil in Norway has been decreasing, which will make the EU increasingly dependent on external sources.¹⁶⁵

¹⁵⁸ Per Hogselius, et al., *The Making of Europe's Critical Infrastructure: Common Connections and Shared Vulnerabilities*, Houndmills, Basingstoke, U.K.: Palgrave Macmillan, 2013, <https://doi.org/10.1057/9781137358738>.

¹⁵⁹ Per Hogselius et al., *The Making of Europe's Critical Infrastructure*, 25.

¹⁶⁰ Laura Solanko, and Pekka Sutela, "Too Much or Too Little Russian Gas to Europe," *Eurasian Geography and Economics* 50, no. 1 (January 2009): 72, <https://doi.org/10.2747/1539-7216.50.1.58>.

¹⁶¹ Philipp M. Richter, and Franziska Holz, "All Quiet on the Eastern Front? Disruption Scenarios of Russian Natural Gas Supply to Europe," *Energy Policy* 80 (May 2015): 178, <https://doi.org/10.1016/j.enpol.2015.01.024>; Solanko, and Sutela, "Too Much or Too Little Russian Gas to Europe," 69.

¹⁶² Duane Verner, Agnia Grigas, and Frederic Petit. *Assessing Energy Dependency in the Age of Hybrid Threats* (Helsinki, Finland: The European Centre of Excellence for Countering Hybrid Threats, 2019), 12, https://www.hybridcoe.fi/wp-content/uploads/2019/02/Assessing_Energy_Dependency_in_the_Age_of_Hybrid_Threats-HybridCoE.pdf.

¹⁶³ Eckart Woertz et al., *The EU's Energy Diplomacy: Transatlantic and Foreign Policy Implications* (Brussels: European Parliament, 2016), 75, <https://doi.org/10.2861/203159>.

¹⁶⁴ Woertz et al., *The EU's Energy Diplomacy*, 44.

¹⁶⁵ Woertz et al., *The EU's Energy Diplomacy*, 75.

(3.3.2) Exploring Alternative Gas Pipelines

Technical CIPR analyses have indicated risks of dependency and disjointed energy transit for the EU, especially if long-term disruptions were to occur. An EU funded study found that current EU capabilities would be able to meet the various projected consumption demands of 2030, even under disruptions in some pipelines.¹⁶⁶ However, the shutdown scenarios did not include one in which Russian gas is cut off by malign state actors. Furthermore, the Joint Research Centre's ProGasNet modeling approach discovered system vulnerabilities due to heterogenous and disconnected transit systems across MS.¹⁶⁷ To counter these shutdown scenarios, the EU has been exploring supply alternatives to reduce dependency on Russian gas. Establishing supply alternatives will minimize damage from malicious threats, and help the EU strengthen ties with additional natural gas producing countries. By 2030, the EU should have long-term bilateral gas supply contracts with multiple countries beyond Russia to address energy transit risks.

Security of supply could also be assured through diversification. The EU high-level groups have proposed the establishment of LNG regasification terminals to further connect the continent to the international liquid gas market. Scholars have noted that the U.S. will become a net exporter of LNG in the near future,¹⁶⁸ therefore, the EU could benefit from increasing LNG gas trade with the U.S. and move away from traditional gas transportation methods.¹⁶⁹

The EU could also look towards North Africa and Central Asia as strong alternative import sources for the diversification of its gas supply.¹⁷⁰ Figure 9 illustrates the various planned gas pipelines from external sources that will provide the EU with gas. The Trans Anatolian Pipeline and the Trans Adriatic Pipeline, which tap Central Asian sources, were stressed as crucial projects that would reduce the EU's reliance on Russian gas.¹⁷¹ Overall, it

¹⁶⁶ *An Updated Analysis on Gas Supply Security in The EU Energy Transition* (Paris: Artelys Optimization Solutions, 2020), 17-18, <https://www.artelys.com/wp-content/uploads/2020/01/Artelys-GasSecurityOfSupply-UpdatedAnalysis.pdf>.

¹⁶⁷ Thierry A. Mara et al., *Security of Gas Supply with the ProGasNet Simulator: An Uncertainty and Sensitivity Analysis Exercise*. (Luxembourg: Publications Office of the European Union, 2017), 28, <https://doi.org/10.2760/818537>.

¹⁶⁸ Richter and Holz, "All Quiet on the Eastern Front," 178.

¹⁶⁹ Woertz et al., *The EU's Energy Diplomacy*, 38.

¹⁷⁰ Richter and Holz, "All Quiet on the Eastern Front," 179.

¹⁷¹ Woertz et al., *The EU's Energy Diplomacy*, 75.

appears to be in the EU's interest to improve LNG import capacities and cultivate alternative gas sources to combat the threat of Russian supply disruption.

Figure 9: Existing or Planned Natural Gas Pipelines from Russia to Europe



Source : 5ème Gauche for Planète Énergies, 26 September 2019,
<https://www.planeteenergies.com/en/medias/infographics/gas-pipelines-eu-russia-relations>.

(3.3.3) Securing Energy Supply Through Renewable Energy Investments and Protecting Pipeline Transit

Despite these alternatives, diversification of hydro-carbon energy sources would only be a short-term CIPR solution. It is not optimal for the security of the European Union's CI to be fully dependent on external energy supplies. Given that adversarial threats could target energy CI and cause disastrous disruptions, the EU should focus on transitioning to renewable energy sources. Becoming self-sufficient to fulfill domestic energy demand will elevate EU CIPR into a more secure position. Overall, the EU should wean itself off of non-renewable energy sources such as gas and oil with the intention of meeting its 2050

carbon neutral goal and move towards a state of stronger energy autonomy through diversification.

Third party interference, particularly through cyberattack, is another malicious threat to the security of gas and oil supply. Despite the deployment of industrial control systems (ICS), all energy transit pipelines are susceptible to hacking by malicious actors because energy CI's are increasingly reliant on open IT networks for operation. Thus far, pipeline security measures have not extended beyond preventing accidental leakage and theft to address the ongoing digitalization of CI. In addition to sabotage, pipeline operations may also be disrupted by ransomware and hybrid threats. Thus, in order to prevent cyberattacks, the EU should develop and implement ICS security measures that will better prepare energy CI pipeline operators to combat malicious interference in pipeline networks.

Due to limited indigenous production, the EU will be dependent on external energy sources for years to come. The EU should update the directive to promote security of supply by shifting to renewable energy sources. The EU should encourage MS to engage in conversations about bilateral contracts with multiple countries beyond Russia. Funding LNG terminals will further increase the security of gas supplies. The capacity to fulfill all internal energy demands will increase the resilience and the security of the EU. In addition, pipeline transit systems, which are commonly a complex mixture of legacy hardware and new IT software, require more EU direction for the adoption of CIPR best practices. With the increasing development of alternative fuel sources and electricity generation methods, the EU should consider establishing CIPR best practices for all forms of energy transit by 2030. Cyber threat detection and prevention for energy transportation should be emphasized to a greater degree in an updated CIPR directive.

(3.4) Cyber Risks of Information and Communication Technology

The increasing use of information and communication technology (ICT) is happening at a rapid rate, requiring attention be given from all members of the European Union. Several expert groups have raised concerns over the compromise and the disruption of digital systems during the transitioning to new state-of-the art technology such as 5G networks, artificial intelligence and smart grid devices. The move from old to new digital

infrastructure carries high cybersecurity risks that require continuous maintenance and monitoring.

Recognizing the scope of possible disruption caused by the cyber infiltration of ICT systems, the EU has worked to position itself in a state of agility that can readily address arising security concerns. The European Union's ability to adapt to the threat landscape is reflected in its creation of the European Union Agency for Network and Information Security (ENISA) as a pan-European cybersecurity organization, the work associated with its Critical Information Infrastructure policy and the issuing of an official EU 5G toolbox. However, an opportunity still exists to refine the process for addressing the active cyber threat landscape in a way that tailors future policy efforts to better fitting the security needs of large targets — including Member States, organizations, and private enterprises. This can be done through improving communication channels that allow affected and vulnerable parties to provide feedback and highlight concerns to ENISA.

(3.4.1) Cyber-Related European Agencies and Programs

ENISA has been the EU's primary actor in protecting MS cyber systems, private enterprises and citizens, and in addressing the dynamic cyber threat landscape since 2004.¹⁷² In the past 15 years, ENISA has become responsible for the execution of pan-European Cybersecurity Exercises, formulating National Cybersecurity Strategies, and overseeing Computer Security Incident Response Teams (CSIRTs).¹⁷³ After the 2019 passage of the Cybersecurity Act, ENISA became additionally responsible for designing “European cybersecurity certification schemes” to maintain the integrity of the Digital Single Market when new products and services entered. The centralized authority in ENISA over standard-setting in the European Union reflects unified interest in securing ICT and the cross-border nature of network technology.

Cybersecurity was first addressed directly in an EU policy in the 2016 Network and Information Systems (NIS) Directive. The European-wide directive served as a mandate to all MS to adopt national legislation detailing a stance on NIS that is in accordance with pan-European standards set by ENISA. It is important to recognize that the NIS Directive

¹⁷² European Union Agency for Cybersecurity, “About ENISA,” updated February 10, 2020, <https://www.enisa.europa.eu/about-enisa>.

¹⁷³ European Union Agency for Cybersecurity, “About ENISA,”

has three parts: national capabilities, cross-border collaboration and national supervision of critical sectors.¹⁷⁴ The NIS directive recognizes that within the EU, different MS have radically different capabilities and protections in place for cybersecurity. The intent behind mandating MS to set national standards that are compliant to EU expectations as well as calling for cross-border collaboration is to resolve drastic differences and patch up blatant risk vulnerabilities.

(3.4.2) Landscape of Cyber Threats

Prior to ICT, the main concern of the EU and its MS was preventing physical threats. Now, a growing focus is being placed on threats seeking to disrupt operations through targeting the internal operations of computing systems and networks. The daily use of ICT in most European activities increases the likelihood of future hybrid offenses on the front of cyber warfare. The ability to disrupt government and business operations through the

Figure 10: Comparing the 2018 and 2017 Threat Landscapes

Top Threats 2017	Assessed Trends 2017	Top Threats 2018	Assessed Trends 2018	Change in ranking
1. Malware	↔	1. Malware	↔	→
2. Web Based Attacks	↗	2. Web Based Attacks	↗	→
3. Web Application Attacks	↗	3. Web Application Attacks	↔	→
4. Phishing	↗	4. Phishing	↗	→
5. Spam	↗	5. Denial of Service	↗	↑
6. Denial of Service	↗	6. Spam	↔	↓
7. Ransomware	↗	7. Botnets	↗	↑
8. Botnets	↗	8. Data Breaches	↗	↑
9. Insider threat	↔	9. Insider Threat	↘	→
10. Physical manipulation/ damage/ theft/loss	↔	10. Physical manipulation/ damage/ theft/loss	↔	→
11. Data Breaches	↗	11. Information Leakage	↗	↑
12. Identity Theft	↗	12. Identity Theft	↗	→
13. Information Leakage	↗	13. Cryptojacking	↗	NEW
14. Exploit Kits	↘	14. Ransomware	↘	↓
15. Cyber Espionage	↗	15. Cyber Espionage	↘	→

Legend: Trends: ↘ Declining, ↔ Stable, ↗ Increasing
Ranking: ↑ Going up, → Same, ↓ Going down

Source: Sfakianakis, Andreas, Christos Douligeris, Louis Marinos, Marco Lourenço, and Omid Raghimi, ENISA, European Union Agency for Cybersecurity, *ENISA Threat Landscape Report 2018 15 Top Cyberthreats and Trends*, Heraklion, January 2019, 9, table 1, <https://doi.org/10.2824/622757>.

¹⁷⁴ The European Parliament and The Council of the European Union, *DIRECTIVE (EU) 2016/1148 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 July 2016 Concerning Measures for a High Common Level of Security of Network and Information Systems Across the Union*, L 194/1, EUR-Lex, July 19, 2016, <https://eur-lex.europa.eu/eli/dir/2016/1148/oj>.

interception of communications, compromising of critical infrastructure and data manipulation grows in direct relation to the further integration of ICT into key operations.

Figure 10 reflects a trend toward threats of greater effectiveness and sophistication. Within the field of cybersecurity, there is considerable concern about malign state actors, namely Russia, and the emergence of advanced hackers that can perform effective cyberattacks against European technologies and their defenses. The ENISA graphic and its related report are based on data compiled from publicly accessible data networks from Member States, companies, and organizations. However, there is room for improvement in how ENISA characterizes threats in yearly reports and identifies possible perpetrators. If MS and private enterprises were incentivized to share private data and concerns with ENISA, that are otherwise not publicly accessible, ENISA could improve its ability of accurately addressing the threat landscape.¹⁷⁵

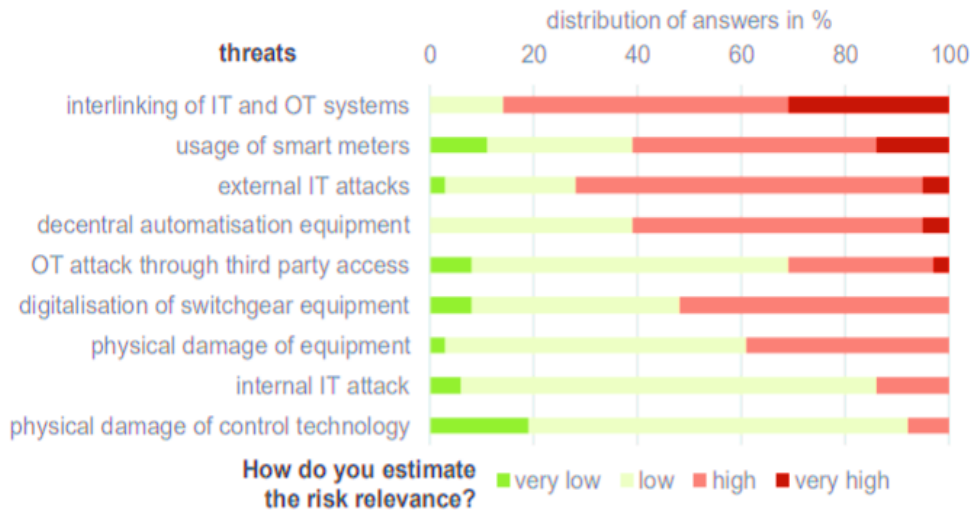
(3.4.3) Trends in Electrical Infrastructure and Cyber Threat Implications

Technological improvements have enabled efficiency and load balancing across power grid systems and gas pipeline networks. These developments, namely sensors, monitors and control-flow technology, upend conventional operation processes and decentralize overall system functions. In 2017, it was predicted that over 80 billion USD per year would be saved in direct power system infrastructure efficiency with the transition to a digitized grid, further reflecting both the economic and operational advantages that come from digitizing electrical infrastructure.¹⁷⁶

¹⁷⁵ Hermeneut. "How to Better Assess Vulnerabilities and Protect Company Assets from Cyberattacks?" Shaping Europe's Digital Future, European Commission, February 12, 2020. <https://ec.europa.eu/digital-single-market/en/news/how-better-assess-vulnerabilities-and-protect-company-assets-cyberattacks>.

¹⁷⁶ Fischer, et al., *Study on the Evaluation of Risks of Cyber-Incidents*, 10.

Figure 11: Estimation of Risk Relevance as Regarded by German Distribution System Operators



Source: Fischer et al., Ecofys, *Study on the Evaluation of Risks of Cyber-Incidents and on Costs of Preventing Cyber-Incidents in the Energy Sector*, 30 October 2018, 12, figure 6,

An important distinction in electrical infrastructure is the difference between Information Technology (IT) and Operational Technology (OT). OT comprises of the physical structures (monitors, sensors, and screens) and their control mechanisms, all of which run on closed, secure networks with limited access. Alternatively, IT systems function on software-based open networks to manage data and information, (email, cloud computation, and document sharing platforms). While there has been an emphasis in R&D in order to enhance IT systems security, these systems are inherently more vulnerable to cyber threats because of exposure and accessibility associated with open network operations. When asked in a survey to report the threats facing their operations, German Transmission System Operators (TSOs) overwhelmingly reported cyber-related risks connected to IT, as reported in Figure 11. However, this does not mean the transition towards IT, designed to increase the efficiency of energy consumption and demand-side management, is not favorable to those in the energy sector. Rather, the opinion of the German TSOs points to the inherent vulnerabilities that must be addressed in the convergence of Information Technology with Operational Technology (OT).

Case Study: 2015 Cyberattack on a Ukraine Distribution System Operator

The Ukrainian power grid faced a power outage affecting a predicted 225,000 customers in December 2015.¹⁷⁷ The outage that targeted the Ukrainian regional electricity distribution company, Kyivoblenergo, was the result of an illegal third-party malware infiltration using IT means.¹⁷⁸ This infiltration gave the perpetrators disruptive abilities for a 6-month period in which they disconnected seven 110 kV and twenty-three 35 kV substations.

The response to the 2015 outage was a unified European response in a call for increased resilience within energy industry supply chains and the coordination of public-private partnerships towards contracts with similar resilience goals. Despite the risk mitigation efforts, a similar cyberattack was successfully conducted against the Ukraine power grid again in December 2016. Ukraine later went on to determine that Russian security services had orchestrated the blackout.

This attack on Ukraine's power grid reflects the risk posed in converging operational technology (OT) and Information Technology (IT).

In its commission and directing of ENISA, the EU Commission has worked on many fronts to develop a universal mitigation strategy but has faced challenges in addressing regional vulnerabilities of critical infrastructure with a pan-European policy.¹⁷⁹

(3.4.4) Increasing EU Agility in Time of Rapid Technological Development

With the increasing use of 5G networks and Artificial Intelligence (AI) as part of large grids and networks, the pathways that open for cyberattacks against ICT are more prevalent and more difficult to forecast accurately. Additionally, the privacy and safety concerns of cellular-using citizens increases with technological advancements. Without the development of security and protection measures to counter the vulnerabilities of such emerging systems, cyber and data risk exposure is much higher in the context of increasing the use of network and information pathways. The best path forward for the European Union would include the funding of several R&D initiatives aimed at further

¹⁷⁷ Fischer et al., *Evaluation of Risks Cyber-Incidents*, 20.

¹⁷⁸ Robert M. Lee, Michael J. Assante, and Tim Conway, *Analysis of the Cyber Attack on the Ukrainian Power Grid*, Washington D.C.: SANS and the Electricity Information Sharing and Analysis Center, 2016, https://ics.sans.org/media/E-ISAC_SANS_Ukraine_DUC_5.pdf.

¹⁷⁹ European Commission, *Communication on Strengthening Europe's Energy Networks*, section 4.

safeguarding IT operations, in addition to a risk-based comprehensive design for ENISA's certification scheme in the upcoming year that accounts for system vulnerabilities.

5G poses risks that must be addressed in the upcoming decades. As put forth by ENISA, threats related to 5G networks include possible outages, physical attacks and nefarious cyber activity.¹⁸⁰ In January 2020, the European Union released its 5G Toolbox to preemptively address uncertainty presented by 5G networks. By April 30, 2020, member states will have to produce a statement compliant with the EU Toolbox that describes the future of their telecommunication market practices. This political push comes days after Britain's decision to grant 35% market entry to the Chinese company, Huawei. The 5G Toolbox aims to mitigate security risks and outline standards for future member state telecommunications conduct, ultimately giving member state countries the choice whether to allow telecommunication giants like Huawei to enter their market. The threat landscape created by 5G must be constantly evaluated in the upcoming decade as infrastructure is further constructed within European borders.

The NIS Directive reflects European awareness of the need for cross-border cooperation when it comes to maintaining integrity of ICT and critical infrastructure systems. To date, ENISA has been the primary agency to spearhead efforts and follow-through on directives pushed by the EU. With the increased authority put in ENISA as the agency tasked with overall European cyber protection, more effort should be put towards further consolidating cyber-related work within the Union as to avoid overlap. The European Commission should consider opening a secondary headquarters for ENISA in Western Europe for stronger regional distribution of expertise and better tailored solutions.

(3.5) Transportation

The transportation sector faces many overlaps between EU and international industrial regulations on security and defense. However, MS have not accounted for the cross-border vulnerabilities caused by increasing integration in this sector. Given the transnational ambition of Horizon 2020 (H2020) projects, the EU needs to utilize a

¹⁸⁰ Marco Lourenco and Louis Marinos, *ENISA Threat Landscape for 5G Networks: Threat assessment for the fifth generation of mobile telecommunications networks (5G)*, (Heraklion: European Union Agency for Cybersecurity, 2019), <https://www.bgp4.com/wp-content/uploads/2019/11/ENISA-threat-landscape-for-5G-Networks.pdf>.

security-by-design CIPR approach to address potential threats to these wide-reaching transportation networks.

(3.5.1) Road and Rail Vulnerability

In 2018, only 5 out of the 93 identified European Critical Infrastructure were in the transportation sector.¹⁸¹ Member states have been reluctant to place their national critical infrastructure onto the European roster because of the added financial responsibilities that come with the designation. Nonetheless, the private sector has been compliant with international and national standards for industrial legislation requirements and self-investment.¹⁸² An example of internationally consistent critical infrastructure protection and resilience is in the aviation industry, with its strict observance of International Civil Aviation Organization requirements. The EU has also invested in improving and integrating domestic air traffic management and maritime transport. In all, the aviation and maritime industries are defined by a timely enactment of international CIPR practices with EU industrial legislation.

In contrast to aviation and maritime, the most at-risk subsectors in transportation are road and rail. Experts highlight that road traffic is hard to manage compared to aviation and railway traffic because there are multiple actors on the road.¹⁸³ Road tunnel and bridge closure can cause significant disruptions because there are rarely easy alternative routes for road vehicles.¹⁸⁴ Railway tunnels and bridges are also difficult to restore quickly which causes significant delays in transportation.¹⁸⁵ Given the many adversarial threats that the EU faces, road and rail CIPR needs to be further enhanced by 2030.

¹⁸¹ Migration and Home Affairs, *Commission Staff Working Document Evaluation of Council Directive 2008/114 on the Identification and Designation of European Critical Infrastructures and the Assessment of the Need to Improve Their Protection*, SWD(2019) 310 final, European Commission, 2019, https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20190723_swd-2019-308-commission-staff-working-document_en.pdf.

¹⁸² Alessandro Lazri, *ERNICIP Training for Professionals in Critical Infrastructure Protection: From Risk Management to Resilience*, (Luxembourg: Publications Office of the European Union, 2017), 65, <https://doi.org/10.2760/932771>.

¹⁸³ Jan Kiel, et al., "A Decision Support System for the Resilience of Critical Transport Infrastructure to Extreme Weather Events," *Transportation Research Procedia* 14 (2016): 73, <https://doi.org/10.1016/j.trpro.2016.05.042>.

¹⁸⁴ Jan Kiel, et al., "A Decision Support System for the Resilience of Critical Transport Infrastructure," 73.

¹⁸⁵ Zdeněk Dvořák, et al., "Assessment of Critical Infrastructure Elements in Transport," *Procedia Engineering* 187, (April 2017): 552. <https://doi.org/10.1016/j.proeng.2017.04.413>.

In preparation for a possible transportation crisis, the EU has sponsored the establishment of many frameworks to cope with the disruption of transportation CI. Currently, the EU's research and innovation program, Horizon 2020, has initiated some projects to improve resilience and crisis response capacities. Future interconnection projects will increase cross-border risks. As such, the EU should consider a preemptive approach to address the possibility of malign actors instigating cascading failures by including CIPR analysis in future CI projects. Although there is an expert working group on land transport security, LANDSEC, the EU has not legislated CIPR industrial regulations to the degree it has for maritime and aviation sectors. Therefore, more CIPR practices can be adopted by land transportation CI ownership.

(3.5.2) Security by Design Approach and Risk Assessments

One CIPR procedure in need of improvement in the land transportation sub sector is threat prevention. The security by design approach for CIPR recognizes the multifaceted threats to CI and then accordingly incorporates threat prevention measures into the design of the infrastructure.¹⁸⁶ Projects such as Continuing Education and Scientific

Figure 12: Core Network Corridors



Source: European Commission, accessed 06 February 2020, https://ec.europa.eu/transport/sites/transport/files/updated_map.jpg.

¹⁸⁶ Lazari, *European Critical Infrastructure Protection*, 9, 88.

Information Literacy on Raw Materials for Professionals (CARONTE) have demonstrated that even changing the material used to construct CI can be useful to improve CIPR.¹⁸⁷ Moreover, given the numerous planned Core Network Corridors that heavily involve cross-border infrastructures (Figure 12), the EU should conduct risk assessments with CIPR in mind for future transportation projects. In other words, threat prevention should be considered at the outset and design of these transportation CI.

To achieve a secure Single European Transport Area, the EU should bolster LANDSEC to conduct design reviews and risk analyses on land transportation CIs. The projects under the Trans-European Networks for Transport (TEN-T) framework will interconnect MS and increase the possibility of cascading failures. Without proper cross-border consultations, future transportation CI will be less resilient against malicious threats. The TEN-T corridors should be reviewed from a security standpoint, especially in terms of cybersecurity. In sum, the EU should update the CI directive to elevate land transportation CIPR to the more stringent aviation and maritime standards.

(3.6) Crisis Response

In conjunction with the 2008 Council Directive on EPCIP, the Critical Infrastructure Warning Information Network (CIWIN) was proposed as a rapid alert system and information exchange forum. However, mandatory CIWIN was scrapped after complaints that it violated commercial confidentiality.¹⁸⁸ While voluntary CIWIN was launched in 2013 after many hurdles, private CI owners have remained reluctant to contribute to the system. The EU should mandate MS and CI ownership participation in CIWIN in order to improve crisis response and meet public expectations, and should furthermore foster regional cooperation and training frameworks to prepare for all hazards, especially malicious threats.

(3.6.1) Crisis Preparation Through CIWIN

As is seen in the energy sector, detailed information on critical infrastructure is sensitive and rightfully classified. Therefore, it is hard for outside observers to clearly quantify the

¹⁸⁷ Claudia de Stasio, et al., *Research Theme Analysis Report Transport Security*, (Luxembourg: Publications Office of the European Union, 2017) <https://doi.org/10.2832/074992>.

¹⁸⁸ Bossong, "Critical Infrastructure and Critical Information Infrastructure Protection," 56.

dynamics behind EU, MS and CI ownership. Nonetheless, it is known that many CI ownership¹⁸⁹ do not like sharing information with their competitors. Also, member states have also claimed that CIPR is a national responsibility and that similar rapid alert systems exist in national policies. As a result of these objections, CIWIN has become a voluntary information sharing mechanism for MS delegates. However, future H2020 projects will raise cross-border challenges that will require the EU to have institutional-level competency for crisis response. Given the threat environment and CI vulnerabilities outlined previously, it appears that lethargic action or inaction will be damaging if worst-case scenarios were to arise. A survey of MS citizens demonstrated a strong public preference for a quick recovery and timely public communication on restoration efforts during CI operation disruption.¹⁹⁰ A voluntary CIWIN without mandated information sharing would make it challenging for the EU to match those public expectations.

(3.6.2) Benefits of Regional Simulations

Given the cross-border nature of many CI, it would be worthwhile to foster the establishment of regional CIPR coordination bodies to facilitate training experiences that enhance crisis response. Establishing regional frameworks can help expedite communication during extreme events and may also help persuade local CI ownership who are reluctant to provide proprietary information, as there would be more limited access to private business data. Regional CIPR management could also help persuade local stakeholders to adopt the mindset that CIPR is an investment;¹⁹¹ currently, many CI owners believe that CIPR entails unnecessary costs.¹⁹² Also, public CI operators have expressed concerns about being punished for non-compliance after sharing information.¹⁹³ Adopting the latest CIPR best practice may be expensive, but the continued operation of CI under attacks from malicious threats will be well received by the

¹⁸⁹ Åsa Fritzon et al., "Protecting Europe's Critical Infrastructures: Problems and Prospects," *Journal of Contingencies and Crisis Management* 15, no. 1 (February 2007): 37, <https://doi.org/10.1111/j.1468-5973.2007.00502.x>.

¹⁹⁰ Laura Petersen, et al., "Public Expectations of Critical Infrastructure Operators in Times of Crisis," *Sustainable and Resilient Infrastructure*, (May 2018): 3. <https://doi.org/10.1080/23789689.2018.1469358>.

¹⁹¹ Marianthi Theocharidou, Luca Galbusera, and Gergios Giannopoulos, "Resilience of Critical Infrastructure Systems: Policy, Research Projects and Tools," in *IRGC Resource Guide on Resilience: Domains of Resilience for Complex Interconnected Systems*, ed. by Benjamin Trump, Marie-Valentine Florin, and Igor Linkov, 150, Vol. 2. (Lausanne: EPFL - International Risk Governance Council, 2018), <https://doi.org/10.5075/epfl-irgc-257279>.

¹⁹² Christer Pursiainen, "The Challenges for European Critical Infrastructure Protection," *Journal of European Integration* 31, no. 6 (November 2009): 733, <https://doi.org/10.1080/0703633090319984>

¹⁹³ Rossella Mattioli and Moulinos Konstantinos, *Analysis of ICS-SCADA Cyber Security Maturity Levels in Critical Sectors*, (Heraklion: European Union Agency for Cybersecurity, 2016), 29, <https://doi.org/10.2824/835661>.

public and other stakeholders. Overall, the enhancement of CIWIN, and simulation training with a regional focus, will greatly improve EU crisis response to the full range of CIPR threats.

While a mandatory CIWIN may face pushback from some stakeholders, the EU should recognize that robust CIPR can only be achieved with an adequate crisis response mechanism that fosters substantial communication between relevant stakeholders. Gradually, encouraging crisis response may be the key to procuring CI ownership involvement, and a regional framework for information sharing and simulation would help CI owners realize the value of CIPR cooperation. Proper precautions would be utilized to protect proprietary information to dispel concerns about data leaks. Also, relevant institutions should be granted greater funding so that more regional cross-border exercises can be facilitated. In sum, a roadmap for CIWIN expansion should be realized by 2030 to improve EU's defense capacities against adversarial threats.

(3.7) Conclusion

The protection of Europe's critical infrastructure is a matter of refining coordination between MS and revisiting the 2008 Directive on Critical Infrastructure with the purpose of revising the document in accordance with Europe's dynamic and changing risk landscape. Europe must effectively improve its agility and ability to adapt to all rising threats. Also, the expansion and explicit integration of crisis response capabilities in CIPR policy is of utmost importance. The increasing adversarial threat of Russia and the prominence of cybercriminals should draw attention towards the role of technology in the changing threat landscape. As ICT's integration ranges from mobile users to critical infrastructure, the demand for cybersecurity on all fronts will be key to sustaining European growth and security. During the time of research, development and cyber protection installation, the best path forward for Europe is further interconnection of critical infrastructure in the form of power grids and gas/oil pipelines across member states' borders. Proper interconnection measures that acknowledge cascading failures, and hybrid threats improve overall system resilience. Establishing stronger CIPR frameworks amongst member states will bolster a sense of security through shared interest in risk mitigation. An updated CI directive will help increase EU's defense capabilities as member states increasingly face adversarial threats that endanger.

Related Policy Recommendations

- ◆ Commission a biennial-meeting task force to continue the identification of corridors and cross-border opportunities for PCI development throughout Europe as to inform CEF decision and maximization of benefits, mainly the equal distribution of system security and resilience, for the Union and associated Member States.
- ◆ Address need for regular reconsideration to the High Level Groups as identified within TEN-E to increase EU agility in achieving its mission of increased security and resilience in the context of changing project scope and membership.
- ◆ Develop communication channels for ENISA to receive willingly shared private information of large cyber targets in order to improve threat landscape analysis and best practice development.
- ◆ Expand CERT programs in ratio with the growth of 5G and ICT implementation to ensure crisis response capabilities.
- ◆ Open a secondary headquarters for ENISA in Western Europe to have better regional distribution of expertise and tailored solutions.
- ◆ Intensify discussion with gas producing countries besides Russia to establish alternative supply routes as needed for security and defense under decreasing EU demand. Fund research projects to develop crisis-response decision-support systems for stakeholders to utilize for energy transit ICS.
- ◆ Incorporate integrated risk assessments and a security-by-design approach for land transport CI.
- ◆ Create a roadmap for the expansion of CIWIN starting with mandating regional frameworks for crisis response that include cross-border simulation exercises.

(4) Building Popular Support

Sydney Janeway, Reegan O’Keefe and Arwa Mokdad

“Only the people can change and enrich things in the institutions and transmit them to future generations.”

— Jean Monnet

Europe faces the challenge of convincing its members of the importance of increased military spending. Without this, most, if not all, recommendations previously made will fail to be accomplished. Moving forward, the EU should address the issues of a complacent population with differing strategic priorities, an increasingly ambivalent American partner and the European public’s skepticism of a more powerful EU. The overall recommendations of this chapter will focus on building EU unity by convincing younger Europeans that defense is a priority.

The EU should utilize emotional messaging to overcome European complacency. To engage the public, fear is an unfortunate necessity. During the Cold War, the transatlantic Alliance was incredibly unified due to the shared threat of the Soviet Union, not a common identity. Thus, the EU should implement an experimental emotional messaging campaign for key demographics to promote European defense.

A prime example of successfully using fear and emotionally charged arguments to accomplish action and defeat complacency is Greta Thunberg. Climate activist Greta Thunberg began a global climate strike that is now the largest and most international of all youth movements. At the same time, Greta is a controversial figure, as can be seen in the resistance she inspires from older generations. Similar controversy to the messaging and methods in this chapter are expected, yet Greta Thunberg shows that fear and emotionally charged messaging can be utilized to accomplish a positive result, whether it is climate change reform or supporting European defense for a more secure future.

(4.1) Creating Urgency and Unity

To motivate and unite Europeans to raise security capacity, the European Union should emphasize the current threat that Russia represents. To do so, Russia's fundamental opposition to the values of the European Union, perspectives on the European security order, influencing tactics and modernization of military forces should be stressed to both leaders and the general public.

(4.1.1) European Disunity in Security Aims

Europe currently lacks a unified stance on numerous security issues, which prevents effective engagement and potential solutions. This is highlighted in the Libyan civil war, where Italy has aligned with the Government of National Accord while France has aligned alongside Russia with General Haftar.¹⁹⁴ The lack of unity has allowed problems to fester; according to Abdul Hafiz Ghoga, a former Vice Chairman of the National Transitional Council of Libya, "there will be no peace and stability in Libya unless the international community reaches consensus".¹⁹⁵ This French-Italian disunity has exacerbated conflict beyond European borders, and is also an important indication of broader divides in Europe on topics such as migration and the role of Russia.¹⁹⁶

(4.1.2) A Normative War

There is little possibility for the EU to reach a genuine strategic understanding with Russia, as they are operating on different international norms. As stated by a senior policy fellow at the European Council of Foreign Relations, "the EU and Russia are fundamentally on different sides of the coin".¹⁹⁷ The EU and Russia are fighting over the norms of international conduct — liberal universalism versus authoritarian statism.¹⁹⁸ According to one Russian expert, Kadri Liik, the EU and Russia "have completely different visions of

¹⁹⁴ Orlando Crowcroft, "Can Peace Talks in Berlin on Sunday End the Civil War in Libya?" Euronews, January 19, 2020, <https://www.euronews.com/2020/01/19/civil-war-in-libya-can-peace-talks-in-berlin-on-sunday-bring-an-end-to-the-conflict>.

¹⁹⁵ Middle East Monitor, "Libya Turns into Battleground between France and Italy," January 22, 2019, <https://www.middleeastmonitor.com/20190122-libya-turns-into-battleground-between-france-and-italy/>.

¹⁹⁶ Federica Saini Fasanotti and Ben Fishman, "How France and Italy's Rivalry Is Hurting Libya," *Foreign Affairs*, October 31, 2018. <https://www.foreignaffairs.com/articles/france/2018-10-31/how-france-and-italys-rivalry-hurting-libya>.

¹⁹⁷ Kadri Liik, "Winning the Normative War with Russia: An EU-Russia Power Audit," European Council on Foreign Relations, May 21, 2018, https://www.ecfr.eu/publications/summary/winning_the_normative_war_with_russia_an_eu_russia_power_audit.

¹⁹⁸ Liik, "Winning the Normative War."

what is legitimate, what is desirable, what drives and what should drive policies and politicians”.¹⁹⁹ Therefore, Moscow’s interference in Europe should be seen as part of its larger struggle against liberal universalism.²⁰⁰ Russia desires a new international order that does not include the basic concepts of human rights and the possibility of regime changes.²⁰¹ To combat this, Europe should stand together and fully support the Western model of democracy and rule of law in both the political and security realms as “Europe has made the principles of the liberal order a core part of its identity: the European Union was born out of the idea that cooperation, shared sovereignty, representative democracy, and respect for human rights form the path to peace and prosperity”.²⁰² These principles are the foundation of Europe and its security order.

In the aftermath of the Cold War, a new European security order was formed. This security order has fostered relations among Western nations while simultaneously ushering in a period of peace in Europe. Yet, Russia believes that the European security order poses a threat to Russian interest as both the European Union and NATO act as a check on Russia’s power.²⁰³ Therefore, the key components of the Russian narrative include skepticism and hostility regarding European nations increasing relations with the EU and NATO.²⁰⁴

The Kremlin aims to undermine European voters’ trust in the European Union and its democracies by raising discord and confusion through increasingly sophisticated disinformation tactics.²⁰⁵ Analysis by the European Commission and the European Union’s diplomatic service found that “Russian groups carried out a widespread disinformation campaign aimed at influencing the European Parliament election”.²⁰⁶ This campaign attempted to undermine the EU’s democratic legitimacy by focusing on key issues

¹⁹⁹ Liik, “Winning the Normative War.”

²⁰⁰ Liik, “Winning the Normative War.”

²⁰¹ Liik, “Winning the Normative War.”

²⁰² Liik, “Winning the Normative War.”

²⁰³ Steven Pifer, “The Growing Russian Military Threat in Europe,” Brookings, May 16, 2017,

<https://www.brookings.edu/testimonies/the-growing-russian-military-threat-in-europe/>.

²⁰⁴ Heather Conley, “Russian Malign Influence in Montenegro: The Weaponization and Exploitation of History, Religion, and Economics,” Center for Strategic and International Studies, May 14, 2019, <https://www.csis.org/analysis/russian-malign-influence-montenegro>.

²⁰⁵ Marco Silva, “Is Russia Trying to Sway the European Elections?” *BBC News*, BBC, May 20, 2019,

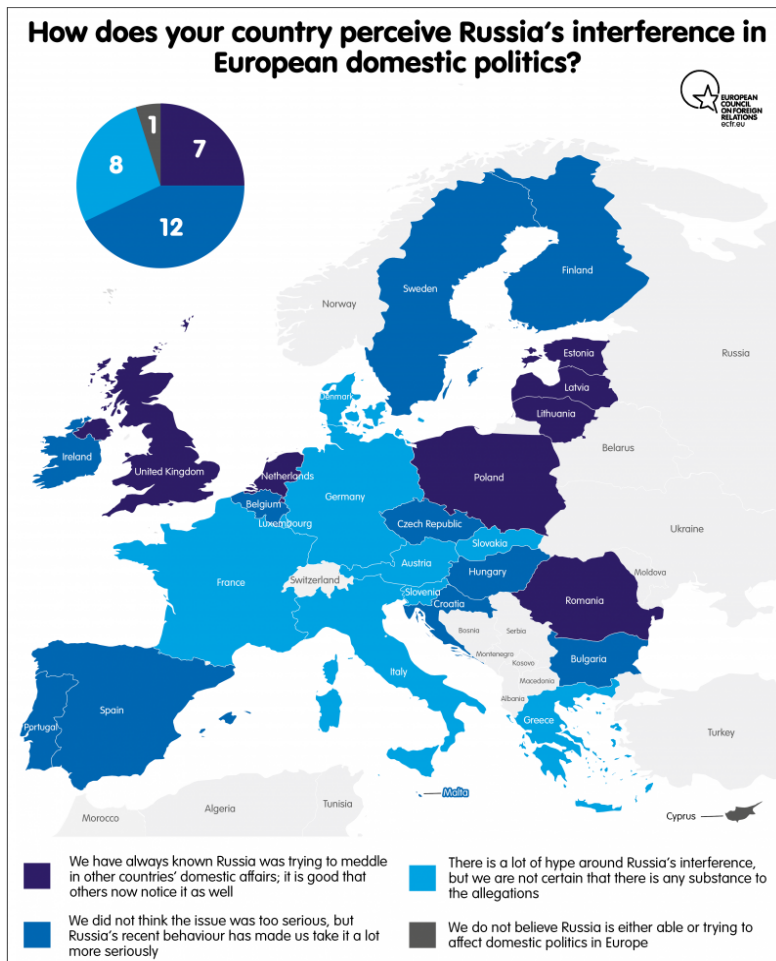
<https://www.bbc.com/news/blogs-trending-48296557>.

²⁰⁶ Mark Scott and Laurens Cerulus, “Russian Groups Targeted EU Election with Fake News, Says European Commission,” *POLITICO*, June 16, 2019, <https://www.politico.eu/article/european-commission-disinformation-report-russia-fake-news/>.

relevant to target demographics in order to lower voter turnout and change voter preferences.²⁰⁷ Russia also targets national elections and referendums.²⁰⁸ However, despite increased Russian interference in European elections, surveys conducted by the European Council on Foreign Relations show that the majority of Europeans believe that Russia has only interfered somewhat with marginal groups, but to no large effect.²⁰⁹

While most believe Russia does not significantly impact European domestic politics, this is

Figure 13: Varying Threat Perception Across Europe



far from the truth. As highlighted in Figure 13, there is a correlation between a nation's proximity to Russia and its threat perception of Russian interference in European domestic politics. Moscow strategically targets disinformation "to exploit every weakness and societal division within a respective country" by weaponizing "religion, history, facts, information, racial and ethnic tensions, illicit financing, and institutional and economic weakness".²¹⁰ These tactics can be seen in the case of Montenegro, where by exploiting sensitive attitudes toward economics, pan-Slavic identity and the Orthodox faith, Moscow created political chaos in an attempt to prevent

Source: Liik, "Winning the Normative War."

²⁰⁷ Scott and Cerulus, "Russian Groups Targeted EU."

²⁰⁸ James Ball, "Russian Interference Threatens Elections across the World - Including Ours," The Bureau of Investigative Journalism, November 27, 2019. <https://www.thebureauinvestigates.com/stories/2019-11-13/russian-interference-threatens-elections-across-the-world-including-ours>.

²⁰⁹ Liik, "Winning the Normative War."

²¹⁰ Conley, "Russian Malign Influence in Montenegro."

Montenegro from joining NATO.²¹¹ While these attempts ultimately failed, the sophistication of Russian messaging warrants more than mere apprehension.

Additionally, given formal Russian military doctrine, it is important to remain diligent about Russia increasing its military presence and capabilities. Currently, Russia is in the process of modernizing its military forces by replacing strategic nuclear forces with newer versions.²¹² This is worrisome as “formal Russian doctrine suggests that Russia would resort to use of nuclear weapons in the event that nuclear or other weapons of mass destruction were used against Russia or an ally, or in the event of a conventional attack on Russia in which the existence of the Russian state is at stake”.²¹³ More generally, Russia’s “escalate to de-escalate” doctrine poses a threat to European nations and NATO.²¹⁴ Moscow continues to make these military steps and beliefs clear to the West and the world at large. In 2018, Russia launched its largest military drills to date, which NATO condemned “as a rehearsal for large-scale conflict”.²¹⁵ This show of force “demonstrates Russia’s focus on exercising large-scale conflict” amid a backdrop of Russia’s increased large-scale military exercises in the Caucasus, the Baltics, and Arctic.²¹⁶ These threats posed by Moscow warrant concern, especially considering the changing dynamics of the transatlantic Alliance.

(4.2) Shifting Transatlantic Relations

The European Union has been slow to strengthen defense capacities due to a historic indifference on security issues. According to *Eurobarometer’s* “Europeans in 2019” report (Figure 14), when asked what are the two most important issues facing the EU, neither defense nor security capabilities against Russia are mentioned in any of the 16 answers

²¹¹ Conley, “Russian Malign Influence in Montenegro.”

²¹² Pifer, “The Growing Russian Military.”

²¹³ Pifer, “The Growing Russian Military.”

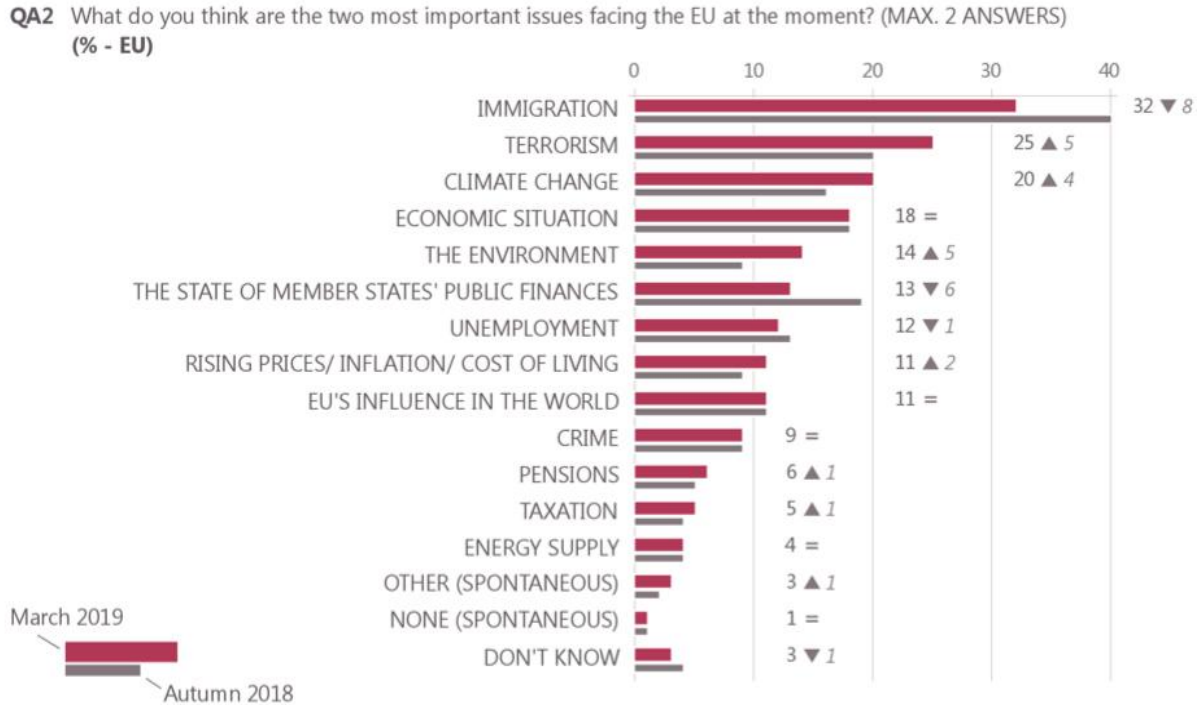
²¹⁴ Pifer, “The Growing Russian Military.”

²¹⁵ Agence France-Presse in Chita, “Russia Begins Its Largest Ever Military Exercise with 300,000 Soldiers,” *The Guardian*, September 11, 2018, <https://www.theguardian.com/world/2018/sep/11/russia-largest-ever-military-exercise-300000-soldiers-china>.

²¹⁶ Agence France-Presse, “Russia Begins Its Largest.”

provided.²¹⁷ It is clear that European defense is not a priority to EU citizens, which prevents additional resources from being devoted towards defense capabilities.

Figure 14: The Two Most Import Issues Facing the EU According to EU Citizens



Source: "Special Eurobarometer 486, 'Europeans in 2019.'" European Commission, March 2019. <https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm>.

This indifference is in large part due to the United States' successful creation and maintenance of the liberal world order that has provided stability for the EU to thrive in. The EU has always been confident in the U.S. to supply this stability. Yet, Americans continue to grow skeptical of their responsibility to the liberal world order. Additionally, clear differences between European and American perspectives regarding the use of force and multilateralism reveal that Americans may not always act with the best interest of Europeans in mind. Moving forward, the EU should work to make European security a priority to its citizens by unifying against the threat of Russia.

²¹⁷ Public Opinion, "Special Eurobarometer 486, 'Europeans in 2019,'" European Commission, March 2019, <https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm>.

(4.2.1) The United States’ Role in European Security

As the United States rose to power following the end of World War II, the U.S. liberal world order was created. With this, numerous global alliances were established, international free trade rose and general peace ensued due to America’s unquestionable military dominance.²¹⁸ Within this environment, the European Union was created — a single market that established mutual interdependence and trust among nations that have otherwise fought one another for centuries. With a pan-European identity, the European Union, as an institution, symbolizes the liberal world order from which it was born.²¹⁹ It has brought member states great prosperity, in large part by utilizing the peaceful, interconnected environment the U.S. has worked to maintain. Through its special relationship with the United States, the EU has utilized U.S. military power to help protect

Figure 15: European Views on Security

% who say if Russia got into a serious military conflict with one of its neighboring countries that is our NATO ally, ___ to defend that country

	Our country should use military force	The U.S. would use military force	Diff
	%	%	
Italy	25	75	+50
Greece	25	65	+40
Spain	41	72	+31
Germany	34	63	+29
Slovakia	32	57	+25
UK	55	73	+18
France	41	57	+16
Turkey	32	46	+14
Canada	56	69	+13
Poland	40	47	+7
Hungary	33	39	+6
Lithuania	51	57	+6
Czech Rep.	36	41	+5
Netherlands	64	68	+4

Note: Statistically significant differences in **bold**. U.S., Bulgaria,

Source: Fagan, Moira, and Jacob Poushter. “NATO Seen Favorably Across Member States.” Pew Research Center: Global Attitudes and Trends. Pew Trusts, February 9, 2020. <https://www.pewresearch.org/global/2020/02/09/nato-seen-favorably-across-member-states/>.

Europe. This arrangement, however, has led EU citizens to have contrasting views on the necessity of national and American defense capabilities.

The cornerstone of the transatlantic Alliance is NATO, and as Figure 15 clearly shows, multiple EU/NATO member states (Italy, Greece, Spain, Germany, France) view the relationship as heavily skewed. While there is a strong belief that the U.S will use military force in defending a NATO ally against Russian aggression, far fewer Europeans believe their own country should also use military force. This distinction is particularly noteworthy considering Article 5, which stipulates that an attack on one ally is an attack on all. Following this sort of attack, each NATO member will take action “to restore and maintain the security of the

²¹⁸ John Kagan, *The Jungle Grows Back*, first ed., (New York, NY: Alfred A. Knopf, 2018), 245.

²¹⁹ Kagan, *The Jungle Grows Back*, 129.

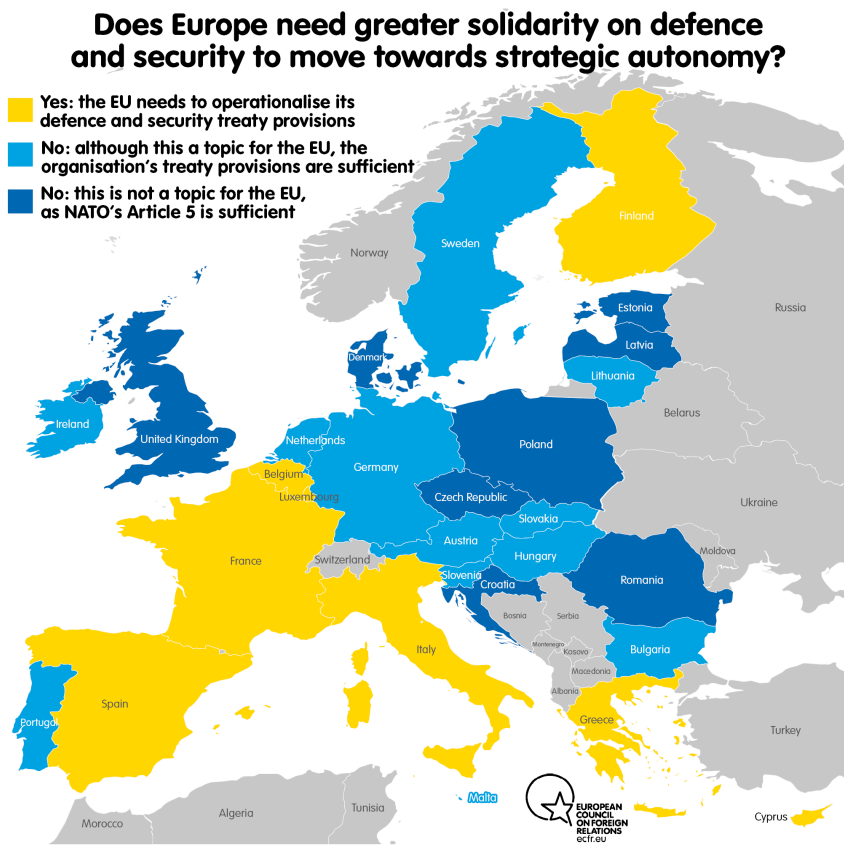
North Atlantic area”.²²⁰ The disparity in Europeans’ expectations for the U.S. and their own country in terms of military capacity highlights the importance of including a public support campaign to accompany strategic European military aims.

(4.2.2) European Opinion on Achieving Strategic Autonomy

Recognizing the gap in current European defense capacities, the EU Commission stresses the importance of pursuing “strategic autonomy” in the 2016 European Union Global Strategy (EUGS).²²¹ This means the EU would work to protect itself and share the responsibility of maintaining the interconnected, rules-based world order with world powers like the United States.

However, EU citizens vary in their opinions of how to pursue strategic autonomy — indicating a reluctance towards devoting more resources to European security. At the moment, only a handful of countries believe that the EU needs to increase security capacities in order to move towards strategic autonomy (shown in Figure 16 in

Figure 16: EU Member States’ Views on Strategic Autonomy



Source: Franke, Ulrike, and Tara Varma. “Independence Play: Europe’s Pursuit of Strategic Autonomy.” European Council on Foreign Relations. International Affairs ; Compagnia di San Paolo, July 2019. https://www.ecfr.eu/specials/scorecard/independence_play_europes_pursuit_of_strategic_autonomy

²²⁰ North Atlantic Treaty Organization, “Official Text: The North Atlantic Treaty,” last updated April 10, 2019, https://www.nato.int/cps/en/natolive/official_texts_17120.htm

²²¹ European Commission, “Shared Vision, Common Action: A Stronger Europe,” June 2016, https://eas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf

yellow).²²² All other EU countries believe that current action is sufficient, through either NATO's Article 5 or the EU's treaty provisions. To sway the blue-colored countries into believing more should be done to achieve strategic autonomy, the EU should utilize emotional messaging to create a sense of urgency among the European people with regards to threats such as Russian military modernization. With a better understanding of current threats to the world order, Europeans will likely come to see current EU defense capabilities as insufficient.

(4.2.3) Retreating U.S. Actions on World Stage

The United States has recently begun retreating from global commitments and will likely continue to do in the foreseeable future. While President Trump has put "America First" in foreign policy decisions and even questioned the entirety of NATO, the Obama administration was also hesitant to involve the United States overseas.²²³ This shift is evident in Obama's Asian "pivot", his reluctance to intervene in Syria, and his withdrawal of U.S. soldiers in Afghanistan so that the United States could "focus on nation building here at home".²²⁴ The two most recent Administrations have turned inward to address increasing American disinterest in protecting allies abroad. This exasperation only continues to spread, with 57% of U.S. citizens polled in 2016 believing their country should focus on domestic issues, rather than intervening in other countries. This comes as a 27-point increase from just 30% in 2000.²²⁵ As a result of this trend, it is likely that a pattern of U.S. isolationism will persist even after the Trump Administration.

Therefore, the EU should begin to take on more responsibility when it comes to maintaining the future liberal world order. Central to this should be a mechanism for reaching EU citizens to discuss European security capacity and bolstering support for such policies.

²²² Ulrike Franke and Tara Varma, "Independence Play: Europe's Pursuit of Strategic Autonomy," *Compagnia di San Paolo and International Affairs*, July 2019, https://www.ecfr.eu/specials/scorecard/independence_play_europes_pursuit_of_strategic_autonomy

²²³ Jolyon Howorth, "Strategic Autonomy and EU-NATO Cooperation: Threat or Opportunity for Transatlantic Defence Relations?," *Journal of European Integration* 40, no. 5 (2018): pp. 523-537, <https://doi.org/10.1080/07036337.2018.1512268>

²²⁴ Kagan, *The Jungle Grows Back*, 24.

²²⁵ Kagan, *The Jungle Grows Back*, 24.

(4.2.4) EU v. U.S. Perspectives on Multilateralism and Use of Force

While the United States and the EU often agree on key policies and global developments, upon closer examination, there are clear divergences regarding multilateralism and use of force. These differences reveal that Europeans cannot rely entirely on the U.S. to uphold the same European values. By emphasizing the importance of European values, the EU Commission could spark action among young Europeans (18-29) — some of the EU’s strongest proponents — to protect such values through actively supporting European defense.²²⁶

There is a disparity concerning American and European leaders’ views on the importance of multilateralism. While it functions within the EU as a guiding framework for all actions, the United States tends to understand multilateralism as a tool for serving U.S. interests.²²⁷ This position is further exacerbated by the current U.S. administration. Since his election, President Trump has withdrawn the U.S. from the JCPOA, the Paris Accord, UNESCO, TPP, and the UN Human Rights Council. With regards to Iran and climate change agreements, EU citizens largely disapprove of U.S. actions. As Figures 17 and 18 reflect, 52% of

Figure 17: U.S. Actions in JCPOA

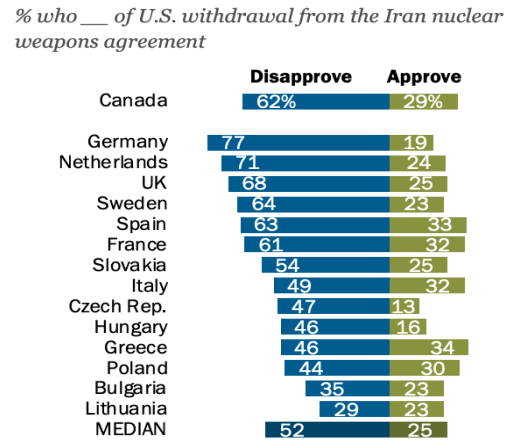
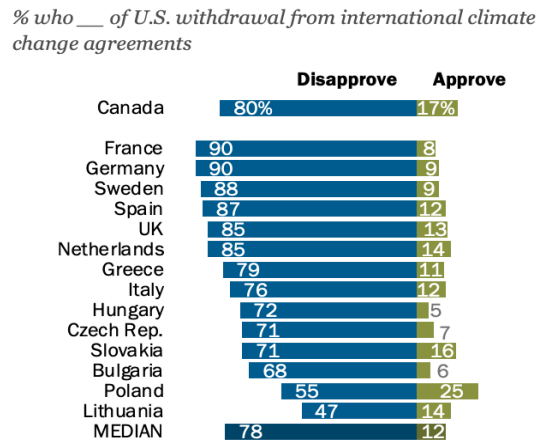


Figure 18: U.S. Actions in Climate Change



Source: “Schumacher, Shannon, Richard Wike, Jacob Poushter, and Janell Fetterolf. “Trump Ratings Remain Low Around Globe, While Views of U.S. Stay Mostly Favorable.” Pew Research Center: Global Attitudes and Trends. Pew Trusts, January 8, 2020. <https://www.pewresearch.org/global/2020/01/08/trump-ratings-remain-low-around-globe-while-views-of-u-s-stay-mostly-favorable/>

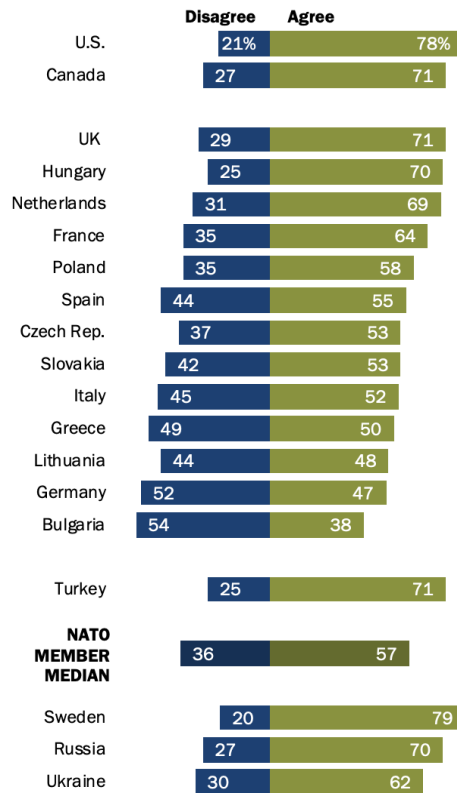
²²⁶ Kat Devlin, “Attitudes toward EU Are Largely Positive, Both within Europe and Outside It,” Pew Research Center, Pew Trusts, October 21, 2019, <https://www.pewresearch.org/fact-tank/2019/10/21/attitudes-toward-eu-are-largely-positive-both-within-europe-and-outside-it/>.

²²⁷ Mike Smith, “The EU, the US and the Crisis of Contemporary Multilateralism,” *Journal of European Integration* 40, no. 5 (2018): pp. 539-553, <https://doi.org/10.1080/07036337.2018.1488836>.

Europeans disapprove of U.S. withdrawal from the JCPOA, and 78% of Europeans are against U.S. withdrawal from international climate change agreements like the Paris Accord.²²⁸ This dissatisfaction with the U.S. creates an opportunity for the EU Commission to market strategic autonomy as a possible European solution that would prioritize multilateralism.

Figure 19: Support for Use of Force

% who ___ that it is sometimes necessary to use military force to maintain order in the world



Note: Don't know responses not shown. Sweden, Ukraine and Russia are not NATO member states.

Source: Spring 2019 Global Attitudes Survey, Q50h. "NATO Seen Favorably Across Member States"

PEW RESEARCH CENTER

Source: Fagan, "NATO Seen Favorably"

In addition, the U.S. considers use of force at early stages of foreign policy, while the European Union prioritizes conflict prevention through civilian and diplomatic methods. The EU states that its foreign policy is “designed to resolve conflicts and foster international understanding, ... [through] diplomacy, ... respect for international rules, trade, humanitarian aid, and development cooperation”²²⁹ — a stark contrast to U.S. foreign and security policy.²³⁰

Recent polling across NATO member states conducted by Pew Research Center (Figure 19) found that Americans are the strongest supporters of use of military intervention, with 78% in agreement.²³¹ In contrast, countries like Germany are polarized on their support for military force, with 52% against and only 47% in favor. This polling data reveals a potential avenue for the European Commission to strengthen popular support for increasing EU defense. Compared to U.S. citizens, Europeans are generally more hesitant to use military force, but are not altogether opposed to it. If

²²⁸ Shannon Schumacher et al., “Trump Ratings Remain Low Around Globe, While Views of U.S. Stay Mostly Favorable,” Pew Research Center: Global Attitudes and Trends, Pew Trusts, January 8, 2020, <https://www.pewresearch.org/global/2020/01/08/trump-ratings-remain-low-around-globe-while-views-of-u-s-stay-mostly-favorable/>

²²⁹ Foreign and Security Policy, “European Foreign and Security Policy,” European Union, 2018, https://europa.eu/european-union/topics/foreign-security-policy_en

²³⁰ Michael E Smith, “Transatlantic Security Relations since the European Security Strategy: What Role for the EU in Its Pursuit of Strategic Autonomy?,” *Journal of European Integration* 40, no. 5 (2018): pp. 605-620, <https://doi.org/10.1080/07036337.2018.1488840>

²³¹ Fagan, “NATO Seen Favorably.”

the EU Commission were to outline the importance of military intervention within the lens of protecting European values and way of life, more EU citizens would likely come to see increased EU defense as necessary.

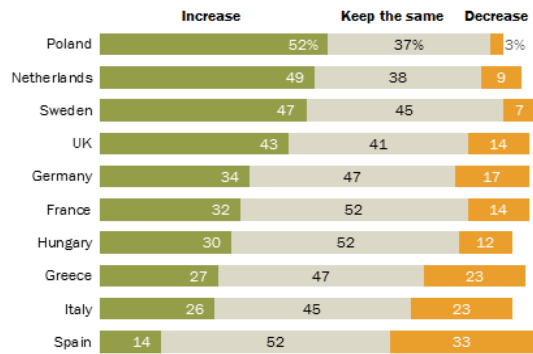
(4.3) Public Opinion and Defense

To pursue a more ambitious defense strategy, it is essential to build public support for both the institution of the EU, and its specific defense goals. Currently, the EU is polling favorably, and the proportion of citizens that view EU membership positively is at a historic high. 68% of Europeans strongly believe that EU membership has benefitted their country, which is the highest level recorded since 1983.²³² This number is expected to rise as the consequences of Brexit become increasingly clear in the upcoming year. Similarly, Denmark has traditionally kept the EU at an arm’s length. However, since Brexit, Danes have shown an increase in public support for EU membership. A majority of the Danish population agreed when asked if they feel like a citizen of the EU.²³³ Overall, member states are reporting a more pervasive sense of allegiance to the EU, which bodes well for

Figure 20: Support for Boosting Defense Spending

Only Poles and Dutch favor boosting defense spending

Do you think that we should increase our spending on national defense, keep it about the same or decrease it?



Source: Spring 2016 Global Attitudes Survey, Q40.

"Europeans Face the World Divided"

PEW RESEARCH CENTER

Source: "Wike, Richard, and Jacob Poushter. "Europeans Are Wary of Hard Power in the World." Pew Research Center's Global Attitudes Project. Pew Research Center, December 30, 2019. <https://www.pewresearch.org/global/2016/06/13/europeans-wary-of-hard-power/>.

the goal of a more ambitious plan for European defense. However, real action and sacrifice from EU citizens will require more than just positive polling. Most Europeans still report feeling wary of the use of hard power in international affairs and many still feel as though NATO, and specifically the United States, will come to their aid in the event of an

²³² European Parliament, "Support for EU Remains at Historically High Level despite Sceptics," News, April 25, 2019, <https://www.europarl.europa.eu/news/en/press-room/20190417IPR41755/support-for-eu-remains-at-historically-high-level-despite-sceptics>.

²³³ Jon Stone, "Support for EU Rises in Denmark as Consequences of Brexit Become Clear," UK Politics, The Independent, April 3, 2018. <https://www.independent.co.uk/news/uk/politics/brexit-denmark-poll-eu-referendum-consequences-a8286296.html>.

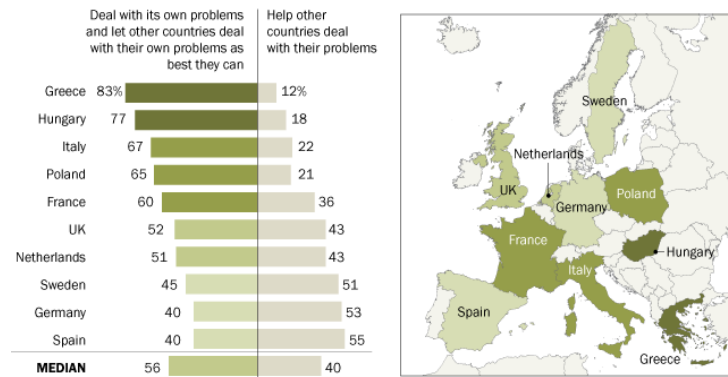
attack.²³⁴ As discussed in the previous section, this may no longer be as certain as it has been in the past. That being said, the current level of public trust in the EU lends itself well to a public information campaign aimed at mobilizing general support for a more concrete increase in the level of ambition in regard to security and defense.

Raising public awareness of the necessity to increase the military power of the EU will require an understanding of the popular preference towards national solutions for national problems. Most EU citizens do not support increasing defense spending (Figure 20).²³⁵

Figure 21: Weighing Domestic and International Issues

Many Europeans focused on their own country's problems

Our country should ...



Note: Volunteered categories "Both" and "Neither" not shown.

Source: Spring 2016 Global Attitudes Survey, Q29.

"Europeans Face the World Divided"

PEW RESEARCH CENTER

Source: Wike, Richard, and Jacob Poushter. "Europeans Are Wary of Hard Power in the World." Pew Research Center's Global Attitudes Project. Pew Research Center, December 30, 2019. <https://www.pewresearch.org/global/2016/06/13/europeans-wary-of-hard-power/>.

Additionally, recent events in Europe — including the debt and migration crises, terrorist attacks, and prolonged economic stagnation — have raised questions of whether resources would be better focused inward, or if national interests should take precedence over protecting alliances. In 7 of 10 MS surveyed by Pew Research in 2016, more than half of respondents believed that their country should focus on domestic issues rather than investing in foreign aid (Figure 21).²³⁶ Interestingly, the UK reported a slightly higher proportion of citizens that prioritized involvement in the affairs of other countries, but

shortly after this survey was conducted, the first Brexit referendum was held and the UK elected by a small margin to leave the EU. This demonstrates that data provides real

²³⁴ Richard Wike, and Jacob Poushter, "Europeans Are Wary of Hard Power in the World," Pew Research Center's Global Attitudes Project, Pew Research Center, December 30, 2019, <https://www.pewresearch.org/global/2016/06/13/europeans-wary-of-hard-power/>.

²³⁵ Wike and Poushter, "Europeans Are Wary of Hard Power in the World."

²³⁶ Wike and Poushter, "Europeans Are Wary of Hard Power in the World."

world insights, and keeping a finger on the pulse of the union is critical in the development of a campaign that seeks to shift public opinion.

(4.3.1) Disinformation

The spread of disinformation acts as a major vehicle for the spread of public skepticism towards the EU. The European Commission defines disinformation as “verifiably false or misleading information created, presented and disseminated for economic gain or to intentionally deceive the public”.²³⁷ Brexit provides a dramatic example of how a European society can be negatively impacted by the spread of disinformation. The “leave” and “remain” campaigns prior to the Brexit referendum were influenced by deliberate rumors and incomplete truths that affected all sides of the political debate. Those in favor of leaving the bloc believed that Britain was the victim of “faceless, highly-compensated bureaucrats in Brussels” who enforced excessive regulations and did not adequately represent the desires of the British people.²³⁸ They felt out of control and powerless to make choices about their own borders. These fears were largely exacerbated by disinformation spread by tabloids, online sites, and local political elites. UK Prime Minister Boris Johnson famously rode on campaign buses with the words “We send the EU £350 million a week. Let’s fund our NHS instead”²³⁹ emblazoned on their sides, a deliberately misleading figure. In reality, once rebates and returns from the EU were accounted for, the UK actually sent closer to £190 million a week, representing only .5% of British GDP.²⁴⁰ This false information was alarming to British citizens; incidents such as this played a significant role in the decision to eventually leave the EU.

Currently, the EU has a plan in place for battling disinformation, particularly as it appears online. Disinformation inhibits the ability of the public to make informed decisions and erodes trust in both traditional and digital media. It endangers electoral systems, puts a nation’s security at risk and hinders freedom of speech and expression, a right included in the Charter of Fundamental Rights of the European Union.²⁴¹ In an effort to combat this,

²³⁷ European Commission, “Tackling Online Disinformation,” Shaping Europe’s Digital Future, October 26, 2017, <https://ec.europa.eu/digital-single-market/en/tackling-online-disinformation>.

²³⁸ Steven Erlanger, “Money, Jobs and Sovereignty: Myth vs. Reality Ahead of ‘Brexit’ Vote,” *The New York Times*, June 6, 2016, <https://www.nytimes.com/2016/06/08/world/europe/britain-brexit-vote-facts.html>.

²³⁹ Steven Erlanger, “Money, Jobs and Sovereignty.”

²⁴⁰ Steven Erlanger, “Money, Jobs and Sovereignty.”

²⁴¹ European Commission, “Tackling Online Disinformation.”

the EU has outlined an action plan that aims to strengthen cooperation between member states by:

- 1) Improving detection, analysis and exposure of disinformation
- 2) Strengthening cooperation and joint responses to threats
- 3) Enhancing collaboration with online platforms and industry to tackle disinformation
- 4) Raising awareness and improving societal resilience²⁴²

Allowing disinformation to permeate a society poses a threat not only to the goal of building popular support for a political objective, but also for ensuring national security. Cybercriminals or malign state actors can build sites that are almost indistinguishable from legitimate government outlets and fill them with falsehoods designed to enhance a political goal, provoke separation, or shake public opinion. Additionally, fake news websites can be used to distribute malware and put confidential security documents at risk.²⁴³ A stronger plan to prevent the dissemination of disinformation is an essential cornerstone to the message of an increased level of ambition in regards to common defense. Although the EU already has a plan in place, it is crucial that it is expanded to include the technology firms that monitor and control these online platforms. This should be accompanied with the campaign to be described in Section 4.4, as the Commission should be prepared to tackle the response that will inevitably follow its new campaign.

(4.3.2) Improving EU Anti-Disinformation Efforts

Working to reduce the permeation of disinformation is an endeavor that should be undertaken in both the public and private sectors, by governments, companies and citizens. The EU and its member states should encourage independent, professional journalism, as well as work with news outlets to inform the public. Censorship should be avoided as it goes against the fundamental values of the EU and could incite public outrage.

While it may seem appealing and effective, total censorship is not an appropriate response for the current disinformation crisis the EU is facing. There have been cases

²⁴² European Parliament, "Tackling Online Disinformation."

²⁴³ Gabriela Belova and Georgieva, Gergana, "Fake News as a Threat to National Security," *International conference KNOWLEDGE-BASED ORGANIZATION* 24, no. 1, 20.

where — instead of limiting misinformation and building faith in the EU — censorship raises harsh criticism and denunciation by human rights organizations. For example, when Germany’s Network Enforcement Act took effect in 2018, its goal was to induce large social media platforms to remove “illegal content” within 24 hours.²⁴⁴ However, this initiative has been criticized for being ineffective, failing to provide proper judicial oversight and setting a dangerous precedent for states hoping to restrict government criticism, like Russia, Venezuela and the Philippines.²⁴⁵ Prioritizing freedom of speech and expression, a value that is enshrined in the foundation of the EU as an institution, is an important way to rebuild trust.

While certain governments within the Union have already taken successful measures to combat disinformation campaigns and cyberattacks, they may not adapt well to the unique needs of the EU. Despite a surge in fake news stories, Finland’s strong public education system and comprehensive government plan keeps the impact of these campaigns to a minimum. To combat the threat of disinformation, Finland hired an expert, Jed Willard, to study resistance tactics. Willard believes that “the best way to respond is less by correcting the information, and more about having your own positive narrative and sticking to it”.²⁴⁶ Finland has accomplished its objectives by stressing the importance of media literacy among its citizens as well as employing a force of over 100 officials to investigate the impact of disinformation in their country.²⁴⁷ At a time where critical evaluation of sources and media literacy across Europe is generally low, emphasizing the importance of verifying information can make a difference.²⁴⁸ However, Finland is a relatively small and homogenous country that consistently ranks at the top of indexes for happiness, transparency and education. Adopting Finland’s strategy would require retrofitting its approach to the specific needs of an institution like the EU and at the moment is too ambitious a task to undertake. Despite this, it is important to acknowledge

²⁴⁴ Darrell M West, “How to Combat Fake News and Disinformation,” Brookings, December 18, 2017, <https://www.brookings.edu/research/how-to-combat-fake-news-and-disinformation/>.

²⁴⁵ Human Rights Watch, “Germany: Flawed Social Media Law,” February 15, 2018, <https://www.hrw.org/news/2018/02/14/germany-flawed-social-media-law>.

²⁴⁶ Reid Standish, “Why Is Finland Able to Fend Off Putin’s Information War?” *Foreign Policy*, accessed February 18, 2020, <https://foreignpolicy.com/2017/03/01/why-is-finland-able-to-fend-off-putins-information-war/>.

²⁴⁷ Standish, “Why Is Finland Able to Fend Off Putin’s Information War?”

²⁴⁸ Eliza Mackintosh, “Finland Is Winning the War on Fake News. Other Nations Want the Blueprint,” *CNN*, accessed February 18, 2020, <https://www.cnn.com/interactive/2019/05/europe/finland-fake-news-intl>.

the country's success in combating an issue that has implications for the stability and security of Europe.

Government regulation and encouragement alone will not be enough to counter public skepticism towards the EU. Media companies and news outlets should also take some responsibility in keeping the public informed. It is critical that these entities avoid legitimizing outlets that deliberately spread false information and additionally work to promote internal journalistic integrity. With an investment in analytics, technology companies can more precisely identify misinformation and other objectionable content to provide warnings on potentially false information to viewers. A measure like this would strike a balance between upholding freedom of speech and protecting democracy through the management of online materials.

In addition to the European Commission imploring companies to invest in algorithms that would provide content warnings on potentially false information, more research should be conducted to understand how fake news influences people and impacts societies. Currently, the bulk of the research that has been conducted examines the amount of disinformation that is distributed, meaning the pieces of content that have been published, shared or viewed.²⁴⁹ Little has been done, however, to evaluate the way it affects consumers. The quantity of false information needed to change a person's opinion is unknown, as is the amount of positive messaging required to counteract this effect. Flagging disinformation that is potentially untrue will only partially negate its impact, as one publication can be seen thousands of times before it is detected by an algorithm. Therefore, research on the consequences of disinformation should be conducted so that there is more data available to build an appropriate and effective anti-disinformation campaign. The EU should pursue these measures with the goal of building a society that is resilient to fake news.

(4.4) An EU Campaign to Support Increased Defense Capacities

In the face of a changing world order in which global norms are eroding, EU defense unification is crucial. Through defense, Europeans will be able to preserve the liberal

²⁴⁹ Kalev Leetaru, "Stopping Disinformation Requires Measuring And Understanding It Not Just Monitoring And Debunking It," *Forbes*, accessed February 19, 2020, <https://www.forbes.com/sites/kalevleetaru/2019/04/27/stopping-disinformation-requires-measuring-and-understanding-it-not-just-monitoring-and-debunking-it/>.

world order that their way of life is based on. Therefore, Europeans should view European defense as a priority. This is a message that the European public, particularly its youth, should be receiving.

The next crucial step is managing the dissemination of this message to European youth (18-29), as their support is critical in reaching higher European defense aims for 2030 and beyond. Recent polling reveals that the majority of European youth (at least 60%, depending on the country) would vote to remain in the EU if given a referendum to leave.²⁵⁰ Additionally, one in five young Europeans took part in a demonstration in the past twelve months — showcasing that today’s youth act when they feel passionate about a topic.²⁵¹ However, they currently consider migration and the environment to be the most critical issues, not defense.²⁵² Thus, now is a great opportunity to build on the existing support for the EU and emphasize to European youth that investing in defense should be a top priority.

Recognizing a lack of management of EU branding, think tank Gold Mercury International and strategy consulting firm CorporateVision.io created “Brand EU” in 2014.²⁵³ Former EP President Enrique Barón Crespo and Nicolas De Santis, President of Gold Mercury International, lead the branding center in its goal “to create a future vision of the EU and transform its brand to create a meaningful connection between the EU and its citizens”.²⁵⁴ As an independent communications center, Brand EU is not funded by or affiliated with any EU institutions or political parties. They compile reports, hire brand ambassadors, and employ a large marketing department to promote EU values of peace, security, innovation, and human rights across member states and the world.

The EU Commission should create a formal relationship with Brand EU, as it provides a foundation for garnering public support for policies. This may initially be difficult, as Brand EU is an independent center, but it is likely to accept the EU Commission’s gesture, as it shows they care about the EU’s brand image. Additionally, such a relationship would be

²⁵⁰ Christian Rapp, “Youth Study ‘Young Europe 2019’ of TUI Foundation,” TUI Group, May 3, 2019, <https://www.tuigroup.com/en-en/media/press-releases/2019/2019-05-03-tui-foundation-youth-study>

²⁵¹ Rapp, “Youth Study ‘Young Europe 2019’.”

²⁵² Rapp, “Youth Study ‘Young Europe 2019’.”

²⁵³ Brand EU, “CNBC Brand EU Interview – Rebranding Europe,” *CNBC*, 2019, YouTube Video, 4:52, <https://www.youtube.com/watch?v=g8yUW2TAG8k&feature=youtu.be>

²⁵⁴ Nicolas de Santis, “Marketing the EU Brand: Where Europe Has Fallen Short,” *Campaign*, February 2, 2016, https://www.campaignlive.co.uk/article/marketing-eu-brand-europe-fallen-short/1295277?src_site=marketingmagazine

beneficial to Brand EU, as it would give the center increased international credibility and access to more resources. The EU Commission Communications department should be involved in working out the specifics of the relationship, and once established, should work to incorporate Brand EU further into the Communications department. Eventually, the communications department could create a subsection of the department dedicated to EU branding under which Brand EU could work. While Brand EU would be under a new department, its day-to-day operations would remain largely the same. This would ensure Brand EU receives the appropriate resources and that all branding efforts are well-aligned with the EU Commission's overall goals and policies — such as increasing European defense capacities.

Following this connection, Brand EU should be more effectively aimed at changing the perception of youth. Currently, brand ambassadors are older and formerly held high positions in government or academia, making them unrelatable to European youth. Additionally, their reports, while informational, are quite long. Given these factors, it is unlikely young people will read a Brand EU report or be influenced by Brand EU ambassadors.

There are also limitations with current EU branding when it comes to the specific goal of advancing EU hard power security ambitions as a collective. Asking the public to take action, vote, and make sacrifices on behalf of enhanced European defense capabilities should go beyond positive polling or a favorable opinion of the EU brand. Now, there is the more ambitious task of creating a real sense of allegiance to the Union, a feeling of being European. The sense of pride, combined with a feeling that the European way of life is under threat due to a changing world, is what will incite the public, particularly youth, to support a stronger and more united European defense plan.

(4.4.1) Inciting Youth Action via Brand EU

As discussed in the introduction of this chapter, Greta Thunberg has been successful in sparking action among the world's youth to rally around climate change reform. Following this as a model, in order to raise the level of impact of Brand EU, there should be a shift in their dissemination strategy to better target younger Europeans and make their messaging more emotionally based, as this incites action. Due to the complexity of building strong popular support for increasing European defense, the following shift by

Brand EU should be executed on a small scale and closely monitored for effectiveness before expanding.

This new campaign should target young Italians because of Italy's unique relationship with the EU. Italy has higher levels of Euroscepticism as a result of the migration crises, for which it received minimal help from the EU.²⁵⁵ As a result, Italy is ideal for a trial campaign attempting to increase support for EU defense. If the campaign is successful, it could be adapted to and then issued in other member states.

Brand EU's campaign message to young Italians should stress that the European way of life is under threat due to a shifting world environment. In disseminating this powerful message, Brand EU should hire new ambassadors that reflect this message more directly to youth and craft clear messages about the need for further European defense through various media tools (public advertising, website, social media).

As explained earlier in the chapter, the world order is shifting: Russia is a threat to the entirety of the EU and the United States is retreating from its global commitments. Because of this, protecting the European way of life can only be accomplished through increasing European defense capabilities. The task now is making this message clear to European youth. First, Brand EU should hire new brand ambassadors who are younger and have experienced the impact of the shifting world order. For example, a brand ambassador could be an Estonian who discusses the prevalence of Kremlin media in their country. To be relatable to youth, this could be a story on the popularity of Russian films and the difficulty to find Estonian films even within the capital.²⁵⁶ This could play into a larger narrative of fear in the face of decreased autonomy and national identity.

These new brand ambassadors would then share their story across social media platforms like Twitter, Facebook and Instagram, along with doing formal interviews posted to online newspapers and advertising campaigns. This is based on data showing that more than half of young Europeans are using social media daily for news; for example, 74% of young

²⁵⁵ Philipp Schulmeister, et al., *Parlemeter 2018 Taking up the Challenge: From (Silent) Support to Actual Vote*, (Brussels: The Public Opinion Monitoring Unit within the Directorate-General for Communication of the European Parliament, 2018), <https://www.europarl.europa.eu/at-your-service/files/be-heard/eurobarometer/2018/parlemeter-2018/report/en-parlemeter-2018.pdf>.

²⁵⁶ Vijai Maheshwari, "Estonia's Russian Reset," *POLITICO*, October 29, 2019, <https://www.politico.eu/article/estonia-russia-border-language/>.

Italians get their news through social media every day.²⁵⁷ By having young people tell their stories, other youth will feel connected and realize that they too could be negatively impacted by the shifting world order unless they take action. Along with sharing their stories, these brand ambassadors would point followers to a website focused on supporting increased EU defense immediately. This would then harness the emotions

Figure 22: Example Campaign Website

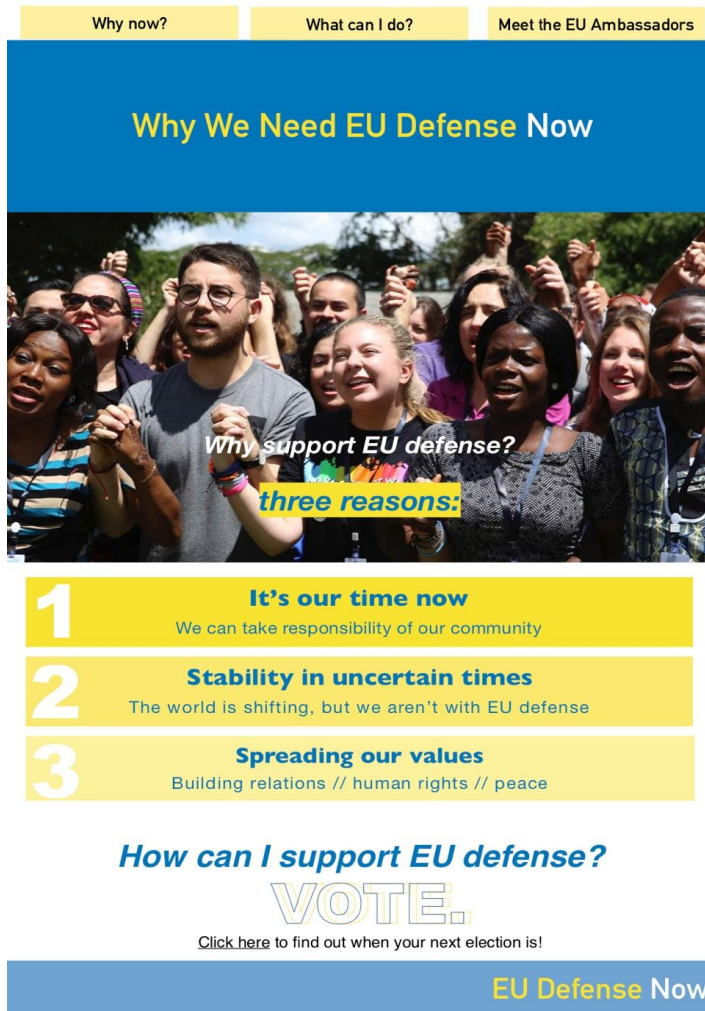


Image Citation: Youth in a Demonstration, Holding Hands Together Protesting (Potentially in the United Kingdom). LES JEUNES MENEURS ET MENEUSES SANS PEUR DONT LE MONDE A BESOIN MAINTENANT. Amnesty International. Accessed February 27, 2020. <https://www.amnesty.org/fr/latest/campaigns/2018/08/the-fearless-young-leaders-the-world-needs-right-now/>.

triggered in the ambassadors' powerful storytelling into action that would support the policies outlined in this report.

A new website (Figure 22) would be created to which all advertisements would point back. This website will be accessible through simple wording and bright colors to counter stereotypes about the "elitist EU". The goal behind such a website would be to convince youth, who are now concerned about their way of life being threatened, that the correct path of action is increasing EU defense capacity.

In rolling out any campaign, it is critical to establish feedback loops in order to measure the effectiveness of such a campaign. Because the overall purpose is to raise youth support for European defense aims, frequent polling should be done on people ages 18 to 29 in Italy during

²⁵⁷ Katerina Eva Matsa et al., "Younger Europeans Are Less Likely to Turn to Public News Media but More Likely to Rely on Social Media and Newspaper Brands," Pew Research Center: Journalism and Media, Pew Trusts, October 30, 2018, <https://www.journalism.org/2018/10/30/younger-europeans-are-less-likely-to-turn-to-public-news-media-but-more-likely-to-rely-on-social-media-and-newspaper-brands/>.

and after this campaign to gauge its impact. Additionally, this campaign seeks to ignite action, therefore election results around the time of dissemination (both during and immediately after) should be monitored to better understand whether it successfully swayed voting behavior. Thus, it would also be advisable that this campaign be timed to align with both national and EU-wide elections.

The campaign's message that the European way of life is under threat due to a changing world order, making it imperative that European defense be fully supported, could be viewed as extreme. Given the potential controversy, it will be difficult to reach a necessary consensus and fund this type of program. However, a powerful measure such as this should be taken in order to stoke a sense of urgency among European youth because otherwise, they will continue their indifference towards bolstering EU defense capabilities. Even with clear changes in the international arena, defense is not on the minds of European youth. Radical steps such as those outlined in this chapter should be taken to provoke a sense of urgency and inspire the action needed to support the higher defense ambitions recommended in this Task Force.

Related Policy Recommendations

- ◆ Implore technology and media companies to invest in algorithms that more accurately detect and verify potential misinformation that could be harmful to the EU's goals.
- ◆ Invest in research to track not just how disinformation appears in traditional and online media, but how it permeates society, influences people, and leaves lasting harm.
- ◆ Establish an official relationship between the European Commission and the independent Brand EU firm to align Brand EU's efforts with the EU Commission's goals.
- ◆ Issue an experimental Brand EU campaign that is specifically targeted at young Europeans in Italy that emphasizes the only way to protect the European way of life is through increasing EU defense capacities.
 - Brand EU would hire younger, more relevant, brand ambassadors to share their stories across media platforms and direct youth to a carefully crafted website titled, "Why EU Needs Defense Now" to inspire support from young EU citizens for increased defense aims.
 - Implement a feedback loop to measure the effectiveness of the campaign by conducting polls and examining election results.

Works Cited

- "About PESCO." PESCO Member States Driven. <https://pesco.europa.eu>.
- "About ENISA." European Union Agency for Cybersecurity. Updated February 10, 2020. <https://www.enisa.europa.eu/about-enisa>.
- "About the European External Action Service." European External Action Service. Last modified November 11, 2019. https://eeas.europa.eu/headquarters/headquarters-homepage/82/about-european-external-action-service-eeas_en.
- "A Continent in Peril." *The Economist*, November 09, 2019. <https://search.proquest.com/docview/2313054468?accountid=14784>.
- Agence France-Presse. "French nuclear power plant is seven years late and costs have tripled." *The Local*, October 29, 2019. <https://www.thelocal.fr/20191028/french-nuclear-power-plant-is-seven-years-late-and-costs-have-tripled>.
- Agence France-Presse in Chita. "Russia Begins Its Largest Ever Military Exercise with 300,000 Soldiers." *The Guardian*, September 11, 2018. <https://www.theguardian.com/world/2018/sep/11/russia-largest-ever-military-exercise-300000-soldiers-china>.
- "Airbus Helicopters Tiger to Get a New Set of Claws." Airbus, September 27, 2018. <https://www.airbus.com/newsroom/press-releases/en/2018/09/airbus-helicopters-tiger-to-get-a-new-set-of-claws.html>.
- Appunn, Kerstine. "The history behind Germany's nuclear phase-out." *Clean Energy Wire*, January 2, 2018. <https://www.cleanenergywire.org/factsheets/history-behind-germanys-nuclear-phase-out>.
- An Updated Analysis on Gas Supply Security in The EU Energy Transition*. Paris: Artelys Optimization Solutions, 2020. <https://www.artelys.com/wp-content/uploads/2020/01/Artelys-GasSecurityOfSupply-UpdatedAnalysis.pdf>.
- Baars, Hans, Robert Lassche, Robin Massink, and Hans Pille. *Smart Grid Security Certification in Europe*. Heraklion: European Union Agency for Cybersecurity, 2014. <https://doi.org/10.2824/36179>.
- Bachmann, David, Tobias Bunde, Quirin Maderspacher, Adrian Oroz, Gundbert Scherf, and Kal Wittek. *More European, More Connected and More Capable: Building the European Armed Forces of the Future*. Munich Security Conference, 2017. https://securityconference.org/assets/02_Dokumente/01_Publikationen/MSCEuropeanDefenceReport2017.pdf
- Ball, James. "Russian Interference Threatens Elections across the World - Including Ours." The Bureau of Investigative Journalism. November 13, 2019. <https://www.thebureauinvestigates.com/stories/2019-11-13/russian-interference-threatens-elections-across-the-world-including-ours>.
- Lippert, Barbara, Nicolai von Ondarza and Volker Perthes. "The Nuclear Question." In *European Strategic Autonomy – Actors, Issues, Conflicts of Interests*, 5-32. Berlin: SWP – German Institute for International and Security Affairs, 2019. doi:10.18449/2019RP04.
- Barcikowska, Anna. "EU Battlegroups, Ready to Go?" European Union Institute for

- Security Studies. November 2013. https://www.iss.europa.eu/sites/default/files/EUISSFiles/Brief_40_EU_Battlegroups.pdf.
- Belova, Gabriela and Gergana Georgieva. (2018). Fake News as a Threat to National Security. *International conference KNOWLEDGE-BASED ORGANIZATION 24*, no. 1. 19- 22. 10.1515/kbo-2018-0002.
- Benavente, Enrique Mora. "Time for the Sleeping Beauty to Wake." European Council on Foreign Relations. November 15, 2017. https://www.ecfr.eu/article/commentary_time_for_the_sleeping_beauty_to_wake.
- "Benchmarks." European Defence Agency. Accessed February 26, 2020. <https://www.eda.europa.eu/info-hub/defence-data-portal/Benchmarks>.
- Biscop, Sven. *EU-U.S. Consensus and NATO-EU Cooperation - New Perspectives on Shared Security: NATO's Next 70 Years*. Brussels: Carnegie Europe, 2019. <https://carnegieeurope.eu/2019/11/28/eu-u.s.-consensus-and-nato-eu-cooperation-pub-80416>.
- Boland, Matt, Troy Thomas, and Danny Werfel. *Four Steps to High-Impact Strategic Planning in Government*. Massachusetts: Boston Consulting Group, 2018.
- Bossong, Raphael. "Critical Infrastructure and Critical Information Infrastructure Protection: The New Frontier of EU Internal Security?" In *Challenges and Critiques of the EU Internal Security Strategy: Rights, Power and Security*, edited by Maria O'Neill and Ken Swinton, 54-79. Newcastle upon Tyne, UK: Cambridge Scholars Publishing, 2017.
- Boyer, Yves. "France and the European Security and Defense Policy: A leadership role among equals." *Sicherheit und Frieden/Security and Peace*, vol. 18, no. 2 (2011): 69-73. JSTOR.
- Brand EU. "CNBC Brand EU Interview – Rebranding Europe." CNBC. 2019. YouTube Video, 4:52. <https://www.youtube.com/watch?v=g8yUW2TAG8k&feature=youtu.be>
- Brattberg, Erik, and Tomáš Valášek. *EU Defense Cooperation: Progress Amid Transatlantic Concerns*. Washington, D.C.: Carnegie, 2019. https://carnegieendowment.org/files/WP_Brattberg_Valasek_EU_Def_Coop_v3.pdf.
- Briançon, Pierre. "5 Takeaways from Macron's Big Speech on Europe's Future." *POLITICO*, October 2, 2017, <https://www.politico.eu/article/5-takeaways-from-macrons-big-speech-on-europes-future/>.
- "Brussels Summit Declaration Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in Brussels, 11-12 July 2018." NATO. July 11, 2018. https://www.nato.int/cps/en/natohq/official_texts_156624.html.
- Brzozowski, Alexandra and Claire Stam. "In Strasbourg, Merkel brings European army one step further." *EURACTIV*. November 13, 2018. <https://www.euractiv.com/section/future-eu/news/in-strasbourg-merkel-brings-european-army-one-step-further/1289644/>.
- Bugos, Shannon. "Turkey Shows Nuclear Weapons Interest." Arms Control Association, October 2019. <https://www.armscontrol.org/act/2019-10/news/turkey-shows-nuclear-weapons-interest>.
- Building the European Energy Union*. Rome: The European House - Ambrosetti S.p.A,

2015. http://www.ambrosetti.eu/wp-content/uploads/Building-the-European-Energy-Union_Full-Report_ENG.pdf.
- “CEF Energy: Second Call for Proposals 2015.” Innovation and Networks Executive Agency. The European Commission. Accessed February 27, 2020. <https://ec.europa.eu/inea/en/connecting-europe-facility/cef-energy/apply-funding/cef-energy-second-call-proposals-2015>.
- Commission Staff Working Document Evaluation of Council Directive 2008/114 on the Identification and Designation of European Critical Infrastructures and the Assessment of the Need to Improve Their Protection*. SWD(2019) 310 final. Migration and Home Affairs. European Commission, 2019. https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-security/20190723_swd-2019-308-commission-staff-working-document_en.pdf.
- COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL Achieving the 10% Electricity Interconnection Target Making Europe's Electricity Grid Fit For 2020*. COM (2015) 82 final. European Commission. EUR-Lex, May 25 2015. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2015%3A82%3AFIN>.
- Communication on Strengthening Europe's Energy Networks*. COM (2017) 718 final. European Commission. EUR-Lex, November 23, 2017. <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52017DC0718>.
- Conley, Heather. “Russian Malign Influence in Montenegro: The Weaponization and Exploitation of History, Religion, and Economics.” Center for Strategic and International Studies. May 14, 2019. <https://www.csis.org/analysis/russian-malign-influence-montenegro>.
- “Coordinated Annual Review on Defence.” European Defence Agency. Accessed February 7, 2020. [https://www.eda.europa.eu/what-we-do/our-current-priorities/coordinated-annual-review-on-defence-\(card\)](https://www.eda.europa.eu/what-we-do/our-current-priorities/coordinated-annual-review-on-defence-(card)).
- “Critical Infrastructure and Cybersecurity.” European Commission. March 27, 2019. <https://ec.europa.eu/energy/en/topics/energy-security/critical-infrastructure-and-cybersecurity>.
- Croft, Stuart. “European Integration, Nuclear Deterrence and Franco-British Nuclear Cooperation.” *International Affairs* 72, no. 4 (1996): 771-787. JSTOR.
- Crowcroft, Orlando. “Can Peace Talks in Berlin on Sunday End the Civil War in Libya?” Euronews. January 19, 2020. <https://www.euronews.com/2020/01/19/civil-war-in-libya-can-peace-talks-in-berlin-on-sunday-bring-an-end-to-the-conflict>
- de Santis, Nicolas. “Marketing the EU Brand: Where Europe Has Fallen Short.” *Campaign*. February 2, 2016. https://www.campaignlive.co.uk/article/marketing-eu-brand-europe-fallen-short/1295277?src_site=marketingmagazine.
- de Stasio, Claudia, Cosimo Chiffi, Alessio Sitran, Riccardo Parolin, Silvia Maffii, Raffaele Vergnani, Claus Doll, Lucia Mejia-Dorantes, Katharina Wachter, Gareth Horton, Marius Biedka, Hana Bruhova, and Ian Skinner. *Research Theme Analysis Report Transport Security*. Luxembourg: Publications Office of the European Union, 2017. <https://doi.org/10.2832/074992>.
- “Defense: is the EU creating a European army?” News. European Parliament. June 24,

2019. <https://www.europarl.europa.eu/news/en/headlines/security/20190612STO54310/eu-army-myth-what-is-europe-really-doing-to-boost-defence>.
- Dempsey, Martin E. *Quadrennial Defense Review 2014*. Washington D.C.: Department of Defense, 2014.
- Devlin, Kat. "Attitudes toward EU Are Largely Positive, Both within Europe and Outside It." Pew Research Center. Pew Trusts, October 21, 2019. <https://www.pewresearch.org/fact-tank/2019/10/21/attitudes-toward-eu-are-largely-positive-both-within-europe-and-outside-it/>.
- DIRECTIVE (EU) 2016/1148 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 July 2016 Concerning Measures for a High Common Level of Security of Network and Information Systems Across the Union*. L 194/1. The European Parliament and The Council of the European Union. EUR-Lex. July 29, 2016. <https://eur-lex.europa.eu/eli/dir/2016/1148/oj>.
- Domańska, Maria, Szymon Kardaś, Marek Menkiszak, Jadwiga Rogoża, Andrzej Wilk, Iwona Wiśniewska, and Piotr Żochowski. *Fortress Kaliningrad: Ever Closer to Moscow*. Warsaw: OSW Centre for Eastern Studies, 2019. Accessed February 8, 2020. https://www.osw.waw.pl/sites/default/files/Report_Fortress_Kaliningrad_net_0.pdf.
- Domecq, Jorge. *Coherence and focus on capability priorities: why EDA's role in CARD, PESCO and EDF matters*. Madrid: Elcano Royal Institute, 2018. http://www.realinstitutoelcano.org/wps/portal/rielcano_es/contenido?WCM_GLOBAL_CONTEXT=/elcano/elcano_es/zonas_es/europa/ari54-2018-domecq-coherence-focus-capability-priorities-why-eda-role-card-pesco-edf-matters.
- Durkalec, Jacek and Matthew Kroenig. "NATO's Nuclear Deterrence: Closing Credibility Gaps," *Polish Quarterly of International Affairs* 25, no. 1 (2016): 37-50. <https://heinonline.org/HOL/P?h=hein.journals/polqurint25&i=39>.
- Durkalec, Jacek. "European Security without the INF Treaty." *NATO Review*. September 30, 2019. <https://www.nato.int/docu/review/articles/2019/09/30/european-security-without-the-inf-treaty/index.html>.
- Dvořák, Zdeněk, Eva Sventeková, David Řehák, and Zoran Čekerevac. "Assessment of Critical Infrastructure Elements in Transport." *Procedia Engineering* 187, (April 2017): 548-55. <https://doi.org/10.1016/j.proeng.2017.04.413>.
- Einhorn, Robert, and Richard Nephew. *The Iran Nuclear Deal: Prelude to Proliferation in the Middle East?* Washington, D.C.: Brookings, 2016. Accessed February 10, 2020. https://www.brookings.edu/wp-content/uploads/2016/05/acnpi_20160531_iran_deal_regional_proliferation.pdf.
- Erlanger, Steven. "Money, Jobs and Sovereignty: Myth vs. Reality Ahead of 'Brexit' Vote." *The New York Times*, June 6, 2016. <https://www.nytimes.com/2016/06/08/world/europe/britain-brexit-vote-facts.html>.
- EUROCORPS. <https://www.eurocorps.org/>.
- EUROCORPS. "European Union." <https://www.eurocorps.org/operations/european-union/>
- "Eurocorps has recently renewed its firm compromise with the European Union Common Security, Defence Policy and, from July 2017 to January 2018, and it

- will participate in EUTM RCA for the third time in a row.” *Euronews*, January 19, 2020. <https://www.euronews.com/2020/01/19/civil-war-in-libya-can-peace-talks-in-berlin-on-sunday-bring-an-end-to-the-conflict>.
- “Eurocorps takes command of the NATO Response Forces LAND.” Eurocorps, January 8, 2020. <https://www.eurocorps.org/2020/01/08/eurocorps-takes-command-nato-response-forces-land/>.
- “Eurocorps will maintain its effort to support EU’ missions.” European Union External Action. Last modified March 29 2017. <http://eueuropaeas.fpfis.slb.ec.europa.eu:8084/csdp-missions-operations/eutm-rca/23875/eurocorps>
- “EU Defence: Towards a European Defence Union.” European Commission. Accessed February 13, 2020. https://ec.europa.eu/info/sites/info/files/towards-a-european-defence-union_en.pdf.
- “EU Budget For The Future.” European Commission. June 13, 2018. https://ec.europa.eu/commission/sites/beta-political/files/budget-may2018-eu-defence-fund_en_0.pdf
- “European Foreign and Security Policy.” Foreign and Security Policy. European Union. 2018. https://europa.eu/european-union/topics/foreign-security-policy_en.
- Eva Matsa, Katerina, Laura Silver, Elisa Shearer, and Mason Walker. “Younger Europeans Are Less Likely to Turn to Public News Media but More Likely to Rely on Social Media and Newspaper Brands.” Pew Research Center: Journalism and Media. Pew Trusts, October 30, 2018, <https://www.journalism.org/2018/10/30/younger-europeans-are-less-likely-to-turn-to-public-news-media-but-more-likely-to-rely-on-social-media-and-newspaper-brands/>.
- Fagan, Moira, and Jacob Poushter. “NATO Seen Favorably Across Member States.” Pew Research Center: Global Attitudes and Trends. Pew Trusts, February 9, 2020. <https://www.pewresearch.org/global/2020/02/09/nato-seen-favorably-across-member-states/>.
- Fasanotti, Federica Saini, and Ben Fishman. “How France and Italy’s Rivalry Is Hurting Libya And How the Palermo Conference Can Help.” *Foreign Affairs*, October 31, 2018. <https://www.foreignaffairs.com/articles/france/2018-10-31/how-france-and-italys-rivalry-hurting-libya>
- Fay, Matthew. “The Good, the Bad, and the Ugly of the National Defense Strategy.” Niskanen Center. January 30, 2018. <https://www.niskanencenter.org/good-bad-ugly-national-defense-strategy/>.
- Fischer, Lars, Mathias Uslar, Doug Morrill, Michael Doring, and Edwin Haesen. *Study on the Evaluation of Risks of Cyber-Incidents and on Costs of Preventing Cyber-Incidents in the Energy Sector*. Ecofys, October 2018. https://ec.europa.eu/energy/sites/ener/files/evaluation_of_risks_of_cyber-incidents_and_on_costs_of_preventing_cyber-incidents_in_the_energy_sector.pdf.
- Fix, Liana, Bastian Giegerich, and Theresa Kirch. *European Security in Crisis: What to expect if the US withdraws from NATO*. Hamburg: Körber-Stiftung, 2019. Accessed February 10, 2020. https://www.koerber-stiftung.de/fileadmin/user_upload/koerber-stiftung/redaktion/koerber-policy-game/pdf/2019/Koerber-Policy-Game_What-to-expect-if-the-US-withdraws-from-NATO.pdf.

- Fortmann, Michel and Stephanie von Hlatky. "Nuclear Weapons in Today's Europe: The Debate That Nobody Wants." in *European Security since the fall of the Berlin Wall*, 82-101. Toronto: University of Toronto Press, 2011. JSTOR.
- Franke, Ulrike, and Tara Varma. "Independence Play: Europe's Pursuit of Strategic Autonomy." Compagnia di San Paolo and International Affairs, European Council on Foreign Relations, July 2019. https://www.ecfr.eu/specials/scorecard/independence_play_europes_pursuit_of_strategic_autonomy.
- French Ministry of Armed Forces. *Defense and National Security Strategic Review*. Strategic Review Committee. Paris: 2017. <https://www.defense.gouv.fr/layout/set/popup/content/download/520198/8733095/version/2/file/DEFENCE+AND+NATIONAL+SECURITY+STRATEGIC+REVIEW+2017.pdf>
- Fritzon, Åsa, Kristin Ljungkvist, Arjen Boin, and Mark Rhinard. "Protecting Europe's Critical Infrastructures: Problems and Prospects." *Journal of Contingencies and Crisis Management* 15, no. 1 (February 2007): 30-41. <https://doi.org/10.1111/j.1468-5973.2007.00502.x>.
- General for Communication. "Taking Up the Challenge: From (Silent) Support to Actual Vote." Eurobarometer Survey 90.1 of the European Parliament, October 2018. <https://www.europarl.europa.eu/at-your-service/files/be-heard/eurobarometer/2018/parlemeter-2018/report/en-parlemeter-2018.pdf>.
- German Ministry of Defense. *Weissbuch 2016: Zur Sicherheitspolitik und Zur Zukunft der Bundeswehr*. Bundesregierung. Berlin: 2016. <https://www.bmvg.de/resource/blob/13708/015be272f8c0098f1537a491676bfc31/weissbuch2016-barrierefrei-data.pdf>
- "Germany: Flawed Social Media Law." Human Rights Watch, February 15, 2018, <https://www.hrw.org/news/2018/02/14/germany-flawed-social-media-law>.
- Gostovic, Dragan, Sava Savic, and Srdjan Blagojevic. "Financing the Civilian and Military Missions and Operations Under the Common Security and Defence Policy of the European Union." *Vojno Delo* 68, no. 1 (2016): 17-38. doi:10.5937/vojdelo1601017G.
- Goure, Dan. "Germany's Choice for a Tornado Replacement Could Undermine NATO." *Defense News*. July 6, 2018. <https://www.defensenews.com/smr/nato-priorities/2018/07/06/germanys-choice-for-a-tornado-replacement-could-undermine-nato/>.
- Hazel Smith. *European Union Foreign Policy*. GB: Pluto Press, 2002. [https://ebookcentral.proquest.com/lib/\[SITE_ID\]/detail.action?docID=3386318](https://ebookcentral.proquest.com/lib/[SITE_ID]/detail.action?docID=3386318).
- Hermeneut. "How to Better Assess Vulnerabilities and Protect Company Assets from Cyberattacks?" *Shaping Europe's Digital Future*, European Commission. February 12, 2020. <https://ec.europa.eu/digital-single-market/en/news/how-better-assess-vulnerabilities-and-protect-company-assets-cyberattacks>.
- Hogselius, Per, Anique Hommels, Arne Kaijser, and Erik Van Der Vleuten. *The Making of Europe's Critical Infrastructure: Common Connections and Shared Vulnerabilities*. Houndmills, Basingstoke, U.K.: Palgrave Macmillan, 2013. <https://doi.org/10.1057/9781137358738>.
- Howorth, Jolyon. "Strategic Autonomy and EU-NATO Cooperation: Threat or

- Opportunity for Transatlantic Defence Relations?” *Journal of European Integration* 40, no. 5 (October 8, 2018): 523–37.
<https://doi.org/10.1080/07036337.2018.1512268>.
- Hura, Myron, Gary W. McLeod, Eric V. Larson, James Schneider, Dan Gonzales, Daniel M. Norton, Jody Jacobs, Kevin M. O'Connell, William Little, Richard Mesic, and Lewis Jamison, *Interoperability: A Continuing Challenge in Coalition Air Operations*. Santa Monica, CA: RAND Corporation, 2000. https://www.rand.org/pubs/monograph_reports/MR1235.html.
- “Infographic: MEPs Want to Boost European Defence by Increasing Cooperation.” News. European Parliament. March 16, 2017. <https://www.europarl.europa.eu/news/en/headlines/security/20170310STO66196/infographic-meps-want-to-boost-european-defence-by-increasing-cooperation>.
- “Intermediate-Range Nuclear Forces Treaty (INF Treaty).” U.S. Department of State. Accessed January 27, 2020. <https://2009-2017.state.gov/t/avc/trty/102360.htm#text>
- “Introduction: An Assessment of U.S. Military Power.” Heritage. Last modified October 30, 2019. <https://www.heritage.org/military-strength/assessment-us-military-power>
- James, Deborah L, and Daniel Goure. “The Implications of Fifth-Generation Aircraft for Transatlantic Airpower: A Primer.” Atlantic Council. October 7, 2019. <https://www.atlanticcouncil.org/in-depth-research-reports/report/the-implications-of-fifth-generation-aircraft-for-transatlantic-airpower-a-primer/>.
- Johnson, Seth. *A Europe that Protects? U.S. Opportunities in EU Defense*. Cambridge: Belfer Center, 2019. <https://www.belfercenter.org/publication/europe-protects-us-opportunities-eu-defense>.
- “Joint Declaration issued at the British-French Summit.” Saint Malo: Foreign and Commonwealth Office of the United Kingdom, 1998. https://www.cvce.eu/content/publication/2008/3/31/f3cd16fb-fc37-4d52-936f-c8e9bc80f24f/publishable_en.pdf
- Kagan, John. *The Jungle Grows Back*. First ed. New York, NY: Alfred A. Knopf, 2018.
- Kerry, John. “Remarks with EU High Representative Federica Mogherini.” Brussels: 2016. <https://2009-2017.state.gov/secretary/remarks/2016/06/259074.htm>
- Kiel, Jan, Peter Petiet, Albert Nieuwenhuis, Ton Peters, and Kees Van Ruiten. “A Decision Support System for the Resilience of Critical Transport Infrastructure to Extreme Weather Events.” *Transportation Research Procedia* 14 (April 2016): 68-77. <https://doi.org/10.1016/j.trpro.2016.05.042>.
- Lazari, Alessandro. *ERNICIP Training for Professionals in Critical Infrastructure Protection: From Risk Management to Resilience*. Luxembourg: Publications Office of the European Union, 2017. <https://doi.org/10.2760/932771>.
- Lee, Robert M., Michael J. Assante, and Tim Conway. *Analysis of the Cyber Attack on the Ukrainian Power Grid*. Washington D.C.: SANS and the Electricity Information Sharing and Analysis Center, 2016. https://ics.sans.org/media/E-ISAC_SANS_Ukraine_DUC_5.pdf.
- Leetaru, Kalev. “Stopping Disinformation Requires Measuring And Understanding It Not

- Just Monitoring And Debunking It.” *Forbes*. Accessed February 19, 2020. <https://www.forbes.com/sites/kalevleetaru/2019/04/27/stopping-disinformation-requires-measuring-and-understanding-it-not-just-monitoring-and-debunking-it/>.
- “Libya Turns into Battleground between France and Italy.” *Middle East Monitor*. January 22, 2019. <https://www.middleeastmonitor.com/20190122-libya-turns-into-battleground-between-france-and-italy/>.
- Liik, Kadri. “Winning the Normative War with Russia: An EU-Russia Power Audit.” European Council on Foreign Relations. May 21, 2018. https://www.ecfr.eu/publications/summary/winning_the_normative_war_with_russia_an_eu_russia_power_audit
- Lourenco, Marco, and Louis Marinos. *ENISA Threat Landscape for 5G Networks: Threat assessment for the fifth generation of mobile telecommunications networks (5G)*. Heraklion: European Union Agency for Cybersecurity, 2019. <https://www.bgp4.com/wp-content/uploads/2019/11/ENISA-threat-landscape-for-5G-Networks.pdf>.
- Mackintosh, Eliza. “Finland Is Winning the War on Fake News. Other Nations Want the Blueprint.” *CNN*. Accessed February 18, 2020. <https://www.cnn.com/interactive/2019/05/europe/finland-fake-news-intl>.
- Macron, Emmanuel. “Speech of the President of the Republic on the Defense and Deterrence Strategy.” Paris: 2020. <https://www.elysee.fr/en/emmanuel-macron/2020/02/07/speech-of-the-president-of-the-republic-on-the-defense-and-deterrence-strategy>.
- Major, Claudia. *The Role of Capabilities in the Transatlantic Defense Relationship*. Carnegie Europe, 2019. https://carnegieendowment.org/files/9-30_Major-EU.pdf
- “MALE RPAS - Medium Altitude Long Endurance Remotely Piloted Aircraft System.” Male RPAS. OCCAR. Accessed February 26, 2020. <https://www.occar.int/programmes/male-rpas>.
- Mangasarian, Leon and Jan Techau. *Führungsmacht Deutschland – Strategie ohne Angst und Anmaßung*. Munich: dtv, 2017.
- Rapnouil, Manuel Lafont, Tara Varma, and Nick Witney. *Eyes Tight Shut: European Attitudes Towards Nuclear Deterrence*. European Council on Foreign Relations, December 2018. https://www.ecfr.eu/specials/scorecard/eyes_tight_shut_european_attitudes_towards_nuclear_deterrence.
- Maheshwari, Vijai. “Estonia's Russian Reset.” *POLITICO*. October 29, 2019. <https://www.politico.eu/article/estonia-russia-border-language/>.
- Mara, Thierry A., Kopustinskas Vytis, Rosati Rossanna, Stakelytė Gintare, and Praks Pavel. *Security of Gas Supply with the ProGasNet Simulator: An Uncertainty and Sensitivity Analysis Exercise*. Luxembourg: Publications Office of the European Union, 2017. <https://doi.org/10.2760/818537>.
- Matsaberidze, David. “Russia vs. EU/US through Georgia and Ukraine.” *Connections: The Quarterly Journal* 14, no. 2 (2015): 77–86. <https://doi.org/10.11610/connections.14.2.06>.
- Mattioli Rossella, and Moulinos Konstantinos. *Analysis of ICS-SCADA Cyber Security Maturity Levels in Critical Sectors*. Heraklion: ENISA, 2016. <https://doi.org/10.2824/835661>.

- Mattioli, Rossella, and Konstantinos Moulinos. *Communication Network Interdependencies in Smart Grids*. Heraklion: European Union Agency for Cybersecurity, 2015. <https://doi.org/10.2824/949547>.
- Mazurek, Kamil. *European offensive in defense sphere - EDF, PESCO and CARD*. Warszawa: Casimir Pulaski Foundation, 2018. https://pulaski.pl/wp-content/uploads/2018/11/European_offensive_in_defense_sphere_EEDF_PESCO_and_CARD.pdf
- Meijer, Hugo, and Marco Wyss. *The Handbook of European Defence Policies and Armed Forces*. First ed. Oxford: Oxford University Press, 2018. DOI:10.1093/oso/9780198790501.003.0023
- Melchiorre, Tiziana. *Recommendations on the Importance of Critical Energy Infrastructure (CEI) Stakeholder Engagement, Coordination and Understanding of Responsibilities in Order to Improve Security*. Vilnius: NATO Energy Security Centre of Excellence, 2018. https://enseccoe.org/data/public/uploads/2018/04/d1_2018.04.23-recommendations-on-the-importance-of-critical-energy.pdf.
- "Member States Driven." PESCO. Accessed February 26, 2020. <https://pesco.europa.eu/>.
- Nomikos, John, and A Th. Symeonides. "NATO and the Future, 2016: Five Questions and Answers." *The Polish Quarterly of International Affairs* 25, no. 1 (2016): 88-97. <https://heinonline.org/HOL/P?h=hein.journals/polqurint25&i=90>.
- "Official Text: The North Atlantic Treaty." North Atlantic Treaty Organization. Last updated April 10, 2019. https://www.nato.int/cps/en/natolive/official_texts_17120.htm.
- O'Hanlon, Michael E. *The Pentagon's Quadrennial Defense Review*. Brookings Policy Brief Series, April 1, 1997. <https://www.brookings.edu/research/the-pentagons-quadrennial-defense-review/>.
- Pelopidas, Benoît. *The Next Generation(s) of Europeans Facing Nuclear Weapons: Forgetful, Indifferent, but Supportive?* EU Non-Proliferation Consortium Non-Proliferation Papers: 2017. Accessed March 1, 2020. <https://www.nonproliferation.eu/wp-content/uploads/2018/09/the-next-generation-s-of-europeans-facing-nuclear-57.pdf>.
- Petersen, Laura, Laure Fallou, Paul Reilly, and Elisa Serafinelli. "Public Expectations of Critical Infrastructure Operators in Times of Crisis." *Sustainable and Resilient Infrastructure*, (May 2018): 1-16. <https://doi.org/10.1080/23789689.2018.1469358>.
- Pezard, Stephanie, Andrew Radin, Thomas S. Szayna, and F. Stephen Larrabee. *European Relations with Russia: Threat Perceptions, Responses, and Strategies in the Wake of the Ukrainian Crisis*. Santa Monica, CA: RAND Corporation, 2017. Accessed February 9, 2020. https://www.rand.org/pubs/research_reports/RR1579.html.
- Pifer, Steven. "The Growing Russian Military Threat in Europe." Brookings, May 16, 2017. <https://www.brookings.edu/testimonies/the-growing-russian-military-threat-in-europe/>.
- "Political and Security Committee." European Council. Accessed February 21, 2020.

- <https://www.consilium.europa.eu/en/council-eu/preparatory-bodies/political-security-committee/>
- Pursiainen, Christer. "The Challenges for European Critical Infrastructure Protection." *Journal of European Integration* 31, no. 6 (November 2009): 721-739. <https://doi.org/10.1080/07036330903199846>.
- "Purpose." Accessed January 10, 2019. <https://www.eurocorps.org/>.
- "Purpose." NATO Response Force. NATO. Last updated January 10, 2019. https://www.nato.int/cps/en/natolive/topics_49755.htmf
- Rapp, Christian. "Youth Study 'Young Europe 2019' of TUI Foundation." TUI Group. May 3, 2019. <https://www.tuigroup.com/en-en/media/press-releases/2019/2019-05-03-tui-foundation-youth-study>.
- Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on Guidelines for Trans-European Energy Infrastructure*. L 115/39. The European Parliament and the Council of the European Union. EUR-Lex, April 17, 2013. <http://data.europa.eu/eli/reg/2013/347/oj>.
- "Resilience and Article 3." North Atlantic Treaty Organization. NATO. Updated December 3, 2019. https://www.nato.int/cps/en/natohq/topics_132722.htm.
- "Relations with the European Union," NATO. Last modified August 12, 2019. https://www.nato.int/cps/en/natohq/topics_49217.htm
- Reykers, Yf. "EU Battlegroups: High Costs, no Benefits." *Contemporary Security Policy* 38, 3 (2017): 457-470. doi:10.1080/13523260.2017.1348568.
- Richter, Philipp M., and Franziska Holz, "All Quiet on the Eastern Front? Disruption Scenarios of Russian Natural Gas Supply to Europe." *Energy Policy* 80 (May 2015): 177-89, <https://doi.org/10.1016/j.enpol.2015.01.024>.
- Schulmeister, Philipp, Elise Defourny, Luisa Maggio, Said Hallaouy, Matthias Buttner, Alice Chiesa, and Bart Van Gasse. *Parlemeter 2018 Taking up the Challenge: From (Silent) Support to Actual Vote*. Brussels: The Public Opinion Monitoring Unit within the Directorate-General for Communication of the European Parliament, 2018. <https://www.europarl.europa.eu/at-your-service/files/be-heard/eurobarometer/2018/parlemeter-2018/report/en-parlemeter-2018.pdf>.
- Schumacher, Shannon, Richard Wike, Jacob Poushter, and Janell Fetterolf. "Trump Ratings Remain Low Around Globe, While Views of U.S. Stay Mostly Favorable." Pew Research Center: Global Attitudes and Trends. Pew Trusts, January 8, 2020. <https://www.pewresearch.org/global/2020/01/08/trump-ratings-remain-low-around-globe-while-views-of-u-s-stay-mostly-favorable/>.
- Scott, Mark, and Laurens Cerulus. "Russian Groups Targeted EU Election with Fake News, Says European Commission." *POLITICO*, June 16, 2019. <https://www.politico.eu/article/european-commission-disinformation-report-russia-fake-news/>.
- Sechser, Todd S. "Nuclear security: The enduring challenge of nuclear weapons." *Foreign Policy Association – Great Decisions* (2017): 105-114. JSTOR.
- "Seven Countries Now Deploy Russian S-400 Technologies - Over Half a Dozen More Have Shown Interest in Purchases." *Military Watch Magazine*. July 15, 2019. <https://militarywatchmagazine.com/article/seven-countries-now-deploy-advanced->

- russian-s-400-technologies-over-half-a-dozen-more-have-shown-interest-in-purchases.
- “Shared Vision, Common Action: A Stronger Europe.” European Commission, June 2016. https://eeas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf.
- Sfakianakis, Andreas, Christos Douligeris, Louis Marinos, Marco Lourenço, and Omid Raghimi. ENISA, European Union Agency for Cybersecurity. *ENISA Threat Landscape Report 2018 15 Top Cyberthreats and Trends*, 2019. <https://doi.org/10.2824/622757>.
- Shea, Jamie. “Resilience: A Core Element of Collective Defence.” NATO. Updated March 30, 2016. <https://www.nato.int/docu/review/articles/2016/03/30/resilience-a-core-element-of-collective-defence/index.html>.
- Silva, Marco. “Is Russia Trying to Sway the European Elections?” BBC News. BBC, May 20, 2019. <https://www.bbc.com/news/blogs-trending-48296557>.
- “Smart Grids.” ENISA. European Union Agency for Cybersecurity. Updated June 28, 2016. <https://www.enisa.europa.eu/topics/critical-information-infrastructures-and-services/smart-grids>.
- “Special Eurobarometer 486, ‘Europeans in 2019.’” Public Opinion. European Commission. March 2019. <https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm>.
- Smith, Michael E. “Transatlantic Security Relations since the European Security Strategy: What Role for the EU in Its Pursuit of Strategic Autonomy?” *Journal of European Integration* 40, no. 5 (2018): 605–20. <https://doi.org/10.1080/07036337.2018.1488840>.
- Smith, Mike. “The EU, the US and the Crisis of Contemporary Multilateralism.” *Journal of European Integration* 40, no. 5 (2018): 539–53. <https://doi.org/10.1080/07036337.2018.1488836>.
- Solana, Javier, Angel Saz-Carranza, María García Casa, and Jose Francisco Estébanez Gómez. *On the way Towards a European Defence Union - A White Book as a first step*. Belgium: European Parliament, 2016. https://www.europarl.europa.eu/RegData/etudes/STUD/2016/535011/EXPO_STU%282016%29535011_EN.pdf.
- Solanko, Laura, and Pekka Sutela. “Too Much or Too Little Russian Gas to Europe?” *Eurasian Geography and Economics* 50, no. 1 (January 2009): 58-74. <https://doi.org/10.2747/1539-7216.50.1.58>.
- Standish, Reid. “Why Is Finland Able to Fend Off Putin’s Information War?” *Foreign Policy*. Accessed February 18, 2020. <https://foreignpolicy.com/2017/03/01/why-is-finland-able-to-fend-off-putins-information-war/>.
- Stone, Jon. “Support for EU Rises in Denmark as Consequences of Brexit Become Clear.” UK Politics. The Independent. April 3, 2018. <https://www.independent.co.uk/news/uk/politics/brexit-denmark-poll-eu-referendum-consequences-a8286296.html>.
- Stuart, Christina. “The French exception: The French nuclear power industry and its influence on political plans to transition to a new energy system.” in *Learning from Fukushima*, 27-61. Canberra: Australian National University Press, 2017.
- “Support for EU Remains at Historically High Level despite Sceptics.” News. European

- Parliament, April 25, 2019. <https://www.europarl.europa.eu/news/en/press-room/20190417IPR41755/support-for-eu-remains-at-historically-high-level-despite-sceptics>.
- “Tackling Online Disinformation.” Shaping Europe’s Digital Future. European Commission. October 26, 2017. <https://ec.europa.eu/digital-single-market/en/tackling-online-disinformation>.
- Tama, Jordan. "The politics of strategy: why government agencies conduct major strategic reviews." *Journal of Public Policy*, no. 1 (May 2015): 27-54. <https://doi.org/10.1017/S0143814X15000148>.
- Techau, Jan. “The Servant Leader,” Carnegie Europe – Berlin Policy Journal, July 6, 2016. <https://carnegieeurope.eu/2016/07/06/servant-leader-pub-64223>.
- "The Birth of the Agency." European Defence Agency. Accessed February 7, 2020. <https://eda.europa.eu/our-history/mb/birth-agency-2001-2004.html>.
- “The Common Security and Defence Policy (CSDP).” European External Action Service. "Last modified March 5, 2018. https://eeas.europa.eu/topics/common-security-and-defence-policy-csdp/431/common-security-and-defence-policy-csdp_en.
- "The European Union Military Staff." European External Action Service. Accessed February 27, 2020. [https://eeas.europa.eu/headquarters/headquarters-home_page_en/5436/The%20European%20Union%20Military%20Staff%20\(EUMS\)](https://eeas.europa.eu/headquarters/headquarters-home_page_en/5436/The%20European%20Union%20Military%20Staff%20(EUMS))
- "The 2010 Quadrennial Defense Review: Refocusing Priorities." ASUA's Institute of Land Warfare. Association of the United States Army. Accessed February 18, 2020. <https://www.ausa.org/sites/default/files/DR-10-2-The-2010-Quadrennial-Defense-Review-Refocusing-Priorities.pdf>.
- Theocharidou, Marianthi, Luca Galbusera, and Gergios Giannopoulos. “Resilience of Critical Infrastructure Systems: Policy, Research Projects and Tools.” In *IRGC Resource Guide on Resilience: Domains of Resilience for Complex Interconnected Systems*, edited by Benjamin Trump, Marie-Valentine Florin, and Igor Linkov, 147-59. Vol. 2. Lausanne, Switzerland: EPFL - International Risk Governance Council, 2018. <https://doi.org/10.5075/epfl-irgc-257279>.
- Trump, Donald, and Jens Stoltenberg. “Remarks by President Trump and NATO Secretary General Stoltenberg After 1:1 Meeting.” London: 2019. <https://www.whitehouse.gov/briefings-statements/remarks-president-trump-nato-secretary-general-stoltenberg-11-meeting-london-united-kingdom/>.
- “The Intermediate-Range Nuclear Forces (INF) Treaty at a Glance.” Arms Control Association. Last reviewed August, 2019. <https://www.armscontrol.org/factsheets/INFtreaty>.
- U.S. General Accounting Office. *Quadrennial Defense Review: Future Reviews Can Benefit from Better Analysis and Changes in Timing and Scope*. GAO-03-13. Washington, DC, 2002. <https://www.gao.gov/products/gao-03-13>.
- “U.S.-Russian Nuclear Arms Control Agreements at a Glance.” Arms Control Association. Last reviewed August 2019. <https://www.armscontrol.org/factsheets/USRussiaNuclearAgreements>.
- Valášek, Tomáš. *New Perspectives on Shared Security: NATO's Next 70 Years*.

- Brussels: Carnegie Europe, 2019. <https://carnegieeurope.eu/2019/11/28/new-perspectives-on-shared-security-nato-s-next-70-years-pub-80411>.
- Verner, Duane, Agnia Grigas, and Frederic Petit. *Assessing Energy Dependency in the Age of Hybrid Threats*. Helsinki, Finland: The European Centre of Excellence for Countering Hybrid Threats, 2019. https://www.hybridcoe.fi/wp-content/uploads/2019/02/Assessing_Energy_Dependency_in_the_Age_of_Hybrid_Threats-HybridCoE.pdf
- Vershbow, Alexander. "The Case for Extending New START." Atlantic Council. February 5, 2020. <https://www.atlanticcouncil.org/blogs/new-atlanticist/the-case-for-extending-new-start/>.
- Vincent, Michael. "EU Battlegroups: The European 'Army' that Politicians can't Agree how to Use." *ABC News*. November 20, 2018. <https://www.abc.net.au/news/2018-11-17/the-european-army-that-has-never-been-in-a-fight/10506466>.
- Wagner, Rene and Thomas Seythal. "Germany to Run World's Largest Current Account Surplus in 2019." *Reuters*. September 13, 2019. <https://www.reuters.com/article/germany-economy-trade/germany-to-run-worlds-largest-current-account>
- West, Darrell M. "How to Combat Fake News and Disinformation." Brookings, December 18, 2017. <https://www.brookings.edu/research/how-to-combat-fake-news-and-disinformation/>.
- Wike, Richard, and Jacob Poushter. "Europeans Are Wary of Hard Power in the World." Pew Research Center's Global Attitudes Project. Pew Research Center, December 30, 2019. <https://www.pewresearch.org/global/2016/06/13/europeans-wary-of-hard-power/>.
- Woertz, Eckart, Meike Fienitz, Hugh Jorgensen, Andrew Sprague, Arya Fazilat, and Berenguer Gangoellis. *The EU's Energy Diplomacy: Transatlantic and Foreign Policy Implications*. Brussels: European Parliament, 2016. <https://doi.org/10.2861/203159>.
- Woody, Christopher. "Germany Has a 'Massive Problem' That Has Reportedly Knocked Almost All of Its Eurofighter Typhoon Fighter Jets out of Commission." *Business Insider*, May 4, 2018. <https://www.businessinsider.com/german-military-fighters-jets-not-ready-for-combat-2018-5?IR=T>.
- Woolf, Amy F. 2020. *Russia's Nuclear Weapons: Doctrine, Forces, and Modernization*. CRS Report No. R45861. Washington D.C.: Congressional Research Service. <https://fas.org/sgp/crs/nuke/R45861.pdf>.