

NATO-INDUSTRY FORUM 2015

A White Paper

BACKGROUND

The NATO-Industry Forum is an annual event sponsored by the NATO Secretary General to stimulate lively and output-oriented strategic debate between industry and NATO with the mutual goal of enhanced Alliance security. Supreme Allied Commander Transformation in Norfolk, and the Assistant Secretary General for Defence Investment Division at NATO HQ, Brussels, co-organise this event.

The third edition of the NATO-Industry Forum (NIF) took place in Lisbon, Portugal on October 20, under the auspices of the Portuguese Minister of Defence, Senõr José Pedro Aguiar-Branco, gathering more than 300 participants, including senior leaders from the defence and security industry, political and military leaders from NATO, nations and the European institutions, along with think-tanks, the science and technology community and, for the first time, from the private equity sector.

The NIF was held to coincide with Exercise Trident Juncture 2015, NATO's largest live-exercise since 2002. Trident Juncture included the participation of industry observers as part of the exercise, which allowed for a direct dialogue with soldiers, sailors, airmen and marines on the challenges faced in terms of interoperability and readiness. This first-time experiment, *Industry Involvement Into NATO eXercises* or I3X, is a manifestation of initiatives deriving from past NIF discussions, particularly within the Framework for NATO-Industry Engagement (FNIE), which aims to develop practical improvement of the relationship between NATO and industry in capability development and delivery.

On the road to the 2016 Warsaw Summit, the 2015 NATO-Industry Forum highlighted the potential industrial contribution to the three pillars of Alliance Long-Term Adaptation - Political, Institutional and Military. It was a natural continuation of the debate initiated in Washington at the March 2015 NATO Transformation Seminar where the strengthening of partnerships, innovation and cooperation, in particular with the European Union, were considered critical topics for the Warsaw summit.

CONTEXT

At the Wales Summit in September 2014, nations agreed to reinvest in their security, through a Defence Investment Pledge that committed them to halting the decline in defence spending and increasing that spending toward the goal of 2% of GDP over the next decade. This pledge also includes a commitment by all Allies to spend 20% of their defence budgets on new equipment and on research and development. As national budgets increase, nations are to pursue capabilities that contribute to NATO objectives; this is where opportunities for industry may lie.

Barely one year on, the Alliance is faced with a dynamic and challenging security environment that threatens its territory and principles more than at any time since the end of the Cold War. NATO leaders will be confronted at Warsaw with a number of decisions to improve collective defence, crisis management and cooperative security, the core tasks at the heart of the NATO Strategic Concept.

NATO is facing the challenge of adapting to the fast changing and unpredictable security environment. Its relevance is in the collective solidarity of its members and their ability to deliver efficient and effective solutions to shared challenges at the right time; from political will and unified messaging to a mix of conventional and nuclear capabilities. A strong industry complement enables the Alliance to be responsive in confronting emerging security challenges.

In this context, the 2015 NATO-Industry Forum confirmed a shared vision of industry as more than simply a commercial provider, an enabler, or a partner, but rather as a pillar of NATO's credibility.

The Framework for Future Alliance Operations (FFAO) developed by the Strategic Commands offers a military assessment of an indicative strategic environment in 2030. FFAO is designed to provide long-term perspectives for a *NATO capacity* concept to enable the conception of forces that are agile, aware, resilient and networked. The core element of the capacity will be robust command and control achieved through interoperability that connects NATO and Allied capabilities.

This would suggest that NATO needs an integrated system approach, which promotes open architectures and where nations see incentives to greater collaboration to plug-and-play with their own capabilities, possibly prompted by clear return on their investments, among other motivations. Cutting edge industry skills are critical enablers of such development and will drive NATO to pursue innovation where it lies, in the defence and security industry primarily, but also in the commercial sector well beyond the cyber domain where NATO already works to exploit known advances. To be attractive to industry, NATO must also consider opportunities for industry to experiment with new concepts and technologies, shift the paradigm from a risk averse organization to risk management, and develop new business models that may challenge the *status quo*.

INTEROPERABILITY AND STANDARDIZATION

The NIF debates highlighted interoperability, and its obvious pre-requisite, standardization, as the *sine qua non* of Alliance future success. However, several interlocutors challenged whether there was sufficient agility, speed and enforcement in the current processes to keep them 'fit for purpose.' It may be necessary going forward for a reinvigorated approach to this crucial role played by NATO on behalf of its members and partners.

The example of Federated Mission Networking (FMN), an essential lesson learned from the coalition experience in Afghanistan, introduces a new approach to standardization, through an inclusive and open conceptual architecture, not tied to proprietary solutions or technology, and which goes beyond the current STANAG process. NATO must consider whether this approach offers an innovative technique to develop future standards and architectures.

THE NORTH AMERICAN DIMENSION

In November 2014, the USA announced a Defence Innovation Initiative (DII), intended to preserve their technological military advantage to 2030 and beyond. The DII seeks innovation to inform a broad military transformation, including new technologies, new concepts, new forms of education, and the reform of the acquisition process, linked to the Better Buying Power 3.0 initiative. The DII includes an interoperability dimension recognizing that the US might otherwise risk incompatibility with future coalition members. DII and Better Buying Power are considered elements of a third 'offset strategy' adopted in response to the evolving security environment.

Action: We commit to closely monitor the development of the US third offset strategy to ensure sustainable interoperability of NATO and Partner forces.

THE EUROPEAN DIMENSION

Multiple commentators have long called for a stronger NATO-EU relationship. As the European Union is preparing an *EU Global Strategy on Foreign and Security Policy* and, possibly, a *White Paper on Defence*, the two organizations have even greater incentive to develop a shared vision of the future military security environment, as well as a continuous dialogue on capability development intended to avoid duplication.

This year, a strong presence at the political level of both NATO and European Union officials demonstrated a clear appreciation of NIF as a venue for exchange of ideas to realize our



common goals. While NATO continues to pursue cooperative R&D solutions, the European Union, through its Preparatory Action for cooperative defence research programmes, is changing their paradigm for R&D funding to go beyond solely civilian and dual-use research by including defence R&D, possibly offering new areas for collaboration between the two organizations.

Announcement of the US DII has raised the question whether there is a need for a European Defence Innovation Initiative? As the EU considers its options for such an initiative, NATO should remain supportive of EU efforts as they may represent a useful contribution by European members and partners to our collective security. Certainly any such initiative might become a useful complement to the US effort.

OUTREACH TO NON-DEFENCE INDUSTRY

In 1968, the NATO Conference of National Armaments Director (CNAD) created the NATO Industrial Advisory Group (NIAG) as a way to receive comprehensive and unbiased industry expertise and advice in the development and acquisition of Alliance capabilities. Reflecting a continuity of approach based on consensual approval, and considering that domains such as cyber are not the exclusive prerogative of defence, there have been recent challenges to the relevance of NIAG advice. Several interlocutors challenged NIAG (and by extension, NATO) to take a critical look at the composition, agility and relevance of the organization to ensure that NIAG has the necessary tools (e.g. access to expertise, sufficiently responsive processes and adapted products) to provide timely and useful industry counsel.

In recognition of this growing call for broader advice, and as a complement to NIAG, several tools to engage the broader, non-defence sector have been developed in recent years: ACT's Framework For Collaborative Interaction (FFCI) with industry and the Innovation Hub to connect with academia offer additional vectors to inform the NATO community; additionally, the NATO Agencies and Centres of Excellence (COE) have developed additional mechanisms to exchange ideas with industries relevant to their work.

INNOVATION

The concept of *NATO Capacity* as an integrated system should offer opportunities to leverage innovation at all levels; technical innovation complementing the procedural and structural innovation that NATO should pursue, as well.

One innovative approach resulting from previous NIF debates is the engagement of industry earlier in the capability development process. In Lisbon, several speakers noted that the dynamics of the threat environment might render obsolete the solutions that have been matured and agreed through traditional NATO processes. This highlights the potential value of more serious consideration to off-the-shelf commercial technologies and the criticality of shortening delivery time to the warfighter, or other alternatives. Of course, this has to be balanced by the need for interoperability and standardization, which NATO must do more to influence and drive.

Further, the conceptualization of NATO as an 'enterprise' to be supported by a *NATO cloud*, with interoperability based on a strong, open, command and control core is worth consideration. This paradigm shift advocates for re-thinking requirements by focusing on "problem statements" vs. "formal requirements" leading to more rapidly experimenting with various solutions to speed capability delivery. It also advocates for a NATO platform where innovative concepts and solutions can be proposed, and, on the model of platforms like *Kickstarter*®, can be possibly rewarded by offering direct opportunities for interaction between industry, including in particular small businesses, NATO and nations. It represents a shift by NATO from a risk averse organization to risk and innovation management. The Federated Mission Network is an example of this approach using spiral development to challenge proposed solutions against reality in exercises like CWIX and Trident Juncture. Tomorrow, the Alliance Future Surveillance and Control project, which seeks a successor capability to the AWACS fleet before its presumed obsolescence around 2035, will add to the *NATO Capacity* under this new approach to deliver an affordable, sustainable and interoperable capability on time.

Innovation can be applied to multiple domains:

- in defence investment, by making clear a distinction between (reactive) expenditure and (consciously planned) investment;
- in cooperation, by encouraging the inclusion of transatlantic cooperation in the EU vision for capability development;
- in improved strategic communication with tax-payers to explain the rationale and benefits of investing in defence;
- in attracting political support for cooperative programmes at early stages;
- in combining physical (live) exercises with conceptual exercises (so-called 'table top' exercises which focus on examining and refining new strategies);
- in understanding that interoperability is not solely a technical issue but requires an alignment of mind-sets as well;
- in reinventing collaboration between member nations and with partners, while recognizing individuality and national identity as strengths;
- in realising that we should challenge ourselves (as one speaker put it, calling for disruptiveness);
- in adapting processes by making them less constraining and more agile, since technology moves faster than processes;
- in defining options for industry, particularly Small and Medium-Sized Enterprises (SME) to propose and test their solutions, in arrangements similar to 'kickstarter' or innovation funds, moving NATO toward a paradigm of risk-management;
- in simplifying export control procedures, since current procedures hamper cooperation even within the EU;
- and last but not least, in identifying real areas in need of innovation as opposed to taking actions without a proper understanding of the problem.

LIST OF SPEAKERS AND PANEL MEMBERS

Conference Hosts:

- Mr. José Pedro AGUIAR-BRANCO, Portuguese Minister of Defence
- General Denis MERCIER, Supreme Allied Commander Transformation
- Mr. Patrick AUROY, NATO Assistant Secretary General for Defence Investment

NATO:

- Ambassador Alexander VERSHBOW, NATO Deputy Secretary General
- Ambassador Mariangela ZAPPÌA, Italian Permanent Representative and Member of the North Atlantic Council
- Ambassador Luís de ALMEIDA SAMPAIO, Portuguese Permanent Representative and Member of the North Atlantic Council
- Admiral (Ret) Giampaola DI PAOLA, former Italian Minister of Defence and Chairman of the Military Committee
- Air Marshal Sir Christopher HARPER, Director General, International Military Staff
- Dr. Al SHAFFER, Director CSO, NATO Science and Technology Organisation

Industry:

- Mr. Mauro MORETTI, CEO Finmeccanica and President and Chairman of the Board of the AeroSpace and Defence Industries Association of Europe (ASD)
- Mr. Antoine BOUVIER, CEO MBDA
- Mr. Alex CRESSWELL, THALES EVP Air Operations & Land Defence
- Mr. Pedro SINOGAS, CEO TEKEVER, Portugal

Venture Capital:

- Mr. Frank FINELLI, Managing Director, The Carlyle Group

NATO Parliamentary Assembly:

- Mr Julio MIRANDA CALHA, NATO Parliamentary Assembly, Vice-President of the Portuguese Parliament

European institutions

- Mr. Michel Barnier European Commission President's Special Adviser on European Defence and Security Policy
- Ambassador Jorge Domecq, Chief Executive of the European Defence Agency

National procurement organisations and representatives of the National Armaments Directors:

- LTG Caroline LAURENT, Strategy Director, French Armament Directorate
- Air Cdre A. Richard LAURIJSEN, Director of Weapons Systems and Agencies, Defence Material Organisation, The Netherlands
- Dr. Jerry MCGINN, Principal Deputy Director, Manufacturing and Industrial Base Policy, US Office of the Under Secretary of Defense for Acquisition, Technology and Logistics

Moderators and think tanks:

- Dr. Luis SIMON, Institute for European Studies
- Mr. Camille Grand, Director Fondation pour la Recherche Stratégique – Moderator Panel 1 and NIF15
- Mr. Brooks Tigner, IHS Jane's and Security Europe (SECEUR) - Moderator Panel 2
- Mr. Ben FitzGerald, Director, Center for New American Security - Moderator Panel 3