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WHAT IS THE ROLE OF STRATEGIC FORESIGHT ANALYSIS IN ANTICIPATING FUTURE THREATS AND OPPORTUNITIES?

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Abstract:
This paper intends to be a synthetic description of Strategic Foresight Analysis as a concept and why it became more and more important for companies, organizations, nations and alliances like NATO to use this tool for shaping their strategy on medium and long term. Finally, this paper brings to reader`s attention the main drivers of change, potential strategic shocks and the key challenges to the effective use of Military Instrument of Power as they were identified in the Strategic Foresight Analysis 2023 published by the Allied Command Transformation. Author's creativity was limited by the objective approach to data presented.

Key words: strategic foresight; challenges; instruments of power; military;

1. Introduction

Defense planning has been a long-standing practice throughout human history and it has played a crucial role in ensuring the survival and security of groups, communities, nations, and states.

Within the contemporary modern nation state, this practice has taken on great complexity through a variety of formal national and international processes [1], which challenge and renegotiate the civil-military relationship as well as the bureaucratic organization of the state as security threats evolve and proliferate. Davis' evolution of defense planning indicates, governments have had a hard time incorporating change into their defense planning systems, and to accommodate the condition of deep uncertainty. His analysis indicates how organizational inertia of the planning system calls for civilian and military strategic leadership and the necessity of reaching outside of established planning processes to access non-standardized analyses. [2]

To address the deep uncertainty when planning for mid and long term, organizations, nations and alliances as NATO started to proactively scan the horizon for emerging trends, potential disruptions, and untapped opportunities through strategic foresight analysis, to embrace a mindset of adaptability and agility.

2. Strategic foresight

2.1 What is strategic foresight?

Starting In 1990s from the US Army War College introduced the term VUCA, which stands for Volatile, Uncertain, Complex, and Ambiguous. It was initially used to describe the state of global affairs after the dissolution of the Soviet Union. Over time,

VUCA has become a widely used framework in strategic planning within governments and organizations. Here's a brief overview of each component:

Volatile: Refers to the rapid and unpredictable nature of change.

Uncertain: Highlights the lack of predictability and the difficulty in forecasting future events.

Complex: Indicates the multiplicity of forces, the confounding of issues, and the chaos that surrounds an organization.

Ambiguous: Suggests the lack of clarity about the meaning of an event and the potential for misreads.

Richard, Slaughter in his *Futures for the third millennium: enabling the forward view*, (1999), defined strategic foresight as the ability to create and maintain a high-quality, coherent and functional forward view, and to use the insights arising in useful organizational ways. For example, to detect adverse conditions, guide policy, shape strategy, and to explore new markets, products and services. It represents a fusion of futures methods with those of strategic management.[3]

Currently, in a VUCA world, strategic foresight is seen as a proactive and methodical approach for organizations to prepare for the future. To better understand the concept, here are the key points:

- it is a Systematic Process: It involves collecting information relevant to the future through environmental scanning;
- involves Scenario Planning: Organizations extrapolate various plausible scenarios to anticipate and prepare for potential opportunities and challenges;
- involves Strategic Development: This process aids in aligning innovation planning and goals with the anticipated future scenarios;
- involves Preparation for Future: Strategic foresight enables organizations to be proactive rather than reactive to future developments.

This approach helps organizations to navigate uncertainty and make informed strategic decisions.

Strategic foresight and forecasting should not be confused. Strategic foresight and forecasting have similarities in that they both involve anticipating and preparing for future events, but there are significant differences. Quantitative data and trend extrapolation is the primary focus of forecasting, with the aim of predicting the most probable outcome based on past patterns. Strategic foresight is a more comprehensive approach that takes into account a wider range of factors, including qualitative data, expert insights, and multiple scenarios. Rather than focusing on a single future outcome, strategic foresight aims to develop a deeper understanding of the drivers of change and the various possible futures that could emerge. Organizations can improve their agility and adaptability in uncertain situations by developing strategies that can be adjusted and refined as new information emerges.

2.2 Why is strategic foresight important?

An organization may have a good understanding of the short-term trends in their industry, or even general long-term trends in society without strategic foresight. In a world that is interconnected, where change is happening at a faster pace and the boundaries between industries are blurring, there is a call for more understanding of the future.

Events on one side of the world have a ripple effect on the other side of the world. Today's small startup could cause disruption to the largest company in the world tomorrow. Political instability in a tiny area of the globe can change the balance of power and have widespread consequences across the globe. Not to mention no one knows where AI, automation, and other rapidly developing areas will take us.

The dominance of these topics in conference agendas and coffee table discussions has resulted in the development of systematic foresight activity, which is a good thing. An increasing number of organizations are interested in gaining a deeper understanding of how the world is changing and how to capitalize on these changes. Strategic foresight serves as a tool to assist them with that challenging task and, naturally, to ensure that organizations make well-informed decisions based on carefully evaluated perspectives of alternative future scenarios. Identifying emerging forces of change that can confer a competitive advantage and enhancing resilience through contingency planning, and facilitating the management of changes are some of the benefits of subjecting strategies to the scrutiny of various potential futures.

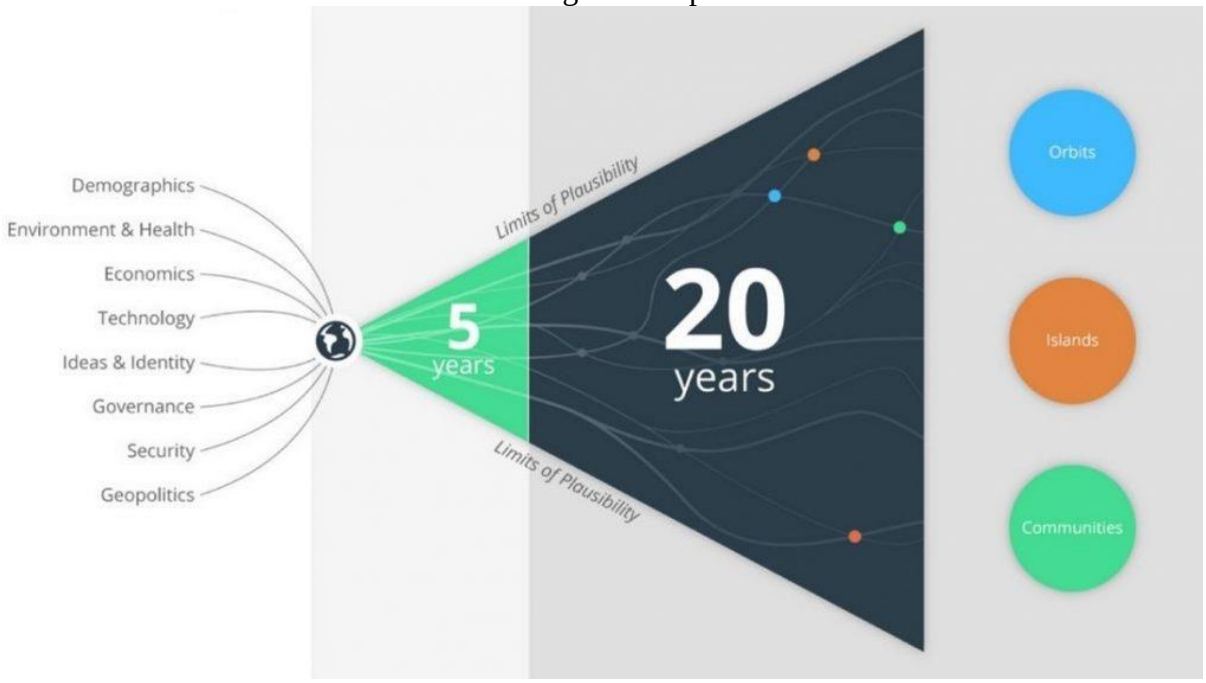
The use of this strategic foresight tool is not limited to public administration and business, as it also has relevance in personal development and diverse organizational contexts, including defense resource management and defense planning.

2.3 Strategic foresight methodology

There are a multitude of techniques employed in strategic foresight analysis, still, Javier Jordán, Professor of Political Science at the University of Granada and Director of Global Strategy believes, at its core, all foresight work necessitates four essential elements:[4]

- The right mindset: Counteracting the tendency to project the present with minimal adjustments, individuals must cultivate a mindset open to disruptive ideas and unconventional thinking. Jim Dator's second law of futures studies underscores the need for futuristic ideas to appear initially absurd, prompting a revaluation of accepted paradigms.
- Understanding the present: Recognizing that no future scenario, even black swan events, materializes without a causal chain originating in the present, foresight work begins with a strategic analysis of the current situation. This involves identifying key actors, patterns, and variables to establish stable trends and uncertainties that shape future possibilities.
- Explore alternative futures by visualizing diverse combinations of identified trends and uncertainties. For instance, construct simple scenarios around two axes, incorporating extreme values of two key uncertainties. Expand the scope by manipulating more variables and exploring various options through a morphological analysis matrix (examples provided here). Utilize a futures wheel to depict second and third-order impacts of a specific trend or event, considering multiple dimensions (political, social, economic, technological, etc.). Alternatively, employ a matrix game to simulate the behavior and strategic choices of key players in a given scenario, generating novel scenarios. Emphasize that the exploration of futures does not seek precise prediction. While expert consultation, such as Delphi, can assign probabilities to changes in trends and uncertainties, leading to a calculation of a cone of likely scenarios with cross-impacts, this remains a quantitative representation of subjective opinions. While systematic and rigorous execution may render it useful, it's crucial to recognize its inherent limitations. In scenario building, the key lies in plausibility—offering a logical

explanation for why drivers culminate in a particular scenario, even if it appears surprising. The cone of plausibility, distinct from probability, broadens with an extended time horizon (refer to the image below for the limits of plausibility). As time progresses, the interactions between drivers become increasingly intricate and challenging to anticipate. Nevertheless, maintaining a logical chain to explain driver behaviour remains fundamental throughout the process.



Cone of plausibility. Source: Office of the Director of National Intelligence, Paradox of Progress.

- Feeding into strategic planning: For strategic foresight to be truly strategic, its conclusions must integrate with the planning process, guiding organizational paths with a continuous feedback loop. This ensures relevance and practical applicability, transforming foresight from an intellectual exercise into a valuable tool for navigating an uncertain future.

In the face of strategic surprises and the complexities of an interconnected world, the temptation to neglect foresight must be resisted. Mapping the future through strategic foresight not only facilitates contingency planning but also enhances comprehension of causal relationships, preventing hasty and uninformed responses to crises. Strategic foresight thus emerges as an indispensable endeavour in a dynamic and uncertain world.

3. NATO and Strategic Foresight Analysis

3.1. Planning for the future

Planning decisions always involve assumptions about future developments. Making decisions in the face of uncertainty is a dilemma that we can never escape and time is an essential factor for every strategy development. Adjusting the course of a consensus-based alliance like NATO in peacetime takes at least years while development, procurement and production of new capabilities can take decades.

Most of the time, our own assumptions about future developments in our personal lives are based on emotions like fear or wishful thinking, prior experiences or simple

extrapolations of the status quo. This can lead to suboptimal results in our personal life, such as buying nonperforming stocks or picking an insufficient retirement plan. But it might lead to much more disastrous outcomes for multiple people or even nations if military planning rests on less-than-optimal methods of predicting future threats and challenges.[5]

Our adversaries are looking to take advantage of disruptions in the rapidly deteriorating global security landscape, presenting challenges in both cognitive and virtual realms. NATO requires rapid and more relevant adaptation and transformation because competition and conflict have gone beyond the traditional Military Instrument of Power, now extending into the Information domain. To counter these attempts, it is crucial to enhance dialogue between the military and political spheres. Even when there are no wars, our adversaries are actively searching for methods to challenge our use of the Military Instrument of Power.

As the world contends with existential challenges like climate change, navigates the intricate interplay of technological advancements and formidable geopolitical shifts, this foresight analysis emerges as an indispensable compass guiding NATO through uncharted territories, equipping it to navigate evolving threats and bolster global security in an era of unprecedented change.

3.2. Integration of Strategic Foresight Analysis

The Strategic Foresight Analysis (SFA) 2013 Report was the product of initial efforts to establish institutional foresight within Allied Command Transformation (ACT) to provide NATO, national leaders and defense planners with a common perspective of the challenges facing the Alliance in the decades to come.

The Strategic Foresight Analysis series, spanning from 2013 to 2017, has been a cornerstone for shaping collective and Allied defense planning processes. These analyses, integral to understanding future trends, informed the development of the NATO Warfighting Capstone Concept which lays out a strategic vision that will sustain NATO's military advantage over the next two decades. It was endorsed by all NATO nations in 2021.[6]

Collective defense planning processes can be strengthened through Strategic Foresight Analysis. Strategic Foresight Analysis has played a pivotal role and influenced NATO's strategic trajectory, particularly with the significant restructuring in 2022. NATO's adaptive resilience cannot be achieved without a comprehensive approach that emphasizes the broader spectrum of diplomatic, informational, and economic actions.

The Strategic Foresight Analysis 2023, aimed at predicting security landscapes until 2043, is a valuable tool for assessing the driving forces and uncertainties that impact the Military Instrument of Power.

4. Allied Command Transformation – Strategic Foresight Analysis 2023

NATO Allied Command Transformation has achieved a significant milestone by concluding its most comprehensive futures research in years, resulting in the Strategic Foresight Analysis 2023.

This report will serve as a baseline assessment for subsequent futures research projects, including NATO`s Future Operating Environment, which addresses challenges and opportunities of transforming NATO`s Military Instrument of Power, in order to remain fit for the future. The analysis, derived from 10 intensive workshops, stands as a collaborative effort that incorporates the insights of over 800 Allied experts. This extensive collaboration ensures a multifaceted view of the future, considering diverse perspectives and expertise. The result is a holistic understanding that addresses fundamental trends shaping our world and potential strategic shocks. The Strategic Foresight Analysis aims to inspire thinking on existing as well as novel problem sets and enable the Allied defense planning, warfare development and concept development communities in their long-term considerations. [7]

Below are presented the main drivers of change identified by Allied Command Transformation – Strategic Foresight Analysis 2023.[8]

4.1. Drivers of change

The most relevant strategic trends were identified, organized into seven drivers of change, which will significantly affect the evolving security environment of the Alliance.

4.1.1 Climate breakdown and loss of biodiversity

Climate change will continue to enhance devastating extreme weather and climate events (hereafter climate extremes) with increasing frequency and severity. There is unequivocal evidence that the impact of climate change is reshaping living conditions on Earth and poses existential threats driven by human activities such as the burning of fossil fuels and deforestation. Rising global surface temperatures due o increased greenhouse gas emissions (GHG) can lead to the increased frequency and volatility of extreme atmospheric conditions, weather events, rising sea levels, and heat stress.

Climate breakdown and loss of biodiversity should be considered as the primary structural force that will have a profound impact on every aspect of the evolving Security Environment. If unchecked, it will act as a threat multiplier, accelerating disruption and pervasive competition and causing further fragmentation. Societal instability, displacement and essential resource insecurity will pose a significant challenge to military operations across all domains as impacts escalate. This is an existential challenge for humanity.

Potential Strategic Shocks:

1. Unexpected climate collapse in multiple countries, severely changing weather patterns and enduring life-threatening conditions, with little to no warning.

2. Increased risks from crop disease and failure in shrinking temperate zones, as

extreme weather and loss of biodiversity harm legacy crops and devastate less resilient ones.

3. Sudden emergence of pandemics or collapse of biodiversity as a result of natural causes or human-induced ecocide creating lasting global crisis.

4. Activation of geoengineering of the atmosphere to create disruptive cross-border weather patterns, potentially enabling instrumentalization of the atmosphere and prompting possible pre-emptive responses or conflict.

4.1.2 Resource scarcity

As climate breakdown further degrades vital ecosystems and interrupts the services they provide, the demand for renewable and non-renewable resources and critical raw materials is set to increase, while the competition and dependencies for these resources become more acute. The high demand and scarcity of resources may cause a tipping point whereby competition turns into confrontation.

Potential Strategic Shocks:

1. Confrontation over limited resources (`resource wars') expanding to regional and global levels, attracting major powers or security coalitions with further unintended or calculated escalations.

2. Popular movements revolting against fragile governments as a result of deteriorating environmental conditions, prompting internal conflicts, coups and regional escalation as well as major humanitarian crises.

3. The sudden emergence of vast market asymmetries, as a result of instability or export control disrupting the continuity of resource supply chains, undermining efforts of green energy transition and enhancing competition or confrontation with potential adversaries.

4. Human-induced or natural disasters leading to disruptions to electric grids, on a global scale.

4.1.3 Age of AI: emerging and disruptive technologies converging

The pace of technology transformation will continue unabated. Emerging and Disruptive Technologies will present opportunities and challenges in an age where effects and enhancements will converge across multi-dimensional environments. Convergence of technology will not only be transformative on a societal level in the next 20 years but will also change the character of warfare where military capabilities are increasingly autonomous, networked, multi-domain and precise, and empowering an increasing number of actors. *Potential Strategic Shocks:*

1. Significant political or social unrest triggered by the uncontrolled spread of misinformation, disinformation as a result of AI, big data, and advanced language models.

2. The lack of human oversight and the speed of highly interconnected and automated systems triggering escalation or unintended crises due to highly interconnected systems, operating in a confused security environment.

3. Unanticipated use of any Emerging or Disruptive Technology (EDT) to gain strategic advantage in anticipation of imminent confrontation.

4. Enduring and successfully concealed employment of any EDT with effects of mass destruction.

4.1.4 Geoeconomics, fueling polarization

Economic activity across the globe continues to shift towards Asia whilst established economic systems and global division of labour is still transforming, due to security concerns, digital transformation and rapidly evolving manufacturing and

production innovations. Pervasive competition is unfolding amidst major shocks to the global economy. This fuels an increasing level of polarization when both states and the private sector face global decoupling, with weaker states choosing or being coerced between systems, while states authority is being challenged with trust issues that become harder to address.

Potential Strategic Shocks:

1. Major supply chain shock resulting from regional conflict, denied access to resource nodes, or severe trade prohibitions.
2. Actors introducing an export ban on critical rare earth materials or energy resources in a concerted and coordinated fashion.
3. Isolated states conducting disruptive strikes against digital and economic global systems causing global shock in telecommunication, supply flows and industrial activity.
4. Alternative financial systems emerging and gathering increasing support.

4.1.5 Human networks - empowered

Technology accelerates interconnectivity within groups and individuals increasing their influence in the security environment. It empowers them to pursue their objectives independently from and sometimes in contradiction with state actors. Human networks' ability to adapt rapidly, makes them formidable allies, or foes in the future security environment. Potential Strategic Shocks:

1. Non-state actors openly and declaratively contesting and challenging state authority, or replacing state responsibility in critical services, or acting in the state's stead in international affairs. This may include the sudden removal of any previously provided commercial enabler from a state leading to critical reliance concerns and counteractions.
2. Winning a conflict without fighting through successfully shaping and contesting within the cognitive and virtual dimensions, collapsing

national cohesion and severing the military instrument from the society.

3. The exponential spread of any emerging norm, belief, idea, technology or disease across the global human networks.
4. Collapse of a megacity.

4.1.6 Scramble for the commons

Pervasive competition as well as depletion and uneven access of existing resources will drive actors towards the insufficiently governed global commons. Actors will explore and exploit these commons to gain strategic advantage, control or deny access to contest and, if needed, confront. This scramble will require stronger reliance on non-state actors and will be driven by commercial capacities.

Potential Strategic Shocks:

1. Unintended escalation from confrontation of state or state sponsored commercial actors in scrambling for exploration and exploitation beyond national jurisdiction, in the insufficiently governed global commons.
2. Interdiction of naval trade, air traffic, satellite orbits and critical undersea infrastructure in critical nodes or locations with global effects.
3. Autonomous actors imposing paralysis in physical and digital infrastructure by creating strategic disruptions in cyber space, driven by alternative ideologies or beliefs.
4. Any form of kinetic or non-kinetic attack against Allied and major commercial satellite constellations.

4.1.7 International order in transition

Across all aspects of the Evolving Security Environment, pervasive competition will accelerate as strategic competitors of the Alliance adapt to increasing levels of global fragmentation and the erosion of the current international systems. As a result of increasing uncertainty and instability, rivals will position themselves to undermine international norms, shape and contest in peacetime and prepare for confrontation. The relationship between Russia and China is likely to strengthen and smaller states may be exposed to coercion as pervasive competition gathers pace. Formation and solidification of new forms of regional security cooperation and military alliances may become more prevalent.

Potential Strategic Shocks:

1. A Russian attack against Allied countries or assets or any action by actors to violate territorial sovereignty with overt or covert confrontation.
2. Formation of a military alliance, openly adversarial to NATO.
3. Major war expanding to multiple regions leading to instability, prompting humanitarian crisis and mass migration. Major systemic war is a distinct possibility. Its emergence will be more likely a result of miscalculation (including underestimated NATO reaction) or unintended escalation.
4. Surprise employment of massed autonomous weapons to create an asymmetrical advantage against high-value targets.
5. Nuclear exchange between states.

4.2. Implications to alliance

In a pervasive competition scenario, Diplomatic, Information and Economic Instruments of Power (IoP) could potentially be used to target Allied cohesion, exert influence over sovereign nations, solidify regional security formations and military coalitions, and fuel as well as exploit grievances in areas of instability.

The capacity of potential adversaries and their efficiency to coordinate and employ IoP will increase, while non-military instruments will likely gain more relevance. Potential adversaries will likely prefer to avoid open and direct conflict with the Alliance, due to NATO's advantage in the Military Instrument of Power. Their objectives will reflect that, in attempting to conceal intent and capacity to achieve strategic surprise. These adversaries may introduce plausible deniability to avoid attribution and response, extensive use of emerging and disruptive technologies, cyber warfare to cause lasting damage to critical infrastructure, and robust technology-enabled cognitive warfare designed to undermine unity. These actors will take advantage of their ability to efficiently combine employment of all instruments of power to limit the Alliance's military instrument, already in peacetime.

Main key points emphasized by the analysis:

- The Diplomatic Instrument of Power will be challenged by a great variety of actors, behaviours and attitudes, as well as competing narratives and increasing complexity;
- Allied actions in a congested information environment will face challenges due to the abundance of narratives, AI, and automation complicating detection. Cognitive warfare will play a critical role in shaping public perception and decision making, requiring countermeasures in pervasive competition;
- Gaining an economic advantage over competitors will become a key objective for nations seeking to enhance their power and influence, while retaining an economic advantage will be fundamental to creating resilience against a chaotic future security environment;

- National ability to generate fighting power may become constrained by a wide range of challenges to states, including costs of climate adaptation and green energy transition; keeping pace with accelerating technology changes; and economic, financial and technology limitations. In addition, social dynamics, including the need to reallocate spending to welfare and domestic labour challenges (ageing societies, shortage of skilled workforce) will pose further demands for states resources. At the same time, cost escalation in the defence sector is set to increase further.

4.3. Key challenges to the effective use of Military Instrument of Power

1) Accelerating changes in technology will shape the character of warfare and be characterized by:

a. Increasing complexity and confusion of the security environment;
b. Concealment of intent (due to dual use tech and a dense information environment) will complicate the cognitive component and demand rapidity and agility in decision making, resulting in compressed timelines;
c. Integration of AI and sensors will enhance detection, attribution and rapid decision making to guide responses;
d. Increasing speed, scale, range and precision of strikes;
e. Compressed decision making cycles;
f. Low-cost, dual use autonomous systems on land, air, and sea will be ubiquitous across the battlespace;
g. A limited number of high-value autonomous weapons for strategic effects and an exponentially increasing number of low-cost, unmanned and human-machine systems will allow an increasingly contested and degraded security environment for Allied forces;
h. Emerging technologies include bio-toxins, human enhancement technologies, quantum technology, directed energy weapons, engineered pandemics, and generative AI. These will have the power to wield existential damage to societies. States will be challenged to produce countermeasures that can keep pace with these advancements and be pressed to develop mitigation strategies at pace to respond to these low-probability, high-impact events;
i. EDTs will make military capabilities increasingly intelligent, interconnected, distributed, and digital in nature.

2) Active shaping and contesting by potential adversaries in virtual and cognitive dimensions will be aimed at disrupting the moral component through:

a. Cognitive warfare;
b. The promotion of alternative norms and principles,
c. A complex congested and confused information environment with a high variety of actors, stakeholders and narratives;
d. Technology-enabled concealment of capacity and intent increasing legal challenges and complicate attribution

3) The physical dimension will be challenged by a range of factors, which are shaped by the key drivers of change:

a. The Personnel Element will require adaption due to changing demographics:

i. Ageing;
ii. Scarcity of a skilled and available workforce;
iii. Increasing personnel (human resources) costs.

b. The equipment element will face:

i. Accelerating changes in technologies resulting in obsolescence at faster rates;

ii. A low industrial base for large scale, enduring conflict;

iii. Challenges for rapidly adopting commercial and dual-usable technologies;

iv. Cost escalation;

v. Interoperability challenges;

vi. An austere operating environment with high attrition rates;

vii. An increasing need to automate and re-balance the quality and quantity of force structures.

c. The training element will be faced by increasing incremental cost and be resource intensive for a variety of previously unintroduced conditions, including:

i. Operating in extreme weather environments;

ii. Utilization of more advanced technologies in weapons and systems;

iii. Increasing complexity of multi-domain operations and integrated effects.

d. The Readiness Element will depend on:

i. Availability of sufficient force elements;

ii. Availability of sufficient materiel stockpiles.

Whilst being challenged by:

iii. Strategic distances;

iv. Increasing variability of potential employment and deployment scenarios with no or short notice;

v. Sustainment issues due to a requirement to rebuild a strong industrial base;

vi. Political resolve to continue engagement despite associated costs;

4) Potential adversaries:

a. Likely possess the means to target Allied and social cohesion in peacetime, in order to:

i. Limit the capacity and will to fight;

ii. Disrupt resolve to sustain operations.

b. Will take advantage of insufficient rules and regulations in new theatres of operation and increasingly shift:

i. To the virtual and cognitive dimensions;

ii. Towards insufficiently governed global commons;

iii. To conduct hybrid activities;

iv. Towards actions under plausible deniability and utilizing concealment and proxies.

5) Climate breakdown and rising global temperatures will require:

a. Armed forces to adapt and operate under extreme conditions;
b. Operations in austere environments to increase,;
c. Facing climate-related attrition on equipment, forces, and stockpiles, which will lead to higher operating costs; and
d. Extreme weather disruptions which will pose challenges to the safety of navigation and to access to land forces in affected coastal areas.

6) Resource scarcity driving instabilities will require Allied forces to:

a. Accelerate transition to green energy sources to reduce carbon footprint and dependence on fossil fuels;
b. Ensure increased operational effectiveness as a result;
c. Adapt force designs and, as necessary, operational concepts to increase the use of electric vehicles in and around urban areas;

d. Prepare to protect freedom of navigation against novel ways of interdiction as well as to protect critical trade nodes in the global commons, as appropriate.

7) Empowered human networks through Public (State) and Private (commercial) partnerships will become critical enablers for the military instrument. In the modern operating environment:

a. State capacities are insufficient;
b. Commercial services are expanding steadily;
c. Armed forces alone cannot effectively wagemodern warfare across multiple domains without substantial support from commercial actors;
d. Trust, reliability and attribution concerns must be resolved;
e. Prevalence of commercial service providers will necessitate a new approach to national security;
f. Future cyber and space commercial service providers will be ubiquitous across the domain. They are not necessarily combatants and may be citizens of third countries.

8) Scramble for the commons will require a new mind-set, including anticipation and detection as well as modern capabilities by Allied forces to ensure success for missions and operations in a complex, congested, commercialized, contested and confused environment. Areas and actions are as follows:

a. On the High Seas and Oceans:
   i. Control and secure trade routes;
   ii. Counter piracy and maritime terrorism;
   iii. Protect undersea infrastructure;
   iv. Utilize unmanned naval drones and advanced sensors.
b. In the Arctic and Antarctica:
   i. Increase monitoring of the region;
   ii. Assert sovereignty and uphold internat
   iv. Address climate-related tensions;
   v. Protect critical supply routes.
c. In the Atmosphere:
   i. Reinforce air traffic management;
   ii. Address emerging threats from drones;
   iii. Start assessing long-term implications of geoengineering;
   iv. Prepare and protect against electromagnetic effects.
d. In the Outer Space:
   i. Prepare for protecting increasing commercial traffic;
   ii. Explore ways to manage congestion and debris in orbit;
   iii. Protect space-based assets and capabilities;
   iv. Address potential space weaponization in concepts.
e. In the Cyberspace:
   i. Defend against cyber-attacks of varying scales;
   ii. Adapt to evolving tactics and actors;
   iii. Enhance technological expertise;
   iv. Collaborate with the private sector for cybersecurity;
   v. Address governance challenges and vulnerabilities stemming from insufficient regulation as appropriate.

5. Conclusion

New Technologies in the Context of National Security and International Relations: NATO Building Integrity (BI) Awareness Course as the Case Study

More and more organizations want to understand in greater detail how the world is changing and how they can make the most of these changes. The purpose of Strategic Foresight is to help them in that difficult task. And, of course, to ensure that organizations make informed decisions based on carefully analyzed views of alternative future scenarios.

NATO understood the importance of Strategic Foresight and from 2013 when it issued the first report of Strategic Foresight Analysis undertook a series of steps for restructuring the Strategic Foresight Process in order to increase organization adaptability and agility in countering future threats, and ultimately, in 2022, set several objectives, outlined below:

- Establishing a biennial foresight cycle for trends assessment heaving Strategic Foresight Analysis 2023 as a baseline;
- A follow-on analysis expanding the military aspects of the Future Operating Environment of the Alliance in 2024;
- Develop subsequent foresight studies to analyze long-term challenges and inform long-term capability development;
- Establish a foresight community to modernize forward-looking practices and enhance future collaborative research.

One important aspect derived from the same Strategic Foresight Analysis 2023 published in 2024 is that only efficient coordination across all Instruments of Power (Diplomatic, Economic, Information and Military), efficient aggregation of the Alliance's capabilities, and joint actions in a multi-domain environment will remain fundamental to prevail in a degraded security environment.

The objective of Strategic Foresight Analysis is to encourage thought on both existing and novel problem sets and enable the Allied defense planning, warfare development, and concept development communities to consider their long-term demands. It acts as a stark alert, prompting strategic thinkers and decision-makers to confront potential obstacles head-on.

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