Security and Defence
Together for European Growth
Introduction

The American Chamber of Commerce to the European Union (AmCham EU) believes that strong security and defence industries are crucial for the European economy. Both contribute to sustainable growth in Europe by providing highly skilled jobs and fostering Europe’s knowledge economy through massive research and development (R&D) investment. Through their dynamism and innovative edge, the security and defence industries help Europe achieve and maintain technological excellence.

With a turnover of €97.3 billion in 2014, the EU defence industry provides a wealth of highly skilled jobs with 500,000 people directly employed in the sector and an additional 1,200,000 indirect jobs. Similarly, the EU security industry has a fast growing market value of around €35 billion, and employs 180,000 people. Europe is currently the second largest security market in the world. This sector is essential for Europe’s growth and competitiveness, a key part of the Europe 2020 Strategy for smart, sustainable and inclusive growth. However, growing competition from international markets means that Europe is at risk of losing this leading position in the next few years if no action is taken to promote the industry.

In view of the difficulties facing both these sectors, AmCham EU would like to use this opportunity to offer a set of recommendations for EU policy makers to harness the potential of these key industries.

The transatlantic partnership remains vital for the security and defence industries in Europe, especially during economically challenging times.

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Foreword

Member companies of the American Chamber of Commerce to the European Union (AmCham EU) have actively participated in the European security and defence community for many years in various capacities – as partners, customers, suppliers and with their manufacturing presence. Many of them engage in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. Others focus on extensive partnerships with local industries, suppliers and universities thus contributing to and benefiting from Europe’s tradition of innovation and excellence.

The second edition of *Security and Defence – Together for European Growth* clearly reiterates our commitment to supporting the development of the security and defence sectors and the search for innovative technological solutions in Europe. We value our cooperative relationship with the EU institutions, national governments, industry and customers in Europe to support job creation and innovation on both sides of the Atlantic.

The transatlantic partnership is indispensable in a global environment in which security challenges are increasingly complex, with new threats emerging constantly. Europe is facing one of its most challenging periods in recent years, which requires working together to find tailored solutions to recapture growth and stability. We encourage policy-makers to continue their efforts to create the right regulatory environment for businesses to succeed.

The European Commission has made jobs, growth and investment its core priority. AmCham EU remains committed to helping policy-makers create an environment that encourages the development and innovation of the security and defence sectors, which will in turn bring job creation and stable growth. In this regard, we hope that you find this publication useful.
Executive summary

This brochure examines the state of play of the European defence and security sectors from the perspective of the transatlantic partnership. It introduces issues linked to market openness, public procurement, investment in research and technology (R&T), challenging topics (privacy, cyber security) and harmonisation of codes and standards.

It also looks at market-related aspects including the economic footprint as well as growth and employment outlook for both sectors. Case studies illustrate the state of play, issues and recommendations. The list of recommendations is aimed to help policy-makers create an environment that fosters innovative and prosperous security and defence sectors.

Recommendations:

1. **Maintain a strong defence and security industry** in Europe and capitalise on the potential of transatlantic defence industrial cooperation.

2. **Encourage openness and competition** and avoid initiatives that create formal or informal barriers to security and defence market access.

3. **Move towards a more harmonised approach to the certification and standardisation** of security and defence equipment and services in Europe and the US.

4. **Streamline and harmonise export licensing processes**.


6. **Ensure national procurement documents are also published in English**.

7. **Harmonise transport and border security procedures and standards**, and promote international cooperation to ensure new technologies and methodologies can be internationally recognised and used.

8. **Implement a single certification scheme for security products and European standards** to strengthen the Single Market for the security sector, and open markets especially to small and medium-sized enterprises (SMEs).

9. **Put in place EU-wide rules and harmonised standards to improve fire safety**, including by proposing a hotel fire safety directive and encouraging national governments to report fire incidents to a central administrator.

10. **Further advance the integration of the Digital Single Market** and promote a cooperative approach to cybersecurity in which both the public and the private sectors, as well as European and non-European stakeholders, are able to work together to achieve the common objective of better protecting critical infrastructure against cyber threats.
The security and defence fields are often treated as a single industrial sector, yet each has its unique challenges and should be treated individually.

The defence industry in Europe can be divided into four main sub-sectors (aeronautics, land defence, naval defence and electronics) and focuses on providing a strong industrial base for the EU Common Security and Defence Policy (CSDP). It largely operates outside the Single Market, with Member States maintaining strict control over the sector.

On the other hand, the security industry is neither well defined nor clearly identifiable. The production and supply of security-related equipment, systems, services and applications can be found under a wide range of industry and services headings. For the purposes of this brochure it is understood to encompass private companies and research institutions that are engaged in or that support the development and supply of physical security and safety products and services.

Traditionally, security corresponds with protection against threats such as conventional criminal activity or ensuring safety against hazards (e.g. fire protection). To understand emerging challenges, we have to understand security both at borders and inland. As such, the EU can protect itself against terrorism, organised crime, and cybercrime, and respond quickly and effectively to major catastrophic events.

Migration, both regular and irregular, will continue to increase in the coming decades - due to international conflicts, population growth and climate change. The transportation of goods will also require attention.
Economic footprint

Defence

In 2014, the European defence industry achieved an impressive turnover of €97.3 billion\textsuperscript{2}. The sector is centred on high-end engineering and technologies, creating invaluable potential for Europe to win the lead in manufacturing and innovation.

However, ongoing cuts in many national defence budgets and fragmentation of the market are severely impacting Europe’s military capabilities. There was renewed commitment by European Allies at the NATO Wales summit in September 2014\textsuperscript{3} to increase annual defence spending to 2% of national GDP as well as spending on major new equipment, including R&D, to 20% of annual defence expenditure. However, in many cases efforts to meet these guidelines have fallen short, with some budgets showing decreases. In 2015, the median spending was 1.18% of GDP instead of 2% and 14.6% of annual defence expenditure instead of 20%. The US currently provides over 72% of all NATO defence payments, with the non-US share of spending falling continuously since 1991.

\textbullet\ Alliance equipment expenditures as a percentage of defence expenditures (2008 and 2015)

Source: NATO SecGen annual report (2015)

\* Defence expenditures do not include pensions.

\textsuperscript{2} AeroSpace and Defense Industries Association of Europe (ASD), Facts and Figures, 2014

\textsuperscript{3} North Atlantic Treaty Organization (NATO), Wales Declaration summit, 5 Sep 2014 http://www.nato.int/cps/en/natohq/official_texts_112964.htm
In light of emerging political and security threats, this growing transatlantic imbalance is unsustainable and risks undermining the Alliance’s principle of solidarity. The clear message to Europe is that ‘we need to take on greater responsibility for our security, not less’.

From 2005 to 2015, defence expenditure nominally increased by 3.6% from €193 billion to €200 billion, yet in real terms there was a 10.7% or €22 billion decrease. Estimated spending between 2011 and 2020 varies according to two spending projections.

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The first projection assumes a moderate annual decline in total European defence spending of 1.8% per year. Under this scenario, dubbed the ‘slow decline’ scenario, it can be assumed that defence spending will continue to drop at the average rate of the last decade.

The second projection assumes larger cuts in light of continued economic recession, reducing total European defence spending by an average of 3.2% per year. In this scenario of ‘accelerated decline’, austerity measures implemented in the aftermath of the 2008 global economic crisis will result in a steeper decrease in European defence spending.

These trends may lead to Europe losing over 12% of its overall defence spending since the beginning of the economic crisis. It will be detrimental to the competitiveness of Europe’s defence industry and military capabilities, with ramifications for the security of everyday citizens.

Security

The main security segments have an estimated market value between €26 billion and €36.6 billion depending on the defined scope, with electronic security equipment companies contributing €16.4 billion. A recent study estimates the size of the security industry for Germany alone at €35 billion. The large range of these estimates confirms the difficulty to obtain a precise idea of the EU market size and, equally, that of the EU security industry itself. The global security market is estimated to be worth roughly €137 billion, of which Europe ranks second with a 30% market share. Despite the financial crisis, global demand for security equipment is expected to grow by more than 5% per year.

Physical security protection, undeniably the most significant security segment, is based on general security applications such as closed circuit television (CCTV), access control, intrusion and fire detection systems and related services (ie. installation and monitoring). It accounts for nearly 40% of the total European security market, with a value ranging from €10 billion to €15 billion. This is also an area of relatively high private sector expenditure and investment.

In addition, the public sector is a major consumer of security equipment and services, accounting for around 80% of the market (€13 billion to €17 billion). The private sector accounts for roughly 20% of this market, purchasing equipment and services with a value of €3 billion to €4.5 billion.

Growth and employment outlook

Defence

The defence industry in the EU directly employs 500,000 people and generates up to another 1,200,000 indirect jobs, many of which are highly skilled. The defence sector includes more than 1,350 small and medium-sized enterprises (SMEs) who contribute significantly to the EU economy in terms of job creation, growth and innovation. They are also critically important to maintaining the complex supply chain.

Security

In terms of employment, the security sector can be divided into the following sectors: physical security protection, aviation security, maritime security, border security, critical infrastructure protection, cybersecurity, counter-terrorism intelligence (including cybersecurity and communication), crisis management and protective clothing.

The security industry has much to offer in terms of high-tech job creation and economic growth: 130,000 employees in the security equipment and components industry with 255,000 people employed in system-related services. There are nearly two million private security service employees (guarding and cash-in-transit) and 4.2 million civil servants across Europe’s public administration performing security duties.

Regarding regular and irregular migration, major investments have been announced by the EU to further improve and integrate the surveillance at borders, as well as to implement a smart border management system for visiting third country nationals. Efficiency (‘data’ to become ‘information’) and interoperability are the key to this implementation.

Security of public spaces is becoming closely linked to border issues, and as such, non-intrusive solutions are necessary.

Investment in innovation

Defence

R&D investments in defence are crucial to the development of future military capabilities. However, between 2006 and 2013 there was a decline of 29.1% in R&D spending by Member States. Jorge Domecq, Chief Executive of the European Defence Agency (EDA), expressed his concern about this decrease. ‘New incentives must be found to reverse the trend and address Europe’s capability gaps’\(^\text{10}\).

Part of the problem is that R&D budgets are often seen as discretionary, suffering deep cuts in many Member States. In addition to this dangerous trend, most R&D in the defence sector is carried out at the national level, resulting in duplication and overcapacity in some areas. Only 9.7% of the total R&D spending carried out by the EDA-participating Member States has been done on a collaborative basis, representing a record low.

AmCham EU supports the creation of a European Defence Fund including a capability window of around €5 billion per year and a research window with a budget of at least €500 million per year in the future EU research and innovation framework programme (2021-2027)\(^\text{11}\).

Security

Fragmentation of the security market in Europe hampers innovation, delays product entrance and adds substantial costs. Rather than funding innovation, significant time and money is spent on complying with national codes and standards in order to get a product to market, disproportionately affecting SMEs. Often they only operate in one or two Member States, focusing on innovation but with limited market potential.

Security equipment suppliers, notably SMEs, often experience difficulties bringing products from technological to full commercial development. As a consequence, smaller innovative companies often license technologies to larger players, or are acquired by them, rather than enter the market directly.

Large multinational companies focus on compliance and certification to be able to sell in larger markets. This dichotomy does not foster European champions on the global market and only stifles innovation and growth.

\(^\text{10}\) Jorge Domecq, 4 March 2015 http://newsmilitary.com/pages/44761914-european-defence-r-and-d-has-fallen-catastrophically-new-eda
Case study: Transport security

STATE OF PLAY
The transport sector has a vital role in upholding key European principles such as the free movement of people and goods. It is also responsible for boosting international trade and competitiveness and even during times of slower growth, it continues to be the key pillar of global trade. Any disruptions to the sector will nearly always have a knock-on effect on other key industries. Threat assessment and risk management are essential to an effective transport system. Therefore a critical balance must be struck to protect passengers, goods and infrastructure while not impeding the steady flow of trade. The availability of security screening technologies that are fit for purpose is fundamental in this context.

THE ISSUE
AmCham EU strongly supports EU efforts to strengthen aviation and air cargo security across the 28 Member States and in third countries. The previous years have seen the development of many important initiatives including: mutual recognition, one-stop security, facilitation of legislation, a threat-based risk management approach, enhanced information and intelligence sharing, recognition of the critical role of technology and the harmonised implementation of EU regulations.

Business is reassured to see regular and close EU coordination with international organisations such as the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO), the US Transport Security Administration (TSA) and US Customs and Border Protection (CBP), as well as with major global trading partners.

RECOMMENDATIONS
International coordination and cooperation are needed to ensure that new technologies and methodologies can be globally recognised and used. Namely, both increased transatlantic governmental cooperation as well as more dialogue with the transatlantic business community are necessary. This could lead to a harmonisation of measures through common definitions and standards. Industry can be an integral partner in vulnerability assessment, implementation of security control processes and national security programmes.
Creating controlled environments in which intelligence and best practices can be shared to the benefit of all public and private stakeholders will further strengthen transport security and will help foster growth and legitimate international trade. We further support initiatives that would create a stable R&D investment environment for technologies that can address both emerging security threats as well as industry needs.

Market access

The development of a competitive defence industry in Europe needs both European and global markets to remain open and accessible. Mutual trust, predictability, openness, recognition and standardisation will allow for better market access.

Statistics in a Eurodéfense France 2014 report\(^\text{12}\), indicate the following trends in military trade between the US and the EU:

<table>
<thead>
<tr>
<th>Year</th>
<th>EU to US</th>
<th>US to EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>$0.9 billion</td>
<td>$3.8 billion</td>
</tr>
<tr>
<td>2012</td>
<td>$3 billion</td>
<td>$3.4 billion</td>
</tr>
</tbody>
</table>

On the heels of a similar declaration during the May 2012 Chicago Summit, NATO heads of state and government declared during their 2014 Wales and 2016 Warsaw Summits that ‘a strong defence industry across the Alliance, including a stronger defence industry in Europe and greater defence industrial cooperation within Europe and across the Atlantic, remains essential for delivering the required capabilities’. They recognised ‘the importance of inclusive, sustainable, innovative, and globally competitive defence industries, which include SMEs, to develop and sustain national defence capabilities and the defence technological and industrial base in the whole of Europe and in North America’.  

AmCham EU recommends that, in order to avoid duplication and fragmentation of capabilities, more transatlantic defence industrial cooperation (TADIC) measures and initiatives be encouraged. In the very long term, sharing more projects will reduce costs and increase interoperability. It will also create an environment in which Member States and the US can consider investing in shared capability clusters, allowing them to focus investment on certain areas of key strategic importance.

Effective TADIC also requires reciprocal market opening through foreign direct investment (FDI) in national defence industries. FDI, through partial or full ownership of a local company with connectivity to the customer can lead to more interoperability with coalition partners and to competition in consolidating defence markets.

American and European export licensing processes should be streamlined and harmonised. This will avoid unnecessary duplication along with enabling simpler and faster export licensing for inter-ally transfers.

AmCham EU strongly urges policy-makers and Member States to continue encouraging openness and competition and to resist initiatives to create informal or formal barriers to defence market access. Both Europe and the US should recognise the value of dialogue, consultation and arrangements that facilitate the supply of defence products and services. More security of supply arrangements between the US and Europe might lessen current security of supply issues.

Case study: Defence export controls

STATE OF PLAY

To ensure security of supply, some Member States believe it is essential to have industrial capabilities in key strategic sectors on their territory to avoid dependence on foreign suppliers. A contracting authority in the EU may require that a tender identify any restriction that it has regarding disclosure, transfer or use of the products and services, or any result of those products and services arising, for instance, from export control or security arrangements.

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15. Technological and Industrial Cooperation (TADIC) NIAG Consultancy Advice Study
THE ISSUE

The extraterritorial reach of US export control laws and regulations, such as the International Traffic in Arms Regulations (ITAR) and the Export Administration Regulations (EAR), is often perceived as an additional burden by EU contracting authorities and negatively affects trade and investment in the defence industry on both sides of the Atlantic.

As a result of the extraterritorial application of ITAR, the export of many defence technologies and services from a US vendor is still complex and burdensome since most of these technologies and services are controlled by the US State Department.

If the performance of a contract implies the cross-border movement of goods and services, export authorisation may be required from the US State Department in several stages of a product’s life cycle. US export, re-transfer and re-export licences are also needed for the delivery of components and subsystems from sub-suppliers to the system integrator.

RECOMMENDATIONS

AmCham EU calls on the Member States and the European defence industrial base to take advantage of the ongoing US Export Control Reform. Open markets encourage the creation of transnational industrial teams and foster the development of defence industrial capabilities.

AmCham EU opposes efforts to try to enforce or condition defence market access rights through regulation. Instead of removing barriers, this could create even more. It would slow the trend toward defence market integration and increasing competitiveness. The EU and its Member States should continue to resist any defence market preference language and continue to pursue their objectives for open and competitive defence procurement. A matter of concern is that EU’s Intra-Community Transfer Directive encourages European system integrators to work with EU rather than third-country suppliers because of the improved guarantee of security of supply when they source components in the EU.
**Case study: Transatlantic defence and industrial cooperation**

### STATE OF PLAY

Most transatlantic defence expenditure is split into relatively closed national markets. Fragmentation at the national level still remains the main feature of the transatlantic defence sector, both in supply/demand and regulatory frameworks. This fragmentation is a costly and inefficient obstacle to both intra-European and transatlantic defence competition and cooperation.

### THE ISSUE

Europe and the US are facing similar challenges: decreased domestic demand and declining competitiveness compared to emerging economies. The following issues negatively impact the transatlantic defence market and should be limited: offsets, technology control policies, restrictions on foreign/transatlantic investment into each other’s foreign defence markets, a lack of standardisation of defence equipment and the culture of national defence-industrial protectionism.

### RECOMMENDATIONS

The European and American governments face an increasingly transnational and global defence industrial base. Hence, they should be more transparent on their medium to long-term defence planning in order to stimulate the efficiency of a balanced Transatlantic Defence Technological and Industrial Base (TDTIB).

Transatlantic harmonisation and synchronised government procurement, based on common military requirements and interconnected needs, are fundamental to developing economies of scale. In order to use TADIC efficiently, an off-the-shelf acquisition from one or more allies could be compensated by including other allies from the other side of the Atlantic in the sustainment phase.

Development of collaborative and joint projects will create an environment in which Europe and the US invest in shared capability clusters. This will allow them to focus investment in certain areas and buy off-the-shelf from other clusters within the transatlantic community, freeing up resources for other investments or purchases.

Foreign investment, through partial or full ownership of a local company with connectivity to the customer, can lead to more interoperability and competition in consolidating defence markets. It will also be beneficial for the US and Europe to create a more harmonised transatlantic approach to the certification and standardisation of defence equipment and services.
Security

A single certification scheme for security products and European standards would strengthen the Single Market for the security sector. It will open markets to many companies, in particular to SMEs that do not have the resources to alter or repackage products to access all 28 EU markets.

Security products must also obtain various national certifications to trade across Europe. These certificates are required for products that have a CE (Conformité Européenne) mark, which fall under an EU legislative framework, as well as products that do not have a CE mark, such as fire safety (which falls under the Construction Product Regulation)\(^{17}\). It is important to note that safety products such as fire products and services are considered as part of ‘security’ by the industry.

National standards bodies do not consistently apply harmonised testing procedures for CE marked products, leading to inconsistent outcomes. The CE mark is not always perceived as the best path towards uniform European quality levels, privately run national voluntary marks remaining a de facto market requirement. Industry is still subject to multiple testing in order to obtain national certification, which is also the case for non-CE marked products.

AmCham EU recommends to improve the value of the CE mark through strict and uniform implementation of the technical assessments by national standards bodies.

Public procurement

Defence

Security of supply is crucial to ensuring the proper functioning of defence markets, yet the European defence market remains fragmented with more than 83% of investment in defence equipment still spent on national territory. Too many defence procurement decisions in Europe occur behind closed doors and their outcomes are difficult to explain in terms of best value.

New rules were adopted in 2009 to regulate how contracting authorities purchase defence and security equipment throughout the EU. The objective was to create a more open and transparent European defence equipment market. AmCham EU supports the Defence Procurement Directive (2009/81/EC), as it provides a flexible procurement process tailored to the nature of defence equipment and markets. Member States should

implement the Directive and the European Commission should enforce it in an open and transparent manner. Both sides of the Atlantic will benefit from a level playing field and maximum flexibility in competing for new security and defence procurements when the paradigm is shifted from national defence industrial policies towards a transatlantic one.

AmCham EU:

- supports the European Commission’s intention to focus on the effective implementation of the 2009/81/EC Directive, in order to improve its effectiveness and in turn, its efficiency.

- urges the European Commission to maintain the central thrust of the Directive towards openness and competitiveness in defence procurement during this process. For example, based on the principle of non-discrimination, the Directive recalls that it is forbidden to introduce selection criteria based on nationality. However, Recital 18 of the Directive states that Member States retain the power to decide if their contracting authority/entity may allow economic operators from third countries to participate in contract award procedures. The European Commission may wish to consider making this type of preference less restrictive by expanding the scope to economic operators from ‘qualifying partner countries’ (NATO allies etc.) outside the EU.

- recognises the particular importance of security of supply for defence procurement as well as the dialogue and consultation necessary to facilitate the supply of defence articles and services.

- believes that it is particularly important for contracting authorities/entities to ensure that their security of supply requirements comply with the principle of non-discrimination between European and US suppliers.

- encourages Member States and the US to ensure the right level of transparency on their medium- to long-term defence planning in order to stimulate the efficiency of the transatlantic security and defence technological and industrial base.

- believes that it would be mutually beneficial for European and US suppliers if national procurement documents (such as contract notices, requests for proposal and requests for information) were published not only in the national language but also in English.
Case study: Fire safety

STATE OF PLAY
Each year over 4,000 Europeans are killed and about 70,000 are hospitalised for injuries related to fire and smoke. Some estimates have fire damage costing the European economy over €10 billion in property damage or 1% of GDP. Even though such tragedies are preventable, there is no comprehensive and harmonised legal framework setting minimum requirements that would ensure a guaranteed level of fire safety to citizens travelling across Europe.

THE ISSUE
The lack of harmonised certification procedures and standards or reliance on voluntary schemes have led to an inconsistent level and understanding of fire safety, putting EU citizens and tourists at risk, depending on where they are located.

For instance, there are many different definitions at national level for a ‘high rise’. This poses a challenge when determining when additional fire safety measures are required. For example, fire sprinkler threshold requirements in hotels vary from nine metres in Portugal to 200 metres in France.

RECOMMENDATIONS
The Commission can improve fire safety by putting in place EU-wide rules and harmonised standards, while still considering that most responsibilities are held at the local or Member State level. In areas where the Commission could argue jurisdiction, such as tourism services, the EU should propose a hotel fire safety directive.

Although this is clearly a local or Member State competence, the EU should act where it has jurisdiction, such as creating a uniform definition of what can be considered a ‘high rise’. The European Committee for Standardization (CEN) can develop European standards to provide a harmonised approach. If records show that fire protection systems and equipment have been maintained, it is likely that training and other procedures have also been followed and citizens will enjoy a minimum level of safety throughout Europe.

Accurate data and reporting by national authorities is essential to understand the current level of fire risk facing Europeans. We encourage national governments to collect and report fire incidents to a central administrator using the reporting and data collection schemes of the UK and the US to serve as examples for the Commission.
The public sector is a major consumer of security solutions and has a strong influence on purchases in key sector segments. Transparency in public procurement for security equipment and systems may be enhanced and national authorities may ultimately prefer local suppliers to foreign competitors.

Public authorities can sometimes influence public procurement rules through national security concerns in order to force the localisation of investments, putting European investments in the security sector under constant threat.

**AmCham EU** has long recommended establishing a European handbook for security procurement in order to achieve greater clarity and transparency in procurement rules.

Mature markets (such as border surveillance, airport security and critical infrastructure protection) are large and diverse enough to attract a high degree of investment. On the other hand, emerging markets (such as automated immigration control or cybersecurity) need public and private funding to develop world-class solutions.

One example of an emerging market is biometrics. The improvement in understanding biometrics is part of the move to digitisation, enabling better identification of an individual and their documentation. The technology is evolving from more efficient and faster fingerprint scanning to include facial recognition. Iris scanning is also becoming part of automatic border checking, whilst fingerprint-scanning smart phones demonstrate how biometrics can offer security solutions in the commercial market.

The Commission’s initiative to establish a contractual public-private partnership for the development and promotion of cybersecurity in the EU is a positive development. In order to encourage companies to invest in product development while a consolidated market takes shape, policy-makers should consider open pre-commercial public procurement. This could be especially attractive to SMEs.
Innovation has long been a hallmark of the defence industry, both in achieving unprecedented technical advances in science and engineering, and allowing individual companies to remain competitive in an uncertain and rapidly evolving market.

There are plenty of examples of innovative ideas in the defence sector that have found use in our daily lives, such as microwaves, satellite navigation and even the Internet. Similarly, there are examples of civilian sector innovations that are used widely by the military sector, for instance jet engine propulsion.

However, there is currently too little capital invested in innovation for the defence sector and the industry constantly struggles to attract talent. Sustainment and maintenance activities will slow the loss of these skills, but cannot preserve them over time.

AmCham EU recommends rationalising spending in accordance with military ambitions, and putting the financial savings into defence R&D.

Europe and the US will benefit from a more harmonised approach to the certification and standardisation of defence equipment and services. This will nurture a healthy transatlantic defence industrial base and promote interoperability between allies.

Close coordination between the European Defence Agency (EDA) and the NATO Standardization Agency will improve harmonisation. This is particularly relevant in the case of European defence standards and the NATO Standardization Agreements, for procedures and systems and equipment components, referred to as ‘STANAGs’.

AmCham EU urges Member States to launch the next generation of major defence projects and procurement in order to avoid the loss of skills and knowledge in the sector.
The Market

**Case study: Defence research and technology**

**STATE OF PLAY**

Due to the ever-changing threat environment and rapid pace of technological innovation, investment in defence R&T is vital in order for Europe and the US to maintain technological superiority and respond to their future defence and industrial needs. However, defence R&T spending is low and disbursed nationally, causing the EU and US to miss opportunities for economies of scale. The large and growing gap in defence R&T investments between Europe and the US creates an even more challenging environment for TADIC\(^{18,19}\).

**THE ISSUE**

Without new defence R&T flagship initiatives, NATO’s capability shortfalls could undermine its political and military aspirations.

More open and accessible top-down defence R&T programmes on both sides of the Atlantic are needed to give opportunities to a wider set of competitors with a broader range of alternative solutions. This would not only lead to cost savings and innovation, but also some new solutions resulting from European and US defence R&T spending.

Through its Foreign Comparative Testing\(^{20}\) programme, the US government tests high technology readiness level items and technologies of its foreign allies. This process satisfies valid critical US defence requirements more quickly and economically. Europe does not have such a programme.

**RECOMMENDATIONS**

Europe and the US should collectively invest more in key defence technologies that must be preserved or developed in the transatlantic region. Governments on both sides should make their best efforts to facilitate, co-fund, catalyse and increase research, technology and testing collaboration. This need is reinforced by the growing cross-border ownership of companies in the supply chain and the necessity to create synergies between civil and military activities.

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19. Technological and Industrial Cooperation (TADIC) NIAG Consultancy Advice Study
Europe and the US must establish more formal mechanisms for consultation and decision-making in this domain in order to obtain greater congruence in defence R&T projects.

Defence R&T is a fundamental aspect of TADIC. Transatlantic cooperation should range from laboratory efforts to the creation of full-scale technology demonstrators. Europe and the US should select and (co-)fund a small number of demonstrators, linked to common critical capability requirements. Their implementation should be used to exercise TADIC.

The slow pace at which research programmes are being adapted to new security threats makes it difficult to rapidly mobilise public research funding in response. The solution could be stimulating and creating a proper innovation framework and establishing fast track procedures for new market technology requirements, through programmes such as an EU fund for security and resilience. A promising example is the proposal of the European Commission for novel funding concepts, such as pre-commercial procurement in Horizon 2020 which is poised to reduce the gap between research and market. Adequate protection of intellectual property will play an important role in promoting such concepts.

The European Commission promotes the societal acceptance of security technologies by introducing the concepts of ‘privacy by design’ and ‘privacy by default’ throughout the development of new security technologies. Privacy by design is an essential element of good practice in an environment of technological change and information-intensive innovation. It plays an important role in an accountability approach, where organisations must be able to show what processes they use to protect privacy and personal data.

Privacy by design cannot be reduced to technology mandates such as the mandatory use of ‘privacy enhancing technologies’, nor to a requirement that technologies be developed to meet specific technical privacy standards. Given the horizontal nature of the EU’s privacy framework as modernised by the General Data Protection Regulation agreed in December 2015, it is critical to respect technology, service, application, and business model neutrality in order to create a level playing field necessary for innovation to thrive. An organisation seeking to implement a privacy by design
The security industry shares another challenge with sectors such as defence - the lack of an EU-wide certification scheme which affects the mutual recognition of products and services between Member States. Products, systems and services in the fire detection, fire alarm, intruder & hold-up alarm, closed-circuit television and access control areas are mostly affected. The diversity of national systems contributes to the fragmentation of the security market. This diverts resources such as time, personnel and funds away from innovation and is especially burdensome to SMEs. Within a harmonised market, larger quantities could lead to better cost recovery in procurement and sales. Therefore, European policy-makers should adopt an EU-wide certification scheme for fire and security products.

In times of financial constraints, an emphasis should be given to a better exploitation of synergies between civilian and defence orientated research.

Case study: Public alert systems

STATE OF PLAY

Major incidents putting lives and property at risk typically require the intervention of civil defence authorities. To respond effectively, they rely upon a range of public and private alert, communications and intervention services. As a result, the European Commission is working to install a pan-European public alert system.

Public alert systems are already in place in Europe’s building stock and rely upon traditional broadcast media to reach citizens. However, these channels do not reach everyone at all times. The private and public sectors have also installed mass notification systems (MNS) that provide real-time information and instructions using intelligible voice communications along with visible signals, text and graphics. These can reach a broader audience and be more reactive when situational feedback is received.
THE ISSUE

Member States adoption of regulations in public alert systems has been disappointingly low, despite demonstrations and other projects disseminating best practices and protocols.

A pan-European public alert system initiative is needed to create standards that promote the industry, improve the effectiveness and efficiency of crisis management/civil protection in the EU and facilitate coordination and cooperation between Member States.

RECOMMENDATIONS

AmCham EU encourages the Commission to take recommendations from the pan-European public alert system initiative. It should support the creation of standards and guidelines as well as recommend practices for the EU.

The experience held by the security industry should be leveraged to establish public alert and mass notification systems that reach more citizens.

Since Member States have varying alert, response and equipment capabilities, the European Commission proposed Security Mandate 487 to create common standards. This would allow easier collaboration among countries when a unified response is necessary. For example, many small border towns’ responders have equipment that does not work across the border due to differences in cable connections, voltage changes and radio frequencies. By creating common standards, any responder could use equipment no matter which country has mobilised it.
Case study: Cybersecurity and critical infrastructure protection

STATE OF PLAY
Cyber threats have become the foremost risk to the security, integrity and resilience of Europe’s critical infrastructure. This will be even more so as economy and industry become increasingly digitalised.

The EU has demonstrated ambition on this issue through the Strategy on Cybersecurity published in 2013, the Council conclusions on cyber diplomacy adopted in 2014 and the political agreement on the Network and Information Security Directive reached in December 2015. However, its effectiveness in propelling and maintaining Europe at the forefront of the global fight against cyber threats remains to be seen.

THE ISSUE
Guided by national security considerations and political aspirations for digital sovereignty, many member states have claimed the cybersecurity policy area for themselves, which has created certain risks.

One of them is fragmenting the Digital Single Market through divergent national regulatory approaches and technical market barriers such as product localisation requirements. Introverted cybersecurity policies can hardly be effective as cyber threats are cross-border by nature and often originate outside of the EU.

Research, development, innovation, industrial policy and procurement decisions on cybersecurity should not be driven by protectionist considerations or the desire to build national champions to displace current technologies with yet-to-be-developed domestic ones. In this case the risk is that Europe would fall behind in terms of the global competitiveness of its domestic technology vendors, and would not be protecting the security of its critical infrastructure.
RECOMMENDATIONS

EU and Member State policy-makers and legislators should step up to prevent those risks from materialising, in particular by:

• Developing policies which attract the best available technologies to the European market, irrespective of their countries of origin.
• Channelling European R&D resources to build innovative solutions that leverage the most effective and promising solutions available worldwide, rather than trying to replicate or to displace them.
• Further advancing the integration of the Digital Single Market by promoting a cooperative approach to cybersecurity, in which both the public and the private sectors, as well as the European and non-European stakeholders, are able to work together to better protect critical infrastructure against cyber threats.
Conclusions

AmCham EU reiterates its commitment to a strong and productive cooperation between Europe and the US, including in the field of security and defence. In conclusion, we would like to highlight the following messages from both perspectives.
Defence  

Sustained efforts should be made by policy-makers to strengthen the competitiveness of the European defence equipment market. Market reforms or improvements to procurement practices should be considered in light of global forces and trends that affect all defence markets and companies supplying defence equipment.

In a global environment where security and defence challenges are becoming more complex and demanding, transatlantic partnerships and cooperation will remain indispensable. AmCham EU welcomes the June 2016 ‘European Union Global Strategy (EUGS) on Foreign and Security Policy’ and the 15 December 2016 ‘European Council Conclusions on Security’. AmCham EU also strongly supports the EU objective to further develop the Common Security and Defence Policy (CSDP) and the European Defence Action Plan (EDAP), as this promises to reinforce the transatlantic security relationship. Transatlantic cooperation will also contribute to the good health of the defence industrial base on both sides of the Atlantic.

European and American governments must recognise the potential for a certain degree of mutual interdependence and explore solutions to achieve transatlantic security of supply.

Security  

Europe is a major market for security-related products, systems and services, and innovation remains strong. AmCham EU is committed to ensuring that European leadership in this sector remains vibrant.

Eliminating or limiting national barriers caused by the absence of single certification and standardization schemes will strengthen the European market. It will also help companies from both sides of the Atlantic develop and supply security solutions for both the commercial and public sectors.

Security issues related to migration are becoming global and they require a global approach. Biometrics using global standards offer a digital solution with improved levels of safety.

To increase the security of city dwellers, European and American governments must include advanced security and safety technologies in their smart city initiatives.

We support the attention given by the European Commission and the European Parliament to establishing an ‘Action Plan for an innovative and competitive Security Industry’ to overcome the fragmented market that currently characterises the security sector in Europe. The Commission should be even more ambitious and consider including security services in future communications on this industrial policy.
AmCham EU speaks for

American companies committed to Europe on trade, investment and competitiveness issues. It aims to ensure a growth-orientated business and investment climate in Europe. AmCham EU facilitates the resolution of transatlantic issues that impact business and plays a role in creating better understanding of EU and US positions on business matters. Aggregate US investment in Europe totalled more than €2 trillion in 2016, directly supports more than 4.5 million jobs in Europe, and generates billions of euros annually in income, trade and research and development.

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Introduction

The American Chamber of Commerce to the European Union (AmCham EU) believes that strong security and defence industries are crucial for the European economy. Both contribute to sustainable growth in Europe by providing highly skilled jobs and fostering Europe’s knowledge economy through massive research and development (R&D) investment. Through their dynamism and innovative edge, the security and defence industries help Europe achieve and maintain technological excellence.

With a turnover of €97.3 billion in 2014, the EU defence industry provides a wealth of highly skilled jobs with 500,000 people directly employed in the sector and an additional 1,200,000 indirect jobs. Similarly, the EU security industry has a fast-growing market value of around €35 billion, and employs 180,000 people. Europe is currently the second largest security market in the world. This sector is essential for Europe’s growth and competitiveness, a key part of the Europe 2020 Strategy for smart, sustainable and inclusive growth. However, growing competition from international markets means that Europe is at risk of losing this leading position in the next few years if no action is taken to promote the industry.

In view of the difficulties facing both these sectors, AmCham EU would like to use this opportunity to offer a set of recommendations for EU policy makers to harness the potential of these key industries.

The transatlantic partnership remains vital for the security and defence industries in Europe, especially during economically challenging times.