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MILITARY COMMITTEE
BACKGROUND GUIDE

-
- Modernizing NATO Interoperability Capacity through Procurement
 - NATO, Energy Security and Hybrid Warfare
 - Developing and integrating new technologies



Introduction to the Military Committee

The Military Committee (MC) is the senior military authority in NATO and the oldest permanent body in NATO after the North Atlantic Council, both having been formed months after the Alliance. It is the primary source of military advice to NATO's civilian decision-making bodies: the North Atlantic Council and the Nuclear Planning Group. Its advice is sought prior to any authorization for military action and, consequently, is an essential link between the political decision-making process and the military structure of NATO.

The Military Committee is charged with translating political decisions into military action, taking the direction of the political element and finding practical ways to bring about action. Delegates will be addressing some of the pressing nuts-and-bolts questions facing NATO at this time, and will be expected to provide both appropriate, reality-based recommendations, as well as practical solutions to decisions made at the political level.

Topic A: Modernizing NATO Interoperability Capacity through Procurement

Interoperability Overview – Importance and Components of Interoperability

The effectiveness of any military is determined at a basic level by the ability of its members and parts to coordinate action to achieve objectives. This notion is underscored by the old adage that “Amateurs talk about tactics while experts speak of logistics”. The ability to communicate and materially match needs and capabilities, from strategic planning all the way down to the tactical level in the field, is crucial to efficient, safe and decisive military action. This is evermore the case with NATO as an alliance comprising the militaries of 31 member nations (soon to be 32 with the accession of Sweden), each in turn representing its own doctrines, capacities, equipment and logistical capabilities.

This capability (of forces of different countries, specializations and purposes) to work together through common protocols and toolsets is known as **interoperability**. NATO defines this term as “... the ability for Allies to act together coherently, effectively and efficiently to achieve tactical, operational and strategic objectives. Specifically, interoperability enables forces, units and/or systems to operate together, allowing them to communicate and to share common doctrine and procedures, along with each other’s infrastructure and bases”¹. It further identifies four main components of interoperability². They are:

- Technical (including hardware, equipment, armaments and systems),
- Procedural (including doctrines and procedures),
- Human (including terminology and training) and
- Information (as a critical transversal element).

All of these components must be taken into account, with no one of them having overriding precedence over the other: Soldiers with compatible communications infrastructure but differing protocols on how and when to use it will not necessarily be more effective than those who lack both. Having acknowledged the importance of each of these areas, the question this topic seeks to address primarily concerns the first of these, the importance of the others notwithstanding.

Procurement Overview – Procurement as a Process and a Chance to improve Interoperability

Procurement (as pertains to matters of public interest such as security and defense) is the process of a government interfacing with public and private firms to obtain the equipment, materiel and resources necessary to satisfy a given set of strategic requirements. This process includes:

- Strategic Planning – What kinds of force and capabilities does a given state need?

¹ North Atlantic Treaty Organization, 2023. “Interoperability: connecting forces.”

² Ibid.

- Resource Allocation – What kinds of resources can both the contracting government and the available systems of production supply to satisfy the strategic requirements (Finances, development programs, technical expertise, raw materials, project coordination and oversight, etc.)?
- Tendering and Competition – Which firms will be chosen to work on the project and awarded the contracts to develop the desired capabilities? What is each promising to provide? (For an example of what this looks like from the civilian world, consider the competition between aircraft manufacturers to deliver a workable airframe to the 1963 American National Supersonic Transport Program³)
- Delivery and Implementation – How will procured items be distributed and their performance monitored to ensure peak performance?

For many nations, procurement internally within just their own governments is a monumental task. Interfacing all the relevant departments in evaluating these considerations requires considerable time and resources. Coordinating procurement between governments multiplies these issues, however if done successfully it could greatly increase the effectiveness of NATO nations' ability to pool resources, avoid process duplication and benefit interoperability. To this end, it is worth, at the very least, assessing the feasibility of developing a NATO-directed platform for "meeting each member nation's procurement where they are" and providing a template for streamlined international procurement.

Central Question – What needs attention and what problems will this solve?

How can NATO nations change or better integrate their procurement processes to improve interoperability?

This question seeks to provide a strategic and comprehensive answer to a narrow-focused tactical issue within the technical category of interoperability, that being **the need for common (or at least compatible) systems of weapons, communications, logistics, technology and command and control**. To be sure, interoperability does not necessarily mean everyone using exactly the same equipment⁴, however compatibility is essential. Presently the alliance effectively covers for deficient areas of interoperability; however, **eliminating gaps at the source will of course do far more to improve interoperability than any stopgap measures**. This is the motivation for casting attention to improving procurement processes. **It is hoped that an effective system of integrating the military procurement processes of member states would serve to increase interoperability as new technologies and systems are developed and implemented.**

³ Mustard. 2018. "Why You Never Got to Fly The American Concorde: The 2707 SST Story." *View a short history here starting at 3:29 - <https://youtu.be/Y91Zr480Tn4?t=209>

⁴ North Atlantic Treaty Organization, 2023. "Interoperability: connecting forces."

Conclusion - Particular Challenges facing the Alliance

Since its creation, NATO has continually faced challenges of integrating the systems of its member states at every level, from strategic disposition of forces down to the manufacturing specifications of individual rifle cartridges. The latter of these represents interoperability at its most basic tactical level. According to one 2015 NATO article, "... overcoming [challenges] at the tactical level can be accomplished through the establishment of common tactics, techniques, and procedures (TTPs). Key tactical interoperability challenges include technological disparities, command and control, doctrinal differences, and resource gaps"⁵. This is the nuts-and-bolts level of technical specifications which requires the creation of a powerful program of procurement integration to run smoothly and ensure effective oversight as new technologies are introduced.

While these challenges have persisted for decades, they are increasing in scale with the appearance of Emerging and Disruptive Technologies (EDTs), complex political situations such as the ongoing war in Ukraine and the use of hybrid strategies such as information warfare. In particular, the steady progress of artificial intelligence and cyberattack capabilities means that robust interoperability will be difficult to achieve without a comprehensive security and information architecture common to all member nations. The ability to share accurate and sensitive information securely, especially in a command-and-control capacity underpins interoperability, meaning any threats to it must be aggressively and decisively countered. With all these factors bearing their influence, it is clear the future of NATO as an effective collective defense organization depends on improving the interoperability of its constituent forces and that the integration of procurement processes has enormous potential in to serve this goal.

Guiding Questions:

- Assuming the utility of integrated procurement for the sake of the question, in attempting to integrate the procurement systems of member nations, should NATO attempt to create an alternative/replacement system, a parallel system, or merely make recommendations to the existing procurement systems?
- For the first of these, a system that replaces a national system of military procurement in its entirety is likely to be extremely unpopular among most nations. Be that as it may, are there individual elements of procurement that could be integrated at a NATO level while nations still retain their autonomy? E.g. The nations jointly consult each other before changing their strategic requirements for their forces and introducing new tech and doctrine, ensuring each member maintains optimal roles in the organization to increase efficiency.
- If NATO were to create a parallel, voluntary system into which nations could opt if they so choose, this would likely meet far less resistance but would trade comprehensiveness for

⁵ Derleth, 2015. "Enhancing interoperability: the foundation for effective NATO operations."

participation as members would still have the option of relying on their own systems of procurement. Small nations, such as Malta and Albania may benefit from this, but the United States and United Kingdom could remain separate and autonomous, blunting the benefits of such a move. Is there a way to gain participation without trading efficacy?

- Finally, a body run by NATO which merely advises and coordinates but does not dictate how procurement should be carried out to member states may see greater acceptance, but will have less ability to affect change. Could a program such as DIANA⁶ fulfill this role? What can NATO do to encourage participation in combined procurement from an advisory position?
- How can NATO coordinate with existing standardization apparatuses⁷ to improve interoperability at the source through the design and implementation phase?

Further Reading

Derleth, J., 2015. "Enhancing interoperability: the foundation for effective NATO operations." *NATO Review*, June 16: <https://www.nato.int/docu/review/articles/2015/06/16/enhancing-interoperability-the-foundation-for-effective-nato-operations/index.html>.

Deimling, C. V., Glas, A. H., Ekström, T., & Essig, M., 2013. Cooperative purchasing in defence: Analysis of NATO and EU initiatives. In *IPSERA 2013 Conference*.
https://www.researchgate.net/profile/Andreas-Glas/publication/235995172_Cooperative_purchasing_in_defence_Analysis_of_NATO_and_EU_initiatives/links/00b4951559ac59e165000000/Cooperative-purchasing-in-defence-Analysis-of-NATO-and-EU-initiatives.pdf

Mustard. 2018. "Why You Never Got to Fly The American Concorde: The 2707 SST Story." *YouTube*. March 6. Accessed December 29, 2023. <https://youtu.be/Y91Zr480Tn4?t=209>.

North Atlantic Treaty Organization, 14 October 2022. "Standardization." December 29, 2023. https://www.nato.int/cps/en/natohq/topics_69269.htm.

North Atlantic Treaty Organization, 11 April 2023. "Interoperability: connecting forces." Accessed December 29, 2023. https://www.nato.int/cps/en/natohq/topics_84112.htm.

North Atlantic Treaty Organization, 22 June 2023. "Emerging and disruptive technologies." Accessed December 29, 2023. https://www.nato.int/cps/en/natohq/topics_184303.htm.

Pohl, Á., & Gulyás, G., 2020. The Role of the NATO Support and Procurement Agency in Support to Operations. *Academic and Applied Research in Military and Public Management Science*, 19(3), 37-51. <http://real.mtak.hu/130415/1/03-gulyas-pohl-37-51-aarms-2020-3.pdf>

⁶ North Atlantic Treaty Organization, 2023. "Emerging and disruptive technologies."

⁷ North Atlantic Treaty Organization, 2022. "Standardization."

Topic B: NATO, Energy Security and Hybrid Warfare

Introduction

On 5 June 2023, the NATO Military Committee held a meeting with select Partners – Algeria, Azerbaijan, Jordan, Kuwait and Uzbekistan – to discuss energy security and subsequent challenges as well as focus areas of that would benefit from strengthened military cooperation within the existing partnerships. The NATO Military Committee then heard from Partners, Azerbaijan and Jordan. The Military Representative for Azerbaijan, Colonel Aghaverdi Guliyev and Dr Esmira Jafarova provided some insights into country’s energy security strategy and noted their efforts to diversify natural gas sources and routes, as well as export renewable energy resources.⁸

The energy security priorities are centred on reducing risk by:

- decreasing their dependence on imported energy;
- protecting vital energy facilities;
- including cybersecurity measures to ensure national stability;
- and building a stable, reliable, and sustainable energy sector.

Threats to NATO

Russia has intentionally exacerbated the energy crisis since 2021 and its war of aggression against Ukraine impacts the global energy landscape. Energy security falls under the umbrella of hybrid warfare which Russia has pursued as a means of threatening and destabilizing NATO members and their internal cohesion without crossing the threshold of an article 5 response.⁹ **Hybrid warfare** is roughly defined as ‘grey area’ warfare, which often exists just beneath the threshold of armed conflict. It is designed to erode public confidence in civil society and democratic foundations, primarily through cyber-attacks on critical infrastructure, including energy, or targeted disinformation methods.¹⁰

Russia’s aggression against Ukraine and its willingness to deploy energy as a geopolitical weapon have destroyed its reliability as an energy supplier. A mass European exodus from Russian oil and gas markets has occurred.¹¹ As a result, NATO member states have accelerated their energy transitions and NATO is venturing through different avenues for energy security such as most recently in meeting with Saudi Arabia for the first time which would have many benefits and implications for NATO.¹²

⁸ North Atlantic Treaty Organization, 6 June 2023. “NATO Allies and Partners discuss energy security” https://www.nato.int/cps/en/natohq/news_215433.htm?selectedLocale=en

⁹ Harriett Baldwin, “General Report - Russia’s War on Ukraine and Transatlantic Energy Security Challenges,” accessed January 17, 2024, <https://www.nato-pa.int/document/2023-energy-security-report-baldwin-023-esc>.

¹⁰ North Atlantic Treaty Organization, 13 January 2021. “Energy security in the era of hybrid warfare” <https://www.nato.int/docu/review/articles/2021/01/13/energy-security-in-the-era-of-hybrid-warfare/index.html>

¹¹ Galeotti, M., 1 September 2017, “Controlling Chaos: How Russia manages its political war in Europe,” *European Council on Foreign Relations*, https://www.ecfr.eu/publications/summary/controlling_chaos_how_russia_manages_its_political_war_in_europe

¹² Secretary General sets out vision for deeper NATO–Saudi Arabia cooperation in historic first visit to Riyadh https://www.nato.int/cps/en/natohq/news_220769.htm?selectedLocale=en

NATO's Role

Energy security was first defined at the 2008 Bucharest Summit and has since been strengthened. The NATO Energy Security Centre of Excellence (ENSEC) in Vilnius, Lithuania has been supporting NATO's work on energy security since 2012. ENSEC's mission is assisting Strategic Commands, other NATO bodies, nations, partners, and other civil and military entities by supporting NATO's capability development process, mission effectiveness, and interoperability in every term by providing comprehensive and timely subject matter expertise on all aspects of energy security. Furthermore, Energy security plays an important role in the common security of NATO Allies. The disruption of energy supply could affect security within the societies of NATO member and partner countries and have an impact on NATO's military operations. NATO seeks to enhance its strategic awareness of energy developments with security implications; develop its capacity to support the protection of critical energy infrastructure; and ensure reliable and efficient energy supplies to the military.

Conclusion

All countries rely on energy infrastructure for their energy security. Energy infrastructure is one of the most vulnerable assets, especially in areas of conflict. Since infrastructure networks extend beyond borders, attacks on complex energy infrastructure by hostile states, terrorists, or other malign actors can have repercussions across regions. Moreover, Energy supplies to the military must be ensured at all times. Since the military depends on civilian energy networks, it is important to ensure the security of critical energy infrastructure and supply chains, and develop innovative, resilient, efficient, and autonomous energy solutions for the military.¹³ Since 2021 Energy Security is a critical issue in that NATO must address in order to maintain stability in allied regions, the energy crisis has shown how vital it is to secure access to reliable energy amongst hostile environments.

Guiding Questions:

- Energy relies on a high level of global interconnectedness; how can NATO ensure security when a host nations infrastructure is dependent on array of potential attack vectors which could disrupt liquid fuel flows or availability of battlefield power?
- Should NATO military focus move toward protecting vital energy sectors when in times of conflict to maintain a stable connection to energy?
- Should NATO allies focus on different forms of energy such as nuclear power as many of NATO's allies are the largest producers of uranium ore in the world? What are the implications of focusing on this form of energy for NATO?
- What could NATO's potential new partnership with Saudi Arabia mean in terms of stability, is it a strategic partnership in the middle east? Will NATO rely on the Middle East for oil in the near future?

Further Readings

Baldwin, Harriett. "General Report - Russia's War on Ukraine and Transatlantic Energy Security Challenges." Accessed January 17, 2024. <https://www.nato-pa.int/document/2023-energy->

¹³ North Atlantic Treaty Organization, 11 January 2024. "Energy security". https://www.nato.int/cps/en/natohq/topics_49208.htm

security-report-baldwin-023-esc

Dupuy, A., Nussbaum, D., Butrimas, V., & Granitsas, A. (2021). Energy security in the era of hybrid warfare. *NATO Review*, 13.

<https://www.nato.int/docu/review/articles/2021/01/13/energy-security-in-the-era-of-hybrid-warfare/index.html>

Galeotti, M., 1 September 2017, “Controlling Chaos: How Russia manages its political war in Europe,” *European Council on Foreign Relations*,

https://www.ecfr.eu/publications/summary/controlling_chaos_how_russia_manages_its_political_war_in_europe

North Atlantic Treaty Organization, 6 June 2023. “NATO Allies and Partners discuss energy security”

https://www.nato.int/cps/en/natohq/news_215433.htm?selectedLocale=en

North Atlantic Treaty Organization, 13 December 2023. “Secretary General sets out vision for deeper NATO–Saudi Arabia cooperation in historic first visit to Riyadh”

https://www.nato.int/cps/en/natohq/news_220769.htm?selectedLocale=en

North Atlantic Treaty Organization. 11 January 2024. “Energy security.”

https://www.nato.int/cps/en/natohq/topics_49208.htm

Topic C: Developing and integrating new technologies

Introduction

The 5th annual NATO Training Technology Conference, organized by the Modelling and Simulation Learning Technologies Branch from NATO's Allied Command Transformation, took place in the historic city of Athens, Greece, from September 12-14, 2023. Hosted by the Hellenic National Defense General Staff, the conference provided a dynamic platform for NATO entities, national representatives, academic professionals, and industry experts to gather and delve into the latest advancements in training technology within the NATO Alliance.

The conference showcased a wide array of innovations aimed at enhancing the efficiency of NATO's training programs such as immersive virtual reality simulations to Artificial Intelligence-driven solutions. The success of the NATO Training Technology Conference was the ability to blend the latest technological advancements with the expertise of professionals from diverse backgrounds. It demonstrated NATO's commitment to staying at the forefront of training technology to ensure it is prepared for the new challenges of global conflict.¹⁴

NATO Context

NATO in the last decade has been keen on implementing Artificial Intelligence and innovative technologies; Adopting them into training strategy has been identified as vital for the maintenance of the alliance's technological edge. NATO has recognized that it must stay at the forefront of such advancements to confront and maintain the alliance's military edge and has dedicated centres and institutions to ensure this.¹⁵ Such institutions include:

- **The NATO Science and Technology Organization (STO)** - The STO is the world's largest collaborative research forum in the field of defense and security. The organization supports the defense and security posture of the Alliance and its partners through scientific and technological research. With a network of 6,000 actively engaged scientists, the STO draws upon the expertise of more than 200,000 people in Allied and partner nations. Its annual programme of work includes over 300 projects that cover a wide range of fields such as autonomous systems, anti-submarine warfare, hypersonic vehicles, quantum radar, and the impact of social media on military operations.¹⁶
- **The NATO Centre of Excellence – Modelling and Simulation** is a NATO accredited Education & Training Facility, committed to a continuous improvement in providing quality NATO Education & Individual Training opportunities, by utilizing an Effective Quality Management System. The facility has introduced **The Modelling and Simulation for Autonomous Systems Workshop (MESAS)** which is an Inter-domain and Interdisciplinary exchange between M&S and Robotics that scout the use of M&S to integrate Systems with

¹⁴ NATO Training Technology Conference 2023. September 2023. <https://www.act.nato.int/article/nttc-2023/>

¹⁵ NATO launches artificial intelligence strategic initiative. May 2022. <https://www.ncia.nato.int/about-us/newsroom/nato-launches-artificial-intelligence-strategic-initiative.html>

¹⁶ Science and Technology Organization. May 2023. https://www.nato.int/cps/en/natohq/topics_88745.htm

Autonomous Capabilities in Operational Scenarios and to support Coalition Interoperability.¹⁷

- **The Defense Innovation Accelerator for the North Atlantic (DIANA)** - is a NATO body working with leading researchers and entrepreneurs across the Alliance, helping them develop technologies to keep NATO populations safe and secure. With dozens of accelerator sites and test centres across the Alliance, DIANA brings together universities, industry and governments to work with start-ups and other innovators to solve critical defense and security challenges. DIANA has an array of areas of interest from AI, autonomy and quantum technologies to biotechnology and human enhancement.¹⁸

Each of these NATO bodies conducts innovative research that intersects with each other and beyond NATO to trusted partners. Many are emerging technologies still in the research phase; however, some have already become adopted in training initiatives. It is imperative that NATO can continue to adapt and innovate to keep its technological and military edge in order to ensure peace and stability in our rapidly changing world. Some emerging technologies that are being researched include:

Modelling and Simulation - Allied Command Transformation implements strategic studies and concepts, such as multi-domain operations and wargaming, through modelling and simulation. This helps lower exercise risk and resource demand, while increasing innovation, collaboration, and communication.¹⁹ The benefits of modelling and simulation are numerous, providing risk free experimentation, education and training, exploration of alternatives, dynamic visualization of political, military, economic, social, informational, and infrastructure environments.²⁰

Biotechnology – commonly refers to a wide range of procedures for modifying living organisms: as an interdisciplinary frontier between biology, engineering, medicine, and other fields of applied and theoretical sciences, biotechnologies have drawn increasing attention for their benefits and dual-use applications. Similarly, human enhancement technologies, which also include non-biotechnological enhancements, are important to understand and integrate as part of collective defense and deterrence.²¹ Examples of biotechnologies and human enhancement with both civil and military applications include:

- Medical Biotechnology: Personalized medicine, vaccines, treatments, and battlefield management.
- Food Product Biotechnology: Optimized nutrition and food preservation for disaster relief.

¹⁷ North Atlantic Treaty Organization, 24 May 2023. "NATO Centres of Excellence – Modeling and Simulation" <https://www.act.nato.int/article/nato-centres-of-excellence-modelling-and-simulation/>

¹⁸ North Atlantic Treaty Organization, September 2023. "Defence Innovation Accelerator for the North Atlantic." https://www.nato.int/cps/en/natohq/topics_216199.htm?selectedLocale=en

¹⁹ NATO Modelling & Simulation Centre of Excellence. "What we do" <https://www.mscoe.org/education-training/>

²⁰ NATO Modelling & Simulation Centre of Excellence. "Modelling and Simulation take key role in Warfare." <https://www.mscoe.org/modelling-and-simulation-take-key-role-in-warfare/>

²¹ North Atlantic Treaty Organization, May 2023. "Biotechnology and Human Enhancement Technologies: Transformational Innovation." <https://www.act.nato.int/article/biotechnology-and-human-enhancement-technologies-transformational-innovation/>

- Industrial Biotechnology: Modified biofuels for logistic and supply optimization.
- Exoskeletons: Robotic devices worn externally to enhance strength, endurance, and mobility, providing support for physically demanding tasks.
- Brain-Computer Interfaces: Devices that enable communication between the brain and external devices, allowing individuals to better control technology.
- Virtual Reality and Augmented Reality: Immersive technologies simulate realistic or artificial environments, providing interactive training and learning opportunities.

Artificial Intelligence (AI) – NATO’s strategy for AI began in 2021, first by NATO’s recognition of its security challenges which could affect both traditional military capabilities and hybrid threats and thus acknowledging the vital role it will play in strategic military capability in the coming era of defense. The aim of NATO’s AI Strategy is to accelerate AI adoption by enhancing key AI enablers and adapting policy, including by adopting Principles of Responsible Use for AI and by safeguarding against threats from malicious use of AI by state and non-state actors. By acting collectively through NATO, Allied governments also ensure a continued focus on interoperability and the development of common standards.²²

Currently one of the main uses of AI in defense is through Cybersecurity AI which has emerged as a game-changer in the field of cybersecurity, offering both defensive capabilities and potential risks. AI-powered algorithms and tools enable more efficient network scanning, threat detection, and response mechanisms. However, malicious actors can exploit the same technology to orchestrate sophisticated cyberattacks.²³

Conclusion

As the threat landscape continues to evolve, NATO remains dedicated to staying at the forefront of emerging technologies and adopting them into their training initiatives. By leveraging the power of their research expertise, NATO strengthens its collective defense capabilities, enhances crisis management, and bolsters cooperative security efforts. Through collaborative partnerships, ongoing research, and a commitment to ethical practices, NATO is poised to meet the challenges of the digital age and safeguard the transatlantic alliance against emerging new threats.

Guiding Questions:

- What role can AI play in effectively integrating and enhancing data analysis and decision-making processes within the alliance without compromising ethical considerations? Who is at fault when things go wrong?
- Will AI or Virtual Reality help in modernizing NATO's military capabilities against new emerging threats?
- What challenges and opportunities arise when integrating biotechnology into military

²² North Atlantic Treaty Organization, October 2021. “An Artificial Intelligence Strategy for NATO.”

<https://www.nato.int/docu/review/articles/2021/10/25/an-artificial-intelligence-strategy-for-nato/index.html>

²³ North Atlantic Treaty Organization, July 2023. “NATO’s AI Strategy: Enhancing Cybersecurity Defenses.”

<https://salvacbersec.medium.com/natos-ai-strategy-ai-956f013064d0>

training?

- How might digital simulations help NATO adapt to unconventional scenarios and emerging threats?

Further Reading:

Bellasio, J., & Silfversten, E. (2020). The impact of new and emerging technologies on the cyber threat landscape and their implications for NATO. *Cyber Threats and NATO 2030: Horizon Scanning and Analysis*, 88. https://ccdcoe.org/uploads/2020/12/Cyber-Threats-and-NATO-2030_Horizon-Scanning-and-Analysis.pdf#page=95

Bielawski, R. (2022). Development of Security Technologies by NATO: Current Status and Development Prospects. *Safety & Defense*, 1. <https://bibliotekanauki.pl/articles/2174788>

North Atlantic Treaty Organization, October 2021. "An Artificial Intelligence Strategy for NATO." <https://www.nato.int/docu/review/articles/2021/10/25/an-artificial-intelligence-strategy-for-nato/index.html>

North Atlantic Treaty Organization, May 2023. "Biotechnology and Human Enhancement Technologies: Transformational Innovation." <https://www.act.nato.int/article/biotechnology-and-human-enhancement-technologies-transformational-innovation/>

North Atlantic Treaty Organization, 24 May 2023. "NATO Centres of Excellence – Modeling and Simulation" <https://www.act.nato.int/article/nato-centres-of-excellence-modelling-and-simulation/>

North Atlantic Treaty Organization, July 2023. "NATO's AI Strategy: Enhancing Cybersecurity Defenses." <https://salvacybersec.medium.com/natos-ai-strategy-ai-956f013064d0>

North Atlantic Treaty Organization, 26 September 2023. "Defence Innovation Accelerator for the North Atlantic." https://www.nato.int/cps/en/natohq/topics_216199.htm?selectedLocale=en

North Atlantic Treaty Organization, 26 September 2023. "Modelling and Simulation take key role in Warfare." <https://www.mscoe.org/modelling-and-simulation-take-key-role-in-warfare/>

Soare, S. R. (2021). Innovation as Adaptation: NATO and Emerging Technologies. *The German Marshall Fund of the United States (GMF)*. <https://www.gmfus.org/news/innovation-adaptation-nato-and-emerging-technologies> (accessed on 14.09. 2022)
<https://www.gmfus.org/sites/default/files/Soare%2520-%2520NATO%2520emerging%2520tech.pdf>