



Cyber Security Export Market: United Kingdom 2014

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George Mason University (School of Public Policy)

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Virginia loves Exports 





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EXECUTIVE SUMMARY

- » In recent years, cyber security has become a priority for the UK. It invested heavily in protecting its infrastructure during the London Olympics in 2012. Since then demand for cyber security has increased. The UK launched its National Cyber Security Programme in 2011 with an initial outlay of around \$1 billion. It recently revealed that it is investing in developing offensive cyber capabilities.
- » Various reports claim that there is a dearth of cyber security skills in the UK in spite of its overall advanced defense and security¹ prowess.
- » The UK is a niche market for cyber security exports from Virginia. While its cyber security preparedness is parallel to that of the United States (US), in some areas such as cloud computing, business analytics, anti-virus, content management, and others, there is considerable demand² for expertise.
- » US exporters are likely to face the challenge of competition from domestic firms but the procurement process does not discriminate foreign companies, which increases the chances of obtaining a contract.
- » The [United Kingdom](#) (UK) is a close political and defense ally of the United States. This strong political relationship is reflected in the extensive economic partnership between the two nations. Although there is no free trade agreement in place, the two countries are each other's largest trade and investment partners.
- » US companies have open market access to UK defense contracts that makes it easier for US firms to do business with the British government. Defense trade includes foreign military sales as well as direct commercial sales.
- » A common language and cultural similarities help in interpreting policies and procedures. By virtue of being a member of the European Union (EU), the UK is expected to abide by EU directives, which inform the legalities of doing business in the UK market. US exporters should pay heed to UK and EU regulation and draw up suitable contracts.

¹ (PAC, 2013)

² (Infosecurity Magazine, August 16, 2013)

CYBER SECURITY IN THE UK

In 2010, the UK government classified cyber security as a 'Tier 1' national security risk out of the top four risks threatening the nation. The Cabinet's Office for Cyber Security and Information Assurance is responsible for the nation's responses to cyber threats and attacks. Other government agencies such as the Ministry of Defence, Government Communications Headquarters, the Department for Business, Innovation and Skills and some others are also involved in implementing the government's cyber security initiatives.

The UK first introduced its cyber strategy in 2009 followed by another one in 2011. The strategy focuses on mitigating risks, better responses to attacks and exploiting cyber opportunities³. A goal of the Cyber Security Strategy is to make the online business environment in the UK one of the safest in the world.

The UK recently publicly stated that it is developing the cyber capability to undertake offensive attacks on other countries. Phillip Hammond, the UK's Defense Secretary stated that along with its army, navy and air force, the UK would recruit a 'cyber-army'. Security breaches in the UK have reportedly increased by 10 percent as 87 percent of small businesses and 93 percent large firms claimed to have been risked in 2012⁴. The National Audit Office in the UK claimed that cybercrime cost the UK between \$29 – 43 billion in 2012⁵. The renewed emphasis on cyber security is important as the UK braces to face further attacks in the coming years.

- » The [Office of Cyber Security and Information and Assurance](#)⁶ and details on its [policy and action](#) can be accessed for more information.

TECHNOLOGICAL ENVIRONMENT

The UK is a highly networked nation with 80 percent of its households with access to Internet facilities. E-commerce transactions and online communication are extremely common. In 2012, it ranked seventh out of 142 on the World Economic Forum's network readiness index. In a period of two years from 2010-2012, Internet access via mobile rose by 27 percent⁷. In 2009, users spent almost \$75 billion on online transactions⁸. In fact; the Internet comprises 6 percent of the UK's gross domestic product. Thus, the nation's need for cyber security is extremely high in order to keep these transactions and infrastructure safe. Specific cyber laws or laws that govern Internet usage include the EU's Privacy and Electronic Communications Regulations which require consent before sending spam mail to customers, Consumer Protection Regulations which cover Internet sales and the Electronic Communications Act, to name few.

³ (CSIS, 2011, page 20)

⁴ (Department of Business, Innovation and Skills, UK)

⁵ (National Audit Office, 2013)

⁶ (Underlined phrases all contain links)

⁷ (Data from PAC, 2013)

⁸ (UK Cabinet Office, 2011)

MARKET ACCESS

POLITICAL ENVIRONMENT: US-UK RELATIONSHIP

The US and the UK are close political allies and have a strong defense relationship. Formal defense agreements between the two countries go far back in time. Bilateral defense cooperation includes the Second World War, the Cold War, North Atlantic Treaty Organization (NATO), the Gulf War and collaboration for several other security operations and on global issues. In addition, the two nations consult each other on intelligence and diplomatic matters⁹. Many opine that the US-UK 'special relationship'¹⁰ has cooled down during the Obama administration. However, the likelihood of this relationship changing the status quo between the two countries in the near future is low. The UK's traditional and cyber defense systems are comparable to those in the United States and the two countries are the biggest military suppliers to each other's defense departments. The US maintains multiple military sites in the UK.

- » More details on the US-UK political and defense relationship can be accessed from the following resource: [Congressional Research Service](#) report

UK-EU RELATIONSHIP

The US-UK closeness can only be topped by the relationship between the UK and the European Union (EU) of which the UK is a part, although the UK is not a part of the European monetary union.¹¹ Therefore, it often finds itself immersed in pan-European politics. In recent years, there has been some friction between the UK and the European Union on a variety of issues ranging from economic integration and national sovereignty to the euro currency. As a member of the European Union, the UK offers companies access to a wider market. But, this also means that some of the 'rules of the game' in the UK are guided by broader European policy.

In spite of this tension with the EU and the fact that the UK has a coalition government ruling the nation at present, it remains a politically stable parliamentary democracy. The UK has bilateral agreements with its neighbors in the region and across the world covering various issues from tax treaties to defense pacts. Its current military deployments are in Afghanistan, Cyprus, Germany, Canada, Kenya, Brunei and some other nations¹². It is a founding member of NATO and has permanent membership in the United Nations Security Council. Thus, it is highly active in international affairs and foreign policy.

DEFENSE TRADE

The UK is the largest market in Europe for US products¹³ with over 40,000 US exporters trading with the UK. In 2011, the US imported British goods worth \$46 billion whereas American imports into the UK amounted to roughly \$44.7 billion indicating a major trade relationship. In 2012, the US exported nearly \$110 billion worth of goods and services to the UK¹⁴. The UK is the largest foreign investor in the US. The reverse is also true in that the US is the biggest investor in the UK. Foreign investment flows between the two economic partners are also significant at \$550 billion (US to UK) in 2011 and \$442 billion (UK investment flows into the US) in 2011.

⁹ (CRS, 2013)

¹⁰ (WSJ, September 1, 2013)

¹¹ (The UK is not a part of the European monetary union)

¹² (BMI, Q4, 2013)

¹³ (US Commercial Service, Doing Business, 2013)

¹⁴ (US Commercial Service. Doing Business. 2013)

The two countries are major defense trade partners in the Foreign Military Sales (FMS) programs. The program amounted to agreements worth \$1.8 billion in 2010 and \$537 million in 2011¹⁵. Direct commercial sales to the UK average to around \$500 million a year. Not only trade but also foreign investment by the US and the UK is also present in the respective defense industries. One third of the UK's total security exports are comprised of cyber security exports amounting to almost \$1.2 billion. The US is the top market for these exports, another point that highlights the strong economic relationship between the two countries.

- » The US Commercial Service provides detailed information on the trade and investment climate and on [Exporting to the UK](#)

The economic relationship between the two nations is so deep-seated that the UK's banks and financial institutions were seriously affected by the economic crisis of 2008. The British currency, the pound sterling, is flexible which may or may not significantly impact the value of the trade depending on how the transactions are conducted. Nonetheless, the UK is an expensive place to do business.

TRADE AGREEMENTS

While the US does not have an existing free trade agreement with the UK, market access is fairly easy and straightforward. There is a free trade agreement being discussed between the US and the EU. If it were to come into effect, market access to the UK would become even more efficient. The US and the UK signed a reciprocal treaty concerning [Defense Trade Cooperation](#) in 2007 under which licenses for defense equipment and services (for example, US International Traffic in Arms, ITAR) were eliminated for sales to the government. The agreement was ratified in 2010. The treaty also includes accepted lists of companies and individuals for defense trade among other favorable clauses. The benefit for US exporters is that they do not require a partner or major presence in the UK to bid or win defense contracts, although it is believed that a presence or partner does help with navigating the procurement process.

The UK is in fact one of the most open defense markets because it does not favor domestic companies as suppliers – a practice which is fairly common in most nations¹⁶. Instead, contracts are awarded to those companies that offer low costs and/or innovative expertise. There is considerable competition for government contracts. The UK imports defense equipment in spite of having a large, domestic defense industry, which is capable of producing sophisticated materials and software. [Import licenses](#) may be required for some security related products. Due to defense spending cuts in recent times, many domestic companies have merged or been acquired which has led to some industry consolidation.

- » Setting up an office in the UK is simple. Requirements and procedures can be accessed through the [Companies House](#) and the [UK Trade and Investment](#) bureau.

GOVERNMENT PROCUREMENT

The Defence Equipment and Support (DE&S) agency, a body of the Ministry of Defence is tasked with the procurement of equipment and services for defense purposes. The agency has a budget of approximately \$21.4 billion and oversees hundreds of projects¹⁷. The UK is currently working on a plan to share management of the DE&S agency with the private sector to make its operation more efficient. The US Department of Defense expressed its concerns regarding this plan as have the governments of other countries such as Germany and Spain. Once it is fully approved, the plan will go into effect in January 2015.¹⁸

¹⁵ (Ibid, Defense Security Cooperation Agency)

¹⁶ (Defense Equipment and Support Office, MoD, UK)

¹⁷ (BMI, Q4, 2013)

¹⁸ (Bloomberg BusinessWeek, August 21, 2013)

The UK is a party to the [World Trade Organization's Government Procurement Agreement](#). This implies that companies from the US have open access to public sector contracts in majority of the cases although not all for national security related reasons. The Ministry of Defense and the European Defense Agency publish information frequently on their projects and procurements. US firms are allowed access to this information. New exporters to the UK might find it useful to contact the US embassy's Office of Defense Cooperation to get advice and support¹⁹. All procurements exceeding certain EU limits are published in the [Official Journal of the European Community](#).

- » Details on the government's national security technology procurement strategy are available [here](#). Page 31 in this document highlights the importance of the US as a major acquisition partner.
- » US exporters expecting to do business with the Ministry of Defense can [register](#) with [Defense Contracts Online](#) to get information on upcoming opportunities.
- » The [Contracts Finder](#) website is another resource which also includes links to contracts in Scotland, Northern Ireland and Wales.
- » The [US Mission to the EU](#) and the [European Defense Agency](#) also produce information on defense procurement contracts.
- » Tenders for projects in the UK by category are available [here](#)²⁰

DOING BUSINESS WITH GOVERNMENT

According to Transparency International, the UK has relatively lower levels of perceived corruption. It ranks 17th in the Corruption Perceptions Index (2012). While there are mechanisms in place to prevent corruption during defense procurement such as anti-collusion, public compliance programs by companies and a place to file complaints about malpractice, there is no specific anti-corruption policy within the Ministry of Defence²¹. This information is vital to US exporters when dealing with the public sector in foreign markets because of the strict US Foreign Corrupt Practices Act of 1977, which considers bribery and other forms of corruption abroad to be punishable offenses. On its side, the UK is a signatory to the OECD Convention on Combating Bribery and the UN Convention against Corruption. It is also pursuing multiple anti-corruption initiatives at its end.

SAFETY AND SECURITY IN THE UK

There have been instances of terrorist attacks in London and other areas in the UK in the recent past. While these are a cause for concern, the target during these attacks has not been US citizens. The UK is also engaged in skirmishes or territorial disputes with Northern Ireland, Scotland, and Argentina to name a few. In spite of these issues, overall the UK is a safe place to do business.

- » For travel to the UK to make or build business contacts, please refer to the Department of State's travel advisory portal for the [United Kingdom](#)
- » There are many similarities between the US and UK markets because of the use of a common language. However, there are cultural differences which exporters should pay attention to in order to increase their chances of success in the British market – [British culture](#).

¹⁹ (US Commercial Service. Doing Business. 2013. See <http://london.usembassy.gov/odc/index.html> and <http://export.gov/europeanunion/grantstendersandfinancing/cseutendersdatabase/index.asp>)

²⁰ (www.globaltenders.com)

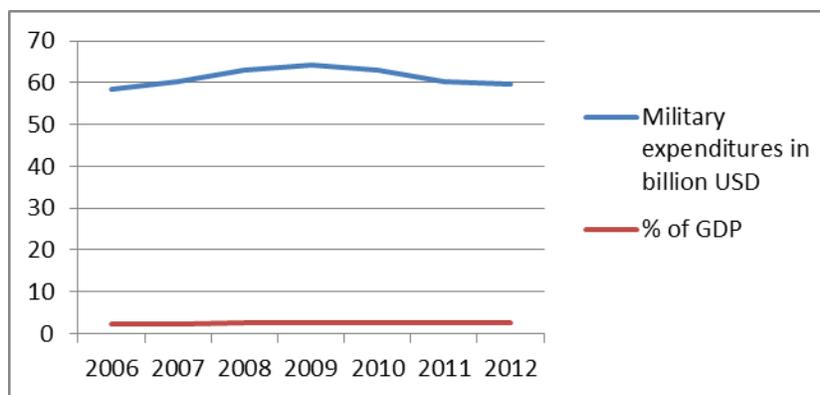
²¹ (Government Defense anti-corruption index, 2012)

MARKET SIZE AND GROWTH

DEFENSE SPENDING

After the US, China and Russia, the UK was the fourth largest military spender in 2012 with expenditures of over \$60 billion which comprised approximately 2.5 percent of gross domestic product²². In 2011, the UK occupied the third position on the list. Austerity and fiscal pressures have forced the Ministry of Defence to reorganize and cut its spending. Figure 1 shows the trend in military spending. The government is considering reducing defense expenditures by 8 percent but the Ministry of Defence (MoD) has been immune to some spending cuts²³. The MoD received approximately \$145 million to spend on cyber security from 2011-2015²⁴.

Figure 1: UK Military Expenditures 2006-2012



Source: SIPRI military expenditures database.

CYBER SECURITY SPENDING

The UK's security sector is reportedly worth \$19 billion (sales) and one third of the sales are from cyber security²⁵. In spite of spending cuts elsewhere in its defense operations, the government planned to spend over \$1 billion as part of the National Cyber Security Programme over the next four years until 2015 to secure its cyber borders²⁶. It is believed that this money comprises around 4 percent of the government's information technology budget, which is roughly \$1 billion.²⁷ Details on the spending plans are in Figure 2.

The US Commercial Service states that the information technology security industry in the UK is worth \$8.5 billion and growing²⁸. The cyber security market is expected to grow at 8 percent in a year²⁹. Other

²² (SIPRI Fact Sheet 2013. SIPRI military expenditures include "all current and capital expenditure on" military operations, defense projects, procurement, research and development and personnel expenses)

²³ (BMI, Q4, 2013)

²⁴ (Parliament publications, UK)

²⁵ (UKTI, 2013)

²⁶ (UK Cabinet Office, 2011)

²⁷ (US Commercial Service. Doing business. UK. 2013. Roughly equals \$1 billion)

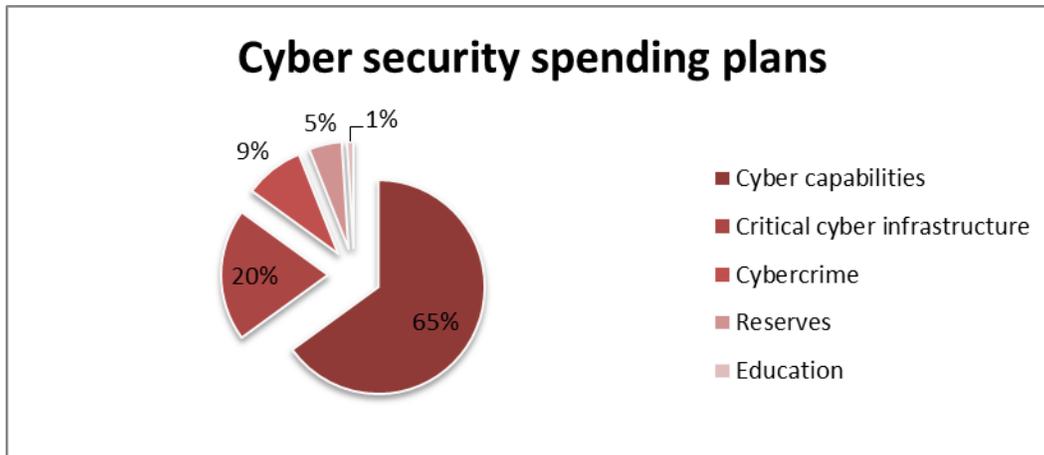
²⁸ (US ITA 2013)

²⁹ (Ibid.)

studies claim that the market is valued at \$3.8 billion and will grow to \$5.4 billion by 2017³⁰ which is an estimated compound annual growth rate of 5.7 percent. Regardless, all reports point to the large size of the UK market for cyber security products and services.

It is believed that the UK government is embarking on another major cyber security operation. The details, which are not yet available, will become clearer as this plan develops³¹. Other spending details are available via the [Parliament's publications](#).

Figure 2: Allocation of cyber security expenditures



Source: ZDNet, 2013. Developed from estimates provided by various UK government reports and published articles

COMPETITIVE MARKET LANDSCAPE

Around 2,000 domestic companies offer cyber security solutions. This creates ample competition for US exporters. Competitors include both foreign and domestic firms. Thus, there is significant competition for cyber security contracts. However, due to the relatively easier entry into the UK market by US firms, it also provides a plethora of promising opportunities. Given the magnitude and nature of the threat and preparation to tackle those threats, there is room for innovative American companies to do business in the UK. There is a shortage of current and future cyber expertise working on cyber defense operations and the UK is trying to induce people to take up these positions in various organizations. The Cyber Security Challenge UK is a group, which holds events for this purpose³² on behalf of government agencies and private sector companies.

MARKET OPPORTUNITIES

The opportunities in the market include hardware or security equipment and software services. Out of the two segments, the cyber security software and services market has relatively more possibilities for growth although the hardware sector is not very far behind. Cloud computing is another lucrative area for exports. Anti-virus, content management and compliance software, security testing, unified threat management and biometric products are some of the promising sub sectors for cyber security³³.

³⁰ (PAC, 2013, page 42)

³¹ (PRWeek, 3/1/2013)

³² (Engineer, 2013)

³³ (US Commercial Service. Doing Business. 2013)

The UK cyber security market can be classified as mature but growing for the following reasons. The cyber security industry in the UK is developed, advanced, and 'substantial'³⁴. At the same time, it continues to grow as new threats become apparent, and as established infrastructure needs maintenance, upgrades and services. Therefore, the UK is a niche market with demand for 'innovative' cyber security solutions by experienced companies.

TRADE EVENTS

There are many trade events³⁵ held throughout the year in the UK and elsewhere in Europe where exporters can create a network of contacts, find partners if needed and seek opportunities for growth.

- » [Defense procurement events](#) offer access to the marketplace and many partnership opportunities
- » Other trade events include the [IFSEC International](#) and [Infosecurity Europe](#).

LEGAL ISSUES

The basis for the British legal system is common law, which has similarities with the US system. Being a part of the European Union (EU), the UK is also required to abide by EU directives which guide doing business in the European Union nations, including the UK. The US embassy in London can provide useful information on key contacts and law firms in the UK.

INTELLECTUAL PROPERTY RIGHTS

Exporters and foreign investor rights are protected in the UK because of the existence of strong laws protecting intellectual property rights, and institutions that effectively enforce these laws. As in most countries, it is recommended that property rights be registered in the UK so that there is adequate protection under UK law. The same applies to trademarks and copyrights in majority of the cases.

BUSINESS LAW

US exporters who plan to use agents, distributors or similar arrangements should ensure that they draw up contracts which are aligned with EU and UK laws. It is advisable to solicit legal advice in the UK to do business in its market. Most importantly, EU Directives influence government procurement in the UK.

- » For [defense procurement in EU](#) countries, please refer to the policies of the European Commission.

EU directives affect payment to sellers of goods or services in the EU/UK. Sellers are entitled to interest in case of a delay in payment ranging from 30 days to 60 days depending on the identity of the purchaser. Direct consumers are not included in this directive. The interest rate is 8 percent above the EU Central Bank rate³⁶. There are strict EU laws related to consumer and data privacy and transfer that are different and usually stricter than those in the US. There is a [Safe Harbor Agreement](#) in place between the US and the EU to direct data transfer and companies can sign up to it. The [Data Protection Agency](#) in the EU is responsible for approving contracts related to transfer of data from the EU. On most aspects of doing business in the UK, EU laws and directives are also applicable. The terms of doing business are thus different from what businesses in the US are familiar with. Due to the complexity involved, it is prudent to

³⁴ (Ibid. page 212)

³⁵ (<http://www.infosec.co.uk/>)

³⁶ (US Commercial Service. Doing Business. 2013)

obtain the assistance of law firms in the UK, some of which are branches of US law firms, to ensure compliance in the EU and the UK.

Value added tax in the UK is usually standard at 20 percent³⁷. There is no bilateral investment agreement between the US and the UK. However, there is a tax treaty that protects US companies from paying double taxes. More information can be obtained from the [Department of Business, Innovation and Skills \(BIS\)](#).

DEMAND FROM THE PRIVATE SECTOR

In leading democracies such as the UK, majority of the national infrastructure is managed by the private sector. As a result, government controlled industries such as defense; health and education do not provide opportunities for cyber security as much as the private sector, which includes financial institutions, telecommunications, utilities, and other industries of national interest. For these reasons, some estimates suggest that almost 70 percent of the cyber security market in the UK is made up of demand from the private sector³⁸. In April 2013, the government started discussing a plan to share operation of its defense procurement agency with the private sector, another indicator of the role of the private sector. The aforementioned agency has a yearly budget of around \$21.4 billion³⁹.

The study on cybercrime in the UK, which concluded that it cost up to \$43 billion a year, claimed that the targets were mostly private businesses from a variety of industries⁴⁰. The report recommended that businesses should try to protect their trade in earnest as cybercrime is likely to increase with the increasing reliance on communication technologies in all sectors of society. The Financial Times reported that UK companies are not equipped with sufficient data to prevent cyber-attacks⁴¹. British banks such as Barclays and Santander have been victims of cyber-attacks along with other organizations in the UK.

The UK faces the classic dilemma that advanced, democratic countries face – private companies manage majority of the national infrastructure. Hence, defending the nation entails securing the systems of these private companies with support from the government. The UK government recently started sharing information with the private firms that control infrastructure in order to help them prevent and respond to cyber-attacks⁴². A PWC report noted that barely 12 percent of the companies in the UK had a process in place to identify and manage cyber risks in their organizations. For these reasons, there is huge demand from the private sector in the UK for cyber security services. While large firms comprise a large part of the private sector, small to medium sized enterprises are the most vulnerable.

- » To seek partners or view competitors in the UK, please access these [Company Directories](#). Visit this link for detailed [information and reports](#) on specific UK companies.

³⁷ (Ibid)

³⁸ (PAC, 2013, page 43-44)

³⁹ (Bloomberg BusinessWeek, April 25, 2013)

⁴⁰ (Detica, 2012/National Audit Office)

⁴¹ (Financial Times, October 13, 2013)

⁴² (Financial Times, August 13, 2013)

Table 1: UK Cyber Security Market at a Glance

Strengths

- Strong political and defense relationship with the US
- Open and transparent market access
- Member of WTO's Government Procurement Agreement

Opportunities

- Increased spending on cyber security
- Access to the European Union market
- Private sector opportunities

Weaknesses

- Political issues with the EU
- Coalition government
- Expensive market to do business
- Compliance with UK laws and EU Directives

Threats

- Significant competition from other domestic and foreign companies
- Defense spending cuts

APPENDIX: USEFUL LINKS

US Export Controls

- » [International Traffic in Arms Regulations \(ITAR\) – U.S. Department of State](#)
- » [Export Administration Regulations \(EAR\) – U.S. Department of Commerce](#)
- » [Exporting from Virginia](#)
- » [VA-UK Economic relationship](#)
- » [Export Licenses](#)
- » [UK Import Licenses](#)

US Laws Governing International Business

- » [US Anti-corruption guide](#)
- » [Corruption Map](#)

US-UK Political Relationship

- » [US-UK Political Relations](#)
- » [Congressional Research Service report](#)

UK Country Information

- » [Country Information](#)
- » [Culture](#)

Doing Business in the UK

[US Commercial Service](#)

Cyber Security Resources

- » [Industry Event](#): National Security: Innovation and Technology
- » [Cyber Security Summit](#)
- » [Defense and cyber security](#)

REFERENCES

- Business Monitor International. (BMI) (2013). United Kingdom Defense and Security Report. Q4. Print. ISSN 1749-1746.
- Bloomberg Business Week. (2013). U.K. Defense Procurement Agency sale said to clear Treasury. April 25. Web. Retrieved November 7, 2013 from <http://www.businessweek.com/news/2013-04-24/u-dot-k-dot-defense-procurement-agency-said-to-clear-treasury-for-sale>
- Bloomberg Business Week. (2013). U.K. rebuts conflict of interest concerns in defense agency sale. August 21. Web. Retrieved November 7, 2013 from <http://www.businessweek.com/news/2013-08-21/u-dot-k-dot-rebuts-conflict-of-interest-concerns-in-defense-agency-sale>
- Center for Strategic and International Studies (CSIS). (2011). Cybersecurity and cyberwarfare. *UNIDIR Resources*. Web. Retrieved October 30, 2013 from <http://www.unidir.org/files/publications/pdfs/cybersecurity-and-cyberwarfare-preliminary-assessment-of-national-doctrine-and-organization-380.pdf>
- Central Intelligence Agency. (2013). The World Factbook: Japan. CIA Publications. Retrieved November 12, 2013 from <https://www.cia.gov/library/publications/the-world-factbook/geos/uk.html>
- Congressional Research Service. (2013). The United Kingdom and U.S.-UK Relations. *CRS Report for Congress*. Web. Retrieved November 5, 2013 from <http://www.fas.org/sqp/crs/row/RL33105.pdf>
- Defense Security Cooperation Agency, Fiscal Year Series. Web. Retrieved November 5, 2013 from <http://www.dsca.mil/programs/bizops/factsbook/Fiscal%20Year%20Series%20-%2030%20September%202011.pdf>.
- Detica. (2012). The cost of cyber crime. In partnership with the Office of Cyber Security and Information Assurance in the Cabinet Office. Retrieved October 29, 2013 from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/60943/the-cost-of-cyber-crime-full-report.pdf
- Espiner, Tom. ZDNet. (2011). UK cybersecurity spending plans revealed. ZDNet. April 2013. By Tom Espiner. Retrieved November 4, 2013 from http://www.zdnet.com/uk-cybersecurity-spending-plans-revealed_p2-3040092586/
- Financial Times. (2013). Companies 'critical' to UK to receive support against cybercrime. August 13. Web. Retrieved November 13, 2013 from <http://www.ft.com/cms/s/0/aa88a330-0438-11e3-8aab-00144feab7de.html>
- Financial Times. (2013). UK business faces cyber security challenge. October 13. Web. Retrieved November 25, 2013 from <http://www.ft.com/intl/cms/s/0/504ab002-33ef-11e3-8f1d-00144feab7de.html>
- Harris, Stephen. (2013). Hacking the skills shortage. *Engineer*. August 30. Web. Retrieved November 14, 2013 from <http://www.theengineer.co.uk/blog/hacking-the-skills-shortage/1017020.article>
- Infosecurity Magazine. (2013). UK cybersecurity skills gap persists – especially for the cloud. Retrieved November 3, 2013 from <http://www.infosecurity-magazine.com/view/35083/uk-cybersecurity-skills-gap-persists-especially-for-cloud/>
- National Audit Office. (2013). The UK cyber security strategy: Landscape review. Government of the United Kingdom. Web. <http://www.nao.org.uk/>

Parliament, UK. (2013). Defence and cyber-security. *Defence committee*, Publications and Records. Web. <http://www.parliament.uk/>

Pierre Audion Consultants (PAC). (2013). Competitive analysis of the UK cyber security sector. *Study for the Department of Business, Innovation and Skills*, UK. Print. Report.

Owens, John.. (2013). Government powers up comms to fight cyber crime. *PRWeek* March 1. Print.
PwC. (2013). Various information retrieved November 3, 2013 from cyber security practice
<http://www.pwc.co.uk/cyber-security/cyber-security.jhtml>

RAND Europe. (2013). Cyber-security threat characterization: A rapid comparative analysis. Prepared for the Center for Asymmetric Threat Studies, Swedish National Defense College, Stockholm. Print.

Stockholm International Peace Research Institute (SIPRI) (2012). Trends in World Military Expenditure, 2012. Fact Sheet. Retrieved October 30, 2013 from http://books.sipri.org/product_info?c_product_id=455

Transparency International. (2012). Corruption Perceptions Index, 2012. Web. Retrieved November 2, 2013 from <http://cpi.transparency.org/cpi2013/results/>

Transparency International. (2012). Government Defence Anti-Corruption Index. Japan. Web. Retrieved November 5, 2013 from <http://government.defenceindex.org/results/countries>

UK Cabinet Office. (2011). The UK cyber security strategy. Retrieved November 10, 2013 from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/60961/uk-cyber-security-strategy-final.pdf

UK Trade and Investment. (2013). Cyber Security: The UK's approach to exports. Retrieved October 24, 2013 from www.ukti.gov.uk/uktihome/item/503140.html

US International Trade Administration. (2013). Global safety and security resource guide. 2013-2014 Edition. Available from www.buyinfousa.net

US Commercial Service . (2013). Doing Business in Japan. *Country Commercial Guide for U.S. Companies*. Department of Commerce. Web. Retrieved November 14, 2013 from <http://export.gov/uk/>

Wall Street Journal. (2013). *To walk on world stage, UK needs Europe*. September 1. By Alex Nixon. Print.

World Economic Forum. (2013). *The Global Information Technology Report*. Insight Report. Web. <http://www.weforum.org/reports/global-information-technology-report-2013>

World Trade Organization. (2013). United Kingdom and the WTO. Member Information. Web. Retrieved November 16, 2013 from http://wto.org/english/thewto_e/countries_e/united_kingdom_e.htm