SACT's address at

The NATO Industry Forum 2019

on "State of the NIF"

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As delivered

Général d'armée aérienne André Lanata

- Honourable David Norquist, US Deputy Secretary of Defense,

- Dear Ambassadors, members of the North Atlantic Council,

- Honourable Ellen Lord, US Under Secretary of Defense for Acquisition and Sustainment,

- Air Chief Marshal, Sir Stuart Peach, Chairman of the NATO Military Committee, Dear Stu,

- Mr Camille Grand, Assistant Secretary General for Defence Investment, mon cher Camille,

- Senior Industry leaders from all Allied nations,

- Generals, Admirals,

- Distinguished Guests, ladies and gentlemen,

I want to start by thanking the U.S. authorities for hosting this NATO Industry Forum. I am very happy that we were able to meet in Washington, D.C., where the North Atlantic Treaty was signed. Your presence testifies that the Transatlantic Bond is ironclad.

This bond is at the heart of our Alliance – an Alliance which has offered security and prosperity in the Euro-Atlantic for seven decades. We can legitimately be proud of it.

But our security also relies on our capabilities, or as Thomas Hobbes once said, "*Covenants, without the Sword, are but Words, and of no strength to secure a man at all.*"

Since NATO's inception, our military power was primarily based on the quality of our people in armed forces, and the technological superiority our industry gives us. The industry is, therefore, a genuine part of the Alliance's Deterrence and Defence Posture.

Today, the civilian sector assumes the role of lead innovator in critical areas of military relevance such as computation, robotics, advanced manufacturing, energy, and others.

Consequently, our armed forces are increasingly reliant on technologies which development is driven purely by the market and that are widely available.

This proliferation of technology also offers our adversaries greater capabilities to challenge the Alliance technologically, militarily, and therefore politically.

At the same time, our procurement processes struggle to engage with the ecosystem that is behind these technologies, moving at a pace which challenges our capability development processes.

We, therefore, collectively, must radically change our methods and our mindsets. This transformational endeavour is a matter of urgency and the *raison d'être* of my command, Allied Command Transformation.

It can only happen through a renewed partnership with you, the industrial community. We need you to understand better these technologies, to be able to propose relevant solutions, but also, the first and foremost, we need to jointly adapt our development processes to deliver quicker better military capabilities.

This is what our Forum today is all about! To trigger this change, we need to challenge each other, in a friendly but <u>resolute fashion</u>, and aim to:

o give momentum, at the highest level, to topics we deem relevant to maintain the Alliance's edge, and,

o generate tangible, actionable leads we can build on between two NATO Industry Forums.

Last year, the theme of the NIF held in Berlin was innovation and Emerging and Disruptive Technologies. There is no doubt in my mind that NIF18 significantly raised awareness of the strategic and political level.

This event, amongst others initiatives, has contributed to generate a momentum, which first tangible result is the establishment of a NATO roadmap on Emerging and Disruptive Technologies that was discussed at DEFMIN last month and is to be endorsed at the Leader's meeting in 3 weeks, in London.

Our fruitful debates of last year NATO Industry Forum also generated various ideas on how to better leverage innovation in NATO and the Alliance.

Here are some examples of what we have done following these recommendations:

- We took the ACT innovation hub to the next step by giving it a "lab" capability, making it able to rapidly prototype and to offer a productive environment for final users and solution providers to interact and design "user-centric" solutions.

    o In this endeavour, ACT is leveraging its geographic location on US soil to benefit from the lessons learned in the US DoD open innovation Labs and USAF's software factories, especially the "Kessel Run" initiative.

    o We are building this capacity as we speak and expect to reach Initial Operating Capability (IOC) next month.

- We set up a dedicated budget to fund this lab programme of work, to give it the necessary freedom and agility to be truly innovative.

- Following the suggestion to create a NATO Open Innovation Alliance, offering a framework based on shared principles and values for open innovation agreements between start-ups and major defence companies, under the "moral umbrella" of ACT, we have taken the initiative to put this idea at the agenda of the ACT day of the NIAG plenary meeting that will be held tomorrow.

- We openly shared some of NATO's problem statements and use cases with industry and academia through two innovation challenges in the 12 past months.

This shows that, for us, the NIF is not just a fancy and enjoyable high-level social event, even if it is always a great pleasure for me to meet our numerous friends from Industry. We leverage the NIF outcomes to adapt the way we operate.

I do not doubt that this new edition will also bring its fair share of actionable ideas, as we already saw yesterday with the Break-out sessions, and the day before with the specific Young Disruptors' sessions, that ACT organized in the same way.

Here are my few key takeaways from the very fruitful exchanges in our Break Out Sessions held yesterday.

- Technologies are available, leveraging them requires the appropriate human capital:

  – Our leaders need to become more familiar and comfortable with AI;
  – Our operators need the appropriate skillsets;
  – NATO must adopt a federated learning approach, and consider exercises and operations as venues to train our personnel to use new technologies and build trust in the insights they deliver;

- To unlock the potential of AI and big data, we have to take resolute measures to change the way we approach data:

  – Treat data as a strategic asset;

- Develop a problem-driven data collection strategy;
- Initiate and drive at the highest leadership level the transformation of NATO into a "data-centric" organization;
- Build trust between nations, academia, and industry to facilitate data sharing;
- Machine learning only works if the data used to train algorithms is reliable. We need to mitigate the risks of bias or manipulation of this data.

- Resourcing has to align with the leaders' intent. Leaders have endorsed the importance of data science and analytical decision making; we now need to secure resources in relation to the stakes.

- Harnessing solutions from the new tech ecosystem requires a real overhaul of our procurement processes:

  - We need to speed up dramatically our contracting;
  - We must acknowledge that freezing requirements and sticking to them is not adapted to software development;
  - We need to be more agile and to move from a fixed project to a living product approach;

I expect the next three plenary discussions will build upon these proposals and generate additional fresh ideas on the theme of decision making.

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Let me tell you an anecdote to illustrate what we had in mind when we picked this theme. When LtGen Rick Lynch took the command of the Deployable Joint Task Force (DJTF) of the NATO Response Force, back in 2005, he addressed his team in its command post.

There was a big screen in the room. He asked the audience "*You see this screen? You want to know what it is meant for? That's quite simple: this is where I want to see the answers to my questions before I ask them*."

Well, I consider this an entirely legitimate request. Because, ideally, we want to deliver to a commander what he or she needs to make informed decisions before he or she asks for it specifically.

This is today even more relevant than back then.

As new domains of conflict appear, such as Cyber, Space and the Information sphere, the lines between peace, crisis and war are blurring. It becomes more and more difficult to spot the adversary – sometimes even to detect that we are under attack.

Spotting a missile that is fired at us is one thing – spotting a hybrid attack combining fake news, cyber-attacks and instrumentalized militias is a different story.

Concurrently, time scales are compressing. Our ability to understand the situation and take the appropriate decisions in the necessary tempo is consequently challenged.

In order to out-think and out-pace our potential adversaries, we need to approach our decision-making processes differently.

My vision is that the decision-makers at all levels are presented with the richest information available on a situation:

- presented through visualization techniques, so that is easy to digest,

- allowing the exploration of a wide field of possible courses of actions and assumptions and their consequences through modelling and simulation.

This will offer our leaders a range of response options. This seems to me of great value at the Political-military level, but not only. Amongst other examples:

- Assessing and refining assumptions on very complex studies such as we did during A2AD work ;

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- Apprehend a complex situation and analyse a huge amount of open or classified data as included in our Information Environment Assessment tool;

- Test and wargame our advanced operational plans to verify their relevance;

- And, assess the most relevant architecture of systems in our capability development.

That being said, it is not only a matter of developing technology. Many technologies are already there, available for us.

The question is: what does it take to adopt them?

The answer is, in my view: we need to change our people's culture and skills, our processes and our organizations.

In order to make the best use of the available technologies, the first condition is naturally to have people ready to use them – in other words, to secure we have the right skill sets in our workforces and military personnel, in our capability development branches as well.

We also need to take into account the cognitive dimension of the interactions between men and machines. I'm not only talking about the questions of man-machine interface raised by the growing complexity of our systems here but also about the key question of confidence in the machine.

I don't ignore the difficulty for military and political leaders to trust machines when it comes to helping them to decide. Confidence is not achieved by decree, it must be earned. That means we need to experiment, explain, illustrate, demonstrate what is feasible and what the added value is.

We also need to transform our processes and our organizations to gain the agility required to capture technologies that move so fast.

Consequently, our 3 plenaries intend to explore:

- **first**, the potential of technologies to assist decision-makers, attempting to answering the following questions:

  o What do technologies already offer today to enable better-informed, quicker decisions?

  o What can we expect tomorrow?

- **second**, the impact of the new information landscape on the way decisions are produced. I'm eager to hear how companies have transformed the way they take decisions in this new landscape.

- and, **third**, the "so what" for NATO and the Alliance's posture: how can we apply these technologies, set-up the appropriate processes, and get our people and our leaders to trust and to get used to using machines to assist them in their decision-making processes?

In other words, how do we, very concretely, improve NATO's decision-making capability, to maintain the Alliance's political-military edge and its defence and deterrence posture?

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Ladies and gentlemen,

I have full confidence that we'll have fascinating and enlightening debates during these plenaries.

I invite you to challenge us, in NATO, to reform ourselves and personally commit to taking actions to leverage your recommendations in NATO's continuous adaptation.

It also works the other way around. My dear friends from Industry, as a voice of NATO customers, I want to challenge you personally to adapt alongside with us. This must be a collective endeavour. Let's start now!

Thank you for your attention.