New Approaches for Selling to the Military

Mary Lynn Landgraf
Senior International Trade Specialist
IFAI Fall Conference
October 6th, 2015
Research Assistant and Intern: Micheal Zimmer
Critical Components to the Presentation

- A basic overview of OTEXA and its host of services for domestic and international marketing and sales.
- U.S. textile industry revival.
- Advancing technical textiles in the U.S.
- National Network for Manufacturing Innovation (NNMI).
- Military segment outlook.
- The Internet of Things (IOT).
- U.S. Military demand for textiles and apparel.
- Smart fabrics.
- Selling to the Federal Government.
- OSD Foreign Comparative Test
- Selling to the UK Ministry of Defence (MOD)
- Canadian Defence and Security Procurement
- Selling to NATO
- Foreign Military Sales
- Trade Shows
U.S. Department of Commerce
Office of Textiles and Apparel (OTEXA)

- Develops programs and strategies to improve the domestic and international competitiveness of the U.S. fiber, textile, apparel, footwear and travel goods industries.

- DAS/OTEXA is Chairman of the Committee for the Implementation of Textile Agreements (CITA).

- Responsible for textile trade policy.

Source: http://otexa.trade.gov
A comprehensive trade and investment agreement between the United States and the European Union that offers significant benefits in promoting U.S. international competitiveness, jobs, and growth.
A successfully negotiated agreement would aim to boost economic growth in the United States and Europe and add to the over 13 million American and European jobs already supported by transatlantic trade and investment. In particular, the Partnership would aim to:

- Further open EU markets to U.S. goods and services
- Grow investments through strengthened rules
- Eliminate tariffs on trade
- Reduce costly non-tariff barriers that impede the flow of goods
- Reduce the cost of differences in regulations and standards by promoting greater compatibility, transparency, and cooperation
- Develop rules, principles, and new modes of cooperation on issues such as intellectual property and market based disciplines addressing state-owned enterprises and discriminatory localization barriers to trade
- Promote the global competitiveness of small- and medium-sized enterprises

Source : Office of the U.S. Trade Representative (USTR)
The U.S. and the European Union are the world's two largest economies; account for almost 50% of global GDP

• In 2014, the U.S. exported $276 billion of goods and services to the EU.

• Over $3.4 trillion in investments (i.e. imports and exports) in each other's economies in between 2010 and 2014.

• More than 13 million jobs tied to the transatlantic economic relationship.

https://www.whitehouse.gov/the-press-office/2014/03/26/fact-sheet-us-eu-cooperation
“the greatest opportunity – and the greatest challenge – of T-TIP is in the area of regulation and standards...”

U.S. Trade Representative Michael Froman, September 30, 2013
Negotiations Are Ongoing

**Negotiating Objectives:**
- Separate textile and apparel chapter to provide clarity and transparency
- Yarn-forward rule of origin with certain flexibilities
- Strong Customs enforcement language
- Safeguard mechanism specific to textiles and apparel
- Full cumulation among the TPP partner countries

TPP Region has Substantial Textile and Apparel Production (2014)

Total TPP textile exports - $34.3 billion
Total TPP apparel exports - $40.4 billion

The four largest TPP textile exporters – the U.S., Japan, Vietnam and Mexico – represent over 83 percent of total TPP textile exports

### Exports by TTP Country (2014)

<table>
<thead>
<tr>
<th>Country</th>
<th>Textiles</th>
<th>Apparel</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States:</td>
<td>$14.3 billion</td>
<td>$6.1 billion</td>
<td>$20.4 billion</td>
</tr>
<tr>
<td>Vietnam:</td>
<td>$5.2 billion</td>
<td>$19.5 billion</td>
<td>$24.7 billion</td>
</tr>
<tr>
<td>Japan:</td>
<td>$6.3 billion</td>
<td>$622 million</td>
<td>$6.9 billion</td>
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<tr>
<td>Mexico:</td>
<td>$2.5 billion</td>
<td>$4.6 billion</td>
<td>$7.1 billion</td>
</tr>
<tr>
<td>Malaysia:</td>
<td>$1.8 billion</td>
<td>$4.7 billion</td>
<td>$6.5 billion</td>
</tr>
<tr>
<td>Canada:</td>
<td>$1.8 billion</td>
<td>$1.3 billion</td>
<td>$3.1 billion</td>
</tr>
<tr>
<td>Peru:</td>
<td>$490 million</td>
<td>$1.2 billion</td>
<td>$1.7 billion</td>
</tr>
<tr>
<td>Singapore:</td>
<td>$877 million</td>
<td>$1.3 billion</td>
<td>$2.2 billion</td>
</tr>
<tr>
<td>Chile:</td>
<td>$174 million</td>
<td>$370 million</td>
<td>$544 million</td>
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<tr>
<td>Australia:</td>
<td>$214 million</td>
<td>$221 million</td>
<td>$435 million</td>
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<tr>
<td>New Zealand:</td>
<td>$257 million</td>
<td>$261 million</td>
<td>$518 million</td>
</tr>
<tr>
<td>Brunei:</td>
<td>$1 million</td>
<td>$6 million</td>
<td>$7 million</td>
</tr>
</tbody>
</table>

OTEXA has over 40 years of experience facilitating exports for small and medium-sized companies:

- Export counseling & assistance
- Market research
- Emphasis on niche markets (e.g., technical, advance textile materials for industrial & military end-uses), higher-end producers & suppliers, and FTA partnerships
- U.S. Pavilions at established trade shows overseas
- Cost-efficient catalog/sample booths at overseas trade shows
- Trade missions
- Match-making

Source: http://otexa.trade.gov
OTEXA Overview

• Compiles industry data
• Conducts research and analysis
• Assists in trade negotiations
• Promotes U.S. textile and apparel companies at trade events
• Develops supply chain and sourcing strategies
• Executes U.S. textile and apparel trade policy
• Works to improve exports of U.S. textile and apparel companies in overseas markets
• Evaluates the current state of the domestic fiber, textile and apparel industries, and the impact of import competition

Source: http://otexa.trade.gov
OTEXA Services: Conduit to Military Sales

- OTEXA, with its designated Trade Specialists, receives and disseminates military trade leads from 80 country offices of the U.S. Commercial Service
- OTEXA works with military offices that specialize in R&D and product commercialization
- OTEXA sponsors pavilions and sample booths at military trade shows around the world, such as MILPOL in Paris and Defense Systems & Equipment International in London (DSEi), to create market exposure, market entry, marketing and sales. Trade show follow-up consists of tailored company specific data sheets with leads and contact information
- OTEXA interfaces with Foreign Military Sales (FMS) offices overseas and in Washington to train, create awareness and seek new business opportunities
- OTEXA trains clients on Export Licensing and Controls and ITAR updates and changes

Source: http://otexa.trade.gov

U.S. Department of Commerce | International Trade Administration
OTEXA Services: Conduit to Military Sales (cont.)

- OTEXA assists with marketing suggestions/strategies for international sales
- OTEXA offers seminars/webinars on specific topics
- OTEXA works as a match-maker when a company needs complementary product or expanded production capabilities
- OTEXA can tailor, develop and co-lead a trade mission for trade associations
- OTEXA works with relevant trade associations and military organizations to keep abreast of developments and promote your company’s products
- OTEXA can interface with universities to facilitate R&D for co-development of your product
Announcements

- **09/28/2015** - Limitations of Duty- and Quota-Free Imports of Apparel Articles Assembled in Beneficiary Sub-Saharan African Countries From Regional and Third-Country Fabric. The AGOA caps for duty-free, quota-free imports are increased for the one-year period from October 1, 2015 to September 30, 2016.

- **09/11/2015** - Increase of Haiti HOPE Knit Apparel TPL from 70 million SMEs to 200 million SMEs for the annual period from October 1, 2014 to September 30, 2015. In accordance with the Haiti HELP legislation, because imports under the knit apparel TPL exceeded 52 million SMEs during the month of July 2015, the applicable quota level for the 2014/2015 annual period is automatically increased to 200 million SMEs. The quota level for the new annual period, from October 1, 2015 to September 30, 2016, will be 70 million SMEs until such time as imports reach or exceed 52 million SMEs.

- **09/10/2015** - The Office of the United States Trade Representative (USTR) requests written comments from the public identifying Internet and physical marketplaces that reportedly engage in or facilitate substantial copyright piracy and trademark counterfeiting. The deadline for interested parties to submit written comments is October 5, 2016.


- **08/19/2015** - Request for Public Comments to Compile the National Trade Estimate Report on Foreign Trade Barriers. Comments due to the Office of the Trade Representative no later than October 28, 2015.

- **08/05/2015** - Public comment is requested on a new Commercial Availability Request under the U.S.-Chile FTA. Comments must be received by August 24, 2015.

- **07/29/2015** - Indonesia increases tariffs on many products, including clothing, footwear, home furnishings and some fabrics. See Minister of Finance Regulation No. 132/PMK.01/2015, dated July 8, 2015 for a list of the new tariffs.

- **07/23/2015** - Mexico has invited interested parties to comment on proposed revisions to its Textile Labeling Standards. Comments must be received by August 29, 2015.

- **07/10/2015** - Commerce Department Releases New Reports Ranking Top Export Markets - New!

- **05/05/2015** - Call for Applications for the International Buyer Program Select Service for Calendar Year 2016.

- **04/10/2015** - Now available for download: Recording and slide presentation from “New Textile and Apparel Measures in Mexico” webinar.

Past Announcements
DoD Procurement of Clothing & Textiles
(the Berry Amendment)

The Department of Defense (DoD) required by law (the “Berry Amendment”, 10 USC 2533a) to procure domestically-manufactured clothing and textiles:

- Purpose – to maintain an active industrial base in times of war
- Generally applied on a fiber-forward basis
- In FY 2014, the Defense Logistic Agency’s sales of clothing, textiles & equipment to military personnel worldwide surpassed $1.9 billion
- Over 8,000 different items procured, ranging from uniforms, footwear and undergarments to ecclesiastical items, individual equipment, flags, tents
- OTEXA provides match-making services to U.S. companies wishing to sell to the military, both here and overseas
- Visit the OTEXA Berry Amendment website at www.otexa.trade.gov, side bar “Berry Amendment”

The U.S. textile industry is, in the words of one former Secretary of Defense, "Second only to steel in importance to the Armed Forces of the United States."

Source: Maria D’Andrea, Supervisory International Trade Specialist
U.S. Department of Commerce | International Trade Administration
Contact for the Berry Amendment

Maria D’Andrea  
Supervisory International Trade Specialist  
Office of Textiles and Apparel  
Industry and Analysis  
International Trade Administration  
U.S. Department of Commerce

Maria.Dandrea@trade.gov
Telephone: (202) 482-1550
The Buy American Act of 1933

Federal agencies are required to buy domestic goods/construction materials.

- **Domestic** is defined as being manufactured in the United States and the cost of domestic components must exceed 50% of the cost of all components.

- Establishes price preferences for domestic. Federal agencies can waive the domestic requirement for reasons of price, non-availability of domestic, and public interest ("public interest" is undefined).

- Under the Trade Agreement Act of 1979, if a procurement is covered under a trade agreement, then the Buy American Act of 1933 is waived.

- In those situations, Federal agencies can only buy either the domestic products or products from trade agreement countries. Trade agreements include all of our FTA’s (except the U.S.-Jordon FTA) or the WTO Agreement on Government Procurement (GPA).
The Buy American Act of 1933 (Cont.)

• GPA is a plurilateral agreement that includes 46 countries including the United States. Mostly developed nations such as Canada, the EU member states, Japan, Korea, Singapore, Switzerland.

• Important note: what is “covered” and what is excluded from our trade agreements. For purposes of textiles, there are exclusions that can be found in all our trade agreements.

Annex 1 (central government entities) GPA states for the DoD the Agreement doesn’t cover:
• FSC 83 Textiles, Leather, Furs, Apparel, Shoes, Tents, and Flags (all elements other than pins, needles, sewing kits, flagstaffs, flagpoles and flagstaff trucks)
• FSC 84 Clothing, Individual Equipment, and Insignia (all elements other than sub-class 8460 – luggage)
The Buy American Act Contact Information

Mr. Brian Woodward
Senior International Trade Specialist
Trade Agreements, Negotiation and Compliance
U.S. Department of Commerce
Phone: (202) 482-0375
Email: Brian.Woodward@trade.gov
“Made in the U.S.A.” Database

- Search by Supplier, Manufacturer, or Service Provider

http://otexa.trade.gov/MadeInUSA
Promoting “Made-in-USA”

• With increasing demands by consumers, brands and retailers for “Made-in-USA” products, OTEXA has developed an online registry that will showcase domestic manufacturers, suppliers of apparel, textiles, and footwear.

• To register as a supplier or manufacturer, or to locate domestic producers and suppliers, contact:

  Kim-Bang Nguyen
  kim-bang.nguyen@trade.gov or on 202-482-4805
  www.otexa.ita.doc.gov
Why People Buy “Made in USA”?

Why the world prefers and buys US brands and products:

- Quality is the number one factor in decision making
- The perceived value of the product, its engineering etc.
- Design and trendsetting
- We deliver what we promise
- We do not overstuff containers with non-ordered “filler” goods
- Order quantities, timely deliveries
- Transparency throughout the system
- Safety perceptions of products: that which touches the skin such as linens etc.
- Cultural attractiveness/Snob factor
- Design vignettes—the theme in fabrics, furnishing and carpets
- Cultural savvy and awareness (colors, images and ability to adapt and adjust to markets)
The United States: A Global Leader

- A strong and diverse **textile and apparel industry** producing a range of high-quality products.

- An important economic sector in terms of output and investment with a highly productive workforce:
  - Output of $71 billion in 2014.
  - $1.8 billion on capital expenditures in 2014. -up $300 million from 2013.
  - 372,400 employees in 2014, 3% of the total manufacturing workforce.

- **Fourth largest single country exporter of textiles**, with $14.3 billion in exports in 2014.

- **Largest single country importer of apparel**, with imports of $93.1 billion in 2014, 18% of total global imports.

1Following China, India and Germany. Source: *Time Series on International Trade*, WTO.

2Source: *Time Series on International Trade*, WTO
http://www.nwto.org/industry-facts-figures/
Resurgence in the US Textiles Industry
New Textiles Investment in the Last 18 Months

Capital Investment

New Employment

Source: NC State College of Textiles, Dean Hinks Presentation on Textiles

U.S. Department of Commerce | International Trade Administration
U.S. Textiles and Apparel Industry Revival

U.S. Total Exports of Textiles and Apparel

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2014</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles</td>
<td>9,930</td>
<td>14,374</td>
<td>44.7</td>
</tr>
<tr>
<td>Apparel</td>
<td>4,187</td>
<td>6,109</td>
<td>45.9</td>
</tr>
</tbody>
</table>

*Figures in Millions USD


U.S. Department of Commerce | International Trade Administration
Top 10 Export Markets For the U.S. in Technical Textiles

July 2015 Top Markets Report from the Department of Commerce ranked the following countries based on volume of exports in four categories of Technical Textiles:

- Non-Wovens
- Specialty and Industrial Fabrics
  - Medical Textiles
  - Protective Apparel

1. Mexico
2. Canada
3. China
4. Germany
5. Japan
6. Hong Kong
7. United Kingdom
8. Belgium
9. Brazil
10. Honduras

Source: 2015 Top Markets Report Technical Textiles and Apparel, OTEXA
Protecting Intellectual Property (IP)

The IP awareness assessment tool (USPTO.gov) helps businesses understand how an intellectual property strategy may be best for their company, based on their needs.
USPTO.gov has a Patent Pro Bono network with regional bar associations and attorneys to help under-resourced inventors navigate the patent system.
OTEXA: Catalyst to Innovation

- Functions as a one-stop shop for international companies seeking U.S.-based partners to share their innovation as well as manufacture goods to comply with Berry Amendment requirements.
- Works with international companies that require Berry compliant components.
- Strives to spark innovation among U.S. textile companies in order to maintain the global comparative advantage and assure the ultimate protection of our warfighters.
- OTEXA:
  - Amplifies U.S. technical textile innovation globally
  - Interfaces with U.S. Textile Universities for product development and testing
  - Promotes concept to finished product development
“Government should maintain a great research laboratory ... In this could be developed ... all the technique of military and naval progression without any vast expense.”

--Thomas Edison, May 1915
Navy Research Lab—A Brief History

• The Navy Research Lab was the first modern research institution created within the U.S. Navy. It began operations at 11:00 a.m. on July 2, 1923.

• The Navy Research Lab further expanded with the rise of WWII.
Advancing Technical Textiles in the U.S.A.

- Studies show that “small manufacturers lag behind larger competitors when it comes to adapting to new technology and business practices, negatively affecting productivity and competitiveness.”

- “The federal government is now working on facilitating public-private partnerships to help small manufacturers compete.”

- The Obama Administration launched the National Network for Manufacturing Innovation (NNMI) to help domestic companies compete.

National Network for Manufacturing Innovation (NNMI)

• The NNMI provides the infrastructure needed for manufacturing research

• NNMI is a network of institutes for manufacturing innovation who each have a distinct focus, but common goal to create new advanced technologies and processes to increase commercial productivity

• The nine manufacturing institutes are:
  1. America Makes
  2. Digital Manufacturing & Design (DMDII)
  3. Lightweight Metal Manufacturing (LIFT)
  4. Power America
  5. IACMI
  6. Integrated Photonics
  7. Flexible Hybrid Electronics
  8. Smart Manufacturing
  9. Revolutionary Fibers and Textiles

Source: http://manufacturing.gov/nnmi.html
Nine Manufacturing Institutes

- **America Makes -3D/Additive (8/2012)**
  - Public-private membership organization that manages a portfolio of $60 million in public and private funds for members to advance in additive (3D) manufacturing.
  - Help collaborate on innovation, maximize applied research and development funding, Accelerate time to market, and more.

- **Digital Manufacturing & Design (DMDII) (2/2014)**
  - Awarded more than $70 million by the U.S. government.
  - Goal is to provide U.S. factories with tools, software, and expertise needed to build things more quickly, less expensive, and overall more efficient.
  - Works to increase R&D through competitive programs, increase economic development, and expand education among digital manufacturing.

Source: [https://americamakes.us/membership/become-a-member](https://americamakes.us/membership/become-a-member)
[http://dmdii.uilabs.org/the-institute/vision](http://dmdii.uilabs.org/the-institute/vision)
Nine Manufacturing Institutes (Cont.)

• **Lightweight Metal Manufacturing (LIFT) (2/2014)**
  – Supports innovative manufacturing technologies through cost-effective “weight-cutting” of components used in transportation systems
  – Target sectors consist of automotive, aerospace, defense, rail, and more.
  – Recognizes priorities for technology, workforce, and supply chain development.
  – Financial support for precompetitive research.

• **Power America – Wide Bandgap Semiconductors (1/2015)**
  – Drives down the cost of and build the U.S. manufacturing leadership in wide bandgap (WBG) semiconductor-based power electronics.
  – Establishing an effective education and workforce development program to support the industry.

Source: [http://lift.technology/about/membership/](http://lift.technology/about/membership/)
Nine Manufacturing Institutes (Cont.)

• **IACMI (1/2015)**
  – Development of innovative manufacturing technologies for low-cost, energy efficient manufacturing of advanced polymer composites for vehicles, wind turbines, and compressed gas storage
  – Focus on developing a strong supply chain to support the growing advanced composites industry.

• **AIM Photonics (2/2015)**
  – Works to accelerate the transition of integrated photonic solutions from the innovation process to manufacturing ready systems in commercial and defense applications.
  – Provides cutting edge fabrication, packaging, and testing capabilities to create an adaptive photonic manufacturing chain.

Source: [http://iacmi.org/about-us/](http://iacmi.org/about-us/)
Nine Manufacturing Institutes (Cont.)

- **Flexible Hybrid Electronics (10/2015)**
  - Provide education and training on FHE manufacturing through community colleges, research universities, etc.
  - FHE manufacturing allows the integration of thin silicon electronic devices, sensing elements, communications, and more.
  - Benefit a variety of markets such as defense, automotive, communications, consumer electronics, medical devices.

- **Smart Manufacturing (9/2015)**
  - Goal is to reduce the cost of using technology such as sensors, controls, platforms, and modeling.
  - Implement these technologies in manufacturing processes to increase energy efficiency by a minimum of 15% and improve energy productivity by 50%.
  - Could impact industries such as oil/gas, aerospace, steelmaking, solar, chemical, and more.

Nine Manufacturing Institutes (Cont.)

- **Revolutionary Fibers and Textiles Manufacturing Innovation Institute (RFT-MII) (12/2015)**
  - Will ensure that the U.S. leads the manufacturing of cutting edge innovation in fiber science, commercializing fibers and textiles with unique properties.
  - Vision of supporting the entire ecosystem of U.S. advanced fibers and textiles manufacturing with hope of leveraging domestic manufacturing sites to develop and increase manufacturing processes.
  - Intend to capitalize on the rebound of the American textile industry by creating global export opportunities and building leadership of sophisticated fibers and textile technologies here in the U.S.

## Worldwide Military Expenditures (2014)

<table>
<thead>
<tr>
<th>Country</th>
<th>Mil Expenditure (Billions USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>$1776</td>
</tr>
<tr>
<td>United States</td>
<td>$610</td>
</tr>
<tr>
<td>China</td>
<td>$216 (est.)</td>
</tr>
<tr>
<td>Russia</td>
<td>$84.5 (est.)</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>$80.8</td>
</tr>
<tr>
<td>France</td>
<td>$62.3</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>$60.5</td>
</tr>
<tr>
<td>India</td>
<td>$50</td>
</tr>
<tr>
<td>Germany</td>
<td>$46.5</td>
</tr>
</tbody>
</table>

Source: Stockholm Institute for Peace.
Military Segment Outlook

- Spending on Military textiles and clothing decreased 6% in 2014, and is expected to be flat in 2015.

- Due to Defense budget cuts, there is an expectation of marginal growth in clothing and textiles for military in 2015.
  - Although an expected marginal growth, it’s still a substantial amount of $1.6 billion (estimated) in 2015

- Given this outlook, the U.S. will still be the largest spender on Military products for at least the next 10 years.
  - New initiatives to enhance the U.S. Army military base in Europe

R&D Spending U.S. Government

- DoD plans to spend $69.9 billion on research, development, testing, and engineering in 2016.

- It has identified 17 technology portfolios which are described as “communities of interest” because each includes representatives from the Pentagon’s laboratories, organizations like DARPA, and from each branch of the military.

- Included in the 17 portfolios are human systems.

- In 2016 the Pentagon will have to work outside of its traditional comfort zone. It is seeking industry’s help in fielding new capabilities.

Source: Defense Department Takes Steps to Energize cutting edge research, National Defense Magazine: March 2015 issue
## DoD Historical Funding Budget

### FY 2016 – FY 2020 TOPLINE

The historical funding picture is summarized in Figure 1-2:

**Figure 1-2. Department of Defense Topline Since September 11th Attacks**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Base</td>
<td>287.4</td>
<td>328.2</td>
<td>364.9</td>
<td>376.5</td>
<td>400.1</td>
<td>410.6</td>
<td>431.5</td>
<td>479.0</td>
</tr>
<tr>
<td>OCO</td>
<td>22.9</td>
<td>16.9</td>
<td>72.5</td>
<td>90.8</td>
<td>75.6</td>
<td>115.8</td>
<td>166.3</td>
<td>186.9</td>
</tr>
<tr>
<td>Other</td>
<td>5.8</td>
<td>--</td>
<td>--</td>
<td>0.3</td>
<td>3.2</td>
<td>8.2</td>
<td>3.1</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>316.2</td>
<td>345.1</td>
<td>437.5</td>
<td>467.6</td>
<td>478.9</td>
<td>534.5</td>
<td>600.9</td>
<td>665.9</td>
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</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>513.2</td>
<td>527.9</td>
<td>528.2</td>
<td>530.4</td>
<td>495.5</td>
<td>496.3</td>
<td>496.1</td>
<td>534.3</td>
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<tr>
<td>OCO</td>
<td>145.7</td>
<td>162.4</td>
<td>158.8</td>
<td>115.1</td>
<td>82.0</td>
<td>84.9</td>
<td>64.2</td>
<td>50.9</td>
</tr>
<tr>
<td>Other*</td>
<td>7.4</td>
<td>0.7</td>
<td>--</td>
<td>--</td>
<td>0.1</td>
<td>0.2</td>
<td>0.1</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>666.3</td>
<td>691.0</td>
<td>687.0</td>
<td>645.5</td>
<td>577.6</td>
<td>581.4</td>
<td>560.4</td>
<td>585.3</td>
</tr>
</tbody>
</table>

*Other non-war supplemental funding

Numbers may not add due to rounding

### Table A-10. DoD Total Budget by Appropriation Title

<table>
<thead>
<tr>
<th>$ in Thousands</th>
<th>FY 2015 Enacted</th>
<th>FY 2016 Request</th>
<th>Delta FY16 - FY15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military Personnel</td>
<td>139,993,999</td>
<td>139,939,434</td>
<td>-54,565</td>
</tr>
<tr>
<td>Operation and Maintenance</td>
<td>246,345,015</td>
<td>250,041,175</td>
<td>3,696,160</td>
</tr>
<tr>
<td>Procurement</td>
<td>101,273,354</td>
<td>114,992,064</td>
<td>13,718,710</td>
</tr>
<tr>
<td>RDT&amp;E</td>
<td>63,822,806</td>
<td>69,976,397</td>
<td>6,153,591</td>
</tr>
<tr>
<td>Revolving and Management Funds</td>
<td>2,225,830</td>
<td>1,875,582</td>
<td>-350,248</td>
</tr>
<tr>
<td>Defense Bill</td>
<td>553,661,004</td>
<td>576,824,652</td>
<td>23,163,648</td>
</tr>
<tr>
<td>Military Construction</td>
<td>5,652,265</td>
<td>7,024,439</td>
<td>1,372,174</td>
</tr>
<tr>
<td>Family Housing</td>
<td>1,126,735</td>
<td>1,413,181</td>
<td>286,446</td>
</tr>
<tr>
<td>Military Construction Bill</td>
<td>6,779,000</td>
<td>8,437,620</td>
<td>1,658,620</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>560,440,004</strong></td>
<td><strong>585,262,272</strong></td>
<td><strong>24,822,268</strong></td>
</tr>
</tbody>
</table>

*Note: Reflects Discretionary Budget Authority
Numbers may not add due to rounding*
The Proposed DoD Budget FY16-20

Figure 1-3 presents the proposed FY 2016 – FY 2020 DoD base budget topline for this year’s President’s budget, as compared to last year’s FY 2015 President’s budget.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2015 PB</td>
<td>535.1</td>
<td>543.7</td>
<td>551.4</td>
<td>559.0</td>
<td>567.6</td>
<td>2,756.9</td>
</tr>
<tr>
<td>Change</td>
<td>-0.8¹</td>
<td>+3.5</td>
<td>+5.0</td>
<td>+5.4</td>
<td>+2.4</td>
<td>+15.5</td>
</tr>
<tr>
<td>FY 2016 PB</td>
<td>534.3</td>
<td>547.3</td>
<td>556.4</td>
<td>564.4</td>
<td>570.0</td>
<td>2,772.4</td>
</tr>
<tr>
<td>FY16 PB % Real Change</td>
<td>+6.2%</td>
<td>+0.8%</td>
<td>-0.2%</td>
<td>-0.6%</td>
<td>-1.0%</td>
<td>+1.0%²</td>
</tr>
</tbody>
</table>

¹ The FY 2015 President’s budget request included plans to allocate $1.4 billion from DoD’s FY 2016 topline to the National Nuclear Security Administration in support of DoD’s requirements for nuclear weapons and naval reactors. The FY 2016 request reallocates these funds as planned, and this is the cause of DoD’s topline decrease in the FY 2016 President’s budget request, as compared to the FY 2016 level in the FY 2015 request, after a $0.6 billion increase.

² Average annual real growth of the FY 2016 President’s Budget for FY 2016 – FY 2020.

# U.S. Military Apparel and Footwear Exports (End Use CODE 50060)

<table>
<thead>
<tr>
<th>Country</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Total</td>
<td>577,554,868</td>
<td>674,226,504</td>
<td>625,297,855</td>
<td>689,512,544</td>
<td>1,172,696,149</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>69,111,634</td>
<td>30,025,755</td>
<td>19,829,805</td>
<td>106,729,933</td>
<td>184,958,245</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>8,756,819</td>
<td>10,601,962</td>
<td>2,054,374</td>
<td>8,312,381</td>
<td>15,786,430</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>57,438,890</td>
<td>130,094,340</td>
<td>72,153,779</td>
<td>165,933,540</td>
<td>187,068,426</td>
</tr>
<tr>
<td>Pakistan</td>
<td>13,256,060</td>
<td>35,132,568</td>
<td>76,486,658</td>
<td>68,502,855</td>
<td>65,305,448</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2,428,122</td>
<td>10,308,137</td>
<td>4,232,518</td>
<td>7,589,562</td>
<td>17,608,368</td>
</tr>
<tr>
<td>Mexico</td>
<td>1,035,915</td>
<td>33,973,498</td>
<td>9,362,221</td>
<td>11,199,125</td>
<td>51,994,821</td>
</tr>
<tr>
<td>Japan</td>
<td>95,549,562</td>
<td>63,695,325</td>
<td>10,508,978</td>
<td>32,595,921</td>
<td>114,692,713</td>
</tr>
<tr>
<td>Italy</td>
<td>4,123,265</td>
<td>2,615,778</td>
<td>3,745,718</td>
<td>7,975,653</td>
<td>2,896,969</td>
</tr>
<tr>
<td>Israel</td>
<td>42,618,744</td>
<td>50,140,584</td>
<td>22,351,929</td>
<td>36,608,869</td>
<td>26,034,036</td>
</tr>
<tr>
<td>Germany</td>
<td>13,801,261</td>
<td>13,515,147</td>
<td>22,211,828</td>
<td>30,927,014</td>
<td>58,948,844</td>
</tr>
<tr>
<td>France</td>
<td>6,547,889</td>
<td>546,797</td>
<td>1,743,275</td>
<td>679,388</td>
<td>1,202,753</td>
</tr>
<tr>
<td>Finland</td>
<td>209,572</td>
<td>671,233</td>
<td>370,119</td>
<td>1,222,580</td>
<td>904,672</td>
</tr>
<tr>
<td>Brazil</td>
<td>394,256</td>
<td>1,210,741</td>
<td>601,306</td>
<td>3,668,890</td>
<td>2,005,290</td>
</tr>
<tr>
<td>Belgium</td>
<td>973,443</td>
<td>225,443</td>
<td>475,896</td>
<td>1,480,901</td>
<td>2,520,668</td>
</tr>
<tr>
<td>Australia</td>
<td>27,699,191</td>
<td>114,073,443</td>
<td>170,219,209</td>
<td>79,713,803</td>
<td>143,352,351</td>
</tr>
<tr>
<td>Argentina</td>
<td>494,979</td>
<td>197,341</td>
<td>227,339</td>
<td>417,419</td>
<td>172,824</td>
</tr>
</tbody>
</table>

*figures in thousands USD

Here are examples of radical increases and decreases over the last year:

<table>
<thead>
<tr>
<th>Country</th>
<th>2013</th>
<th>2014</th>
<th>Numerical Change</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>106,729,933</td>
<td>184,958,245</td>
<td>78,228,312</td>
<td>73%</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>8,312,381</td>
<td>15,786,430</td>
<td>7,474,049</td>
<td>90%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>7,589,562</td>
<td>17,608,368</td>
<td>10,018,806</td>
<td>132%</td>
</tr>
<tr>
<td>Mexico</td>
<td>11,199,125</td>
<td>51,994,821</td>
<td>40,795,696</td>
<td>364%</td>
</tr>
<tr>
<td>Japan</td>
<td>32,595,921</td>
<td>114,692,713</td>
<td>82,096,792</td>
<td>252%</td>
</tr>
<tr>
<td>Israel</td>
<td>36,608,869</td>
<td>26,034,036</td>
<td>-10,574,833</td>
<td>-29%</td>
</tr>
<tr>
<td>Germany</td>
<td>30,927,014</td>
<td>58,948,844</td>
<td>28,021,830</td>
<td>91%</td>
</tr>
<tr>
<td>Brazil</td>
<td>3,668,890</td>
<td>2,005,290</td>
<td>-1,663,600</td>
<td>-45%</td>
</tr>
<tr>
<td>Australia</td>
<td>79,713,803</td>
<td>143,352,351</td>
<td>63,638,548</td>
<td>80%</td>
</tr>
</tbody>
</table>

*figures in millions USD

“Futurists say that 90% of what will be known 50 years from now has yet to be discovered.”

– Matthew Freedman, Defense Intelligence Agency
The Internet of Things: Game Changers

THE INTERNET OF THINGS

WHAT WE KNOW

Source: Stained Glass Labs

U.S. Department of Commerce | International Trade Administration
The Internet of Things: Game Changers

SOURCE: Stained Glass Labs

WEARABLES

$19B MARKET BY 2018

WEARABLES

OPTICS
Interactive
Google Glass
Tele-Pathy
Meta
Recon
Optinvent

WATCHES
Health
Jawbone
Basis
Shine
FitBit
Nike+

CLOTHING
Health
Nike
Under Armour
NuMetrex
Ollo Mobile
Plantiga

SUPPORTING SERVICES

Multimedia
Avegant
Oculus Rift
castAR

Digital
Pebble
Omate
Samsung Gear

Fashion
Clothing+
Radiate Athletics
CuteCircuit

Gestures
Kinect/MSFT
Leap Motion
GestureWorks

AR
Infinity AR
Metaio
Wikitude

Voices
Nuance
SpeakWithMe
Siri

BY 2020

There will be 24 Billion Connected Devices

Totaling an estimated revenue of $1.2 Trillion

SOURCES

CREATED BY:

STAINED GLASS

U.S. Department of Commerce | International Trade Administration 50
Military Procurement: A Shifting Paradigm

• The Federal Government is concerned about keeping up with the tech boom and innovation.

• This is leading to a shift of federal procurement to the private sector.
  – Defense department wants to be a “smart customer of commercial technology.”

• In the 2016 National Defense Authorization Act (NDAA), there are parts that would allow the Defense Department to behave increasingly more like a commercial customer.

• “If we want to get nontraditional suppliers, we have to be willing to change the way we do business in DoD”- retired Air Force Lt. Gen. Charles R. Davis

Military Procurement: A Shifting Paradigm (Cont.)

- Defense Secretary Ashton Carter recently travelled to Silicon Valley.
  - Announced a $75 million investment plan in a “new manufacturing technology consortium that produces next generation electronics for commercial and military use”

- Carter is firm on making significant alliances with the private sector in an effort to increase defense innovation.

- Carter’s strategy is to prove “the Pentagon can be a nimble buyer, willing to play by the rules of the private sector.”

The U.S. Army’s Natick Soldier Research, Development and Engineering Center (NSRDEC) listed some demanded properties in textiles:
- Fiber reinforced
- Insect repellent
- Modular
- Ergonomic
- Chemical resistant
- Thin but tough
- Omniphobic

Highest demand includes lightweight materials with ballistic/blast protection along with low-cost flame resistant materials.

• **Ballistic and Blast Protection**
  – A goal of 10% reduction in armor weight and improved ergonomic design within 1-5 years

• **Tropical Protection**
  – Insect resistant textiles to protect soldiers from vector-borne (caused by infectious microbes) illness
  – Thick spacer fabric, tortuous nonwoven fabric, and fabric with densely woven pore size

• **Interfaces between jackets, hoods, respirators, gloves, boots connected by zippers, Velcro, or elasticized material.**
  – Polymer development
  – Operational under all environmental conditions

U.S. Military Demand In Textiles and Apparel (Cont.)

- **Camo**
  - Army says it will continue to “evaluate camouflage in the visible, near-infrared, shortwave infrared, and thermal-infrared electromagnetic spectral regions”

- **Smart Connections**
  - Incorporate electronically conductive threads into fabrics
  - Design ways to streamline the process of manufacturing e-textiles

- **Temperature-Adaptive Fibers**
  - Improve warmth in soldier’s clothing, sleeping bags, and blankets with adaptive insulation
  - Non-clothing applications for temperature-adaptive insulation
  - Non-Insulation applications for temperature-adaptive fibers

U.S. Military Demand In Textiles and Apparel (Cont.)

• **Chemo/Bio Protection**
  – Looking to “balance chemical warfare agent protection with water vapor transport and air permeability using fabric composites”
  – Developing catalysts that are effective against chemical and biological agents in all types of weather

• **Fire-Resistant Protection**
  – Develop and advance materials that are durable, lightweight, comfortable, flexible, cost-effective, nontoxic, and environmentally friendly

• **Lightweight, High Performance Tents**
  – Tents with high strength to weight ratios
  – Flexible tents that can be rigid during and after deployment

• **Collaboration with textile industry experts to take part in super-omniphobic coating and fiber developments, coating applications, fabric weaving, and optimizations of coating processes**

Industrial Definition: Technical Textiles

“Textile materials and products manufactured primarily for their technical performance and functional properties rather than their aesthetic or decorative characteristics.”

- *Textile Terms and Definitions*

  The Textile Institute

*Steve Warner:  www.beaverlake6.com*
Smart Fabrics

- The defining characteristic of smart fabrics is their ability to interact with their user or environment. According to smart textiles researcher Rebeccah Pailes-Friedman, this can include everything from the ability to transform themselves, conduct energy, communicate with other devices, and, in some cases, even grow.

- On a very basic level, smart fabrics can be categorized according to whether or not sensors have been embedded into the textile. Sensor-embedded smart textiles are also referred to as “e-textiles,” and examples include textile electrodes that can be knit or woven directly into clothing to monitor heart rate and other vital signs.

Smart Fabrics (Cont.)

- According to Business Day at the NY Times, there is “an arms race to offer the newest, most high-tech garments as often as possible.”
  - active wear has become popular street wear.
  - A major focus of textile innovation in this field is centered around “anti-odor” technology.

- Applications for sports and fitness include clothing that can monitor biometrics such as heart activity zones, breathing rates, and muscle activity, as well as physicality including movement and gait.
  - currently developing headgear for concussion monitoring.
  - The advantages of using smart fabrics rather than smart watches, wristbands, or other types of wearable devices include more accurate biometric data, increased comfort, and the ability to integrate sensors into fashionable clothing and accessories.

Forrester Research predicts that 2015 will be a breakout year for wearables as the technology becomes more appealing for consumers.

Another research firm, Tractica LLC, projects that the world market for smart clothing will grow from a base of $17.2 million in 2013 to approximately $600 million by 2020, an increase of nearly 3,400 percent.

This growth is likely to be driven by sporting goods manufacturers adopting smart clothing as a part of their product mix, though Tractica’s research indicates that it will probably remain a premium product for now and account for a very small percentage of the overall sports apparel market.

“The world market for specialty fabrics grew about 2.6 percent in 2014 and is expected to achieve sales growth of about 2.8 percent in 2015.”

--Jeff Rasmussen, Market Research Manager for Industrial Fabrics Association International (IFAI) based in Minnesota, USA.

U.S. Domestic Manufacturing Base

[Image of a bar chart showing export data for various countries, with source information.]
Global Smart Fabric/Textile Market Revenue Projection (in billions USD)


U.S. Department of Commerce | International Trade Administration
Capacitive Yarn

- Developed by a team at Drexel University, capacitive yarn converts fabric into an “energy storage device.”

- Done through Natural Fiber Welding (NFW)
  - NFW developed by Paul Trulove at the US Naval Academy.
  - Allows functional materials to be implanted into textile fibers.
  - Done at the molecular level.

- “[...] Can use any commercially available yarn made of cellulose—cotton, linen, bamboo, viscose, rayon” – Genevieve Dion, director of Drexel's Shima Seiki Haute Technology Laboratory

- “Natural Fiber Welding is proving to be highly effective in producing yarns that we can tune for particular uses, including energy storage.” – Kristy Jost, PhD, project leader and materials scientist

Capacitive Yarn Images

(Source: Kristy Jost, PhD, and Drexel University)

(Source: Kristy Jost, PhD, and Drexel University)

Conductive Fiber Applications

- Intelligent Textiles, based in London, are testing combat fatigues with conductive fibers to deliver power to equipment for the British and Canadian Military.

- Some companies want to use the technology to conceal RFID tags in retail clothing.

- Adidas has begun knitting conductive fibers into clothing to make “textile electrodes.”
  - These electrodes would pick up heart and muscle signals.
  - These signals would transfer to a clip-on device and relay information to one’s smart phone, for example.

High Tech Apparel

• Innovators within the apparel industry are finding ingenious ways to leverage technology in creating thoughtfully designed products that enhance the user’s experience.

• Sewing electronic components such as sensors into soft goods and garments is challenging. The apparel manufacturing industry isn’t set up to make radical changes—“Cycles are short and margins low,”” Dr. Lucy Dunne, Associate Professor at the University of Minnesota and head of the school’s apparel design program and the Wearable Technology Lab. Further she said, “It doesn’t make sense to make big investments in completely restructuring the manufacturing process”

• Dr. Dunne is investigating ways to adapt existing cut and sew processes to manufacture smart clothing—its makes sense to adapt existing scalable processes to produce smart garments more efficiently—could also be boon for domestic apparel production sector.

• Dr. Dunne’s lab has produced “bend and stretch sensor” that’s sewn into fabrics with a cover stitch swapping out one line of regular thread for a conductive thread.

Nanotechnology

» Nanoparticles are microscopic particles with specific physical and chemical properties; nanoparticles incorporated into fabrics to enhance/change properties, e.g. – fire-resistant fabric; can be electronic/conductive fabrics for sensing someone's vital signs

» Potential of nanotechnology in the development of new materials in the textile industry is considerable
  - Military uniforms that change color to match the environment
  - Light weight battlesuits including bullet-resistant vests
    - U.S. Army developing bullet resistant nanobattlesuit; thin as spandex with health monitors and communication equipment
  - Smart nanomaterials respond to injuries deliver drugs/antibiotics
  - Medicine will use sensors that warn people of cancer and blood clots

Source: Jeff Rasmussen, IFAI Market Research Manager

U.S. Department of Commerce | International Trade Administration
Markets for Wearable Technologies

- Medical
- Military
- Athletic/Performance Measurements
- Leisure markets
- Firefighters/First Responders
- Police and Law Enforcement
- Employee Performance Tracking
Selling to the Federal Government

In order to do business with the Federal Government to include the Department of State, there are required procedures you must follow.

The first and most critical step is online registration with the Federal Government’s System for Award Management (SAM).

Once registered, your company will be able to sell to all Federal Agencies that may have an interest in your products. Registration enables purchase orders to be sent to your company as well as payments to be made via electronic funds transfer (EFT) for goods received.

1) Visit the System for Award Management website at [http://www.sam.gov](http://www.sam.gov)
2) Acquire your DUNS number at [http://fedgov.dnb.com/webform](http://fedgov.dnb.com/webform) or call at 1-866-705-5711.
Defense Logistics Agency (DLA) and DIBBS

DLA Internet Bid Board System (DIBBS)

- Provides access to DLA’s solicitations.

- Can search, view, and submit secure quotes on Requests For Quotations (RFQs) for DLA items of supply.

- Can search and view Requests for Proposals (RFPs), Invitations For Bid (IFBs), and other procurement information.
Defense Logistics Agency (DLA) and DIBBS (Cont.)

DLA Internet Bid Board System (DIBBS)

- Search the Awards through the DLA Awards Database.

- Can find all the Mil Specs
  - Go to “Technical Data”
  - Find “ASSIST Quick Search”
  - Search for item via document ID, document number, keyword, etc.

Source: [http://quicksearch.dla.mil/](http://quicksearch.dla.mil/)
Example of ASSIST Quick Search for “Socks”

www.quicksearch.dla.mil

Enter search criteria in one or more of three text fields: Document ID, Document Number, Find Term(s). Filter search results by selecting Status or FSC/Area from drop-down lists, or by checking the box and specifying a range of document dates. Click a label for a detailed description and sample search results.
Teresa Bouchonnet
Business Development Specialist
North Carolina Military Business Center
bouchonnett@ncmbc.us
(828) 349-3878

http://www.ncmbc.us/
**Procurement Technical Assistance Centers**

**dla.mil**

- The Defense Logistics Agency, on behalf of the Secretary of Defense, administers the DoD Procurement Technical Assistance Program (PTAP).

- PTA Centers are a local resource available at no or nominal cost that can provide assistance to business firms in marketing products and services to the Federal, state and local governments.

Source: [http://www.dla.mil/SmallBusiness/Pages/ptac.aspx](http://www.dla.mil/SmallBusiness/Pages/ptac.aspx)
Finding Government Funding and Support for Innovation

Association of Procurement Technical Assistance Centers (APTAC)

• Supports the PTACs by providing information, professional networking, training opportunities, and influence in national government contracting assistance.

Source: http://www.aptac-us.org/
Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR)

- Encourages domestic small businesses to engage in Federal Research/Research and Development (R/R&D) that has the potential for commercialization.
- Through a competitive awards-based program, SBIR enables small businesses to explore their technological potential and provides the incentive to profit from its commercialization.
- Small Business Technology Transfer (STTR) expands funding opportunities in the federal innovation research and development (R&D) arena. Expands public/private sector partnership to include the joint venture opportunities for small businesses and nonprofit research institutions. STTR requires small business to collaborate with a research institution in Phase I and Phase II.
- STTR bridges the gap between performance of basic science and commercialization of resulting innovations.

Source: https://www.sbir.gov/about/about-sbir
Finding Government Funding and Support for Innovation

About SBIR

The SBIR Program
The Small Business Innovation Research (SBIR) program is a highly competitive program that encourages domestic small businesses to engage in Federal Research/Research and Development (R/R&D) that has the potential for commercialization. Through a competitive awards-based program, SBIR enables small businesses to explore their technological potential and provides the incentive to profit from its commercialization. By including qualified small businesses in the nation’s R&D arena, high-tech innovation is stimulated and the United States gains entrepreneurial spirit as it meets its specific research and development needs.

SBIR Mission and Program Goals
The mission of the SBIR program is to support scientific excellence and technological innovation through the investment of Federal research funds in critical American priorities to build a strong national economy.

The program’s goals are four-fold:
- Stimulate technological innovation.
- Meet Federal research and development needs.
- Foster and encourage participation in Innovation and entrepreneurship by socially and economically disadvantaged persons.
- Increase public-sector commercialization of innovations derived from Federal research and development funding.

Source: https://www.sbir.gov/about/about-sbir
U.S. Department of Commerce | International Trade Administration
Finding Government Funding and Support for Innovation

Grants.gov
- Centralized website to find and apply for federal grants.

Source: [http://www.grants.gov/web/grants/home.html](http://www.grants.gov/web/grants/home.html)
Finding Government Funding and Support for Innovation

Defense Innovation Marketplace

• A communications resource that provides industries with Research and Engineering (R&E) investment priorities of the DoD.

• Provides R&E strategic documents, solicitation, and news/events.

The Rapid Innovation Fund (RIF)
• is designed to transition innovative technologies, primarily from small businesses, that resolve Department of Defense operational challenges.

Finding Government Funding and Support for Innovation

Source: http://www.defenseinnovationmarketplace.mil/rif.html
Finding Government Funding and Support for Innovation

National Science Foundation

• Increases the incentive and opportunity for undertake cutting-edge, high quality science/engineering research that would have a high potential economic payoff if the research is successful.

Source: https://www.nsf.gov/funding/
Small Business Administration (SBA)

U.S. Small Business Administration (SBA): www.sba.gov

• **SBA Programs:** Small business is America’s most powerful engine of opportunity and economic growth. SBA offers a variety of programs and support services to help you navigate the issues you face with your initial applications, and resources to help after you open for business.

• **Small Business Development Center:** No-cost, extensive, one-on-one professional business advising [www.sba.gov/content/small-business-development-centers-sbdc](http://www.sba.gov/content/small-business-development-centers-sbdc)
  – Find a mentor: [http://www.sba.gov/content/find-business-mentor](http://www.sba.gov/content/find-business-mentor)

Other helpful links:

• **OTEXA:** [http://otexa.ita.doc.gov](http://otexa.ita.doc.gov)
• **Fabric Link:** [www.fabriclink.com](http://www.fabriclink.com)
Rethinking Innovation Strategies

The Foreign Comparative Technologies program is an excellent entry point to DoD for the foreign company thereby gaining access to the U.S. military market that would otherwise have been prohibited due to the Berry Amendment.
Foreign Comparative Testing

Send Us Your Product Information

Product Template

- Product
- Company Name
- Country
- POC Information
- Website
- TRL
- Countries Using
- Application (So What?)
- Science (How it works)
- Data (key performance metrics)
- US Partners
- Previous Work w/ DoD

Technical Readiness Level lowered to 6

Source: Foreign Comparative Testing – Col Scott Wallace, USAF Director
U.S. Department of Commerce | International Trade Administration
Robert Thompson  
OSD Comparative Technology Office  
Office of the Deputy Assistant Secretary of Defense for Emerging Capability & Prototyping  
4800 Mark Center Drive  
Suite 17H08-09  
Alexandria, VA 22350-3600  
571-372-6822  
DSN 372-6822  
Fax 571-372-6725  
http://www.acq.osd.mil/cto  
SIPR: robert.thompson.ctr@osd.smil.mil

Areas of Interest
• Electro-Magnetic Spectrum (EMS) Agility
• Autonomous Systems
• Space Capability Resilience
• Asymmetric Force Application

For more information on the areas of interest, please click here
OTEXA’s London, UK Commercial Services Partner in Selling to The Ministry of Defense

- Provides introductions for U.S. companies to the UK MOD Defense Suppliers Service.

- Offers counseling and literature to U.S. companies on selling to the UK MOD.

- Monitors UK MOD opportunities and distributes them to U.S. companies in a data base as well to OTEXA.

- Provides introductions for U.S. companies to UK clothing/fabric companies who are known to sell to the UK MOD.

https://en.wikipedia.org/wiki/United_Kingdom
https://en.wikipedia.org/wiki/United_States
Contact Information for OTEXA’s London, UK Commercial Services Partner

PJ Menner
U.S. Department of Commerce
International Trade Administration
U.S. Commercial Service
U.S. Embassy, London
Phone: 011-44-20-7894-0470
pj.menner@trade.gov

https://en.wikipedia.org/wiki/United_Kingdom
https://en.wikipedia.org/wiki/United_States
Logistics Commodities Support (Transformation) Contract

- UK Ministry of Defence realised it needed to transform the Logistics Commodities supply chain and instigated an outsourcing project to appoint an industry partner to deliver this multi-billion £ program.

- In April 2015, Team Leidos were selected as the successful industry partner to deliver the transformation and the contract went live on August 1\textsuperscript{st} 2015.

- A 13 year contract is now underway to deliver the benefits outlined as part of the Team Leidos bid.

Source: Danny Harris and Jill Evans, Team Leidos
• The program is headed by Barbara Doornink, former 1* General in the US Army, who has significant experience of similar programs run by the US Department of Defense.

• The contract comprises both procurement of commodities and their storage, distribution & freight.

• The main commodity groupings are Defence Clothing, Medical Equipment & Consumables, General Supplies, Oils/Lubricants/Gases and Food.
Who are Team Leidos?

Source: Danny Harris and Jill Evans, Team Leidos
Team Leidos – Overview

Investing in:
- Better infrastructure
- Better equipment
- Better systems
- Better flexibility
- People development

To provide:
- Improved visibility & control
- Improved speed & reliability
- Improved service at less cost

To ensure that FLCs get:
- what they want, when they want it

Source: Danny Harris and Jill Evans, Team Leidos
Defense Clothing – What Leidos Needs From You!

- Defense Clothing are responsible for broad sub-categories including:
  - Footwear
  - Parade Uniforms
  - Working Uniforms
  - Headwear
  - Woollen Garments
  - Ceremonial Items
  [not currently responsible for Combat Equipment e.g. Helmets, Load Carriage etc.]

- Looking for suppliers who can deliver:
  - Quality products
  - Surety and security of supply
  - Competitive pricing
  And above all...
  - Innovation and continuous improvement

Source: Danny Harris and Jill Evans, Team Leidos
Leidos Contact Information

Danny Harris
Head of Category, Commodity Support Services
daniel.harris@tvsscs.com

Jill Evans
Defense Clothing Team Leader, Commodity Support Services
jill.evans@tvsscs.com

Source: Danny Harris and Jill Evans, Team Leidos
The Federal Players in Canada

<table>
<thead>
<tr>
<th>Major Purchasers</th>
<th>Supports buyers and suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of National Defence</td>
<td>Public Works and Government Services Canada</td>
</tr>
<tr>
<td>Canadian Coast Guard</td>
<td>Industry Canada</td>
</tr>
<tr>
<td>Canadian Space Agency</td>
<td>Department of Foreign Affairs, Trade and Development</td>
</tr>
<tr>
<td>Public Safety</td>
<td>Canadian Commercial Corporation</td>
</tr>
<tr>
<td>Royal Canadian Mounted Police</td>
<td>Regional Development Agencies</td>
</tr>
<tr>
<td>Canadian Security Intelligence Service</td>
<td></td>
</tr>
<tr>
<td>Communications Security Establishment</td>
<td></td>
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</tbody>
</table>
For more information, please find the attached presentation on selling to the Canadian Government, provided by Lucy Latka.

Canadian Defense and Security Procurement

Defence and Security Procurement

Presented by the Office of Small and Medium Enterprises – National Capital Region (OSME-NCR)

Source: Lucy Latka, Senior Commercial Specialist (Government Procurement, Defense and Security) U.S. Embassy Ottawa
Lucy Latka
Senior Commercial Specialist (Government Procurement, Defense and Security)
U.S. Department of Commerce
International Trade Administration
U.S. Embassy Ottawa
(613) 688-5219
Lucy.latka@trade.gov

https://en.wikipedia.org/wiki/Canada
https://en.wikipedia.org/wiki/United_States
National Contract Management Association (NCMA)

• The world’s leading resource for professionals in contract management.

• Committed to growth and educational advancement of procurement and acquisition personnel around the globe.

• Important source for current events, regulations, laws, research studies, standards, etc.

• Currently has 22,000 members from 2,000 organizations

Source: http://www.ncmahq.org/discover-our-profession/what-is-ncma
Contact Information for NCMA

www.ncmahq.org

Jessie Charter
Member Services Coordinator and Program Support Specialist
(571) 382-1121

http://www.ncmahq.org/
Soldier Enhancement Program (SEP)

The Soldier Enhancement Program (SEP) is an enduring process designed to help the Army move at "the Speed of Industry" to evaluate and type classify existing prototypes or commercially available items that will enhance Soldiers’ ability to execute their combat mission.

Source: http://www.peosoldier.army.mil/sep/
Established in 1990

- Enhances tactical field equipment worn, carried or consumed by troops
- SEP collaborates with Marine Corps program Marine Enhancement Program (MEP)

- Over two decades of consistent/moderate funding
- PEO Soldier has been solely dedicated to the American Soldier for the past decade and will continue into an uncertain future.
- PEO Soldier manages more than 450 products and programs that are a manifestation of that dedication. Our four Project Management (PM) Offices are dedicated to providing the very best equipment.
- These four offices are: PM Soldier Protection and individual Equipment, PM Soldier Sensors and Lasers, PM Soldier Warrior and PM Soldier Weapons.

Mission

- Identify/enhance anything that improves military tactical advantage and survival
- Commercial-off-the-shelf (COTS)
- Government-off-the-shelf (GOTS)
- Non-development items (NDI)
- Weapons, gear etc...

Source: http://www.peosoldier.army.mil/aboutus/
Clothing (uniforms)
- Hand & Foot wear
- Individual equipment
- Load carriage
- Personnel airdrop

Protective equipment
- Body protection
- Eyewear
- Head protection

Sensors & Lasers
- Maneuver sensors
- Precision targeting devices

Warrior technology
- Air warrior
- Ground soldier
- Soldier systems integration

Weapons
- Crew served
- Individual

Source: http://www.peosoldier.army.mil/portfolio/
Solicits suggestions from
- Troops
- Commercial manufacturers
- Combat and material developers worldwide
- Reviews submissions / prioritizes items for potential field testing to standardize and issue to soldiers in the field

Rules & Constraints
Rules:
- COTS/GOTS/NDI, test and evaluate to confirm or deny applicability for soldiers use

Constraints:
- Will not re-invent technology/launch long development efforts or produce large numbers of major items for use

Source: http://www.peosoldier.army.mil/
Because the U.S. is a NATO nation, U.S. companies are eligible to bid for contracts with the NATO Support Agency. However, companies need to register at the NATO Support Agency (NSPA) registration site.
NATO Procurement Processes: Resources

- NSPA buys a fair number of services and general items from office supplies to marketing services. In addition to reviewing NSPA’s list of Systems and Equipment, you should review the Logistics Services drop down menu located here: http://www.nspa.nato.int/en/organization/Logistics/Logistics.html

- For an idea of what goods and services you might have an opportunity to sell to the agency in the future you can find listings of contracts that NSPA has awarded in the past several years here: https://eportal.nspa.nato.int/eProcurement/Content/AllProcurementContents.aspx?r=3.

- US suppliers that want to compete for NSPA contracts can register at: https://eportal.nspa.nato.int/eProcurement/default.aspx
NATO Procurement Processes: Summary

• Businesses interested in procuring contracts with NATO headquarters or operational divisions are advised to use various resources to increase the probability of getting their company details into vendors’ databases.

• NATO has a number of different agencies that have their own acquisition processes, and the procurement of goods is generally based on the identification of a particular budgetary line instead of the needs of particular agencies.
  – Most prominent agencies are NSPA, NC3A, NCSA, NACMA and NAPMA, along with procurement from NATO headquarters.
  – NSPA is the most appropriate self registration site for many commodities and services, including textile and textile related products.

• NATO procurement offers great potential trade opportunities for U.S. companies in sectors ranging from security and defense to maintenance and repair services.
What Is FMS?

- The Foreign Military Sales (FMS) program is the U.S. Government’s program for transferring defense articles, services, and training to other sovereign nations and international organizations.

- Under FMS, the U.S. government procures defense articles and services on behalf of the foreign customer.

- Countries approved to participate in this program may obtain defense articles and services by paying with their own national funds or with funds provided through U.S. government-sponsored assistance programs.

- In certain cases, defense articles, services and training may be obtained on a grant basis. The Defense Security Cooperation Agency (DSCA) administers the FMS program for the Department of Defense (DoD).

- Find out more about the FMS program at www.dsca.mil
How Does FMS Operate?

- FMS is managed and operated by DoD on a no-profit and no-loss basis.

- Countries and international organizations participating in the program pay for defense articles and services at prices that recoup the actual costs incurred by the United States. This includes a fee (currently 3.8% of what the defense articles and/or services cost, in most instances) to cover the cost of administering the program.

- When defense articles and/or services are required, the requesting country's representative provides a Letter of Request (LOR) to their U.S. counterpart.

- Copies are sent to the Department of State (DoS) Bureau of Politico-Military Affairs and the DSCA. The original is furnished to the DoD Military Department or other implementing Defense Agency that will prepare the response in the form of a Letter of Acceptance (LOA).
How Does FMS Operate? (Cont.)

LOAs take three forms:

1. **Defined Line.** Certain defense articles and services can be provided only on Defined Line LOAs, which offer items at individually estimated prices and delivery dates.
   - The U.S. Government, where necessary, in turn contracts for the defense articles and services that are required to fulfill the LOA.

2. **Blanket Order.** Most repair parts and routine services can be offered under Blanket Order LOAs.
   - These LOAs are perfectly suited for addressing recurring needs (i.e., where the customer will require additional defense articles or services on a periodic or frequent basis).
   - Once established, the Blanket Order LOA reduces the time needed for processing an order and contracting for the items and/or services required.

3. **Cooperative Logistics Supply Support Arrangement (CLSSA).** Under the CLSSA, the customer acquires access to the U.S. logistics pipeline for the support of specified end items.
   - allows supply of repair parts from existing U.S. stocks, without waiting for completion of a procurement cycle.
   - CLSSAs are normally established for countries with well-developed logistics systems and with larger quantities of end items to be supported.
Differences Between FMS and Direct Commercial Sales of U.S. Defense Articles or Services

• With few exceptions, the U.S. does not mind whether a customer acquires its defense articles and services under FMS or through Direct Commercial Sales (DCS).

• In general, LOAs promote standardization (by providing customers with defense articles identical to those used by U.S. forces), provide contract administration services which may not be readily available otherwise, and potentially help lower costs by consolidating FMS buys with U.S. purchases.

• DCS allow the purchaser more direct interface during contract negotiation (and likely more opportunity for firm-fixed priced contracting), and acquire non-standard defense articles where special requirements demand tailoring the articles to meet a particular need.

• One common misperception: Although the extent of DoD involvement is different, technology release approvals, and third country transfer approval requirements are the same for both methods of purchase.
FMS Step-by-Step

• The Security Assistance Management Manual (SAMM) is managed by DSCA and located on their website.

• Chapter 4 of the SAMM provides general information on the FMS process and is a good starting point for review:

  http://www.samm.dsca.mil/chapter/chapter-4

• In addition, the below link from a DISAM course provides a thorough overview of the FMS with some visuals that may be helpful:

• Starting with FY 2008, FMS sales skyrocket to $14.6 billion. These large numbers include Attack Helicopters, Radar and Missile systems, etc.

• FMS sales in FY 2014 were $20.7 billion.

• As of 9/30/2015, FY 2015 FMS sales were $19.7 billion.

Source: John Neil Director, Performance & Process Management Officer U.S. Army Security Assistance Command
Foreign Military Sales:
• OTEXA is often contacted by our Commercial Service Posts overseas with leads for Foreign Military Sales. An example of this would be Morocco, with whom we’ve been working 3½ years.

Non-Foreign Military Sales:
• OTEXA is exposed to military buyers at international shows. As a result we have been able to interface our companies with military procurement from the UK, Brazil, Denmark, the UAE, Saudi Arabia, South Africa, Chile, Czech Republic, Libya, Colombia, and Morocco.
U.S. Army Security Assistance Command Handles the Following FMS Items

FMS non-standard items, i.e. inactive/obsolete items such as previous issue helmets and body armor (SAPI and OTV).

- Long lead time standard items (Nan's) that are commercially available such as BDU's in Woodland and Desert camo.

Items the SPD does not support:
- Command managed items Weapons, Ammo, Vehicles, Parachutes
- Night Vision Equipment
- Classified, Sensitive, and Special Forces items
- Other service managed items (Air Force, Navy, Marine)

Source: Colleen Campbell Chief, Services & Products Division U.S. Army Security Assistance Command
How to Involve Your Company in the FMS Process

- Check solicitations on FedBizOpps.gov
- Participate in international and domestic military shows
- Word of mouth
- Have a good vendor website
- Send samples and product information to Ms. Campbell for their files and resource library
- Companies should send samples, information on the company, contact details etc. This information would cover active and inactive, new and older products
- Ensure items supplied are Berry Compliant
- Small purchases exception applies equally to FMS as it does to DoD requirements. For DoD or FMS requirements, under the Simplified Acquisition Threshold (SAT), typically $150,000, the restrictions of Berry Amendment do not apply

Source: Colleen Campbell Chief, Services & Products Division U.S. Army Security Assistance Command
Guidelines on State-of-the-Art Military Products for FMS Sales

• If a country wants to procure an item currently used by US soldiers, Defense Security Cooperation Agency approval is required.

• The country can work with the US military attaché in said country to help route the request to Defense Security Cooperation Agency (copy USASAC Country Program Manager).

Source: Colleen Campbell Chief, Services & Products Division U.S. Army Security Assistance Command
Contact Information for Product Introduction and Mailing of Samples

Ms. Colleen Belack Campbell
Chief, Services & Products Division
USASAC, Services & Products Division
AMSAC-LAS-P
54 M Avenue, Suite 1
New Cumberland, PA 17070

(717) 770-7912, DSN 771-7912
collen.b.campbell.civ@mail.mil

*Please note: Ms. Campbell accepts small, inexpensive samples, catalogs and product brochures. Please do not send expensive bulky items.
FMS: Summary of Key Points

• The FMS program is a fundamental US foreign policy tool with the goal of achieving world peace and strengthening the security of the United States.

• The Foreign Military Sales (FMS) program is the U.S. Government's program for transferring defense articles, services and training to other sovereign nations and international organizations.

• The Secretary of State determines which countries will have programs. The Secretary of Defense executes the program.

• FMS is a program of the U.S. Department of Defense (DoD) with the Defense Security Cooperation Agency (DSCA) administering the FMS program for DOD.

• The FMS program is conducted through formal contracts or agreements between the US government (USG) and an authorized foreign purchaser.

• FMS requirements ARE restricted by the Berry Amendment. 10 USC 2533a states that funds appropriated or otherwise made available to DoD shall apply the restrictions of the Berry Amendment. When a country deposits funds into the FMS trust fund (US Treasury Account) these funds take on the same form and function as US Appropriations, thus the Berry requirement.
Outreach Assistance

Department of Commerce:
Bureau of Industry and Security
• Stephen B. Hall – (202) 482-4017; stephen.hall@bis.doc.gov
• or 202 482-4811
• Western Regional Office Director: Michael Hoffman – (949) 660-0144

Web: www.bis.doc.gov www.export.gov/ecr
Comprehensive Screening List: http://export.gov/ecr/eg_main_023148.asp

State Department:
Office of Defense Trade Controls
• Response Team – (202) 663-1282; ddtcresponseteam@state.gov

Web: http://www.pmddtc.state.gov
Trade Show Schedule: 2015-2016

Milipol: Paris, France
November 17th-20th, 2015

Heimtextil: Frankfurt, Germany
January 12th-15th, 2016

Def Expo: GOA, India
March 28th-31st, 2016
OTEKA Participation To Be Confirmed

Expo Seguridad: Mexico City, Mexico
April 26th-28th, 2016
Showtime: High Point, North Carolina
June 5th-8th, 2016

http://www.solarsquadnc.com/areas-of-service/high-point/

Eurosatory: Paris, France
June 13th-17th, 2016

http://www.destination360.com/europe/france/paris

Offshore Norther Seas: Stavanger, Norway
August 29th-September 1st, 2016
OTEXA Participation To Be Confirmed

www.cruisin.me

Techtextil North America: Atlanta, GA
April 26th-28th, 2016

http://www.proshred.com/georgia
Salient Points of Presentation

• Basic understanding of OTEXA services, website, and relevant trade show events.
• A quick review of government contracting, access to funding, and resources.
• The Internet of Things (IOT) and its multiplier effect on innovation and changes in technology.
• The U.S. Government’s role in stimulating advanced manufacturing.
• Smart fabrics as a game changer.
• FMS sales, NATO procurement, and SEP—new avenues for sales.
• Country specific contracting and sales guidelines, highlighting the UK and Canada.
• U.S. Military demands in technical textiles.
“Freedom is the sure possession of those alone who have the courage to defend it.”

-Pericles

https://en.wikipedia.org/wiki/Pericles
OTEXA Contact for Technical Textiles

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Email: mary-lynn.landgraf@trade.gov
http://otexa.trade.gov