NATO Foundation
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The 2018 NATO Industry Forum: Real Progress or just Networking Event?

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The sixth NATO Industry Forum (NIF) was held in Berlin by November 2018. The purpose, following the launch of the Framework for NATO Industry Engagement in 2013 was to assess progress in the interaction NATO-Industry, increase the Industry awareness of NATO priorities, and improve its participation in establishing requirements and developing capabilities.

Recognizing the frenetic pace of technology and the challenges from competing countries, the Forum was titled "Innovation and Emerging and Disruptive Technologies" (EDT). The NIF was jointly organized by ACT (Allied Command on Transformation), the CNAD (Conference of National Armament Directors) and the German MoD, host of the event.

The Forum, after a series of official speeches, was structured in 4 Breakout Sessions and 3 Plenary Sessions. The Breakout Sessions reflected NATO's present priorities: Logistics and Sustainment, Disruptive Technologies, Enhanced Military Decision making, Autonomous Systems.

The Plenary Sessions were targeted toward the NATO-Industry dialogue and were focused on three topics: Innovation and EDT, Transatlantic Policies and Strategies for 21st Century capabilities, NATO and Industry ready for novel challenges. Unfortunately no time was allotted for the discussion.

The attendance featured: the NATO Secretary General, the EU Commissioner for Internal Market, Industry, Entrepreneurship and SMEs and 15 CEOs of the most important aerospace and defence industries of the Alliance (e.g. Lockheed Martin, Boeing, MBDA, Thales, BAe, Leonardo, Navantia), including a very interesting newcomer, Palantir, a Silicon Valley industry.

The priorities and recent actions of NATO were summarised by the Secretary General at organizational, operational and technological level. Namely, two new Commands have been established; the goals of more readiness and increased spending efficiency by the Allies have been reached; more exercises carried out (the recent Trident Juncture in Norway involved all 29 Members of the Alliance plus Finland and Sweden, with thousands of troops and materiel). In addition to these results, increased attention to Innovation and EDT, Logistics and Sustainability was achieved. In the technology area Stoltenberg mentioned microdrones, robotics, 3D Printing, Artificial Intelligence and Machine Learning, Future Computing Techniques (quantum technology) and Big Data.

He also spent time reiterating his interest in the NATO-Industry dialogue (in this context saluted the 50th anniversary of NIAG, the NATO Industrial Advisory Group), and stated that NATO can help Industry in many ways. Another message, delivered by the EU, reciprocated by

NATO and reiterated several times during the meeting, stated EU's interest in cooperating with NATO.

The Breakout Session "Logistic and Sustainment" concentrated on 4 items:

1. a discussion of the logistic and readiness requirements for the so called Four Thirties initiative launched at the last Summit: 30 naval combat systems, 30 heavy battalions, 30 air squadrons at 30 days readiness or less. A new approach to logistic support implemented by Germany was described: it is centred on the total outsourcing of the activities deriving from support requirements;

2. resilient infrastructure and host nation support;

3. situation awareness and

4. operational agility and persistent systems.

The Session on "Enhancing Military Decisions" was broken down into four themes: sense making to create strategic awareness, planning for synchronized effects, assess outcomes of desired and undesired effects and enablement of data science. Potential solutions were presented and discussed with the audience.

The Disruptive Technologies "Session initiated with a presentation of a NATO originated list followed by a joint presentation (Science and Technology Organization and Industry) on Quantum Technology and its military applications. The audience was also made aware of the ACT Emerging and Disruptive Technologies roadmap and was invited to contribute to its development.

Lastly, in the Session on Autonomy ACT informed the attendants about its Autonomy Program initiated in 2017 with many strands such as Command and Control, Intelligence Surveillance and Reconnaissance, Education Training Exercises and evaluation etc. The importance of close cooperation with industry was acknowledged and discussed and industry was invited to take this opportunity

During the three Plenary Sessions the discussions between the CEOs and the Alliance representatives brought out some interesting points, although precious little was said on how to improve operationally the relation and cooperation between NATO and Industry. From the Alliance side it was again emphasized the importance of interoperability and the strong interest and expectation that industries (especially European ones) find ways to cooperate more with

each other in developing capabilities. It was also suggested that capabilities be tested in the field rapidly, even during the prototype stage.

The inputs from the CEOs were, not surprisingly, more diversified and reflected their different views of the industrial predicament and the associated problems. Topics mentioned were difficulties in making predictions, (and therefore in planning); the strong technical competition from Russia and China, often difficult to compete with, also because of their different business models. All agreed on the need to cooperate more, but several stumbling blocks were indicated, including the occasional lack of trust, the national or industrial ego, and the need of improvement of the level of communication among companies. The ever increasing cyber threat was often mentioned with the wish for some form of international regulation to be established in order to reduce the risk. The relevance of software companies and expertise, and civilian IT was mentioned. The difficulty to apply directly civilian technology to military problems also came up. And finally, the point was made for the need of new business and financial models for the defence industry in view of the rapidly changing market environment.

A comment worth making here is that both the pervasive nature of IT and the vastness of the civilian markets in areas somewhat similar to some areas of the defence sector are generating a trend for the industry to extend its interest toward those markets. One notable example here is the case of Thales, in advanced negotiation to acquire Gemalto, a very large company leader in digital security mostly for civilian application. When this acquisition will be completed, probably early next year, Thales will be more civilian than military, creating an interesting precedent.

Main points of the event's presentations were three.

First, from the NATO point of view, the Secretary General took advantage of the strong participation of the CEOs from most of the main Defence industries on both side of the Atlantic to convey his views on the directions of the Alliance, its needs and priorities, present and future, and the opportunities for the industrial sector. "NATO is likely to shape the future of the defence industry in many ways" he said. And he mentioned three important aspects: "How much Allies spend on defence, what we spend on, and how efficiently we spend the money we have. In all three areas NATO can help the industrial sector".

From the point of view of the CEOs, apart from the unique opportunity for networking at a private dinner before the Forum with the Sec. Gen., it was an exceptional occasion to listen in person to what are the NATO views and priorities. CEOs in such uncertain times were

extremely interested to get guidance from such an authoritative source. "NATO is a lighthouse for us" one of the CEOs notably declared.

Since the forum's theme was on innovation and EDT, it is worthwhile remembering that the ACT (Allied Command of Transformation) plays a fundamental role and its action programme includes several relevant initiatives like: an Observatory and a Roadmap for EDT and a triangular cooperation with the Science a Technology Organization (STO) and the NATO Industrial Advisory Group (NIAG). It was made clear, however, that the need for Innovation and the attention to EDTs are firmly established and embedded throughout the Alliance.

During the course of the Breakout Sessions and the Plenaries, Industry received several recipes regarding innovation and several lists for EDTs. For what concerns innovation, a stronger cooperation with ACT was suggested together with attention to the work of DARPA and the US innovation Board. The concept of Open Innovation was mentioned several times as a tool to increase the flexibility of approach especially for large industries.

The lists of EDTs included among other items: Artificial Intelligence (AI), Nanotechnology, New Materials, Quantum Technology, 3D Printing (also a disruptive process), Human Learning, Machine Learning, Big Data, Data Science and Cyber. In any case industry should certainly meditate on the long list received.

Two disruptive technologies stand out as truly revolutionary: Quantum Technology and the applications of AI to faster and better military decision making both at the tactical and strategic level. In the first case, for example, China has recently announced breakthroughs in the detection of submarines at great depths and in long distance secure communications based on quantum technology. In the second case it is NATO that has chosen the improvement of military decision making through the application of AI as one of the top priorities in S&T with an expectation of considerable improvement. 3 D Printing may also usher a revolution in some aspects of logistic support (generation of spare parts).

As a final comment, since FNIE (the Framework for NATO-Industry Engagement) was mentioned at the beginning as a topic whose progress should allegedly have been assessed, very little was said, as mentioned before, about significant improvement about industrial participation, in an operational and structural way, to the establishing requirements and giving advice early in the development of capabilities. Clearly the well-known difficulties remain (see NDCF Papers, Esposito, NATO Industry Relation: The Jury is Still Out, http://www.natofoundation.org/wp-content/uploads/2018/07/NDCF_Paper_Esposito_NATO_NIAG.pdf).

Bottom line: the Forum was a success, whether or not all this will generate new and significantly better ways of cooperation remains to be seen. Next milestone the November 2019 Forum at ACT (Norfolk, VA).


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