

SACT KEYNOTE SPEECH  
DEFENCE PLANNING SYMPOSIUM 2014

“The Long Haul”

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**[Introduction]**

Ambassadors, Generals, Admirals, Ladies and Gentlemen, Heinrich

I would like to thank the NATO School for welcoming us all to this place of excellence here in Oberammergau. This school has always been a cradle of new ideas and informal remarks made here, have quite often inspired NATO and Allies. Hopefully this meeting will also contribute to NATO’s thinking particularly as we are fast approaching the next NATO Summit in Newport, South Wales. In this context, I am very grateful to be able to explore with key members of the Defense and Force planning teams, the critical issue of the long-term military relevance of the Alliance.

From a military perspective, preparing the future starts with a clear, yet challenging, aim which is to anticipate the future strategic context for the Alliance out to the next 30 years.

This is challenging as we could always be blinded by the pace and effect of short-term issues while underestimating the scale and nature of long-term and enduring mutation.

Furthermore, what we believe to be the most likely trends that will shape the future strategic context, does not preclude the need to take into consideration lower probability alternatives.

My purpose today is not to give you a complete view of the trends as they were described last year in our Strategic Foresight Analysis Report, a document to which, I would stress, the Allies and many organizations contributed.

I would rather emphasize some overarching fundamental considerations which will influence, in my vision, the long term, the “long haul”.

I will first argue that the Alliance remains indispensable and that it is our responsibility to maintain its relevance.

In support of this, my second point centers on the primary challenge we face in maintaining the level of operational effectiveness and interoperability while procuring and developing the right capabilities.

Finally, in consideration of the first two points, it is my belief that defence planning will remain at the heart of this process but will certainly need to have a longer term perspective.

It is worthy to start with recalling that the Alliance has contributed to deterring a major conflict in Europe for the last 70 years or so, and has brought peace and security in an uncertain world to nearly 900 million people. NATO has as well constantly and successfully answered to the call of recent crises when it was asked. This is not by chance. This is mainly because our Alliance is not a coalition of circumstantial choices. The enduring, fundamental principle to keep in mind, is that, from its inception, the strength of the Alliance has been to bring together diverse national and regional security concerns and strategic interests. Besides, this diversity is perfectly reflected in our strategic concept which is comprehensive enough to account for a wide variety of threats and a broad spectrum of missions.

Therefore, the cohesion of our Alliance will keep on relying on its ability to cope with the diversity of national interests, threat perceptions, political changes, social culture, and regional perspectives. More than ever, as a genuine robust military Alliance, NATO's relevance will rely on strong, consensual, political and strategic commitment. In fact, since its birth 65 years ago and through its enlargement, common values have been the very glue of our Alliance, indispensable to maintain its cohesion and to build a constructive consensus.

This raises perhaps the first and foremost concern for the future. I mean our ability to educate, to transmit these values to the next generations, to make them understand that there is a price to pay to protect and, if necessary, to defend these values; that peace and security have not been guaranteed so far by chance or by legacy, but by will, sacrifice and common political and military commitment.

Another key consideration is the geopolitical or geostrategic map of NATO for the future. Recently, NATO's foreign ministers stressed that they supported a continuing open door policy, while setting demanding criteria for future new members. Obviously, the Alliance presents a great power of attraction; our will and aptitude to answer to the applicant countries will be a key factor for the future. But, in addition I would suggest that in our interdependent and interconnected world, the multi-dimensional map of NATO is not solely defined by its geographic borders. First, as it has been recognized in the strategic concept, cooperative security is a key component of NATO inventory, based upon a very proactive partnership policy. As it has been demonstrated in almost all recent operations (including Afghanistan), NATO's future will be significantly influenced by the role and place we will give to our partners and the interactions we will build together in all our strands of interest. This

is true for partner nations but it is as well crucial with international organizations. Here, I can only stress the importance of the NATO-EU relationship as 22 nations are members of both organizations. In my view, it is more than a partnership, it is a mutual interdependency. In this regard you will have noticed that one major outcome of the last European Summit is to keep on developing the Common Security and Defence Policy in full complementarity with NATO with a more systematic and long term approach to cooperation through increased transparency and information sharing in defence planning. This is an important consideration to take into account in your work.

Coming back to the multi-dimensional map of NATO's interests, the interconnection and interdependency of Nations, international organizations, private sector, and individuals have been appealing for some time to develop a coherent and prospective approach to what our predecessors have named the global commons, maritime, air, space, and cyber space. In short, our ability to build bridges with partner nations and organizations to address these global commons challenges will be a key factor in NATO's future.

One cannot seriously address long term plans without some, at least generic, economic perspectives. At this point, I could use a joker, taking the quotation of a renowned 20<sup>th</sup> century physicist, **Mr Niels Bohr** who said that, "prediction is very difficult, especially about the future," and I would add, especially in the field of economy. For sure when the economy underperforms, defence budgets are primary targets for cuts, even if anybody serious would recognize that defence is a long term investment and that major budget reductions produce their effects in the long run. This is why in planning for the decade to come we have to take realistic financial

assumptions and a permanent cost to value assessment approach. Furthermore, we have to make clear that there is no magic recipe to keep a suitable capability inventory against enduring fiscal pressure. Therefore, initiatives such as Smart Defence, pooling and sharing, or the Framework Nations Concept, must be seen as ways to anticipate, to mitigate budget constraints' long term impact and certainly not as a pretext for further cuts.

One could argue that Allies' economy will recover, and it is true that there are some positive signs on both sides of the Atlantic. At this stage, it is worth remembering Article 2 of the Treaty of Washington 65 years ago, I quote, "Allies will seek to eliminate conflict in their international economic policies and will encourage economic collaboration between any of them." Let's assume that this is still relevant for the future of the Alliance as negotiations are underway for a future Transatlantic Trade and Investment Partnership between the US and the EU, just as a similar agreement has been taken forward between Canada and the EU. That could open the road for a global "transatlantic renaissance". But still I would posit that we will need a very strong case to convince our citizens and our political masters that they do need to reinvest in defence.

As a matter of fact, there is an impressive defence effort in many 21<sup>st</sup> century power nations, in Asia, the Middle East, in Russia, which cannot be ignored in the future geostrategic balance perspective. That emphasizes, by the way, the very problematic choices the US is facing today, which in turn reinforce the need for a better responsibility and duty sharing with other European and non-European Allies in NATO. As far as European countries are concerned, they face as well a problem of balance in defence efforts, as fewer and fewer nations are able to achieve the 2

percent of GDP ratio for defence budgets. The last European Council on defence stressed the need for a more coordinated and ambitious approach within the EU. The success of this endeavor will be crucial for NATO. So hopefully for our Alliance and for future generations we will succeed in our quest for defence reinvestment, but we cannot afford to wait for better days. We must shape the future - now; we must tackle the problems of today – now; we must find new paths to answer the current and future challenges, and we must better prioritize our efforts.

Let me move on now to my second theme, that being the challenge we face in maintaining present levels of operational effectiveness and interoperability while procuring and developing the right capabilities.

An effective operational preparation of our forces has been a key for NATO credibility during the Cold War. We put a lot of effort into preparing ourselves, and it has been instrumental as well for the last two decades' success in operations. Keeping NATO military relevance, NATO readiness, NATO interoperability; these are the major challenges we have to face. Therefore I see the Connected Forces Initiative as a very powerful tool; perhaps the only tool, to regenerate our education, training, exercises and evaluation. The Connected Forces Initiative provides a wonderful opportunity to capitalize on lessons learned, to optimize national, multinational, and NATO training and exercise activities and facilities. And I would strongly advocate along these lines to keep investing in our common assets like this outstanding NATO School Oberammergau. National centres of excellence present as well a huge potential that we must exploit in full synergy with NATO structures. The success of Connected Forces Initiative will rely on a continuous day to day effort of imagination, of innovation.

I do think that effective, pragmatic, efficient innovation offers us solutions to tackle the many challenges I just depicted. This is why I put so much emphasis on developing innovation in my Command, for example, through a strong strategic partnership with the NATO Science and Technology Organization. We must learn as well to work much closer with industry.

Putting a premium on technology and innovation is all the more relevant considering the exponential pace of technological progress which has created a “Law of Accelerating Returns” as described by Raymond Kurzweil, American director of engineering at Google.

An important aspect of this law is that a large part of new technologies will be available to a greater number of players, making the fog of future warfare even thicker. I do not want to overstate the case, but if we are not able to rapidly and smartly exploit technological breakthroughs, others will likely not miss the opportunity.

In this context, I would like to touch upon three important points to feed the discussions on how to better define the military requirement for the long term.

My first point is **about time scales and program management**.

An interesting study into the respective acquisition programs of Raptor F-22 and Phantom aircraft<sup>1</sup> **has shown that it took three times longer** to develop the F-22 (22 years actually) than the F-4. Such long program cycles make more likely major changes whether they are political, economic, or technological, **during the development phase** of capabilities.

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<sup>1</sup> René Francillion, Mc Donnell Douglas Aircraft since 1920, volume II

And as a consequence, changes in the requirements could even be necessary before the operational capability is delivered. For instance, when the F22 Initial Operational Capability was delivered, computers on the market were 500 times faster and held 60,000 times more information than the ones that were initially designed for the aircraft.

In terms **of program management**, we have to adapt our approach to technological choices and the way we deal with evolutions occurring at an unprecedented pace. In 2009, then-Secretary of Defense Robert Gates noted that “[...] *we needed to shift away from the 99-percent exquisite service-centric platforms that are so costly and so complex that they take forever to build, and only then in very limited quantities. With the pace of technological and geopolitical change and the range of possible contingencies, we must look more to the 80-percent solution, the solution that can **be produced on time, on budget and in significant numbers.***”

As a topical, yet lasting issue, **my second point is about economic factors** and efficiency. If we closely examine the last 20 years or so of NATO’s transformation, we have to recognize first that, we face a higher cost for the procurement of our equipment.

Coming back to the development of the F-22 Raptor has cost the U.S. DOD nearly 20 times more than the F-4 Phantom. Although there is really no comparison in terms of military advantage offered by the F-22, we must also keep in mind the facetiousness of Norman Augustine’s Law – which predicted that in 2054 the cost of one tactical aircraft would consume the entire U.S. Air Force budget –; it is a real lesson in terms of requirement control.

In addition, in recent operations, we have learned that our opponents can challenge our financial capabilities in very effective way.

For instance, huge amounts of money have been spent in equipment to counter “\$5 Improvised Explosive Devices” in Afghanistan. The same is true for pirates using skiffs worth less than \$10,000 but requiring us to deploy multi-million dollar assets. In the current economic context, a military success cannot be an economical setback; we need to address this issue and design, to the greatest extent possible, affordable responses for such threats to our security.

My third point is that, it is of utmost importance that we understand the art-of-the-possible and imagine what will be the technologies of the 21st century and their military implications.

Emerging manufacturing technologies, in particular additive manufacturing which is also known as 3-D printing, are about to initiate a new industrial revolution, bringing the power of the exponentially growing computer capabilities to the physical area, while the information area is still being profoundly transformed. We witness the emergence of companies that aim to leverage new manufacturing to make small UAVs very effectively.

At the same time, from a military perspective, I can see that autonomous and unmanned systems are increasingly important to our missions. What was ten years ago a small part of our capabilities has gained a paramount importance, for instance, in the area of Joint ISR.

What is going on, now, is the synergy between these trends, offering the possibility for **shorter**, yet more **frequent acquisition cycles**, for **small and better adapted**

**systems.** An iterative development process could enable us to quickly develop different sub-systems, thus allowing **planners to focus on nearer term** and therefore better match emerging threats.

Of course, we will still need large programs to build major platforms and systems but I believe that a large part of their military value will be delivered through add-ons to be developed quickly to respond to unexpected situations or to leverage unexpected technological advantage.

Connecting these ideas, we may imagine that future capabilities will be delivered in a very different manner than those we have now, with shorter but more frequent development of tailored capabilities. And this is probably the only way to defeat Mr. Augustine's prediction...

You may argue that the aforementioned analyses and overall objective are not new. This is true, but I believe that we are now at a turning point where we could achieve this objective; existing and emerging technologies such as autonomous systems, nanotechnologies, distributed IT solutions - cloud computing -, new energy production and storage (and many others) are promising ways for the future that we must explore in close cooperation with industry, in order to maintain our advantage over potential adversaries that will try to do the same. I must also mention standardization; which is from my perspective, it is one of the most powerful enabling factors of a smarter capability development.

As a summary of these considerations on equipment perspectives, I would say that we need to better **master the trinity of cost, time, and effectiveness**, including a reinforced interoperability. We must do this, through a **balanced and innovative approach** for our Capability Development process, for our Smart Defense projects.

And now I will expand upon the third and final theme of this address; that defence planning will remain at the heart of this entire process, but needs to more directly take into consideration a longer term perspective.

I have tried to share so far with you my vision on the main considerations which should shape the future and the way we should adapt, transform our approach to confront these challenges. Now I would like to discuss in more detail how we intend to support more precisely your efforts in defence planning, in drawing long term military implications from this new environment which was more largely described in last year's Strategic Foresight Analysis.

This is the aim of the Framework for Future Alliance Operations (FFAO), which we started a few months ago, to identify new mission types and then to inform NDPP with a long term perspective. We want FFAO to be the main vehicle for strategic Commanders to provide best military advice for future military operations. FFAO is a Bi-SC effort and will be put to MC consideration and to the NAC because it is, at the end of the day, a political decision. FFAO is still in its early stage; it is a huge effort and a very innovative approach, and I would like to share with you a few initial ideas.

Three main strategic perspectives seem to emerge in the first instance; there could be more at the end of the process, which will be an open process with the Nations. First, the need for a robust, coherent, I would say credible strategic awareness, for better crisis anticipation, for better information in the decision-making process, for better operational preparation of our forces. This is why we are putting such an emphasis on JISR as a major flagship for the future Summit. This is why we must carry on developing AGS and other ISR platforms such as Remote Piloted Aircraft,

and maritime surveillance assets. This is why we must successfully introduce coherent, interoperable, and adaptable C3 capabilities.

That leads me to the second trend we found, the need for adaptable shaping capabilities. Facing the uncertainties of the future operational environment, it is crucial that we improve our flexibility, our responsiveness. Alongside with strategic awareness, the keys to adaptable shaping are mobility, diversity of military effects, and as far as possible multi-roled platforms and systems. Again, achieving flexibility requires a high level of training and exercises, and needless to say, the highest level of interoperability.

Last but not least, the credibility of our Alliance will rely more than ever on its resilience, both individual and collective. It is what I would call a shared resilience. As we are learning time and again, every crisis requires a long term commitment, and an enduring effort. We are still in Kosovo today, in the Mediterranean Sea, and of course, in Afghanistan. Obviously, our national capacity to support these commitments is dramatically reduced by the effects of budget reductions, in terms of manpower, logistics, maintenance, ammunition, etc.

Shared resilience means organizing ourselves to sustain the effort as long as needed. Smart defence or pooling and sharing present a great potential to improve our global resilience but it must be stressed again that they are not magic recipes that would allow further fiscal cuts. Shared resilience means as well that we have to imagine together the possible impact of new threats and identify ways to mitigate the risks individually and collectively. For instance, in the cyber domain, protection and defence is a clear national responsibility, but NATO has to protect its own systems

and ensure cyber defence in operations. Both aspects, national and collective, cannot be treated alone. The cyber chain is only as strong as its weakest link.

Now to conclude this part and illustrate the Framework for Future Alliance Operations more precisely, I would like to give you an example of how some military implications could be envisioned for operations in very dense urban areas. Of course this analysis will be consolidated with many stakeholders and with ACO.

From the SFA we have identified a convergence of trends which are among others, an increased influence of non-state actors and reliance on private actors for security, an increasing complexity of human networks and a growing influence of the people on decision making.

We came to the conclusions that, in the future, operations in a very dense urban area will be likely where soldiers might face un-mapped and intricate terrain in three dimensions including tall buildings, factories and undergrounds, with poor infrastructure and accesses.

They might deal with multiple actors with competing interests, highly adaptive and empowered by technology, which can blend into the mass and severely challenge their ability to operate against or despite them. It sounds like science fiction - it is not.

Lastly, common use of communications technology and social media would facilitate disruptive influence actions to weaken the legitimacy of our operation and provoke hostile reactions from the population and its leaders.

Within this context the possible military implications would be that planners need to consider providing our forces with the ability to quickly localize, identify and

neutralize with minimum collateral damage, technologically empowered and net-supported individuals. This would necessitate deployable mapping and identification assets, with secure, reliable connection to military decision makers. Critical to this, obviously, will be a short loop intelligence process, able to operate 24/7, and able to cue lethal and non-lethal assets.

It is for these reasons, in the context of this simple example, that it is critical for us to imagine the future of warfare, not necessarily under conditions which are favourable to our capabilities of today, but in the ways that it is most likely to happen.

### **[Closing]**

In conclusion, as the Alliance will conclude its combat mission in Afghanistan the Defence planners are going to confront a situation where urgent operational requirements for operations will not have the precedence over longer-term capability development. As a consequence, rebuilding our full spectrum capability to include training and equipment is now both a necessity and a challenge – exacerbated by the effects of the financial crisis.

Accordingly, the guidance that has been given by our Ministers is to enhance the NDPP before the next cycle by integrating a long-term focus and the principles of fair burden sharing and reasonable challenge.

I am convinced that issues of fair burden sharing and reasonable challenge could be addressed by leveraging new technologies and through a strong NATO/EU partnership.

As far as the long-term is concerned, SFA and FFAO should provide useful tools. Indeed, it is likely that the future of the Alliance will happen as a result of long-wave

trends and developments that unite it to the past and the present. Thus, quite often predicting the future is somehow telling what is already happening.

Although one persistent element throughout history is the prominence of contingency and surprise, we have but no choice but to confront the challenges of the future with the context of history and human experience.

As the great English historian Edward Gibbon one reflected:

*'I have but one lamp by which my feet are guided, and that is the lamp of experience. I know no way of judging the future, but by the past'.*

And what the past has taught us is that will, commitment and imagination have brought our Alliance to this superb organization it is today. Let's carry it forward together.