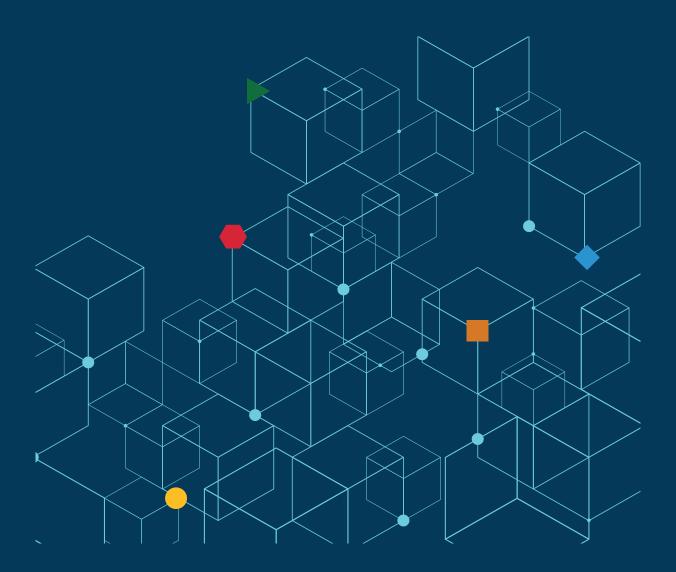**THE ALPHEN GROUP (TAG)**

THE TAG NATO SHADOW STRATEGIC CONCEPT 2022: PRESERVING PEACE, PROTECTING PEOPLE

A Report by The Alphen Group (TAG) for the Secretary General on the 2022 NATO Strategic Concept

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A REPORT BY THE ALPHEN GROUP (TAG) FOR THE SECRETARY GENERAL ON THE 2022 NATO STRATEGIC CONCEPT

On January 3, 2022, The Alphen Group completed its Shadow Strategic Concept for the future defense of the Euro-Atlantic area. This Strategic Concept is intended to reflect the substance and intent of the guidance of June 14, 2021 by NATO heads of state and government. It serves as a model for the official NATO Strategic Concept to be released in June 2022, mirroring its structure. The wording and emphasis of certain passages varies from those of the guidance by NATO heads of state and government.

The NATO Shadow Strategic Concept identifies the principles, parameters, and guidance necessary for the development of the right policies, strategic-operational planning, and force structure as well as capabilities for NATO to meet the challenges of the future. It builds on the NATO 2030 Agenda and seeks to present fresh ideas for improved readiness, capability, and capacity of allied armed forces, for enhanced resilience, for more equitable burden-sharing, a reinforced NATO-EU relationship, and strengthened, function-driven partnerships.

The NATO Shadow Strategic Concept is a report written by The Alphen Group, a network of leading security policy experts chaired by Julian Lindley-French.

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Preface

For 73 years, NATO has preserved peace and strengthened the foundations of democracy, individual liberty, and the rule of law across the transatlantic community. Based on an unbreakable link between Europe and North America, the Alliance has grown from 12 members to 30, expanding the zone of freedom and liberty in which war has become unthinkable. The security of NATO members has been enhanced by the contributions of partners in Europe and across the globe who share the Alliance's enduring commitment to peace and collective security. Today, the Alliance faces perhaps the most complex set of challenges in its history and must continue to deter, defend, and engage all threats to the Euro-Atlantic area. Urgency is the defining feature of this Strategic Concept, given both the nature and extent of the challenges to the values of the Alliance and the increased threats to NATO citizens compared with 2010 when the last Strategic Concept was agreed.

Strategic Concept 2022 is proof of the determination of the allies to preserve the peace and protect people and re-affirms collective deterrence and defense as NATO's core task, and it reaffirms the Alliance's commitment to crisis management and cooperative security within the context of the strategic environment of the 2020s and beyond.

Strategic Concept 2022 is a politico-strategic vision, not a military-strategic concept, but any such vision must be based on effective military power. Therefore, its primary focus is on identifying the principles, parameters, and guidance necessary for the development of the right policies, strategic-operational planning, force structure, and capabilities. This includes improved transatlantic burden-sharing and the creation by 2030 of a more balanced Alliance in which the European allies produce a sufficiency of capabilities and enablers for them to take more responsibility alongside the United States for collective defense and as credible first responders in the event of crises and emergencies.

Strategic Concept 2022 builds on the NATO 2030 Agenda by making the Alliance both more effective and more efficient through greater political cohesion; the improved readiness, capability, and capacity of allied armed forces; enhanced resilience; more equitable burden-sharing; a reinforced NATO-EU relationship, and strengthened, function-driven partnerships. Better NATO preparedness to meet the threats posed by emerging and disruptive technologies both to the functioning of our open democratic societies and in the battlespace is also central to Strategic Concept 2022.

Part I: The Enduring Purpose of an Adaptive Alliance

1.   Strategic Concept 2022: Preserving Peace, Protecting People, adopted at the June 2022 NATO summit in Madrid, sets three overarching goals for the Alliance: to be sufficiently strong militarily, to be more united politically, and to adopt a broader global approach to security and defense. The world is changing fast and not necessarily for the better. At their June 2021 summit meeting in Brussels, Alliance heads of state and government invited the secretary general to lead the process toward a new NATO Strategic Concept. The mission of this Strategic Concept is to defend the Alliance's territories, populations, values and forces. It has five essential elements: protecting our values, reinforcing NATO military power, strengthening Alliance societies, adopting a global outlook, and the preservation of the Alliance as the vital institutional link between Europe and North America.

2.   After almost 20 years, NATO-led military operations in Afghanistan have come to an abrupt end, raising questions about the Alliance's cohesion and credibility. The Alliance pays tribute to those who lost their lives or were wounded, and expresses deep appreciation to all the men and women who served in either the International Security Assistance Force or the Resolute Support Mission. What happened toward the end of the campaign in Afghanistan has potentially profound political, strategic, and economic implications for the West and for the Alliance. These implications must and will be addressed. Consequently, there are a host of lessons that the Alliance must learn from the long campaign in Afghanistan, all of which are germane to Strategic Concept 2022. These include the setting of realistic political objectives; the need for strategic patience; the role of the Alliance in promoting better governance, rule of law, and economic development in an inherently unstable environment; improved campaign design; tighter political-military cohesion; the need for consistent and appropriate rules of engagement; better intelligence-sharing as well as sustained stabilization and reconstruction, and partnerships with other institutions and partner nations; the establishment of an appropriate set of metrics to measure progress; and, above all, enduring unity of effort and purpose. The Alliance will learn and apply these lessons.

3.   At the heart of the Alliance are the shared values of a unique community. The preamble of the Washington Treaty declares that the Alliance is "founded on the principles of democracy, individual liberty, and the rule of law." NATO has always been based on a set of core values that set it apart from traditional balance-of-power interstate Alliances. This, together with NATO's ability to adapt to changing strategic circumstances, is why the Alliance endures. Strategic Concept 2022 builds on these values, principles, and traditions as well as on the seven previous strategic concepts to better prepare the Alliance for a new age in which those principles are once again threatened by states that have systems of government inconsistent with those values and that seek to discredit democracy and those who aspire to the freedom it brings. In recent times, these external threats have been joined by internal challenges to the basic values that the treaty signatories have vowed to defend.

4.   The upholding of the rules-based order will be further assured by reinforcing the transatlantic pact between North America and Europe in which Europeans become ever more central to European defense. This will further ensure that the Alliance is sufficiently politically robust to face the worst possible combination of situations and circumstances. Strengthened political cohesion will be further reinforced by a renewed culture of strategic realism and pragmatism at the highest levels of authority, with a clear-eyed recognition that at times of crisis the Alliance must also act at the speed of relevance.

5.   NATO will remain the unique, essential, and indispensable transatlantic forum for consultations and joint action on all matters related to the individual and collective security of the allies, as set out in Article 4 of the Washington Treaty. Any security issue of interest to any ally can be brought to the attention of the Alliance to share information, exchange views, and, where appropriate, forge common approaches. The Alliance will always take a robust approach to deterrence and defense against any possible, threatened, or actual aggression, ranging from transnational threats and irregular warfare to major war.

6.   The Alliance faces a range of threats that are fast evolving. Russia remains a first-order threat to the Alliance, but terrorism and instability around the Mediterranean and across the Middle East and North Africa must also be regarded as persistent threats to the security of the Alliance as a whole. However, the greatest single game-changer between 2010 and 2022 has been the rise of China as a military superpower and the consequent renewed great-power competition, which is a systemic challenge for the entire transatlantic community, European security, and much of the free world beyond. China's close relationship with Russia adds to the strategic complexity with which the Alliance must contend, not least because the United States and its armed forces are committed to supporting democracies in both the Indo-Pacific and Europe. The Alliance must also confront other challenges, such as emerging and disruptive technologies, future pandemics, and climate change, all of which are potential catalysts for ever more dangerous competition and instability.

7.   We pledge that by 2030, the European allies and Canada will provide at least half of the Alliance's overall military capabilities, as measured by the minimum military requirements established by the NATO military authorities. This will ensure that the burdens of collective defense are shared more equitably with the United States, while over time enabling the European allies to assume primary responsibility for crisis management in and around Europe. The credibility of the Alliance is built on proportionate and legitimate fighting power. Only by having the capacity to fight and win wars will NATO accomplish its primary mission to preserve the peace. To retain such credibility in a changing world now demands greater European strategic responsibility and thus European allies willing to develop European capabilities sufficient to conduct high-end crisis-management operations in Europe's strategic neighborhood without the current heavy reliance on US capabilities. The US military presence in Europe will remain strong, reinforced by forward-deployed forces and prepositioned stocks.

Part II: NATO's Evolving Strategic Environment

8. The allies remain committed to meeting the 2014 Defense Investment Pledge and the capability targets that will further improve the readiness of all allied forces and strengthen and modernize the NATO Force Structure to meet current and future defense needs. NATO will also maintain an appropriate mix of conventional, nuclear, and missile defense capabilities for the purposes of deterrence and defense, while also adapting Alliance capabilities and tactics for operations in other domains, such as space and cyberspace.

9. Mass disruption and mass destruction are merging into a continuum of risk, challenge, and threat with which the Alliance must contend through a prism of defense, deterrence, and engagement. NATO will preserve or restore the integrity and security of the Euro-Atlantic area in all circumstances by employing such forces and resources as may be necessary as part of a strengthened posture that combines flexible response and forward presence. NATO will further adapt to the fast-changing character and conduct of war, which now stretches across a mosaic of information war, cyber war, increasingly precise and more rapid "conventional" war (also known as hyperwar), and nuclear war. However, even with a marked increase in the competence of Alliance military capability and capacity, forces and resources will always be limited in scope given the scale of the challenges implicit in NATO's full mission spectrum. A balance must also be struck between the maintenance of credible deterrence and defense on the Alliance's northern and eastern flanks; effective security engagement in and around the Mediterranean, the Middle East, and North Africa; and ensuring and assuring the security of the North Atlantic and the global commons from seabed to space, which are vital to the strategic and operational functioning of the Alliance.

10. The Alliance will continue to seek dialogue with Russia and honor the NATO-Russia Founding Act, even though Russia continues to breach the values, principles, trust, and commitments outlined in that and other agreed documents that underpin the NATO-Russia relationship. However, Russia's aggressive actions and the increasingly challenging behavior of Belarus—reinforced by Moscow's growing military capability and expanding military footprint—continue to constitute the most pressing and immediate threat to allied security and defense. Russia's illegal seizure of Crimea, destabilization of and threats to Ukraine, support for separatists, and denial of Ukraine's legitimate aspiration to choose its Alliances are part of a wider policy of complex strategic coercion that the Alliance must confront. Russia's growing military presence in Belarus and the driving of thousands of desperate migrants toward Poland point to a consistent policy of such behavior around Russia's borders driven from and by the Kremlin, designed to undermine the security and stability of allies in the region.

11. Russia's pattern of aggressive coercion is reinforced by the growing power-projection capabilities of Russia's armed forces, which are designed primarily to threaten NATO's eastern flank and the Black Sea region. Recent exercises such as Vostok 18 and Zapad 21, combined with continuous military pressure on Ukraine's eastern and northern borders, suggest that Moscow is already engaged in an inner-European conflict with the aim of extending its fiat across much of Eastern Europe. Russia is also engaged in research, development, and production of advanced munitions, all of which aim to establish a clear military advantage over NATO in areas Moscow deems vital to its interests, and at a time and place Russian forces could bring overwhelming power to bear. The Arctic Sea, Svalbard, North Cape and Finnmark, the Baltic states, Belarus, Ukraine, and the Black Sea region are all areas where Russia is active. NATO must respond to this challenge.

12.   Terrorism challenges the rules-based international order by seeking to undermine democracy and stability across the globe. Consequently, terrorism must also be seen as a primary threat to the Alliance. It is also a major factor in mass irregular immigration into the Euro-Atlantic area, together with human trafficking and organized crime, which now operate in Europe on an unprecedented scale. The terrorist threat has changed since September 2001 and the attacks on New York and Washington. Al-Shabab is well established in Somalia, while al-Qaeda in the Arabian Peninsula and al-Nusra in Syria continue to undermine the stability of Europe's strategic neighborhood, including the Mediterranean region. Thanks to the efforts of the Global Coalition Against Daesh, the group has suffered major setbacks, but it continues in its efforts to create a caliphate in Syria and Iraq, establish affiliates in multiple countries across Africa and Asia, and extend its influence into Europe. NATO has to adapt to such changing threats and better understand collectively their scale and scope, the interaction between them, and where best the Alliance can assist in dealing with them as part of broader efforts by the international community.

13.   The rise of China as a military, economic, and political superpower will be the defining change factor in the coming decade, with profound implications for the Alliance. While NATO seeks to maintain a constructive dialogue with China, Beijing's growing influence and military and economic power present challenges that the Alliance must address and constantly assess and reassess together. The sheer speed and growth of Chinese military capabilities across the mosaic of hybrid, cyber, and hyperwar is a cause of some concern to the Alliance. China poses wider challenges that range across implications of military-civil fusion, state-sponsored industrial espionage, state-subsidized efforts to monopolize key markets, control of rare-earth and supply-chain monopolies, coercive and targeted foreign direct investment to gain sensitive technology/critical infrastructure, and efforts to dominate 5G networks and standards development in critical technology sectors

14.   NATO's Overarching Space Policy will ensure secure allied access to space services, products, and capabilities that will be increasingly essential for the conduct of the Alliance's operations, missions, and activities. NATO considers that attacks to, from, or within space represent a clear challenge to the security of the Alliance, the impact of which could threaten national and Euro-Atlantic prosperity, security, and stability, and could be as harmful to modern societies as a conventional military attack. Such attacks could even lead to the invocation of Article 5 of the Washington Treaty, although any such decision would be taken by the North Atlantic Council on a case-by-case basis. Work will be accelerated to deepen and expand the Alliance's use of space as an operational domain, including through the NATO Space Centre in Germany and the Space Centre of Excellence in France. The Alliance will further strengthen space domain awareness and better integrate space into allied activities, including training and exercises, resilience, and innovation efforts. The allies' presence will be fully in line with international law and NATO will offer full support to international efforts to promote responsible behavior in space.

15.   The Alliance will help counter hostile information activities, the malicious use of ever more sophisticated emerging and disruptive technologies, espionage, and targeted attacks, all of which have the aim of undermining confidence in legitimate, democratic leadership vital to sound security and defense. NATO will develop more sensitive indicators and tools to contend with "gray zone" conflict between peace and war. With the bandwidth of coercion becoming increasingly sophisticated and complex, strategic coercion is being employed against the Alliance and the allies that, while short of all-out war, remains a clear and present danger. The primary aim of "gray zone" conflict is to exploit political tensions between allies and social tensions within them. Both state adversaries and terrorists seek to exploit such tensions by using any weakness or vulnerability to their advantage. China and Russia routinely employ a range of economic, political, and information warfare instruments against the allies, such as threats to energy supplies, cyberattacks on critical infrastructure and systems, propaganda targeted at vulnerable segments of society, political subversion, and the implicit threat of military power as part of a complex array of strategic coercion.

Part III: Reinforcing and Rebalancing the Transatlantic Relationship

EQUITABLE BURDEN-SHARING

16.   NATO is a vital component in the respective security polices of the United States and Canada and will become more so with the rise of China and other challenges US armed forces face the world over. The United States will continue to lead collective defense operations against a major adversary in Europe, but by 2030 a more equitable sharing of Alliance burdens will be achieved, built on the principle of shared risks, responsibilities, and costs. Canada and the European allies will provide more high-end forces and capabilities to complement US forces across the Euro-Atlantic area. Even if shared burdens at times lead to a more equitable division of labor, this by no means suggests a division of responsibility. All Alliance members will continue to share responsibility for NATO's goals and missions even when labor is sensibly divided.

17.   Since the 2014 NATO Wales Summit, European allies have made considerable efforts to increase defense expenditure, with several nations now meeting the 2 percent of GDP goal, of which 20 percent per annum should be spent on new equipment, under the Defense Investment Pledge. The United States also reaffirmed its commitment to the defense of Europe through the European Deterrence Initiative (EDI) in the wake of Russia's illegal annexation of Crimea. The EDI led to the first increase of US forces in Europe since the end of the Cold War, together with the pre-positioning of equipment and stocks, more joint exercises, and improved infrastructures. Building on the progress achieved to date, the allies will, as a matter of urgency, continue efforts to commit more cash, capabilities, and contributions in support of NATO's core missions.

EUROPEAN STRATEGIC RESPONSIBILITY

18.   Realizing greater European strategic responsibility will be vital to more effectively rebalancing transatlantic military roles, thus easing legitimate US concerns over burden-sharing while creating a more effective Alliance. Enhanced European strategic responsibility is therefore not only a prerequisite for improved transatlantic burden-sharing, it also promotes more equitable consultations on politico-strategic and politico-military matters, ensuring European allies have a greater say in the Alliance and promote greater collective ownership of missions and operations. Such an amplification of European capabilities will afford Europeans the opportunity to take on more responsibility for crisis management within the framework of the EU's Common Security and Defense Policy, or through coalitions of the willing and able outside of the EU framework. The goal is for the European allies to become effective first responders in possible future crises in the Middle East and North Africa, and to take the lead, where appropriate, for cooperative security missions, such as training partners around the Black Sea or in the Western Balkans.

19.   While recognizing the distinct strategic identities of the two institutions, a deeper strategic partnership between NATO and the European Union will be fostered, building on a now long and privileged partnership. The EU remains a unique and essential partner for the Alliance, with enhanced consultations and practical cooperation vital to the success of both institutions in an increasingly complex security environment. With the

bulk of Europe's defense capabilities outside the EU, arrangements are now also needed to establish mutually agreed enhanced coordination where possible between Alliance and EU defense-planning processes and thus to promote greater coherence between their respective outputs. Such arrangements will need to be agile and responsive to EU needs in return for a much closer involvement of so-called third countries in the planning and conduct of EU operations. Only then will non-EU NATO allies commit forces and resources to the full spectrum of EU civil-military crisis-management operations.

Part IV: NATO's Core Tasks and Responsibilities

20.   Strategic Concept 2022 reaffirms the three core tasks of collective defense, crisis management, and co-operative security, and it further establishes a new priority of enhanced resilience to better enable the Alliance to meet the threats and challenges posed by the changing security environment. Strategic Concept 2022 also rebalances the ends, ways, and means of allied security and defense and better meets the requirement for enhanced resilience and more equitable sharing of costs and risks.

21.   Collective Defense: The Alliance will continue to lead the collective defense of Europe and the allies reaffirm the firm and binding commitment to always assist each other in the event of an attack, in accordance with Article 5 of the Washington Treaty. NATO reasserts its determination to deter and defend against any threat of aggression, and against emerging and increasingly dangerous security challenges where they threaten the fundamental security of individual allies or the Alliance as a whole.

22.   Crisis Management: The Alliance will continue to apply and adapt its unique, robust set of political and military capabilities to address the full spectrum of crises before, during, and after conflicts. An appropriate and tailored Alliance mix of political and military tools to help manage developing crises will also be better delivered in partnership with strategic partners, most notably the European Union.

23.   Cooperative Security: The Alliance continues to recognize that it is affected by, and can affect, political and security developments beyond its borders. The Alliance will engage actively to enhance international security, through partnership with relevant countries and other international organizations; continue to contribute to arms control, non-proliferation, and disarmament; and keep the door open to membership of the Alliance. The Alliance will also strengthen partnerships through enhanced defense capacity-building.

24.   To reinforce the core tasks, enhanced resilience will be a priority. The principle of resilience is anchored in Article 3 of the Washington Treaty. By establishing the Strengthened Resilience Commitment and the baseline requirements, the Alliance has also reaffirmed that national and collective resilience is a vital component of credible deterrence and defense and the effective fulfillment of the Alliance's core tasks. Cyberattacks and information warfare on critical civilian and military infrastructures, as well as on critical information flows between the state and its citizens, are now deemed clear and present dangers. The allies will strengthen efforts to reduce their own vulnerability and that of NATO to such threats as a whole and work closely with the EU to strengthen all transnational aspects of resilience. Such cooperation will help ensure that, whatever the nature and scale of an attack or other disruptive events, continuity of government, essential services to the population, and civil support to the military will be maintained in all circumstances, thus further strengthening deterrence.

MODERNIZING THE NATO FORCE STRUCTURE

25.   The Alliance will commit to further strengthening and modernizing the NATO Force Structure to meet current and future deterrence and defense needs. This will ensure a flexible, agile, and resilient multi-domain force architecture designed to ensure the right forces are always in the right place at the right time. Command and control will also be modernized and better tailored to support NATO's 360-degree posture, dynamic force

management, improved response system, and more agile planning. Consequently, increased emphasis will be placed on the interdependence of geography, domains, and readiness. Improved readiness will be particularly important, and the allies are fully committed to continue improving the readiness of their forces and thus the Alliance's rapid-response capability. Implementing the NATO Readiness Initiative in full is essential to establishing an Alliance culture of readiness.

26.   The Alliance and the allies will also further invest in a host of advanced military capabilities in order to meet new and enduring challenges across all operational domains. The aim is for NATO to be able to deliver an array of robust and sophisticated capabilities across all domains, including heavier, more high-end, technologically advanced, and better-supported forces and capabilities at the required state of readiness in sufficient capacity to be rotated effectively for the duration of any crisis. The Alliance will also continue to improve and adapt the sustainability, deployability, and interoperability of capabilities for a demanding strategic environment, particularly for the successful conduct of high-end operations. National capability development plans will support the full and timely generation of such capabilities, in line with the NATO Defense Planning Process.

27.   Preserving the Alliance's technological edge will be vital. Both the Defense Innovation Accelerator for the North Atlantic (DIANA) and the NATO Innovation Fund are important steps forward in meeting both the challenge and the opportunity of emerging and disruptive technologies (EDT). One of the Alliance's strategic priorities must be to compete successfully with authoritarian states that seek to achieve dominance in EDT, such as artificial intelligence, hypersonic missiles, autonomous drone systems, quantum computing and machine learning, robotics, big-data analytics, nanotechnologies, biotechnologies and bioengineering. NATO will also act as a coordinating institution for information sharing and collaboration between allies on all aspects of EDT that have a bearing on their security.

ALLIED COMMAND OPERATIONS MOBILE HEAVY FORCE

28.   To ensure the Alliance meets its core commitments by 2030, Canadian and European allies will stand up a NATO Allied Command Operations Mobile Heavy Force (AMHF). The AMHF will consolidate all Allied Rapid Response Forces into a single pool of forces supported by the requisite force structure. The AMHF will act as a high-end, first responder Allied Future Force able to act from seabed to space and across the domains of air, sea, land, cyber, space, information, and knowledge. The AMHF will be sufficiently robust and responsive, and held at a sufficient level of readiness to meet any and all threats to the territory of the Euro-Atlantic area in the first instance, with sufficient capacity to also support those frontline nations facing transnational threats such as terrorism. The AMHF will build on the Very High Readiness Joint Task Force and the enhanced NATO Response Force, as well as those very high readiness forces that will emerge from the NATO Readiness Initiative.

29.   The AMHF will enable NATO to better exploit emerging and disruptive technologies and maintain a high degree of interoperability with fast-evolving US forces. The AMHF will also act as a vehicle for the introduction into the Allied Order of Battle of artificial intelligence, super/quantum computing, big data, machine learning, drone swarming, and autonomous capabilities (for example, manned-unmanned teaming, decoys, relays, and networked autonomous systems), hypersonic weapon systems to enable an allied capability to engage in hyperwar. This capability will be crucial to deterrence in the future.

30.   The AMHF will help give shape and meaning to greater European strategic responsibility. Such responsibility and the autonomy it fosters are a function of relative military capability and capacity and must be seen as such. Together with enabling combat support and combat service support, the AMHF will be deployable in several guises and under more than one flag, including as a NATO-enabled European coalition (both EU allies and partners) or as a framework for coalitions of the willing and able.

31.   To ensure the AMHF is stood up in a timely manner, the European allies, together with Canada, will by 2030 invest sufficient resources to ensure they collectively meet at least 50 percent of NATO's Minimum Military Requirements identified by the strategic commanders, including fully usable forces required for covering the whole spectrum of operations and missions, as well as the strategic enablers required to conduct multiple demanding large- and smaller-scale operations. Such operations will be conducted both alongside US forces in a variety of regions inside and outside SACEUR's area of responsibility as well as autonomously when agreed.

32.   NATO is and will remain Europe's principal provider of military security. Defense ministers will decide and direct the necessary details in their Political Guidance for Defense Planning in 2023, based on the guidance given in this Strategic Concept. Such a set of contingents of fully capable forces and capabilities provided by European allies will at the same time provide a pool of forces they could draw from for autonomous crisis-response missions and operations within the EU.

EQUIPPING NATO FOR THE FUTURE

33.   The Alliance will conduct a further shared assessment of the systems needed to prepare both allied forces and mission-critical nonmilitary national assets for a wide range of debilitating future contingencies, such as attacks on critical national infrastructures, cyberattacks, and other more exotic threats. The Alliance will also move to strengthen the interface between defense planners and a wider technology community than hitherto and encourage defense industrial partners to further consider innovative applications of dual-use technologies as well as new cross-domain multinational partnerships.

34.   The Alliance also recognizes that defense industries are an important element of national economic development and technological innovation and provide highly qualified jobs in many allied countries, and it will seek to ensure the equitable sharing of work. Consequently, the Alliance will make certain that any process of adaptation is based on fair competition, reciprocal arrangements, and open to partners beyond the traditional defense, technological, and industrial bases. The Alliance also recognizes that the integration of high technology into allied forces must not come at the expense of affordability, ease of maintenance, logistics, training, and exercising, which will remain vital.

35.   It is vital that NATO maintain its technological edge where it still enjoys it and regain it where it has been lost. More European strategic responsibility also requires a stronger European pillar of the Alliance. Therefore, the European allies will ensure that Europe's defense industry becomes more innovative and competitive as well as a strong partner for transatlantic cooperation. Strategic Concept 2022 also presupposes a host of new partnerships and none will be more important than procurement, with a particular focus on the development and application of emerging and disruptive technologies. The cost of procurement must be markedly reduced and the pace of procurement cycles accelerated if the allies are to meet the defense investment objectives implicit in this Strategic Concept. The European allies face a particular challenge in conducting collaborative research and technology (R&T). The allies will increase collaborative R&T spending, which remains below 2007 levels. In addition to meeting the Capability Targets, the European allies also commit to doubling both their respective national and collective R&T investment by 2030.

36.   Realizing such a shift will require significant reform to the Defense, Technological and Industrial Base (DTIB). Therefore, the Alliance will undertake an urgent shared assessment of the DTIB in partnership with NATO members to consider how existing industries can be better harnessed and new industrial partners successfully engaged. This shared assessment will help establish a reasonable and sustainable level of necessary operational capabilities. Realistic future requirements will thus be defined far more in terms of the operational capability the Alliance will need than in terms of any specific capacity. Given the nature and scope of emerging threats, understanding the systems, platforms, and technologies that Alliance forces will require, the interaction between them, and at what level of capacity to generate required effects is a matter of urgency.

EFFECTIVE CRISIS MANAGEMENT

37.   NATO is an Alliance built on political will, military capability, and security capacity, the preservation, adaptation and development of which will be vital going forward. NATO's International Security Assistance Force and Resolute Support Mission in Afghanistan demonstrated the value of Alliance political and military cohesion. However, while NATO played a vital role in the fight against terrorism, a stable Afghanistan was not achieved. Therefore, the planning and conduct of future campaigns will require the allies to collectively and continuously assess their strategic interests and match ambitions to realistic and achievable goals that actively contribute to security, stability, and, ultimately, peace. The capacity of NATO to engage with other international partners that can reinforce Alliance efforts to generate legitimate and relevant change across the civilian and military spectrum will be particularly important.

38.   NATO's train, advise, and assist missions will better embrace and understand the political and cultural norms of the host nation and the ability of any society and its security and defense establishments to effectively absorb capacity-building and training. The Alliance will ensure effective mechanisms are in place to promote the military interoperability and political dialogue required by close collaboration with operational partners. Allies will also improve mechanisms to strengthen the relevance of reporting from the field and promote more interactive real-time discussions at the highest levels within NATO. While allies successfully carried out a mass evacuation operation from Afghanistan under extreme duress, NATO as an organization will develop a stronger capability to support short-notice non-combatant evacuation operations.

ARMS CONTROL, DISARMAMENT, AND NON-PROLIFERATION

39.   Arms control is a cornerstone of the rules-based international order, but its effectiveness is slowly being eroded by powerful states, such as Russia, that deliberately flout treaty terms for narrow advantage, such as in the case of the now abrogated 1987 Intermediate Nuclear Forces Treaty. Allies will help develop a strategy for future nuclear arms control, building on the New START Treaty, to encompass non-strategic nuclear weapons, newly deployed Russian intermediate-range missiles, and destabilizing new delivery systems such as nuclear-tipped hypersonic and advanced cruise missiles and torpedoes. NATO supports efforts toward strategic risk reduction, which can make important contributions to regional and international security. In particular, transparency and dialogue can help avoid misunderstanding and miscalculation.

40.   The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) remains the essential bulwark against the spread of nuclear weapons, the cornerstone of the global nuclear non-proliferation and disarmament architecture, and the framework for international cooperation in sharing the benefits of the peaceful uses of nuclear energy, science, and technology. The allies remain strongly committed to the full implementation of the NPT in all its aspects, as an irreplaceable platform, and the strengthening of the NPT across its mutually reinforcing three pillars.

41.   The Alliance also reaffirms its resolve to seek a safer world for all and to take further practical steps and effective measures to create the conditions for further nuclear disarmament negotiations. The allies fully support the ultimate goal of a world without nuclear weapons in full accordance with all provisions of the NPT, including Article VI, in an ever more effective and verifiable way to promote international stability, based on the principle of undiminished security for all. NATO will also be prudent to ensure no potential enemy gains a critical advantage. The three NATO nuclear-weapon states have also repeatedly emphasized their commitment to fulfilling their respective national obligations under the NPT insofar as international conditions allow. NATO continues to favor negotiated solutions to reduce tensions and nuclear and conventional forces

in Europe, but the Alliance has also made clear that it will not accept unverifiable, unbalanced, and destabilizing proposals or ultimatums.

42.   The Alliance remains committed to conventional arms control as a foundation of a stable Euro-Atlantic security architecture and will thus seek to preserve, strengthen, and modernize conventional arms control in Europe based on key principles and commitments, including reciprocity, transparency, and host-nation consent. Unfortunately, Russia's continuing aggressive military posture, refusal to fully comply with its obligations under the Treaty on Open Skies, ongoing selective implementation of the Vienna Document, and long-standing failure to implement the Treaty on Conventional Armed Forces in Europe continue to undermine security and stability across Europe.

43.   The Alliance underscores the importance of modernizing the Vienna Document, welcomes the broad support for its comprehensive modernization package, and looks forward to intensified discussions in the Forum for Security Cooperation in the belief this will lead to consensus on an updated Vienna Document. To revive the Treaty on Open Skies, it is essential that all parties fully implement its provisions. NATO will continue to actively support ongoing discussions at the OSCE, including through the Structured Dialogue.

PARTNERSHIPS AND THE OPEN-DOOR POLICY

44.   Partnership is either a route to eventual membership through the open-door policy of the Alliance or, for some partners, an end in itself. The Alliance will reinforce the Building Integrity Policy and Program in support of partners preferring either. Corruption and poor governance undermine democracy, the rule of law, and economic development, and thus constitute challenges to security. Implementing measures to improve integrity-building, promote the fight against corruption, and foster good governance and democracy will be of continued importance to the Alliance as proof of commitment to the shared values eventual membership will demand.

45.   With the Arctic and Northern Europe an increasingly contested space, Finland and Sweden are trusted partners in ensuring the integrity of the Euro-Atlantic area, most notably in the Arctic and Finnmark. Canada is an Arctic power and is directly affected by the combined impacts of climate change and the growing Chinese and Russian presence in that region. Canada will establish a NATO Centre of Excellence on Climate and Security to better understand the interaction between the two. The Alliance will also fully support Canada and Norway in their respective efforts to ensure the Arctic remains a region of peace and exploration, but will resist any efforts to militarize the sea, or any claims that go beyond current agreements on demarcation.

46.   The Alliance reaffirms its support for the territorial integrity and sovereignty of Ukraine, Georgia, and Moldova within their internationally recognized borders and calls on Russia to withdraw all of the forces it has stationed on the territories of those countries without their consent. The Alliance will never recognize Russia's illegal annexation of Crimea. The door also remains open for eventual NATO membership for both Georgia and Ukraine. In the interim, NATO will continue to support both Georgia and Ukraine to improve the resilience of their respective armed forces and to help deter any aggression. Particular efforts will be made to further strengthen the Enhanced Opportunities Partnerships, which is part of the Partnership Interoperability Initiative launched at the NATO Wales Summit in September 2014. Australia, Finland, Georgia, Jordan, Sweden, and Ukraine each have tailored partnerships with NATO to promote effective interoperability between their respective armed forces and those of the Alliance. The established partnerships with Finland and Sweden are particularly important to the Alliance and are models for the closest of partnerships short of membership.

47.   In view of the continued aggression by Russia and Russian-led forces in eastern Ukraine, the Alliance will launch a Ukrainian Deterrence Initiative (UDI) as an extension of the Alliance's Enhanced Opportunity Partner program. Under the UDI, the allies will do all they can to assist Ukraine to defend itself, dissuade Russia from launching further aggression, and thus increase Kyiv's leverage in pursuit of a political settlement to the

conflict in Donbas. The UDI will include the provision of military equipment and training, as well as efforts to enhance Ukraine's resilience against cyberattacks, disinformation, economic warfare, and political subversion. The UDI will also establish a function-driven form of partnership, making it a formal Alliance responsibility to help train Ukrainian armed forces and to facilitate their acquisition of modern defensive weapons backed by common funding. Similar support will be offered to Georgia.

48.   Defense capacity-building efforts, such as NATO Mission Iraq, are particularly important to the Alliance in the fight against terrorism as part of joint efforts with partners to help stabilize the Euro-Atlantic area and beyond. The Mediterranean Dialogue promotes political consultations and bilateral and multilateral practical cooperation involving countries around the Mediterranean Sea. The Istanbul Cooperation Initiative promotes practical cooperation on a bilateral basis across a broad swath of the Middle East and the Alliance will continue to seek to deepen such vital partnerships and intensify such cooperation.

49.   The Alliance will support the preservation of democratic peace the world over. Deeper partnerships will be forged with fellow democracies in the Indo-Pacific region, such as Australia, India, Japan, New Zealand, and South Korea. The Alliance will in parallel also seek deeper consultations with China, possibly through the creation of a NATO-China Council.

WOMEN, PEACE, AND SECURITY

50.   NATO's Policy and Action Plan on Women, Peace and Security will better prepare the Alliance to address the challenges of today and tomorrow. In accordance with its values, the Alliance fully recognizes the critical importance of women's full, equal, and meaningful participation in all aspects of peace and security, as well as the disproportionate impact that conflict has on women and girls, including conflict-related sexual violence. The Alliance is fully committed to implementing in full the Women, Peace and Security Agenda set out by the UN Security Council.

51.   The 2019 Policy on Preventing and Responding to Sexual Exploitation and Abuse will also hold the Alliance to the highest standards of behavior in keeping with its values. Working together with partners, international organizations, and civil society, the NATO 2030 Agenda will also advance gender equality, ensure equal promotion opportunities in allied armed forces, integrate gender perspectives, and foster the principles of the Women, Peace and Security Agenda in all that NATO does, including operations, missions, and activities.

UNCONTROLLED MIGRATION

52.   The Alliance will continue to assist allies in meeting the challenge of uncontrolled migration. In accordance with international law, all ships that sail, including NATO ships, are required to rescue people in distress at sea, and will continue to do so. Allied vessels will also continue to live up to their respective national responsibilities to fully meet obligations to help ease the suffering of desperate people displaced by conflict and prevent terrorists from exploiting their plight. As part of efforts to ease the humanitarian crisis, allied maritime forces have been deployed in the Aegean Sea and contribute critical, real-time information to Greece and Turkey. Standing NATO naval forces use allied maritime and air assets to conduct reconnaissance, monitoring, and surveillance of illegal crossings in the territorial waters of Greece and Turkey, as well as in international waters, and they share whatever relevant information they find with the Greek and Turkish coast guards and authorities. Such efforts will continue.

ENERGY SECURITY

53.   The Alliance will play its full part in strengthening energy security with the NATO Energy Security Centre of Excellence (ENSEC COE) continuing to provide qualified and appropriate expert advice on questions related to operational energy security. ENSEC COE will further assist Strategic Commands, other NATO bodies, allies, partners, and civil and military entities by offering guidance to the capability-development process, mission effectiveness, and interoperability in the near, medium, and long terms as well as by providing comprehensive and timely subject matter expertise on all aspects of energy security. Such efforts will include cost-effective solutions to support military requirements, energy efficiency in the operational field, and improved interaction with academia and industry.

HUMAN SECURITY

54.   The Alliance has long recognized the importance of human security, which focuses on risks and threats to populations in conflict or crisis areas, and how to mitigate and respond to them. Taking a human-security approach is a reflection of Alliance values and makes NATO more operationally effective. The Alliance remains committed to ensuring that all efforts are made to avoid, minimize, and mitigate any potential negative effects on civilians arising from allied missions or operations. These goals are underscored in the Policy for the Protection of Civilians and the Policy on Preventing and Responding to Conflict-Related Sexual Violence, a landmark demonstration of the allied commitment to addressing such violence, which inflicts long-term stigma and trauma on individuals and families, contributes to their marginalization, destroys the social fabric of communities, triggers displacement, fuels armed actors' activities, fosters prolonged conflict and instability, and acts as an impediment to sustainable peace and reconciliation. NATO will also play its full role in combating the trafficking of human beings. The Alliance will continue to work with others to mitigate the impact of conflict on children as part of Children and Armed Conflict and Cultural Property Protection. NATO will further assist in building a network with expert partners, international organizations, and civil society to further the Alliance's Human Security Agenda, and it will initiate robust policies and clear operational guidelines in support of lasting peace and security and the common defense of allied populations.

CLIMATE CHANGE

55.   Climate change is one of the defining challenges of this era. It is a threat multiplier that impacts allied security, both in the Euro-Atlantic area and in the Alliance's wider strategic neighborhood. Through the NATO Climate Change and Security Action Plan, the Alliance aims to become the leading international security organization when it comes to understanding and adapting to the impact of climate change on security. Climate change puts allied resilience and civil preparedness to the test, affects planning and the resilience of military installations and critical infrastructure, and creates harsher conditions for operations. The Action Plan will increase allied awareness, adaptation, mitigation, and outreach efforts while ensuring a credible deterrence and defense posture, upholding the priorities of the safety of military personnel and improving operational and cost effectiveness. To increase awareness, NATO will conduct annual assessments of the impact of climate change on its strategic environment as well as on missions and operations.

56.   To further adapt to climate change, NATO will also incorporate climate-change considerations into its full spectrum of work, ranging from defense planning and capability development to civil preparedness and exercises. NATO will reduce the negative environmental impact of its operations (both civilian and military) and seek improved energy efficiency and a marked reduction in its carbon footprint. To contribute to the mitigation of climate change, drawing on best practices of allies and taking into account their different national circum-

stances, NATO will develop a mapping methodology to help the allies measure greenhouse-gas emissions from military activities and installations. These measures could contribute to formulating voluntary goals to reduce such emissions. NATO will also strengthen exchanges with partner countries as well as with international and regional organizations that are active on climate change and security issues.

Part V: Alliance Forces in the 2020s

THE ALLIANCE'S FORCE CONCEPT

57.   Alliance power is ultimately fighting power. During the Cold War, NATO's military power provided the bedrock for a credibly powerful conventional and nuclear deterrent. In the wake of the Cold War, the "peace dividend" eroded allied military power over time. That will now change. The next ten years could well see the equivalent of 70 years of past military technological development. Consequently, this Strategic Concept reaffirms the enduring military role of the Alliance and its fundamental military tasks in light of the fast-changing nature of contemporary and future risks and threats.

58.   The Alliance is taking toward a new military strategy through the implementation of two significant military concepts. The Concept for the Deterrence and Defense of the Euro-Atlantic Area provides a single coherent framework to contest, deter, and defend against the Alliance's main threats in a multi-domain environment and thus strengthen NATO's preparedness to address pervasive instability and strategic shocks. The Warfighting Concept provides a long-term vision for maintaining and developing NATO's decisive military edge. The Deterrence and Defense Concept will guide enhanced advance planning to respond to potential crises and conflicts, as well as further improve the use and organization of allied forces and capabilities in all operational domains and ensure more effective command and control. Through the implementation of the Warfighting Concept, the Alliance will ensure that it continuously develops its military and technological advantage as the character of conflict evolves.

59.   The Deterrence and Defense Concept will provide the foundation for all the core military tasks, based on the following principles: a manifest determination to act jointly to defend the Euro-Atlantic Area against all forms of aggression; a recognizable capability and capacity to respond effectively, regardless of the level or nature of aggression; the flexibility to prevent a potential aggressor from predicting with confidence any specific allied response to aggression; and the implacability to convince even the most fanatical of enemies that they will run an unacceptable degree of risk regardless of the nature of any attack.

60.   The NATO Force Structure (NFS) is an overarching framework for force generation, military planning, and operational command and control that addresses both military deterrence activities in peacetime and defense actions in crisis and conflict. This includes rapid and effective deployment to NATO's periphery where needed in a crisis as well as for collective defense operations. The Alliance will strengthen and modernize the NFS so that it will always act as a flexible, agile, and resilient multi-domain force architecture ensuring the right forces are in the right place at the right time. This will strengthen modern command and control tailored to support NATO's 360-degree posture, dynamic force management, improved response system, and force planning. Further planning and operational synergies will be identified to meet the threat from Russia to the Euro-Atlantic area and the terrorist threat both within and outside, together with the EU and other partners. The NFS will be further adapted to better exploit the technologies of the future battlespace as well as make use of synthetic exercising and simulations. The Alliance will constantly address and update the scale of threats as well as optimize responsiveness and readiness.

61.   The Alliance will ensure that the NATO Command Structure (NCS) remains robust, resilient, and ready to undertake all elements of effective command and control in the event of simultaneous challenges across all domains and across the full spectrum of missions, including large-scale operations for collective defense. Allies' contributions to command and control through the NFS and national headquarters, as well as their enhanced relationship with the NCS, will include the provision of strengthened host-nation support. Such support will remain essential to improving the Alliance's regional understanding, vigilance, and ability to rapidly respond to any threat from any direction.

62.   The Defense and Deterrence Concept is built on a concept of direct defense and is thus designed to defeat an aggressor on any level at which a fight takes place, including in the gray zone between peace and war. Such a direct defense capability in any contingency is a deterrent because it can either defeat an aggressor or impose intolerable costs. Effective direct defense exists when any aggression can be successfully countered, at whatever place, time, level, and duration it occurs. The direct defense concept includes the use of all available capabilities as may be authorized, either on a pre-planned or case-by-case basis. The minimum requirement for credible direct defense is effective forces-in-being at a sufficient level of readiness, capability, and capacity. On land, such NATO forces must have the capability to defend forward with sufficient defense-in-depth, while at-sea NATO forces must have the capability to defend wherever aggression occurs.

ALLIANCE NUCLEAR FORCES

63.   The fundamental purpose of allied nuclear capability is to preserve peace, prevent coercion, and deter aggression. As long as nuclear weapons exist, NATO will remain a nuclear Alliance. Given the deteriorating security environment in Europe, a credible and united nuclear Alliance is thus essential. Nuclear weapons are also unique and the circumstances in which they would be used remain extremely remote. However, NATO reiterates that any use of nuclear weapons against the allies would fundamentally alter the nature of a conflict. The Alliance has the capabilities and resolve to impose costs on an adversary that would be unacceptable and far outweigh the benefits that any adversary could hope to achieve, including the first use of nuclear weapons.

64.   The strategic forces of the Alliance, particularly those of the United States, are the supreme guarantee of the security of allies. The independent strategic nuclear forces of the United Kingdom and France have a deterrent role of their own and contribute significantly to the Alliance's overall security. The separate centers of decision-making of these three allies further contribute to deterrence by complicating the calculations of potential adversaries. NATO's nuclear deterrence posture also relies on US nuclear weapons forward-deployed in Europe as well as UK and French capabilities and infrastructure. In response to the more challenging security environment, steps are also being taken to ensure UK, French, and US nuclear forces remain safe, secure, and effective.

65.   National contributions of dual-capable aircraft to the Alliance's nuclear deterrence mission remain vital. However, such capabilities will be reinforced and upgraded to remain credible in the face of rapidly developing air-defense systems. As such, the Alliance reaffirms the imperative to ensure the broadest possible participation by allies concerned in the agreed nuclear-sharing arrangements in order to demonstrate Alliance unity and resolve. Allies will also continue to ensure greater coherence between the conventional and nuclear components of the deterrence and defense posture; consider the role and utility of other technologies in the Alliance's deterrence posture, such as offensive and defensive cyber; strengthen effective strategic communications; and enhance the effectiveness of allied exercises to maintain and consistently demonstrate NATO's enduring commitment to credible deterrence.

AIR AND MISSILE DEFENSE

66.   Missile defense can complement the role of nuclear weapons in deterrence, but it cannot substitute for them. The challenge for effective missile defense will also increase with the deployment of hypersonic missile systems and maneuverable reentry vehicles (both ballistic and glide). Therefore, the Alliance will continue to develop and strengthen the Integrated Air and Missile Defense capability as an integral element of the Alliance collective defense. The ultimate aim is to provide full coverage and protection for all NATO European populations, territories, critical infrastructures, and forces against the increasing threat posed by the proliferation of advanced ballistic and cruise missiles.

67.   Any such capability will also be established on the political principles agreed at the 2010 Lisbon Summit—which include the indivisibility of allies' security and solidarity, the equitable sharing of risks and burdens taking into account the level of threat, affordability, and technical feasibility—and in accordance with the latest common threat assessments agreed by the Alliance. Should international efforts reduce the threats posed by the proliferation of ballistic missiles, NATO missile-defense plans and capabilities will adapt accordingly.

CYBER DEFENSE

68.   NATO's Comprehensive Cyber Defense Policy recognizes that in certain circumstances the impact of significant malicious cumulative cyber activities might be considered as amounting to an armed attack of Article 5 significance. Any decision as to when a cyberattack is deemed sufficiently severe to warrant the invoking of Article 5 will be taken by the North Atlantic Council on a case-by-case basis.

THE ALLIANCE'S FORCE POSTURE

69.   To safeguard allied territories and populations, and to preserve the free use of sea, airspace, cyberspace, space, and the global commons, the Alliance will develop a flexible conventional deterrent and defense force posture supported by a credible nuclear deterrent, together with the strengthening of the forward-presence concept. NATO will always deploy sufficient combat-ready and balanced land, air, and naval forces as far forward as is consistent with a sound military posture. Such actions will be taken together with the rapid deployment of component headquarters and logistics, early identification of the scale of any aggression across the domains of land, sea, air, space, cyber, and information to prevent an aggressor seizing or holding all and any parts of the Euro-Atlantic area. If an aggressor remains intent on an aggressive purpose, NATO will confront them with such resistance that they will be compelled to withdraw or risk further escalation which, if necessary, could include the controlled use of advanced conventional, cyber, and/or nuclear weapons.

70.   The Alliance will maintain a credible arsenal of conventional, cyber, and nuclear capabilities as necessary to achieve NATO's objectives and communicate to an aggressor that in the event of any loss of allied territory, no fait accompli will ever be accepted and that the Alliance will commit all necessary means to recover seized territory from hostile occupation. NATO will also continuously interdict all and any terrorist groups, via all necessary civil and military means, and in conjunction with allies and partners. NATO will also seek to identify their aims and means, their specific intentions, and disrupt and destroy their forces.

71.   The Enhanced and Tailored Forward Presence will be merged into a Continuous Forward Presence (CFP) and equipped with the necessary sufficient ground, sea, air, and digital forces. CFP forces will be deployed from Estonia to Turkey and held at a sufficiently high state of readiness to offer prompt, integrated support in times of tension, or take rapid action against any limited or major aggression. The responsibility for fielding

the bulk of these committed forces will over time fall mainly on the European allies as some US forces shift toward the Indo-Pacific.

72.   The 2018 NATO Readiness Initiative (NRI) committed the allies to having 30 battalions, 30 air squadrons, and 30 naval combat vessels ready to use within 30 days. NRI was not about new forces but increasing the readiness of forces that could be made available for collective defense and crisis-response operations. Continuous efforts are underway to meet the NRI's political ambition, including a SACEUR readiness reporting system to enable accurate assessments of available forces. The NRI was also designed to further enhance the readiness of existing national forces as well as to improve their ability to move within Europe through enhanced military mobility and to transit safely across the Atlantic in the event of an emergency.

THE ALLIANCE AND FUTURE WAR

73.   Hyperwar is machine-enabled, super-fast warfare. By 2030, hyperwar will be a reality and the Alliance must be prepared. Hyperwar is defined by speed of command and action that will be far faster than today, much of it automated with adversaries likely to be little concerned about ethical considerations over the introduction of artificially intelligent enablers into command chains and cycles. In view of the speed with which an enemy could undertake an attack, the Alliance's political and military command and control structures will need a real-time capability to continuously assess enemy capabilities and indicators of attack, supported by, but not subject to, artificial intelligence, big data, and machine-learning capabilities.

74.   Therefore, the critical element in modernizing the NATO Command and Force Structures will be decision-making machinery capable of acting at the speed of relevance. Any such capacity will be particularly important with regard to the declaration of alert measures, including the devolution by the North Atlantic Council of command authority to senior commanders, the assignment of forces and resources, the use of interim offensive digital and conventional military capabilities while decisions are being made by the NAC concerning mobilization, the deployment of reinforcements, particularly from across the Atlantic, and the potential use of advanced conventional, cyber, and nuclear weapons, including highly destructive artificial-intelligence-enabled autonomous capabilities or systems.

75.   The NATO Artificial Intelligence Strategy has four aims: to lay a foundation for the development and use of AI for defense and security, to accelerate and bring into the mainstream AI adoption in capability development, to address AI-related security policy considerations, and to safeguard against the threats from malicious AI use. All NATO AI applications will be developed and used in accordance with national and international law, including international humanitarian law and human rights law. AI applications will also be developed and used with appropriate levels of judgment and care with clear human responsibility maintained in order to ensure accountability. NATO policy will be appropriately understandable and transparent, including through the use of review methodologies, sources, and procedures.

76.   The strategy will include verification, assessment, and validation mechanisms at either the Alliance or national level. AI applications will also have explicit, well-defined uses with the safety, security, and robustness of such capabilities subject to testing and assurance across their entire life cycle, including through established NATO and/or national certification procedures. Critically, AI applications will be developed and used according to their intended functions and will allow for appropriate human-machine interaction, an ability to detect and avoid unintended consequences, and the ability to take steps, such as disengagement or deactivation of systems, when such systems demonstrate unintended behavior. Proactive steps will be taken to minimize any unintended bias in the development and use of AI applications and in data sets.

77.   Deeper partnerships with the private sector will be sought with the aim of identifying gaps in collective defense cooperation in areas such as security-related AI strategies, norms, and research and development, as

well as of safeguarding against the malign and aggressive use of AI, quantum computing, hypersonic missiles, and drone technologies and other automated systems as the conduct and character of warfare changes and such technologies accelerate the speed of warfare. To that end, a headwork strategy will be established in conjunction with the allies, supported by the NATO Industrial Advisory Group.

Strategic Concept 2022: Preserving Peace, Protecting People

78.   We, the political leaders, reaffirm the values and principles this unique democratic security Alliance was created to secure and defend. We will ensure that the Alliance has the necessary financial, military, and human resources to fulfil its core missions efficiently and effectively. We remain firmly committed to preserving the effectiveness of the world's most successful political-military Alliance. Our Alliance thrives as a source of hope because it is based on common values of individual liberty, democracy, human rights, and the rule of law, and because our common essential and enduring purpose is to safeguard the freedom and security of its members. These values and objectives are universal and perpetual, and we are determined to defend them through unity, solidarity, strength, and resolve.

The Alphen Group

February 2022

THE ALPHEN GROUP