

# Joint Air & Space Power Conference

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## The Role of Joint Air Power in NATO Deterrence

CONFERENCE  
**PROCEEDINGS**



Joint Air Power  
Competence Centre

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# The JAPCC Conference 2017

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*The JAPCC wishes to thank all sponsors for their contribution to this year's Conference and for helping to make it a great success.*

A handwritten signature in blue ink, reading "Joachim Wundrak".

**Joachim Wundrak**

Lieutenant General, DEU AF  
Executive Director, JAPCC

## The Role of Joint Air Power in NATO Deterrence



**JAPCC Director's Opening Address.**



## Introduction

The 2017 Joint Air Power Competence Centre (JAPCC) Air and Space Power Conference was held between 10 and 12 October in Messe Essen, Germany. The Conference boasted 300 participants including senior military leaders, NATO staff, non-governmental organizations, defence industry officials and staff from 27 different nations, all of whom contributed to the discussion on this complex and challenging area. The theme was deterrence and the role joint air power plays – and should play – in providing NATO with an effective deterrent posture. In introducing the Conference, it was highlighted that the theme of ‘deterrence’ had featured very heavily in the JAPCC’s previous two air power Conferences. During the 2015 Conference on ‘Air Power and Strategic Communications’, the criticality of sending clear, concise and easily-understood messages about NATO’s

joint air capabilities was highlighted as one the critical ingredients of an effective deterrent posture. Similarly, in 2016 the Conference topic of 'Preparing NATO for Joint Air Operations in a Degraded Environment' led to discussion which concluded that there was an urgent need to re-focus the training of NATO forces in order both to develop their war-fighting skills in degraded environments, and, equally importantly, to be visibly prepared to fight – and win – in such conditions. Again, the associated issue of sending a powerful signal of credible deterrence was central to this debate. Given this backdrop, it was highly appropriate that the 2017 JAPCC Conference be dedicated to the role of air power in delivering an effective NATO deterrence.

Following a review of the diverse, unpredictable and demanding security challenges in today's contemporary geostrategic environment, the Conference moved on to consider the political dimension of cohesion and decision-making in deterrence theory, before considering NATO's current air power capabilities. The Conference concluded with an analysis of NATO's current joint air power capabilities and heard from a distinguished panel of experts on the results of a recent study, commissioned by NATO's Allied Command Transformation, which highlighted urgent short-term priority areas for improvements to NATO's air capabilities.

In seeking to address the broad-ranging issue of 'The Role of Air Power in NATO Deterrence', the JAPCC's intention was for the Conference to act as a catalyst to stimulate debate amongst senior military staff, academics and industry partners in order to provide NATO's strategic leadership with innovative ideas on potential actions required in this area.

The following Proceedings consolidate significant points from the keynote addresses, the panel discussions and attendee contributions to form a summary reference of the event and to highlight areas for future consideration and development. The document does not record the minutes of the Conference; rather, it highlights the major themes and draws together thoughts and ideas from all elements of the Conference. For a

fuller understanding of the topic, readers are encouraged to read these Proceedings in conjunction with the previously published Conference Read Ahead material.

In the spirit of the Chatham House Rule, no statements, opinions or ideas are attributed to any particular individual within this record.

## DAY 1

### Understanding Deterrence and Air Power's Role in the Contemporary Strategic Environment

Keynote speakers set the scene by stressing the complexity of the current strategic environment and the myriad challenging, often interrelated, threats that NATO faces in a 360-degree periphery.

*'NATO's threats and challenges range from Russia to radicals to refugees.'*

Such challenges highlight the need for a refocussing of NATO's posture back towards collective defence and deterrence after recent decades of focus on crisis response and the projection of stability in expeditionary, out of area operations. Air power's unique strengths of providing control of the sky, pan spectral situational awareness (ISR), rapid global mobility, precision kinetic effect and command and control prove that it must remain at the heart of the Alliance's deterrent posture. However, this places a heavy reliance on having capable, high readiness forces which are both well trained and robustly sustained. It was highlighted that training and exercising do not simply serve to improve military preparedness, but the messaging regarding such preparations has an extremely powerful deterrent effect of its own. The urgent need to rethink NATO's exercise strategy and to start exercise play on Day 0 rather than Day 100 (or later) was





repeatedly reinforced. As fiscal challenges within individual NATO nations continue to place pressure on defence budgets, it is more important than ever for the Alliance to act together and cohesion remains an absolute necessity. Potential adversaries know this and are likely to have identified Alliance cohesion as NATO's centre of gravity.

*'A smart adversary will target our unity.'*

Potential foes will look for any opportunity to exploit cracks or fissures between Alliance members and NATO must remain acutely aware of this threat. Conversely, for NATO's deterrent posture to be effective, it must possess the ability to rapidly threaten adversary centres of gravity and hold them at risk; as NATO's 'first responders', air power is uniquely placed to undertake this role. At the highest levels within NATO there is now a renewed drive towards Collective Defence and there is a recognition of the criticality of achieving a robust deterrent posture.

*'It is time for us to re-evaluate our deterrence IQ. NATO has taken its eye off the ball and has become a crisis management agency.'*

The notion of NATO having the right forces available at the right readiness states, all with the requisite resilient and proven logistic support chains in place has been summed up by the drive towards delivering a 'sustainable deterrent effect'. The themes of persistence and resilience are likely to run throughout NATO's new Joint Air Power Strategy which is currently nearing completion. In bringing all these threads together, it was stressed that one of the keys to addressing the challenges of today and tomorrow was the need to adopt a multi-domain approach to problem-solving. It was therefore appropriate that a short post-Conference briefing was held on the results of a tri-national (US, UK and France) study into how best to approach the issue of Multi-domain Command and Control (MDC2) in the future. Tellingly, almost all Conference attendees chose to stay and listen to the brief.

## **PANEL 1 | Today's Security Challenges and Threats to NATO and Partners**

Panel 1 began with a variety of academic and senior military views regarding NATO's current and future security challenges and threats. In noting that NATO must look inwards to identify and resolve internal threats as well as preparing to counter external threats, the theme of political cohesion was repeatedly reinforced as being of critical importance to the Alliance. The dynamics of achieving consensus between the Alliance's 29 sovereign nations was also highlighted as being both complex and time-consuming. Conversely, Russia was seen as possessing a greater ability to adapt quickly to the rapidly changing world order. The value of re-learning lessons from the past and the importance of educating political leaders about past military lessons was highlighted as a key area:



*'We have forgotten to remember the history of Russia!'*

As NATO looks to transform and reshape itself in a move away from a posture of assurance and regain its former focus on deterrence, relationship building between Alliance and Partner members is of the upmost importance. Countries do not have relationships; human beings do! Every opportunity must therefore be taken at senior political and military levels to build bridges and form linkages to ensure that NATO is more effective as a whole than the sum of its constituent parts. The complex trans-regional, multi-domain and concurrent nature of NATO's security threats demands a mix of robust and effective capabilities. This is especially relevant for air power capabilities, together with agile, adaptable and highly reactive command and control systems; NATO must have the capabilities to act faster, more decisively and with more precision – in all environments (including degraded ones) than its adversaries if its deterrent posture is to force behavioural change and thus be effective. Furthermore, NATO must learn to look at problems globally because not all of the Alliance's challenges are confined within its geographic footprint, and the solutions to these problems may not be either.

The future will likely see hybrid warfare continue to pose new challenges for the Alliance if potential adversaries' hostile acts fall short of traditional red lines but nevertheless pose genuine threats. In some cases, hybrid warfare will be prosecuted from behind an A2AD bastion, and back-stopped by the threat of nuclear escalation. This will further compound NATO's already complex security challenges.

The challenge of helping political leaders understand the philosophy behind an effective deterrent posture was highlighted. Many NATO countries now operate under political leadership teams with limited military service experience. In some cases, there is also a generational split between the new political leadership and existing Chiefs of Defence which can hinder mutual understanding and can lead, if left unaddressed, to a 'political intellectual deficit'.

*'NATO needs to regain its deterrence IQ.'*

Every opportunity must therefore be taken to enhance the awareness of Allied and Partner political leaders by showcasing military capabilities during realistic training exercises. One academic view put forward was that the military had been guilty in the past of accepting unclear and ambiguous political guidance rather than put potential promotions at risk. Having the moral courage to say 'no' and being constantly prepared to tell the truth to political leaders were viewed as critical characteristics of a dynamic, responsive, and responsible organization.

The need for NATO to refocus on an enduring deterrence campaign reinforces the need to not simply generate capable forces, but to be able to sustain these forces, potentially at high readiness, for extended periods. In seeking to optimize this long-term sustainability, open and transparent dialogue with industry will be vital if NATO is to achieve its aims within the current extended period of fiscal constraint.

*'NATO has lost its asymmetric technological edge.'*

Russia enjoys tremendous leverage through its wealth of natural energy resources and its well-developed capabilities in the cyber arena. It plays to these strengths extremely well. It was argued that in seeking to understand Russian thinking and Russian ambition, the Alliance is often guilty of looking through a 30-year-old lens with a Cold War perspective. Russia is seeking to create and exploit internal cracks and tensions within NATO and to thus undermine its vitally important cohesion.

## **PANEL 2 | Political Cohesion and Decision-Making: is NATO Fit for Deterrence?**

Panel 2 was introduced by an academic viewpoint that NATO needs to fundamentally revise its 'modus operandi'. In hypothesizing that NATO has no role in deterring terrorism (a view which was challenged by a subsequent military speaker), and that there are now too many grey areas when the invoking of Article 5 is not clear (e.g. a massive cyberattack on an Alliance member from a known adversary), it was argued that a future NATO strategy might include a bolstering of conventional deterrence via a large build-up of credible, forward deployed forces. This, however, would be costly in purely fiscal terms. Alternatively, a lowering of the nuclear threshold and the re-establishment of intermediate-range nuclear forces could be considered. Whilst this theory is perhaps valid from an academic perspective, it is unlikely to ever be supported by Alliance nations who do not perceive a current, existential threat to their countries or their lifestyles. It was argued that another potential path for NATO could be a strategy of asymmetric escalation. An example scenario was a land grab of a small piece of territory backed by the threat of nuclear retaliation to any armed NATO response. Rather than risking nuclear escalation with a direct military response, a cross-domain response, including perhaps a cyberattack or other hybrid options might be implemented. These ideas are academic



in nature and serve to highlight the challenges NATO faces both in sustaining its current posture and the difficulties of achieving consensus for any future changes to that posture.

*'How much do people in Portugal really want to risk for people who live in Latvia?!'*

The threats and challenges faced by NATO vary enormously and range from specific regional threats to those of a global nature. Panel 2 considered three brief country studies which illustrated these differences and highlighted that, NATO cohesion is vital, with regard to specific forces on the ground or in the air, there is not a 'one size fits' all solution. The Conference heard from senior representatives from Norway, Romania and Greece. Each of these nations faces different and unique security challenges and public perceptions of 'the threat' were, again, highlighted as

important. In all cases, the criticality of relationship building with neighbours was underlined as was the need for the voices of smaller Alliance members to be heard and seen to be carrying influence.

The issues of migrants and refugees remains a topic of disagreement between some NATO nations. Some nations see this as more of a problem than others with respect to long-term shifts in the makeup of nations and economic impact of social services on national security. These shifts can foster changes in predominant political beliefs and could make the achievement of consensus harder in future.

There also remain differing perspectives between NATO nations on what constitutes an existential threat to both their nation and the Alliance. This could make the achievement of consensus for the triggering of Article 5 difficult in certain circumstances. For instance, Turkey might view threats in the Baltic region very differently from Spain or Portugal. The view was articulated by one speaker that NATO nations are so strongly interlinked that issues affecting one nation or region will eventually affect every member of the Alliance in some manner.

### PANEL 3 | Deterring from the Third Dimension – NATO's Current Capabilities

Panel 3's senior military participants, which included senior Army, Navy, and Air Force officers, provided complementary viewpoints regarding NATO's current capability and capacity to deter. The broad themes of **capability, credibility** and **communication** were raised frequently throughout the discussion. In discussion of the criticality of strong political resolve, the view was offered that the last two decades have seen a lessening of trust between senior military leadership and politicians. It was argued that too often in Iraq and Afghanistan, military leaders were reluctant to tell 'truth to power' and that re-establishing some of that lost trust should be an urgent priority. There was widespread agreement that every

opportunity must be taken to educate politicians by enabling them to witness, first hand, military operations and exercises taking place. In looking to re-establish an effective deterrent posture, there are inherent advantages to forward-basing forces in threat regions. However, too often NATO's lack of credible presence in areas such as Syria or the Black Sea creates vacuums which our potential adversaries are all too keen to exploit and fill. In reinforcing the arguments made in JAPCC's 2015 Conference on Strategic Communications, the need for NATO to articulate its purpose and its threats in clearly comprehensible language was again stressed.

*'We have to argue our case such that it can be understood by a 12-year-old.'*

It was argued that there are still cases where individual nations are investing resources towards capability improvements but these efforts are too often undertaken in isolation. ISR and Air C2 were listed as examples where more must be done to create an effective joint/coalition enterprise. Early





warnings and indicators are critical elements of deterrence by permitting timely responses and by enabling effective air operations. However, the data deluge available from ISR will only increase in future and NATO must improve its analysis capability to sort, understand and utilize data rapidly in order to move from a reactive posture to a proactive posture. NATO must seek to exploit new technologies to connect its numerous C2 systems such that its sensor-to-effect speed remains ahead of that of any potential adversary. The arrival of 5<sup>th</sup> generation aircraft will be a game changer – but only if NATO considers their effects as part of a network of systems. NATO is still too platform-centric in its discussion of delivering military effect. The key to credible deterrence and collective defence will be considering the future from a data/network lens rather than a ‘how many planes are on the line today?’ perspective.

The issue of the relationship between the military and industry was again highlighted as a focus area and a shift in practice away from long-term procurement to more innovative, adaptable, plug and play, interoperable, open solutions was highlighted by many speakers. The mobile phone



industry was quoted as an example that defence could potentially learn from; users want state of the art, quickly upgradable hardware and software and have scant regard for the network they are reliant on for all operations. This is a philosophy that the air domain should perhaps consider, albeit that the military typically demand networks that possess the challenging competing requirements of both agility and security.

## DAY 2

Day 2's keynote speaker outlined the challenging strategic context in which NATO was seeking to transform itself in order to maintain and bolster both its effectiveness and its relevance. In reminding the audience of the key ingredients of an effective deterrence strategy, it was highlighted that the Alliance needs the military capabilities to respond quickly, coherently and in strength if it is to successfully deter across a range of contingencies. Air power's unique attributes of height, speed, reach and agility allow it to play a decisive role in such a strategy.

To remain one step ahead of potential adversaries, NATO still has much to do if it is to maximize its deterrent effect. The delivery of the system has been challenging, not least in time and cost. Specifically, the Air contribution to Allied ISR must be enhanced; Allied missile defence assets must be merged and their operational cohesion and effectiveness enhanced; the Air domain must be brought to bear imaginatively to counter hybrid threats; NATO must be prepared to neuter layered ISR and to defeat increasingly sophisticated potential adversary A2AD systems; NATO must sustain the ability to provide crucial close air support to Land forces; and partner air forces must better integrate cross-generational air capabilities.

NATO has come a long way but there remains much to do. Recent improvements in training and exercising matter a great deal but we need to move forward with a campaign of Joint experimentation and to take



lessons from real-world examples such as enhanced Forward Presence. In some areas a mindset change is required; we must all strive to continually improve our preparedness, to be ready to any eventuality.

*'NATO being more than the sum of its parts should be its mission statement!'*

## PANEL 4 | Joint Air Power: Urgent Priorities

In bringing together some of the previously debated Conference themes, the Conference concluded with a briefing and discussion on the findings of a recent Study carried out by a team of distinguished academic and former senior military officials into urgent priority areas for improvements



to NATO's joint air power capabilities. The study was a consequence of conclusions from both the Wales and Warsaw NATO Summits which led to HQ SACT commissioning an analysis of air power's urgent (short to medium term) deficiencies in capabilities and competencies. This study (which can be referenced through the JAPCC website at <https://www.japcc.org/airpowerafterwarsaw/>) will be a key input to NATO's Joint Air Power Strategy which is currently being drafted. In addition to the panel discussion, the distinguished team members also provided every Conference attendee with a hard copy book summarizing their findings. The JAPCC staff very much hope that this additional material will further enrich the debate on this topic and, as always, welcome post Conference feedback on any aspect of the report's findings.

In opening Panel 4, the point was made that potential power is not real power and NATO needs real power if it is to successfully deter. Real power derives from real investment – ideally at the mandated NATO level of 2 %

of GDP – which is translated into credible, combat capable forces which are made available to NATO through the force generation process. Of note, 9 NATO nations and 3 of its partner nations feature in the world's top 20 GDPs, while only one of the top 20 is a potential adversary. To remain credible, NATO's combat forces must be unleashed by prompt political consensus. Of note, even after the dramatic events of 9/11, the achievement of full political consensus across NATO took a full month. For NATO's joint air forces to be credible and effective they must be capable of deterring and defending against the full spectrum of potential threats and must be deployable, sustainable, interoperable, capable of operations in degraded environments and highly ready. This costs – and costs a lot. However, it is a price worth paying because NATO must also consider the question of 'what happens if deterrence fails?'. In such circumstances, it is these same high readiness air forces with their speed, flexibility and range that will be the first to respond, to defend, to deliver the early counter punches and to maximize the effectiveness of the follow-on force. Air assets alone are uniquely placed to fulfil this role.

There is an urgent need to improve education and awareness at all levels, both militarily and politically. Topics such as A2AD, air defence and deterrence mean different things to different actors. Better, more realistic war-games – that start at Day 0 with initial hostilities and associated political decisions – would help to educate senior political leaders either through their active participation or as observers. We must find better ways of articulating risk to our political masters and the re-establishment of pol-mil trust is a key part of this.

Functionally, the Study concluded that there is an urgent need for the establishment of a standing Air Operations Centre (AOC) with a fully manned peacetime establishment and Joint Force Air Component (JFAC). Consideration should also be given to the establishment of a standing, fully manned ISR Division within NATO Allied Air Command HQs. The Study's authors also felt very strongly that a change in nomenclature away from Air Policing to Air Defence was required. Finally, the development of

a strategic Indication and Warning System and the standing up of a NATO Processing, Exploitation, and Dissemination (PED) Centre was thought to be of great value in the development of skills with the alliance.

Whilst the Study reinforced the need to significantly improve the readiness, deployability and sustainability of NATO's air forces, it noted that there should be an overt acknowledgement of the increasing difficulty of rapidly gaining air superiority in an A2AD environment. NATO must not fall into the trap of becoming complacent as a result of its operational experiences of recent decades. In articulating these arguments in the current drafting of NATO's Joint Air Power Strategy, the need to use easily understood language ('Joe Six Pack') was again highlighted: the publics and budgetary decision makers within NATO member nations must be made to understand why air power matters. In both enhancing deterrence and potentially transitioning to fighting in a contested environment should deterrence fail, European air forces need to increasingly generate the capability to operate with declining assistance and participation from the US. If the North Korean crisis escalates, the US will pivot, and forces will be reallocated. European air forces need to prepare for such a contingency; additional investment in key supporting enablers such as ISR, mobility and air refuelling must be urgently considered.

Space and cyber are both critical and the boundaries between domains must be clearly thought through with C2 procedures developed that reduce boundary frictions and enhance both operational efficiency and effectiveness.

In an era defined by ever reducing financial resources and a complex and challenging security environment, it is vitally important that NATO members and partners cooperate far closer with industry in the field of research and technology if NATO is to maintain and enhance the capabilities of its forces to both current and new, emerging threats. It was argued that, to stimulate and enhance technological and industrial cooperation between allies and partners, an increased focus should be placed on mechanisms

and attractive incentives to generate new opportunities. In this regard, The Framework Nation Concept offers the optimal choice as the best environment and prospect for close cooperation between NATO, its partners, and industry. In a period of constrained funding, priority for research and technology should be given to those technologies with applicability in a hybrid/contested environment. Open standards should be used as tools to stimulate innovation and new ideas. Timing is key and Alliance nations must be encouraged to share thinking and conceptual ideas very early with industry and seek to form innovative partnerships in order to deliver the required effects early. Finally, NATO should look to intensify cooperation with the EU and develop instruments to make cooperation among industrial partners more attractive.

Sadly, the limited time available for the results of the Study to be articulated and discussed did not do justice to the breadth and depth of this topic. The JAPCC therefore very much hopes that attendees will take the opportunity to review their take away copy of the Study Team's Report and provide the JAPCC with comment. The JAPCC will then act as a conduit for this feedback to be provided back to HQ SACT. Thus, Conference participants, be they from the military, from academia or from industry will have had an invaluable opportunity to help shape NATO's Joint Air Power Strategy.

## Conclusions

When the JAPCC planned this conference, it was never our expectation that the assembled attendees would solve any or all of the perceived challenges facing NATO with regard to this topic. Rather, by providing a multinational pool of senior and respected experts from academia, the military and industry an opportunity to debate the issues, ideas might come to light and agreement might be reached on some broad themes which can then be considered by senior leaders across the Alliance. Feedback from attendees both during and in the immediate aftermath of the conference suggests that the JAPCC has met its aims.

Whilst myriad individual lessons and ideas fell out of discussion, with hopefully more to come from follow up dialogues, there were several interlinked themes which repeatedly arose:

- NATO is on a journey of change. It has morphed throughout its history, successfully transitioning from its readily understood Cold War role, through a subsequent period of cooperative security which lasted until 9/11. There then followed a period of interventionist crisis management which ended abruptly in 2014 with events in Crimea. Today's complex and demanding security environment demands a refocussing on what is perhaps the lost art of deterrence. As has been debated extensively at previous JAPCC Conferences, there was a widespread view that the theories of deterrence and coercion which used to be widely taught at staff colleges around the world were now less well understood, as NATO has bred a generation trained – and blooded – in the narrow field of counterinsurgency.
- It was repeatedly stressed during this Conference that to be effective, a deterrent posture must involve capabilities, credibility and communication. A key part of achieving a strong and unified Alliance posture





is the rebuilding and strengthening of the 'connective tissue' among national and NATO command and control architectures.

- Air forces that are capable (against the full spectrum of potential threats, even in degraded environments), deployable, sustainable, interoperable, and highly ready can send a powerful message of deterrence if their capabilities have been understood by a potential adversary *and* there is an associated clear and unambiguous message of political intent regarding their use.
- However, potential adversaries are not always rational actors and deterrence might fail. In such a situation it is these same joint air power assets with their inherent speed, reach and flexibility that will be at the vanguard of NATO's response.
- The Alliance's centre of gravity is its cohesion. Russia, in particular, knows this and will look to foster and exploit internal rifts and tensions. In the case of Article 5 being invoked, time spent achieving political consensus would give any adversary precious time to make inroads to his campaign. Joint air power alone can counter such a risk with immediate response, if it is adequately resourced and if there are robust and politically accepted rules of engagement.
- There was a common understanding among attendees, that NATO must be equipped, trained and authorized to fight on 'Day 0'.
- Another conclusion repeated from a recent JAPCC Conference was the need to help educate the Alliance and Partner political leadership and to help provide them with a better understanding of joint air power's key capabilities. Participation in realistic war games (which begin at Day 0) and the observation of large-scale military exercises have important roles to play in this regard. Such experiences might also help regenerate some of the trust lost between politicians and senior military staff as a result of experiences in Iraq and Afghanistan.

Initial feedback from Conference attendees indicated that the event had been a resounding success. Discussion was lively and vibrant and there was broad agreement on the areas on which NATO should be focussing if it is to enhance its ability to deter using joint air power. There are undoubtedly many improvements which are required in terms of air capabilities and the ways and means by which those capabilities are commanded, controlled, and sustained. More focus is needed on inter-domain boundary areas and multi-domain C2; potential adversary advances in cyber, space and air (hypersonics, low observables etc.) demand faster technological reactivity which in turn demands that new relationships be developed with and between industries. We must continually seek to restore and bolster the trust which our political masters place in their military leadership if difficult, robust decisions are to be taken in a timely manner and the right messages of intent are to be clearly understood by our adversaries.

NATO is a complex and comparatively slow-moving organization and its refocussing of effort towards deterrence has only been actively pursued since the Wales and Warsaw Summits of 2014/2016. It remains to be seen what potential changes of direction lie ahead at the Brussels summit of 2018. However, against this backdrop and a recognition that there is much scope for improvement, we should not lose sight of the fact that NATO still wields astonishing joint air power and its forces are delivering deterrent effect today. As General Wolters remarked in summing up and concluding the event:

*'This was a great two days: we've had two more days of peace across Europe and NATO.'*



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