

# TRANSATLANTIC DEFENCE TECHNOLOGICAL AND INDUSTRIAL COOPERATION (TADIC)

NIAG CONSULTANCY ADVICE STUDY  
SG-154 TADIC

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North Atlantic Treaty Organisation  
Boulevard Leopold III – B-1110 Brussels - Belgium

## Summary Report



Maintaining a strong defence industry in Europe and making fullest possible use of the potential of defence industrial cooperation across the Alliance remain an essential condition for delivering the capabilities needed for 2020 and beyond.<sup>1</sup>

<sup>1</sup> Chicago Summit Declaration on Defence Capabilities.



## TADIC TIMELINES

Forward by the Chairman of the Conference of National Armaments Directors

Enshrined in the basic principles of NATO, transatlantic cooperation has always been at the core of the Alliance. More than six decades on and defence industrial cooperation remains critical to NATO capability development. Trans-Atlantic Defence Industrial Cooperation (TADIC) is a perennial subject; it can be stimulated and improved; it can be made more efficient and effective, streamlined and simplified. The Conference of National Armaments Directors (CNAD), as the NATO senior committee for capability development in the field of armaments recognises the complexity of the subject and, considering the wide spectrum of stakeholders in TADIC, has agreed to systematically address this cooperation.

**2000** The CNAD commissioned a team of experts from industry, through the NATO Industrial Advisory Group (NIAG), to study and provide advice to NATO on TADIC.

**2001** Heavily impacted by the 9/11 events, the report offered recommendations on how to enhance the ability of industry to cooperate more effectively and provide cost effective and interoperable solutions to meet Alliance and national defence needs, while pursuing a defence against terrorism agenda.

**2003** NATO, together with the George C. Marshall European Center for Security Studies, held a conference on US transatlantic defence industrial cooperation. The conference concluded that dialogue with non-US industry and government representatives was important and necessary to contribute to a better understanding of the intentions, difficulties and opportunities of US policies and options to address possible difficulties. For US officials, it was an opportunity to take account of NATO, European and industrial views when finalising the update of the US export control legislation. Following this conference, the North Atlantic Council agreed on a series of recommendations aimed at enhancing Transatlantic Defense Industrial Cooperation via periodic briefings and conferences.

**2004** In June the Istanbul Summit Communiqué<sup>1</sup> stated: “NATO’s armament activities must meet the Alliance’s evolving military needs. We therefore reaffirm the importance we attach to mutually advantageous trans-Atlantic defence industrial cooperation.”

**2007** The CNAD commissioned the NIAG with a further study on Trans-Atlantic Defence Industrial Cooperation, with the mandate to identify measures that Allies could implement to bring about improvements in this area and not to propose changes to existing laws or regulatory mechanisms within the Member States. The study offered 18 separate recommendations for NATO, the United States, European Union Member States of NATO, and industry, both respectively and collectively. These recommendations, which included a number of detailed proposals together with defence trade initiatives in the United States and the EU, sought to improve the “playing field” governed by US and European policies.

The Report, delivered in 2008, focused on two particular impediments to more efficient and effective transatlantic defence industry cooperation: national **export licensing processes** and national **technology transfer policies**. It concluded that if NATO is to meet the ambitious but vital transformational and partnership capacity objectives articulated in the Comprehensive

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<sup>1</sup> 28 Jun. 2004 - Istanbul Summit Communiqué Issued by the Heads of State and Government participating in the meeting of the North Atlantic Council

Political Guidance and underscored in the U.S. Quadrennial Defence Review, its Member States must not only commit sufficient resources to match the requirements, they must also remove barriers to enhanced transatlantic cooperation among defence industries on both sides of the Atlantic.

**2008** The Bucharest Summit<sup>2</sup> declaration stated: “Supported by the defence planning processes, we will enhance our efforts to develop and field the right capabilities and forces, with the greatest practicable interoperability and standardisation. This will be furthered by improving trans-Atlantic defence industrial cooperation.”

That same year the CNAD joined efforts with the Royal United Services Institute (RUSI) and organised a Conference on Trans-Atlantic Defence Industrial Cooperation under the banner “Challenges and Opportunities in Trans-Atlantic Defence Industrial Cooperation”. The Conference produced a range of recommendations, the most salient being: to encourage and stimulate US-EU dialogue on defence industrial matters; to improve the understanding of export control procedures and processes; to develop a forum where senior industry and NATO leadership, both political and military, can engage formally.

**2010** The Strategic Concept adopted in Lisbon states a core principle: “The political and military bonds between Europe and North America have been forged in NATO since the Alliance was founded in 1949; the transatlantic links remains as strong, and as important to the preservation of Euro-Atlantic peace and security, as ever. The security of NATO members on both sides of the Atlantic is indivisible. We will continue to defend it together, on the basis of solidarity, shared purpose and burden sharing.”

The CNAD launched another NIAG effort to prepare a conference in 2011 with participation from export control legislators and other significant TADIC stakeholders.

**2011** Under the banner “Smart Defence, Smart TADIC”, the CNAD organised a TADIC Conference at NATO HQ to consider the implications of the new NATO Strategic Concept and the opportunities provided by NATO transformation initiatives for advancing TADIC; to review the developments in reforming export control processes in Europe and the United States, and discuss the resulting implications and opportunities, particularly with regard to multinational programmes supporting NATO capabilities and interoperability; and to review the TADIC issues and considerations from an industrial point of view, particularly in support of NATO programmes and capabilities such as Alliance Ground Surveillance, territorial missile defence, and cyber-security.

**2012** The Chicago Summit stated: “Maintaining a strong defence industry in Europe and making fullest possible use of the potential of defence industrial cooperation across the Alliance remain an essential condition for delivering the capabilities needed for 2020 and beyond”<sup>3</sup>.

During the late-October NATO-Industry Day, co-organised for the first time by Allied Command Transformation and the NATO International Staff, participants from NATO and industry addressed “Chicago Summit as a game changer”. The entire event, as well as a full breakout session, debated the impact of decisions taken at the summit on the NATO-Industry relationship and made recommendations for the future.

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<sup>2</sup> 03 Apr. 2008 - Bucharest Summit Declaration - Issued by the Heads of State and Government participating in the meeting of the North Atlantic Council in Bucharest

<sup>3</sup> Chicago Summit Declaration on Defence Capabilities

**2013** The CNAD launched another NIAG study on TADIC, with the aim to take stock of previous TADIC studies, reports and conferences and for the purpose of identifying measurable elements to characterise the progress of the transatlantic relationship. The study group will produce its report by March 2014.

**TADIC today.** Based on the momentum of the Chicago Summit declaration on capabilities and on the recommendations of the 2012 NATO-Industry Day, NATO has taken specific actions to improve the NATO-Industry relationship with TADIC implicitly in mind: we have developed a business portal that allows any interested company to easily identify the procurement opportunities at NATO; the North Atlantic Council acknowledged the “Framework for NATO-Industry Engagement”, a document developed with the help of industry that details principles and guidance for improving the NATO-Industry relationship; we rebranded NATO-Industry Day to the “NATO-Industry Forum” to elevate it to *the* event for strategic debate between NATO, industry and governments.

The NATO-Industry Forum is intended to be the capstone event for dialogue with industry and governments; it brings together high-level representatives from all sides to share their own views and experience. It represents a sounding board to discuss implementation of the strategic guidance from Heads of State and Government, jointly expressed in the Chicago Summit Declaration and in the NATO Strategic Concept.

Smart Defence, Connected Forces Initiative and capability development in general can succeed only if the transatlantic defence technological and industrial cooperation remain high on NATO agenda. This is an objective we must all strive to achieve. I hope the report that follows in this brochure will provide much food for thought for stakeholders of all description to identify actions by which you can help the Alliance meet this challenging objective.

Sincerely yours,

Patrick Auroy







01/10/2013

***TRANSATLANTIC DEFENCE  
TECHNOLOGICAL AND INDUSTRIAL  
COOPERATION***





This is the publicly releasable summary of the final report provided by the NATO Industrial Advisory Group (NIAG)'s Study Group (SG) 154 under the statement of work of the study on "Improving the Transatlantic Defence Technological and Industrial Cooperation (TADIC) - Way Forward Proposals".

SG-154 was commissioned by the NATO Conference of National Armaments Directors (CNAD)

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*This summary has been approved for public disclosure and is offered by the NIAG as a contribution to the improvement of the Transatlantic Defence Technological and Industrial Cooperation in support of the Alliance efforts to develop and field the right capabilities for Alliance operations and missions.*

**Disclaimer:** This summary expresses the views of the NIAG Study Group 154. These views do not necessarily reflect the views of NATO, nor of the NATO member countries.

**NIAG CONSULTANCY ADVICE STUDY  
SG-154 TADIC**

# **TRANSATLANTIC DEFENCE TECHNOLOGICAL AND INDUSTRIAL COOPERATION**

## **SUMMARY REPORT**



# PREFACE

The NIAG was invited by NATO's Conference of National Armaments Directors (CNAD) to provide "High Level Advice" to inform decisions by the CNAD on the way ahead following the 2009 CNAD-RUSI (Royal United Services Institute) and the 2011 CNAD-NIAG co-hosted conferences addressing TADIC.

The objectives of the study, performed by the NIAG SG-154, are to:

1. review the developments in Europe and North America to reform export control processes and discuss implications and opportunities resulting, particularly with regard to multinational programmes supporting NATO capabilities and interoperability;
2. review the TADIC issues and considerations from the industrial point of view, in particular in supporting NATO programmes and capabilities, such as Alliance Ground Surveillance (AGS) and Ballistic Missile Defence (BMD);
3. provide advice to CNAD and other concerned NATO Bodies and Agencies, to NATO member countries and to industry on measures and working practices to promote and to benefit from effective TADIC;
4. provide an assessment of developments related to TADIC since the 2008 NIAG Report and the 2009 and 2011 TADIC Conferences;
5. consider the implications of the new NATO Strategic Concept and the opportunities provided by NATO transformation initiatives for advancing TADIC;
6. offer the rationale for follow-on TADIC activities;
7. provide a joint International Staff - NIAG report to present to the Autumn 2012 CNAD meeting.

The NIAG SG-154 conducted interviews and analyzed the available news, databanks, surveys, reports, and other relevant studies which are related to the TADIC subject. The conclusions and recommendations from the 2008 NIAG Report and the 2009 and 2011 TADIC Conferences were also taken into account.

This summary is divided in two parts.

1. The first part provides an executive summary, including a list of most relevant and actionable recommendations.
2. The second part contains the analysis leading to the conclusions and recommendations.

## Summary

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# PART I - EXECUTIVE SUMMARY

Transatlantic Defence Technological and Industrial Cooperation (TADIC) is an iterative NATO effort. Through NATO's Conference of National Armaments Directors (CNAD), it aims at creating multinational



approaches for designing, developing, acquiring, sustaining and disposing of defence capabilities available to the Alliance. The most recent event in the series was the TADIC Conference, held on 14 October 2011 at NATO HQ (Brussels, Belgium), triggered by the new NATO Strategic Concept, the launching of the Smart Defence Initiative, the rebalancing of U.S. strategy between Europe and Asia, and the persistent financial crisis.

This Executive Summary refers to TADIC as both the TADIC Conferences held in 2009 and 2011,

as well as transatlantic cooperation in the field of defence technology and industry.

In general, transatlantic cooperation in industry, technology and science is a success story that has contributed to the development of the western nations and has established the conditions for a global model of prosperity. Defence industries, however, are subjected to strict regulation and control by NATO member countries, for both domestic and export activities, (e.g., the International Traffic in Arms Regulations (ITAR) and the Foreign Military Sales (FMS) programmes in the U.S. and the EU Defence Package in the EU<sup>1</sup>) and the nature of these regulations and controls varies widely amongst the NATO member countries. Demand drives the offer and, as the only legitimate customers for the defence industry are governments who are at the same time the regulating authority, the financier, and the user, normal market rules cannot apply. In some countries, there is additional complexity as the government is also a major shareholder in the defence industry and exercises significant control on mergers and acquisitions, and even on the profit margins of the programmes. Drawing a direct parallel between the defence industry and the civil market is therefore deeply flawed.

TADIC has to mitigate the barriers and/or obstacles to defence trade, acknowledging the fact that the NATO member countries have to ensure sovereignty and protection of national security at the level that each side deems appropriate. Some previous transatlantic defence projects faced some serious

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<sup>1</sup> Directives 2009/81/EC and 2009/43/EC and the "Defence Package" were adopted by the Council and the EP in 2009. The Defence Package also contained a Communication "Strategy for a Stronger and More Competitive European Defence Industry", ([http://ec.europa.eu/enterprise/sectors/defence/documents/index\\_en.htm](http://ec.europa.eu/enterprise/sectors/defence/documents/index_en.htm)) COM(2007) 764, 05/12/2007

challenges due to the conflict of interest between participants, agencies, policies and compounded by the imbalance between NATO member countries.

Defence systems are always required to be state of the art to cope with evolving threats and to maintain operational supremacy. End user collaboration is fundamental to define products. Innovation via defence Research and Development (R&D) cannot realistically be funded by private industry alone when there is only the single government customer and export prospects are so restricted. Therefore, governments, setting scientific and technological targets that give a return to NATO member countries in form of accumulated technological capital, should also fund and coordinate defence R&D activities.

Differences in approach and investment between the USA and the other Allies mean that the transatlantic technological gap is widening at an increasing rate. Trying to make R&D investments in Europe to reach or keep pace with the USA is beyond a single nation's capability.

**Differences in approach and investment between the USA and the other Allies is widening**

NATO does not mention a defence industrial policy in its Strategic Concept. In many countries the impact on society and jobs of the defence industry is a major political issue. Defence investments are contested and must be justified. Indeed, different defence industrial policies exist within the Alliance.

Governmental and industrial restructuring initiatives are primarily national, and budgets for defence capability acquisition are national. Few NATO member countries are devoting 2% of their Gross Domestic Product (GDP) to defence, and there is no sign of this changing. At present multinational agreements of variable geometry between the NATO member countries are considered the only practical way to proceed. The UK-France Defence Co-operation Treaty, the UK-U.S. Defence Trade Cooperation Treaties, the France-Germany Defence Cooperation Agreement, the Visegrad Group (Czech Republic, Hungary, Poland and Slovakia) Defence Cooperation Agreement, are current examples of bilateral and multilateral cooperation.



Due to the reduction of the domestic demands within the Alliance, most defence projects need to consider the potential of export. Many export contracts, however, require well-defined industrial compensation and offsets as a means for the contracting governments to develop their own defence industries. Exports are strongly regulated, with some cases requiring parliamentary approval, and in most cases sales have a

very strong element of government-to-government business, supported by government investment and guarantees; the U.S. ITAR and FMS programmes are typical.

In the May 2012 NATO "Summit Declaration on Defence Capabilities: Toward NATO Forces 2020", Alliance leaders recognise the continued importance of a strong transatlantic link and Alliance solidarity as well as the significance of sharing responsibilities, roles, and risks to meet the challenges North-American and European Allies face together. The Alliance leaders also confirm that the connections among the Allies and between them and their partners should be deepened on the basis of mutual benefit. Maintaining a strong defence industry in Europe and making the fullest possible use of

the potential of defence industrial cooperation across the Alliance remain an essential condition for delivering the capabilities needed for 2020 and beyond, they say. Therefore, there is no doubt that TADIC can serve as a valuable channel of NATO's "Smart Defence" Initiative.

The NATO 2012 Chicago summit provides clear guidance for concrete initiatives in the area of TADIC. Accordingly, SG-154 reached some conclusions and makes recommendations that are readily achievable, near-term improvements that NATO, NATO governments and NATO industries, both respectively and collectively, should implement:

1. Industrial objectives should be included in the NATO council agenda. NATO member countries, at political level, must establish the conditions for cooperation. Fairness, mutual market access (reciprocity) and balance must be the norm. TADIC needs risk management rather than total risk aversion. NATO should also consider how non-NATO countries' defence spending and industrial policy trends would influence the industrial, technology and market policies and priorities of businesses within NATO member countries.
2. Effective TADIC includes reciprocal market opening to foreign direct investment (FDI) in national defence industries. Restrictive attitudes toward foreign acquisitions in the transatlantic defence industrial landscape should be avoided, within realistic limits that do not require any government to reduce its desired level of control or ownership.
3. Transatlantic requirement harmonisation and synchronised government procurement, based on common military requirements and interconnecting needs, are fundamental to develop economies of scale. This should be done in consultation with the other Allies within the context of the NATO Defence Planning Process (NDPP), in order to avoid critical shortages at Alliance level.
4. TADIC progress must be monitored and measured. The transatlantic defence/commercial balance is dynamic and should be addressed by permanent bodies, such as the European Parliament, the European Commission, the NATO Parliamentary Assembly, the CNAD and the NIAG. Measures for increasing transatlantic defence trade and TADIC to strengthen the Alliance's military capability and economic position in the world, should be identified. These permanent bodies' targets could include a range of possible initiatives, from enhanced regulatory cooperation to recommendation for bi-or multilateral defence trade agreements addressing the issues mentioned in this report. NIAG could be instrumental in defining objectives and metrics.
5. Smart Defence, Multinational Approaches and Connected Forces are powerful concepts that NATO, NATO member countries and Industry should leverage to develop actual and pragmatic TADIC opportunities. Each TADIC opportunity could be initiated by at least two contributing NATO member countries from both sides of the Atlantic, which can invite other NATO member countries to join. Common project management guidelines will be a critical key element to TADIC's success.
6. Effective TADIC must be focused on realistic practical approaches. Some civil market approaches and good practices could be used for the implementation of programmes. National and multinational regulations that affect defence trade and technology exchange should be considered as parameters for acquisition arrangements, but never as reasons not to engage in defence cooperation. On the regulatory side, for instance, the European Commission

**SG-154 makes 14 main recommendations that are readily achievable, near-term improvements that should be implemented for NATO multinational / transatlantic programs.**



and the NATO member countries should continue to reform their export control regimes, in a way that will protect selected key technologies within the NATO community while at the same time allowing industries within the NATO community to be more competitive in the international defence and security market. The U.S. Government could, for instance, develop an approved/trusted community of the European companies that will be certified according to the new European Directive 2009/43/EC<sup>2</sup>. Common guidelines on the description and best practices of internal compliance programmes should be established.

7. The competitiveness of the Transatlantic Defence Technological and Industrial Base and the cooperation between the NATO member countries could be enhanced if the National Security Agencies (NSAs) could achieve a “harmonized implementation” of the NATO-wide security policy which is outlined in the NATO document “Security within the North Atlantic Treaty Organisation” and its supporting Directives.
8. TADIC programmes must demonstrate benefit to participating NATO member countries. They must cover the complete Life Cycle, from concept definition to through life support and disposal. However, different parts of the life cycle are amenable to being treated in different ways. In order to make the fullest possible use of TADIC, for instance, in accordance with the Smart Defence principles, an acquisition from one or more Allies could be compensated by including other Allies in the sustainment phase, whose value could even exceed the original purchase.
9. R&D is a fundamental aspect of both of Smart Defence and of TADIC. NIAG recommends that a small number of funded demonstrators, linked to NATO capability requirements, be selected and their implementation used to exercise TADIC. Previous NIAG studies that have recommended follow-up with technology demonstration offer a rich menu from which to choose.
10. TADIC must take into account the export potential of the final products and systems. Some future systems for NATO - Land, Sea & Air - might be considered for export outside the NATO area. Some methodologies, used by the Letter of Intent (LoI) countries and the Joint Armaments Cooperation Organisation (known by its French acronym OCCAR), may be helpful.
11. Transatlantic standardisation of security and defence equipment is an important basis for the opening-up of transatlantic markets and the gradual creation of a single European defence market. It will optimise effectiveness, efficiency, and interoperability. It will also be mutually beneficial for the Alliance to move towards a better-harmonized transatlantic approach to certification and standardisation of security and defence equipment and services in order to nurture a healthy transatlantic security and defence industrial base. Therefore, NIAG recommends close coordination between the European Defence Agency and the NATO Standardisation Agency.
12. The transatlantic defence market should become more accessible for Small and Medium sized Enterprises (SMEs) and they should be treated in an equal and non-discriminatory way. One possible policy initiative is to consider requiring a specific level of SME participation in some contracts. National defence and industrial authorities should also improve the flow of information to SMEs about defence procurement opportunities (both foreign and domestic).

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<sup>2</sup> Directive 2009/43/EC of the European Parliament and of the Council of 6 May 2009 simplifying terms and conditions of transfers of defence-related products within the Community (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:146:0001:0036:en:PDF>)



13. In order to build cooperation on both sides of the Atlantic, industries should know and understand each other. National defence industry associations should maximize the information freely available concerning their defence industries. In order to enhance mutual understanding, an explanatory guide about how to build TADIC programmes could be helpful.
14. NIAG considers that effective TADIC is achievable and that TADIC should remain on the NATO agenda. NIAG recommends follow-on activity to continue to evaluate TADIC progress and support the implementation of the NIAG SG-154 study recommendations. NIAG also recommends holding a NATO-sponsored TADIC conference every two years, including legislators from both sides of the Atlantic.

# PART II - MAIN REPORT

## Developments in the transatlantic defence market



### Introduction

At a NATO conference on transatlantic defence industrial cooperation ten years ago, then-Secretary General Lord Robertson said:

*“Export licensing reform is not a “Europe versus U.S.” issue. I strongly believe that both sides of the Atlantic stand to gain by working together towards a more level and acceptable playing field in this sphere, and I acknowledge the part the European allies have to play in getting their own act together.”*

Since then there has been a continual series of initiatives, conferences, reports and summits that have reiterated the need for transatlantic and international cooperation to achieve NATO capability needs. Smart

Defence and Connected Forces are the latest in this series and the conclusions of the NIAG SG-114 bear repetition as they are still pertinent today. NATO member countries must not only commit sufficient resources to match the requirements, they must also continue to remove barriers impeding enhanced transatlantic cooperation among defence industries on both sides of the Atlantic.

**Effective TADIC must be focused on realistic practical approaches.**

Some civil market approaches and good practices could be used for the implementation of programmes. On the regulatory side the NATO member countries, supported by the European Commission in Europe, should continue to

reform their export control regimes, in a way that will protect selected key technologies within the NATO community while at the same time allowing industries within the NATO community to cooperate more easily in the international defence and security market. The U.S. Government could, for instance, develop an approved/trusted community of the European companies which will be certified according to the new European Directive 2009/43/EC<sup>3</sup>. Common guidelines on the description and best practices of internal compliance programmes should be established. The NIAG also supports the idea of creating a strong and robust global Arms Trade Treaty (ATT) which would require state parties to deny any arms and ammunition export in case there is a serious risk that the arms would be used to commit or facilitate serious violations of international human rights law and international human rights, including genocide, crimes against humanity and war crimes. Having said this, the NIAG SG-154 fully appreciates the dangers and risks inherent in the 21st Century security environment and is in full accord that our advanced weaponry and most sensitive

<sup>3</sup> Directive 2009/43/EC of the European Parliament and of the Council of 6 May 2009 simplifying terms and conditions of transfers of defence-related products within the Community ( <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:146:0001:0036:en:PDF> )

technologies must be denied both to our opponents and to terrorists who wish us harm. Strong, effective and targeted export controls, together with rigorous compliance and end-use monitoring mechanisms, including cooperation in intelligence sharing and law enforcement, are now, and are expected to remain for the indefinite future, an indispensable element of transatlantic defence industry cooperation.

In order to maximise the potential of the reforms being introduced within the Alliance and to lay the ground for future improvements, the NATO member countries must co-ordinate their efforts and develop more mutual trust.

## Context of the U.S. defence market

A measure of the United States Defence spending is given in the President's 2012 Defence Department Base budget request of \$553 billion. This is part of the total defence spending request of \$881 billion, which included Homeland Security and a range of other government department programmes. It should be borne in mind that this takes into account the 31st July 2011 agreement under which the U.S. Congress increased the ceiling for national debt cuts defence spending by \$350 billion over the next ten years, and there are indications these cuts could rise to more than \$600 billion<sup>4</sup>.

In terms of industrial expenditure, U.S. Defence Industry contract revenue for the top 20 U.S. defence companies in 2009 amounted to \$69 billion, with Lockheed Martin, Northrop Grumman, Boeing, Raytheon and General Dynamics, the top five. BAE Systems, the UK-owned company, comes 12th in the list with a 2009 defence contracts revenue of \$1,659 million.

### ❖ Export Control Reform Initiatives

Following a Presidentially-directed review of the United States export control system, a draft new framework for the U.S. export control system was announced by President Obama on 30th August 2010 based on "Four Singularities":

- Single Control List (for defence and commercial dual-use items)
  - Common criteria and definitions for items on the United States Munitions List (USML) and the Commerce Control List (CCL) have now been developed and are being applied across both the USML and the CCL.
  - Aim is for USML to be a "positive list" of controlled defence items that describes controlled items using objective criteria and distinguishes the types of items that should be subject to stricter or more permissive levels of control for different destinations, end-uses, and end users.
  - The U.S. has sought input from U.S. industry as well as European and other governments and companies on its ongoing review on the Categories of the USML with the goal of completing this review by the end of 2011.
- Single Primary Enforcement Coordination Agency
  - Executive Order signed by the President on 9th November 2010 to create an Export Enforcement Coordination Center to coordinate and de-conflict U.S. criminal and administrative enforcement operations. Implementation of this Executive Order is now underway.
- Single Information Technology (IT) System

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<sup>4</sup> Defence Systems publication – 27/05/2010

- Funding has been identified and transitional activities are underway across the relevant U.S. Government agencies.

➤ Single Licensing Agency

- Requires legislative action and while there are discussions underway between Administration and Congressional committees.

❖ Other related U.S. initiatives

- The National Export Initiative – Streamlining of U.S. Government regulations and the promotion of commercial U.S. exports with a goal of doubling U.S. export sales in five years.
- ITAR Amendment on Dual and Third-Country Nationals – Final rule took effect on 15th August 2011.
- Defence Services proposed rule to amend the ITAR policy to update the policy regarding defence services – aim to reduce the number of Technical Assistance Agreements (TAA) required for the transfer of defence services. Proposed rule was issued on 13 April 2011.
- U.S.-UK and U.S.-Australia Defence Trade Cooperation Treaties – ratified by the U.S. Senate in late 2010 and implementation is still underway.
- Reciprocal Defence Procurement Memorandum of Understanding (RDP MOU) established between the U.S. and 14 EU Member States – provides a platform for ongoing communication regarding market access and procurement matters that affect effective defence cooperation.
- U.S. Department of Defence (DoD) technology security and foreign disclosure (TS&FD) process reform. There are currently thirteen processes for the review of technology across DoD each with their own processes and timelines and with no integrated Department appeals or closure process. A review has established a TS&FD office in the Office of the Secretary of Defence to serve as the focal point for TS&FD issues for key Government and industry stakeholders.
- Implications for TADIC

National security requirements are certainly a predominant factor for national governments, but employment and technology need to be considered. Too much regulation will restrict the development of transatlantic technological and industrial base and a sensible compromise should be found.

- ◆ Any easing of government controls and regulations will facilitate industrial cooperation.
- ◆ Bilateral approaches can create effective models for cooperation that can be expanded over time, but they may have an unintended effect of making multinational trans-Atlantic cooperation more difficult.

## Context of the European defence market

The European Defence equipment market, worth 41 billion euro in 2009, is technology-intensive with cutting-edge research and development in fields such as electronics, ICT, transport, biotechnology and nanotechnology.

The European Defence Industry is mostly concentrated in six EU Member States – France, Germany, Italy, Spain, Sweden and the UK, although companies producing ancillary systems and equipment are found all over Europe.

The European defence market is highly regulated at a national level and fragmented. In the European Union (EU), Member States have the possibility of control over defence equipment markets and related industries applying Article 346 of the Treaty on the Functioning of the EU (TFEU), which permits the suspension of the application of the Treaty with regard to defence products to protect “...essential interests of its security...”.

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.

### (1) Export Control and Defence Procurement Reform Initiatives in the European Union

In December 2007, the European Commission (EC), on behalf of the European Union Member States, launched a “Defence Package” designed to set out a European policy and legislative framework to improve the competitiveness of the European defence sector. Following this, two Directives were published in 2009:

- (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. This Directive also addresses EU-wide security of supply.
- (b) Directive 2009/81/EC on the coordination of Defence and Procurement procedures for the award of certain work contracts, supply contracts and service contracts awarded by contracting authorities, or entities, in the fields of defence and security. While not mentioning offsets specifically, this Directive indirectly inhibits the application of offsets.



The “EU Defence Package” also provides a Communications Strategy for a stronger and more competitive European defence industry. In December 2011, the European Commissioners Michel Barnier and Antonio Tajani decided to set up a Defence Task Force, focusing on four main issues: (1) monitoring the application of the two European Union (EU) Defence-related Directives (2009/43/EC on transfers and 2009/81/EC on procurement); (2) catalysing debate on the development of

a European defence industrial policy; (3) ensuring research and development synergies between the security and defence sectors; and (4) ensuring security of supply of defence equipment for Europe’s Armed Forces <sup>5</sup>.

<sup>5</sup> [http://ec.europa.eu/commission\\_2010-2014/barnier/docs/speeches/20111109/speech\\_fr.pdf](http://ec.europa.eu/commission_2010-2014/barnier/docs/speeches/20111109/speech_fr.pdf)

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. This regime requires that controlled items may not leave the EU customs territory without an export authorisation. On June 30, 2011, the European Commission adopted a Green Paper on the EU dual-use export control system. The Green Paper launches a broad public consultation concerning the functioning of the EU dual-use export control system. Stakeholders were invited to provide responses on all of the issues set out in the document. The regulation (EU) No 1232/2011 of the European Parliament and of the Council of 16 November 2011 amends Council Regulation (EC) No 428/2009

The EU export policy, controlling the export of military equipment to third countries, 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.

The EU list of controlled items is based on control lists adopted by international export control regimes including the Wassenaar Arrangement and the Missile Technology Control Regime (MTCR). Candidate countries for EU membership are required to apply the EU regime.

The NIAG's October 2011 white paper on the "Developments in Europe to reform export control and defence procurement processes" lists seven major recommendations for TADIC development:

- Enlarge the transatlantic approved community within the TADIC export control framework;
- Define a legally acceptable interpretation of Article 346 TFEU;
- Create more mutual transparency on defence planning;
- Limit the adverse impact of the new 2009/43/EC and 2009/81/EC Directives on the North American and Turkish Industries;
- Limit the adverse impact of technology control policies;
- Promote mergers, acquisitions and joint ventures in the security and defence sector; and,
- In times of austerity, the NATO member countries and the EU should cooperate and seek for smart solutions.

## (2) Implications for TADIC

### i) Legal

The EU Defence and Security Procurement Directive considerably improves the current fragmented regulatory framework for defence procurement. It also improves legal clarity. Awarding authorities will be able to address which legislation to apply and justify their decision if necessary.

### ii) Administrative

In the medium to long term, greater transparency will reduce administrative costs for companies, in particular Small and Medium sized Enterprises (SME).

### iii) Economic

These implications depend on the EU Defence and Security Procurement Directive's acceptance by awarding authorities. Initially the Directive may impact mainly on the off-the-shelf procurement and technologically less sophisticated equipment. Greater openness of markets should enhance companies' chances of winning cross-border contracts, thereby allowing the most competitive European companies to achieve economies of scale. The reduction of unit costs will then make their products more competitive on the global market. In addition, contracting authorities will obtain better value for money.

#### iv) Operational

Added to the European contracting authorities' award criteria, will also be "security of supply" and "interoperability". After national certification in the scope of the intra-EU transfers of Defence products Directive, companies dealing in Europe with non-ITAR/EAR-controlled goods and technology can obtain general and global licenses instead of individual licenses and become part of a trusted community within the EU. However, companies, transferring ITAR/EAR-controlled items might lose the benefits of this intra-EU transfers of Defence products Directive because they still have to comply with U.S. Government export regulations.

#### v) International

The introduction of EC procurement rules for defence will not change the situation regarding arms trade with third countries. Awarding authorities will continue to be able to invite to tender only EU companies or non-EU firms as well. The UK-U.S. Defence Trade Cooperation Treaty offers privileges to British entities only. The danger is that such a restriction could lead to a two-tier European defence market with non-British companies lagging behind. The Directive 2009/43/EC ensures an EU-wide security of supply.

## Context of the Canadian defence market

The Canada First Defence Strategy, announced in June 2006, laid out a \$240 CAD billion capital acquisition plan to refurbish the Canadian Forces over twenty years. Once fully implemented, the plan will enable Canada to make a meaningful contribution to international efforts in failed and failing states. It will also serve to support the security interests of Canada on the North American continent.



#### (a) Developments in the Canadian Defence Market

The Canadian defence market is open to international competition and its offset program, the Industrial and Regional Benefits program, is designed to secure meaningful work packages to qualified and competitive Canadian industry. Its export control regime, based on international regimes including the Wassenaar Arrangement, is among the most stringent in the world. Canada operates a national defence and security industrial base, which is recognized in U.S. law

as part of their National Technology and Industrial Base. Its industrial base is comprised largely of smaller niche market players (by global standards) providing world class products, technologies and services to defence and security customers in North America and around the world – including but not limited to systems integration, C4ISR, simulation and training, maritime domain awareness, cyber security, armoured land



vehicle systems, MRO. It is also home to a number of large global defence contractors, the majority of which are of U.S. parentage. Fifty percent of the domestic industry's annual revenues are earned internationally, of which 80% are through trade with the United States.

Like its industrial base, Canada's export control regime is harmonized with the U.S., particularly when it comes to the sphere of controlled goods. Since 2009, Canada's Controlled Goods Program has been implementing the Enhanced Security Strategy, which aims to streamline business processes, strengthen security, while also assisting registrants to be compliant with ITAR, specifically with respect to the recent rule change to ITAR's Part 126.18.

- (b) Implications for TADIC - Canada's technology intensive labour market and relatively small industrial base makes it a valuable industrial collaborator to partners on both sides of the Atlantic. The Canada First Defence Strategy ensures a steady flow of capital programs for the foreseeable future, and common public safety and national security challenges provide the possibility for greater co-developed and co-marketed industrial capability that can be delivered in a timely and cost-effective manner to customers on both sides of the Atlantic.

## Context of the Turkish defence market



Turkey has been able to increase the Turkish Defence Exports multi-fold over the last decade through openly sharing its hard-earned capabilities. Today, the Turkish defence industry shows a strong presence in numerous areas from aerospace, naval shipbuilding, tracked and wheeled armoured vehicles to specialised textiles, armaments and munitions, rocketry as well as advanced defence electronics. Turkey is taking part in multinational cooperative projects and Turkish export regimes are being assessed currently.

Three international cooperation offices were established during 2011 in Washington DC/USA, Riyadh/Saudi Arabia and Brussels/Belgium for representing and supporting the

Turkish defence industry in the international market.

As a part of an Economical and Commercial Strategic Cooperation Framework, studies conducted with the U.S. through coordination by the Turkish Ministry of Economy, came to the conclusion that the "defence industry" should be assessed as being a cooperative and strategic field. In this field, in 2011, several meetings were held with the Ministry of Economy and studies were conducted for the evolution of political view and the realization of planned activities.

With the help of Economical and Commercial Strategic Cooperation Framework studies, Turkey aims to establish a dialogue mechanism and sign an agreement with the U.S. for cooperation regarding defence industry.



## The NATO strategic concept and TADIC

During the NATO Summit at Lisbon in November 2010, Heads of State and 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. 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 NATO Strategic Concept defines three core Alliance tasks, namely collective defence, crisis management and cooperative security. At Appendix 1 an overview is produced of elements which are considered to have an industrial bearing. The list, of course, overlaps with the Lisbon Capability Package. For each element, its relevance to industry in general and to TADIC specifically has been outlined. Also, it is indicated whether a subject will enjoy new impetus from being in the Concept or is already under consideration in NATO. It should be stressed that the indications at Appendix 1 are subjective in nature, and changes will occur from a different earmarking of the individual topics. Selecting new topics with High TADIC relevance from the scheme in Appendix 1 provide the subjects Territory Ballistic Missile Defence (TBMD), Cyber and the European Union (EU). Therefore, these subjects merit a more in depth analysis.

### a) Territory Ballistic Missile Defence (TBMD)

As regards TBMD, a recent NIAG study on “The Industrial dimension of NATO territorial Missile Defence” provides for an up-to-date overview of TADIC opportunities. The ideas to upgrade naval radar systems, together with the establishment of a NATO Missile Pool, are tangible results which fit both in the new NATO Strategic Concept and the concept of Smart Defence.

The Lisbon capability package prioritises TBMD for urgent response. Ongoing ALTBMD efforts are to be expanded to include the integration of new weapons and sensors within a full capable NATO IAMD. TBMD threats are strongly asymmetrical and taking continuous advantage of the globalisation of technologies and services increasingly available all over the world. TBMD is a complex and extremely demanding task that pushes to the edge existing defence technologies.

Initial efforts for the NATO TBMD will be directed to complement NATO C2 capabilities by including the new territorial ballistic defence needs: from strategic sensors integration for early warning to high level consultation for engagement decisions and consequences management. Lack of European early warning sensors and interceptors, particularly in the upper layer, imposes a mayor challenge for nations’ contribution.

At present the USA Phased Adaptive Approach (PAA) advanced European and Mediterranean deployment, will provide an initial response, but, as the threat evolves, a European territory NATO Ballistic Missile Defence System in full swing will require a more ambitious effort with a more extensive NATO and nations systems contribution to the TBMD architecture and systems operations.

NATO and nations contribution to the effort will be substantial and will require a balanced return for a good number of political and social reasons, not to mention nations defence budget efficient application. It is a well-known fact that the increasingly opening transatlantic technological gap is running at the fastest in the TBMD field.

The NIAG SG-151 High Level Advice identified three areas where the transatlantic cooperation can positively contribute to the harmonization of the needs and the nations' interest and contributions: Spatial and Air Early warning, Long Range Radar and exo-atmospheric interceptors. It is a clear opportunity for the TADIC framework to focus the efforts, interest and limited nations budgets in a number of enduring initiatives where the industrial transatlantic link will be reinforced.

Within TADIC, NIAG recommends early activation of technological initiatives in the three fields: Early Warning (EW), Long Range Radar (LRR) including upgrading of existing systems, exo-interceptors, under new NATO concepts for smart defence - building security in the age of austerity -new business models, and transformations. Share of defence technological and industrial base objectives of European nations and EU, EDITB, are of utmost relevance, as they are the potential NATO Partners contribution as addressed in Lisbon.

#### b) Cyber

Cyber is an extremely interesting case for TADIC (D stands for Defence), not least because cyber is a much wider subject than just defence. Therefore TADIC can only be a small element of the overall Cyber Defence effort. During the EU-U.S. summit at Lisbon in November 2010 a special cyber working group has been commissioned, to report in one year's time. It shows that cyber is not a defence issue only, but to the contrary it predominantly is an issue which increasingly attracts attention in the civil domain. Cyber Defence embraces civil-military, public-private and national/international components.

Currently highest priority in nations is to establish their own Cyber Defence competence. The question in front of us is which NATO and/or national cyber activities will have a TADIC relevance (for debate). NATO has adopted the NATO Cyber Defence Concept and has its Cyber Defence Policy in place (as agreed by Ministers, June 2011). Individual companies from both sides of the Atlantic will contribute. Which are the obstacles for fruitful cooperation?

NATO cyber activities may gain advantage from one of the successful examples of transatlantic cooperation, at least in the eyes of the two participating governments (U.S. and UK), the International Technology Arrangement (ITA) on network sciences, led by IBM. See more details in paragraph 10 (Research and Development) of Part II of this report.

#### c) TADIC and the European Defence Technological and Industrial Base

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 is an indispensable element. The underlying maintenance and development of the industrial bases that provide the capabilities NATO wants, is a "why we need TADIC" and a key industry



message here. The subject EU & TADIC therefore raises the issue of how to establish a balanced approach, where all parties involved can win, both in the short and longer term. The regulatory frameworks on both sides of the Atlantic already have been the subject of an earlier NIAG study (SG-114). Also a Conference on TADIC took place in 2009.

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 Nations' Security and Defence Strategy identifies the role of the national industry in its own terms (core capabilities) and determines the objectives of the industrial policies to implement (and of course the budget to go on). The European component of the NATO security and defence industry base has its own dynamics fostered by EU initiatives on Defence procurement and industrial policies looking for a capable and competitive European Defence Technological and Industrial Base (EDTIB).

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

Initiatives as Pre-Commercial-Procurement (PCP) for Security (Defence), inspired to some extent from the U.S. experiences, could be a good point to start in concrete terms with a practical exercise.

There is already a considerable degree of cross-ownership of industry between the two sides of the pond, and there is a likelihood that this will increase. Certainly within Europe there is strong government pressure for a more efficient defence industry base and hence for more industry consolidation.

The disparities of budget and defence industry structures between the European nations are every bit as great as those between the U.S. and medium-sized European nations. Europe has had much experience, with successes and failures, with a multiplicity of approaches, in trying to establish multinational defence projects. If we leave ITAR out of the equation as a separate issue, a study of the European experience might help inform the TADIC process.

## Conditions for transatlantic cooperation

Industrial objectives thus far are expressed mainly at the national level. In addition, the European Defence Agency (EDA) has designed a Strategy for a European Defence Technological and Industrial Base (EDTIB)<sup>6</sup>. The NATO Smart Defence initiative is not necessarily best served by such a variety of policies and strategies. One of the reasons why the Secretary General of NATO at the NATO Industry Days event in 2011 in London looked at industry to play a full role in it.

In view of the specificities of the defence market, and the exclusive role governments are having in it, it is clear that governments in a NATO setting need to address the industrial elements of Smart Defence. Those elements are related to a large variety of subjects like research and technology, planning, regulations etc. Therefore, it is recommended that the NATO Council will have on its agenda the industrial objectives which, from a NATO perspective, should be pursued. The discussion should, amongst others as outlined below, and next Smart Defence implications, encompass the industrial implications of the NATO Strategic Concept in full (as dealt with elsewhere in this report) and even beyond that the industrial implications of the notion of protecting our national societies.

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<sup>6</sup> <http://www.eda.europa.eu/Strategies/Technologicalandindustrialbase>

Industry currently is treading water in Europe, while trying to get a marginally bigger slice of a shrinking pie in North America, and pinning its hopes on growth in East Asia, South Asia, the Middle East, and Latin America. This, also necessary, may not be in the longer term NATO interest<sup>7</sup>. NATO should also consider how non-NATO countries' defence spending and industrial policy trends would impact the industrial, technology and market policies and priorities of businesses within NATO member countries.



During his speech at the NATO Industry Days event in 2011 in London, the Secretary General of NATO stated: "A single and open European market is not enough. We need equal opportunities for European and American defence companies to compete across the Atlantic. Today, the Pentagon still awards more than 90 per cent of its procurement budget to US companies. Moreover, several European countries still rely mostly on domestic suppliers. Excessive controls on the export of military goods and technologies continue to hamper industrial collaboration. In addition, they hinder cooperation between our troops in the field. And for these reasons, we must allow greater access to each

other's markets. I very much welcome the work that is underway to remove these distortions in the defence market, not only in Europe, but also in the United States. The Obama Administration is working with Congress to reform America's export licensing process. This includes reducing the number of items considered 'sensitive', so they would be easier to export. More open, less restricted competition will make companies more efficient. It will lead to lower costs and greater economies of scale, and to lower prices and obtain better margins. That is good for industry. It is good for the taxpayer. And it is good for NATO. "

<sup>7</sup> Mr Kurt Vöker, NATO Industry Days - London 2011

## Foreign Direct Investment

Companies from NATO member countries, with small domestic markets, recognize the imperative to participate in global markets and have increasing percentages of revenues from non-domestic markets.

If selling directly to the other country's Department/Ministry of Defence does not really work, they try to participate through acquisitions of the other country's defence companies, partnerships, joint ventures, and other collaborative mechanisms.

As the national defence budgets within the Alliance remain flat or decline, defence companies may start looking again to deepen their engagement in other NATO member countries and outside of NATO.

Foreign investment, through ownership of a local company with connectivity to the customer, presence on programs and capabilities, can lead to more interoperability with coalition partners and to competition in consolidating defence markets.

Effective TADIC requires reciprocal market opening to foreign direct investment (FDI) in national defence industries. The NATO member countries should view defence supplier globalization within the Alliance more in terms of policy benefits than of policy risk. However, issues of sovereignty, security of supply, and jobs are major reasons for restrictive policies<sup>8</sup>. Industrial security agreements can provide a solution.

FDI also leads to local job creation. North American companies, for instance, continued to invest heavily in Europe. The U.S. retained its position as the top investor in Europe in 2010, accounting for 26% (= 972) of FDI projects and 28% (37,979) of jobs created<sup>9</sup>. On March 16, 2007, for instance, 100% of the shares of Polskie Zakłady Lotnicze Sp. z o.o. were purchased from ARP S.A. by United Technologies Holdings S.A. (UTH), a subsidiary of United Technologies Corporation (UTC). As a part of UTC, PZL became a Sikorsky Aircraft Corporation (SAC) company. In a few years time, the PZL Mielec's work force grew from 1,400 to more than 2,100 employees<sup>10</sup>.

European industry is also buying American companies and maintaining a financial relationship with their subsidiaries; the European mother companies, BAE Systems and Finmeccanica for instance, own in this case 100% of the American subsidiary. If nothing else, it provides significant revenues to European industry and the money can in turn be converted into investments in technology in Europe<sup>11</sup>.

## Harmonisation and synchronisation of requirements

Transatlantic requirement harmonisation and synchronized government procurement, based on common military requirements and interconnecting needs, are fundamental to develop economies of scale. This should be done in consultation with the other Allies within the context of the NATO

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<sup>8</sup> Bialos, Jeffrey P., Fortresses and Icebergs - The Evolution of the Transatlantic Defense Market and the Implications for U.S. National Security Policy, Volume I (Washington, D.C.: Center for Transatlantic Relations, 2009 - Page 103).

<sup>9</sup> Restart Ernst & Young's 2011 European attractiveness survey, page 20

<sup>10</sup> <http://www.pzlmielec.pl/en/company/company-profile/>

<sup>11</sup> [http://ec.europa.eu/enterprise/sectors/defence/files/final\\_report\\_trans\\_en.pdf](http://ec.europa.eu/enterprise/sectors/defence/files/final_report_trans_en.pdf)

Defence Planning Process (NDPP), in order to avoid critical shortages at Alliance level. It is advisable to do this in consultative coordination with industries to reach best budget efficiency and interoperability.

On the way towards a more efficient use of ever declining defence budgets and, therefore, improved NATO capabilities, there are basically two options for a Smart Defence approach. The first aims at improving defence cooperation via specific projects and programmes. This approach offers concrete results in the form of harmonised and, in the end, standardised equipment on a case-by-case basis.

The other option is to develop a more structured and procedural approach to Smart Defence within NATO, similar also in the EU pooling and sharing process. This approach should define pooling and sharing as the first option to pursue for the whole life-cycle of a capability development and acquisition. Eventually, this would lead to a common Code of Conduct to ensure the most efficient, i.e. “smart” use of allocated budgets. Through this agreed procedure, harmonisation and synchronisation could be achieved in a comprehensive and far-reaching way.

## TADIC progress measurement

The transatlantic defence/commercial balance is dynamic and multi-faceted. Its evolution must be monitored and a permanent body should be available to measure these changes and to highlight progresses. Metrics to monitor and measure for the increasing transatlantic defence trade and TADIC to strengthen the Alliance’s military capability and economic position in the world should be identified.

...  
**evolution must be monitored and a permanent body should be available to measure these changes and to highlight progresses**

Following the successful model of the Transatlantic Economic Council (TEC) and its EU-U.S. High-Level Group (HLG), a similar group, sponsored by the NATO Council and led by representatives of the NATO member countries’ regulatory procurement and industry communities, should be established. A representative of the NATO Parliamentary Assembly, the Chairman of the CNAD and the Chairman of the NIAG are potential candidates. The HLG’s targets could include a range of possible initiatives, from enhanced regulatory cooperation to recommendation for bi-or multilateral defence trade agreements addressing the issues mentioned in this report.

NIAG could be instrumental in defining objectives and metrics.

NIAG supports the European Parliament’s resolution of 12 September 2012 on the Annual Report from the Council to the European Parliament on the Common Foreign and Security Policy <sup>12</sup> in which the European Parliament recalls the need to set up, with no further delay, a Transatlantic Political Council as an ad hoc body for systematic, high-level consultation and coordination on foreign and security policy issues between the EU and the USA in parallel with NATO.

TADIC should also be included in the meeting agendas of following European Parliament (EP) delegations: (a) the EP Delegation for relations with the U.S.; (b) the EP Delegation for relations with Canada; (c) the Delegation to the EU-Turkey Joint Parliamentary Committee (JPC); and (d) the EP Delegation for relations with the NATO Parliamentary Assembly.

<sup>12</sup> <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2012-0334&language=EN&ring=A7-2012-0252>



## Structured cooperation

Smart Defence, Multinational Approaches and Connected Forces are powerful concepts that NATO, NATO member countries and Industry should leverage to develop actual and pragmatic TADIC opportunities.

TADIC is not new but the main practical driving force behind NATO member countries current interest in TADIC is the constrained budgetary environment. It is unlikely that any single company would consider TADIC as a modus operandi if it could afford to deliver credible capabilities by its own. However, the reality is that currently no single industrial base within the Alliance has sufficient resources to provide the total spectrum of military capabilities and this is not expected to improve in the future.

TADIC offers a promising option for getting more from hard-pressed budgets: paying less for the same capability or getting more capability for the same expenditure.

The more countries/companies have in common, the better initiatives work. Similarities or commonalities, such as common language, similar level of ambition and equipment, similar strategic and organisational cultures, trust and solidarity, and quality, facilitate TADIC. A regional factor, for instance, is being identified as enabling element for TADIC initiatives. Companies from neighbouring countries seem more prone to engage in cooperation, as witness the examples from the UK and France (the 4 November 2010 UK/France Defence Treaty), the Nordic countries but also from the Visegrad, Baltic and Weimar Triangle countries. During his keynote speech at the Security & Defence Agenda (SDA)'s 29 June 2011 event on "Shaping NATO's reform agenda", the Dutch Minister of Defence, Mr. Hans Hillen, said: "I strongly believe in the merits of coalitions of the willing within NATO, where pioneering countries can take the lead with regard to a specific issue, always under the NATO umbrella, but within smaller, flexible groups that roughly share the same outlook, if deemed necessary. We should not be afraid to use this recipe for quicker and more tangible NATO results.<sup>13</sup>"

TADIC initiatives are often born out of necessity and ad hoc, but arguably without the appropriate structure. There may be benefit from complementing this with a more structural approach, taking into account that defence is still the most national of policies, and that different NATO member countries have different agendas, for example on how to set up and manage a central procurement agency.

TADIC might often be very difficult. However, for procuring many types of defence equipment, there is no alternative to TADIC.

Much existing TADIC is bilateral and small company groupings predominate. Each TADIC opportunity could indeed be initiated by at least two contributing NATO member countries, which can invite other NATO member countries to join.

Therefore, NATO member countries should engage early in a dialogue about national defence planning, in order to continuously update each other about plans and intentions so that all would have the complete picture. Industries should be involved in this process as soon as possible, what might lead to effective and efficient TADIC initiatives.

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<http://www.securitydefenceagenda.org/Contentnavigation/Activities/Activitiesoverview/tabid/1292/EventType/EventView/EventId/1059/EventDateId/1079/PageId/5160/ShapingNATOsreformagenda.aspx>

The basic parameters of success for defence programmes are to deliver capabilities on time and to budget. One of the problems is that TADIC partners not always define shared requirements nor do they have common analytical tools to measure the success and failure of their collaborative programmes.

Another problem is the lack of coordination of investments due to different budget cycles. Different parliamentary approval processes make it difficult as well.

Another step to a collaborative defence programme is to establish Integrated Project Teams, both on the supplier side as well as on the customer side. Some Governments, however, do not want to lose full control of such programmes.

## Security policies within NATO

NATO's "Security within the North Atlantic Treaty Organisation" document provides for the NAC approved NATO-wide security policy. It sets the policy for the following areas: personnel security, physical security, security of information, industrial security and INFOSEC. In its Enclosure "B", Basic Principle and Minimum Standards of Security, paragraph 1, is stated: "This C-M establishes the basic principles and minimum standards of security to be applied by NATO nations and NATO civil and military bodies in order to ensure that a common degree of protection is given to classified information exchanged among the parties." NATO member countries also signed the "Agreement between the Parties to the NATO for the Security of Information". This Treaty commits the Parties to protect and safeguard classified information exchanged. It forms the legal basis for the aforementioned NATO Security Policy.

The document also provides for common minimum standards and procedures to be applied to the provision of security clearances for personnel (Encl."B" and Encl."C" Personnel Security) and to the provision of security clearances for facilities, i.e., certification of industries' capacity to protect classified information (Encl. "B" and Encl."G" Industrial Security). Additionally, the Enclosures are supported by more detailed instructions laid down in the respective Directive on Security of Information, Directive on Personnel Security and Directive on Industrial Security. All Directives have been approved by the Nations forming the (NATO) Security Committee and are binding in nature upon NATO nations and civil and military bodies.

Security within NATO is a precondition for a more competitive, transparent and cooperative transatlantic defence market and should not hamper the creation of a level playing field. Only if National Security Agencies (NSAs) implement aforementioned policies and directives in a harmonised manner, suppliers from different NATO member countries will be able to participate on an equal footing in the defence procurement procedures. And, currently, this is not the case.

Examples:

- (1) The time to obtain a security clearance is not the same in all the NATO member countries. In some countries, it might take up to 4 months longer. And in some countries the deadlines, laid down in their own national regulations, are not met either.
- (2) In some NATO member countries the security clearance for a facility is only given in the scope of a specific contract. In other countries the security clearance for a facility might be given for a specific timeframe, without limiting the scope of work anticipated.



- (3) Access to NATO HQ facilities might be easy for industry representatives from one NATO member country and difficult for industry representatives from another NATO member country.
- (4) In order to obtain a security clearance, one has to prove “the need to know”. Some NSAs interpret “the need to know” differently.
- (5) When a NSA needs information from another NSA in the scope of a security clearance application, some NSAs are not always cooperative/transparent; this, for instance, to protect their respective domestic industries, ...
- (6) It happens that a company, which did not get a security clearance in country A, establishes a legal entity in country B where it does obtain a security clearance. And with this clearance they gain access to contracts in country A.

Conclusion: the competitiveness of the Transatlantic Defence Technological and Industrial Base and the cooperation between the NATO member countries could be enhanced if NSAs aim for a “harmonized implementation” of aforementioned policies and directives.

## Through Life Cycle support

TADIC programmes must provide demonstrable benefit to participating NATO member countries. However, the nature of this benefit may differ from nation to nation. A typical programme will need to cover the complete life cycle, from concept definition to through life support and disposal. For example, the UK model works on six phases: Concept, Assessment, Development, Manufacture, In-Service, Disposal.

Whilst the programme needs to be considered as a whole, procurement and contracting is often done in different phases, typically according to the breakdown of the life cycle model in operation, and different parties may be involved at different stages.

It is precisely this decomposition that opens up the option of achieving national benefit in different ways for each participating nation.

Thus, in order to make the fullest possible use of TADIC, for instance, in accordance with the Smart Defence Principles, an acquisition from one or more Allies could be compensated by including other Allies in the sustainment phase. Hence, balance of benefit is obtained, not on individual phases of the programme, and on procurements associated with these phases, but rather over the programme as a whole taken through the complete life cycle. In fact, it will often be the case that the value of the sustainment phase of a programme exceeds considerably the original purchase, or that, because of incremental development, there are a number of purchases during the lifecycle, which no longer takes a simple linear phased structure.

Naturally, in the spirit of Smart Defence, the programme will need to be planned as a whole, and not left to open competition for each phase, if there is to be fair and equitable distribution of the resulting benefits.

Finally, the opportunity for this distribution of benefit is likely to increase in the future with the move away from procurements of large numbers of identical big platforms to the provision of systems, solutions and services.

**... in the spirit of Smart Defence, the programme will need to be planned as a whole**

## Research and Development

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.

NATO cyber activities may gain advantage from one of the successful examples of transatlantic cooperation, at least in the eyes of the two participating governments (U.S. and UK), the International Technology Arrangement (ITA) on network sciences, led by IBM. This was based on a combination of the Cooperative Technology Arrangement (CTA) programme, ran by the U.S. Army, and the Defence Technology Center (DTC) concept, established by the UK MoD. Basically generic and low TRL work is done within the boundaries of the ITA, free from ITAR considerations, and separate channels and funding mechanisms for exploitation have been set up in the two nations. There might be scope at the NATO level for something similar for Cyber.

## Export outside the NATO area

TADIC must take into account the export potential of the final products and systems. Some future systems for NATO - Land, Sea & Air - might be considered for export outside the NATO area. Some methodologies, used by the Letter of Intent (LoI) countries and the Joint Armaments Cooperation Organisation (known by its French acronym OCCAR), may be helpful.

## Standardisation

Standardisation of defence equipment is an important basis for the opening-up of national markets and the gradual creation of a single European defence market. NIAG supports the European Commission's sponsorship of the "CEN Workshop 10 on Standardisation for Defence Procurement" project, managed by the European Committee for Standardisation (CEN), through which a European Handbook for Defence

Procurement (EHDP) has been 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<sup>14</sup>. Just recently, the EHDP has been replaced by the European Defence Standards Reference System (EDSTAR)<sup>15</sup>.

NIAG also believes that it would be mutually beneficial for the Alliance to move towards a more harmonised transatlantic approach to certification and standardisation of security and defence equipment and services in order to nurture a healthy transatlantic Security and Defence industrial base. Rather than looking for protections through national specificity, the NATO member countries should be in favour of common transatlantic standards that promote allied interoperability. Therefore, NIAG promotes wider use of open standards and, where appropriate, NIAG recommends close coordination between the European Defence Agency and the NATO Standardisation Agency in order to harmonise the European Defence Standards with the NATO Standardisation Agreements for procedures and systems and equipment components, known as STANAGs.

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<sup>14</sup> "European Handbook for Defence Procurement" - <http://www.defense-handbook.org/>

<sup>15</sup> European Defence Standards Reference System - <http://www.eda.europa.eu/EDSTAR/home.aspx>

The NIAG notes that the European Parliament, in its 14 December 2011 resolution on the impact of the financial crisis on the defence sector in the EU Member States<sup>16</sup>, shares the NIAG view on this matter.

## Small and Medium sized Enterprises

The subject of Small and Medium sized Enterprises (SME) is longstanding on both sides of the Atlantic. On top of the general issues at stake, like mutual market awareness, SMEs active in the defence market are facing issues that are even more challenging. The 2011 TADIC Conference report highlights that SMEs have considerable niche capability, but do not have the resources needed to fully comply with export control regulations and procedures. The report mentions that SMEs could be better involved into transatlantic cooperation through prime Contractors. They need to better communicate their capabilities to the primes and vice versa.

For SMEs in general, the EU and the U.S. have agreed to foster transatlantic SME cooperation<sup>17</sup>. SMEs from both sides of the Atlantic should better profit from increased trade between the U.S. and the EU. In the framework of the Transatlantic Economic Council (TEC), stakeholders and government representatives have agreed (July 2012) to facilitate SMEs presence on both continents. Efforts to facilitate SME business support and market access is being explored, in particular by developing a framework for cooperation between the U.S. International Trade Administration and the Enterprise Europe Network, key business support organizations on both sides of the Atlantic. For SMEs inactive in the security and defence market the transatlantic defence market should become more accessible and they should be treated in an equal and non-discriminatory way.

The way defence companies do business with NATO needs to be re-examined. Today, it is easier for industry to deal with its member nations separately than within a multinational framework. The NATO environment is even more difficult for SMEs to access.

NATO needs to streamline its business processes to be successful in future cooperative programs. Only large companies have the resources to participate in large programs which will exclude the SMEs. But the trend should be to smaller cooperative programs and in new areas like cyber security, cloud computing, and technology base development. Some governments impose work share commitments on local contractors to outsource to SMEs, and encourage the selection of SMEs for export contracts by the allocation of offset credit multiples for SMEs. This distorts the supply chain itself and increases costs for the government. Nevertheless, NIAG recommends to consider requiring a specific level of SME participation in some contracts.

SMEs should have easier access to information on potential defence market opportunities on both sides of the Atlantic, within existing legal frameworks (Buy American Act, EC Public Procurement, EC Directive 81 and/or EU TFEU treaty Art. 346). In Europe, the EDA has its Bulletin Boards in place, which can be used either by SMEs themselves or by the national defence industry associations. NATO nations may decide to initiate a concerted action to ensure that all nations are providing defence market opportunities for SMEs in a similar manner.

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<sup>16</sup> [http://www.europarl.europa.eu/RegistreWeb/search/advanced.htm?relName=PROCEDURE&reference=2011/2177\(INI\)&language=EN](http://www.europarl.europa.eu/RegistreWeb/search/advanced.htm?relName=PROCEDURE&reference=2011/2177(INI)&language=EN)

<sup>17</sup> <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/12/552&format=HTML&aged=0&language=EN&guiLanguage=en>

## Exchange of Information

Smart Defence's primary aim is to have an effective defence capability at minimum cost through NATO member countries' cooperation.

In this regard, it is necessary to use the capability of member countries in an effective way for the development and production of defence products. The main problem for the cooperation is especially the unknown capabilities of distant geographic industries.

Building a database that includes member industries' capability information increases the probability of cooperation between industries that do not know each other.

Besides the fundamental information (foundation year, contact information, etc.) of companies, scope of their work fields, technology capabilities, products, regulations, legislations and etc. can be included in this data base.

The database must have a filtration property namely there should be a searching function. Because when the database is put in practice, there will be a great number of members, so finding a suitable firm will be difficult in this database. Using the mentioned function, we will be able to search firms according to their capability, products etc.

Building this database will be an important but not a sufficient step for effective TADIC. This database should be in the form of a guide that will contain practical information for TADIC. This guide should include information about how to cooperate through regulations of countries. This information will decrease uncertainty on the cooperation process.

How to establish this database / guide?

- First option  
A NIAG study could be launched. The NIAG Study Group could collect all the technical (industries capabilities, products etc.) and legislative information regarding import and export issues of the Alliance's industries, and conduct a technical database study including the support of software companies. The question about the maintenance of the database can also be solved within the scope of the study. This NIAG study should require maximum 1 year.
- Second option  
All the countries collect the technical and legislative information via their national industrial associations depending on their structural organization. Then, all the NIAG Heads of Delegation provide those data to the NIAG. Then, the NIAG could provide a database section under the NIAG web site. For this activity, a NIAG Study group should be established as well. In addition, the NIAG Heads of Delegation should provide revised database information periodically to the NIAG website manager.

## TADIC conferences

The first TADIC Conference was held in Brussels on 2003. In one of the introductory speeches, Lord Robertson quoted the Final Report of the CSIS Commission on Transatlantic Security and Industrial Cooperation: "...The most important constraints on cooperation are U.S. and European government policies ... U.S. and European governments should foster an environment that allows for closer industrial cooperation on the development of advanced military systems across the Atlantic."

Most of the times, the issues in increasing the Cooperation are excused because of "difficulties due to market regulations". In reality, we are after 10 years of discussion on TADIC, and the impression is that "market protections" or "national regulations" are not the most important issues that impede the increase of a TADIC.

Instead, most of the issues are due to the "knowledge": people generally do not accept to follow new processes, do not know about the progress or the changes of the procedures, do not accept easily the changes: and therefore, even if all major events, summits etc. foster for a better cooperation and sharing, in reality the progress is not so easy.

Taken together, these issues are a major challenge for Allies, partners and the supporting defence industry. Making better use of resources that talks among them with the same language, with more coordination and coherence and by seeking and encouraging opportunities for Allies to work together is a primary aim of the Smart Defence concept.

TADIC is critical, not only to solve export issues or to adopt a common set of standards, but to harmonise and synchronise 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. A better knowledge of the progresses achieved, a better knowledge and sharing of the best practices and success stories can greatly contribute to fasten the process. The "avalanche effect" of the "win win" process can produce much better results than declaration of good intentions.

During these years, the NIAG TADIC Group has analysed the process, has done many recommendations, and still considers that an effective TADIC is a benefit for the Alliance and is achievable:

TADIC should remain on the NATO agenda.

NIAG therefore recommends a follow-on activity to:

- ❖ continue to evaluate TADIC progress,
- ❖ support the implementation of the NIAG SG-154 study recommendations,
- ❖ increase the sharing of "best practices" and "win-win" events that create and push the positive trend that the Smart Defence Concept is requesting.

To this purpose, NIAG recommends to continue holding a NATO-sponsored TADIC conference to be organized every two years.

The experience gained in the previous three TADIC events gave us the impression that there are two different classes of participants to those types of events:

- ❖ Members of Governments and MoDs, mainly focussed on Policy and Strategy;
- ❖ Industrialists and Operators mainly focussed on Tactical Aspects.

These two classes of TADIC merit two different formats of TADIC Conferences, and the NIAG TADIC WG opinion is that the organization of such type of conference/ seminars can greatly improve the establishment of a common language and a sharing of common experiences that, eventually, will go in the direction of the Smart Defence principles.

NIAG recommend holding alternatively TADIC conferences focussed on these two themes "Policy & Strategy" and "Tactics & Lessons Learned".

## Lessons learned

The NIAG SG-154 endorses NATO's report on "Building Capability Through Multinational and Innovative Approaches" in which is stated that lessons learned from previous multinational projects suggest that critical success factors for multinational acquisition include:

- ❖ harmonising military requirements , timing and specifications for equipment purchases to the greatest extent possible, consistent with national capability requirements, to increase commonality, minimise variation and reduce cost;
- ❖ buying "off the shelf" when feasible and cost-effective, taking into account the possible effects on research and development of doing so;
- ❖ being open to requirements being filled by alternative solutions (i.e., specifying output, not solely input);
- ❖ optimising research and development to help overcome negative trends in expenditure (greater coordination and cooperation in R&D offers a means of delivering more for less);
- ❖ while having regard to one's own industrial base, being fully open to competitive tendering (in accordance with legal instruments) and the benefits it brings such as reducing cost and increasing quality;
- ❖ harmonising legislative requirements in different countries or successfully managing the impact of any differences.

The above concepts derive from the analysis done by the NIAG TADIC WG of the major transatlantic defence programs, such as:

1. Alliance Ground Surveillance;
2. Active Layered Theatre Ballistic Missile Defence Medium Extended Air Defence System (MEADS);
3. Joint Strike Fighter;
4. NATO Air Command & Control System;
5. Multinational R&D



## Recommendations

- a) Industrial objectives should be included in the NATO council agenda. NATO member countries, at political level, must establish the conditions for cooperation. Fairness, mutual market access (reciprocity) and balance must be the norm. TADIC needs risk management rather than total risk aversion. NATO should also consider how non-NATO countries' defence spending and industrial policy trends would influence the industrial, technology and market policies and priorities of businesses within NATO member countries.
- b) Effective TADIC includes reciprocal market opening to foreign direct investment (FDI) in national defence industries. Restrictive attitudes toward foreign acquisitions in the transatlantic defence industrial landscape should be avoided, within realistic limits that do not require any government to reduce its desired level of control or ownership.
- c) Transatlantic requirement harmonisation and synchronised government procurement, based on common military requirements and interconnecting needs, are fundamental to develop economies of scale. This should be done in consultation with the other Allies within the context of the NATO Defence Planning Process (NDPP), in order to avoid critical shortages at Alliance level.
- d) TADIC progress must be monitored and measurable. The transatlantic defence/commercial balance is dynamic and should be addressed by permanent bodies, such as the European Parliament, the European Commission, the NATO Parliamentary Assembly, the CNAD and the NIAG. Measures for increasing transatlantic defence trade and TADIC to strengthen the Alliance's military capability and economic position in the world, should be identified. These permanent bodies' targets could include a range of possible initiatives, from enhanced regulatory cooperation to recommendation for bi-or multilateral defence trade agreements addressing the issues mentioned in this report. NIAG could be instrumental in defining objectives and metrics.
- e) Smart Defence, Multinational Approaches and Connected Forces are powerful concepts that NATO, NATO member countries and Industry should leverage to develop actual and pragmatic TADIC opportunities. Each TADIC opportunity could be initiated by at least two contributing NATO member countries from both sides of the Atlantic, which can invite other NATO member countries to join. Common project management guidelines will be a critical key element to TADIC's success.
- f) Effective TADIC must be focused on realistic practical approaches. Some civil market approaches and good practices could be used for the implementation of programmes. National and multinational regulations that affect defence trade and technology exchange should be considered as parameters for acquisition arrangements, but never as reasons not to engage in defence cooperation. On the regulatory side, for instance, the European Commission and the NATO member countries should continue to reform their export control regimes, in a way that will protect selected key technologies within the NATO community while at the same time allowing industries within the NATO community to be more competitive in the international defence and security market. The U.S. Government could, for instance, develop an approved/trusted community of the European companies, which will be certified according to the new European Directive 2009/43/EC. Common guidelines on the description and best practices of internal compliance programmes should be established.
- g) The competitiveness of the Transatlantic Defence Technological and Industrial Base and the cooperation between the NATO member countries could be enhanced if the National Security Agencies (NSAs) could achieve a "harmonized implementation" of the NATO-wide security policy which is outlined in the NATO document "Security within the North Atlantic Treaty Organisation" and its supporting Directives.
- h) TADIC programmes must demonstrate benefit to participating NATO member countries. They must cover the complete Life Cycle, from concept definition to through life support and disposal. However, different parts of the life cycle are amenable to being treated in different ways. In



order to make the fullest possible use of TADIC, for instance, in accordance with the Smart Defence principles, an acquisition from one or more Allies could be compensated by including other Allies in the sustainment phase, whose value could even exceed the original purchase.

- i) R&D is a fundamental aspect of both of Smart Defence and of TADIC. NIAG recommends that a small number of funded demonstrators, linked to NATO capability requirements, be selected and their implementation used to exercise TADIC. Previous NIAG studies which have recommended follow-up with technology demonstration offer a rich menu from which to choose.
- j) TADIC must take into account the export potential of the final products and systems. Some future systems for NATO - Land, Sea & Air - might be considered for export outside the NATO area. Some methodologies, used by the Letter of Intent (LoI) countries and the Joint Armaments Cooperation Organisation (known by its French acronym OCCAR), may be helpful.
- k) Transatlantic standardisation of security and defence equipment is an important basis for the opening-up of transatlantic markets and the gradual creation of a single European defence market. It will optimise effectiveness, efficiency, and interoperability. It will also be mutually beneficial for the Alliance to move towards a better-harmonized transatlantic approach to certification and standardisation of security and defence equipment and services in order to nurture a healthy transatlantic security and defence industrial base. Therefore, NIAG recommends close coordination between the European Defence Agency and the NATO Standardisation Agency.
- l) The transatlantic defence market should become more accessible for Small and Medium sized Enterprises (SMEs) and they should be treated in an equal and non-discriminatory way. One possible policy initiative is to consider requiring a specific level of SME participation in some contracts. National defence and industrial authorities should also improve the flow of information to SMEs about defence procurement opportunities (both foreign and domestic).
- m) In order to build cooperation on both sides of the Atlantic, industries should know and understand each other. National defence industry associations should maximize the information freely available concerning their defence industries. In order to enhance mutual understanding, an explanatory guide about how to build TADIC programmes could be helpful.
- n) NIAG considers that effective TADIC is achievable and that TADIC should remain on the NATO agenda. NIAG recommends follow-on activity to continue to evaluate TADIC progress and support the implementation of the NIAG SG-154 study recommendations. NIAG also recommends holding a NATO-sponsored TADIC conference every two years, including legislators from both sides of the Atlantic.

## Conclusions

Making the fullest possible use of the potential of transatlantic defence cooperation remains an essential condition for delivering the capabilities needed within the Alliance for 2020 and beyond. It leads to following benefits:

- a) Economic
  - i) Seek common solutions to common problems, since we are pursuing similar objectives and face similar challenges
  - ii) Improve affordability and innovation
  - iii) Maximise the use of scarce resources in all phases by avoiding duplication of effort and inefficiencies in spending, due to insufficient economies of scale and the non-competitive nature or many defence solicitations shaped by national preferences
  - iv) Sharing Research and Technology costs
  - v) Sharing development costs
  - vi) Sharing in-service support and upgrade costs
  - vii) Maintain mutual investment in the North Atlantic space
  - viii) Remain the dominant force in the global security and defence economy
  - ix) More mutual access to security and defence market and government contracts
- b) Technical
  - i) Access to higher level technology
  - ii) Avoid growing technology gap
  - iii) Less duplication of production chains
- c) Industrial
  - i) Develop and maintain an advanced industrial and technological capability for the North Atlantic Alliance
  - ii) Influence industrial restructuring
  - iii) Growing interdependence and cooperation, with step-by-step confidence-building measures, will create more comfort on issues such as the security of supply
  - iv) Mitigate the erosion of the transatlantic security and defence industrial base
- d) Operational
  - i) Save lives through better common technology, doctrine, force planning, mission preparation and training/exercises in order to define equipment needs that could be met by consortia or partnerships among industrial suppliers and technology companies on both sides of the Atlantic
  - ii) Enhance interoperability and standardisation
  - iii) Reduce logistic footprint in operations
  - iv) Ensure greater operational efficiency
  - v) Maximise common system configuration
  - vi) Common timescales for the programmes
  - vii) Limit adverse effects of “ad hoc cooperation of the willing”
- e) Management
  - i) Reduce overall management overhead
  - ii) Sharing / exchange of knowledge and best practices over long(er) period(s) and between programmes managed by the joint teams, building up excellence
- f) Political
  - i) Strengthen transatlantic security and defence relationships
  - ii) Strengthen the North Atlantic Alliance’s military capability and economic position in the world
  - iii) Enhance the European Union’s Common Security and Defence Policy objectives

- iv) Bringing more partners in a cooperation reduces the number of countries in opposition to transatlantic, American, Canadian, European, Turkish or national initiatives

# Part III - Background Papers

## Appendix 1 - NATO Alliance Tasks with Industrial Bearing

Strategic Concept		Industrial Relevance	TADIC Relevance	New Element
		(High-Medium-Low)	(High-Medium-Low)	Yes /No
Collective Defence	TBMD	H	H	Y
	CBRN WMD	H	H	N
	Cyber	H	H	Y
	Anti-Terrorism	M	M	N
	Energy security	H	L	Y
	Emerging Technology assessment	H	H	N
Crisis Management	Civil-military approach (e.g., civilian crisis management 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	L	Y
Reform and Transformation		H	L	Y

## Appendix 2 - SG-154 Participants and Contributors

NAME	COUNTRY	REPRESENTING	ROLE
<b>Dr Gustavo Scotti di Uccio</b>	ITALY	Atlantic Organization for Security	Co-Chairman
<b>Dr John (Jerry) McGinn</b>	USA	Northrop Grumman	Co-Chairman (until 16/02/12)
<b>Rudy Priem</b>	BELGIUM	United Technologies Corporation (UTC)	Co-Chairman (from 16/02/12)
<b>Tim Page</b>	CANADA	Canadian Association of Defence and Security Industries	
<b>Michael Langer</b>	GERMANY	Diehl	
<b>Ralf Bliesener</b>	GERMANY	Cassidian	
<b>Giampaolo Delbuono</b>	ITALY	AleniaAermacchi	
<b>John Jansen</b>	NETHERLANDS	Netherlands Industries for Defence and Security	
<b>Francisco Gonzalez Mené</b>	SPAIN	Asociación española de empresas tecnológicas de defensa, aeronáutica y espacio	
<b>Ahmet Demirdöğen</b>	TURKEY	MKEK (Mechanical and Chemical Industry Corporation)	
<b>Martin Hill</b>	UK	Thales	
<b>Dr Peter Collins</b>	UK	Selex Galileo	
<b>Gene Cunningham</b>	USA	Boeing	
<b>Ambassador Marisa R. Lino</b>	USA	Northrop Grumman	
<b>Wayne Fujito</b>	USA	Decisive Analytics Corp	

## Appendix 3 - List of Abbreviations

• ACCS	Air Command and Control System	• ICT	Information and Computer Technology
• AGS	Alliance Ground Surveillance	• ITAR	International Traffic in Arms Regulations
• ALTBMD	Active Layered Theatre Ballistic Missile Defence	• JPC	Joint Planning Committee
• ATT	Arms Trade Treaty	• JSF	Joint Strike Fighter
• BMD	Ballistic Missile Defence	• LoI	Letter of Intent
• CBRN	Chemical Biological Radiological & Nuclear	• LRR	Long Range Radar
• CCL	Commerce Control List	• MoD	Ministry of Defence
• CEN	European Committee for Standardisation	• MOU	Memorandum of Understanding
• CFSP	Common Foreign and Security Policy	• MRO	Maintenance Repair Overhaul
• CNAD	Conference of National Armaments Directors	• MTCR	Missile Technology Control Regime
• CTA	Cooperative Technology Arrangement	• NADREP	National Armaments Director's Representative
• C2	Command & Control	• NATO	North Atlantic Treaty Organisation
• C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance & Reconnaissance	• NDPP	NATO Defence Planning Process
• DoD	Department of Defence	• NIAG	NATO Industrial Advisory Group
• DTC	Defence Technology Center	• NSA	NATO Standardisation Agency / National Security Agency
• EAR	Export Administration Regulations	• OCCAR	Organisation conjointe de coopération en matière d'armement
• EC	European Commission	• PAA	Phased Adaptive Approach
• EDA	European Defence Agency	• PCP	Pre-Commercial-Procurement
• EDSTAR	European Defence Standards Reference System	• R&D	Research and Development
• EDTIB	European Defence Technological and Industrial Base	• RDP	Reciprocal Defence Procurement
• EHDP	European Handbook for Defence Procurement	• RUSI	Royal United Services Institute
• EP	European Parliament	• SDA	Security & Defence Agenda think tank
• EU	European Union	• SG	Study Group
• EW	Early Warning	• SME	Small and Medium sized Enterprises
• FDI	Foreign Direct Investment	• STANAG	Standardisation Agreement
• FMS	Foreign Military Sales	• TAA	Technical Assistance Agreement
• GDP	Gross Domestic Product	• TBMD	Territory Ballistic Missile Defence
• HLA	High Level Advice	• TEC	Transatlantic Economic Council
• HLG	High Level Group	• TFEU	Treaty on the Functioning of the European Union
• HQ	Headquarters	• TRL	Technology Readiness Level
• IAMDS	Integrated Air and Missile Defence	• TS&FD	Technology Security and Foreign Disclosure
• IT	Information Technology	• UK	United Kingdom
• ITA	International Technology Arrangement	• U.S.	United States
		• USA	United States of America
		• USML	United States Munitions List
		• WMD	Weapons of Mass Destruction





