The Voice of Industry in NATO to inform Capability Development

NIAG

1968-2018

NIAG YEARS
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FOREWORD

BY JENS STOLTENBERG, NATO SECRETARY GENERAL

For 50 years, the NATO Industrial Advisory Group (NIAG) has brought industry and the NATO Alliance together. This multinational cooperation has enabled NATO to remain at the forefront of military technology, giving us the capabilities and the interoperability that our armed forces need to keep us safe.

The challenges we face today are more complex than they have been for a generation. We need the skill, imagination and expertise of our industrial partners more than ever. Thanks to the NIAG, and the Conference of National Armaments Directors, the voice of industry is heard throughout NATO’s decision making and strategic planning.

This brochure charts the history and successes of the NIAG since its creation in 1968, highlighting its strategic role within transatlantic industrial defence cooperation (TADIC). I commend it for everything it has achieved over the past 50 years, and for everything I know it will go on to achieve in the decades to come.
As we celebrate the NIAG’s 50th anniversary, it is a great pleasure for me to recognize the extraordinary value this Group brings to the work of the CNAD and more broadly to NATO. Five decades ago, the NIAG was established as a far-reaching and visionary entity. Today it is fair to say that the NIAG has delivered on its mission with more than 220 studies and advice papers completed so far, as well as establishing and nurturing effective networks with a large number of NATO and external stakeholders.

The NIAG has continuously adapted to NATO needs, providing detailed technical expertise as well as high-level policy advice, covering a wide spectrum of topics from classical defence to cyber, to organizational adaptation and trans-Atlantic cooperation. The latest NATO summits reinforced the message of the importance of industry’s cooperation to NATO capability development. This anniversary is the opportunity to further explore options to achieve the full potential of the NATO-Industry engagement in the current evolving security environment. This anniversary is the opportunity to further explore options to achieve the full potential of the NATO-Industry engagement in the current evolving security environment. As the permanent chairman of the CNAD, I count on the NIAG as a trustworthy advisor and a key enabler for NATO to steer and facilitate capability delivery. I congratulate each and every NIAG member whose unwavering dedication over the years has contributed to make it so strong, capable and effective. I wish you an even brighter future and continued success in the years ahead.

It is a pleasure to contribute to the brochure you have in front of you. As Chairman NIAG I am particularly proud of the contributions the NIAG has been able to deliver through concerted actions by my predecessors and the overall NIAG community. I am convinced decisive differences have been made. I can only hope my contributions as Chairman will be evaluated the same way in future.

Already in 1968 National Armaments Directors were convinced that armaments cooperation needed a clear and structured interface with industry in order to receive precompetitive advice. Over time the words chosen to reflect this concept have changed. Today we are using words like triple helix, singularity, disruptive and ecosystems, however the underlying concept did not change. NIAG has adapted to the changing environment ever since its inception. We have provided advice on the , by now, well known Framework for NATO-Industry Engagement (FNIE) and just concluded, in consultations with the CNAD, new ways of working which will allow to increase even more our agility.

My personal ambition, shared by national Heads of Delegations, for NIAG is to be fully recognized as THE in-house body where inclusive, pre-competitive and consensual industrial advice can be obtained by all other NATO bodies and organizations. Basis for fruitful cooperation is a balance of interest. In some cases, given the extent of advice needed, NATO funding may be at stake. For sure we will continue such studies but our toolbox is now much more geared towards quick reaction advice.

NIAG will develop further. We will have to ensure that the influx from civil world technology like Artificial Intelligence and Autonomous systems can be offered to NATO. We also need to use modern ways of trying to encapsulate the niche technologies which are embedded in micro-, small-, medium- and mid-cap size enterprises.

In order to provide credible advice NIAG needs to be fully aware of its environment. In this respect the NATO-EU relationship has become important as never before. EU initiatives do have a bearing on the way European industries are considering the best ways towards military capabilities. At the same time, all are convinced that a strong EU contributes to a strong NATO. It is within the NIAG realm to preserve the transatlantic balanced approach being fully aware of developments on both sides of the Atlantic.

The NIAG community remains ready to support you!!!
The NIAG is a high level consultative and advisory body of senior industrialists of NATO member countries, acting under the Conference of National Armaments Directors (CNAD), with the aims of:

1. providing a forum for an open exchange of views on industrial, technical, economic, management and other relevant aspects of research, development and production of armaments equipment within the Alliance; based on current and updated information provided by relevant NATO bodies;

2. providing industry’s advice to the CNAD, and other NATO bodies as appropriate, on how to foster government-to-industry and industry-to-industry armaments co-operation within the Alliance;

3. providing optimal use of NIAG resources to assist the Main Armaments Groups (MAGs) and their subordinate bodies, and other NATO bodies as appropriate, in exploring opportunities for international collaboration, and seeking timely and efficient ways to satisfy NATO military capability requirements.
The NATO Industrial Advisory Group (NIAG) was established in October 1968 to provide a link to the NATO nations' defence industries through which the industrial viewpoint and industrial technology development could be included in the work of NATO. NIAG was created as a Main Group under Conference of National Armaments Directors (CNAD) by the North Atlantic Council, following a recommendation of the "Experimental Consultative Conference of Industrialists" held in May 1968. The aim was to establish a CNAD forum, composed of high-level industry representatives of the member nations, each of them acting as focal points and spokespersons for their national defence industries, and playing the role of stimulating better and more cost effective armaments cooperation in NATO.
NATO-Industry relationship

Industries and governments are ultimately working together in all phases of any capability life cycle.

What is NIAG?

- NIAG is the tool of choice to engage with industry to obtain consensual view on a non-competitive basis. The members of NIAG are industrial representatives designated by each member country. Members will hold positions at a high level of responsibility in companies engaged in defence activities and/or in national defence industry federations/associations.

- NIAG represents transparency, inclusiveness and consensus from industry, and operates exclusively in the pre-competitive phase.

- NIAG allows NATO to seek industrial advice without fear or favour from all member and partner nations.

What is NIAG? (continued)

- Representatives are NATIONAL and the voice of the Industry in their nations. They do not represent the interest of any single company.

- NIAG provides a network of +/- 5000 companies, 80% of which are Small and Medium-size enterprises, to collaborate with on future capabilities.

All members of NIAG are in a privileged position in that confidential information is provided to them in connection with NIAG activities. They should therefore adhere strictly to the NIAG Moral Code 1.

1 NIAG Moral Code: All members should take the position that confidential information provided at NIAG meetings, or in connection with NIAG activities, should not be used to obtain unfair advantages over competitors, and that information provided on the activities of certain industries in particular member countries should be treated in the strictest confidence.

How does NIAG operate?

1. NIAG Plenary Meetings are held three times per year in Allied and Interoperability Platform formats.

2. NIAG engagement tools:
   - See page 12

3. NIAG Strategy vision
   - The NATO Industrial Advisory Group (NIAG) strategy will build on its strategy for 2013-2017. Changes in the political/military environment influence both the modus operandi and the need for swift consensual industrial advice. The NIAG is conscious of this and will develop its modus operandi in the following ways:
     - In support of the Conference of National Armament Directors (CNAD) and other NATO bodies, the NIAG will continue the standard study programme and develop further NIAG Industry Liaison Team with the Main Armaments Groups (MAGs) and their substructure.
     - The NIAG will continue to further its enhanced coordination with NATO’s Science and Technology Organization (STo).
     - The NIAG will continue to further develop the relationship with NATO’s Allied Command Transformation (ACT) and the NATO Parliamentary Assembly (NPA) Staff.
     - Current developments in defence matters in the EU demand that NIAG recognises their importance and understands how they will interact with a transatlantic perspective.
     - Increased use of e-processes will be an important additional tool as it will help NIAG outreach to micro-, small-, medium- and mid-cap size enterprises and non-traditional defence companies.
     - The NIAG will increase its credibility and raise awareness for its community with key stakeholders and audiences.

NATO
Get understanding of opportunities associated with technology trends and roadmap, production timescale, business model …

INDUSTRY
Receive early visibility of capability planning and funding sources, allowing them to make strategic forward investment decisions

WIN WIN THROUGH NIAG

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11
NIAG Engagement Tools

PRE-COMPETITIVE, INCLUSIVE, CONSENSUAL

NIAG studies
- High level advice
- Technical Studies Advice
  More than 225 studies conducted since 1972

NIAG Interface Groups
- Long-term sounding board
- Accelerated advice
  Support the Life Cycle Management Group (LCMG) and the Alliance Future Surveillance and Control (AFSC) initiative

- Action Plans (with ACT, CNAD)
- Communities of interest (CoI)
- Letter of Intent with the NATO Parliamentary Assembly
- NIAG Industry Liaison Team (NILT)

NIAG Relationship Map

CoES
Centres of Excellence

EU

NPA
NATO Parliamentary Assembly

NATO

ACT
NCIA
NSPA

NATO HQ

C3B
C3 Board

AVC
Aviation Committee

CDC
Cyber

IS/ESC

NHQC3S

STB/STO

IS/DI

CNAD
NADREPs

Main Armament Groups (MAGs)
Other CNAD Main Groups
Steering Committee - Project Group

NAAG

LCMG

AFSC PG

NAFAG

CAGS

NNAG

Action Plan, Letter of Intent
NIAG Interface or Liaison Group
NIAG Study Sponsor
Overall, this project will have a significant impact on the operational effectiveness of Alliance air assets, by increasing the efficient use of underwing stores available in theatre. An additional benefit should be a reduction in the stocking and storage requirements for the operational environment and an associated optimization of logistics re-supply.

**NIAG SG-211 - NATO Defensive Aids Suites (DAS) Exploitation**

Modern Defensive Aids Suites have traditionally been designed to protect the aircraft or platform to which they are fitted. These systems are now fully integrated into the modern flight management and mission systems. The increased use of network enabled capability defined the purpose SG-211 to explore the possible options to use the information of multiple DAS systems to build a wider picture of the threat environment. For example the combined input of the DAS systems employed in a 4 ship formation provides greater protection for the formation than the individual systems could for individual aircraft. Through networked capability there are wider options for the use of remote sensor information. ACG3 has taken the recommendations from this study into DAS trials and is now in the mature stages of the development of a NATO DAS STANAG to promote interoperability to enable the exploitation of networked systems.

**NIAG SG-215 - MTDS**

Increasing restrictions on airspace for military training, environmental constraints (noise pollution and carbon emissions) and limitations on the availability of ranges for live firing means there is an increasing requirement for the use of virtual/synthetic environments. Modelling & Simulation can provide an environment that supports: training & mission rehearsal in a synthetic environment; the development of the interoperability and connectivity of 4th and 5th generation platforms; the exploitation of JISR data; the development of AI, Machine Learning, Deep Learning and of course Cyber. The purpose of SG-215 was therefore to further develop the use of Mission Training through Distributed Simulation. Notably the study was extended in order to contribute to the review of the NATO Modelling & Simulation Action Plan.

**NAFAG NIAG STUDIES**

The main focus of the NAFAG is to promote multi-national cooperation by providing the fora in which to exchange information on national concepts, doctrine and Research and Development work related to armaments, weapons, systems and platform, equipment and materiel. The NAFAG fosters dialogue among nations and other key stakeholders, including subject matter experts, supporting technical and material standards, and promoting multi-national capability development and acquisition with a view to filling critical capability gaps. NIAG studies enable industry to engage at the pre-competitive stage, encourage creative thinking within the realms of the possible and help the development of an intelligent customer. Recent examples of NAFAG sponsored NIAG studies include a NATO Universal Armaments Interface; Exploitation of the technology used in Aircraft Self Protection systems (Defensive Aids Suites); and Modelling & Simulation.

**NIAG SG-198 - NUAI**

The aim of the NIAG study into the development of a NATO Universal Armaments Interface (NUAI) was to improve the ability of Alliance nations to share external stores for combat aircraft. This requires interoperability between the aircraft flight management and mission planning systems, the launcher on the aircraft and the weapon itself. The project has since been renamed the Logical Store Interface Framework (LSIF) and is also the subject of Smart Defence Initiative 1.17. Overall this project will have a significant impact on the operational effectiveness of Alliance combat air assets, by increasing the efficient use of underwing stores available in theatre. An additional benefit should be a reduction in the stocking and storage requirements for the operational environment and an associated optimization of logistics re-supply.

**NIAG SG-219 - NUAI**

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