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CONFERENCE OF ARMAMENTS DIRECTORS (CNAD)

"SMART DEFENCE – SMART TADIC"

CONFERENCE TO ADDRESS

TRANS-ATLANTIC DEFENCE TECHNOLOGICAL AND INDUSTRIAL COOPERATION (TADIC)

14 OCTOBER 2011

NORTH ATLANTIC TREATY ORGANISATION – ORGANISATION DU TRAITE DE L'ATLANTIQUE NORD

NATO INDUSTRIAL ADVISORY GROUP (NIAG)

THE NATO SECRETARY GENERAL REFERS TO "SMART DEFENCE" AS THE WAY TO "ENSURING GREATER SECURITY, FOR LESS MONEY, BY WORKING TOGETHER MORE FLEXIBLY". ONE ELEMENT OF PROMOTING THIS IS BY ENSURING EFFICIENT AND EFFECTIVE TECHNOLOGICAL AND INDUSTRIAL COOPERATION AMONGST NATIONS, PARTICULARLY IN THE TRANS-ATLANTIC DOMAIN.

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INVITATION

Assistant Secretary General for Defence Investment
Le Secrétaire Général Adjoint pour les Investissements dans le domaine de la Défense

14 October 2011

Dear Speakers and Participants,

I welcome you to our Trans-Atlantic Defence Technological and Industrial Cooperation Conference, under the banner *"Smart Defence- Smart 'TADIC"*, at NATO Headquarters.

This Conference under the direction of the Conference of National Armaments Directors (CNAD) will address Trans-Atlantic Defence Technological and Industrial Cooperation in the context of the realisation by NATO nations of multinational approaches to designing, developing, acquiring, sustaining and disposing defence assets for current and future operations.

The aim of the Conference is to identify specific and practical ways to strengthen trans-Atlantic defence technological and industrial cooperation within the evolving framework of defence trade developments on both sides of the Atlantic and to set out what is necessary, on both sides of the Atlantic, to enable successful trans-Atlantic cooperation in defence capability development and delivery.

I cordially thank you for your participation and contribution in this conference and willingness to help advance our efforts to foster Trans-Atlantic Defence Technological and Industrial Cooperation.

Yours sincerely,

Patrick Auroy

CONFERENCE PROGRAMME

The Conference which will take place on the 14th October in the "LUNS" room at NATO Headquarters in Brussels, is being hosted by National Armaments Directors of NATO and will bring together senior decision makers and subject matter experts from governments and industry on both sides of the Atlantic.

1. **WELCOME AND OPENING REMARKS**

by Chairman Mr. Patrick Auroy - Assistant Secretary General Defence Investment and CNAD Chairman 0845-0900

2. **KEYNOTE ADDRESS**

by NATO Secretary General Mr Anders Fogh Rasmussen 0900-0930

3. PANEL ONE

The imperative for increased Alliance Trans-Atlantic defence technological and industrial cooperation in an era of "Smart Defence".

"This topic will address the requirements for Trans-Atlantic defence technological and industrial cooperation emanating from the new NATO Strategic Concept and related initiatives and the opportunities that defence trade developments on both sides of the Atlantic, both in terms of defence procurement and export control reforms, offer government and industry in achieving TADIC."

Panellists:

- **Ms. Beth M. McCormick Deputy Assistant Secretary for Defense Trade and Regional Security U.S. Department of State**
- **Mr. Giuseppe Orsi CEO – Finmeccanica SpA**
- **Ms Valeria Evans – UK, Head of International Relations Group at Defence Equipment and Support**
- **Mr. Jack Harrington CEO – Thales-Raytheon Systems**
- **Mme Claude-France Arnould CEO – European Defence Agency**

Moderator:

- **Mr. Robert Bell - United States Secretary of Defense Representative, Europe, Former Assistant Secretary General Defence Investment and CNAD**

BREAK

4. PANEL TWO

Delivering Alliance capability: lesson learned and future prospects for Trans-Atlantic programmes.

"This topic will address lessons learned in working TADIC issues and how these be taken account of in current and future multinational programmes, as well as in ongoing technology cooperation to meet emerging security challenges."

Panellists:

- **Major General Carlo Magrassi - Deputy Commander Air Force Command – Italian MoD Former Deputy Chief Executive Strategy, EDA**
- **Mr. James A. Hursch - U.S. Department of Defence**
- **Mr. Peter M. Wagner - Defence, Aeronautic and Maritime Industries – DG Industry and Enterprise European Commission**
- **Mr. Thomas F. Darcy - Vice President, Defence Electronic & Systems – EADS North America**
- **General (rtd) William J. Begert - Vice President for Business Development and Aftermarket Service Pratt & Whitney, United Technologies Corporation**

Moderator:

- **Jean Fournet - International Consultant, Former Assistant Secretary General, NATO Public Diplomacy Division**

LUNCH 1300

During Lunch

5. CONFERENCE CONCLUSIONS AND ASSIGNMENTS

- Panel 1 & 2 Moderators

- Summary by Chairman

Closing Remarks by Chairman **ending at 1430**

NATO INDUSTRIAL ADVISORY GROUP HIGH LEVEL ADVICE STUDY NO 154

Developments in Europe to reform export control and defense procurement processes

+

Implications and opportunities resulting, particularly with regard to multinational programs supporting NATO capabilities and interoperability

EXECUTIVE SUMMARY

This is the white paper for the NATO's 14 October 2011 Trans-Atlantic Defence Industrial Cooperation (TADIC) conference attendees on the developments in Europe to reform export control and defense procurement processes.

The European defence equipment market, worth €41 billion in 2009, is technology-intensive with cutting-edge research and development in fields such as electronics, ICT, transport, biotechnology and nanotechnology. Many new technologies developed for defence have also turned into drivers for growth in civil sectors such as in global positioning and earth observation.

The European defence industry is mostly concentrated in six Member States (France, Germany, Italy, Spain, Sweden and the UK) although companies producing ancillary equipment and systems are found all over Europe.

However, the European defence market is still highly regulated at a national level and fragmented. Europe's defence-related industries (primarily the defence part of sectors such as aeronautics, space, electronics, land systems and shipbuilding) largely operate outside the internal market. Member States have maintained national control over defence equipment markets and related industries with reference to Article 346 of the Treaty on the Functioning of the European Union (TFEU) which permits EU Member States to circumvent the common market by providing that "any Member State may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material."

European governments have a clear preference for their own national defence industries not only to protect jobs and boost investment but also to ensure security of supply and of information. Some Member States are still reluctant to accept mutual dependence. As a consequence, producers from other Member States have only limited, or no, access to domestic defence markets. This fragmentation and divergent national policies creates red tape, hampers innovation and leads to duplication of defence programs and research. Ultimately this undermines competitiveness of the European Defence industry and the effectiveness of the European Common Security and Defence Policy (CSDP).

Nevertheless, the situation is now evolving. The economic pressure resulting from reduced defence budgets after the end of the cold war and the current crisis, and the escalating development costs, make the maintenance of a comprehensive national defence industrial base impossible for any single European state. The European defence industry has therefore to enhance its competitiveness as

much as possible. The technological evolution towards multiple use and bridging technologies is an important new challenge presenting opportunities and difficulties.

With this background, the European Commission launched a “Defence Package” on 5 December 2007 designed to set out a new European policy and legislative framework to improve the competitiveness of the European defence sector.

Following the European Commission's adoption of this "Defence Package", two directives were published in 2009 with a view to facilitate the development of a European defence equipment market: (a) Directive 2009/43/EC on intra-EU transfers of Defence products simplifying terms and conditions of transfers of defence-related products within the Community and (b) the 2009/81/EC Defence and Security Procurement Directive on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts awarded by contracting authorities or entities in the fields of defence and security. The package also consists of the Communication "Strategy for a Stronger and More Competitive European defence Industry".

The 2009/81/EC Directive doesn’t mention the term offset but it addresses the offset practices indirectly by providing for subcontracting, conditions on contract performance, and contract award criteria to inhibit the application of offsets.

Several other initiatives have been launched to overcome or mitigate challenges toward a more European defence market. Noteworthy efforts include key European Defence Agency initiatives (such as the Electronic Bulletin Board (EBB), the voluntary Code of Conduct on Offsets, the voluntary Code of Best Practice in the Supply Chain) and the European Committee for Standardisation (CEN)’s workshops on Standardisation for Defence Procurement.

This white paper yields following seven major recommendations for TADIC development:

a. Enlarge the transatlantic approved community within the TADIC export control framework
b. Define the scope of an essential security interest in Article 346 TFEU
c. Create more mutual transparency on defence planning
d. Limit the adverse impact, if any, of the new 2009/43/EC and 2009/81/EC Directives on the North American Industry
e. Limit the adverse impact of technology control policies
f. Promote mergers, acquisitions and joint ventures in the security and defence sector
g. In times of austerity, the EU and NATO should cooperate and seek for smart solutions.

WHY TADIC?

Like the US earlier, the EU is now in a process of structuring its efforts in the area of Security and Defence. NATO recognizes the benefits of a strong European Security and Defence and the importance of a balanced North American-EU relationship within the overall NATO context. Within such a balanced relationship, Trans-Atlantic Defence Industrial Cooperation (TADIC) can only be successful where there is a win-win situation both in the short and longer terms.

Defence industrial policy for Nations with a strong defence industrial capability aims today, above all, at preserving security of supply and at defending national interests by limiting the dependency on others. However, eventual trans-Atlantic win-win cases should not be inhibited or negatively influenced by regulatory frameworks on either side of the Atlantic.

Safeguarding both the short and long term North American-EU balanced relationship as well as promoting the removal of inhibiting regulations could lead to the concept of "Smart TADIC for Smart Defence".

Such a concept of Smart TADIC would also need to allow for an efficient use of scarce financial resources both in NATO and NATO Nations by avoiding unnecessary duplication of effort

NATO, NATO NATIONS AND TADIC

The topic of TADIC is relevant to both NATO and the NATO Nations. Multinational programmes evolve under a NATO umbrella and may be of a trans-Atlantic nature, however, it is Nations who provide funding and make the decisions. NATO funded programmes, albeit on a limited scale, may also encompass trans-Atlantic consortia to execute the contracts involved, although final decisions on funding remain with the nations. NATO's role, in both cases, is to facilitate a consultation process during which nations can discuss, amongst many other things, TADIC issues of mutual interest both when preparing the programme and during its execution.

One basic issue to be discussed is the impact of the non-dependent policies on both sides of the Atlantic. As regards the US, a threefold scheme of measures is in place, namely the Federal Acquisition Regulations (FAR), the International Traffic in Arms Regulations (ITAR) / Export Administration Regulations (EAR) and the Committee on Foreign Investment in the US (CFIUS), whereby the control over company capital does not equal the control over the company. A similar scheme currently does not exist in Europe (or EU), albeit that for EU programmes the non dependent issue is controlled. Within EU circles the debate is ongoing whether and how measures could be taken to reinforce the non dependence of the European Defence and Security Technological and Industrial Base. An impact analysis of these developments on TADIC is considered essential.

The regulatory frameworks on both sides of the Atlantic already have been the subjects of an earlier comprehensive NIAG study (SG114) and a Conference on TADIC in 2009. The

evaluation/implementation of its recommendations continues with the 14 October 2011 TADIC conference.

THE NATO STRATEGIC CONCEPT AND TADIC

During NATO's November 2010 Lisbon Summit, Heads of State and Heads of Government agreed on a new NATO Strategic Concept for the next decade, titled "Active Engagement, Modern Defence". Although the document does not mention industry explicitly, many subjects have a bearing on future industrial involvement. An example is the preface, fifth bullet, which commits NATO to continuously reform towards a more effective, efficient and flexible Alliance, so that taxpayers get the most security for the money they invest in defence. The agreed NATO Political Guidance mentions: "... *Developing and fielding the right capabilities and forces also requires close involvement with industry. ...To that end, fostering more effective trans-Atlantic defence industrial cooperation is essential to achieve the greatest practical interoperability ... "*.

The new NATO Strategic Concept defines three core Alliance tasks, namely collective defence, crisis management and cooperative security. At Annex of this paper is an overview produced of elements which are considered to have an industrial bearing. The list overlaps with the Lisbon Capability Package. For each element, its relevance to industry in general and to TADIC specifically has been assessed. Also, it is indicated whether a subject is new or is already under consideration in NATO. It should be stressed that the scheme at Annex is subjective in nature, and changes will occur as priorities of the individual topics change. The topics with high TADIC relevance from the scheme are Theatre Ballistic Missile Defence (TBMD), Cyber and EU and these subjects certainly merit a more in depth analysis.

The NATO Strategic Concept, from a cooperative security point of view, recognizes the importance of a strong European defence, for which a strong European Defence Technological and Industrial Basis (EDTIB) is an indispensable element. The maintenance and development of the Industrial Base that provide the capabilities NATO wants is, in fact, the reason for TADIC.

A healthy, advanced and globally competitive NATO Defence Industry is fundamental in the transformation process towards a more effective security and defence for the NATO Nations and their citizens. Each Nation's Security and Defence Strategy identifies the role and core capabilities of the national industry in its own terms and determines the objectives of the industrial policies for implementation. The European component of the NATO security and defence industry has its own dynamics based on EU initiatives on Defence procurement and industrial policies, looking for a capable and competitive EDTIB.

TADIC is critical not only to solve export issues or to adopt a common set of standards, but to harmonize and synchronize the Nations' industrial interests with their contribution to NATO and the expected return in terms of industrial, technological capabilities, employment, contribution to GDP, global market position. It follows that a NATO Defence Technological and Industrial Base, where TADIC is the instrument to bridge the gaps, should be part of an overarching NATO strategy. As a potential actor in the Strategic Concept implementation, the NATO Industrial Advisory Group (NIAG) is clearly the instrument best fitted to provide the necessary industry vision and roadmap.

Initiatives like Pre-Commercial Procurement (PCP) for Security (Defence), inspired at some extent by US experiences, could be a good starting point in concrete terms with a practical exercise.

There is already a considerable degree of cross ownership of industry between the two sides of the Atlantic, and there is a likelihood that this will increase. Certainly within Europe there is strong government pressure for a more efficient defence industrial base and hence for more industry consolidation. This issue might be addressed by TADIC as well.

The disparities of budget and defence industry structures between the European nations are every bit as great as those between the US and medium sized European Nations. Europe has had much experience, with successes and failures (probably more failure than success!), with a multiplicity of approaches, in trying to establish multinational defence projects. If we leave ITAR/EAR out of the equation as a separate issue, a study of the European experience could help inform the TADIC process.

DEFENCE R&D AND TADIC

Defence technology is seen by both industry and the customers as a key discriminator, and hence there is very significant investment by both parties, and the resulting technology is treated as a highly competitive asset – in the case of industry this is against potential competitors, and the more open the defence market the greater the need to protect this asset – in the case of government this leads to technology transfer and export controls.

A number of types of technology investment can be differentiated. One way in which technology investment is sometimes described is through the categories: emerging, key, pacing, and base. Emerging technologies are low Technology Readiness Level (TRL) research that may lead to product/system differentiation in the future. By their nature, they tend to be found in academia or in research organisations, although some larger industries still maintain central research facilities. Collaboration on these is relatively straightforward, as the competitive issue is in their application rather than in themselves. Key technologies are those that are integral to the development of new products and services, or to extensions of existing ones. As such they constitute a significant part of the competitive advantage of the industry, and attract a significant portion of the available investment. Likewise, pacing technologies form the core of an industry's capability to differentiate in its existing products and services, and also are part of the competitive advantage, attracting a significant part of the available investment. Finally base technologies are in effect the "tools of the trade" in which the industry needs to have competence, but are open to sharing. Roughly speaking, there is correlation between key and pacing technologies, which constitute the main part of the technologically based competitive advantage, attracting the major part of available investment, and the mid TRLs which constitute the so-called "valley of death".

From a government perspective, as customer, the situation is parallel. Even if there is little indigenous industry base, the government still needs to be able to operate as an intelligent customer. However, if the government wishes to retain operational sovereignty, then it needs to invest in the nation's technology base, especially the relevant key and pacing technologies. Both for this reason, and for reasons of varying degrees of industrial policy, several governments make significant investments in their industry in these technology domains. Indeed increasingly individual industries cannot afford to make the necessary investment entirely on their own, and even with government support there is often insufficient funding and resource to address properly the valley of death at national level. Therefore one might logically assume that this forms a prime candidate for addressing at multinational and trans-Atlantic level. Precisely because of the competitive/sovereign value of key/pacing technologies, these have predominantly been tackled at a national level in the

past. It is questionable whether NATO, and NATO Nations, can continue to afford this, instead needing to apply the principles of "Smart Defence". The complexity of the situation is likely to be compounded when one considers the implications of the new NATO Strategic Concept with its emphasis on the shift from defence to security and the concomitant need for a much stronger partnership approach.

It is in the civil domain, however, within Europe, that the real benefits of multinational collaboration under the right conditions can be demonstrated. This can be seen very clearly in the space domain, or, perhaps more controversially, with civil aeronautics and Airbus. Indeed, this forms a significant part of the ethos behind the European Commission Framework Programme on R&D, examples being ICT (and Artemis) or Clean Sky.

Success will necessitate NATO and the Nations taking political initiatives that can overcome inhibitors caused by widely varying national approaches to sovereignty and to industrial policy. Industry can only be responsive, as it is constrained to operate within its competitive environment. Nevertheless, the NIAG could help NATO and the Nations develop the appropriate models to enable enhancement of multinational R&D collaboration. This becomes even more important in the context of the new Strategic Concept, with its emphasis on partnership and on security.

SMART DEFENCE AND TADIC

The Smart Defence initiative, launched by the NATO's Secretary General at the 4 February 2011Munich Security Conference, outlines following cornerstones for future cooperation:

Ensuring greater security, for less money, by working together with more flexibility

More security by:

Pooling and sharing

Setting the right priorities

Better coordinating

NATO's role is to set strategic direction, identify possible areas of cooperation, to act as a clearing house, to share best practices

NATO acts as an adviser and an honest broker

NATO and Nations to invest in Science & Technology

Creating greater coherence within Europe (NATO-EU strategic partnership)

Build closer links with the private sector, e.g., Public-Private Partnerships (PPP)

Involve industry sooner and more closely

There is no doubt that the latter two elements are of major importance to industry and trans-Atlantic industrial cooperation. Potentially, for instance, experiences in the field of PPP could be shared among US and European industries with a view to better serve operational forces. However,

the differences in national laws and policies may complicate the development of solutions from both sides of the Atlantic.

The involvement of industry sooner and more closely is currently under consideration with NATO's Assistant Secretary General for Defence Investment (ASG/DI). During the February 2011 meeting of the NIAG he launched the idea of considering a new relationship between NATO and industry, which may result in a NATO-Industry Partnership Agreement. Such a partnership by default has to take into account the TADIC specificities. In May 2011, the ASG/DI wrote to the NIAG Chairman, requesting proposals for multinational approaches for capability development to which the NIAG responded in early July 2011 with proposals reflecting defence industry from both sides of the Atlantic.

One of the aspects of "smart defence" is an acknowledgement that the traditional, simplistic model of defence procurement is no longer appropriate, especially for today's more complex systems and services. Right from the requirements stage, there is a need for industry/government partnership, and to be effective at a trans-Atlantic level, the effect of ITAR/EAR needs to be considered and minimised. To some extent this has been recognised by the NATO's Allied Command Transformation (ACT) with its Framework For Collaborative Interaction (FFCI). Should we think of models, akin to the ITA, which could better enable this industry/government partnership?

One of the tenets of "smart defence" is pooling and sharing. This is also one of the work strands of the European Defence Agency (EDA) within the European theatre. EDA has been trying to get industry interest in participating in the discussions on pooling and sharing, so far with limited success. This is clearly a topic for which TADIC ought to have significant implications in the NATO environment. This being the case, it raises the question how to energize industry for a Pooling and Sharing (P&S) discussion within the context of the NATO Smart Defence initiative. Trying to find an answer to the famous question "What's in it for me?" might help.

The EDA's Food For Thought paper mentions, but currently excludes from the discussion, role specialisation as an element of P&S. What remains is a group of disguised arrangements of (albeit limited) current practice. P&S in the area of the use of capabilities has an impact on the logistics side of the house and, in the longer term, even ownership could be shared. Industry has an interest in discussing these issues. A new P&S capability will need upfront discussions on how sustainment will take place. Industry, no doubt also looking at current national developments, may be the catalyst in providing multinational performance-based logistics (PBL), PPP constructs etc.

Industry itself differs in its approach, some not being convinced of the benefits, and therefore is reluctant to invest time and effort in this track. Here again NATO could act as a facilitator and start activities allowing government and industry to exchange experiences, business models lessons learned, and best practices. A dedicated NATO P&S conference preceded by a number of topical workshops, perhaps in collaboration with NIAG (and the AeroSpace & Defence Industries Association of Europe (ASD)) could be a way forward.

DEFENCE TRADE DEVELOPMENTS IN EUROPE AND THE US

EUROPE

The European defence industry is mostly concentrated in six Member States (France, Germany, Italy, Spain, Sweden and the UK) although companies producing ancillary equipment and systems are found all over Europe.

However, the European defence market is still highly regulated at a national level and fragmented. Europe's defence-related industries (primarily the defence part of sectors such as aeronautics, space, electronics, land systems and shipbuilding) largely operate outside the internal market. Member States have maintained national control over defence equipment markets and related industries with reference to Article 346 of the Treaty on the Functioning of the European Union (TFEU) which permits EU Member States to circumvent the common market by providing that “any Member State may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material.”

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With this background, the European Commission launched the “Defence Package” on 5 December 2007 designed to set out a new European policy and legislative framework to improve the competitiveness of the European defence sector.

Following the European Commission's adoption of this "Defence Package", two directives were published in 2009 with a view to facilitate the development of a European defence equipment market: (a) Directive 2009/43/EC on intra-EU transfers of Defence products simplifying terms and conditions of transfers of defence-related products within the Community and (b) the 2009/81/EC Defence and Security Procurement Directive on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts awarded by contracting authorities or entities in the fields of defence and security. The package also consists of the Communication "Strategy for a Stronger and More Competitive European defence Industry".

The 2009/81/EC Directive doesn’t mention the term offset but it addresses the offset practices indirectly by providing for subcontracting, conditions on contract performance, and contract award criteria to inhibit the application of offsets.

Several other initiatives have been launched to overcome or mitigate challenges toward a more European defence market. Noteworthy efforts include key European Defence Agency initiatives

(such as the Electronic Bulletin Board (EBB), the voluntary Code of Conduct on Offsets, the voluntary Code of Best Practice in the Supply Chain) and the European Committee for Standardisation (CEN)'s workshops on Standardisation for Defence Procurement.

Attached white paper on the "Developments in Europe to reform export control and defence procurement processes" provides more details and yields following seven major recommendations for TADIC development:

a. Enlarge the trans-Atlantic approved community within the TADIC export control framework;

b. Define the scope of an essential security interest in Article 346 TFEU;

c. Create more mutual transparency on defence planning;

d. Limit the adverse impact, if any, of the new 2009/43/EC and 2009/81/EC Directives on the North American Industry;

e. Limit the adverse impact of technology control policies;

f. Promote mergers, acquisitions and joint ventures in the security and defence sector; and,

g. In times of austerity, the EU and NATO should cooperate and seek for smart solutions.

UNITED STATES OF AMERICA

TADIC continues to receive high level attention in the United States. 13 August 2009, President Obama directed the National Economic Council / National Security Council to "launch a broad-based interagency process for reviewing the overall US export control system." The Administration determined in April 2010 that "fundamental reform of the US export control system is needed in each of its four component areas, with transformation to a:

- • Single Control List (for defence and commercial dual-use items);
- • Single Primary Enforcement Coordination Agency;
- • Single Information Technology (IT) System; and
- • Single Licensing Agency.

President Obama announced a draft new framework for the US export control system on 30 August 2010. The Administration has subsequently worked on the so-called "Four Singularities" over the past several months. The preponderance of effort has centered on the first Singularity with the development of common criteria and definitions for items on the United States Munitions List (USML) and the Commerce Control List (CCL). The goal of the Administration's approach is to ensure that the revised lists:

- • are "tiered" to distinguish the types of items that should be subject to stricter or more permissive levels of control for different destinations, end-uses, and end-users;
- • create a "bright line" between the two current control lists to clarify which list an item is controlled on, and reduce government and industry uncertainty about whether particular items are subject to the control of the State Department or the Commerce Department; and

- • are structurally aligned so that they potentially can be combined into a single list of controlled items.

As a test case for this new model, the Administration published its first set of initial results in December 2010, which included a draft rewrite of one of the Categories of the USML for public comment, i.e., Category VII (tanks and military vehicles). The Administration has sought input from US industry on these and other proposed changes from US industry as well as European and other governments and companies with a goal of completing a draft rewrite of the USML by the end of 2011. On the second Singularity, the President signed an Executive Order on 9 November 2010 to create an Export Enforcement Coordination Center to coordinate and de-conflict US criminal and administrative enforcement operations. This center will be housed in the Department of Homeland Security. Funding for a common IT infrastructure, the third Singularity, has been identified and transition activities are underway across the relevant US Government agencies. Efforts to create a Single Licensing Agency, the fourth Singularity, have met with significant Congressional resistance and legislative action in this area is not expected anytime soon.

Industry reactions to the President's export control reform initiative have been generally positive, but cautious. The Chief Executive Officers (CEO) and senior officials from the major industry associations such as the Aerospace Industries Association, the National Defense Industrial Association and the National Association of Manufacturers and CEOs of major defence companies issued statements of support for the announced reforms.

Meanwhile, a number of other initiatives are in progress that are focused on how the US shares defense technology and services with its NATO and other close partners. The US Department of State, for example, is amending the International Traffic in Arms Regulations (ITAR) to revise (1) its policy with regard to transfers of defense articles and services to companies that employ dual national and third-country national employees and (2) its policy regarding defence services, clarifying the definition and scope of defense services. The previous dual-nationals policy had generated resistance in many European countries because it was perceived to violate national privacy laws in many Nations. The new dual-nationals policy was published as a final rule on 16 May 2011 and will go into effect soon. Industry reaction has been mixed; while most, especially Canada, see the new rule as an improvement, there are still questions and concerns about privacy laws. Most industry observers consider the proposed services rule, which was published as a draft rule in April 2011, a step in the right direction, but that some ambiguity needs to addressed before the change becomes final.

The US-UK and US-Australia Defence Trade Cooperation Treaties were ratified by the Senate and accompanying implementing legislation was passed by the Senate and the House of Representatives in late September 2010. The US, UK, and Australian governments are presenting working to modify existing regulations to accommodate the Treaty regime and identifying "pathfinder" programmes to test the Treaty framework during 2011. The goal of the governments is to have the Treaty regime up and running by early 2012. The Treaties are expected to benefit US, UK, and Australian industries through the sharing of approved controlled technology and hardware with their respective bilateral partners and customers without the lag time and uncertainty of the export license process. Some advanced technologies are exempted from the Treaty regime, at least initially, but the goal of the governments is to get the regime up and running first and then to look at additional areas where the Treaty regime could be expanded in time.

Another example of bilateral initiatives is the Reciprocal Defense Procurement Memoranda of Understanding (RDP MOU) which have been established by the US with fourteen EU member States. These RDP MOU provide a platform for ongoing communication regarding market access and procurement matters that affect effective defence cooperation. The purpose of these MOUs is to promote rationalization, standardization, and interoperability of defence equipment with allies and friendly governments, called RDP MOU countries, and to offer all parties equal access to each other's defence procurement competitions and treat the bidders of the other Party equally fairly as domestic bidders. Among other things, such MOUs involve reciprocal waivers of buy-national laws by each country so that the companies of the other Party are eligible to bid on equal footing with the domestic bidders These RDP MOU countries are part of the list of "qualifying countries" in the US Defense Federal Acquisition Regulation Supplement (DFARS 225.872), which ensures that offers of products of those countries are exempted from the US Buy American Act and Balance of Payments Program policy that normally requires the US Department of Defense to add 50 percent to the price of the foreign products when evaluating offers. This also means that US goods and technologies will be exempted from any analogous "Buy National" law or policy applicable those countries' defence procurements.

Congressional reaction to these TADIC-related activities has been mixed. The Senate did ratify the US-UK and US-Australia Treaties in late 2010 and there have been a number of discussions between the Administration and key Congressional staff about the progress of the President's export control reform initiative. Congressional priorities are somewhat different from that of the Administration, however. Chairwoman of the House Foreign Affairs Committee (HFAC), Rep. Ileana Ros-Lehtinen (R-Fla.), noted in May 2011 that "Ultimately, new legislative authorities would be required to implement the administration's plan – a plan substantially at variance with the current statutory scheme for controlling defense articles under the Arms Export Control Act and dual-use items under the Export Administration Act (EAA), and requiring Committee review." She introduced her own bill, H.R.2122 - Export Administration Renewal Act of 2011, on 3 June 2011. The Ranking Member of the HFAC, Rep. Howard Berman (D-CA.), introduced a separate bill also focused on the renewal of the EAA on 26 May 2011. While both bills have provisions that are viewed as positive steps forward, the Congressional efforts are largely disconnected from the Administration's approach and there is not a great deal of synergy among these initiatives. There is no clear timetable for legislative consideration of these House bills.

With the upcoming US Presidential election campaign in 2012 and the recent departure of Secretary Gates from US DoD, who was the lead champion for export control reform within the Administration, the prospects for these multiple initiatives in the US are uncertain. While most observers expect the Administration to complete its review of the USML, it is unclear how receptive that Congress will be to the consequent movement of a significant number of defense items from the USML to the CCL. On July 18, 2011, the White House reaffirmed the Administration's commitment to reform and said that Secretary of Defence Leon Panetta has expressed his full commitment to see it through. Given that and the recent regulatory activity laying out the reform programme for Phases I and II, confidence is growing that meaningful change will be achieved. The reform initiative and the implementation of the US-UK and US-Australia Treaties could significantly improve how the US shares technology with its close allies and partners over time.

ANNEX 1 to TADIC Paper Panel 1

NATO Strategic Concept	Functional Category	Industrial relevance	TADIC relevance	New element ?? Yes/No
Collective Defence	TBMD	H	H	Y
	CBRN WMD	H	H	N
	Cyber	H	H	Y
	Anti-Terrorism	H	H	N
	Energy security	H	L	Y
	Emerging Technology assessment	H	H	N
Crisis Management	Civil-military approach (eg civilian crisis managment capability	M	L	Y
	Monitor and analyse the international environment	H	H	N
	Enhance intelligence sharing	H	H	N
Cooperative security	EU	H	H	Y
	Russia	H	M	Y
Reform and Transformation	Reorganization of NATO agencies, committees and CNAD substructure	H	H	Y

INTRODUCTION

There have been many examples of transatlantic cooperation. All have had their difficulties and their successes. This study looks at some of the most recent and most significant and draws some of the best practises used to overcome or mitigate restrictions to transatlantic trade.

The structure of the paper is to look at some of the drivers for transatlantic cooperation today. Look at some lessons from key modern programmes. Include a more detailed descriptions later for further reading.

FINANCIAL IMPERATIVE

The current financial climate means that budgets are being reduced and that every effort needs to be made to reduce the cost of programmes.

OPERATIONAL IMPERATIVE

NATO and the EU are conducting more operations than during the cold war and have more soldiers deployed on active service over a wider area. Forces almost always operate in coalitions that include NATO and non-NATO members.

Our forces use technology as a key battlefield advantage. This means that systems are becoming more complex and thus more expensive to develop. The advantage is that they allow fewer units to be deployed for given effect. However fewer units means reduced production runs and increased development cost per unit and hence price with an end result that nations find it more difficult to maintain their forces at the leading edge of operational capability. The obvious solution to this is to promote cooperation between nations, and for the most expensive and capable programmes will need transatlantic cooperation.

The other important benefit of this is that it would promote increased interoperability at all levels.

MARKET IMPERATIVE

New problems such as critical infrastructure protection and cyber defence bring new dimensions to the defence and security domain. The threat often comes from non-state actors. The domain under attack is owned and managed by the commercial sector and is often international rather than national. The bringing together of these defence and security sectors means that traditional procedures and structures are having to change at every level.

The role of the armed forces can no longer be restricted to military issues. The provision of security means that civil and military forces must work together much more closely. The concept of providing security is now enhanced by the need to ensure for stabilisation and reconstruction to ensure a lasting security.

INDUSTRY IMPERATIVES

Industry is already structured on an international basis. Much of the defence industry uses dual use technology and solutions that are suitable for defence and security needs. This accords well with the changes implied by the emerging threats. However shrinking budgets, the rising cost of development and production and the move towards cooperative programmes must inevitably lead to some sort of consolidation.

Transatlantic approaches will give benefits to the USA, the EU and the nations. Europe and Canada stand to benefit from the technology lead of the USA. The US industry benefits from a wider market. Competition is more realistic as the market size is large enough to support more than one industry. Overall the transatlantic cooperation would also enhances the political security and cohesion of the Alliance.

LEGAL IMPERATIVES

ITAR; EU paragraph 346; Offset rules, national rules all have to be considered. A special working group could be established for large programme to foresee problems and propose early solutions.

SUMMARY OF LESSONS LEARNT FROM PROGRAMMES:

ALTBMD: ITAR exemption obtained by SAIC representing US industry negotiated on the basis of the need for interoperability of NATO and national systems.

EU – There have been export control requirements, but the processes are faster and easier than the USA and, therefore, they have not been significant

AGS: ITAR at an industrial level has been addressed by dividing the programme into two parts

AMN: Existing TAAs related to ISAF AMN have been used between key players: Industry like Thales; national like UK for Overtask, US for Centrix and NC3A for AMN. NC3A has acted as a broker /facilitator and has ensured

JSF Partner nations should develop the same approach to Technology Transfer on JSF, currently each partner nation has their own approach.

Harmonisation of import/export laws and regulations, tariffs, Taxes and Duties to simplify technology dissemination

Have a common implementation process agreed by all stakeholders addressing the everyday steps that need to be taken to transfer the technological items/data in real time, across borders, and between agencies.

Within a given system the sensitive technology is usually only a small component of the whole. In NATO Programs a new paradigm could be used whereby everything is releasable except for key components for which export licenses are required.

Have licenses approved per Nation or Organisation (for instance US have a license at EU level and vice versa) with Provisos to limit Technology Transfer for individual Nations and/or companies.

Have a Technology Transfer WG at the technical level for each major program in order to anticipate the needs and problems.

US National Disclosure Policy (NDA) secrecy and the cumbersome updating process leads to misunderstandings and some mistrust between US and European Companies.

US LESSONS AND SOLUTION

The US Administration determined in April that "fundamental reform of the US export control system is needed in each of its four component areas, with transformation to a:

- Single Control List (for defence and commercial dual-use items),
- Single Primary Enforcement Coordination Agency,
- Single Information Technology (IT) System, and
- Single Licensing Agency."

Bilateral initiatives are in progress between US and other NATO and non-NATO Countries, notably the U.S.-UK and U.S.-Australia Defence Trade Cooperation Treaties signed in 2007. However they have still not been fully ratified in the USA.

R&T

One way in which technology investment is sometimes described is through the categories:

- Emerging Technology. Low TRL research that may lead to product/system differentiation in the future. Generally found in academia or in research organisations. Generally not competitive, as the competitive issue is in their application rather than in themselves.
- Key Technology. Integral to the development of new products and services, or to extensions of existing ones. Significant competitive component.
- Pacing Technology. The core of an industry's capability to differentiate in its existing products and services from the competition and significant competitive component.
- Base Technologies. Effectively the 'tools of the trade' where industry is open to sharing.

Targeting effort at finding cooperative R&T in the Key and Pacing technologies will enhance the probability of cooperative programmes emerging. Typically however it is easier to agree to

cooperation in the Emerging or Base technologies and this subverts the aim of eventual cooperative programmes.

Increasingly individual industries cannot afford to make the necessary investment on their own, and even with government support there is still often insufficient funding and resource. Cooperation, as one of the principles of Smart Defence needs to be applied.

To over come this nations should formulate political initiatives that will overcome different national approaches to industrial policy and allow industry to propose cooperative solutions based on commercial drivers, rather than cooperation based on political drivers. This applies to transatlantic and to inter European projects. NIAG should help NATO and the nations develop the appropriate models to enable enhancement of multinational R&D collaboration.

QUESTIONS AND WIN WIN PROPOSALS

Panel 1 - The imperative for increased Alliance Trans-Atlantic defence technological and industrial cooperation in an era of "Smart Defence".

- How will the US Export Control Reform Initiative benefit Trans-Atlantic defence acquisition cooperation – for the United States; for Canada; for Europe? What areas remain as key concerns for US export control as this program moves forward?
- How do you see the streamlining and reforming of the US export control policies enabling US industry to engage with their trans-Atlantic counterparts more constructively, thereby supporting Smart Defense, reduced US defense budgets, and OSD's call for greater innovation?
- What changes could be made/are being made to EU defence procurement policies and intra-European community export controls to improve trans-Atlantic defence industrial cooperation?
- What lessons has Finmeccanica learned to date from your investments in US defence companies (e.g., the acquisition of DRS) that have a bearing on Trans-Atlantic defence industrial cooperation?
- What is the appropriate balance between national sovereignty in defence and collective defence needs? How should the Trans-Atlantic alliance balance investment in new defence technologies with investment in interoperability for coalition operations.
- Thales-Raytheon is a Trans-Atlantic cooperative success. Can you describe some of the barriers you faced in pulling this alliance together, the synergies you have found, and the regulatory changes you believe still need to be addressed on both sides of the Atlantic to improve Trans-Atlantic defence industrial cooperation?
- What are the key lessons learned from intra-European defence acquisition programmes and trans-Atlantic defence acquisition programmes? What opportunities do we have to improve efficiency on cooperative programmes? What measures can be taken to improve defence cooperation between NATO and the EU/EDA?

Panel 2 Delivering Alliance capability: lesson learned and future prospects for Trans-Atlantic programmes.

- What savings and operational efficiencies can be gained by NATO through access to a Trans-Atlantic defence technological and industrial base? In what way will NATO's relationship with industry have to change to get there?
- What currently impedes and/or enables trans-Atlantic technology transfer and industrial cooperation as an integral part of NATO's new strategic concept and delivering the Lisbon capability package? How will the Export Control Reform Initiatives help to enhance Trans-Atlantic defence industrial cooperation?
- What recommendations would you give to industry on both sides of the Atlantic to promote greater cooperation?
- "NATO Europe" and "EU Europe" are different – are the defence needs of the two different? What defence procurement process changes are required to stimulate multi-national approaches for NATO or EU specific programmes (pooling assets, sharing support and services)?
- Do "TADIC barriers" impede successful project execution by NATO programme managers? What steps could be taken to alleviate these barriers? In this time of fiscal restraint, are there technology gaps between the US and NATO countries that should be addressed to remove these barriers?
- From your distinguished career as both military officer and a successful business executive, can you offer your views regarding why a warfighter and why a businessman would value cooperation on Trans-Atlantic defence acquisition programmes. What would be the key concerns from these two perspectives?
- What successes has UTC achieved in Trans-Atlantic defence industrial cooperation and what lessons can you share that contributed to this success?

SOME IDEAS FOR WINWIN PROPOSALS

The following are some ideas for possible practical and "fast track actions" that can be tackled by both EU and US Authorities. If resolved, they can greatly improve the collaboration and exchange of information and technologies among EU and US Companies while collaborating on the same programs.

ACTIONS FOR NATO APPROVED PROGRAMS

- **NATO transatlantic approved community** - The UK-US Treaty should be enlarged to all EU Governments. At least the EU-based companies, "certified" according to Directive 2009/43/EC, could become part of a transatlantic "approved" community.

- **NATO ITAR MOU** - It is possible and MOU within NATO covering all the NATO Nations at the same time, for a dedicated NATO program, that avoids bilateral agreements?

- **Reduce the number of licenses to be approved**. - Have licenses approved per Nation or Organization (for instance US have a license at EU level and vice versa) with Provisos that might limit some Technology Transfer for some Nations and/or industries.

- **Reduce or avoid bilateral agreements in a collaboration Program if it is a NATO PROGRAM. -** The current attitude is to prefer the stipulation of bilateral as oppose to general agreements that encompass all of a EU & US Program participating Nations. This approach foster a different levels of releasablility very difficult to manage properly in practice by the involved companies.

- **NATO TAA Special Agreement -** It is possible to ask to a NATO Host Nation, responsible for a NATO program, to act in name of the US State Department; this can be in line with the 2nd of June announcement " US State Department proposes to limit definition of defense services; eliminates TAA requirement in certain circumstances" ?

- **Paradigm Change in NATO Programs to facilitate Technology Transfer . -** Within a given technology the non releasable, highly sensible, and controlled portions are usually a fraction of the whole (there are few exceptions like Low Observability). Because of that fraction everything is strictly controlled and releasable only after the long process currently in place to get the necessary licenses. In NATO Programs and the likes there should be a change in paradigm (especially from US point of view) where everything is releasable except for key elements that are not, for which export licenses are required.

- **NATO simplified IR -** It is possible to simplify the process of the "DOD Interaction Request" to allow employees of companies teaming/working together for a NATO program to talk without a formal request – that regularly expires every 3 months

NATO NATION POLICY FOR NATO APPROVED PROGRAMS

- **Create more mutual transparency on defense planning -** EU Member States should provide each other more mutual transparency on their medium to long-term defense planning, which would allow opportunities to be identified for harmonised military requirements, joint investment projects, pooled acquisitions and coherent role specialization. The EDA could play an important role here.

- **Limit adverse impact of new EU ICT directive on US Industry -** According to DG Enterprise and Industry, Aerospace Industries, GMES, Security & Defence's Report on "The Nature and Impacts of Barriers to Trade with the United States for European Defence Industries", the new ICT Directive provides Europe with a real leverage towards the US. The advantages offered by the new ICT Directive coupled with the EU Defence Procurement Directive provisions on security of supply are worrying to US industry, which fears it may be used to exclude it from European RFPs. This American concern provides important leverage for transatlantic negotiation, which is all the more important now, as ICT implementation details are being put in place. As a consequence the main recommendation of the study would be to move towards the establishment of transatlantic general licenses for transfers to certified companies with the objective of promoting a greater predictability, transparency and efficiency of a transatlantic defense trade control regulatory framework. Those transatlantic general licenses would target specific European end-users approved by the USG.

- **Define legally acceptable interpretation of Ar ticle 346 TFEU -** The European Court of Justice should define the legally acceptable interpretations of Article 346 TFEU. A progressive opening of the market with improved security of supply between EU Member States and suitable procurement rules applicable throughout the EU might increase transparency and could reduce the need to use exemptions to the rules.

- **Limit adverse impact of technology control policy for NATO approved programs -** The technology control policy's abusive restrictions should be considered by industry on both sides of the Atlantic as the main inhibiter to transatlantic defense industrial cooperation.

- **EU Nations should implement the same approach to Technology Transfer. -** Technology Transfer should be decided at EU level not National level. This means that a given solution/approach should be applicable to all EU Nations (right now each Nation has its own approach even in the case where a EU guideline exist, the differences are usually more than the commonalities). This also means that each Nation should not have any bilateral agreement outside EU.

LESSONS LEARNT – PROGRAMS DETAILS

ALTBMD

ITAR

ITAR has been addressed via an exemption obtained by SAIC representing US industry.

Negotiated on the basis of the need for interoperability of NATO and national systems.

Took time to put in place, but operational administrative effort is not significant.

Covers documents and specifications.

Comprises specific products and companies – there is a list of each that is updated quarterly.

EU – There have been export control requirements, but the processes are faster and easier than the USA and, therefore, they have not been significant.

DISCLOSURE OF NATIONAL INFORMATION

Disclosure is subject to national policy and tends to be arbitrary. It is driven by the need to protect data and national industry and production. To address this the PMO has found it necessary to revert to the agreed alliance goals and use this common "purpose" to overcome issues.

The lack of data on national systems has a knock on effect on operational planning, system architecture and deployment plans. The solution implemented is to send data and tasking to national systems and allow them to accept or refuse based on their own assessment of the task and their capability. The effect is a potential delayed response.

National procedures and funding: National funding issues can delay and even cancel programmes.

Approval processes can be very fluid, especially where national parliamentary processes are involved.

MEADS is a good example: It was delayed for Congressional approval, it was then delayed for German parliamentary approval. Ultimately national funding issues have effectively stopped the programme.

AGS

ITAR

ITAR at an industrial level has been addressed by dividing the programme into two parts (see diagram below):

The air segment (UAV, Radar, Datalinks) will be procured from US companies only.

The Ground segment is procured from Europe and Canada and will be ITAR free.

The connectivity and interoperability between these two segments will be assured by the use of common STANAGS and the NATO Infrastructure Architecture (NIA) and MAJIIC.

Industrial cooperation is assured by NG as prime. They have put in place a large industrial team with associated work share in coordination with national industry.

DISCLOSURE

- NAGSMA has a TAA in place with the MODs from the participating nations for the procurement of the system only. There is also an accompanying MOU.
- There is an ongoing discussion on how the system will be operated and for the long-term support. This involves NAGSMA, SHAPE and the nations.

Political cooperation – there have been no specific issues associated with AGS. Although the programme has had a long gestation the progress since 2007 has been remarkably quick despite the financial crisis. The factors that have helped are:

- Nations with reservations had left the programme, leaving a very focussed and positive group.
- The financial crisis probably boosted this as the nations finances deteriorated and made them more reliant on cooperation to achieve expensive capability.
- The overwhelming operational imperative from Afghanistan and ISAF expressed within NATO by the JISR needs.
- The MAJIIC programme gave a technical and agreed way forward for interoperability between nations

NC3A AND AMN

NC3A has acted as a broker /facilitator and has ensured that ITAR issues were much less intrusive and caused smaller delays in implementation.

Existing TAAs related to ISAF AMN have been used between key players: Industry like Thales TAA; national like UK for Overtask, US for Centrix and NC3A for AMN.

This is a role that any NATO agency should be able to fill and could be used in future programmes. An immediate example is for the next generation of the NATO SATCOM space segment that should become operational in about 2017.

F-35 -LIGHTNING II (JSF)

The Issues:

The DoD and to a greater extent the State Department and Congress are very worried about technology transfer risks and have developed a very rigid position on their ansfer of sensitive technologies and knowledge.

Foreign industrial partners find themselves operating from "black boxes". This has placed their involvement in these programs under severe stress…".

US Gov. and Lockheed Martin will develop the partners' F-35 version that meets U.S. National Disclosure Policy. This means partners' will receive a product that is second-class compared to the US variant to protect US technological leadership.

The software codes that underlie the management of the mission and weapon systems: the US currently envisions using the code on partner country aircraft with protective measures that would prevent any reverse engineering; this means the partner countryreceives "black boxes" and has no visibility of their operational software.

For each international partner US says that they will receive "…all project information required for the autonomous use, maintenance and support of the air system at its highest capabilities, save for US national policies on distribution…". The "save for" expression represents a first limitation stemming from a compromise between the countries on the quality and extent of the sensitive information that can actually be transferred.

Neither the bi-lateral Letters nor the MoUs at the Government level include provisions for the exchange of information during a bid. This makes it extremely difficult for non-US companies to present a competitive bid. The current procedures allowed by US laws and regulations for exchanging information, both before and during a bid, are slow and difficult to apply.

The greatest technology transfer problems occurred at the beginning of the cooperation in that the licenses under ITAR regulations did not allow an adequate transfer of knowledge and sensitive technologies. Indeed in most cases the licenses signed only covered unclassified technologies or information.

In addition to the public part of the licenses there is often an un-releasable annex provided by the US government. This consists of a list of provisos that take precedence over the license and they are designed to provide guidance for the technician or official that works on the transfer of specific information or technology. The provisos can be more restrictive than the relevant license.

For non-US companies, the procedures to issue ITAR licenses (TAAs, MLAs, etc.) appear to be excessively bureaucratic and sometimes handled by staff with inadequate technical and scientific preparation.

US Government prefers bilateral as opposed to general agreements for the JSF Program participating Nations. This approach fosters different levels of releasablility that is very difficult for US companies to manage effectively.

Potential Improvements:

- Collaborative Projects that are not classified as NATO projects, but are between nations that are members of NATO and/or the EU should be considered equivalent to a NATO Programme from the Technology Transfer point of view. This is not the case for JSF.
- Partner nations should develop the same approach to Technology Transfer on JSF, currently each partner nation has their own approach. This would mean that a given solution/approach would be applicable to all partner nations. This also means that no partner nation should have a bilateral agreement.
- The current discussion about the technology transfer process does not consider how to harmonise import/export laws and regulations, tariffs, Taxes and Duties to simplify technology dissemination once the necessary licenses are in place. This problem alone can, in practical terms, stop any real Technology Transfer even if the licenses have been approved.
- Have a common implementation process agreed by all stakeholders about how to manage the licenses and get the most from them in terms of Technology Transfer. The process must address the practicality of everyday steps that need to be taken to transfer the technological items/data in real time, across borders, and between agencies.
- Within a given system/technology the non releasable, highly sensitive, and controlled portions are usually only a fraction of the whole. The whole is then controlled because of a small subset/component. In NATO Programs a change in paradigm should be considered whereby everything is releasable except for key elements for which export licenses are required.
- Have licenses approved per Nation or Organisation (for instance US have a license at EU level and vice versa) with Provisos to limit Technology Transfer for individual Nations and/or companies. Today, for a given Program, there are thousands of licenses that need to be acquired and managed making any Technology Transfer extremely difficult to manage, hence actually increasing risk, and adding significant cost to the programme.
- Have a Technology Transfer WG at the technical level for each major program in order to anticipate the needs and problems. Those WGs should be able to provide realistic solutions for problems, both forecast and when encountered, to the appointed authorities that have to approve the licenses. All stakeholders should participate to the WGs.

MULTINATIONAL R&D

This note offers some thoughts in the hope they are relevant both for the multinational initiative of the ASG DI and as input to the TADIC event.

This note does not consider the very high TRL work which is directly associated with product development or contract fulfilment. Rather, it is assumed that this will be covered, where appropriate, through the relevant projects.

The note starts by looking at the defence industry perspective, and in the interest of brevity (and provocation!) we make a number of gross oversimplifications. Technology is seen by both industry and the customers as a key discriminator, and hence there is very significant investment by both

parties, and the resulting technology is treated as a highly competitive asset – in the case of industry this is against potential competitors, and the more open the defence market the greater the need to protect this asset – in the case of government this leads to technology transfer and export controls.

Looking a bit deeper, it is possible to differentiate a number of types of technology investment. One way in which technology investment is sometimes described is through the categories: emerging, key, pacing, and base.

- Emerging technologies are low TRL research that may lead to product/system differentiation in the future. By their nature, they tend to be found in academia or in research organisations, although some larger industries still maintain central research facilities. Collaboration on these is relatively straightforward, as the competitive issue is in their application rather than in themselves.
- Key technologies are those that are integral to the development of new products and services, or to extensions of existing ones. As such they constitute a significant part of the competitive advantage of the industry, and attract a significant portion of the available investment.
- Likewise, pacing technologies form the core of an industry's capability to differentiate in its existing products and services, and also are part of the competitive advantage, attracting a significant part of the available investment.
- Finally base technologies are in effect the 'tools of the trade' in which the industry needs to have competence, but are open to sharing.

Roughly speaking, there is correlation between key and pacing technologies, which constitute the main part of the technologically based competitive advantage, attracting the major part of available investment, and the mid TRLs which constitute the so-called valley of death.

From a government perspective, as customer, the situation is parallel. Even if there is little indigenous industry base, the government still needs to be able to operate as an intelligent customer. However, if the government wishes to retain operational sovereignty, then it needs to invest in the nation's technology base, especially the relevant key and pacing technologies. Both for this reason, and for reasons of varying degrees of industrial policy, several governments make significant investments in their industry in these technology domains. Indeed increasingly individual industries cannot afford to make the necessary investment entirely on their own, and even with government support there is often insufficient funding and resource to address properly the valley of death at national level. Therefore one might logically assume that this forms a prime candidate for addressing at multinational and Transatlantic level.

Let us therefore examine the past history, both Transatlantic and European. First it is worth noting that one of the prime inhibitors in the past has been the very different models that operate in different nations for governing the relations between government and industry for technology investment. In this respect, the Transatlantic dimension can be seen, at least simplistically, as another manifestation of the difficulty of reconciling different government/ industry/ technology models. Perhaps, precisely because of the competitive/ sovereign value of key/ pacing technologies, these have predominantly been tackled at a national level in the past. It is questionable whether NATO, and NATO nations, can continue to afford this, instead needing to apply the principles of 'Smart Defence'. The complexity of the situation is likely to be compounded when one considers the

implications of the new Strategic Concept with its emphasis on the shift from defence to security and the concomitant need for a much stronger partnership approach.

From a Transatlantic perspective, there are some successes at low TRL, prime amongst which is perhaps the ITA (International Technology Arrangement) on network sciences, operating between the US and UK, and led by IBM. There are also examples of successful multinational demonstrators (e.g. MAJIIC). However, there are few examples in the mid TRL range, where in principle the greatest gains for multinational collaboration should be achievable. This is frequently blamed on ITARs and TAAs, although in my experience these are not insurmountable obstacles, provided sufficient time and effort is taken in a manner that demonstrates clear value to both participating industries and participating governments. However, it is perhaps worth noting that some years ago the UK official responsible for the UK/US government to government technology arrangement expressed the view that his main frustration was not the nature or quality of the technology exchange itself, but the difficulty the UK MoD had in making any use of it through the UK supply chain.

Within Europe there has been a strong focus on defence R&D collaboration for many years. Indeed in the early 90's, after the 'Wise Men Report' which led to the establishment of WEAG and the EUCLID programme, the European Defence Ministers signed up to an objective of achieving at least €500M per year (in 1990 values) of spend on collaborative defence R&T, growing year by year. However, even by the end of the WEAG arrangements, in 2004, the actual spend was running at about €100M, a modest 3% of the total European defence R&T spend. Even including other bilateral and multilateral activities does not dramatically increase this figure. After the formation of EDA, the situation actually became worse, and in addition a significant proportion of actual spend is now on low TRL research.

By contrast, examples show that where industry is given the lead, supported by the necessary government actions and policies, success and major benefit can be achieved. Cases include the Neuron UCAV demonstrator, and at a complete industry level the operations of MBDA. A useful lesson can be learnt from the AMSAR project. This was a trilateral (Fr/Ge/UK) project aimed at developing the next generation GaAs capability for RF systems, and included arrangements for joint industrial exploitation of the results. However, although it was largely successful in technology terms for several years, because of the lack of requisite government-to-government links, the industrial exploitation failed at a collaborative level, and the project ended with a certain amount of acrimony.

It is in the civil domain, however, within Europe that the real benefits of multinational collaboration under the right conditions can be demonstrated. This can be seen very clearly in the space domain, or, perhaps more controversially, with civil aeronautics and Airbus. Indeed, this forms a significant part of the ethos behind the European Commission Framework Programme on R&D, examples being ICT (and Artemis) or Clean Sky.

To summarise it is not possible to do justice in a short note to a subject as complex as defence R&D collaboration. However, it is argued that there is very significant potential gain to both government and industry, whether within the European context or the Transatlantic context, if one can enhance multinational R&D collaboration, especially where this is targeted at overcoming the 'valley of death'. Success, though, will necessitate NATO and the nations taking political initiatives that can overcome inhibitors caused by widely varying national approaches to sovereignty and to industrial policy. Industry can only be responsive, as it is constrained to operate within its competitive environment. Nevertheless, NIAG should help NATO and the nations develop the appropriate models

to enable enhancement of multinational R&D collaboration. This becomes even more important in the context of the new Strategic Concept, with its emphasis on partnership and on security.

BACKGROUND INFO

(http://ec.europa.eu/enterprise/sectors/defence/defence-industrial-policy/index_en.htm)
(http://www.eda.europa.eu/defencefacts/)

EU EXPORT CONTROLS

INTRA-EU TRANSFERS OF DEFENCE PRODUCTS (HTTP://EC.EUROPA.EU/ENTERPRISE/SECTORS/DEFENCE/DOCUMENTS/)

Until recently, fragmentation of the European defence market and divergent national approaches caused many problems for the European defence industry. For example, national systems to control the transfer of defence equipment to another Member State did not distinguish between exports to third countries and transfers between Member States. Heterogeneous national licensing regimes hampered the security of supply between Member States. A study on "intra-community transfers of defence goods" from 2005 estimated costs raising from obstacles of intra-community transfers of €3.16 b per year (direct costs €434m, indirect costs €2.73 b per year).

The new Directive 2009/43/EC on intra-EU transfers of defence products, amended by Commission Directive 2010/80/EU of 22 November 2010, aims at alleviating these obstacles.

The Directive induces Member States to replace as far as possible their existing individual licences with general licences for those intra-Community transfers where the risk of re-exportation to third countries is under control, such as purchases by armed forces of other EU Member States and transfers to certified companies of components in the context of industrial cooperation.

Global licences, grouping multiple transfers to several recipients by one supplier, will cover most of the remaining intra-community transfers, with individual licensing thus becoming the exception. Member States will remain free to determine the products eligible for the different types of licence and to fix the terms and conditions of such licences.

Member States will have to transpose the Directive by 30 June 2011 at the latest. They will have to apply the Directive from 30 June 2012.

DUAL-USE EXPORT CONTROLS IN THE EU

(HTTP://EC.EUROPA.EU/TRADE/CREATING-OPPORTUNITIES/TRADE-TOPICS/DUAL-USE/INDEX_EN.HTM)

The EU export control regime for dual-use goods and technologies is governed by Council Regulation (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items. The list of controlled dual-use items is set out in Annex I to Regulation 428/2009. Items not listed in Annex I may also be subject to export controls under certain conditions specified in the Regulation.

Under the EU regime, controlled items may not leave the EU customs territory without an export authorisation. Additional restrictions are also in place concerning the provision of brokering services with regard to dual-use items and concerning the transit of such items through the EU.

Dual-use items may be traded freely within the EU except for those listed in Annex IV to Regulation 428/2009, which are subject to prior authorisation.

Suppliers wishing to apply for authorisation have to contact their competent national authorities for details of what information must be supplied.

National authorities may require export controls on unlisted dual-use items (see Articles 4 & 8 of Regulation 428/2009). Exporters should therefore refer to their relevant national rules and check the situation with regard to their specific transactions.

Such ad-hoc controls may apply where there is a risk that an export to a specific end-user might be diverted for use in a weapon of mass destruction, in violation of an embargo or in certain other situations specified in the Regulation.

Individual EU countries may keep in place certain specific national rules. Such rules can apply to additional items to be controlled (Articles 4 & 8). They can require goods to be checked at specific border points (Article 17). They can introduce additional checks inside the EU (Article 11).

The EU list of controlled items is based on control lists adopted by international export control regimes – the Australia Group (AG), the Nuclear Suppliers Group (NSG), the Wassenaar Arrangement and the Missile Technology Control Regime (MTCR).

The European Commission is a member of the Australia Group and of the Nuclear Suppliers Group.

Candidate countries for EU membership, such as Turkey, Croatia and the Former Yugoslav Republic of Macedonia, are required to apply the EU regime, and the EU is actively promoting Croatia's membership in all the regimes to which it is applying (Croatia is already member of Wassenaar and Nuclear Supplier's Group).

EU EXPORTS OF MILITARY EQUIPMENT TO THIRD COUNTRIES

(HTTP://WWW.CONSILIUM.EUROPA.EU/SHOWPAGE.ASPX?ID=1484&LANG=EN)

The EU export control policy is governed by Council Common Position 2008/944/CFSP of 8 December 2008 defining common rules governing control of exports of military technology and equipment to third countries.

In 1998 the Council adopted the European Union Code of Conduct on Arms Exports which set up eight criteria for the export of conventional arms, established a notification and consultation mechanism for denials and included a transparency procedure through the publication of the EU annual reports on arms exports. The Code contributed significantly to the harmonisation of national arms export control policies and its principles and criteria have been officially subscribed to by various third countries.

Common Position 2008/944/CFSP marked the formal successful conclusion of a review of the Code and set another milestone in improving the EU's export control standards. The Common Position constitutes a significantly updated and upgraded instrument which replaces the Code of Conduct. It includes several new elements, which deepen and widen the scope of application. These elements

include the extension of controls to brokering, transit transactions and intangible transfers of technology, as well as the implementation of strengthened procedures in order to harmonise Member States' export policies. Recognizing the special responsibility of military technology and equipment exporting states, Member States continue to show determination to debate the export of military technology and equipment which might be used for undesirable purposes such as internal repression or international aggression or contribute to regional instability.

The Council assesses implementation of the Code on an annual basis. Article 8(2) of the EU Common Position provides for the publication of an EU Annual Report (see Eleventh Annual report on http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:265:FULL:EN:PDF).

According to this Eleventh Annual report of 6 November 2009, Member States have identified the following priority guidelines for the near future:

continuation of the process of earlier adoption and harmonization of national reports in order to promote more homogeneous statistical data for inclusion in the European Union annual reports, to produce clearer, transparent and complete summary tables;

(b) continuation of activities for the promotion of an Arms Trade Treaty;

(c) implementation of Common Position 2003/468/CFSP, taking into account different national legislation and expanding the appropriate information-sharing mechanism and transparency in reporting;

(d) continuation of the policy of promoting the principles and criteria of Common Position 2008/944/CFSP among third countries, especially those countries that have aligned themselves with the Common Position, and assisting its practical implementation through, inter alia, the provision of practical and technical assistance to ensure the harmonisation of policies on arms export control;

(e) expert contribution to discussions on the implementation of Directive 2009/43/EC;

(f) further development of dialogue with the European Parliament;

(g) continued close cooperation and consultation with the interested third parties, including international NGO's and the defence industry.

The 12th report is available on http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:009:0001:0417

Article 12 of Common Position 2008/944/CFSP stipulates that the EU Common Military List shall act as a reference point for Member States' national military technology and equipment lists, but shall not directly replace them.

The EU Common Military List also serves as a basis for interpretation by Member States of all EU arms embargoes.

The "User's Guide to Council Common Position 2008/944/CFSP" (http://register.consilium.europa.eu/pdf/en/09/st09/st09241.en09.pdf), drawn up and regularly updated by the Working Party on Conventional Arms Exports (COARM), serves as guidance to assist Member States in implementing the Common Position (cf. Article 13 of the Common Position). It is intended for use primarily by export licensing officials

The User's Guide to the European Code of Conduct on Exports of Military Equipment, which is regularly reviewed, serves as guidance for the implementation of this Common Position.

US-UK DEFENCE TRADE COOPERATION TREATY

This Treaty is a significant change to how US-UK exports are managed and will allow the movement and transfer of equipment and information between pre-approved US and UK government agencies and contractors (the "approved community") without ITAR export licenses. By doing so, it will improve interoperability between UK and US forces and support to operations and facilitate cooperation between their industries.

One of the aims is to improve the efficiency of defence procurement by permitting the US to trade many non-sensitive defence articles with Britain without an export licence.

"By simplifying export licensing arrangements for government end use, the treaty will facilitate the more rapid movement of equipment and information between the UK and the US whether purchased off-the-shelf, as part of bilateral project or in support of joint operations," UK's former Defence Minister Nick Harvey said.

The UK is proceeding to implement the Treaty over the course of the year 2011.

EU DEFENCE AND SECURITY PROCUREMENT

(HTTP://EC.EUROPA.EU/INTERNAL_MARKET/PUBLICPROCUREMENT/DPP_EN.HTM)

The legislative framework for defence procurement in Europe is deficient:

(1) Uncertainties persist regarding the use of Article 296 of the Treaty (TEC), now Article 346 (TFEU), which allows Member States to derogate from European Community (EC) rules if this is necessary for the protection of their essential security interests.

(2) The Public Procurement Directive, even in its revised version (Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts), is generally considered ill-suited for many defence contracts.

Therefore, the European Commission chose to introduce specific rules for procurement in the defence sector. These rules would facilitate cross-border procurement of Member States. Up until now, the vast majority of defence procurement contracts have been exempted from the rules of the Single Market on the basis of Article 346 (TFEU). This practice stands in contrast to the case law of the European Court of Justice and hampers the openness of defence markets between Member States. The same problem exists, albeit less prominently, for sensitive non-military security equipment. In order to improve this situation, the Commission adopted a new Directive, tailor-made for defence and security. Member States will soon have at their disposal Community rules they can apply to complex and sensitive procurements without putting at risk legitimate security interests.

Directive 2009/81/EC of the European Parliament and of the Council of 13 July 2009 coordinates the procedures for the award of certain works contracts, supply contracts and service contracts by contracting authorities or entities in the fields of defence and security and amends Directives 2004/17/EC and 2004/18/EC.

By 21 August 2011, Member States have to adopt and publish the laws, regulations and administrative provisions necessary to comply with this Directive. They shall forthwith communicate to the Commission the text of those measures.

By 21 August 2012, the Commission will have to report on the measures taken by Member States with a view to the transposition of this Directive, and in particular Article 21 and Articles 50 to 54 thereof.

The Commission will also have to review the implementation of this Directive and report thereon to the European Parliament and the Council by 21 August 2016. It shall evaluate in particular whether, and to what extent, the objectives of this Directive have been achieved with regard to the functioning of the internal market and the development of a European defence equipment market and a European Defence Technological and Industrial Base, having regard, inter alia, to the situation of small and medium-sized enterprises. Where appropriate, the report will have to be accompanied by a legislative proposal.

Directive 2009/81/EC sets Community procurement rules which are adapted to the specificities of the defence/security sectors. It allows, for example, the use of the negotiated procedure with publication as the standard procedure and provides special provisions for security of supply and security of information. The existence of this Directive will limit Member States' use of the exemption provided for in Article 346 of the Treaty on the Functioning of the European Union to exceptional cases, in line with Court of Justice rulings. Taking into account the increasingly blurred dividing line between security and defence, the new rules will also apply to sensitive contracts in the field of non-military security. This Directive is the logical follow-up to the Interpretative Communication on the application of Article 296 of the Treaty, which was adopted in December 2006 (IP/06/1703). This Communication clarifies the conditions for the use of Article 296 and gives guidance to awarding authorities for their assessment of whether defence contracts can be exempted from Community rules or not.

The Communication is a non-legislative measure and does not modify the existing legal framework. It only concerns defence procurement by national authorities inside the EU and does not deal with defence contracts with third countries, which are managed on bi-lateral levels by each Member State.

Derogations under Article 346 (TFEU) are a politically and legally serious matter. The EU Treaty therefore contains strict conditions for the use of the exemption, balancing Member States' security interests with the principles and objectives of the Community. According to the Court of Justice, the use of the derogation must be limited to clearly defined and exceptional cases and interpreted in a restrictive way.

This means in particular that Article 346 (TFEU) does not provide for an automatic exemption of defence procurement in general. On the contrary, Member State must carefully carry out, for each procurement contract, a case-by-case assessment of whether the use of the exemption is legitimate, with respect to both the field and the conditions of application of Article 346 (TFEU). Only the protection of essential security interests justifies an exemption. Other interests connected with the production of or trade in defence equipment, in particular economic and industrial interests, are by themselves not sufficient to justify derogating from EU procurement rules. The security interests at stake must be "essential". This implies that possible exemptions are limited to defence procurement

contracts which are of highest importance for Member States' military capabilities. It is the Member States' prerogative to define and protect their essential security interests, and to decide on which military equipment they want to procure. However, as guardian of the EU Treaty, the Commission may ask Member States to furnish evidence for the justification of the exemption of a procurement contract. It can also bring a matter directly before the Court if it considers that a Member State is making improper use of the powers provided for in Article 346 (TFEU). In this case, it is for the Member State to prove that the use of the exemption is necessary for the protection of its essential security interests.

In order to ensure correct transposition and application of Directive 2009/81/EC, the European Commission's Director General (DG) Internal Market and Services developed guidance notes on the most important aspects of the Directive. These guidance notes are legally non-binding. Only the Court of Justice is competent to give a legally binding interpretation of EU law. During the drafting process, several workshops were organised to discuss these guidance notes with Member States. On the basis of these discussions, a broad consensus was achieved on most issues. DG Internal Market and Services is nevertheless solely responsible for the content. Besides publishing guidance notes on (a) the field of application, (b) the exclusions, (c) security of information and (d) research and development, following topics are being discussed:

- Security of Supply

The Directive recognises the particular importance of Security of Supply for defence and security procurement. Security of Supply is crucial, particularly in times of crisis, when reliable and in-time delivery can literally be vital. Moreover, Security of Supply is particularly challenging, because of the extremely long life-cycle of most military equipment, which necessitates logistical support, upgrades, modernisation etc for many years.

- Subcontracting

Articles 21 and Title III (Articles 50-53) of the Directive contain provisions allowing contracting authorities/entities to require successful tenderers to subcontract a certain share of the main contract and/or to put proposed subcontracts into competition. Contracting authorities/entities may use these provisions to open the supply chain of successful tenderers to EU-wide competition, but they may not impose local suppliers as sub-contractors.

- Offsets

Whether they are civil or military, direct or indirect in nature, and whatever their legal connection with the main contract is, offset requirements are restrictive measures which go against the basic principles of the Treaty, because they discriminate against economic operators, goods and services from other Member States and impede the free movement of goods and services. Since they violate basic rules and principles of primary EU law, the Directive cannot allow, tolerate or regulate them.

Article 4 of the Directive sets out the basic principle of non-discrimination of candidates and tenderers in contract award procedures: 'Contracting authorities/entities shall treat economic operators equally and in a non-discriminatory manner and shall act in a transparent way.' This principle prohibits all measures which imply a discrimination against participants in a procedure, for instance, by providing compensation obligations only for tenderers from abroad. This prohibition also covers discrimination targeting tenderers' supply chains (Article 21 (1)).

According to the Interpretative Communication, indirect non-military offsets are in general not covered by Article 346 (TFEU), since the latter Article protects only security interests and must be interpreted in a restrictive way. This means that civil offsets must respect Community rules even if they are related to a defence procurement contract which is exempted on the basis of Article 346 (TFEU). Moreover, the Interpretative Communication recalls that Member States must make sure that possible offset arrangements do not adversely affect competition on markets for non-military products.

The Interpretative Communication aims at better complying with EU law and greater openness of defence markets between EU Member States. It specifies the conditions and the field of application of the exemption provided by Article 346 (TFEU). Thus, it helps to distinguish between defence procurement contracts to which the Public Procurement Directive applies and those which can be exempted from Community rules on the basis of Article 296.

On 1 July 2009, a Code of Conduct (CoC) on Offsets administered by the European Defence Agency (EDA) came into effect (http://www.eda.europa.eu/newsitem.aspx?id=420). This Code is a voluntary, non-legally binding intergovernmental instrument, which sets out overarching principles and guidelines for the use of offsets in defence procurement. 25 Member States plus Norway signed up to the Code. The two instruments differ therefore in nature and purpose. At the same time, they are complementary, since the Communication indicates which contracts fall into the scope of the Code.

Both in its introduction and principles, the Code stipulates that its provisions have to be implemented within the framework of EU law. Moreover, the Code is part of the Intergovernmental Regime on Defence Procurement to which participating Member States subscribed 'without prejudice to their rights and obligations under the Treaties.' However, it is important to note that the application of the Code does not of itself make offset requirements compatible with EU law. In every award procedure, contracting authorities/entities first have to ensure that all their requirements comply with the provisions of the Treaty and/or the Directive. On that basis, they may then decide to apply the Code on offsets, provided that this does not put the award procedure in conflict with the Treaty and/or the Directive. In other words: The only legal criterion for the assessment of offset requirements is compliance with EU primary and secondary law.

It is clear that the European Commission and the EDA don't share the same view. So far European governments have been using two different approaches to liberalize the defense market: one based on law, with the European Commission; and the other based on pragmatic arrangements, centered around the EDA. There is also plenty of evidence that some European defense ministries are still reluctant to open up their defense procurement to more competition.

The Electronic Bulletin Board (EBB), operated by the EDA, is an important tool that allows for transparency and fair and equal opportunities to the suppliers as well as a mean for the EDA to monitor its application.

The EBB main objectives are:

- To advertise sMS alll relevant new defence procurement opportunities which fall under the CoC
- To assist suppliers in finding contracting opportunities and procurement details from sMS

- To help EDA in the Reporting & Monitoring of the CoC

The EDA also developed a Code of Best Practice in the Supply Chain (hereinafter referred to as the "CoBPSC"). It is a voluntary Code for use where Article 296 of the TEC is invoked and the voluntary regime applies (other than for excepted goods and services). It is to be read and implemented coherently with the Code of Conduct, of which the CoBPSC is an integral part.

Many European defence industry associations conclude that offsets should be dealt with on an intergovernmental level through the EDA. Offsets, they say, deal with aspects closely related to national sovereignty and therefore the question of offsets in its entirety is not within the European Commission's purview. They encourage the EC not to promote the Guidance Note on Offsets and to support the important work of the EDA on offsets.

According to the EC's Directorate General Internal Market and Services, Member States have the right to define and protect their essential interests of security. Article 346 TFEU, therefore, provides for a derogation which allows Member States to take measures which they consider necessary for the protection of these interests. The EC doesn't exclude that certain offset requirements may be justified on the basis of this derogation. However, Article 346 by no means provides a blank check for offsets. As the EC explained in its Interpretative Communication of December 2006, the use of Article 346 is subject to a number of conditions and has to be interpreted restrictively. It must be limited to exceptional and clearly defined cases, and economic considerations are not accepted as grounds for justifying the derogation. Member States which intend to rely on it must assess and, if necessary, justify case by case whether the conditions for the use of Article 346 are fulfilled. This is the case also when Article 346 is invoked for offset requirements. This means that both EU primary and secondary law contain clear limits to offset requirements. As Guardian of the Treaties, the EC has the duty to ensure compliance with these limits. Consequently, the EC cannot agree with certain European defence industry associations' statement that "the question of offsets in its entirety is not in the Commission's purview [and] should be dealt with on an intergovernmental level through the EDA". In any case, offsets give priority to nationality over competitiveness. From an internal market perspective, they therefore constitute an economically questionable and legally unacceptable market distortion. In this context, the EC draws the attention to the Directive's provisions on security of supply and subcontracting. These provisions take into account all security-related arguments which Member States have put forward during the negotiation of the Directive to justify offsets. The provisions on security of supply, for example, make it possible to secure supply chains. The provisions on sub-contracting enable contracting authorities to drive competition into the supply chain of main contractors and will thus create EU-wide new business opportunities for sub-suppliers. This offers a legally correct and economically sound alternative to traditional offset practices.

- EU activities on defence standards

Standardization of defence equipment is an important basis for the opening-up of national markets and the gradual creation of a single European defence market. In the framework of a project called "CEN Workshop 10 on Standardisation for Defence Procurement", managed by the European Committee for Standardisation (CEN) and sponsored by the European Commission, a European Handbook for Defence Procurement (EHDP) is being produced which contains references to standards and standard-like specifications commonly used to support defence procurement contracts, as well as guidance on the selection of standards and standard-like specifications to optimise effectiveness, efficiency, and interoperability (http://www.defense-handbook.org/). The Handbook's primary objective is to provide Defence Procurement managers with the 'state of the

art' standards references supported by information on best practice when specifying them in defence contracts. It is also designed to complement the work of NATO in this area and the EDA. The Handbook has started its third and final phase of development. Work will probably be complete in summer 2011.

LOI FRAMEWORK

In July 2000, the six Letter of Intent (LOI) partners (France, Germany, Italy, Spain, Sweden, UK). signed a Framework Agreement covering (1) Security of Supply, (2) Transfer and Export Procedures, (3) Security of Classified Information, (4) Research and Technology, (5) Treatment of Technical Information and (6) Harmonization of Military Requirements. In these six areas, the partners committed themselves to create a more homogenous regulatory framework in order to improve market conditions for an increasingly transnational industry.

During a Spanish EU Presidency's workshop on February 15th, 2010, the Chairman of the Letter of Intent Executive Committee said:

"Under a LoI umbrella national experts worked closely together during 2008 and 2009 to establish common positions towards the Commission's draft Defence Procurement Directive. The working group was able to give advice to Commission on a number of key issues. This might be a model for dealing with any future activities being considered by the Commission in defence related matters. Leveling the playing field is one of the main objectives of LoI, as it is for the EDA. Participating Member States recognised an obvious need, as stated in the Joint Action, to "develop close working relations" between EDA and LoI. Of course a duplication of work should be avoided and relevant principles and practices of LoI could be assimilated or incorporated into EDA, as appropriate. Of course, developing the European Defence Technological and Industrial Base will remain the core objective of LoI. But we might give also considerations to transatlantic defence industrial matters."

TADIC INITIATIVES IN THE UNITED STATES

Export control reform has been a major thrust in the United States for the past several years. As noted in the 2007-2008 NIAG study on TADIC1 and subsequent 2009 high-level TADIC conference held at NATO Headquarters,2 the Administration of then President George W. Bush undertook a number of activities to improve how the United States and its allies and partners share technology and defense items. The current Administration of President Barack Obama has continued this emphasis on export control reform and has made progress in a number of areas. This paper looks at President Obama's initiative, other activities underway to address export control reform and defense procurement, the attitudes of industry and in Congress towards these initiatives, and the prospects for the coming months.

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[1] AC/259-D(2008)0007-REV1; NIAG-D(2008)0005-REV1 dated 11 September 2008 - NIAG Study SG 114 Final Report.
[2] AC/259-D(2010)0001-AS1 dated 17 February 2010 – Conference Report.

PRESIDENT'S EXPORT CONTROL REFORM INITIATIVE

Trans-Atlantic defence technological and industrial cooperation (TADIC) continues to receive high level attention in the United States. On August 13, 2009, President Obama directed the National Economic Council / National Security Council to "launch a broad-based interagency process for reviewing the overall US export control system."3 The Administration determined in April that "fundamental reform of the US export control system is needed in each of its four component areas, with transformation to a:

- Single Control List (for defence and commercial dual-use items),
- Single Primary Enforcement Coordination Agency,
- Single Information Technology (IT) System, and
- Single Licensing Agency."[4]

President Obama announced a draft new framework for the US export control system on 30 August 2010.5 The Administration has subsequently worked on the so-called "Four Singularities" over the past several months. The preponderance of effort has centered on the first Singularity with the development of common criteria and definitions for items on the United States Munitions List (USML) and the Commerce Control List (CCL). The intent of the Administration is to make the USML into a "positive list" of controlled defense items that describes controlled items using objective criteria rather than broad, open-ended, subjective, or design intent-based criteria.6 The goal of the Administration's approach is to ensure that the revised lists

- are "tiered" to distinguish the types of items that should be subject to stricter or more permissive levels of control for different destinations, end-uses, and end-users;
- create a "bright line" between the two current control lists to clarify which list an item is controlled on, and reduce government and industry uncertainty about whether particular items are subject to the control of the State Department or the Commerce Department; and
- are structurally aligned so that they potentially can be combined into a single list of controlled items.7

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[3] White House, "Statement of the Press Secretary," news release, August 13, 2009, available at http://www.whitehouse.gov/the_press_office/Statement-of-the-Press-Secretary (accessed September 7, 2010).

[4] For full details on the Presidential initiative, see White House, "Fact Sheet on the President's Export Control Reform Initiative," April 20, 2010, available at http://www.whitehouse.gov/the-press-office/fact-sheet-presidents-export-control-reform-initiative (accessed September 7, 2010).

[5] White House, "Statement of the Press Secretary," news release, August 30, 2010, available at http://www.whitehouse.gov/the_press_office/Statement-of-the-Press-Secretary (accessed September 7, 2010).

[6] See advance notice of proposed rulemaking, "Revisions to the United States Munitions List," available at http://www.pmddtc.state.gov/FR/2010/75FR76935.pdf (accessed July 12, 2011).

[7] White House, "President Obama Announces First Steps Toward Implementation of New U.S. Export Control System," December 9, 2010, available at http://www.whitehouse.gov/the-press-

As a test case for this model, the Administration published their first set of initial results in December 2010, which included a draft rewrite of one of the Categories of the USML for public comment, Category VII (tanks and military vehicles)8. The Administration has sought input from U.S. industry on these and other proposed changes from U.S. industry as well as European and other governments and companies.9 The Administration is continuing its review of the other Categories of the USML with a goal of completing a draft rewrite by the end of 2011.

On the second Singularity, the President signed an Executive Order on November 9, 2010 to create an Export Enforcement Coordination Center to coordinate and de-conflict U.S. criminal and administrative enforcement operations.10 This center will be housed in the Department of Homeland Security. Funding for a common IT infrastructure, the third Singularity, has been identified and transition activities are underway across the relevant U.S. Government agencies. Efforts to create a Single Licensing Agency, the fourth Singularity, have not progressed far, however. The Administration has met with key Congressional committees about proposed legislation for a single licensing agency, but legislative action in this area is not expected anytime soon.

In the United States, industry reactions to the President's export control reform initiative has been generally positive, but cautious. The Chief Executive Officers (CEO) and senior officials from the major industry associations such as the Aerospace Industries Association and the National Association of Manufacturers and CEOs of major defence companies issued statements of support for the announced reforms.11 Groups that monitor arms proliferation and are generally skeptical of export control reform, such as the Federation of American Scientists, did not embrace the President's initiative.12

OTHER TADIC INITIATIVES

Meanwhile, bilateral initiatives are in progress between US and other NATO and non-NATO Countries.

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office/2010/12/09/president-obama-announces-first-steps-toward-implementation-new-us-expor (accessed April 17, 2011).

[8] The proposed rule is available at http://www.pmddtc.state.gov/FR/2010/75FR76930.pdf (accessed July 12, 2011).

[9] See, for example, the February 25, 2011 remarks of Kevin Wolf, Assistant Secretary of Commerce for Export Administration, in Munster, Germany, available at http://www.bis.doc.gov/news/2011/wolf_exportkontrolltag.htm (accessed April 17, 2011).

[10] Executive Order 13558, "Export Coordination Enforcement Center," November 9, 2010, available at http://www.whitehouse.gov/the-press-office/2010/11/09/executive-order-export-coordination-enforcement-center (accessed April 17, 2011).

[11] See, for example, http://www.aia-aerospace.org/newsroom/aia_news/president_obama_announces_additional_steps_toward_export_control_modernization/ (accessed July 12, 2011) and http://www.securityandcompetitiveness.org/resources/show/2254.html (access July 12, 2011).

[12] See, for example, http://www.fas.org/programs/ssp/asmp/index.html (accessed July 12, 2011).

The National Export Initiative. This focus on export control reform supports a related initiative by the President to double U.S. exports by 2014. The National Export Initiative (NEI) was established by Executive Order on March 11, 201013 and there have been a number of reports and activities focused on that effort. The streamlining of U.S. Government regulations is an important component of the NEI and the President again noted the importance of this initiative in his January 2011 State of the Union Address.14 While the President's export control reform initiative is not explicitly related to the NEI, they are both focused on improving how the United States does business with its overseas partners.

ITAR Amendment on Dual and Third-Country Nationals. The Department of State is amending the International Traffic in Arms Regulations (ITAR) to revise its policy with regard to transfers of defense articles and services to companies that employ dual national and third-country national employees. The previous policy had generated resistance in many European countries because it was perceived to violate national privacy laws in those states. The new rule was published as a final rule on May 16, 2011 and will go into effect soon.15 Industry reaction has been mixed; while most see the new rule as an improvement, there are still questions and concerns about privacy laws.

Defense services proposed rule. The State Department issued a proposed rule on 13 April to amend the ITAR to update the policy regarding defense services.16 The intent of this change is clarify the definition and scope of defense services to help reduce the number of Technical Assistance Agreements (TAAs) required for the transfer of defense services. Most industry observers consider the proposed rule a step in the right direction, but that some ambiguity needs to addressed before the change becomes final.

U.S.-UK and U.S.-Australia Defense Trade Cooperation Treaties. The U.S.-UK and U.S.-Australia Defence Trade Cooperation Treaties were signed in the summer of 2007 and had been the focus of much debate and negotiations between the governments concerned and, in particular, between the U.S. Administration and the Congress.[17] Ultimately, the Treaties were ratified by the Senate and accompanying implementing legislation was passed by the Senate and the House of Representatives in late September 2010. The U.S., UK, and Australian governments are presenting working to modify existing regulations to accommodate the Treaty regime and identifying "pathfinder" programs to test the Treaty framework during 2011. The goal of the governments is to have the Treaty regime up and running by early 2012. The Treaties are expected to benefit U.S., UK, and Australian industries through the sharing of approved controlled technology and hardware with their respective bilateral partners and customers without the lag time and uncertainty of the export license process. Some

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[13] White House, "Executive Order: National Export Initiative," March 11, 2010, available at http://www.whitehouse.gov/the-press-office/executive-order-national-export-initiative (accessed April 17, 2011).
[14] White House, "Remarks by the President in State of Union Address," January 25, 2011, United States Capitol, Washington, D.C., available at http://www.whitehouse.gov/the-press-office/2011/01/25/remarks-president-state-union-address (accessed April 17, 2011). Further information on the NEI is available at http://www.export.gov (accessed April 17, 2011).
[15] The final rule is available at http://www.pmddtc.state.gov/FR/2011/76FR28174.pdf (accessed July 13, 2011).
[16] Available at http://www.pmddtc.state.gov/FR/2011/76FR20590.pdf (accessed July 13, 2011).
[17] The texts of the two Treaties and the accompanying implementing arrangements and list of exempted defense articles is available at http://www.pmddtc.state.gov/treaties/index.html (accessed July 14, 2011).

advanced technologies are exempted from the Treaty regime, at least initially, but the goal of the governments is to get the regime up and running first and then to look at additional areas where the Treaty regime could be expanded in time.

Defense procurement. Another example of bilateral initiatives is the Reciprocal Defense Procurement Memoranda of Understanding (RDP MOU) which have been established by the US with fourteen EU member States. These RDP MOU provide a platform for ongoing communication regarding market access and procurement matters that affect effective defence cooperation. The purpose of these MOUs is to promote rationalization, standardization, and interoperability of defence equipment with allies and friendly governments, called RDP MOU countries, and to offer all parties equal access to each other's defence procurement competitions and treat the bidders of the other Party equally fairly as domestic bidders. Among other things, such MOUs involve reciprocal waivers of buy-national laws by each country so that the companies of the other Party are eligible to bid on equal footing with the domestic bidders These RDP MOU countries are part of the list of "qualifying countries" in the US Defense Federal Acquisition Regulation Supplement (DFARS 225.872), which ensures that offers of products of those countries are exempted from the US Buy American Act and Balance of Payments Program policy that normally requires the US Department of Defense to add 50 percent to the price of the foreign products when evaluating offers. This also means that US goods and technologies will be exempted from any analogous "Buy National" law or policy applicable those countries' defence procurements.

U.S. Department of Defense (DoD) technology security and foreign disclosure (TS&FD) process reform. The U.S. DoD TS/FD processes are concerned with the release of high-end technology to U.S. allies and partners. There are currently thirteen processes for the review of technology across DoD, including those for low-observable, counter-low-observable (LO/CLO), communications security (COMSEC), and night vision technologies, each with their own processes and timelines and with no integrated Department appeals or closure process. The status quo created a significant amount of confusion with U.S. companies, international customers, and even DoD officials. Mr. William Lynn, the Deputy Secretary, launched a review of the Technology Security and Foreign Disclosure processes in July 2010 and he later approved the study group's findings and recommendations on December 20, 2010. As a result, a TS&FD office has been established in the Office of the Secretary of Defense to serve as the focal point for TS&FD issues for key Government and industry stakeholders.

CONGRESSIONAL REACTIONS AND LEGISLATION

Congressional reaction to these activities has been mixed. The committees of jurisdiction in the Senate and the House of Representatives, the Senate Foreign Relations Committee (SFRC) and the House Foreign Affairs Committee (HFAC) respectively, have expressed support for the principle of export control reform. The Senate did ratify the U.S.-UK and U.S.-Australia Treaties in late 2010 and there have been a number of discussions between the Administration and key Congressional staff about the progress of the Administration's export control reform initiative.

Congressional priorities are somewhat different from that of the Administration, however. Chairwoman Rep. Ileana Ros-Lehtinen (R-Fla.) has recently expressed negative views about the Administration's approach. She noted in May that "Ultimately, new legislative authorities would be required to implement the administration's plan – a plan substantially at variance with the current statutory scheme for controlling defense articles under the Arms Export Control Act and dual-use

items under the Export Administration Act, and requiring Committee review," she said.18 She did introduce, however, her own bill, H.R.2122 - Export Administration Renewal Act of 2011, on June 3rd.19 This bill has provisions that reauthorize the Export Administration Act of 1979 (EAA), increase penalties on EAA violators, and strengthen foreign policy controls on state sponsors of terrorism. In a nod to industry, the bill also includes a provision to move many "generic parts and components" from the USML to the CCL.20

The Ranking Member of the HFAC, Rep. Howard Berman (D-CA.), has introduced a separate bill also focused on the renewal of the EAA. The bill, titled the Technology Security Act, provides the President with authority to regulate the transfer of sensitive U.S. goods, services, software and technological information that could pose a threat to U.S. national security if obtained by hostile governments, terrorist groups or threatening persons.21 In late May, Rep. Sherman noted that, "The current export control statute is an out-moded relic of the Cold War that focuses on economic warfare against old adversaries and fails to account for today's threats. Updating this law is essential to our national security and necessary to sustain our cutting edge technology sector and create new, high quality jobs. A new export control law is necessary to preserve our competitive advantage."22

Industry reaction to these bills has been mixed. While both bills have provisions that are viewed as positive steps forward, there is concern that the Congressional efforts are disconnected from the Administration's approach and there is not a great deal of synergy among these initiatives. There is no clear timetable for action on these House bills and, should legislation pass the House, their prospects for consideration by the Senate are unknown.

PROSPECTS FOR THE REST OF 2011

With the upcoming Presidential election campaign in 2012 and the recent departure of Secretary Gates from DoD, who was the lead champion for export control reform within the Administration, the prospects for these multiple initiatives in the United States is uncertain. Maintaining momentum for continued reform will require significant leadership across the Administration. While most observers expect the Administration to complete its review of the USML, it is unclear how receptive that Congress will be to the consequent movement of a significant number of defense items from the USML to the CCL. That being said, however, the implementation of the U.S.-UK and U.S.-Australia Treaties and other administrative initiatives underway could significantly improve how the United States shares technology with its close allies and partners over time.

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[18] Erik Wasson, "Ros-Lehtinen Throws Cold Water on Export Control Reform," *The Hill*, May 12, 2011. Available at http://thehill.com/blogs/on-the-money/1005-trade/160815-ros-lehtinen-throws-cold-water-on-export-control-reform (accessed July 14, 2011).
[19] Text of the bill is available at http://www.gpo.gov/fdsys/pkg/BILLS-112hr2122ih/pdf/BILLS-112hr2122ih.pdf (accessed July 14, 2011.
[20] Draft fact sheet on the Export Administration Renewal Act of 2011. Available at http://www.foreignpolicy.com/files/fp_uploaded_documents/110527_Draft%20EAA%20Fact%20Sheet%202011.pdf (accessed July 14, 2011).
[21] Text of the bill, introduced on 26 May, is available at http://thomas.loc.gov/cgi-bin/bdquery/D?d112:3:./temp/~bdOqcB:: (accessed July 14, 2011).
[22] Josh Rogin, "Berman fires opening salvo in export reform debate," *The Cable: Reporting Inside the Foreign Policy Machine*, May 26, 2011. Available at http://thecable.foreignpolicy.com/category/topic/us_foreign_policy?page=1 (accessed July 14, 2011).

NATO DIVISIONS AND NATO BODIES ADDRESSING THE PROVISION OF NATO MILITARY CAPABILITIES

NATO DEFENCE INVESTMENT DIVISION

The Defence Investment Division (DI) focuses on the development of military capabilities to enhance the Alliance's capacity, including armaments planning, integrated air defence, airspace and air traffic management, and command and control. It contributes to the Nations' ability to assign to the Alliance forces that are properly equipped and interoperable to undertake the full range of military missions.

The Division is led by the Assistant Secretary General (ASG) for Defence Investment, currently Mr. Patrick Auroy, France. The ASG/DI is also the permanent Chairman of the of the Conference of National Armaments Directors.

CONFERENCE OF NATIONAL ARMAMENTS DIRECTORS

The major work within NATO to identify opportunities for collaborative research, development, production and support, of military equipment takes place under the auspices of the Conference of National Armaments Directors (CNAD). The CNAD is the senior advisory committee to the North Atlantic Council on armaments issues. It sets priorities and gives guidance to its substructure, which is supported by military and civilian experts from Allies and Partner nations.

NATO INDUSTRIAL ADVISORY GROUP (NIAG)

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 the NATO. 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:

- Advising National Armament Directors on industrial perspectives and issues
- Bringing industrial know-how and ideas to the work in CNAD and other NATO Bodies addressing NATO military capability requirements.

NATO DEFENCE POLICY AND PLANNING DIVISION

The Defence Policy and Planning Division (DPP) has the lead on defence-related issues such as defence transformation, defence capabilities, defence planning, logistics and missile defence. The Division is responsible for developing political guidance for the implementation of NATO's new Strategic Concept, in particular to guide the work undertaken during the NATO Defence Planning

Process, and is also responsible for the defence-related aspects of cooperation between NATO and the EU, notably in the field of defence planning and capability development. In addition, the Division is responsible for the political-military and defence-related aspects of cooperation with partners and international organisations.

NATO EMERGING SECURITY CHALLENGES DIVISION

The Emerging Security Challenges Division (ESC) aims to provide a coordinated approach by the Alliance to the challenges of the 21st Century. These include terrorism, Weapons of Mass Destruction proliferation, cyber threats, as well as energy security challenges, including those posed by environmental changes. The Division will play an important role in the implementation of the new Strategic Concept, as well as in the development of a strategic analysis capability to enable the Alliance to better anticipate crisis situations and assess risks. The division also promotes security cooperation through a variety of programmes, in NATO, with Partner nations, and with other international organisations, as appropriate.

NATO OFFICE OF RESOURCES

The NATO Office of Resources (NOR) brings together, under the direction and leadership of the Director NOR, all international staff working on NATO military common-funded issues with the aim of reinforcing military common-funded resource management at the NATO HQ. The NOR provides integrated staff advice and support to the Resource Policy and Planning Board (RPPB), the Budget Committee (BC) and the Investment Committee (IC) as well as their Chairmen. The NOR provides staff advice to the divisions of the International Staff (IS) and International Military Staff (IMS), and other bodies as required, on NATO military resource issues.

INTERNATIONAL MILITARY STAFF

The International Military Staff (IMS) is the executive body of the Military Committee (MC), NATO's senior military authority. It is responsible for preparing assessments, studies and other papers on NATO military matters. It also ensures that decisions and policy on military matters are implemented by the appropriate NATO military bodies.

ALLIED COMMAND TRANSFORMATION

Allied Command Transformation (ACT) is NATO's leading agent for change, driving, facilitating, and advocating continuous improvement of Alliance capability to maintain and enhance the military relevance and effectiveness of the Alliance. The Strategic Objectives of ACT are:

- Providing appropriate support to NATO missions and operations
- Leading NATO military transformation
- Improve relationships, interaction and practical cooperation with partners, nations and international organisations.

CURRENT NATO AGENCIES

NATO RESEARCH AND TECHNOLOGY ORGANISATION

The NATO Research and Technology Organisation (RTO) promotes and conducts co-operative scientific research and exchange of technical information among 28 NATO nations and 38 NATO partners. The RTO encompasses 3000 scientists and engineers addressing the complete scope of defence and technologies and operational domains. The Research and Technology Agency (RTA) organises a wide range of studies, workshops, symposia, and other forums in which researcher can meet and exchange knowledge.

NATO CONSULTATION, COMMAND AND CONTROL AGENCY

The NATO Consultation, Command and Control Agency (NC3A) is responsible for delivering cutting-edge technology in support of NATO's missions and decision-makers; the lion's share of the capabilities are procured from industry.

NATO MAINTENANCE AND SUPPLY AGENCY

The Maintenance and Supply Agency (NAMSA) is NATOS's principal logistic support management agency. NAMSA's main task is to assist NATO nations by organizing common procurement and supply. of spare parts and arranging maintenance and repair services. NAMSA also contributes regularly to the work of Conference of National Armaments Directors (CNAD) and its sub-groups.

NEW NATO AGENCIES

NATO is conducting a reform of the NATO Agencies. This will result in a Procurement, Support and Communication & Information Agencies, as well as a Science and Technology Organisation under a Chief Scientist.

PROCUREMENT AGENCY

The Procurement Agency aims to be the centre of excellence for multinational armament procurement. It provides a competitive framework for ongoing and future armament procurement programmes. This includes a strategy to encourage and attract Nations to initiate and join multinational armament procurement programmes.

SUPPORT AGENCY

The Support Agency will accommodate multinational programmes, act as a Host Nation for NATO Security Investment Programme (NSIP) projects, and support the Strategic Commands with in-theatre operational logistics.

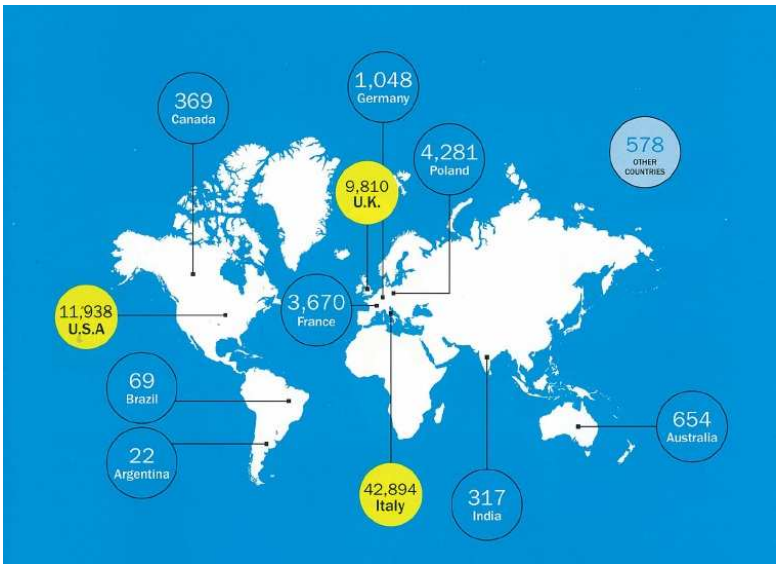
It will also provide in-service support, maintenance and logistics to NATO and national weapons systems, as well as services such as ammunition disposal.

COMMUNICATION & INFORMATION (C&I) AGENCY

The C&I Agency will be NATO's principal C3 capability deliverer and CIS service provider for all its entitled customers. It will provide IT Shared Services to NATO HQ, the NATO Command Structure and the new Agencies.

The C&I Agency will ensure continuous Communication and Information Systems (CIS) support to all operations in which NATO is engaged, responding to SACEUR's needs

FINMECCANICA



Finmeccanica is a leading manufacturer in the high technology sector and ranks among the top ten global players in aerospace, defence and security.

The Finmeccanica Group focuses heavily on three strategic pillars: helicopters, defence and security electronics and aeronautics, which **generate** 73% of revenues, 67% of orders and account for 74% of the workforce.

Finmeccanica also enjoys a strong presence in the space sector where it controls satellite services.

Furthermore, the group has substantial expertise and a well-established position on the global transport and power generation markets.

It is headquartered in Italy, and has permanent bases with significant production assets in three domestic markets: Italy (with a staff of more than 42,500), the UK (with a staff of around 9,700) and the US (with a staff of around 11,900). In Europe, it also has a significant presence in France (with 3,700 employees), in Germany (over 1,000) and in Poland (around 3,400), and has established a growing network of partnerships in emerging countries worldwide. In total, it has about 75,200 employees, of which approximately 43% work outside Italy. In 2010, it generated revenues of approximately EUR 18.7 billion and orders of EUR 22.5 billion. Finmeccanica has a backlog worth EUR 48.7 billion and invests about 11% of its revenues in research and development.

Finmeccanica SpA's ordinary shares are listed on the Italian stock market (FNC IM; SIFI.MI). The Italian Ministry of Economy and Finance retains 30.2% of the share capital, while Italian and foreign institutional and private investors own the remainder.

THALES RAYTHEON SYSTEMS

ThalesRaytheonSystems 10TH ANNIVERSARY

ThalesRaytheonSystems (TRS) is a transatlantic joint venture that specializes in air operation command and control systems, surveillance radars, and ground-based weapon-locating radars. As a mission systems integrator, we are proud to supply some of world's largest programs in our field. ThalesRaytheonSystems is equally owned by two global defense leaders - Raytheon Company and Thales S.A., with subsidiaries located in Fullerton (near Los Angeles), California, and Massy (near Paris), France.

We provide critical decision-making solutions for complex missions through the integration of sensors, operations centers, and telecommunications networks for air operations and battlefield systems. TRS excels in system integration, complex program management, real time and non real time software, human-machine interfaces and service oriented architecture. In addition, we optimize research and development opportunities from our parent companies to provide advanced solutions in terms of operational performance, reliability and affordability.

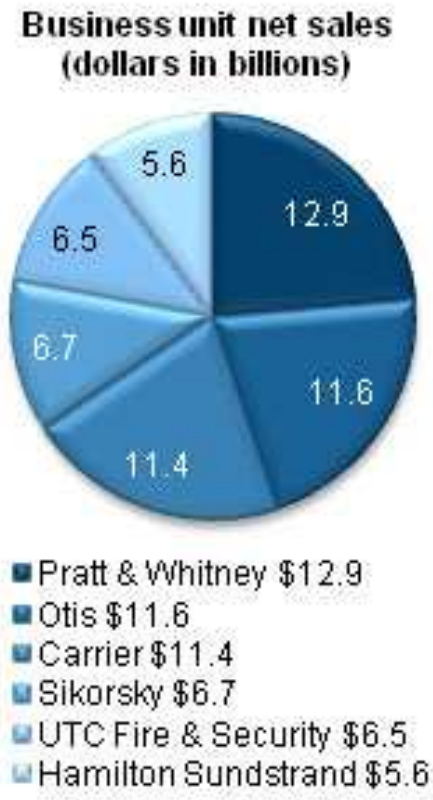
ThalesRaytheonSystems offers radar sensors for homeland defense, tactical air defense, counter-battery and weapon system coordination markets. With the technological strengths of Thales and Raytheon, TRS is positioned to offer customizable solutions matched with a coordinated support for all customers throughout the world.

Mission assurance and customer support are critical to ThalesRaytheonSystems' success. We operate as a trusted partner of each defense client, and are dedicated to meet customer requirements from initial solution design to support through the entire product life-cycle. The significant size of our installed product base allows us to dedicate resources to these activities and offer fast responses to customer needs.

As a forward-thinking, dynamic company, TRS offers numerous career opportunities in the United States, France and internationally. Eighty percent of the company's employees are top-level engineers who benefit from decades of experience. Our employee base of 1,600 is equally split between France and the USA.

UNITED TECHNOLOGIES

United Technologies



United Technologies Corporation (UTC) *is a diversified and leading company which is committed to excellence and whose products include:*

*1) **Carrier** heating, ventilation, air-conditioning and refrigeration products,*

*(2) **Hamilton Sundstrand** industrial products, aerospace and space systems, homeland security and fire protection and suppression systems,*

*(3) **Otis** elevators, escalators and moving walkways,*

*(4) **Pratt & Whitney** aircraft engines, industrial gas turbines and space propulsion systems,*

*(5) **Sikorsky** helicopters and small fixed-wing aircraft,*

*(6) **UTC Fire & Security** fire detection, suppression and fire fighting products and services, security systems (including intruder alarms, access control and video surveillance systems), and,*

*(7) **UTC Power** fuel cells.*

UTC employs nearly 208.000 worldwide, of which 66,000 people across 32 European countries. UTC develops security and defense capabilities to protect people from harm and ensure that our ever-changing world runs better, faster, and more efficiently.

BIOGRAPHIES OF MODERATORS & PANELLISTS AND SPEAKERS

ANDERS FOGH RASMUSSEN

Anders Fogh Rasmussen took office as the North Atlantic Treaty Organization's 12th Secretary General on 1 August 2009.

He studied economics at the University of Aarhus, graduating (MSc Econ) in 1978. The same year he became member of the Danish Parliament representing the Liberal Party.

From 1992 to 1998 he was spokesman for the Liberal Party and from 1993 to 1998 in addition vice-chairman of the Parliament's Economic and Political Affairs Committee. In 1998 he became chairman of the Liberal Party's national organisation and vice-chairman of the Parliament's Foreign Policy Board.

After the parliamentary elections in 2001 he became Prime Minister of Denmark, forming his first government, a coalition consisting of the Liberal Party and the Conservative People's Party. His government was re-elected in 2005 and 2007 respectively, and he held the position as Prime Minister until he was elected as future NATO Secretary General

PATRICK AUROY

Lieutenant General (Armaments) Patrick Auroy is NATO Assistant Secretary General for Defence Investment. In October 2009 he took up the post of Deputy Director General of the DGA (Direction Générale de l'Armement), the armaments branch of the French MoD.

He graduated from the Ecole Polytechnique (1975), the ENSAE (French Aeronautics and Space Academy 1980), and the EPNER (French Flight Test Crew Academy, 1981), and began his career as a helicopter flight test engineer responsible for certification at the DGA Flight Test Centre (CEV) in Brétigny.

In 2005, Mr Auroy was appointed as Director for Force Systems and Strategies, responsible for:

- preparing future capabilities - a part of the capability process led by the Joint Staff,
- defence policy on science, research and technology,
- international armaments cooperation, in particular through NATO and the EU,
- economic and industrial armaments issues.

Throughout this period, he supervised for the DGA the preparation and implementation works related to the French return to the NATO integrated command structure and those related to the French Presidency of the European Union.

ROBERT BELL

Mr. Robert Bell is the Secretary of Defense Representative in Europe (SECDEFREPEUR) and the Defense Advisor (DEFAD) for the US Mission to NATO (USNATO). As SECDEFREPEUR, he is responsible for planning, recommending, coordinating, and monitoring DoD policies, programs and initiatives in Europe. As the USNATO DEFAD, he is responsible for the formulation, coordination, and presentation of Department of Defense policies to the US Ambassador to NATO.

Before taking his current position, Mr. Bell was the Senior Vice President of SAIC. As Account Manager for NATO and EUCOM, he coordinated the activities of SAIC Business Units pursuing contract opportunities at those two organizations. Mr. Bell also chaired SAIC's European Executive Committee and served as Managing Director of SAIC's subsidiaries in Belgium and France. In Jan 2010, he was selected to chair the NATO Industrial Advisory Group (NIAG).

Prior to joining SAIC in 2004, he served as NATO Assistant Secretary General for Defense Investment from 1999-2003. In this capacity, Mr. Bell chaired NATO's Conference of National Armaments Directors (CNAD) and its C3 Board (NC3B) and directed NATO International Staff activities in the areas of armaments cooperation, missile defense, air defense, airspace management, common funding and resource policy.

JEAN FOURNET

Jean Fournet was the NATO Assistant Secretary General for Public Diplomacy from 2003 until 2007. Prior to that he had been the Assistant Secretary General for Scientific and Environmental Affairs since March 2001.

Before coming to NATO, Jean Fournet was the National Armaments Director and Director of Co-operation and Industrial Affairs in the Direction générale de l'armenment (DGA) of the French Ministry of Defence. In his duties there he was responsible for bilateral and multilateral co-operation relations with the various Alliance and European Union countries, which involved intense communication and dialogue efforts. In 2000 he was also the Chairman of the Board of the Organization for Joint Co-operation in Armaments (OCCAR) involving Germany, Italy, the United Kingdom and France. Until 1999 he was a member of the board of directors of several national firms (Aérospatiale, SNECMA, Dassault).

He attained the rank of Lieutenant General, Armament Corps in 1997..

JACK G. HARRINGTON

Since 2009 Jack G. Harrington has served as Chief Executive Officer of Thales-Raytheon Systems and has been based in France. From August 2009 till 2009 Mr. Harrington served as Vice President of Command and Control Systems at Raytheons Network Centric Systems. He co-founded Raytheon - Virtual Technology Corporation (VTC) (formerly Virtual Technology Corporation (VTC)) in 1994 and served as its President and Chief Executive Officer. Under his leadership, VTC became a leader in the field of distributed modeling ... and simulation and joint C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance) interoperability. He served as Director of Software Engineering, and later as Vice President for Software Engineering at Potomac Systems Engineering (PSE). Mr. Harrington's extensive career has been devoted to supporting Department of Defense technology development. He has more than 20 years of experience providing advanced technology engineering support to customers such as Joint Staff; U.S. Central Command, Program Executive Office for Command, Control, Communications, Tactical, Naval Air Systems Command, Defense Information Systems Agency and Defense Advanced Research Projects Agency.

MS VALERIA EVANS – UK MOD

Ms Valeria Evans – UK, Head of International Relations Group at Defence Equipment and Support

JAMES A. HURSCH - US DOD

Mr. James A. Hursch - U.S. Department of Defence

GIUSEPPE ORSI – CEO-FINMECCANICA SPA

Since May 2011, Giuseppe Orsi is the Chief Executive Officer of the Finmeccanica Group

From November 2004 to May 2011 he was the Chief Executive Officer of AgustaWestland, the leading helicopter company owned by Finmeccanica,.

In November 2002, Mr. Orsi was appointed Managing Director of Agusta spa and the COO of the Italian operation of AgustaWestland.

In 1994, Mr. Orsi was appointed Senior Vice President – Government Sales and Programs of Agusta with the responsibility of the worldwide military sales.

CLAUDE-FRANCE ARNOULD – CEO-EUROPEAN DEFENCE AGENCY

Claude-France Arnould is the Chief Executive of the European Defence Agency since 17 January, 2011.

Previously, Ms. Arnould worked on defence matters in other EU positions. She led the Crisis Management and Planning Directorate (CMPD) at the General Secretariat of the Council of the European Union, between 2009 and 2010, and as Director for Defence Issues at the General Secretariat of the Council of the European Union from 2001 to 2009 (in charge of operations military capabilities, partnerships and chair of the EU Satellite Centre Board).

Earlier in her career (1998-2001), Ms. Arnould worked as Director of International and Strategic Affairs at the French National Defence General Secretariat /Prime Minister (preparation of national "Council of Defence", CIEMG / interagency process for weapons exports control, armaments and space issues).

She became Desk Officer at the Economic and Financial Affairs Directorate, at the French Ministry of Foreign Affairs (1983-1986), responsible for EC trade policy and external relations. In 1989, she was appointed Deputy Director of European Community Affairs, at the French Ministry of Foreign Affairs (in charge of external relations, trade, budget, institutions, CAP and development). She was then posted in Germany, as First Counsellor of the French Embassy (1994-1998).

GENERAL (RTD) WILLIAM J. BEGERT

William J. Begert, General, U.S. Air Force (Retired) is the vice president for Business Development and Aftermarket Services for Pratt & Whitney Military Engines in East Hartford, Connecticut. As vice president, he is responsible for domestic and international military sales, assessing U.S. Military requirements and developing business strategies for Pratt & Whitney's military engine services. He is also responsible for the maintenance, repair and overhaul operations of Pratt & Whitney's Military Aftermarket Services

In the Air Force, General (Retired) Begert was a Command Pilot with almost 7,000 flying hours. He held command positions multiple times in his career and held a variety of staff positions.

General (rtd) Begert served as the Vice Commander of U.S. Air Forces in Europe during the air war over Serbia. He culminated his career as the Commander, Pacific Air Forces where he was responsible for U.S. Air Force activities in an area encompassing more than 50 percent of the globe. His command consisted of approximately 45,000 Air Force personnel and more than 400 aircraft. He assumed his position at Pratt & Whitney in February 2005.

THOMAS F. DARCY

Thomas F. Darcy is Vice President of Defense Electronics and Systems at EADS North America.

Darcy is responsible for all Line of Business activities related to Systems and Defense Electronics and Services in the United States. He is responsible to the COO of EADS North America for formulating and integrating Defense and Security strategy and activities for the U.S. market. Darcy serves on numerous corporate boards and non-governmental organization boards.

Prior to his current position at EADS North America, Darcy worked for Northrop Grumman Corporation in

Brussels, Belgium where he was the Vice President of Europe responsible for Northrop Grumman Integrated Systems (IS) Sector's Western, Central and Eastern European business development and government relations activities.

Mr Darcy also was the President of the American Defense Industry Forum (ADIF), was former US Government Representative to the NATO Industrial Advisory Group (NIAG) and served on the Board of Directors of the United States Trade and Investment Center (USTIC).

From 1991 to 1995, he was the U.S. National Armaments Director Representative to NATO.

In addition, Darcy advised the US Ambassadors to NATO and the European Union on defense trade and technology issues. Darcy is a retired U.S. naval officer.

BETH M. MCCORMICK

Beth M. McCormick was appointed to the position of Deputy Assistant Secretary of State for Defense Trade and Regional Security in the Bureau of Political-Military Affairs on February 14, 2010. In this position, she manages two of the Bureaus main organizations, specifically the Directorate of Defense Trade Controls (DDTC), and the Office of Regional Security and Arms Transfers (RSAT). She provides overall policy guidance regarding the transfer of defense technologies to other countries, through commercial defense trade and foreign military sales, and serves as one of the key links between the State and Defense Departments on regional security issues.

From October 2008 to February 2010, Ms. McCormick served as the Deputy Director of the Defense Security Cooperation Agency, the Defense agency responsible for security cooperation and partner capacity building programs worldwide.

PETER M. WAGNER

Head of Unit for Defence, Aeronautic and Maritime Industries, Directorate General for Enterprise and Industry, European Commission

Since September 2010, Dr. Peter M. Wagner has been Head of Unit in charge of defence, aeronautic and maritime industries as well the European Commission's relations with the European Defence Agency.

In May 2005 he was appointed Head of Unit in the Directorate General for

Enterprise and Industry for General coordination, where he was in charge of general policy coordination, relations with Member States and the Council, the Community Lisbon Programme and the Competitiveness and Innovation Framework programme.

Responsibilities also included the setting up of the Executive Agency for Competitiveness and Innovation.

Before being appointed Assistant to the Secretary General in 2003, he worked in the European Commission's Directorate General for Industry on regulatory and policy coordination.

MAJOR GENERAL CARLO MAGRASSI

Carlo Magrassi is a Major General of the Italian Air Force and presently is assigned to the Italian Air Force Staff in Rome. From September 2011 he is Deputy Commander, Air Force Command based in Rome-Centocelle. Moreover, he has been appointed Chairman of a newly established forum, sponsored by the European Defence Agency, to support the military dimension of the Single European Sky ATM Research (SESAR) programme.

Major General Magrassi was deeply involved in the Research & Development and production phases of the European aircraft Eurofighter and Tornado, the EH 101 and NH 90 helicopters, and many other projects.

Major General Magrassi led the Air Force International Cooperation Branch dealing with international co-operation with NATO and non-NATO Nations.

In 2003, as Deputy Chief of the Defence Armaments Policy Department he was in charge of developing the policy on armaments acquisition and coordinating the governmental and industrial relations in national and international projects. In the same period he was also appointed as the Italian Representative to the Future Tasks & Policy Committee of the European procurement organization (OCCAR) and, additionally, as chairman of the Executive Committee of the 6 Nations cooperation initiative known as Letter of Intent (LoI).

BACKGROUND MATERIAL

SUMMARY OF RECOMMENDATIONS FROM 2008 NIAG STUDY SG 114 AND 2009 CNAD-RUSI CONFERENCE

SG 114 Study	CNAD-RUSI Conference	
Recommendations that can be addressed by NATO:		
Review, update and revitalize the 4-part 2003 NAC agreement on facilitating trans-Atlantic defense cooperation, including tasking the CNAD and NIAG to take the leading role in organizing, at senior levels, annual export licensing and technology transfer conferences. The proposed NATO Bucharest Summit Communiqué language (see p. 8) will play a catalyzing role for these NATO HQ efforts.	TADIC Conference should be repeated annually in order to monitor progress and provide a forum for the development of innovative ideas to improve trans-Atlantic co-operation. TADIC should be an item on NATO's agenda and included in the NATO's new Strategic Concept.	Bucharest Summit communique: – Apr 2008. "HoSG agreed to support the improving of trans-Atlantic defence technological and industrial cooperation as part of the efforts to develop and field the right capabilities and forces"
Encourage the setting of spending targets on defense R&T/D, modernization and transformation in order to maintain the ability of industry to supply needed capabilities and compete effectively. In particular, encourage nations falling below the NATO-recommended defense spending guideline of 2% of GDP to raise the level of their resource	Support the work recently endorsed by NAC to look at all options for balancing NATO's own resources and requirements, taking account of both long-term and short- term needs.	

commitments.		
Work with the United States to determine how best to ensure that NATO-related license requests receive appropriate processing priority within the US export licensing system, including by re-establishing an annual DoD-compiled list of items that furthers the Alliance's Prague Capabilities Commitment (PCC) objectives that will be provided to State and DoD licensing officers and to industry.	Conduct a survey to determine the impact on capability gaps and the impact on Coalition Interoperability from extant Export Control processes.	
	Encourage all parties to consider technology transfer and interoperability as design features during the early stage of development of a new equipment/system. NATO should call for Allies to urgently facilitate technology discussions amongst themselves in support of NATO Interoperability. Recommend careful review of recent recommendations from the NATO Staff Working Group on Interoperability (SWGI) and the NIAG regarding how best to enhance NATO interoperability and standardization to the greatest extent practicable, including greater reliance on open standards and "plug- and-play" architectures, and closer consideration of interoperability criteria by	

	the Military Committee when it approves Capability Packages.	
	Recommend the NATO military structure and NATO civilian agencies together consider how best to provide industry with earlier notice of emerging contract opportunities related to Crisis Response Operations (CRO) Urgent Requirements (CURs) emanating from Alliance Operational Missions	
	Recommend NATO Member States consider how to adopt greater use of Best Value Procurement methods for contract competitions related to CRO Urgent Requirements (CURs) emanating from Alliance Operations Missions (AOMs).	
	More effective use should be made of the expertise in the NATO Main Armament Groups to address short-term issues (i.e., support for operations).	1.
Consult on how best to establish a North American and European high-level forum within which trans-Atlantic export licensing issues can be discussed between governments and industry.	NATO should create an Industry Board for top-level dialogue between the Secretary General and the Strategic Commands on one side and Industry CEOs on the other. NATO should promote efforts to reform export control regulations to facilitate as free as possible flow of technology between Allies.	**2.** ***Action:*** To offer the rationale and options for a high level NATO Industry forum where the senior leadership of industry can engage with NATO's senior political and military leadership on a formal basis.

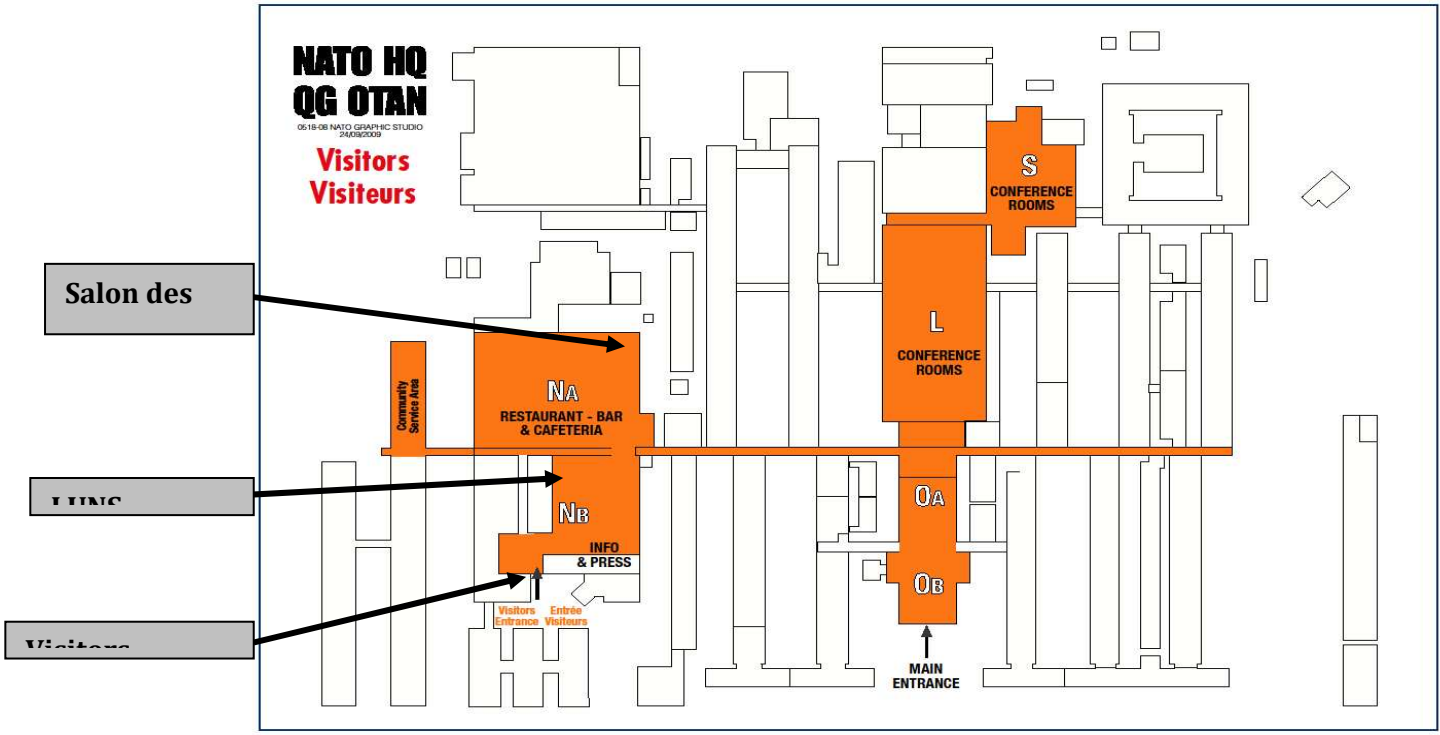
Recommendations that can be addressed by the United States Government:		
President Bush's January 22nd statement on export control reform embraces, at least in principle, most of the 19 recommendations of the Coalition for Security and Competitiveness. SG-114 views this as a good first step, but we recommend thorough implementation of these Presidential directives and positive action on the remainder of the Coalition's recommendations.	Urge the new US Administration to set ambitious goals, consistent with national security requirements, for the export control review ordered by President Obama and to actively engage NATO in a dialogue on the subject.	
Obtain Senate advice and consent in 2008 to the new US-UK (and U.S.-Australian) Defense Trade Cooperation Treaty while also explaining to NATO allies how this bilateral measure with one key NATO ally relates to its broader commitment to all Alliance Member States to promote interoperability consistent with the principle of the indivisibility of allied security. In this context, the United States should consider how the concept of an "approved community" for license-free trade enshrined in the new US-UK and U.S.-Australia Defense Trade Cooperation Treaties might provide a basis for the United States negotiating similar preferential defense trade arrangements with other allies and with NATO itself, via its key	Urge ratification by the US Senate of the pending US/UK Defense Trade Co-operation Treaty and recommend the Administration negotiate similar treaties with other key allies, particularly those engaged with the US and UK in combat operations in Afghanistan.	

procurement Agencies.		
Working with the Network Centric Operations Industrial Consortium (NCOIC), create a task force to together devise a viable export licensing procedure for facilitating the work of this important consortium.		
Complete at early date evaluation and implementation of DoD's Lean Six Sigma Business Process Improvement activity (a "DoD-Wide Project") aimed at improving current processes used for technology transfer and disclosure to allies and coalition partners, including final development of a defense systems and technologies release matrix that affords appropriate priority to the "cooperation" factor as it pertains to the releasability of sensitive technologies urgently needed by many U.S. allies engaged in ISAF operations in Afghanistan, including Counter-IED equipment.		
Avoid further delays in transitioning to the State Department's D-TRADE II, which should also be extended to European industries requiring licenses to respond, for example, to DoD RFPs.		
For major cooperative programs with NATO or among NATO allies, designate at the State Department's Directorate for		

Defense Trade Controls (DDTC) licensing officers for each program, rather than splitting the items intended for these NATO programs among separate ITAR categories, each with a different approval authority.		
Designate an overall DDTC liaison officer for senior-level, single-point-of-contact coordination with NATO HQ on major NATO modernization and coalition war-fighting initiatives.		
Use more fully the NSPD-23 inter-agency coordinating body for resolving U.S.-allied missile defense (MD) export control issues, particularly as the U.S. seeks to intensify its MD coordination with NATO and to broaden and deepen its MD cooperation with Russia pursuant to new initiatives in the NATO-Russia Council.		
Recommendations of relevance to European Union Member States who are also members of NATO		
Support the proposed December 5, 2007 Directive adopted by the European Commission concerning Intra-Community Transfers (ICTs) of defense articles and services within the EU, including supporting the establishment of requirements for EU Member States to provide general and global licenses for transfers to each	Develop a better understanding of where responsibilities and expertise lie between NATO and EU. Urge EU Member States to implement the new EU Directives on Intra-EU Arms transfers and Defence	

other for EU armed forces end-use and for components to certified companies based on each other's national territories.	Procurement.	
Take more aggressive and pro-active steps to explain to U.S. audiences, including Capitol Hill and the Administration, that the proposed December 5, 2007 European Commission Directive on Article 296 does not exclude competition from U.S. (or other foreign) firms and does not contain any overt "European preference" restriction, as SG-114 found had been feared would be the case in some quarters in Washington.	EU and US should enter into a dialogue on Export Controls	
Consistent with the principle of NATO solidarity, restrictions currently being observed with regard to EU arms embargoes should be the subject of deep and continuing consultation with the United States. These consultations should also take account of related issues, including U.S. and European approaches to "dual use" material controls and options for a strengthened EU Code of Conduct governing extra-EU arms transfers.	Applaud the Solana directive to the European Defense Agency (EDA) to identify with the US "concrete opportunities" for trans-Atlantic partnership. Encourage participating EU Member States to authorize EDA to establish co-operative partnership through administrative arrangements with all NATO Member States.	
Recommendations that can be addressed by Industry		
Improve its performance in terms of correctly filling out and formatting State/DDTC licensing	Develop a training program for executors of export control procedures to ensure a common	

requests.	understanding of the export control processes.	
Enhance its understanding overall with regard to how ITAR applies and does not apply, particularly with regard to how industries can take advantage of NATO-related ITAR exemptions or "fast-tracking" procedures.	Develop a methodology to determine the differences between a critical technology and a critical capability. Develop a glossary of export control terms	
Corporate counsel should refrain wherever possible from issuing interpretations more restrictive than strictly required by the ITAR.		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