Former NATO Supreme Allied Commander Transformation General Denis Mercier (right), speaks at a NATO–Industry Forum in 2016. (NATO ACT)

NATO's Adaptation in an Age of Complexity

By Denis Mercier

Next year NATO will celebrate its 70th anniversary. Through decades of a sometimes tumultuous existence in an ever-evolving and challenging security environment, the transatlantic Alliance has managed to remain a cornerstone of stability, peace, and security in the Euro–Atlantic region. Comprising 29 nations since the accession of Montenegro in 2017, NATO is grounded on the same values that presided at its creation, to:

> *safeguard the freedom, common heritage and civilisation of their peoples, founded on the principles of democracy, individual liberty, and the rule of law, to promote stability and well-being in the North-Atlantic area.*[1]

In the aftermath of World War II and in the early phases of the Cold War, this preamble could be read as an unambiguous will to preserve peace and security by all means necessary, and to prevent the resurgence of massive conflicts such as those that had twice ravaged Europe and the rest of the world during the previous 30 years. The menace to peace then identified has changed and evolved ever since, but the principles still stand as valid. The 1949 Treaty of Washington is quintessential in this regard, because it goes to the absolute essentials of what an alliance is—should it have to be rewritten today, changing a single word would probably be close to impossible.

Though its values have remained constant, NATO the organization has evolved to meet new challenges and to adapt to a changing security environment. Indeed, NATO's durability is closely connected to its ability to change, and to the collective resolve of its members to preserve the Alliance as an international security hub.

NATO's history can be traced through four main eras, each era beginning and ending with a paradigm shift to which the Alliance had to adapt.

- The Cold War (1949–91) was the age of collective defense. Facing the imminent threat posed by the Soviet Union and its allies, NATO emphasized deterrence and defense based on the principle expressed in Article 5 of the Treaty of Washington, which states that an attack on one shall be considered as an attack on all.

- The post–Cold War era (1991–01) followed the downfall of the Eastern bloc. Cooperative security was the landmark of this period, with the enlargement to Eastern European nations, but also through the

General Denis Mercier, French Air Force, is a former Supreme Allied Commander Transformation for NATO.

In 2014, Georgian and U.S. soldiers conduct a key leader engagement with village elders, role-played by civilians during a mission rehearsal exercise at the Joint Multinational Readiness Center in Germany. The combined training exercise prepares soldiers on counterinsurgency, stability, and transportation operations for a deployment to Afghanistan in support of NATO. (DOD/ Justin DeHoyas)

development of partnerships, including with Russia in the Partnership for Peace framework.

■ 9/11 snapped the Alliance back to the reality of a dangerous world (2001–14), in which NATO focused its efforts on projecting stability and on expeditionary missions, in Afghanistan and elsewhere, sometimes at the expense of responsiveness and collective defense.

■ Since 2014 and the crisis in Ukraine, NATO has entered its fourth and current phase, characterized by the resurgence of conventional threats, the continuation of stability operations, and the emergence of hybrid threats.

Adaptation in a Complex World

The Wales Summit of 2014 symbolized the beginning of this fourth phase of NATO's history. But it was actually the following Warsaw Summit of 2016 that explicitly acknowledged the complexity of our strategic environment, leading the Alliance to critical decisions regarding NATO adaptation. In this sense, Warsaw was a historical summit, but before we elaborate on its outcomes, it is important to understand what triggered them. And for this, the starting point is the strategic context.

Our security environment is evolving at an increasing pace. But several defining trends can nonetheless be identified. The first is the interrelation of crises: today, any event in a regional crisis can impact another crisis in another region. The actions of Russia in Northeastern Europe, for example, have ramifications for their actions in the Middle East and for their relationships with neighboring countries. The second trend is the interrelation of threats, wherein state and non-state actors are present in different crises and following different agendas, or interacting differently in different regions. The variety of threats is a third distinctive feature of our contemporary security environment, especially when several threats of differing nature are present in the

same region. This is especially true in the Balkans, for example, a region confronted simultaneously with the influence of Russia, the rise of radical Islamism, massive migration, and organized crime. A fourth trend is the ease of access to technology, which empowers potential adversaries, and contributes to the emergence of new confrontation domains, such as cyber or the information environment. And finally, the increasingly blurred transition between peacetime and crisis is another defining trend.

These characteristics of the security environment have converged in the sense that our world has transitioned from *complicated* to *complex*. In a *complicated* world we had to deal with many interacting factors, but analysis remained possible and linear as we identified possible outcomes and evolutions of a given situation. In today's *complex* world where the interacting factors are so numerous and so interconnected, accurately predicting the evolutions of a situation has become impossible. Consequently, in a *complex* world, surprise is certain, decisionmaking based on imperfect information is more commonplace, failure has become a possibility, and resilience a necessity.

In such a context, strategic awareness is essential. While NATO's area of operations is centered on the Euro–Atlantic space, the possibility of early signs of a developing crisis appearing outside of this area—in Asia, in Africa, or elsewhere—can no longer be dismissed. To be able to react appropriately, the Alliance must ensure that it has the capacity to monitor situations on a global scale. Conversely, the global nature of threats may lead NATO to consider scenarios that would engage a wide range of partners, far beyond its historical borders; explore innovative decisionmaking architectures to face future transnational challenges; and help in the definition of requirements to empower all like-minded parties willing to play a role in international security. In essence, the complexity of the environment demands the constant ability of NATO to interact with anybody, operate

anywhere, and be persistently aware of the weakest signals. This is a considerable endeavor.

Consequently, NATO as a whole must also be able to learn from experience. Consistent with the need for a global strategic awareness is the need to process lessons learned in various theaters and implement them in our training and education models. In a complex environment, however, it is also necessary to develop the ability to share lessons learned with our partners, and in particular, with other international organizations, alongside which we operate across the planet.

Cooperation mechanisms for crisis management exist between NATO and the European Union, between NATO and the UN, and between the EU and the UN. But nothing similar exists for stability operations, in spite of shared experiences in these organizations. This must be developed, starting with an assessment of what works in theaters where all three organizations are present, but must also expand to include other actors, such as non-governmental organizations. Capturing the lessons learned in Afghanistan and sharing them on a portal accessible to our partners, for example, could be a first step toward enhancing our cooperation. This is why NATO is developing a shared lessons learned portal to allow partner contributions and to enhance our collective ability to improve and implement best practices. The next step would be to develop exercises involving other international organizations to try and build the mechanisms and working habits, as well as to harmonize our respective objectives when deployed in a partner country we are trying to help.[2] This is the case in Afghanistan, and Iraq should follow.

The Historical Significance of the 2016 Warsaw Summit

The Warsaw Summit aimed to address the challenges of this complex environment, building on a better understanding of the implications of complexity for the security of the Allies. In that sense,

it represented a watershed moment for NATO, converging decisions on the encompassing objective to build a renewed defense and deterrence posture, while expanding the ability to project stability beyond the Euro–Atlantic space.[3]

Significant decisions were made in the realm of defense and deterrence, with the establishment of the Enhanced Forward Presence in Poland and the three Baltic States, and the Tailored Forward Presence in Romania, Bulgaria, and Turkey. These deployments of forces constitute a first line of defense, intended to deter adversary intrusions into these regions challenged by the resurgence of an aggressive Russian posture. In this context, the return of American and Canadian troops to Europe underscored the vitality of the transatlantic bond. Cyberspace was recognized by Allies as an independent operational domain of potential confrontation, allowing better coordination of initiatives and the establishment of common terminology, doctrine, and principles. More importantly, it enabled the integration of cyber activities into joint effects, encompassing all domains of warfare. In 2016, Allies also declared initial operational capability of the Ballistic Missile Defense effort that NATO had decided to develop in 2010 to pursue the Alliance's core task of collective defense.

In terms of projecting stability, NATO initiated a significant upheaval of its partnership activities, aimed at both expanding its reach and harmonizing different initiatives. Symbolic of this effort is the creation of the Hub for the South, the purpose of which is to coordinate activities in the Mediterranean region with concerned countries and other international organizations, and enhance NATO's understanding of the stakes and challenges. In the broad theme of strengthening relationships with international organizations, a specific focus has been put on the NATO–EU partnership, with the signature of a joint declaration identifying key areas for an expanded cooperation.[4]

One of the most significant decisions taken in Warsaw, with regard to the complexity of the strategic environment and its consequences, was to perform a functional assessment of the NATO Command Structure. The objective was to determine if the Alliance was able to meet every potential challenge up to its highest level of ambition. This assessment came to the conclusion that the NATO Command Structure had to be adapted, which in turn prompted the Allies to initiate a functional adaptation. Overall, the process took only a few months, the conclusions having been approved at the political level early this year. The Alliance is now at the stage of refining the details and beginning the implementation. This impressive pace demonstrates the sense of urgency that has driven the collective work on adaptation efforts.

The Uniqueness of the NATO Command Structure

What makes NATO truly unique among international organizations is that it is the only one possessing a permanent command and control structure, which defines the decisionmaking process from the highest political level—heads of state and governments—down to the tactical level—the troops deployed on the ground, on the sea, and in the air.

This decisionmaking process is designed to allow the 29 member nations to reach a consensus on a range of topics—because there is no quorum, no majority, and no veto. But the real specificity of the NATO Command Structure is that it is not merely a central headquarters designed to harmonize national positions and turn them into actionable collective policy: the two strategic commands—Allied Command Operations (ACO) and Allied Command Transformation (ACT)—are permanent structures in charge of implementing these decisions, whether they are related to current or future operations. Connected to these strategic commands are: headquarters at the operational and

In 2017, NATO opened a force integration unit (NFIU) in Slovakia. One of eight NFIUs, all are part of the Readiness Action Plan that NATO agreed to in 2014 at the Wales Summit. (NATO)

single service level, which in turn are liaised with the NATO Force Structure—the actual military capacity owned by the nations. Establishing a coherent link between national forces and a collective command structure was one of the stakes of the Alliance's adaptation—to ensure the ability of NATO to conduct its three core tasks with the simultaneous ability to deter any aggression against its territory.[5]

Adapting the NATO Command Structure to a complex environment required an analysis of the functions the structure was to perform. The objective was not only to assess operational functions, but also to identify overlaps and suboptimal arrangements across the entire structure. The design outline that was proposed to the nations took this assessment into account, but it was integrated into a broader reflection to allow the proper leverage of expertise and capacity existing in the nations—a "one NATO" approach. The urgency of adapting to the environment will lead to an incremental implementation over the coming months, bearing in mind the objective of relying on a structure that is flexible by design, to face any potential challenge in a rapidly changing environment.

The Future of NATO

One of the main drivers of the adaptation of the Command Structure was to ensure more responsiveness. In a complex environment, the process allowing decisions taken at the political level to be enforced at the tactical level must allow for greater speed. This raises the question of the level of autonomy to be granted to subordinate commands, among others. But responsiveness also implies a structure that is robust enough to manage the requirements of a major, all-out conflict, while being at the same time flexible enough to better adapt to the evolutions of the world.

The objective of the Alliance remains to preserve peace and security, but to be effective, deterrence must rely on credible forces and structures, the collective resolve to use them, and an unambiguous message to support it. What this means for NATO is that its responsiveness cannot be limited to the decisionmaking process. It must extend also to the integration of its forces, allowing them to transition seamlessly between baseline activities all the way up to the Alliance's maximum level of effort. So, regardless of the responsiveness of the structure to reach decisions and implement them, NATO needs forces that are ready to fight on short notice—and that are consequently, fully equipped, manned, trained, interoperable, and exercised, relying on key logistics units disposing of sufficient stocks and able to use vital infrastructure.

However, the decisions taken in the present to improve responsiveness at every level must also remain relevant in the future, which is why a medium-and-long-term perspective is necessary as well. In the words of Peter Drucker, who is widely regarded as the Father of Management, "long-range planning does not deal with future decisions, but with the future of present decisions."[6] The adaptation of NATO's military capacity is not exempt from this, and the complexity of the environment demands the ability to operate and adapt simultaneously.

This dual imperative has informed the delineation of roles and responsibilities between NATO's two strategic commands, in a mutually supportive way: ACO, located in Mons, Belgium, is refocusing on current operations, supported by ACT, located in Norfolk, Virginia. Conversely ACT is responsible for future operations, and is supported by ACO.

To identify the key principles necessary to deal with a complex environment, it is useful to study how some of the most innovative private companies, especially in the digital world, have adapted more rapidly than the defense community. Several principles developed and implemented by these companies that have enabled them to thrive in complex situations can be identified. These principles have, more often than not, a direct applicability to NATO and to the defense community as a whole. The most important are:

- No nation or organization alone holds every key to solving a crisis. This is why NATO is expanding its network of partners, and developing ways to better federate the capacity and expertise owned by its nations, but also by a range of actors, including international organizations, private companies, and academia;

- Strategic awareness is necessary and must be global if it is to detect the early signs of a developing situation as soon as possible;

- Complexity renders surprise inevitable. This means that flexibility and resilience must be integrated into the organization at every level, to withstand potential setbacks and turn them into opportunities. This has contributed to the reasoning behind NATO's adaptation;

- Regardless of how demanding day-to-day operations are, permanent adaptation efforts remain essential. Successful organizations are those that preserve their ability to operate and adapt

at the same time—hence the mutually supporting roles of ACO and ACT;

- The emergence of disruptive technologies will transform our organizations and concepts. This presents us with threats, but also with potential opportunities. Both must be considered if NATO is to stay on pace with its potential adversaries;

- In a world increasingly driven by technology, the two main strategic resources are data and human capital.

These principles have contributed to informing the adaptation efforts of the Alliance, with the overall objective to evolve at the speed of relevance. In a complex environment evolving at an increasing pace, NATO must cultivate a culture of innovation.

The Innovation Imperative

In military circles on each side of the Atlantic, innovation is the latest buzzword permeating every reflection on adaptation efforts. But dismissing it entirely because of its trending nature would be a mistake: innovation is not just about having new ideas, but about their implementation as well. The complexity of the environment renders this necessary.

At the scale of NATO, developing a culture of innovation presents a double challenge. The first line of resistance is the nature of military organizations, built around a vertical hierarchy that is necessary in combat situations, which tends to hamper the circulation of new ideas, especially when they come from the lower end of the chain of command. The second line of resistance is the multinational nature of the Alliance, which means that the emergence and diffusion of new ideas has to overcome the cultural misgivings and sensitivities of 29 nations. But the resistance also has a potential upside: the military culture grants a solid framework allowing for easier implementation, and the multinational culture

enriches the reflection considerably. ACT is developing initiatives to foster a culture of innovation, both internally and with external stakeholders.

While these initiatives are both internal and external, the first step is to allow a collective culture of innovation to thrive. Being a multinational military organization, ACT faces a twofold cultural challenge in enhancing the flow and exchange of ideas within a population used to vertical hierarchical models, and taking into consideration the national aspects of culture. To alleviate these difficulties, ACT has put in place training events for its personnel, with the aim of rendering our human capital receptive to innovation. But innovation also needs champions across the structure, and a tailored innovation bootcamp aimed at the intermediate management level has been developed as well.

Innovation also requires external inputs and fresh ideas: the Innovation Hub ensures that ACT remains connected to the outside world. Both a virtual and physical meeting space, it allows companies, universities, and even individuals to contribute to different events, conferences, and, since last year, innovation challenges. This latest initiative is based on open innovation. ACT builds a challenge based on a simple scenario, and outside contributors develop solutions. The winners, or the most promising projects, can then be turned into actual capability projects in cooperation with the headquarters. These are but a few examples of developing initiatives that aim at going beyond the sole declaration of intention.

The next step is to turn this culture of innovation into tangible results—otherwise, it will remain a buzzword, without substance. This is a domain where NATO cannot afford to fail, especially at a time when technology is profoundly transforming the way we plan, prepare, and conduct operations. Symbolic of this is an anecdote involving U.S. Secretary of Defense James Mattis, who was asked about the enduring nature of the principles of war

during a return flight from Europe early this year.[7] Secretary Mattis—like me, also a former Supreme Allied Commander Transformation for NATO—answered that he had spent more than 40 years in the military being absolutely convinced that said principles would never change. However, he added, recent developments and breakthroughs, especially regarding artificial intelligence, had shaken his convictions. He concluded that keeping an open mind on what the future held was necessary. And this is perhaps the most important case for innovation: in a complex environment, where we know we will be surprised, innovative solutions will be required to preserve our flexibility and our responsiveness.

. . . innovation is not just about having new ideas, but about their implementation as well. The complexity of the environment renders this necessary.

NATO at a Crossroads

Successful and lasting organizations must adapt quickly, and militaries are not exempt from that requirement—even less so than their civilian counterparts, because preparing for past wars generally has dire consequences for them, and for their countries. NATO, as the hub for transatlantic and European security it has strived to be for the past 70 years, is undergoing a significant structural upheaval, as it wishes to stay relevant to contemporary threats and challenges, while putting itself in a position to keep an edge on any potential opponent in the foreseeable future.

Of course, like any multinational organization, NATO will face internal challenges and tensions. But the Warsaw Summit proved that the unity of NATO members was not a mere display. In an age of complexity, the famous Churchill quote—"There is only one thing worse than fighting with allies, and that is fighting without them"—rings truer than ever.[8] The Warsaw Summit was an important step for NATO in meeting the demands of our security environment, but its outcomes will only be lasting if the Alliance's adaptation efforts are put into a broader and longer-term perspective; if they bring coherence in leveraging a global network of partners, like-minded people, and organizations that can help foster innovation through the Alliance.

The Brussels Summit drew upon the decisions made by the Nations in Warsaw and reinforced many of their commitments. Since responsiveness is a priority both at the political and military levels, quick implementation of the many decisions taken in Brussels (more than one hundred!) will be the main challenge for the Alliance in the months to come. But we have already shown our ability to adapt at the speed of relevance. No doubt NATO, as one team, will continue to demonstrate its unity by implementing these decisions in a coherent, traceable, timely, efficient, and effective manner. PRISM

Notes

[1] The North Atlantic Treaty, April 4, 1949, available at <https://www.nato.int/cps/ic/natohq/official_texts_17120.htm>.

[2] The exercise *Viking 18*, involving 50 countries and 35 organizations, is a good example of the efforts that NATO supports. For an overview of this spring 2018 exercise see <https://www.forsvarsmakten.se/en/activities/exercises/viking-18/>.

[3] By "projecting stability," NATO envisions the actions necessary to prevent a crisis—either inside its traditional area of operations or not—and, when necessary, the ability to intervene before it degenerates and reaches allied borders.

[4] These seven areas are: hybrid threats, operations, cyber defence, defence capabilities, exercises, maritime security, and capacity building for partners.

[5] The three core tasks are collective defense, crisis management, and cooperative security. NATO, "2010 Strategic Concept 'Active Engagement, Modern Defence'," November 19, 2010, available at <https://www.nato.int/cps/ic/natohq/topics_82705.htm>.

[6] Quoted by Elisabeth Matsangou, *A History of Peter Drucker and his Impact on Management Theory*, European CEO, December 3, 2015, available at < https://www.europeanceo.com/business-and-management/a-history-of-peter-drucker-and-his-impact-on-management-theory/>.

[7] Aaron Metha, AI makes Mattis Question *'Fundamental' Beliefs about War,* C4ISRNET, February 17, 2018, available at <https://www.c4isrnet.com/intel-geoint/2018/02/17/ai-makes-mattis-question-fundamental-beliefs-about-war/>.

[8] This comment was pronounced by Churchill at Chequers, the official country residence of British Prime Ministers, on April 1, 1945, according to the Churchill Foundation. This and other quotes are available to review at <https://winstonchurchill.org/uncategorised/quotes-slider/>.

Photos

Page 2. Original NATO caption: NATO Secretary General attends the NATO–Industry Forum in Brussels. 140213-A-RJ750-001

Page 7. Original NATO caption: NATO inaugurates small unit headquarters in Slovakia. Attribution-NonCommercial-NoDerivs 2.0 Generic (CC BY-NC-ND 2.0), available at < https://www.flickr.com/photos/nato/32350160962/in/album-72157679537061225/>