# The New England Defense Industry:

## CURRENT PROFILE AND ECONOMIC SIGNIFICANCE

DTI Defense Technology Initiative

JUNE 2012

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Defense Technology Initiative

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JUNE 2012

UMASS DONAHUE INSTITUTE
Economic & Public Policy Research

**About the Defense Technology Initiative**

Founded in 2003, DTI was originally created by the Massachusetts High Technology Council to protect Massachusetts' military technology bases through the 2005 federal Base Realignment and Closure (BRAC) process. Following that successful and nationally-recognized effort, DTI evolved into an economic development and sector advocacy organization that represents the region's leading defense technology firms, research labs, universities and military bases.

DTI Defense Technology Initiative

June 25, 2012

Dear Colleague:

We are pleased to present the initial findings of the New England Defense Industry Summary conducted by the UMass Donahue Institute. The first in a series of reports, this summary includes an analysis of DoD/DHS contracting trends in New England covering trends and statistics for each state. Both the New England Summary, as well as detailed State Reports (forthcoming this fall), analyze defense contract data to:

1. **Define and Measure the Defense Industry**
   The first round of analysis examines contracts awarded to businesses and institutions within each New England state and across the region as a whole. The data will define and describe the nature of the defense industry for each state; assess the value of contracting activities; and determine businesses characteristics, activities, and strengths.

2. **Quantify Economic Impacts of Federal Defense Contracting Activities**
   The second round of analysis itemizes the full range of DoD/DHS spending that takes place within each New England state and for the region as a whole. Spending is itemized by New England contractors that perform contract work in New England and those from other states that use New England facilities. The economic impact model quantifies the sum total of economic and employment impacts flowing from this direct spending in New England.

Future DTI reports will feature state-of-the-art cluster asset mapping capabilities to generate dynamic web-based information and analysis. The cluster asset mapping system will build upon the Donahue Institute's prior work in analyzing DoD/DHS contract awards along with detailed cases and content developed in partnership with experts from participating states. The system will be designed to be updated and added to annually, offering an accessible, insightful, and current understanding of the defense and security industry in the region.

Best,

Christopher Anderson
President
Defense Technology Initiative, Inc.

# New England Summary

The defense industry is a major contributor to the economy of New England and to each of the six states that comprise it. In 2011, the region received nearly $34 billion in Department of Defense (DoD) and Department of Homeland Security (DHS) contracts, an 85 percent increase to the region since 2003. Defense and Homeland Security contracting is responsible for a total of more than 319,000 jobs and a total payroll of more than $22.6 billion across the region. The overall direct, indirect and induced economic activity generated by the resulting work performed in New England exceeds $62 billion.

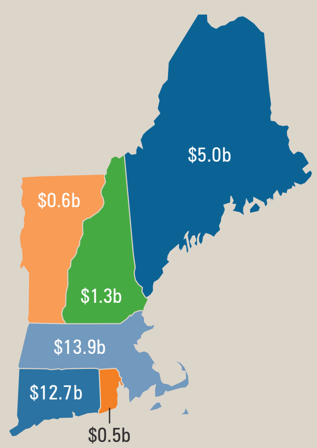
There are more than five thousand New England firms and institutions tied to DoD and DHS funds providing essential equipment, supplies and technical services in support of national and regional defense operations. Much of this activity requires highly skilled workers, precision manufacturing, and sophisticated scientific and technical support.

In particular, the highest level of defense-related spending in New England flows into the transportation equipment manufacturing sector for ships (for example, the U.S. Navy's DDG 1000 Zumwalt-class destroyer); submarines (the U.S. Navy's 14th Virginia-class submarine, SSN-787), rotary wing aircraft (Sikorsky Black Hawk helicopters); engines, turbines and components (including General Electric's T700 engines); and aircraft components. This large-scale production involves both primary contractors as well as many hundreds of sub-contractors and supplier contractors across the region. Major investments are also made in the professional, scientific and technical services sector for research and development and engineering and technical services. Computer and electronic product manufacturing spending for defense communication, detection and radar equipment also tops the list of defense purchases made in the region.

While major contractors may appear distinct, in reality multiple companies are involved in the production of advanced defense systems. It is the interaction of the supply chain across New England that creates such a strong cluster of businesses and workers linked to defense production activities across the region.

**Total DoD and DHS Contracts to New England States, 2011**

Defense contracts to New England firms and institutions totaled nearly $34 billion in 2011




Source: USASpending.gov; Data extracts as of May 3, 2012

## Total DoD and DHS Contracts to New England States, 2003 - 2011 ($B)

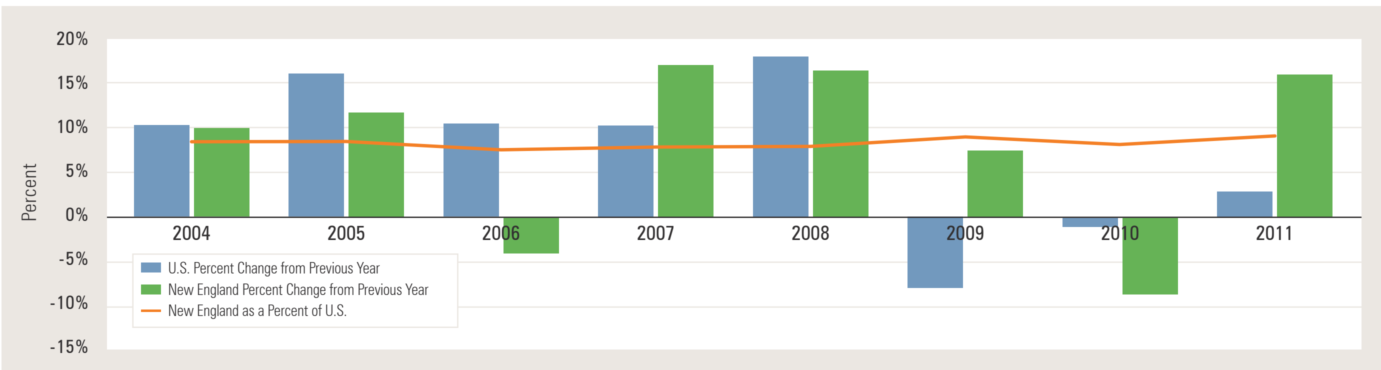
New England led defense awards have risen 85 percent since 2003 but trends have varied significantly by state

| State/Fiscal Year | U.S. Total | Connecticut | Maine | Massachusetts | New Hampshire | Rhode Island | Vermont | New England | New England as a Percent of U.S. |
|---|---|---|---|---|---|---|---|---|---|
| 2003 | $214.9 | $8.4 | $1.0 | $7.5 | $0.6 | $0.3 | $0.5 | $18.3 | 8.5% |
| 2004 | $236.6 | $9.0 | $1.4 | $8.1 | $0.8 | $0.3 | $0.4 | $20.1 | 8.5% |
| 2005 | $275.6 | $9.2 | $1.6 | $9.6 | $1.2 | $0.4 | $0.6 | $22.7 | 8.2% |
| 2006 | $304.0 | $7.9 | $0.9 | $10.3 | $1.2 | $0.5 | $1.0 | $21.8 | 7.2% |
| 2007 | $334.9 | $8.7 | $1.3 | $12.4 | $1.6 | $0.4 | $1.1 | $25.5 | 7.6% |
| 2008 | $396.4 | $12.1 | $0.7 | $14.0 | $1.7 | $0.5 | $0.7 | $29.7 | 7.5% |
| 2009 | $368.5 | $12.2 | $1.3 | $15.5 | $1.7 | $0.5 | $0.8 | $32.0 | 8.7% |
| 2010 | $364.0 | $11.2 | $1.3 | $14.3 | $1.1 | $0.5 | $0.8 | $29.2 | 8.0% |
| 2011 | $373.6 | $12.7 | $5.0 | $13.9 | $1.3 | $0.5 | $0.6 | $33.9 | 9.0% |
| 2012* | $106.3 | $5.3 | $0.4 | $3.5 | $0.4 | $0.2 | $0.1 | $9.8 | 9.2% |
| 2003-2012 | $2,974.8 | $96.7 | $15.0 | $109.1 | $11.4 | $4.1 | $6.8 | $243.1 | 8.2% |

Source: USASpending.gov; Data extracts as of April 30, 2012 *Note - not a full fiscal year

## Percent Change in the Value of New England Defense and Homeland Security Contracts

New England captured about 9 percent of U.S. contracts in 2011




Source: USASpending.gov; Data extracts as of May 3, 2012

## Top Defense Industry Sectors in New England, by Dollar Value, FY 2011

New England contractors provide highly advanced manufactured products & technical services

| Rank | Industry Sector | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Transportation Equipment Manufacturing | $18.19 b | 53.6% |
| 2 | Professional, Scientific & Technical Services | $6.74 b | 19.9% |
| 3 | Computer & Electronic Product Manufacturing | $2.99 b | 8.8% |
| 4 | Fabricated Metal Product Manufacturing | $783.7 m | 2.3% |
| 5 | Machinery Manufacturing | $730.5 m | 2.2% |
| 6 | Construction of Building | $506.6 m | 1.5% |
| 7 | Telecommunications | $462.0 m | 1.4% |
| 8 | Support Activities for Transportation | $459.7 m | 1.4% |
| 9 | Ambulatory Health Care Services | $422.9 m | 1.2% |
| 10 | Merchant Wholesalers, Nondurable Goods | $374.8 m | 1.1% |
| | All Others (Includes N/A) (n=84) | $2.26 b | 6.7% |
| | **Total** | **$33.92 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Defense Products and Services in New England, by Dollar Value, FY 2011

New England is a key provider of advanced technology products and R+D services

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Ships, Small Craft, Pontoons & Floating Docks | $8.41 b | 24.8% |
| 2 | Research & Development | $5.19 b | 15.3% |
| 3 | Engines, Turbines & Components | $3.38 b | 10.0% |
| 4 | Aircraft & Airframe Structural Components | $2.82 b | 8.3% |
| 5 | Guided Missiles | $1.75 b | 5.2% |
| 6 | Communication, Detection & Coherent Radiation Equipment | $1.70 b | 5.0% |
| 7 | Support (Professional/Administrative/Management) | $1.60 b | 4.7% |
| 8 | Maintenance, Repair & Rebuilding of Equipment | $1.21 b | 3.6% |
| 9 | Aircraft Components & Accessories | $1.00 b | 3.0% |
| 10 | Ammunition & Explosives | $597.2 m | 1.8% |
| | All Others (Includes N/A) (n=93) | $6.25 b | 18.4% |
| | **Total** | **$33.92 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Economic Contributions Generated by Defense Contracts Performed in New England, 2011

New England defense contracting generated more than $62 billion and over 319,000 jobs

| | Direct Contribution of Work Performed in New England | Indirect + Induced Contribution from Work Performed in New England | Total Contribution |
|---|---|---|---|
| Output | $32,445,102,950 | $29,615,304,144 | $62,060,407,094 |
| Employment | 125,385 | 194,495 | 319,881 |

Source: USASpending.gov; Data extracts as of April 30, 2012; MIG, Inc., IMPLAN System (data 2010)

# Connecticut Summary

**Photo Credits:**

Photo 1: U.S. Navy photo by Mass Communication Specialist 2nd Class William Jamieson/ Released

The defense industry is an important contributor to the Connecticut economy. In 2011, the state received nearly $12.7 billion in Department of Defense (DoD) and Department of Homeland Security (DHS) contracts, a 51 percent increase to the state since 2003. Defense and Homeland Security contracting is responsible for a total of more than 101,000 jobs and a total payroll of more than $7.9 billion across the state. The overall direct, indirect and induced economic activity generated by the resulting work performed in New England exceeds $22.4 billion.

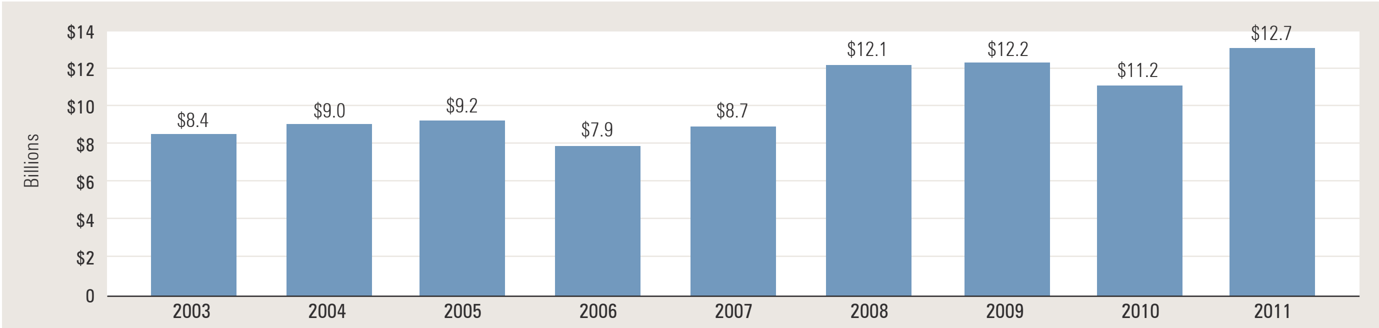
There are more than 1,100 Connecticut firms and institutions tied to DoD and DHS funds providing essential equipment, supplies and technical services in support of national and regional defense operations. Much of this activity requires highly skilled workers, precision manufacturing, and sophisticated scientific and technical support.

Connecticut excels in the production of defense-purposed transportation equipment. This includes spending in the transportation equipment manufacturing sector for submarines (for example, the U.S. Navy's 14th Virginia-class submarine, SSN-787); rotary wing aircraft (Sikorsky Black Hawk helicopters); aircraft components; and engines, turbines and components. This large-scale production involves both primary contractors as well as many hundreds of sub-contractors and supplier contractors across the region. Professional, scientific and technical services spending for research and development services also tops the list for defense purchases made in the state.

While major contractors may appear distinct, in reality multiple companies are involved in the production of advanced defense systems. In fact, it is the interaction of the supply chain across New England that creates such a strong cluster of businesses and workers linked to defense production activities across the region.

## Total Value of Defense Contracts, Connecticut, 2003-2011

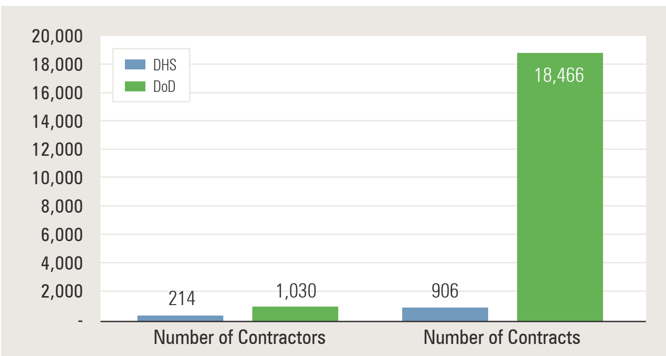
Connecticut led defense awards have risen 51 percent from 2003




Source: USASpending.gov; Data extracts as of May 3, 2012

## Contracts & Contractors by Agency in Connecticut in FY 2011

DoD is the dominant source of contracts




Source: USASpending.gov; Data extracts as of May 3, 2012
Note: Counts are based on unique vendor ID codes (contractors) & unique contract ID codes (contracts)

## Top Ten Defense Industry Sectors in Connecticut, by Dollar Value, FY2011

Connecticut excels in defense-purposed transportation equipment

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Transportation Equipment Manufacturing | $9.51 b | 75.1% |
| 2 | Professional, Scientific, & Technical Services | $1.43 b | 11.3% |
| 3 | Support Activities for Transportation | $409.0 m | 3.2% |
| 4 | Machinery Manufacturing | $342.2 m | 2.7% |
| 5 | Merchant Wholesalers, Nondurable Goods | $161.3 m | 1.3% |
| 6 | Food Manufacturing | $130.2 m | 1.0% |
| 7 | Chemical Manufacturing | $86.7 m | 0.7% |
| 8 | Construction of Buildings | $84.3 m | 0.7% |
| 9 | Computer & Electronic Product Manufacturing | $80.0 m | 0.6% |
| 10 | Electrical Equipment, Appliances, & Component Manufacturing | $72.1 m | 0.6% |
| | All Others (Includes N/A) (n=66) | $368.9 m | 2.9% |
| | **Total** | **$12.67 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Ten Defense Industry Products and Services in Connecticut, by Dollar Value, FY2011

Connecticut's top products are submarines, aircraft & aircraft components

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Ships, Small Craft, Pontoons, & Floating Docks | $3.92 b | 31.0% |
| 2 | Aircraft & Airframe Structural Components | $2.72 b | 21.5% |
| 3 | Engines, Turbines, & Components | $1.96 b | 15.5% |
| 4 | Research & Development | $1.27 b | 10.0% |
| 5 | Maintenance, Repair, & Rebuilding Of Equipment | $595.4 m | 4.7% |
| 6 | Aircraft Components & Accessories | $496.6 m | 3.9% |
| 7 | Support (Professional/Administrative/Management) | $317.4 m | 2.5% |
| 8 | Subsistence | $267.3 m | 2.1% |
| 9 | Electric Wire, & Power & Distribution Equipment | $96.3 m | 0.8% |
| 10 | Maintenance & Repair Shop Equipment | $92.6 m | 0.7% |
| | All Others (Includes N/A) (n=85) | $934.0 m | 7.4% |
| | **Total** | **$12.67 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Connecticut Defense Contractors, by Contract Value, FY2011

Three contractors received 87 percent of all contracts

| Rank | Company/Institution | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Electric Boat Corporation | $4.35 b | 34.3% |
| 2 | Silkorsky Aircraft Corporation | $3.85 b | 30.4% |
| 3 | United Technologies Corporation | $2.77 b | 21.9% |
| 4 | Eurpac Service Inc | $138.3 m | 1.1% |
| 5 | Silkorsky Support Services, Inc. | $121.5 m | 1.0% |
| 6 | Hamilton Sundstrand Corporation | $113.1 m | 0.9% |
| 7 | Goodrich Corporation | $76.1 m | 0.6% |
| 8 | Thomas J Lipton, Inc. | $66.0 m | 0.5% |
| 9 | Conopco, Inc. | $56.6 m | 0.4% |
| 10 | Engineered Electric Company | $50.1 m | 0.4% |
| | All Others (Includes N/A) (n=1,091) | $1.08 b | 8.5% |
| | **Total** | **$12.67 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Economic Contributions Generated by Defense Contracts Performed in New England, 2011

New England defense contracting generated $22.4 billion and over 101,000 jobs in Connecticut

| | Direct Contribution of Work Performed in Connecticut | Indirect + Induced Contribution from Work Performed in Connecticut | Contributions to Connecticut from Work Performed Elsewhere in New England* | Total Contribution |
|---|---|---|---|---|
| Output | $12,386,908,869 | $8,877,866,951 | $1,147,382,937 | $22,412,158,757 |
| Employment | 40,964 | 55,773 | 4,621 | 101,359 |

*These indirect and induced contributions to Connecticut result from the purchase of products and services used in defense work performed in other New England states.
Source: USASpending.gov; Data extracts as of April 30, 2012; MIG, Inc., IMPLAN System (data 2010)

# Maine Summary


The defense industry is an important contributor to the Maine economy. In 2011, the state received more than $5.0 billion in Department of Defense (DoD) and Department of Homeland Security (DHS) contracts, a dramatic increase that year resulting from major contracts for the production of destroyers at General Dynamics' Bath Iron Works. Defense and Homeland Security contracting is responsible for a total of more than 53,000 jobs and a total payroll of more than $2.9 billion across the state. The overall direct, indirect and induced economic activity generated by the resulting work performed in New England exceeds $8.3 billion.

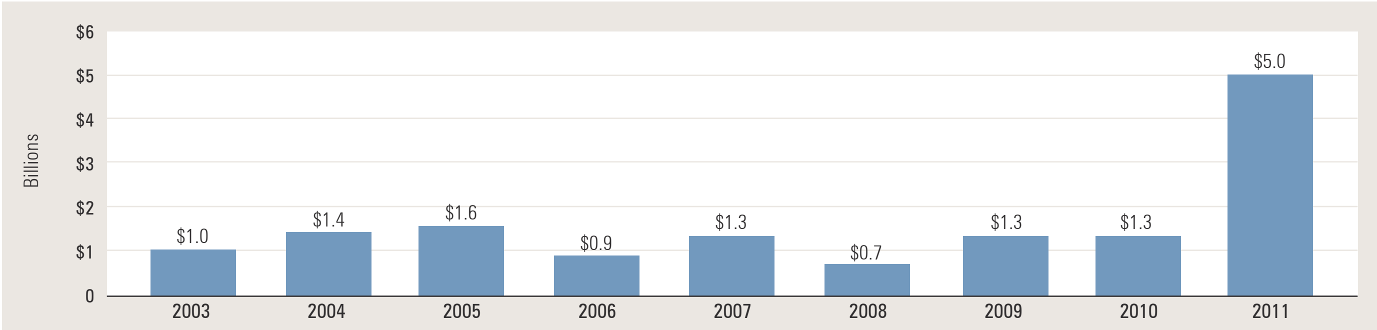
There are nearly 370 Maine firms and institutions tied to DoD and DHS funds providing essential equipment, supplies and technical services in support of national and regional defense operations. Much of this activity requires highly skilled workers, precision manufacturing, and sophisticated scientific and technical support.

Maine excels through the defense-focused activities of Bath Iron Works. The highest level of defense-related spending in the state flows into the transportation equipment manufacturing sector for the production of ships (for example, the U.S. Navy's DDG 1000 Zumwalt-class destroyer). The large-scale production centered at Bath Iron Works involves both primary contractors as well as hundreds of sub-contractors and supplier contractors across the region. Ambulatory health care services spending for medical services (in particular, Martin's Point Health Care services for military families and retirees) also tops the list of defense purchases made in the state.

While major contractors may appear distinct, in reality multiple companies are involved in the production of advanced defense systems and the provision of essential services. It is the interaction of the supply chain across New England that creates such a strong cluster of businesses and workers linked to defense production activities across the region.

## Total Value of Defense Contracts, Maine, 2003-2011

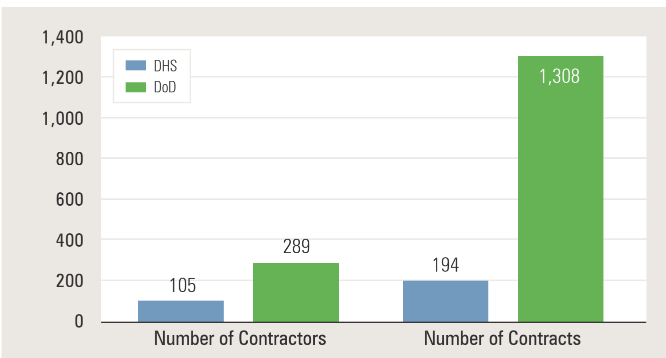
Maine-based destroyer production led to a dramatic increase in defense spending in 2011




Source: USASpending.gov; Data extracts as of May 3, 2012

## Contracts & Contractors by Agency in Maine in FY 2011

DoD is the dominant source of contracts




Source: USASpending.gov; Data extracts as of May 3, 2012
Note: Counts are based on unique vendor ID codes (contractors) & unique contract ID codes (contracts)

## Top Ten Defense Industry Sectors in Maine, by Dollar Value, FY2011

Maine excels from the defense-focused activities of General Dynamics' Bath Iron Works

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Transportation Equipment Manufacturing | $4.55 b | 90.7% |
| 2 | Ambulatory Health Care Services | $271.4 m | 5.4% |
| 3 | Apparel Manufacturing | $65.9 m | 1.3% |
| 4 | Machinery Manufacturing | $36.4 m | 0.7% |
| 5 | Construction of Buildings | $29.2 m | 0.6% |
| 6 | Professional, Scientific, & Technical Services | $28.7 m | 0.6% |
| 7 | Specialty Trade Contractors | $12.6 m | 0.3% |
| 8 | Fabricated Metal Product Manufacturing | $3.3 m | 0.1% |
| 9 | Administrative & Support Services | $3.0 m | 0.1% |
| 10 | Heavy & Civil Engineering Construction | $2.3 m | 0.0% |
| | All Others (Includes N/A) (n=51) | $15.3 m | 0.3% |
| | **Total** | **$5.01 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Ten Defense Industry Products and Services in Maine, by Dollar Value, FY2011

Maine's top products revolve around the production of U.S. naval ships

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Ships, Small Craft, Pontoons, & Floating Docks | $4.48 b | 89.3% |
| 2 | Medical | $271.3 m | 5.4% |
| 3 | Research & Development | $73.2 m | 1.5% |
| 4 | Clothing, Individual Equipment, & Insignia | $65.9 m | 1.3% |
| 5 | Maintenance & Repair Shop Equipment | $30.9 m | 0.6% |
| 6 | Construction of Structures/Facilities | $29.5 m | 0.6% |
| 7 | Support (Professional/Administrative/Management) | $12.1 m | 0.2% |
| 8 | Maintenance, Repair, Alteration of Structures/Facilities | $9.9 m | 0.2% |
| 9 | Architecture & Engineering | $7.9 m | 0.2% |
| 10 | Maintenance, Repair, & Rebuilding of Equipment | $6.7 m | 0.1% |
| | All Others (Includes N/A) (n=69) | $30.1 m | 0.6% |
| | **Total** | **$5.01 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Maine Defense Contractors, by Contract Value, FY2011

One contractor received 91 percent of all contracts

| Rank | Company/Institution | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Bath Iron Works Corporation | $4.54 b | 90.6% |
| 2 | Martin's Point Health Care, Inc. | $271.3 m | 5.4% |
| 3 | Federal Program Integrators | $58.8 m | 1.2% |
| 4 | Group Home Foundation, Inc. | $42.3 m | 0.8% |
| 5 | Source For Native American Products, LLC | $23.4 m | 0.5% |
| 6 | KMK Construction, Inc. | $8.0 m | 0.2% |
| 7 | Oak Point Associates | $6.9 m | 0.1% |
| 8 | Howe and Howe Technologies Incorporated | $5.8 m | 0.1% |
| 9 | CCI Solutions, LLC | $2.9 m | 0.1% |
| 10 | Kardex Remstar, Inc. | $2.5 m | 0.0% |
| | All Others (Includes N/A) (n=354) | $46.9 m | 0.9% |
| | **Total** | **$5.01 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Economic Contributions Generated by Defense Contracts Performed in New England, 2011

New England defense contracting generated $8.3 billion and over 53,000 jobs in Maine

| | Direct Contribution of Work Performed in Maine | Indirect + Induced Contribution from Work Performed in Maine | Contributions to Maine from Work Performed Elsewhere in New England* | Total Contribution |
|---|---|---|---|---|
| Output | $5,062,212,661 | $3,038,194,234 | $200,168,078 | $8,300,574,973 |
| Employment | 23,404 | 28,322 | 1,339 | 53,065 |

*These indirect and induced contributions to Maine result from the purchase of products and services used in defense work performed in other New England states.
Source: USASpending.gov; Data extracts as of April 30, 2012; MIG, Inc., IMPLAN System (data 2010)

# Massachusetts Summary

**Photo Credits:**

Photo 6: U.S. Navy photo by Mass Communication Specialist Seaman Gregory A. Pickett II/ Released.

The defense industry is an important contributor to the Massachusetts economy. In 2011, the state received nearly $13.9 billion in Department of Defense (DoD) and Department of Homeland Security (DHS) contracts, an 83 percent increase to the state since 2003. Defense and Homeland Security contracting is responsible for a total of more than 130,000 jobs and a total payroll of more than $9.7 billion across the state. The overall direct, indirect and induced economic activity generated by the resulting work performed in New England exceeds $25.8 billion.

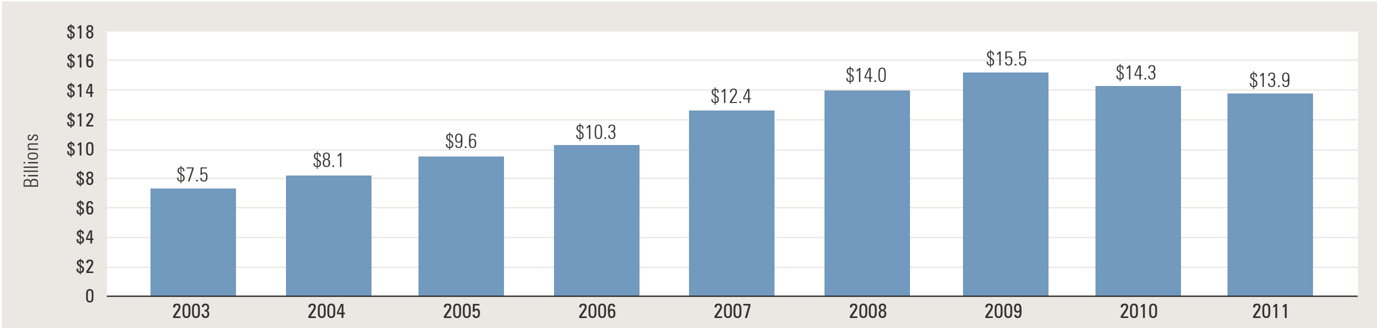
There are nearly 2,500 Massachusetts firms and institutions tied to DoD and DHS funds providing essential equipment, supplies and technical services in support of national and regional defense operations. Much of this activity requires highly skilled workers, precision manufacturing, and sophisticated scientific and technical support.

Massachusetts excels in providing specialized technical services and manufactured products for defense. The highest level of defense-related spending in Massachusetts goes to the professional, scientific and technical services sector for research and development services (for example, contracts to MIT for electronics and communications systems development) as well as for engineering services (contracts to The Charles Stark Draper Laboratory to maintain and repair missile and space systems). Another major area of spending is in the transportation equipment manufacturing sector for guided missiles (Raytheon's Patriot); and for engines, turbines and components (jet engines from General Electric). Spending in the computer and electronic product manufacturing sector on communication, detection and radar equipment also tops the list of defense purchases made in the state.

While major contractors may appear distinct, in reality multiple companies are involved in the production of advanced defense systems. Large-scale production involves both primary contractors as well as many hundreds of sub-contractors and supplier contractors. It is the interaction of the supply chain across New England that creates such a strong cluster of businesses and workers linked to defense production activities across the region.

## Total Value of Defense Contracts, Massachusetts, 2003-2011

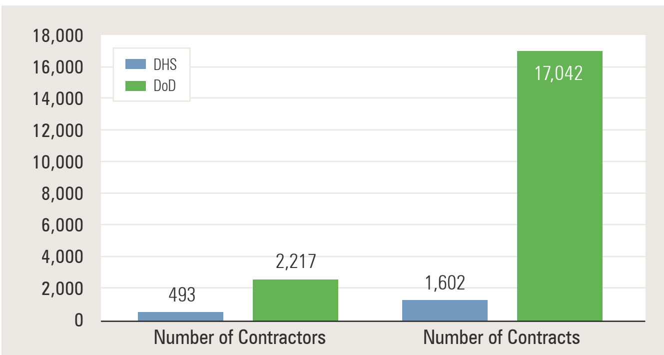
Massachusetts led defense awards have risen 83 percent from 2003




Source: USASpending.gov; Data extracts as of May 3, 2012

## Contracts & Contractors by Agency in Massachusetts in FY 2011

DoD is the dominant source of contracts




Source: USASpending.gov; Data extracts as of May 3, 2012
Note: Counts are based on unique vendor ID codes (contractors) & unique contract ID codes (contracts)

## Top Ten Defense Industry Sectors in Massachusetts, by Dollar Value, FY2011

Massachusetts excels in specialized technical services & manufactured products for defense

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Professional, Scientific, & Technical Services | $4.85 b | 35.0% |
| 2 | Transportation Equipment Manufacturing | $3.71 b | 26.7% |
| 3 | Computer & Electronic Product Manufacturing | $2.23 b | 16.1% |
| 4 | Telecommunications | $459.8 m | 3.3% |
| 5 | Construction of Buildings | $335.8 m | 2.4% |
| 6 | Machinery Manufacturing | $254.0 m | 1.8% |
| 7 | Fabricated Metal Product Manufacturing | $244.0 m | 1.8% |
| 8 | Petroleum & Coal Products Manufacturing | $230.2 m | 1.7% |
| 9 | Merchant Wholesalers, Nondurable Goods | $198.3 m | 1.4% |
| 10 | Ambulatory Health Care Services | $150.6 m | 1.1% |
| | All Others (Includes N/A) (n=77) | $1.20 b | 8.7% |
| | **Total** | **$13.87 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Ten Defense Industry Products and Services in Massachusetts, by Dollar Value, FY2011

Massachusetts' top product is research and development

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Research & Development | $3.61 b | 26.0% |
| 2 | Guided Missiles | $1.72 b | 12.4% |
| 3 | Engines, Turbines, & Components | $1.42 b | 10.2% |
| 4 | Communication, Detection, & Coherent Radiation Equipment | $1.19 b | 8.6% |
| 5 | Support (Professional/Administration/Management) | $1.13 b | 8.2% |
| 6 | Maintenance, Repair, & Rebuilding of Equipment | $567.9 m | 4.1% |
| 7 | Fire Control Equipment | $327.1 m | 2.4% |
| 8 | Weapons | $319.5 m | 2.3% |
| 9 | Fuels, Lubricants, Oils, & Waxes | $293.9 m | 2.1% |
| 10 | Information Technology & Telecommunications | $275.8 m | 2.0% |
| | All Others (Includes N/A) (n=92) | $3.02 b | 21.8% |
| | **Total** | **$13.87 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Massachusetts Defense Contractors, by Contract Value, FY2011

The top five contractors received 62 percent of all contracts

| Rank | Company/Institution | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Raytheon Company | $4.18 b | 30.1% |
| 2 | General Dynamics | $1.57 b | 11.3% |
| 3 | General Electric Company | $1.44 b | 10.4% |
| 4 | Massachusetts Institute of Technology | $951.8 m | 6.9% |
| 5 | The Charles Stark Draper Laboratory, Inc. | $421.7 m | 3.0% |
| 6 | The Mitre Corporation | $324.0 m | 2.3% |
| 7 | Tasc, Inc. | $248.1 m | 1.8% |
| 8 | Textron Systems Corporation | $219.4 m | 1.6% |
| 9 | L-3 Communications Corporation | $187.1 m | 1.3% |
| 10 | Goodrich Corporation | $183.4 m | 1.3% |
| | All Others (Includes N/A) (n=2,368) | $4.15 b | 29.9% |
| | **Total** | **$13.87 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Economic Contributions Generated by Defense Contracts Performed in New England, 2011

New England defense contracting generated $25.8 billion and over 130,000 jobs in Massachusetts

| | Direct Contribution of Work Performed in Massachusetts | Indirect + Induced Contribution from Work Performed in Massachusetts | Contributions to Massachusetts from Work Performed Elsewhere in New England* | Total Contribution |
|---|---|---|---|---|
| Output | $12,492,328,875 | $11,024,774,023 | $2,324,842,833 | $25,841,945,731 |
| Employment | 47,068 | 71,600 | 11,483 | 130,151 |

*These indirect and induced contributions to Massachusetts result from the purchase of products and services used in defense work performed in other New England states.
Source: USASpending.gov; Data extracts as of April 30, 2012; MIG, Inc., IMPLAN System (data 2010)

# New Hampshire Summary

Photo Credits:

Photo 6: U.S. Navy photo by Mass Communication Specialist Seaman Gregory A. Pickett II/ Released.

The defense industry is an important contributor to the New Hampshire economy. In 2011, the state received nearly $1.3 billion in Department of Defense (DoD) and Department of Homeland Security (DHS) contracts, a 123 percent increase to the state since 2003. Defense and Homeland Security contracting is responsible for a total of more than 17,000 jobs and a total payroll of more than $1.0 billion across the state. The overall direct, indirect and induced economic activity generated by the resulting work performed in New England exceeds $2.9 billion.

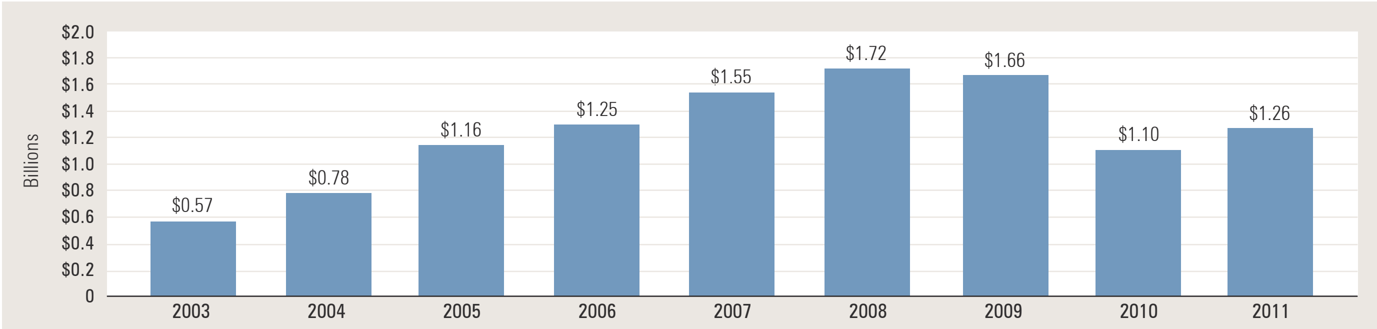
There are 560 New Hampshire firms and institutions tied to DoD and DHS funds providing essential equipment, supplies and technical services in support of national and regional defense operations. Much of this activity requires highly skilled workers, precision manufacturing, and sophisticated scientific and technical support.

New Hampshire excels in providing specialized manufacturing products and technical services for defense. Major defense-related spending in New Hampshire goes to the computer and electronic product manufacturing sector for communication, detection and radar equipment as well as electronic equipment components (for example, BAE's electronic countermeasures). Major investments are also made in the transportation equipment manufacturing sector for aircraft components and accessories. This type of large-scale defense systems production involves both primary contractors as well as hundreds of sub-contractors and supplier contractors across the region. Purchases from the professional, scientific and technical services sector for research and development services (for example, to BAE for electronics and communications research) also top the list of defense purchases made in the state.

While major contractors may appear distinct, in reality multiple companies are involved in the production of advanced defense systems. It is the interaction of the supply chain across New England that creates such a strong cluster of businesses and workers linked to defense production activities across the region.

## Total Value of Defense Contracts, New Hampshire, 2003-2011

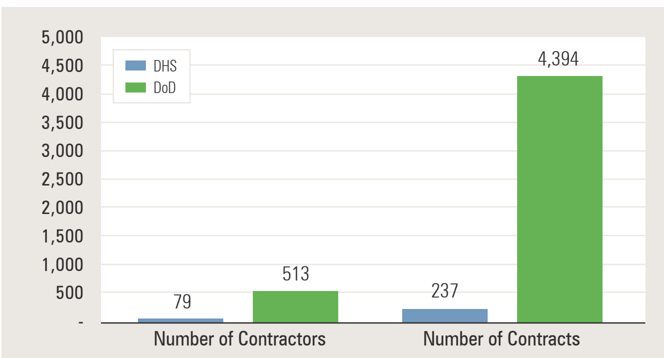
New Hampshire led defense awards have risen 123 percent from 2003




Source: USASpending.gov; Data extracts as of May 3, 2012

## Contracts & Contractors by Agency in New Hampshire in FY 2011

DoD is the dominant source of contracts




Source: USASpending.gov; Data extracts as of May 3, 2012
Note: Counts are based on unique vendor ID codes (contractors) & unique contract ID codes (contracts)

## Top Ten Defense Industry Sectors in New Hampshire, by Dollar Value, FY2011

New Hampshire excels in specialized manufactured products & technical services for defense

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Computer & Electronic Product Manufacturing | $478.9 m | 38.0% |
| 2 | Professional, Scientific, & Technical Services | $309.0 m | 24.5% |
| 3 | Transportation Equipment Manufacturing | $244.3 m | 19.4% |
| 4 | Machinery Manufacturing | $81.5 m | 6.5% |
| 5 | Fabricated Metal Product Manufacturing | $22.9 m | 1.8% |
| 6 | Furniture & Related Product Manufacturing | $17.5 m | 1.4% |
| 7 | Petroleum & Coal Products Manufacturing | $15.3 m | 1.2% |
| 8 | Merchant Wholesalers, Nondurable Goods | $14.2 m | 1.1% |
| 9 | Electrical Equipment, Appliance, & Component Manufacturing | $13.1 m | 1.0% |
| 10 | Miscellaneous Manufacturing | $10.4 m | 0.8% |
| | All Others (Includes N/A) (n=58) | $52.6 m | 4.2% |
| | **Total** | **$1.26 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Ten Defense Industry Products and Services in New Hampshire, by Dollar Value, FY2011

New Hampshire's top products are communications equipment & research and development

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Communication, Detection, & Coherent Radiation Equipment | $405.7 m | 32.2% |
| 2 | Research & Development | $196.5 m | 15.6% |
| 3 | Aircraft Components and Accessories | $133.5 m | 10.6% |
| 4 | Support (Professional/Administrative/Management) | $68.8 m | 5.5% |
| 5 | Automatic Data Processing Equipment (Including Firmware), Software, Supplies & Support Equipment | $59.9 m | 4.8% |
| 6 | Electrical & Electronic Equipment Components | $49.8 m | 4.0% |
| 7 | Fire Control Equipment | $45.4 m | 3.6% |
| 8 | Maintenance, Repair, & Rebuilding of Equipment | $29.7 m | 2.4% |
| 9 | Fuels, Lubricants, Oils, & Waxes | $28.2 m | 2.2% |
| 10 | Guided Missiles | $27.8 m | 2.2% |
| | All Others (Includes N/A) (n=83) | $214.4 m | 17.0% |
| | **Total** | **$1.26 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top New Hampshire Defense Contractors, by Contract Value, FY2011

One contractor received 62 percent of all contracts

| Rank | Company/Institution | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | BAE Systems Information & Electronic Systems Integration | $780.3 m | 61.9% |
| 2 | L-3 Communications Corp | $66.2 m | 5.3% |
| 3 | Kollsman Inc. | $61.8 m | 4.9% |
| 4 | Red River Computer Co Inc. | $59.9 m | 4.8% |
| 5 | Oasys Technology, LLC | $28.4 m | 2.3% |
| 6 | DCI Inc. | $23.0 m | 1.8% |
| 7 | Irving Oil Corporation | $15.8 m | 1.3% |
| 8 | Creare Incorporated | $15.1 m | 1.2% |
| 9 | Sprague Energy Corp | $12.2 m | 1.0% |
| 10 | Windmill International, Inc. | $11.6 m | 0.9% |
| | All Others (Includes N/A) (n=531) | $185.3 m | 14.7% |
| | **Total** | **$1.26 b** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Economic Contributions Generated by Defense Contracts Performed in New England, 2011

New England defense contracting generated more than $2.9 billion and over 17,000 jobs in New Hampshire

| | Direct Contribution of Work Performed in New Hampshire | Indirect + Induced Contribution from Work Performed in New Hampshire | Contributions to New Hampshire from Work Performed Elsewhere in New England* | Total Contribution |
|---|---|---|---|---|
| Output | $1,297,747,055 | $936,121,752 | $750,297,963 | $2,984,166,770 |
| Employment | 6,098 | 7,641 | 4,173 | 17,912 |

*These indirect and induced contributions to New Hampshire result from the purchase of products and services used in defense work performed in other New England states.
Source: USASpending.gov; Data extracts as of April 30, 2012; MIG, Inc., IMPLAN System (data 2010)

# Rhode Island Summary

**Photo Credits:**

Photo 6: U.S. Navy photo by Mass Communication Specialist Seaman Gregory A. Pickett II/ Released.

The defense industry is an important contributor to the Rhode Island economy. In 2011, the state received nearly $472 million in Department of Defense (DoD) and Department of Homeland Security (DHS) contracts, a 37 percent increase to the state since 2003. Rhode Island businesses also play an important role in supporting the work of defense contractors from other states; nearly half of the $812 million in defense contract work performed in Rhode Island comes from out-of-state vendors. Defense and Homeland Security contracting is responsible for a total of more than 12,000 jobs and a total payroll of more than $680 million across the state. The overall direct, indirect and induced economic activity generated by the resulting work performed in New England exceeds $1.7 billion.

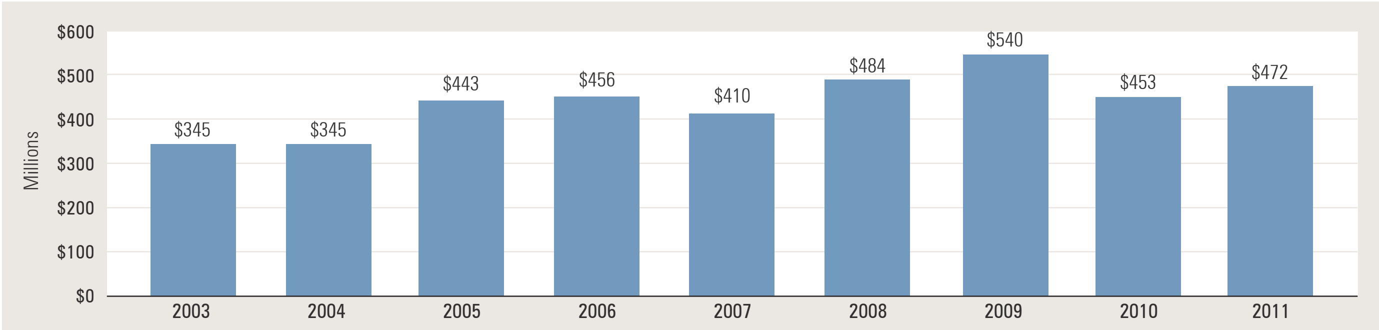
There are 389 Rhode Island firms and institutions tied to DoD and DHS funds providing essential equipment, supplies and technical services in support of national and regional defense operations. Much of this activity requires highly skilled workers, precision manufacturing, and sophisticated scientific and technical support.

Rhode Island contractors excel in providing specialized manufactured products and technical services for defense. This includes spending in the computer and electronic product manufacturing sector for communication, detection and radar equipment (for example, Raytheon's underwater sound equipment), as well as spending for electronic equipment and components. Major spending also flows into the transportation equipment manufacturing sector for aircraft components and accessories (for example, Raytheon's aircraft accessory components). Purchases from the professional, scientific and technical services sector for research and development services also top the list of defense purchases made in the state.

While major contractors may appear distinct, in reality multiple companies are involved in the production of advanced defense systems. This type of large-scale defense systems production involves both primary contractors as well as sub-contractors and supplier contractors. It is the interaction of the supply chain across New England that creates such a strong cluster of businesses and workers linked to defense production activities across the region.

## Total Value of Defense Contracts, Rhode Island, 2003-2011

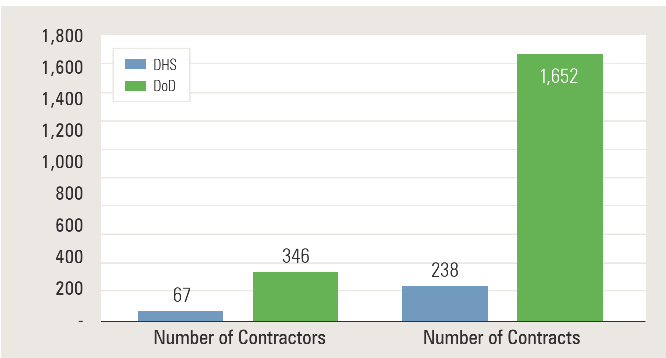
Rhode Island led defense awards have risen 37 percent from 2003




Source: USASpending.gov; Data extracts as of May 3, 2012

## Contracts & Contractors by Agency in Rhode Island in FY 2011

DoD is the dominant source of contracts




Source: USASpending.gov; Data extracts as of May 3, 2012
Note: Counts are based on unique vendor ID codes (contractors) & unique contract ID codes (contracts)

## Top Ten Defense Industry Sectors in Rhode Island, by Dollar Value, FY2011

Rhode Island excels in specialized manufactured products & technical services for defense

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Computer & Electronic Product Manufacturing | $133.1 m | 28.2% |
| 2 | Professional, Scientific, & Technical Services | $103.1 m | 21.9% |
| 3 | Transportation Equipment Manufacturing | $98.6 m | 20.9% |
| 4 | Fabricated Metal Product Manufacturing | $48.7 m | 10.3% |
| 5 | Construction of Buildings | $30.6 m | 6.5% |
| 6 | Heavy & Civil Engineering Construction | $12.3 m | 2.6% |
| 7 | Textile Mills | $8.9 m | 1.9% |
| 8 | Repair & Maintenance | $6.9 m | 1.5% |
| 9 | Machinery Manufacturing | $4.3 m | 0.9% |
| 10 | Textile Product Mills | $3.6 m | 0.8% |
| | All Others (Includes N/A) (n=56) | $21.4 m | 4.5% |
| | **Total** | **$471.5 m** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Ten Defense Industry Products and Services in Rhode Island, by Dollar Value, FY2011

Rhode Island's top products are communications equipment & aircraft components

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Communication, Detection, & Coherent Radiation Equipment | $100.9 m | 21.4% |
| 2 | Aircraft Components & Accessories | $86.4 m | 18.3% |
| 3 | Support (Professional/Administration/Management) | $71.4 m | 15.1% |
| 4 | Weapons | $46.7 m | 9.9% |
| 5 | Construction of Structures/Facilities | $30.9 m | 6.6% |
| 6 | Research & Development | $23.5 m | 5.0% |
| 7 | Maintenance, Repair, Alteration of Structures/Facilities | $15.8 m | 3.3% |
| 8 | Maintenance, Repair, & Rebuilding of Equipment | $11.4 m | 2.4% |
| 9 | Electrical & Electronic Equipment Components | $10.2 m | 2.2% |
| 10 | Utilities & Housekeeping | $7.4 m | 1.6% |
| | All Others (Includes N/A) (n=77) | $66.9 m | 14.2% |
| | **Total** | **$471.5 m** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Rhode Island Defense Contractors, by Contract Value, FY2011

Two contractors received 68 percent of all contracts

| Rank | Company/Institution | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Raytheon Company | $257.3 m | 54.6% |
| 2 | Systems Engineering Associates | $64.4 m | 13.7% |
| 3 | Gilbane Building Company | $18.2 m | 3.9% |
| 4 | Aetna Bridge Company | $8.5 m | 1.8% |
| 5 | J. Goodison Company | $8.1 m | 1.7% |
| 6 | Hyman Brickle & Son, Inc. | $6.7 m | 1.4% |
| 7 | H.V. Collins Company, Inc. | $5.5 m | 1.2% |
| 8 | KVH Industries, Inc. | $5.1 m | 1.1% |
| 9 | Seacon Phoenix, LLC | $4.7 m | 1.0% |
| 10 | Network & Simulation Technologies Incorporated | $4.6 m | 1.0% |
| | All Others (Includes N/A) (n=371) | $88.4 m | 18.7% |
| | **Total** | **$471.5 m** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

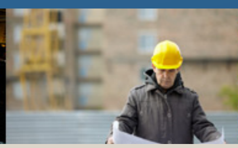
## Economic Contributions Generated by Defense Contracts Performed in New England, 2011

New England defense contracting generated $1.7 billion and over 12,000 jobs in Rhode Island

| | Direct Contribution of Work Performed in Rhode Island | Indirect + Induced Contribution from Work Performed in Rhode Island | Contributions to Rhode Island from Work Performed Elsewhere in New England* | Total Contribution |
|---|---|---|---|---|
| Output | $812,331,462 | $617,765,363 | $307,572,678 | $1,737,669,503 |
| Employment | 5,496 | 5,025 | 1,687 | 12,208 |

*These indirect and induced contributions to Rhode Island result from the purchase of products and services used in defense work performed in other New England states.
Source: USASpending.gov; Data extracts as of April 30, 2012; MIG, Inc., IMPLAN System (data 2010)

# Vermont Summary

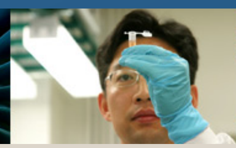
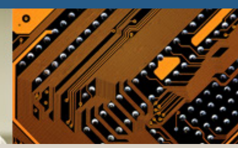
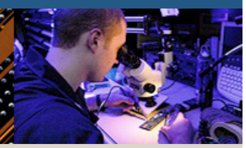




**Photo Credits:**

Photo 1: U.S. Navy photo by Mr. John F. Williams/Released

Photo 6: U.S. Navy photo by Mass Communication Specialist Seaman Gregory A. Pickett II/ Released

The defense industry is an important contributor to the Vermont economy. In 2011, the state received more than $625 million in Department of Defense (DoD) and Department of Homeland Security (DHS) contracts, a 34 percent increase to the state since 2003. Defense and Homeland Security contracting is responsible for a total of more than 5,000 jobs and a total payroll of more than $243 million across the state. The overall direct, indirect and induced economic activity generated by the resulting work performed in New England exceeds $783 million.

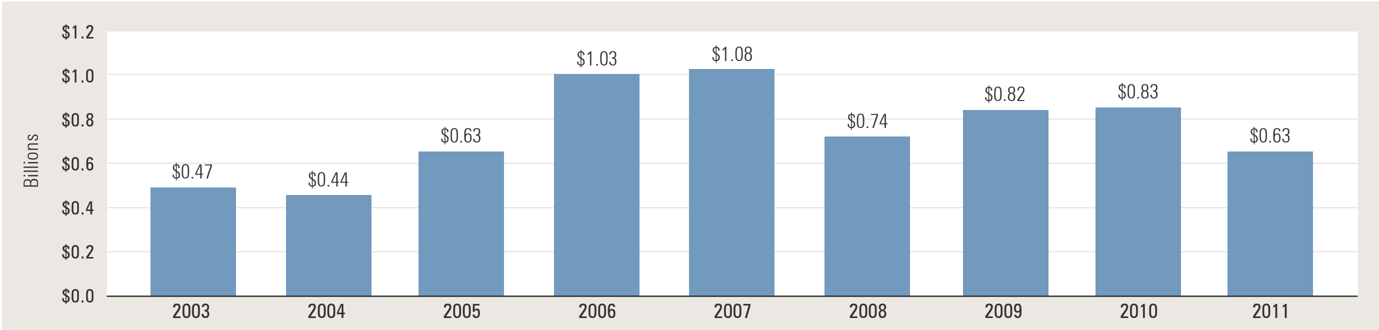
There are 215 Vermont firms and institutions tied to DoD and DHS funds providing essential equipment, supplies and technical services in support of national and regional defense operations. Much of this activity requires highly skilled workers, precision manufacturing, and sophisticated scientific and technical support.

Vermont excels in providing specialized manufactured products for defense. The highest levels of defense-related spending to Vermont are in the fabricated metal product manufacturing sector for the production of ammunition and explosives and weapons systems (primarily General Dynamics' weapons systems and components). This large-scale defense systems production involves both primary contractors as well as sub-contractors and supplier contractors across the region. Major spending also flows into the transportation equipment manufacturing sector for aircraft components and accessories as well as aircraft and airframe structural components. Investments in the computer and electronic product manufacturing sector also top the list of defense purchases made in Vermont.

While major contractors may appear distinct, in reality multiple companies are involved in the production of advanced defense systems. It is the interaction of the supply chain across New England that creates such a strong cluster of businesses and workers linked to defense production activities across the region.

## Total Value of Defense Contracts, Vermont, 2003-2011

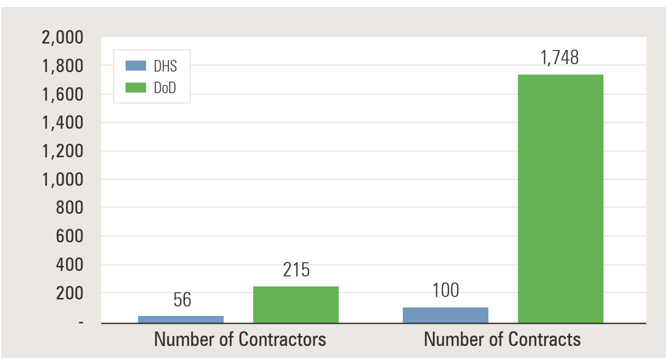
Vermont led defense awards have risen 34 percent from 2003




Source: USASpending.gov; Data extracts as of May 3, 2012

## Contracts & Contractors by Agency in Vermont in FY 2011

DoD is the dominant source of contracts




Source: USASpending.gov; Data extracts as of May 3, 2012
Note: Counts are based on unique vendor ID codes (contractors) & unique contract ID codes (contracts)

## Top Ten Defense Industry Sectors in Vermont, by Dollar Value, FY2011

Vermont excels in specialized manufactured products for defense

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Fabricated Metal Product Manufacturing | $393.4 m | 62.9% |
| 2 | Transportation Equipment Manufacturing | $78.2 m | 12.5% |
| 3 | Computer & Electronic Product Manufacturing | $62.1 m | 9.9% |
| 4 | Construction of Buildings | $18.2 m | 2.9% |
| 5 | Furniture & Related Product Manufacturing | $14.9 m | 2.4% |
| 6 | Professional, Scientific, & Technical Services | $14.8 m | 2.4% |
| 7 | Machinery Manufacturing | $12.0 m | 1.9% |
| 8 | Publishing Industries (except Internet) | $7.3 m | 1.2% |
| 9 | Electrical Equipment, Appliance, & Component Manufacturing | $5.1 m | 0.8% |
| 10 | Leather & Allied Product Manufacturing | $4.0 m | 0.6% |
| | All Others (Includes N/A) (n=44) | $15.0 m | 2.4% |
| | **Total** | **$625.1 m** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Ten Defense Industry Products and Services in Vermont, by Dollar Value, FY2011

Vermont's top products are weapons systems and components

| Rank | Product or Service | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | Ammunition & Explosives | $337.4 m | 54.0% |
| 2 | Weapons | $60.7 m | 9.7% |
| 3 | Aircraft Components & Accessories | $55.7 m | 8.9% |
| 4 | Fire Control Equipment | $32.9 m | 5.3% |
| 5 | Aircraft & Airframe Structural Components | $21.6 m | 3.5% |
| 6 | Research & Development | $17.5 m | 2.8% |
| 7 | Construction of Structures/Facilities | $16.9 m | 2.7% |
| 8 | Instruments & Laboratory Equipment | $15.9 m | 2.5% |
| 9 | Household & Commercial Furnishings & Appliances | $12.4 m | 2.0% |
| 10 | Automatic Data Processing Equipment (Including Firmware), Software, Supplies & Support Equipment | $12.1 m | 1.9% |
| | All Others (Includes N/A) (n=72) | $42.0 m | 6.7% |
| | **Total** | **$625.1 m** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Top Vermont Defense Contractors, by Contract Value, FY2011

Two contractors received 86 percent of all contracts

| Rank | Company/Institution | Value of Contracts | % of Total Value |
|---|---|---|---|
| 1 | General Dynamics, Inc. | $438.5 m | 70.2% |
| 2 | Simmonds Precision Products, Inc. | $100.0 m | 16.0% |
| 3 | New England Woodcraft, Inc. | $14.0 m | 2.2% |
| 4 | Steward Construction, Inc. | $11.7 m | 1.9% |
| 5 | Norwich University | $8.1 m | 1.3% |
| 6 | Airboss-Defense, Inc. | $7.3 m | 1.2% |
| 7 | Problem-Knowledge Coupler Corporation | $7.2 m | 1.1% |
| 8 | Plasan North America, Inc. | $4.3 m | 0.7% |
| 9 | Concepts ETI, Inc. | $3.7 m | 0.6% |
| 10 | Engineers Construction Incorporated | $3.3 m | 0.5% |
| | All Others (Includes N/A) (n=248) | $27.1 m | 4.3% |
| | **Total** | **$625.1 m** | **100%** |

Source: USASpending.gov; Data extracts as of April 30, 2012

## Economic Contributions Generated by Defense Contracts Performed in New England, 2011

New England defense contracting generated more than $783 million and over 5,000 jobs in Vermont

| | Direct Contribution of Work Performed in Vermont | Indirect + Induced Contribution from Work Performed in Vermont | Contributions to Vermont from Work Performed Elsewhere in New England* | Total Contribution |
|---|---|---|---|---|
| Output | $393,574,028 | $217,594,576 | $172,722,755 | $783,891,359 |
| Employment | 2,356 | 2,000 | 831 | 5,187 |

*These indirect and induced contributions to Vermont result from the purchase of products and services used in defense work performed in other New England states.
Source: USASpending.gov; Data extracts as of April 30, 2012; MIG, Inc., IMPLAN System (data 2010)

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