MULTIPLE FUTURES PROJECT
Navigating towards 2030

FINDINGS
AND
RECOMMENDATIONS

April 2009

The military posture of nations must not be geared to a preclusive vision of war. The Alliance must ensure its ability to conduct a full range of operations and missions concurrently, ranging from collective defence, large-scale high-intensity operations, and stabilization and reconstruction, to Security Sector Reform and support to existing security institutions. There will be a greater need to mentor, advise and train indigenous forces in support of longer-term institution- and integrity-building, to promote good governance. The Alliance must develop flexible, adaptable, well-trained, well-equipped, deployable and sustainable expeditionary forces. These forces require an adaptable, comprehensive command structure that can integrate and work effectively with a range of other actors, using a comprehensive approach to deal with challenges and threats across the spectrum of conflict. Many of these challenges and threats, from both state and non-state sources, will be blurred and hybrid in nature, in an environment where exploitation of the global commons is rising along with the potential for use of Weapons of Mass Destruction or Mass Effect. Alliance forces must be ready to operate in urban, high tempo, and WMD/E contaminated environments, while continuing to assure access to, and free use of, the global commons, which will be pivotal to both our security and success.

MFP 2030

FINDINGS
AND
RECOMMENDATIONS

Introduction
Findings and Recommendations

The global security environment is changing rapidly. The likely landscape of 2030, as reflected in the multiple futures developed in this project, will see significant disruptions due to high population density, resource depletion, shifting alliances, advances in human ingenuity and technology, and global economic interdependence. Some believe the scale of these changes will be similar to those experienced from 1910 to 1930. These futures present NATO with unprecedented opportunities to influence positively the future environment, and at the same time help ensure that the Alliance is agile and flexible enough to respond to the unpredictable and complex challenges the future will bring.

In March 2008, the Supreme Allied Commander Transformation (SACT) proposed a Multiple Futures Project (MFP) to the NATO Military Committee. In this proposal, he called for the Alliance to consider "that different views of future worlds will strengthen our endeavour to develop a more rigorous and holistic appreciation for future security challenges and implications for the Alliance." Subsequently, a multi-national, cross-functional team comprising military and civilian staff from HQ SACT was charged to lead the exploration of the question: 'What are the future threats and challenges that could pose risk to the interests, values, and populations of the Alliance?'

The *Multiple Futures Project Report* is meant to inform and support strategic dialogue on challenges the Alliance will face and the corresponding security and military implications. It does not predict the future or presume political decisions that will determine future Alliance roles and required capabilities. Rather, it provides Alliance leaders with a broad set of ideas and information with which to plan for the future security environment. It was submitted to NATO Headquarters in April 2009. This *Key Findings Report* presents a concise, executive overview of the findings and recommendations.

Chapter 1
Security Implications

The Multiple Futures tell the story of four plausible worlds in 2030, and are constructed to reflect their underlying logic and reasoning. None of these is what the future actually will be, but each provides a common ground for structured dialogue on the risks and vulnerabilities that will potentially endanger Alliance populations, territorial integrity, values and ideas.

The first future is called *Dark Side of Exclusivity*, and describes how globalization, climate change and resource scarcity significantly affect the capacity of states outside the globalized world to function effectively and meet the needs of their populations. Weak and failed states are sources of instability, and the states of the globalized world are faced with strategic choices on how to react.

The second future, called *Deceptive Stability,* refers to a world where advanced nations are preoccupied with societal change and how to manage the coming demographic shift as native populations age and young migrants fill the void. States in this world of relative benign stability are preoccupied. They focus inward on social cohesion, legal and illegal migration, and transnational issues related to diasporas. This leaves them ill-prepared to deal with geopolitical risk.

Clash of Modernities, the third future, sketches a world where a strong belief in rationalism, coupled with ingenuity and technological innovation, fuels and promotes horizontal connections between advanced networked societies across the globe. This network is challenged from the outside by authoritarian regimes of the hinterlands, and from within by a precarious balance between civil liberties and oversight by the state.

The fourth future is called *New Power Politics*, in which growing absolute wealth, including the widespread proliferation of WMD, has increased the number of major powers, between whom there is now

a tenuous balance. Globalization through trade integration and internationally agreed standards is undermined as these powers compete for and impede global access to resources and spheres of influence.

Each of the futures provides a backdrop for conceptual analysis. Together they present a canvas on which to evaluate risks, threats, potential strategic surprises, implications and, of course, opportunities. The study has yielded a rich set of Risk Conditions, ranging from 'failed states' and 'disruption of access to critical resources,' to 'increasing ethnic tension' and the 'challenge of conflicting values and world views.' When linked with the six potential Sources of Threat identified in the MFP, the resulting Threatening Actions or Events yield 33 Security Implications and 26 Military Implications.

The Implications make clear that the security environment will continue to evolve and be influenced by a variety of unforeseeable and dynamic political, social, technological and military developments. Conflict will become increasingly complex, unpredictable and more difficult to control. Advanced technologies, used lethally and available widely, will empower adversaries in ways never before imagined. The competition to shape and influence ideas and events will accelerate and intensify. Accordingly, the Alliance will have to ensure its ability to achieve a common understanding of perceived risks and threats if it is to be able to anticipate, influence, prepare for and react to important trends, developments, and events in the security environment of the future.

The Project's Security Implications point to four broad insights. The first insight explains why and how the evolving nature and blurring of the threat will make it more difficult to reach a consensus on what constitutes an attack on the Alliance. The second insight reflects on the need for the Alliance to examine its responsibility to act outside NATO's traditional areas of engagement. The third insight states that readily available advanced technology will enable determined adversaries to attack Alliance vulnerabilities in new and unexpected ways, highlighting the need to review our policies, organisation, operating concepts, capabilities, and ultimately our future force and

command structure. The fourth insight concludes with a call to improve communications with international partners and populations. Doing so will allow us to positively shape and influence values, ideas and events in an increasingly globalised world.

1. **The evolving nature of risks and threats to vital interests will challenge strategic unity and solidarity within the Alliance, as well as the common understanding of what constitutes an Article 5 attack.**

The security agenda of nations will continue to include the consequences of failed states, poverty, famine and expulsion; amidst this turmoil, however, new state and non-state adversaries will emerge, empowered by the rapid development and incorporation of easily accessible and innovative technologies. The Alliance will face rivals for strategic influence, values and ideas; its vulnerabilities will be exploited on and beyond Alliance territory; and its populations and forces attacked in unexpected ways. The common understanding of what constitutes an attack on the Alliance and how the Alliance responds, will be questioned and potentially altered. In this environment, the Alliance must maintain collective defence at its core, acknowledging that challenges that prompt a response under Article 5 will continue to evolve.

Maintaining strategic unity, solidarity, commitment and a strong transatlantic link in the face of a range of risks and threats must remain the Alliance's highest priority. This understanding will directly impact member's priorities regarding defence planning, capability development, resource allocation, burden-sharing, operational engagement, and the sharing of risk.

The indivisibility of Alliance security and the ability to support each other fully will remain both the glue that binds the Alliance, and the fundamental precondition of collective defence. Fulfilling this commitment requires the development and maintenance of necessary capabilities and a sovereign decision to make them available when called upon. This commitment remains the

cornerstone of NATO's defence planning process and the foundation upon which Alliance solidarity is built.

The collective boundaries of the Alliance are well defined by the external borders of the Allied nations. The maritime spaces surrounding these borders and encompassing the vital economic interests of the Alliance are vast, ranging from the Arctic Ocean in the North to the coastal seas of Africa in the South, and from the Pacific Ocean in the West through the Mediterranean to the Black Sea in the East. Maintaining this awareness among Allies strengthens the understanding of the challenges each region poses.

It is more likely the Alliance will be threatened by instability and the weakness of others, than by invading conventional forces. Interstate conflicts in different regions of the world will remain likely: while they may not threaten NATO directly, the consequences of such conflicts may have a significant impact on Alliance security.

2. **Increased interaction with non-NATO nations and other international actors will create opportunities for the Alliance to extend its role in enhancing security and stability outside the traditional areas of engagement.**

The trends point to an international system of governance at a crossroads. In this evolving world, numerous actors will take a role in global governance. Each of these changes will affect the Alliance, and it will need to review continuously its role in international governance. Doing so will ensure clarity concerning the roles of NATO, and its responsibilities related to defence/security, civil/military relations, and public/private partnerships, and relationships with other nations.

The importance of other international actors will increase, and NATO's members will have to rely heavily on the successful implementation of a comprehensive, cooperative approach to security operations. Increasingly, NATO will be responsible for the planning and execution of operations alongside other international actors. An early decision concerning with whom and under what arrangements the Alliance will cooperate in the global environment

could ease the burden of maintaining international security. Strategic partnerships with other international actors, most notably the EU and UN, could help optimize the use of resources and capabilities. The use of Security Sector Reform, enhanced training and exercise tools to strengthen defence reforms could potentially reduce the need to deploy military forces.

The Alliance may have to decide whether to act outside the traditional Alliance areas of engagement, in response to growing resource competition; the increased exploitation of space, cyberspace, and the maritime commons; as well as the spill-over of regional conflicts. Threats to NATO may also stem from radical nations and non-state actors who are willing to use nuclear and tailored biological weapons.

The common members of NATO and the EU have a single set of limited resources and capabilities, which allow for neither duplication nor institutional competition with regard to force generation and capability development. Interoperability, transparency of information and decision-making will be crucial in the face of a common threat, as will common standards and definitions, the identification and elimination of gaps in capability development, cooperation on research and technology and the development of mutually reinforcing capabilities.

3. **Determined adversaries, enabled by readily available technologies, will attack Alliance vulnerabilities in unexpected ways, requiring the Alliance to consider changes in the character of military operations and warfare.**

Adversaries will focus their efforts against perceived vulnerabilities within the Alliance. To prepare, the Alliance will need to face the emerging challenges associated with energy, cyberspace, space and maritime security, as well as regional instability and potential conflict in areas such as the Caucuses, the Middle East, the Mediterranean and the High North. To succeed in a range of demanding landscapes and climates, future operations will emphasise the importance of multinational, joint and expeditionary capabilities.

In parallel, the combination of advanced networks, miniaturization, robotics, swarming, precision, and nanotechnology will pose new and unexpected challenges to conventional warfare. Individuals and small groups will be more mobile, lethal and effective using commercially developed, and easily concealed and transported, disruptive and destructive capabilities. Threats will come in hybrid form, as adversaries integrate conventional, irregular, terrorist and criminal assets operationally and tactically at the lowest possible level. These threats will dominate urban environments and locations where the Alliance lacks established systems of support.

4. **Increased interaction with other international actors will provide NATO the opportunity to positively shape and influence ideas, values and events in a globalised world.**

Advocating the values and ideas on which the Alliance is founded, defending basic human rights that grew out of the Enlightenment, and engaging in the battle of the narrative may be some of the most effective tools to counter those who may oppose the Alliance. In a future of greater integration, cooperation and globalisation, the Alliance will have unprecedented opportunities to counter disruptive forces through its ideas and values that are widely admired and espoused.

The continuous demand for information will require that the Alliance compete vigorously, both nationally and internationally, to communicate effectively and build support for its core mission, purpose and operations. A strong understanding of the threat amongst Alliance populations and governments will be crucial to prevent substantial erosion of national support for the defence sector in general and national capability development in particular.

NATO will need to communicate effectively the inter-relationship between security and defence, which includes the role of NATO in relation to other governance bodies, both internal and external to the Alliance.

Strategic Engagement & Vision©

Chapter 2
Military Implications – Focus Areas and Recommendations

As noted in the Insights, the future security environment will both provide numerous opportunities for NATO and place greater demands on the military capabilities of the Alliance. Decisions on future roles and missions will have significant implications for the size and types of forces, capabilities and command and control structures needed to effectively address hybrid threats, while maintaining the conventional and nuclear prowess of NATO.

The Military Implications that derive from the Security Implications point to seven broad focus areas, each of which is followed in this Report by recommendations concerning changes in concepts and doctrine as well as capability enhancements. The recommendations reflect SACT's military advice, which the Alliance can use to inform the strategic dialogue, policy considerations, and subsequent guidance to Alliance planning disciplines.

(a) Adapting to the Demands of Hybrid Threats.

Throughout history, the "paradox of war" reveals that thinking adversaries avoid strengths and gravitate towards areas of perceived weaknesses. In this tradition, enemies will avoid conventional military operations in which they are unprepared to confront NATO forces. Instead they will attack in ways NATO might consider irregular or asymmetric, but are anything but asymmetric to them. The security environment will include conventional, irregular, terrorist and criminal elements in mixed modes of operations. Adversaries show no respect for distinctions drawn between civil and military operations, and exploit them to threaten the Alliance's territories, populations and forces. The Alliance needs to develop those training, doctrine, and education and

capabilities necessary to confront an opponent that uses these elements at the strategic, operational and tactical levels.

Concepts and doctrine recommendations

- Enhance, and where required develop, both offensive and defensive concepts, strategies and legal frameworks to deter, respond to and counter an attack in ungoverned areas and in sensitive mission areas such as the space, cyberspace, maritime and information domains. Strengthen cooperation with partners and other international organisations to protect critical infrastructure, and guarantee the flow of vital resources, including in the electromagnetic spectrum.

- Re-evaluate the ability of the Alliance to collect, share and fuse all sources of intelligence among nations, international organisations, and partners in order to detect, track, identify, target and engage threats.

- Develop a comprehensive concept and strategy that strengthens the Alliance's strategic partnership with industry and shortens the time that elapses between the emergence and use of a technological innovation.

Capability enhancement recommendations

- Develop a culture where leaders and capabilities are well suited for irregular warfare or the hybrid threat, while simultaneously maintaining NATO's conventional and nuclear competency. This is not an either/or proposition: forces must be flexible and adaptable enough to operate across the spectrum of conflict. Train forces to improvise on the battlefield to make up for any failure to anticipate the actions of a sophisticated adversary.

- Re-examine the combination of conventional and nuclear capabilities to ensure the Alliance can present a credible threat of force to deter and effectively respond to potential adversaries in the areas of space, cyberspace, land, sea and air. Deterrence should include the development, maintenance and adaptation of appropriate capabilities, and a regular show of force through exercises.

- Institutionalise a robust and effective lessons learned capability that effectively and responsively identifies and shares both lessons identified and lessons learned across the Alliance and with partners.

- Retain the technological advantage. Develop the ability to rapidly assess emerging technologies and their potential use against the Alliance. The development of capabilities to detect, identify, locate and engage sources of cyber attacks and for cyber counter-attack are necessary to assure access to the flow of critical information. Ensure C2 systems are agile, configurable and push decision making to the lowest appropriate level.

- Develop advanced Joint Intelligence, Surveillance and Reconnaissance (JISR) capabilities to protect the force. This will require improvements in human intelligence and the Alliance's ability to detect and engage over the horizon. Strengthen NATO's Network-Enabled Capabilities so that nations may better share information, enhance situational awareness and improve Alliance command and control down to the lowest tactical level.

(b) Operating with Others and Building Institutions.

Cooperation and collaboration with non-NATO nations and other international actors are necessary to create opportunities for the Alliance to enhance security and stability. Focusing on Security Sector Reform, as a tool of conflict prevention, will strengthen cultural awareness, improve interoperability and over time may decrease the need for military intervention.

Concepts and doctrine recommendations

- Establish a working group with other international actors to examine areas of cooperation and clarify roles. Plan for the exchange of liaison officers with government and international organisations to improve planning and execution, and minimise duplication of efforts and capabilities in stabilisation, reconstruction and nation-building.

- Implement fully the Comprehensive Approach. Significantly strengthen the areas of good governance by mentoring and advising other nations; conducting integrated civil-military relations;

enhancing information-sharing procedures and practices; and improving role integration, comprehensive planning and operational support.

- Re-evaluate the Alliance's various partnership mechanisms to ensure that partners are more closely involved in NATO's defence policy initiatives, especially with regard to the Mediterranean Dialogue and Istanbul Cooperation Initiative, as well as in partnerships across the globe. Particular emphasis needs to be placed on the transformation of national security postures and the management of non-conventional threats and risks, interagency cooperation, coordination of reforms across national security systems and the development of relevant capabilities.

- Implement fully the UN-NATO Joint Declaration and expand cooperation between the two organisations at all levels. Strengthen UN-NATO planning, information sharing, lessons learned and early-warning cooperation.

- Use the lessons learned in Afghanistan and other engagements to develop an Alliance concept and doctrine on mentoring and advising indigenous forces in order to support the stabilisation, democratisation, and self-sufficiency of a nation's security sectors.

- Determine whether the Alliance would be willing and able to outsource aspects of security, stabilisation or reconstruction to private military companies (PMC), and if so, which aspects. This will require NATO to develop a comprehensive policy on the Alliance's engagement with and relationship to PMCs.

Capability enhancement recommendations

- Develop Alliance standards and procedures, along with national capabilities, to conduct security assistance missions and security sector reform, and to ensure cultural awareness among the forces of the Alliance.

- Enhance the ability to partner with non-military organisations; support the establishment of a military police force; enhance the CIMIC capability; and train and equip construction engineers and military medical personnel to provide public security, temporary

governance and essential services in a conflict zone. Expand situational awareness in order to reduce casualties, fratricide and the collateral damage that may occur as non-military organizations, including private military companies, engage in the same theatre of operations as NATO forces.

- Strengthen the strategic relationship between NATO, the EU, and the UN by adapting the communications, training and interoperability standards necessary to support a flexible command structure.

- Develop an ability to rapidly assess how opposing forces might leverage operational lessons learned, commercial off-the-shelf technology and emerging technologies to attack gaps and vulnerabilities within the Alliance. This would include a robust evaluation mechanism that translates new technological developments into solutions for NATO.

(c) Conflict Prevention, Resolution and Consequence Management.

Nations must establish and maintain relationships by encouraging government agencies to develop a comprehensive approach to conflict management. At the international level, the Alliance has to fulfil its mandate in increasingly complex areas of conflict alongside a varied mix of international actors. It can succeed only by forming strategic partnerships that are transparent, informed and mutually respected and understood.

Concepts and doctrine recommendations

- Adapt Alliance organisational structures, authorities and decision-making processes to successfully implement a comprehensive approach to conflict resolution, stabilization and reconstruction. To this end, nations will have to establish and maintain an interconnected web of government agencies, e.g., law enforcement, border protection services, judiciaries and public health authorities that can work alongside and in support of Alliance missions.

- Develop a legal framework and policy for the use of non-lethal force, as well as common standards regarding the use of non-lethal force in support of law enforcement and security operations.

- Implement fully NATO's partnership with the EU at the strategic, operational and tactical levels. Improve the NATO-EU partnership on issues of non-proliferation and consequence management, with agreed terms of reference that delineate the role of each organisation in a crisis.

- Establish an agreed NATO-EU framework for comprehensive planning and liaison with civilian actors, especially humanitarian relief organisations and NGOs. In this regard, make full use of the NATO-EU working groups to evaluate and prepare recommendations for how military forces will plan, prepare and exercise alongside their civilian counterparts.

Capability enhancement recommendations

- Adapt Headquarters and command and control structures, including rapid reaction capabilities, for a comprehensive approach that would include the integration of personnel from other government agencies, the EU, the UN and other international organisations.

- Adapt NATO's force structure and planning processes to emphasise non-combat missions, such as humanitarian relief, maritime security, infrastructure protection and support for multinational responses to natural disasters.

(d) Counter Proliferation.

Alienated state and non-state actors will be increasingly likely to create, sell, acquire and use WMD/WME. In addition, the failure (or structural weakness) of a nuclear state will also pose a significant risk to Alliance security.

Concepts and doctrine recommendations

- Enhance the preparedness of armed forces to support national civil authorities through the harmonisation of command, control and information systems. This will help mitigate the vulnerabilities that result from risks and threats to populations and vital infrastructure, and the potential use of WMD/E weapons in terrorist attacks.

Capability enhancement recommendations

- In collaboration with other IOs and national organisations, analyse and develop the capability to detect, track, identify and target state and non-state actors who are engaged in the illicit development, diversion, storage, or transport of WMD/E.

- Develop a robust consequence-management capability in collaboration with other IOs and national organisations.

- Enhance the capability (equipment and training) of NATO and the nations to aid first responders and recovery efforts, as well as to survive and fight a war conducted with WMD/E.

(e) Expeditionary and Combat Capability in Austere Environments.

The nature of future operations will emphasize the ability of multinational, joint and expeditionary forces and capabilities to succeed in demanding geographical and climatic environments.

Concepts and doctrine recommendations

- Review policy guidance to improve coordination between defence and operational planning, and so better align defence planning capabilities with evolving political-military requirements.

- Develop a comprehensive maritime strategy to address the threats to Alliance security on the maritime commons presented by demographic shifts, energy scarcity, organised crime, technology-savvy adversaries, terrorism and the proliferation of WMD.

Capability enhancement recommendations

- Maintain the ability to conduct the full range of operations and missions concurrently, ranging from collective defence operations and demanding stabilisation and reconstruction operations to large-scale high-intensity combat operations.

- Develop the capability to conduct expeditionary operations in a flexible manner, with the ability to switch seamlessly between lead and supporting roles when working with IOs and NGOs acting in the same area.

- Improve operational planning to account for the increasing complexity of Rules of Engagement.

- Prepare to deploy mobile, credible, interoperable and sustainable forces to remote locations on short notice in response to humanitarian contingencies.

- Deliver modern, capable air-mobility for rapid response and transport in urban environments. Ensure the protection of air assets, especially with regard to control of the electromagnetic spectrum.

- Explore a sea-basing capability to improve operational responsiveness, reduce exposure to land-based and missile threats, enhance medical evacuation capabilities and reduce host nation support requirements.

(f) Strategic Communications and Winning the Battle of the Narrative.

The continuous demands for information will require that the Alliance compete vigorously, both nationally and internationally, to communicate effectively and build support for its core mission, purpose and operations.

Concepts and doctrine recommendations

- The Alliance will need to develop coherent messages and an engagement strategy that both reflect its strategic goals and support its core values, ideas, missions and operations. This strategy will help foster broad public and governmental understanding of NATO's roles and why it needs to develop, manage and deploy robust civil and military capabilities.

Capability enhancement recommendations

- Improve strategic communications in an area of engagement by broadening cooperation within the international community, especially the UN, EU, AU and NGOs. The capability must include ongoing engagement on the Alliance narrative.

- Develop a systematic long-term process to communicate NATO's purpose and operational commitments, both domestically and internationally.

- Improve communications support for Alliance operations and objectives, and better use the profusion of new media supported by instantaneous transmission capabilities. Doing so will require an increase to the number of fully trained Public Affairs and Information Operations personnel.

(g) Organisational and Force Development Issues.

Future risks and threats will challenge the Alliance's ability to achieve strategic unity, maintain solidarity, and reach a common understanding of collective defence and the threats that could trigger an Article 5 response. Shifting demographics within the Alliance and differing perceptions of threat and security will influence national force generation, readiness and capabilities. The Alliance therefore needs to adapt its internal organisational structures and decision-making processes to meet these realities.

Concepts and doctrine recommendations

- Ensure concepts and doctrine support the requirement for flexible command and balanced force structures that can respond to the evolving nature of risks and threats to the vital interests of the Alliance.

Capability enhancement recommendations

- There is a clear need for general purpose forces that can operate in a disaggregated fashion when confronting those who use methods that appear asymmetric. Flexible, adaptive organizational structures and training requirements will empower these high-performing small units. To prepare forces for the new realities, the Alliance should use distributed training with enhanced modelling and simulation capabilities that replicate the fast-paced, chaotic conditions of future battlefields in the training environment.

- Formulate plans that allow NATO's command structure to respond quickly to a variety of warfare models, ranging from high-end

operations to the conduct of security assistance missions, to an advisory role in support of civilian authorities. Adapt command structures to be flexible and culturally aware in response to hybrid threats.

- Adapt the force structures of NATO and its nations, including non-military capabilities, to support Security Assistance missions.

- Encourage nations to adapt recruitment processes, identify recruitment opportunities, and develop key messages that will encourage both non-traditionally and traditionally willing groups within the society to serve. Share best practices amongst nations.

- Establish training and education standards that promote the development of highly educated, culturally aware forces, capable of operating within the rapidly changing tactical, operational and strategic environments.

Chapter 3
Concluding Remarks

The Multiple Futures Project examined common perceived threats to the populations of the Alliance, and found that the unpredictability and complexity of the future security environment will strain the Alliance's most powerful tools: strategic unity of values and goals, solidarity among Allies, burden-sharing, and commitment to its decisions. No nation can meet the challenges alone, and Alliance credibility and capability depend on every nation doing its part.

It is, therefore, essential that the Alliance continue to demonstrate its strength and resolve, which is rooted in solidarity. These qualities sustain the Alliance as we work to keep societies informed about the methods of potential adversaries, to remain vigilant, and to lead in conflict management. We must be tireless as we work together to build support for an Alliance that continues to espouse the values and ideas upon which it was founded. To do this, the Alliance must maintain a common understanding of what constitutes an attack and how the Alliance would respond, thus sending a clear signal of deterrence. That signal is in essence the clarion's call, showing that there will be strength behind the response to any attack, whether territorial or not.

A comprehensive approach, developed in concert with other international organisations like the EU and UN, is fundamental to the security of a diverse Alliance. It goes without saying that the more comprehensive our approach, the more our engagements will be affected by actions outside of our geographic boundaries. To be effective in this environment, we must develop better partnerships, leverage relationships and work with other international actors to improve the transparency of information and decision-making. Success will depend on our ability to manage conflict effectively and mitigate the consequences that spring from subversive activity. Burgeoning technological developments will contribute both to the breadth of Alliance vulnerabilities and to the ingenuity of potential

adversaries who will use technology to disrupt our society. The use of technology, especially the technology of WMD/E, therefore will demand increasing vigilance and positive control, and highlights the need for the Alliance to consult closely with our partners to protect our technological advantage.

Anticipation is crucial to NATO's preparation for the future. Investment in long-term awareness and long-term analysis will give NATO a significant role to play as it works with national governments to discern forthcoming challenges. This includes the need to develop early warning systems, especially with regard to WMD proliferation. A maneuverist stance can help NATO become a catalyst for identifying problems and analysing solutions, thereby outthinking potential adversaries. Intelligence processes must adapt and improve and our leaders must be both well-versed in current trends and grounded in history in order to make informed decisions. To respond effectively in this environment of surprise and hybrid threats, Alliance capabilities, not solely military but across the range of comprehensive responses, will always need to be flexible and adaptable.

Historically, every military that has transformed successfully has done so by clearly identifying specific military problems that need to be addressed. To this end, the Alliance will have to maintain and improve existing capabilities, and in some cases develop new ones, to address emerging security challenges. The insights and recommendations in this report are the basis of SACT's military advice, and are meant to stimulate dialogue and inform decisions on what needs to change. Furthermore, the findings may support the development of political guidance that will address NATO's role in the future security environment.

Exploration of the future is always risky, as trends invariably change in magnitude and direction. By scanning the horizon periodically and reviewing our assessments, we increase our ability to adapt and respond. The goal is not to be perfectly right in this exploration. However, it is vital that the Alliance gets it sufficiently right, so that it has the fewest regrets when Alliance leaders are faced with the surprises that inevitably accompany conflict. Ultimately, the men and women who make up the force embody the Alliance's greatest

operational strength. It is they who give NATO the ability to improvise, on the spot, for unexpected situations. It is incumbent on NATO and the nations to ensure that these men and women receive the doctrine, training, education, and material they need to succeed in their mission.

NOTES PAGE

Insights	Focus Areas	Concepts & Doctrine Recommendations
Insight 1: The evolving nature of risks and threats to vital interests will challenge strategic unity and solidarity within the Alliance, as well as the common understanding of what constitutes an Article 5 attack. **Insight 2**: Increased interaction with non-NATO nations and other international actors will create opportunities for the Alliance to extend its role in enhancing security and stability outside traditional areas of engagement. **Insight 3**: Determined adversaries enabled by readily available technologies, will attack Alliance vulnerabilities in unexpected ways, requiring the Alliance to consider changes in the character of military operations and warfare. **Insight 4**: Increased interaction with other international actors will provide NATO the opportunity to positively shape and influence ideas, values and events in a globalised world.	Adapting to the Demands of Hybrid Threats	• Enhance/develop offensive and defensive concepts, strategies and legal frameworks to deter, respond to and counter attacks in ungoverned/sensitive mission areas. • Re-evaluate the ability to collect, share, and fuse all sources of intelligence. • Develop a comprehensive concept/strategy to strengthen partnerships with industry and shorten acquisition time for new technologies.
	Operating with Others & Building Institutions	• Examine cooperation, roles and exchange of liaison officers with non-NATO actors. • Implement fully the Comprehensive Approach. • Strengthen support to good governance; mentor and advise other nations. • Ensure partner involvement in operational planning. • Implement fully the UN-NATO Joint Declaration. • Implement policy to mentor and advise indigenous forces. • Understand and evaluate outsourcing of security.
	Conflict Prevention, Resolution and Consequence Management	• Adapt organisational structures, authorities and decision-making processes. • Legal framework, doctrine for non-lethal force. • Implement fully NATO's partnership with the EU. • Improve the NATO-EU partnership on non-proliferation and consequence management. • Establish framework for NATO –EU comprehensive planning and liaison.
	Counter Proliferation	• Enhance force preparedness to better support national civil authorities. • Harmonise C2 and information systems.
	Expeditionary & Combat Capability in Austere Environments	• Ensure better coordination between defence and operational planning. • Better align defence planning capabilities with evolving political-military requirements. • Develop a comprehensive maritime strategy to address the threats presented by population shifts, energy scarcity, organised crime, technology savvy adversaries, terrorism and WMD proliferation.
	Strategic Comms & Winning the Battle of the Narrative	• Develop coherent messages and an engagement strategy that reflects strategic goals and supports core values, ideas, missions and operations.
	Organisational & Force Development Issues	• Ensure concepts and doctrine support the requirement for flexible command and balanced force structures, to respond to the evolving nature of risks and threats to Alliance vital interests.

Capability Enhancement Recommendations

- Develop culture suited to countering hybrid threats.
- Maintain conventional and nuclear competency.
- Operate across the spectrum of conflict.
- Present credible force to deter in all domains.
- Retain technological advantage - rapidly assess emerging technologies.
- Detect, identify, locate, and engage cyber attackers.
- Ensure C2 systems are agile, configurable, with decision making at lowest appropriate level
- Develop advanced Joint ISR capabilities.
- Strengthen NATO Network Enabled Capabilities (NNEC).

- Develop standards for security assistance missions, security sector reform, and the force's cultural awareness.
- Enhance capability to partner with non-NATO actors.
- Strengthen the strategic relationship between NATO, the EU, and the UN.
- Rapidly assess opposing forces' use of technology.
- Create an aggressive capability to translate new technological developments into solutions.

- Adapt Headquarters C2 Structures for Comprehensive Approach, including integration of Governmental and International Organisations.
- Adapt force structure and planning to include newer missions, and response to natural disasters.

- Develop, with GO & IO, capability to detect, track, identify, target, & engage WMD/E actors.
- Develop robust consequence management with GO/IO.
- Develop the capability to aid first responders and recovery efforts, and to survive and fight a WMD/E war.

- Maintain the ability to conduct the full range of operations and missions concurrently.
- Switch seamlessly between lead and supporting roles.
- Improve operational planning to take into account the increasing complexity of Rules of Engagement.
- Deploy mobile, credible, interoperable and sustainable forces to remote locations on short notice.
- Deliver modern, capable air-mobility for rapid response and transport in urban environments.

- Broaden cooperation to deliver the Alliance narrative.
- Communicate NATO's purpose and operational commitments, both domestically and internationally.
- Improve communications support to operations.

- Develop distributed training with enhanced modelling and simulation capabilities.
- Adapt C2 for improved responsiveness, flexibility.
- Adapt force structure for Security Assistance missions.
- Adapt recruitment processes and share best practices.
- Establish education & training standards to develop highly educated, culturally aware forces.

Headquarters
Supreme Allied Commander Transformation
7857 Blandy Road, Suite 100
Norfolk, VA 23551-2490
U.S.A.