

NATO 2030: **Embrace the change,** **guard the values**

A report by the NATO 2030
Young Leaders Group –
for this generation and the next



NATO 2030: Embrace the change, guard the values

A report by the NATO 2030
Young Leaders Group –
for this generation and the next

Preface.....	2
Introduction and Framing.....	3
PART I. A 360° defence and deterrence for a resilient Euro-Atlantic space.....	5
PART II: What we stand for: NATO’s values in a changing world.....	10
PART III: NATO partnerships and cooperation: A strong transatlantic core with a global reach..	13
PART IV: The Alliance in a changing climate: Shifting gears towards a sustainable future.....	16
PART V: Innovating as an Alliance: emerging and disruptive technologies.....	19

Preface

In December 2019, NATO Heads of State and Government asked Secretary General Jens Stoltenberg to undertake a forward-looking reflection about NATO's future. To fulfil this mandate, the Secretary General launched the NATO 2030 initiative on 8 June 2020. As part of this initiative, the Secretary General stated that NATO would engage with young leaders and ask them to provide fresh thinking on how to further strengthen the Alliance to meet the emerging security challenges of the coming decade. To this end, the Secretary General announced the establishment of the NATO 2030 Young Leaders Group at the NATO 2030 Youth Summit on 9 November 2020. This group is composed of 14 emerging leaders from across the Alliance that have been selected from prominent young leadership programmes.¹ They represent diverse professional fields, from researchers to space engineers and diplomats.

Born between 1981 and 1996 into a generation commonly known as Millennials, we were brought up in the post-Cold War era when the world became more interconnected and more digital than ever before. Our generation experienced NATO's enlargement beyond the Iron Curtain that had scarred Europe for decades. These developments made the North Atlantic seem smaller than ever, and made it possible for the generations on both its shores to have more in common than ever before. Through these experiences our understanding of the transatlantic relationship was uniquely shaped - of NATO's role in the world, and of security as a whole.

Coming together in the NATO 2030 Young Leaders Group, we were tasked with providing a set of ambitious 'moon-shot' ideas on the future of the Alliance, particularly on the future of defence and deterrence, NATO's values, climate security and green transition, NATO's partnerships, and emerging technologies. Our report below seeks to represent a stronger and more serious youth voice for the Alliance. Despite our broad scope, we did not aim to provide a comprehensive strategy or to tackle all of NATO's activities. Instead, we intentionally focused on a range of key issues, which we believe are crucial to the future of the Alliance and should feature prominently in NATO's next Strategic Concept.

The work of our group was coordinated by Tania Lațici and Ulrik Trolle Smed and its full composition in alphabetical order is: Alice Billon-Galland, Don Ceder, Martin Dimitrov, Cori Fleser, Anne-Marie Imafidon, Gyde Jensen, Katarina Kertysova, Jan Lukačević, Claudia Maneggia, Andrea G. Rodríguez, Māra Šteinberga, and Kevin Vuong.

Due to the COVID-19 pandemic, our work took place exclusively in the virtual space from November 2020 to January 2021. We are grateful to the Policy Planning Unit with the Office of the Secretary General at NATO for supporting our work by organising seminars with NATO officials and external experts. We also consulted with scholars and other subject matter experts – spanning across several generations – and are grateful to them for sharing their thoughts and feedback.

The NATO 2030 Young Leaders Group is appointed as an independent advisory body to the Secretary General. It is not employed by NATO and does not speak on behalf of the Alliance in any capacity. Throughout this process, the Young Leaders undertook their role in a personal capacity; maintained their independence and did not represent their employer, any affiliated organisation or country. Our objective has been to critically assess NATO's strategic environment and

¹ These young leadership programmes are managed by the following organisations: Aspen Institute Europe, Aspen Institute Romania, Atlantic Council, Center for European Policy Analysis, Cybersec, European Leadership Network, Friends of Europe, German Marshall Fund of the United States, GLOBSEC, Munich Security Conference/Körber Stiftung, Warsaw Security Forum, and ZEIT-Stiftung Ebelin und Gerd Bucerius.

to offer a set of constructive recommendations to strengthen the Alliance over the next decade. Each of the Group members agrees with most but not necessarily all recommendations.

We would like to express our gratitude to NATO Secretary General Stoltenberg for his commitment to incorporating the views of younger generations in the NATO 2030 initiative and for his trust in our group. The Group puts itself at the disposal of the Secretary General and NATO as a sounding board for future projects.

Introduction and Framing

NATO is the most successful Alliance of democratic governments in history. Our aim is to ensure it remains so.

In a world on the move, adapting over the past seven decades, the Alliance has seen fundamental structural, geographical and conceptual changes. Today, it continues to adapt. As the threat landscape broadens and encompasses more borderless and intangible challenges - from terrorism and pandemics to cyberattacks and climate change - NATO must continue to expand its horizon to deliver on its mandate, the defence of the Euro-Atlantic area. This corresponds to NATO's 360 degree approach. Throughout these changes NATO has remained an anchor of stability in an unpredictable world.

As the global configuration of power is shifting, NATO must continue to adjust its understanding of security to match the times. This report is guided by the belief that the Alliance must **broaden and re-conceptualise security** to more accurately account for the evolving threats the Alliance is facing. At the same time, there is an enduring need to preserve territorial integrity and national sovereignty through traditional military strength to effectively deter and defend. **Deterrence continues to be of paramount importance**, and it remains cheaper and more sustainable to deter than to defend.

We also believe that interconnecting security challenges like **human security, climate change** and a potentially dangerous race for **technological supremacy** need to be better acknowledged. These challenges will affect and shape NATO's traditional defence, deterrence and security role. While being cautious not to over-securitise new policy areas or over-extend its mandate, NATO can lead, add value and synergise to be more effective in its mission by encompassing these new areas.

The Group's recommendations reflect **a more comprehensive, holistic, and inclusive understanding of security** towards the 2030s. Climate change has deeply destabilising effects on international peace and security and, more crucially, on the mere existence of life on earth. Meanwhile, the relationship between the empowerment of women and girls, on the one hand, and long-term global security and stability, on the other, is now widely accepted and well documented. Therefore, NATO should **feature non-traditional security challenges** more prominently on its agenda. Hard power alone is already insufficient to respond to today and tomorrow's challenges.

Defending the Euro-Atlantic area is a moving target. As challenges to this space increasingly come from areas beyond the immediate neighbourhood, the Alliance must bolster and expand its outreach. **Although NATO's mandate remains regional, its mind-set should be global**. To be effective, NATO needs to ensure that the transatlantic partnership between Europe and North America rests on a **more equitable sharing of responsibilities for our common security**.

In a world characterised by growing great power competition, the Alliance should **commit to a Values Pledge** and champion its democratic values. NATO must be a beacon for democracy, transparency and accountability. First at home, and then abroad, **leading by example along with a Global Partnership for Peace**. NATO also should not risk becoming a victim of its own success: reaching for the **hearts and minds of younger generations** is imperative. Therefore, NATO needs to double down on smart communication and meaningful engagement about the Alliance's role in ensuring freedom, security and prosperity across the Euro-Atlantic region.

NATO has a responsibility to address the greatest peril of our and the next generation: **climate change**. Climate change is a significant threat multiplier and an existential threat to Allied populations in the long term. It not only impacts Allied militaries' operational capabilities but also alters the security environment in areas of concern to the Alliance. To fulfil its core mission of keeping the Euro-Atlantic space safe, NATO should climate-proof its policies and operations while helping Allies and partners reduce their emissions in ways that do not compromise operational effectiveness.

Maintaining the technological edge of the Alliance is paramount for collective deterrence and defence. NATO should more proactively **develop and adopt emerging and disruptive technologies** by developing the **NATO "STRIVE"**: Strategic Technology Research, Identification, eValuation Ecosystem; while seeking to become an **ethical norm-setter**, allowing values be the shepherd of technological development and reinforced deterrence in the 21st century.

As the title of this report illustrates, the NATO 2030 Young Leaders Group would like to see an Alliance in 2030, which guards its strengths and values with the one hand and embraces change with the other. While recognising the current and ongoing political dynamics in the Alliance, the recommendations of this report provide an indication of where younger generations wish for the Alliance to be by 2030, and, in accordance with its own principles and objectives, serve them as part of **a new Strategic Concept for NATO**.

PART I: A 360° defence and deterrence for a resilient Euro-Atlantic space

Traditional territorial defence and deterrence should remain the key focus of the Alliance. The Group recognises the successful deterrence achieved through the Forward Presence and other measures taken since 2014 and is **adamant on NATO continuing to assume and upgrade capacity and capabilities on NATO's eastern and southern flanks**. The Alliance should constantly monitor security developments, develop robust state-of-the-art conventional capabilities, and double down on scenario-based exercising to hone its ability to respond effectively to any threat and challenge.

However, for NATO to continue to credibly fulfil its core mission and respond to future threats, it will also need to **deter, defend and provide security differently in 2030**. Indeed, the growing complexity and often non-kinetic character of threats requires relying better on interlaced military and civilian instruments. As NATO embraces a 360° outlook on defence and deterrence, **a Euro-Atlantic focus with an enlarged viewpoint** is required as the threat spectrum expands and diversifies.

This **broader understanding of deterrence and defence** should be reflected in the way contributions to Euro-Atlantic security are measured, in multinational exercises, and in NATO's approach to outer-space and nuclear deterrence. For NATO to become internally and externally stronger, the opportunity brought by these changes must be seized to strike a new political and military transatlantic bargain.

NATO Allies have a responsibility to prevent, protect and recover critical assets from shocks, as per Article 3 of the North Atlantic Treaty. In the current threat environment, resilience is fundamental to NATO's ability to deter and defend. Therefore, Allies also need to **operationalise and strengthen** their national and collective resilience.

As non-kinetic and non-military threats are likely to continue to increase in frequency, **resilience** should be viewed as a holistic approach to national and international security that refers simultaneously to *prevention* and *protection* of a critical asset, as well as to the *recovery* and *adaptation* from incurred damage or shock. The Group recommends more precision and an enlarged scope in utilising the concept of resilience in NATO's strategy and policy-making. As **resilience is a moving target**, it requires agile systems that can facilitate continuous adaptation. A circular approach to **resilience engineering** is recommended, covering all stages from preparation to detection, from response to recovery, and from review to adaptation. **Civil-military synergies** should receive more attention across the defence and security spectrum. Making use of civil and military instruments in complementarity would increase NATO's preparedness and widen its toolkit of response. It would also leave NATO Allies better prepared to prevent and face the threat of terrorism on their territory.

a. Design a broader responsibility-sharing metric. By 2030, the Group expects an increased focus on *responsibility* as opposed to *burden-sharing*. The threat spectrum of 2030 and NATO's 360° perspective require a rethink of what represents a defence contribution. The current 2% of GDP metric, agreed in 2014, has been useful in focusing minds and has enabled significant progress in addressing capability gaps and strengthening the Alliance's defence posture. Allies should continue to adhere to the Defence Investment Pledge towards 2024. In parallel, they should begin consultations toward **reforming the 2% metric after 2024** to reflect a new definition of security and efforts to ensure resilience across-the-board.

The Group recommends that NATO **update and broaden** what it requires from Allies to reflect **the full spectrum of challenges that they face and are required to address**. Alongside a **refreshed NATO Defence Planning Process**, the new metric should better incentivise Allies to increase military readiness by measuring defence outputs rather than just spending, and by recognising investments in their national resilience. It is hard to imagine a bigger **political incentive** to invest in non-traditional security than NATO formally considering it as a contribution to the defence of the Alliance. Whether it is a **reformed 2% metric or a new metric altogether**, NATO should ensure that it is **easy to communicate** to politicians and citizens, and that it focuses on aspects that pull Allies together rather than apart.

- b. Maintain a dual-track approach to relations with Russia.** NATO-Russia relations have reached their lowest point since the end of the Cold War. From Russia's military build-up and the growing number and size of military exercises close to NATO borders to cyber-attacks, disinformation campaigns and the use of chemical weapons on the soil of a NATO Ally, the list of NATO's grievances with Russia keeps growing. This behaviour compels NATO to **reinforce its defence and deterrence posture** and do so explicitly, leaving no doubt about its resolve or about Allied unity. The cost of Russian aggression, even below the threshold of armed conflict, must continue to rise. NATO must continue to clearly call out Russia where attribution can be reliably established, and help Allies coordinate on sanctions. By **boosting resilience** in the domains outlined below, the Alliance would further **immunise itself against malign Russian interference**. The Group **endorses NATO's dual-track approach** of deterrence and defence coupled with dialogue. There is a need for **dialogue**, particularly with a view towards military de-escalation and arms control. Measures that promote transparency, risk reduction and predictability are in everyone's interest. **Russia cannot be ignored** when it comes to areas of common interest such as verifiable arms control and confidence building agreements, counterterrorism or the geopolitics of Chinese assertiveness and climate change. NATO should remain open to reviewing its relationship with Russia, if the political environment becomes more favourable and **conditional upon a Russian return to compliance with international law, as well as a change of behaviour in Russia's foreign policy**.
- c. Position NATO at the forefront of strategic risk reduction.** The past decade has witnessed an **erosion of existing arms control agreements**, the modernisation of nuclear arsenals, and new complexities and risks arising from technological advances, which all impact the future of strategic stability² and nuclear deterrence. Being at the forefront of strategic risk reduction would **boost NATO's legitimacy with its publics**, partners and the international community, and would ensure that the Alliance is the shaper of its fast-changing strategic environment rather than merely a responder. The Group encourages NATO to play a greater role in **promoting and facilitating dialogue on nuclear arms control, non-proliferation and disarmament**, as well as to proactively engage with nuclear-armed nations on strategic risk reduction. It is equally important for NATO to improve its own understanding and raise awareness of the **implications of emerging and disruptive technologies for nuclear deterrence**. With the entry into force of the Treaty for the Prohibition of Nuclear Weapons, disarmament will likely gain increasing public attention. In view of this fact, NATO needs to better communicate on the role of nuclear weapons in its deterrence posture and on its policy that as long as nuclear weapons exist, NATO will remain a nuclear alliance.
- d. Match the cyber ambition with 21st century reality.** While cyber is now an operational domain in itself, it is also a horizontal capability cutting across the air, land, sea and space domains. NATO's 2030 cyber strategy should match its ambitious cyber defence posture with

2 According to a definition provided by Pavel Podwig (2012), strategic stability refers to "a state of affairs in which countries are confident that their adversaries would not be able to undermine their nuclear deterrent capability".

the individual domain threats and with a multi-domain perspective. Integrating **interoperable cyber capabilities into the NATO Defence Planning Process** would encourage Allies to fill capability shortfalls and **avoid gaps in deterrence posture**. **Attribution and response frameworks** should be continuously evaluated. Cyber policies and capabilities are deeply connected to both NATO's values and innovation policy. NATO should lead by example in **strengthening international cyber norms** and in promoting **responsible state behaviour** in cyberspace with **rules of engagement** in line with democratic values and international law to further the interests of the Alliance. In order to do so, the Alliance should **engage closely with ongoing debates on internet governance** and state responsibility, including in international fora such as the United Nations (UN). The Group **encourages more collective attribution** when possible, with Allies issuing statements at the North Atlantic Council level, to call out irresponsible state behaviour and promote good state behaviour. NATO needs to annually assess the cyber threat landscape taking on a cross-domain perspective in consultation with industry and the private sector. Finally, in order to increase cyber defence capacity building and knowledge-sharing throughout the Alliance, the Group recommends **more funding and more Allied engagement with the Cooperative Cyber Defence Centre of Excellence**.

- e. **Define NATO's strategic aims in space.** With space officially recognised in 2019 as an operational domain, the sky is no longer the limit for NATO. Despite becoming increasingly competitive and accessible, outer space is facing challenges of **governance** and risks of excessive **militarisation**. Daily life on Earth, from banking to television, as well as operational effectiveness depend on resilient space assets. For instance, phenomena related to space weather significantly endanger Allied critical infrastructure both on Earth and in space. By 2030, NATO will be **reliant on an open and peaceful outer space to fulfil its mandate**. The creation of the NATO Space Centre is welcome and we recommend **long-term investment in joint space-monitoring capabilities**. This offers an opportunity to **explore the potential of dual-use technologies** for monitoring and mitigating threats to peace and security in outer space such as near-earth objects and space weather. NATO should closely follow resource mining technological developments, as they could pose dangers to Allied political and economic systems. Doing so would give NATO the **credibility to be the leading space actor** the Group envisages. To prove its space leadership without propelling militarisation, **NATO should aim to specialise in space debris monitoring and mitigation by 2030**. NATO aspires to be an open and peaceful actor in outer space and should continue to pursue this ambition to avoid misperceptions, reduce risks of escalation, and lay the groundwork for NATO to play a bigger **role in space governance in the future**.
- f. **Develop gender and human security as a military capability.** Women and men continue to be disparately affected by crises and instability, as well as by the international community's response. The gendered nature of human security challenges deserve greater attention. Despite NATO's leadership on advancing human security and women, peace, and security concepts, Allied militaries still largely experience challenges in implementing these perspectives in threat analysis, operational planning, and mission conduct. A gender perspective is the ability to **detect how women, men, girls, and boys are affected differently** by a situation due to their socially constructed gender roles. NATO should develop a gender and human security perspective as a military capability. This means integrating a range of complementary tools that **define and guide the military's role and requirements for addressing the different needs of women, men, girls, and boys** in all operating environments. NATO can enable Allied militaries' understanding and implementation of human security and women, peace, and security concepts by **translating them into parlance, process and procedure** that Allied militaries recognise. This should build on NATO's current efforts and focus on **enhancing NATO doctrine**, designating military and civilian personnel, codifying these concepts within the organisational structure, leadership, education and training, as well as **missions and operations**.

- g. Train for the battles of the future.** From hybrid threats to critical infrastructure paralysis, and from future pandemics to extreme weather events and natural disasters, Allies should double-down on **stress-testing capabilities and interoperability** for future battlegrounds and scenarios. For this, they should immediately step up training, exercising and war-gaming based on the combination of non-kinetic and military threats. They should also assess **civil-military capacity to respond to these threats**. **Multidimensional exercises** should aim to develop NATO's internal conflict thresholds and proportionality of response that will be direly needed by 2030. By testing NATO's response to **extreme weather events and natural disaster scenarios** in parallel with **cyberattacks**, the Alliance could send strong deterring signals about Allied readiness to adversaries using hybrid warfare. 360° defence and deterrence requires **simultaneous** responses to kinetic and non-kinetic threats of both civil and military character. This is why more frequent joint exercises are needed to boost Allied strategic culture, trust and shared situational awareness by 2030. Additionally, Allies should rehearse such deployments in all corners of the Alliance as they can manifest differently in each geographical area.
- h. Upgrade NATO's resilience along eight pillars.** NATO should play a greater role in supporting Allies toward comprehensive resilience, acknowledging the principle of only being **as strong as one's weakest link**. As natural non-kinetic and man-made threats continue to rise towards 2030, **NATO should integrate its existing seven baseline requirements** for resilience³ **along eight key domains** to guide capability requirements more holistically. In 2030, the domains of resilience should be: (1) **internal resilience** - underpinned by Allied solidarity and shared values; (2) **societal resilience** - a society's ability to withstand and react to threats; (3) **democratic resilience** - ability of democratic institutions and processes to withstand shocks and attacks from internal and external sources; (4) **climate resilience** - climate-proofing policies and operations to be able to better anticipate, prepare for, withstand, respond to, and recover from climate-related shocks; (5) **defence spectrum resilience** - ability of defence apparatuses to adapt to a new threat environment and withstand shocks; (6) **critical infrastructure** - protecting the systems vital for a government and society's core functions and ensuring shock recovery; (7) **economic resilience** - shaping safe economic interdependencies and economic systems able to withstand shocks by reducing vulnerabilities to economic coercion; and (8) **space resilience** - ensuring space assets cannot be compromised and promoting the peaceful use of space as a global common good.
- i. Become a resilience pathfinder.** With resilience becoming ever-more important for the Alliance's ability to deter and defend, NATO should ensure political decisions are properly informed and prepared. By 2030, NATO should develop an **internal resilience barometer**. Tailored for each Ally, it could set clear resilience targets, deadlines and gaps to be filled, mirroring the principles of the NATO Defence Planning Process, but leaving room for Allies to decide on implementation. The barometer should inform the design of scenario-based **resilience stress-tests** for **civil-military readiness** and strengthened **emergency volunteer response teams** with specialists from critical professions, given training on a voluntary basis. Some barometer components could even be made public for accountability purposes. The **Euro-Atlantic Disaster Response Coordination Centre** should be expanded in scope, mandate and resources to reflect its use during the COVID-19 pandemic and in view of looming environmental crises, while the **NATO Pandemic Response Trust Fund** should become permanent and include other areas of disaster relief.

3 Continuity of government and critical services; resilient energy supplies; dealing effectively with the uncontrolled movement of people; resilient food and water resources; ability to deal with mass casualties; resilient communications systems; and resilient transportation systems.

Making NATO a credible resilience pathfinder for Allies and partners will be a worthwhile **insurance policy** for future crises. To orient NATO in identifying the right paths, the Group recommends **formulating a civil-military strategy** covering the eight domains of resilience. The strategy should identify the goals and the means to achieve them by mapping necessary capabilities for **dual civil-military responses** to multi-dimensional threats. It could **enhance NATO's preparedness** in key areas such as critical infrastructure protection, ensuring military mobility across the Euro-Atlantic, but also in responding to severe weather events, fighting disinformation, and operating in conflict-affected areas, each requiring combined civilian and military instruments to be addressed. A **civil-military strategy** would enable NATO to make use of **all** assets in its toolbox when deterring and defending the multidimensional threats of the 2030s.

- j. **Equip NATO with geo-economic tools.** In a globalised economy, weaponised economic power can be as damaging as traditional military instruments. NATO should seek to boost Allied **economic resilience to coercive geo-economic strategies** - or *war by other means* - from competitors and potential adversaries. NATO should **revive the defunct Economic Committee** to bring to the Alliance much needed in-house skills and expertise necessary for operating in the economic-security nexus shaped by sanctions regimes, export controls, intellectual property or foreign investment screening mechanisms. NATO should extend the principle of interoperability to economic resilience by becoming a hub for Allies to coordinate and **develop common standards and responses to economic coercion**. This would position NATO as a stakeholder in nascent efforts to build a more resilient global economy by lending its expertise to international economic efforts at the World Trade Organisation, the International Monetary Fund and other organisations.

PART II: What we stand for: NATO's values in a changing world

Since the late 1990s and early 2000s, **the international rules-based order has been disrupted**. In parallel, some politicians in Allied countries, including leaders, have challenged the democratic values that set us apart from autocratic regimes. While the Alliance has seen instances of non-democratic states joining in its early history, recent decades have made sincere democratic aspirations an integral part of becoming a candidate for membership, and every signatory to the Treaty has affirmed their commitment to safeguarding “the freedom, common heritage and civilisation of their peoples, founded on the principles of democracy, individual liberty and the rule of law.”

Over NATO's more than 70-year history, even **when Allies' interests diverged, values still tied them together**. Shared strategic interests and close political consultations were and remain a necessity for cohesion and trust between Allies. When both the political cohesion and shared strategic interests of the Allies are put into question, the Alliance's ability to deter aggression, attract, and project power is affected. Maintaining cohesion will be a continuous task in a changing world. At the same time, political and strategic **cohesion must go hand-in-hand with a resounding commitment to the democratic values that the Alliance was founded upon**.

In a world of geopolitical rivalry, NATO must safeguard and display its values. Transatlantic security, prosperity and unity around core democratic **values are what makes NATO attractive to many** people around the world.

It is also what clearly distinguishes the Alliance from potential competitors like China and Russia. NATO's **enlargement** has helped lock in the peace and security dividends of the end of the Cold War for Allies in Central and Eastern Europe, and provided further security to the Nordic region and the Balkans. NATO has continued to shoulder this responsibility and strengthened the Alliance with the admission of Montenegro and North Macedonia into the Alliance. Similarly, NATO has a history of **contributing to stability outside the Euro-Atlantic region while promoting democratic norms** through engagements with countries for instance in Central Asia, the Middle East and North Africa, and with organisations like the African Union.

Towards 2030, the Allies will need to **recommit to the democratic values** that NATO was founded upon to enable a closer political alignment, beyond deterrence and defence. With values as a vanguard, the Alliance should **introduce an Open Horizon policy** for a Global Partnership for Peace with democracies around the world. NATO should seek to use its values to champion democracy, with **uncompromising truth, transparency and reliability at the core of its strategic communication**, while Allies should bolster public debate and share responsibilities with new generations to communicate this message.

a. Recommit to NATO's democratic values with a Values Pledge. Allies should recommit to democratic principles, including rule of law, transparency, and division of powers at the upcoming NATO 2021 Meeting of Heads of State and Government, and **agree to an annual discussion on democratic principles, working towards a written Values Pledge** outlining norms and responsibilities that Allies strive to live by at home and abroad. This would have an electrifying effect for the Alliance in terms of purpose, commitments and tasks, and serve as a future benchmark to increase accountability. Cementing NATO's democratic commitment at home is crucial for public trust in the Alliance as well as for its ability to credibly project stability and democratic values in its neighbourhood and globally. NATO must lead by example.

- b. Put forward an Agenda for Democratic Security.** Anticipating the rising global competition over values, NATO should put forward an agenda to address how the Alliance will **mobilise the untapped potential between democratic principles, societal resilience, military efficiency and Alliance cohesion**. NATO should double down on its advocacy for democracy. This should include, but not be limited to, **incorporating human security and Women, Peace and Security agenda** into the foundation of the Alliance's policy, operational doctrine, and future partnerships. Similarly, updating NATO's strategic thinking to the strategic environment, the Alliance should view **countering terrorism and great power competition** as interlinked, not dichotomous nor either-or alternatives, but requiring a comprehensive democratic response to the web of terrorist aims, hybrid warfare and great power proxies. This should enable NATO to leverage its existing counter-terrorism partnerships, such as those with Iraq, Afghanistan and the African Union, as opportunities for demonstrating its commitment to democratic values.
- c. Welcome a new generation of leaders.** By historical circumstance and the success of the Alliance, many in the transatlantic Millennial and GenZ generations were born taking security for granted. But history shows we cannot afford to be complacent and NATO should invest in communicating this to young voters and leaders. NATO has a responsibility to ensure that the Alliance always speaks and listens to the hearts and minds of younger generations, not just once a generation. NATO should **kick-start a youth train-the-trainer programme** across the Alliance and **craft a new Strategy for Citizen Ambassadors**. NATO needs to entrust young people with the responsibility to become the leaders that the Alliance needs and **recruit young people to reach beyond the traditional interlocutors**, in line with the needs of a 360° Alliance. These independent young leaders should help tell the fundamental story of the transatlantic Alliance by **listening and openly discussing the basic facts and assumptions** that underpin the activities and operations of the Alliance. NATO should strive to reach a wide diversity of communities, including engaging with artists who could shine a light on transatlantic security and democracy through mainstream pop culture. If peace continues to be the norm across the transatlantic communities, then NATO's ability to adapt its message to the historical circumstances will be essential for the continued vibrancy of the Alliance.
- d. Bolster public skills and awareness against malign influence operations.** With Allied democratic institutions and societies increasingly threatened by disinformation and propaganda, **NATO should support democratic online regulation in cooperation with like-minded partners** through dialogue with the tech industry to deter social media manipulations. The Alliance should **partner with civil society to create a Democratic Vibrancy Fund** and work with Citizen Ambassadors to establish train-the-trainer courses, leveraging the vibrancy and skills of youth in particular. Such programmes could be combined with regional or Alliance-wide exercises such as a "Disinfo Week" to test and practise reactions to disinformation across Allied militaries, institutions and publics. This approach should be augmented by dedicated intelligence collection to develop new tools to enable non-specialised personnel to call out, react and respond to disinformation at local level.
- e. Put democratic values at the core of NATO's external engagements.** In an era of renewed great power competition, NATO should assume the role of a global beacon for democracies around the world. The Alliance should **streamline the Partnership for Peace framework with new value-based principles** for political, capacity-building and operational engagements with full transparency and accountability. NATO is an alliance of both values and interests. It should **continue to communicate clearly when vital interests are at stake**, including levelling with the transatlantic public about when NATO has to compromise with its values abroad to protect interests at home. Levelling with citizens will help NATO retain public support in the long-term and in times of need. It will ensure that the Alliance's partnerships are driven primarily by the collective interests and values of democracies rather than by those of individual countries.

f. **Introduce an Open Horizon to the World.** Article 10 of the North Atlantic Treaty allows Allies “by unanimous agreement” to “invite any other European state in a position to further the principles” and “the security of the North Atlantic area”. Even if the political conditions might not be ripe yet, NATO is bound to take in new democratic members in the coming decade. While the door in Europe remains open, the Alliance should have **an active and open horizon to the world**, strengthening its partnerships with democratic nations to build the 360° foundations for an era of global competition, and beyond. This endeavour should come in full transparency and put NATO at **the centre of a global network of democratic alliances** that will help uphold peace and security. Meanwhile, the Alliance should acknowledge the long-time aspirations of partners on the European continent and ensure continued dialogue to deepen partnerships. The opportunity for **enlargement provides a powerful lever and responsibility for NATO**. Only by upholding the values of transparency, accountability and fairness can the Alliance continue to attract the minds and hearts of democratically oriented individuals and governments.

PART III: NATO partnerships and dialogues: A strong transatlantic core with a global reach

As geopolitical competition continues to increase, so will the need for partnerships. Many of the emerging challenges and threats facing the Alliance today **cannot be solved in the North Atlantic region or by NATO alone**. As an organisation, NATO must prioritise its capacity and means to answer some challenges, but not all of them. Towards 2030, the Alliance must therefore work closer with other multilateral institutions and strategic partners to **capitalise on each other's strengths and support a mutually beneficial international rules-based order**.

The future strategic environment will also mean that **NATO's utility as a high-level political consultation forum for Allies and partners around the world** will grow. Not only can NATO benefit tremendously from strengthening its global network of partnerships by **learning from best practices** to shared challenges such as addressing terrorism or an assertive China, and improving **strategic awareness** but it can also normatively influence them, including on issues such as economic resilience or climate security. In short, the Alliance should envision **NATO as a global bridge-builder for peace and security**, while engaging a new generation of leaders and driving security reforms and policies in the image of democratic values in strategic regions outside the Euro-Atlantic.

a. A more effective and strategic NATO-EU partnership. Despite political differences, cooperation between the two organisations, which have 21 member states in common, has reached unprecedented levels since 2016. Given a broadened and diversified threat landscape, which requires effective use of both military and increasingly civilian means, **the Group considers the NATO-EU partnership as crucial for the Alliance and recommends to further enhance both organisations' level of ambition**. The Group suggests **launching a series of sectoral dialogues** in the framework of the NATO-EU strategic partnership to culminate in a **NATO-EU high-level summit at the end of 2022**. With a clear deadline, the two organisations could elevate their relationship through a **tiered approach** at various working levels and covering all relevant sectors. Complementing the seven areas of cooperation already established by the existing joint declarations, **sectoral dialogues** could cover new areas such as emerging technologies (innovation policies, standards, and ethics), but also under-explored ones such as climate security, economic security, space governance, as well as strategic approaches to China. Finally, the group recommends elevating the level of interaction by **appointing a NATO Special Representative for NATO-EU relations**, ideally matched by a similar EU appointment. This would create more ownership for the portfolio and help streamline cooperation across policy fields. They could also play a role in **encouraging countries with double membership to formulate homogenous policies** across the board. A deeper NATO-EU partnership would further cement the Euro-Atlantic community to the benefit of common members as well as single-membership nations.

b. Establish a Global Partnership for Peace. Building on the existing 'Partnership for Peace' model, NATO should create a global format to boost the Alliance's political dimension. The new Global Partnership for Peace would require **adapting NATO's tried-and-tested programmes** to new demands and realities. For instance, the **Partnership Interoperability Initiative** can be reinvigorated to respond to new technological developments and to promote interoperability along the eight domains of resilience. Equally, the **Enhanced Opportunities Partners** and the **30+n format** should be continuously updated to reflect resilience requirements. It should include both formal as well as informal formats allowing frank discussion. The

Group also encourages NATO to build on the experience it has gained training local forces and institutions in Afghanistan and Iraq and, when required and in full partnership with the recipient, replicate it in other regions of geostrategic importance for the Alliance

- c. **Think globally.** Act thematically and regionally. The **thematic agenda** of NATO's Global Partnership for Peace should cover both areas of conventional military defence and deterrence and non-traditional security topics reflective of the Alliance's values. A practical example is **health security**. As scientists predict more regular and potentially deadlier future pandemics, NATO should insure itself by cooperating with specialised bodies such as the World Health Organisation and the Global Health Security Initiative to improve its foresight abilities and develop informed health crisis scenarios for training and exercising. Other applicable areas could be **humanitarian aid and development, food security, or environmental and security challenges in the Arctic**. The **regional agenda** of a Global Partnership for Peace could follow an **expanded model of NATO's Mediterranean Dialogue**. For example, in the **three "B" seas – Black, Barents, Baltic** – NATO could broaden its engagement with other frameworks, such as the Three Seas Initiative, and with bilateral partners in **Central Asia**. Regional dialogues could address both traditional challenges, such as upgrading deterrents to Russia's provocative behaviour, as well as emerging ones such as critical infrastructure protection and hybrid threats. **Western Balkan** countries often find themselves at the forefront of hybrid warfare campaigns seeking to sow discord with "the West" and its institutions. NATO should revamp its regional public diplomacy strategy and its engagement with existing formats on the ground such as the EU's missions and operations, the Organisation for Security and Co-operation in Europe (OSCE), and the UN.
- d. **A three-pronged approach to China: unity, resilience, and compartmentalisation.** Even though China is geographically remote from the Euro-Atlantic area, the Alliance recognised that its growing influence and international policies present both opportunities and challenges for the Euro-Atlantic space and that Allies need to address them together. The first line of defence with respect to China is **Allied cohesion and unity**. While NATO cannot protect Allies on all challenges posed by China, it should aim to ensure that Allies hold a common front in responding to China, not falling prey to the latter's divide-and-rule approach. NATO should therefore envision **structured Allied consultations** on the range of threats faced, from economic security to ensuring freedom of navigation. These consultations should be extended to relevant strategic partners. The second line of defence is ensuring **resilience across all eight domains** which the Group proposed and reducing opportunities for economic coercion and malicious targeting. Finally, China can be neither ignored nor isolated. Therefore, NATO should aim for **compartmentalisation** and remain open to dialogue and cooperation with Beijing in precise areas of convergence, such as counter-piracy operations, for example, to prevent misunderstandings and **reduce miscalculations**, or to advance global climate action. Furthermore, since several Allies are developing strategies for the region and have a military presence, NATO has a responsibility to encourage a **coherent Alliance-wide Indo-Pacific approach**.
- e. **Strengthen political and practical cooperation with Indo-Pacific partners.** As the Indo-Pacific region gains more geopolitical importance for the Alliance, a NATO-wide political discussion on the Indo-Pacific should go hand in hand with expanded strategic partnerships in the region. As Allies enhance their collective understanding of China's activities and intentions globally and with respect to the Euro-Atlantic space and work to better align politically, **the Group recommends structured dialogues with existing groupings** such as the Quadrilateral Security Dialogue and the Association of South-East Asian Nations, as well as **close political consultations with key bilateral partners** such as Australia, Japan, New Zealand and South Korea. A more structured engagement with the Indo-Pacific would also help the

Alliance cement a more uniform regional threat assessment, which in turn would enhance its credibility.

- f. **Engage the next generation of security leaders beyond the Euro-Atlantic.** NATO has acknowledged the importance of remaining engaged in its southern and eastern neighbourhoods and is actively examining partnership opportunities in the Indo-Pacific to address new challenges. The Alliance should also actively seek out young leaders beyond the Euro-Atlantic region in its future engagements with regional and international organisations. Engaging with young leaders across demographics, gender, religious, ethnic and racial spectra would provide them with **a unique exposure to the values and interests of the Alliance** while also enriching NATO's understanding of the regional socio-political and security dynamics, and the opportunity to shape strategic surroundings of the Alliance now and for the future. For example, NATO could support attendance by **African Union junior and non-commissioned officers to NATO training courses**, while offering structural assistance programmes to the African Union's efforts to retain highly qualified armed forces personnel. NATO could also develop dedicated next-generation components in its **Mediterranean Dialogue** and **Istanbul Cooperation Initiative** to help solve concrete security challenges. Similarly, to address the influence of Russia on the eastern flank, NATO could bolster its engagement with **youth across the Balkans, Eastern Europe and Caucasus regions**.

PART IV: The Alliance in a changing climate: Shifting gears towards a sustainable future

Climate change and its cascading effects pose some of the most profound challenges that the Alliance is facing today and will have to grapple with tomorrow. Rising global temperatures are driving ice-melt, which affects sea-level rise, ocean circulation and weather patterns. More extreme weather events, such as storms, floods and heatwaves, can lead to drought, famine, land degradation, loss of livelihood, and change in demographic trends. This in turn can increase conflict and migration potential in NATO's neighbourhood and alter the physical environment in which NATO operations and training take place. Climate-related risks to military infrastructure, military operations as well as force readiness are already felt across the Alliance. On the whole, climate change impacts NATO's ability to fulfil its core mission of preserving peace and keeping the Euro-Atlantic space safe.

NATO is no stranger to engaging with, and preparing for, existential risks - including the risk of a nuclear conflict. Although NATO already acknowledged the nexus between climate and security, it has not yet fully integrated this understanding into its policies. **The Alliance can and should do more to address the existential threat of climate change.**

Climate change might not fit neatly into an **Article 5** scenario. It is a faceless enemy without any leader or combatants. Yet, it kills people and destabilises societies worldwide. Acknowledging that global warming is man-made, we are our own adversaries in this fight. Nevertheless, evidence is sufficient that climate change presents a **fundamental security risk**. As such, there are three Treaty grounds for climate-related action: **Article 2**, which seeks to facilitate economic stability; **Article 3**, which commits Allies to enhancing their resilience; and **Article 4**, which calls for political consultation when the security of any Ally is threatened.

To fulfil its core responsibility of collective defence, NATO needs to understand the conflict and instability implications of climate change, better prepare for future shocks, adapt its forces to extreme circumstances, and reduce its own ecological footprint in theatres of operation. Including climate change in NATO's work would not only improve the resilience of Allies and partners but it would also help NATO capture the attention of a growing number of citizens looking for leaders in the fight against climate change.

- a. **Mainstream climate change and environmental protection across NATO's work.** Allied militaries supporting NATO operations and missions need to fully understand and integrate climate change considerations into core areas of their work. This process could mirror the integration of a gender perspective into NATO's command structure. Similarly, climate considerations should be mainstreamed at the strategic, operational and tactical levels, with a focus on integrating key concepts into NATO strategy, policy, doctrine, education, training, exercises and evaluation. In addition to integrating climate considerations into existing units and work strands, the Group proposes for NATO to appoint a **coordinating task force** that will track progress and ensure the coherence and coordination of mainstreaming climate efforts. To enhance the visibility of NATO's work on the climate-related agenda, a **Special Representative on Climate and Security** could possibly be appointed as the high-level focal point for NATO's work in this area.
- b. **Prioritize climate change within NATO.** The Group encourages NATO to capitalise on the current political momentum and put climate change on the agenda of the next NATO Summit, with the view to ultimately embedding climate change in an updated Strategic Concept. On that occasion, the Heads of State and Government should **publically state that climate**

change presents an existential threat and a fundamental security risk to the Alliance, and that the Allies therefore have a responsibility to tackle it by reducing their (overall) emissions. Such a statement would deliver a strong message that Allied militaries are taking climate change seriously and could have a normative influence on NATO's partners world-wide.

- c. Frame green transition as a win-win solution.** It is important to raise awareness, at all levels, that emissions reductions, coupled with green technologies, can **increase operational reach and effectiveness**. Such operational advantages include reduced logistical challenges of getting energy to the battlefield, lower dependence on supply convoys in areas of high insecurity, as well as budgetary aspects. Minimising resource use, environmental degradation and pollution in the field can also **protect the positive reputation** of NATO operations, particularly in areas where resource scarcity already causes livelihood insecurities and contributes to conflict. Framing the issue as **an opportunity to innovate and increase military effectiveness rather than only an emissions reduction obligation** would lead to greater enthusiasm for a green transition. Furthermore, Allies whose militaries are already developing and implementing green technologies should share best practices and lessons learned across the Alliance.
- d. Encourage Allies to form an informal climate-security caucus at Council level.** In order to build and strengthen political consensus within the Alliance, the Group proposes the establishment of **an informal caucus of Allies that are already actively addressing climate-security risks**. The members of this informal caucus could be entrusted to organise thematic events, facilitate the exchange of lessons learned and best practices, regularly brief the North Atlantic Council about its findings and proposed next steps, as well as to ensure that the security implications of climate change feature more frequently on the Council's agenda. In addition, the Group proposes for NATO to call upon Allies to nominate a **dedicated contact point in their ministries of defence** with whom NATO staff could collaborate on climate-related issues.
- e. Enhance climate cooperation with other international organisations.** NATO should deepen its climate cooperation with the UN, EU, OSCE, AU and other civilian, security and military institutions, as well as with national emergency management agencies in theatres of operation. The Group encourages NATO to work with the UN to incorporate the discussion on climate-related security risks on the agenda of annual UN Climate Change Conferences (COPs). In the run-up to November 2021, when COP26 will take place, NATO ministerials could serve as a complementary channel for dialogue on climate action. NATO should support the establishment of a thematic climate-security pavilion, at COP26 and in its aftermath, where different security and military institutions could showcase how they are preparing for and coping with consequences of climate change. There is also scope to deepen climate cooperation with the EU. The Group recommends for NATO to incorporate environmental and climate-related issues at all levels of existing NATO-EU staff talks and high-level exchanges, and to include environmental and climate-related considerations in any future review of the EU-NATO Joint Declaration. Training and exercising for harsh climatic conditions is another area where the NATO-EU cooperation could be deepened. Respective special representatives could help facilitate climate-related exchanges.
- f. Prepare for and prevent climate-related security risks.** Prevention is more effective and less costly than dealing with the fallout. Addressing the root causes will require **improving early warning, situational awareness and understanding, and strategic foresight capabilities**. While climate change is already factored in both the Strategic Foresight Analysis and the follow-on Framework for Future Alliance Operations reports, it needs to be better integrated into everything else that NATO does. A combination of **remote sensing, big data and AI**, all while improving intelligence-sharing among Allies, would increase NATO's capacity

to forecast future environmental shocks. **Partnerships at all levels, military cooperation programmes** and **diplomatic tools** are equally important for NATO to understand the underlying dynamics on the ground and to be prepared to respond in time.

- g. Support Allies in their emissions reduction efforts.** Even though emissions reduction targets fall under the competence of nation states, NATO can lead by example by improving energy efficiency in its headquarters, and act as a **catalyser for climate action** by supporting Allies in advancing their own emissions reductions and adaptation investments. As a first step, NATO could assist Allies in **measuring their military carbon emissions**, with the view to possibly agreeing voluntary cuts. To incentivise nation states to reduce their military carbon emissions and shift to sustainable technologies, the Group encourages NATO to set green targets for defence planning. Such targets could include a 25% fuel efficiency increase, higher standards for new military facilities, or cleaner innovative technology for military equipment and support solutions, for example. The development of sustainable technologies (military or dual-use) should also form part of **a reformed 2% defence spending metric**. In addition to financial resources, NATO should also ensure sufficient staffing capacity to enact robust programming. The Green Defence Framework could be revised to also explore supply chain vulnerabilities and wider security considerations tied to resource scarcity, and how these could be addressed through the development and delivery of capabilities both for new and legacy equipment at mid-life upgrade / technological refresh.
- h. Improve domain awareness in the Arctic.** As the Allies increasingly view the Arctic through a military lens, it is paramount for NATO to have an accurate understanding of the threat environment and of the intentions, capabilities and operations of its potential competitors, including Russia and China. In keeping with NATO's crisis management role, the Group encourages NATO to focus on measures that will **strengthen all domain awareness, conduct extended cold-weather operations** among interested Allies and **share a common Arctic operating picture**. To improve domain awareness, the Allies need to improve and better coordinate their air, underwater and satellite capabilities. To address the risks of accidents and incidents, NATO Allies should **continue to be transparent about planned exercises** in the Arctic, increase their notice periods and encourage the establishment of **a military code of conduct for the Arctic that would include Russia**. When the political environment is more favourable, the scope of the NATO-Russia Council could be extended to include an Arctic security working group.

PART V: Innovating as an Alliance: Emerging and Disruptive Technologies

NATO's potential adversaries and competitors have been quick to recognise **the potential of emerging and disruptive technologies**, and are in some areas **reducing a technological lead** that Allies have been building for decades. **Falling behind means degraded deterrence** and a lower potential for reaping the benefits of broader societal technology adoption across transatlantic communities. **Moreover, loosened ethical standards around emerging technologies can undermine the values that the Alliance seeks to protect and uphold.**

Transatlantic technological advances in the fields of artificial intelligence (AI), biotech and human enhancement, quantum technologies, hypersonics, and space technologies **require NATO to take a proactive approach and to develop a strategic ecosystem of innovation and early adoption within the Alliance.** Today, and in 2030, the private sector and academia will play a critical role in technological advancement and innovation across the board. As Allies have market economies, they compete in various strategic fields. But such an ecosystem could yield collective economic benefits stemming from joint investments in technological innovations and services.

- a. **Establish NATO STRIVE - Strategic Technology Research, Identification & eValuation Ecosystem.** NATO's Science and Technology Organization network spans more than 6,000 scientists and 200,000 experts across Allied countries. Yet, the Alliance is in danger of losing technological ground to competitors. NATO should urgently mobilise to **establish a new entity** to strive for early identification of emerging technologies, their further research and development, leading to accelerated adoption. To lay the groundwork, NATO should **conduct an analysis of technological strengths and weaknesses** in comparison with potential adversaries and competitors while leaning into a problem-solving approach to technology adoption and capability development. Furthermore, Allies should create "coalitions of willing" for **high-risk profile investments giving special priority to dual-use technologies** such as green technologies, AI, quantum technologies, and space technologies. These technologies should be proactively sought out and mapped by **a network of technology scouts** across the Alliance, establishing contact and assessing the potential of emerging technology companies and start-ups.
- b. **Digitisation as a baseline for defending and innovating.** Without a broad effort to digitise Euro-Atlantic political and military institutions, NATO's ability to gather and process Allied information, make decisions, and automate routine processes will fall behind, decreasing resilience. To the contrary, more available data could greatly enhance the speed of mundane tasks and political-military decision-making when needed. **Digitisation represents a structural enabler without which AI and machine learning capabilities cannot work.** This is why Allies must harmonise policies to enable early adoption of digital technologies. Extensive education of NATO and Allied military and civilian leadership will be necessary to ensure Alliance-wide adoption and readiness with machine learning-based early warning systems, providing real-time information across multiple domains and countries, in addition to strengthening NATO's surveillance, target acquisition and reconnaissance capabilities.
- c. **Become an ethical norm-setter.** With a long track record as a **standard-setter**, NATO should be at the forefront of developing an ethical framework to drive the development and implementation of emerging and disruptive technology. **An ethical framework should pay special attention to technologies that have overcome the experimental threshold** such as biotech-

nologies and AI. Such a framework should provide detailed guidelines on how to develop, test, and implement emerging and disruptive technologies for military and related security use. This is equally crucial for safeguarding the Alliance's liberal democratic values and for reinforcing NATO's political role at home and abroad. Recognising the importance of this effort in the 21st century, **the Secretary General should guide the process towards achieving alignment among Allies first, and then strengthen the Alliance's collaboration with the private sector and like-minded partners** such as the EU to ensure positive overlap in priorities and key provisions. With a robust ethical emerging and disruptive technologies framework NATO can cement a role as an ethical norm-setter, helping **set democratic norms globally**.

- d. **Allies should better align on import-export control and investment screening.** With political cohesion challenged and Allies strapped for cash, the **military-systems integration within the Alliance could be weakened** when Allies look to defence industries in countries outside of the Alliance for future weapons purchases. **NATO should investigate the consequences of such developments, and identify solutions** to potential operational and strategic vulnerabilities. Transparency shortcomings in the multilateral export control regime (including dual-use) weakens its effectiveness in addressing the security issues of emerging technologies. **NATO should build on previous attempts to better harmonise export-control lists** of military and civil technologies among Allies. Finally, the **potential security implications of foreign investments in Allied high-tech companies** requires close scrutiny. As it equips itself with geo-economic tools, NATO should encourage all Allies to implement robust investment screening frameworks, and align screening standards and practices. With globalised technology value and supply-chains, the weakest screening link in the Alliance can undermine overall resilience.
- e. **Ensure a quick and smooth transition to quantum security.** As Allies digitise, the amount of sensitive data available to NATO will increase exponentially at a time when **advances in the fields of quantum computing** could render existing cryptosystems obsolete, making encrypted information readable, and giving the potential adversaries the ability to perform crippling cyber attacks. To prevent this, NATO should **collaborate with like-minded countries, organisations and with the private sector** to develop **quantum communication technology**. Allies should promote a speedy transition to **post-quantum cryptography solutions** when market-ready. To boost these developments, the Alliance should **identify quantum as a priority for development at NATO STRIVE** not only to increase cyber-security and capabilities, but also to provide for long-term investment, training, and workforce expansion and retention.

