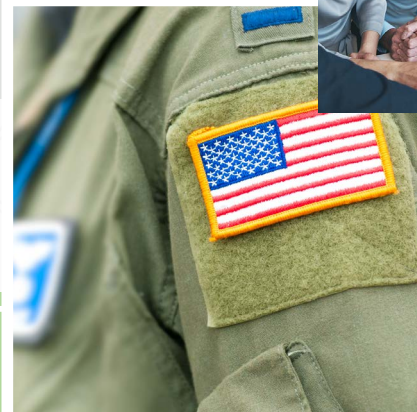


# under the RADAR

2020 update



# INTRODUCTION

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Each year, Minnesota's businesses, workers and culture of innovation draw billions of dollars of federal procurement spending to the state. As for most states, U.S. Department of Defense (DoD) procurement accounts for the majority of that federal contract spending. However, this spending in Minnesota is largely unknown and "under the radar." This is partly due to the many non-traditional products and services that DoD procures from Minnesota companies as well as the diversity of the state's innovation and technology businesses. This report provides information and context on DoD contracts with Minnesota businesses.

# DEFENSE SPENDING & RECENT TRENDS

## NATIONAL PICTURE

The United States Department of Defense accounts for more than half of federal discretionary spending, and in fiscal year (FY) 2018 DoD’s budget authority was around \$694.5 billion.<sup>1</sup>

Procurement make up a large share of that spending. According to DoD’s Office of Economic Adjustment (OEA), DoD awarded \$358.9 billion in contracts in FY2018 to companies providing a wide range of products and services, from military equipment, such as missiles, combat gear and vehicles, to health services and rations for soldiers.

The DoD has several types of contracts that are available to U.S. businesses. Every contract starts as a **prime contract**, which allows DoD to purchase supplies, materials, equipment and services from businesses. Some prime contractors use **subcontracts** to fulfill parts of their contracts with other DoD-approved companies.

Additionally, the DoD accounts for the largest portion of federal R&D spending,<sup>2</sup> some of which is administered through the U.S. Small Business Administration’s **Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs**. These contracts support early stage research and development for products that both meet defense needs and have a potential commercial application.

## RECENT TRENDS & MINNESOTA’S ROLE

Since the end of World War II, the nation’s economy has become more diverse and less focused on military goods and services. Nevertheless, defense remains a major economic activity nationally and produces ongoing commercial applications. In FY 2018, DoD awarded \$358.9 billion in contracts.

A relatively small amount of that contract spending went to Minnesota businesses. In 2018, DoD spent \$3.1 billion on procurement contracts in the state, representing around 1 percent of both DoD’s total contract spending and Minnesota’s \$333.9 billion gross regional product in 2018.<sup>3</sup>

Contract spending in the state has generally increased over the past decade, from \$1.1 billion in 2011 to a high of \$4.3 billion in FY2017. The largest increase came in FY2014 when spending jumped to \$3.9 billion from \$1.9 billion in the previous year. This jump reflected Minnetonka-based UnitedHealth Group receiving a major contract to manage a portion of DoD’s Tricare health insurance system. UHG’s Tricare contract has since expired, decreasing their share of contract spending from \$2.8 billion in FY2017 to \$1.1 billion in FY2018 and accounting for most of the decrease in overall contract spending in the state.

**DoD Contract Spending in Minnesota, FY2011-2018**



Source: DoD Office of Economic Adjustment

1 Office of Economic Adjustment. “Defense Spending by State: Fiscal Year 2018.” February 2020. Retrieved from [www.oea.gov/sites/default/files/defense-spending-rpts/FY2018-Defense-Spending-by-State-Report\\_0\\_0.pdf](http://www.oea.gov/sites/default/files/defense-spending-rpts/FY2018-Defense-Spending-by-State-Report_0_0.pdf)

2 National Science Foundation. “Survey of Federal Funds for Research and Development Fiscal Years 2018-19.” January 2020. Retrieved from [ncesdata.nsf.gov/fed-funds/2018/](http://ncesdata.nsf.gov/fed-funds/2018/)

3 Bureau of Economic Analysis. “Local Area Gross Domestic Product, 2018.” December 12, 2019. Retrieved from [www.bea.gov/system/files/2019-12/lagdp1219.pdf](http://www.bea.gov/system/files/2019-12/lagdp1219.pdf)

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Minnesota does not rank particularly high among states receiving DoD contracts; it ranked 28th in contract spending in FY2018. The top three states for contract spending were California (\$42.5 billion), Texas (\$39.9 billion) and Virginia (\$38.2 billion), which together accounted for a third of DoD's total contract spending. Among neighboring states, Wisconsin received slightly more contract spending than Minnesota at \$3.4 billion. Iowa received \$2.0 billion, North Dakota received \$264 million, and South Dakota received \$155 million.

## MINNESOTA'S DEFENSE INDUSTRY HAS DEEP ROOTS

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### IN THE PAST

Minnesota has a long history of national defense contributions. The iron ore industry in Northern Minnesota has provided crucial resources to war efforts; Minneapolis served as the site for modifications to the B-25 bombers used in the 1942 Doolittle Raid; and the "K" ration was named in honor of Dr. Ancel Keyes, a University of Minnesota scientist who developed the food rations for GIs.

Minnesota companies have played significant roles as well, and some of the largest contractors nationally have ties to Minnesota businesses:

- Honeywell, a long-time DoD contractor that had its headquarters in Minneapolis until 1999, has supplied defense products and systems to the U.S. and its allies for decades, including the first electronic autopilot that enabled B-17 aircraft to accomplish pinpoint bombing missions during World War II. Alliant Techsystems, which spun off from Honeywell in 1990 and later merged with Orbital to form Orbital ATK, was acquired by Northrop Grumman in 2018 and continues some of its operations in Minnesota today under Northrop's Innovation Systems division.
- The Minnesota operations of General Dynamics' Advanced Information Systems traces its roots back to Control Data's government system group, which was spun off to Ceridian and eventually sold to General Dynamics. Today the company's operations in Bloomington design, develop and manufacture mission computers.
- United Defense, which grew into a major defense contractor and was later purchased by BAE Systems, initially supplied fire pumps to the Navy under the business name Northern Pump.

### TODAY

More than 300 companies in Minnesota worked on contracts or subcontracts for the DoD in FY2018, according to USASpending.gov. Within the SBIR and STTR programs, 11 Minnesota companies received 24 DoD-funded awards for early stage research and development in 2018. The Defense Alliance, a Saint Paul-based industry association for DoD contractors is funded by the SBA and has 675 corporate members across 34 states, 70% of which are located in Minnesota.

Many of Minnesota's defense contractors are well known – whether they have headquarters or major production operations in the state. Of those headquartered here, 3M manufactures body armor, helmets and other safety gear for soldiers, and Polaris provides off-road vehicles for use on military bases and on tactical missions. Of companies headquartered outside Minnesota, BAE Systems' facility in Fridley produces artillery, naval guns, missile launchers and precision munitions. General Dynamics' operations in Bloomington are part of its Mission Systems division, which is focused on communications, command and control systems. And United Technologies' Collins Aerospace division produces aircraft components in Burnsville and Minneapolis.<sup>4 5</sup>

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<sup>4</sup> In July 2019, United Technologies and Raytheon announced a merger. UTC's Collins Aerospace division will remain a part of the newly formed Raytheon Technologies.

<sup>5</sup> Lockheed Martin was another major DoD contractor that used to have operations in Minnesota; its Eagan facilities, which closed in 2010, produced information management systems and traced its roots back to Engineering Research Associates, a Minnesota company that later became part of the UNIVAC division at Sperry-Rand (later Unisys).





Sometimes DoD contract spending flows to companies that don't fit the expected profile of a defense contractor, such as food manufacturers like General Mills and Hormel. In recent years, DoD contracted with UnitedHealth Group (UHG) to manage the Tricare insurance program within the military health system. UHG's subsidiary Optum secured further contracts starting in 2019 to provide lifestyle coaching and medical disability examinations for veterans.

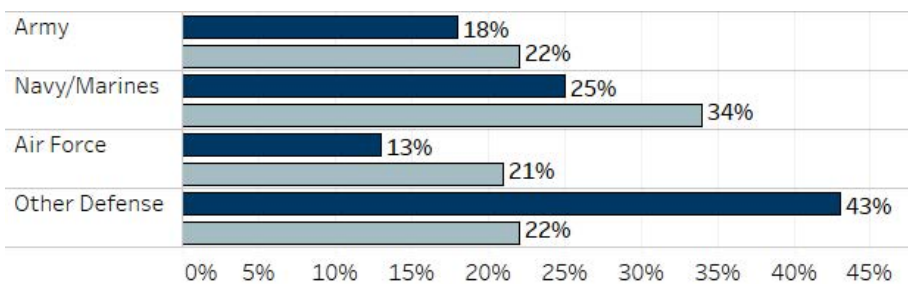
Smaller Minnesota contractors include Minnesota Wire, which manufactures electrical interconnect assemblies and founded the Defense Alliance, initially to share strategies for securing SBIR and other federal funding to innovate and commercialize new products. Other small contractors include MTS Systems, which manufactures sensors and test systems; Third Wave Systems, which specializes in machine modeling software; and PaR Systems, which provides automation and robotics solutions for manufacturers.

## CONTRACTOR CHARACTERISTICS

### MILITARY BRANCHES SERVED

A large portion of Minnesota's DoD contracts do not support the traditional branches of the Armed Forces. Instead 43 percent of FY2018 spending supported "Other Defense." This likely reflects UnitedHealth Group's Tricare contract, which is not specific to any one branch of the Armed Forces. Contracts specific to the Army accounted for 18 percent of spending in Minnesota, the Navy and Marines 25 percent, and the Air Force 13 percent.

#### DoD Contract Spending in Minnesota, FY2011-2018

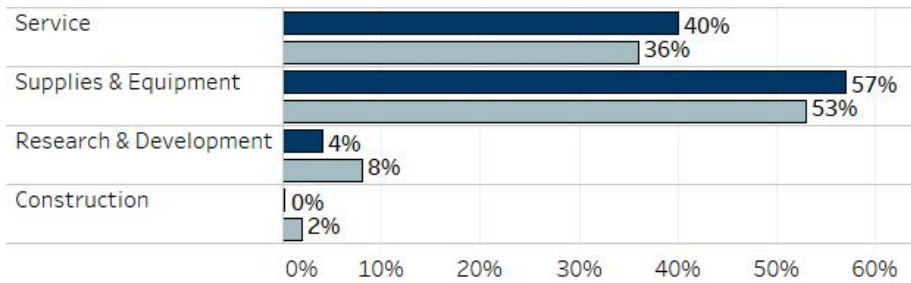


Region  
■ Minnesota  
■ United States

Source: DoD Office of Economic Adjustment

In contrast, DoD's contract spending nationally was distributed more evenly between the different branches. The Army accounted for 22 percent of total contracted dollars, the Navy and Marines 34 percent, the Air Force 21 percent, and "Other Defense" making up the remaining 22 percent.

## Contract Spending in Minnesota by Product/Service Type, FY2018



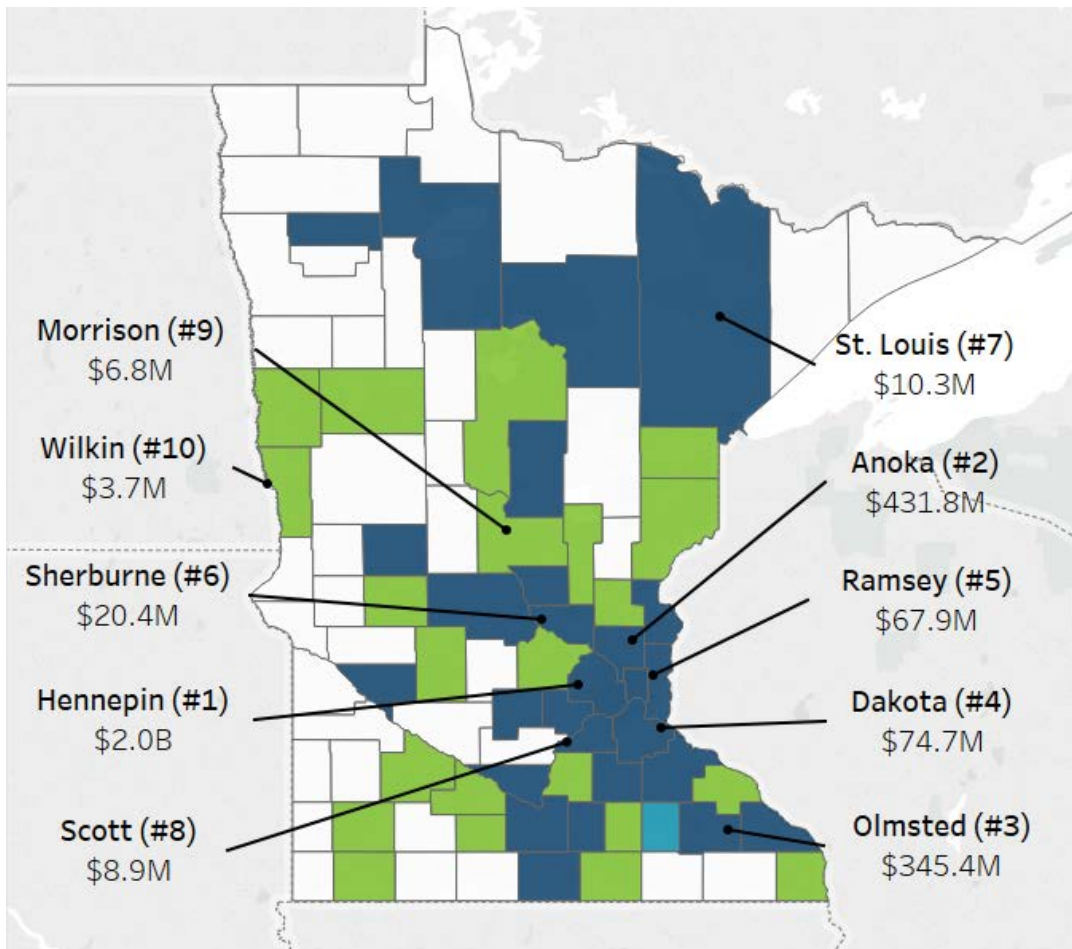
Region  
 ■ Minnesota  
 ■ United States

Source: DoD Office of Economic Adjustment

The wide variety of businesses supplying DoD speaks to the diversity of the nation's defense needs. Nationally, supplies and equipment represented 53 percent of spending in FY2018. Service, research and development, and construction accounted for the remainder. Similarly, 57 percent of spending in Minnesota was for supplies and equipment, with services making up most of the rest.

## GEOGRAPHY

DoD contracts represent an important revenue stream for businesses throughout the state, and this procurement activity touches a large swath of Minnesota. Businesses in 50 of the state's 87 counties received at least some revenues from DoD contracts in FY2018, according to USASpending.gov. In OEA's analysis of the top 10 counties by spending, UnitedHealth Group's FY2018 DoD contracts clearly skew the distribution of spending toward the Twin Cities metro; Hennepin County's \$2.0 billion in contract spending represents 67 percent of the total spending in Minnesota.



## Counties Receiving Contracts & Top 10 Counties by Contract Spending, FY2018

Source: DoD Office of Economic Adjustment and USASpending.gov

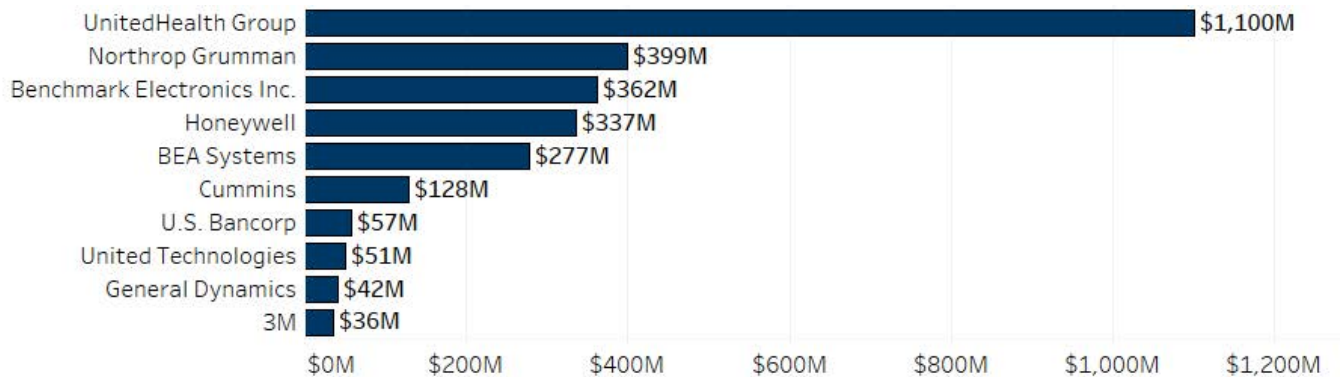
Contract Type

- Prime and subcontract
- Prime and contract only
- Subcontract only
- No contract

## LARGEST COMPANIES & INDUSTRIES

The company receiving the largest amount of DoD contract spending in Minnesota in FY2018 was UnitedHealth Group, which received \$1.1 billion and accounted for 35 percent of the DoD’s total spending in the state. Together, the top 10 award recipients accounted for 89 percent of Minnesota’s total DoD contract spending.

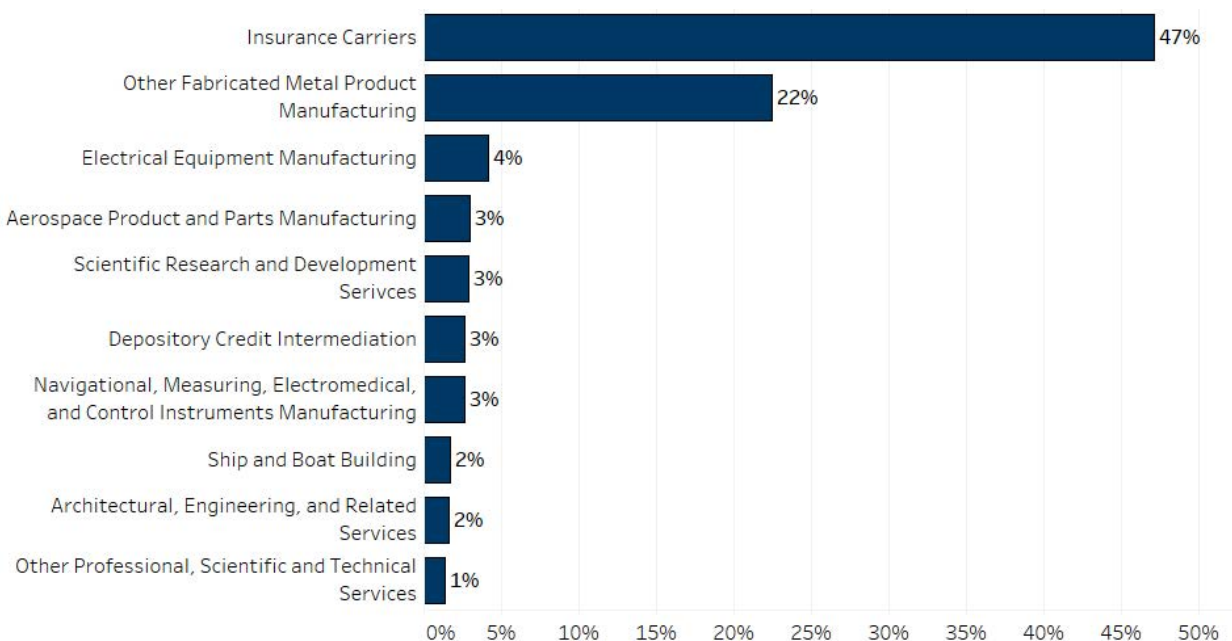
### Top 10 Companies by Contract Spending in Minnesota, FY2018 (in millions)



Source: DoD Office of Economic Adjustment

UnitedHealth Group’s contracts also dominated the distribution of spending across Minnesota industries in FY2018 with 47 percent going to the insurance carrier industry. Fabricated metal manufacturing (specifically for ammunitions) was the other large industry category, receiving 22 percent of contract spending. Smaller industries reflect Minnesota’s niche manufacturing capabilities, such as electrical equipment, aerospace parts, and navigation and control instruments, as well as professional services such as banking, R&D, architecture and engineering.

### Top 10 Industries by Contract Spending in Minnesota, FY2018



Source: USASpending.gov

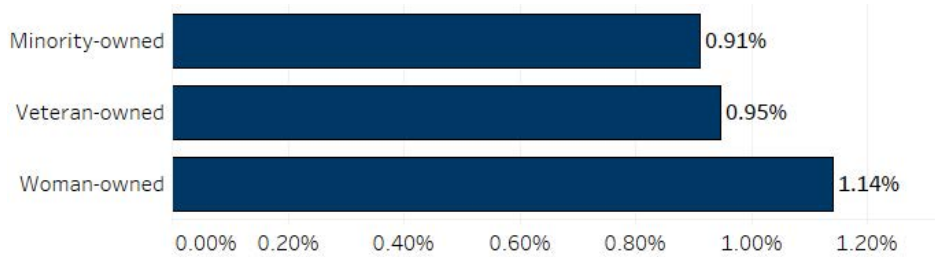


## OWNERSHIP DIVERSITY

Only a small portion of Minnesota’s DoD contract spending flows to businesses owned by people of color, women or veterans. Each of these ownership segments received around one percent of DoD contract spending in Minnesota in FY2018.

Procurement contracts are a powerful tool not just for cultivating broader economic development but also for improving economic opportunities for historically disadvantaged groups. Public sector agencies are often one of the largest employers and industries in a given region, meaning their procurement contracts can provide not only substantial business income but also the reputational and branding benefits of partnering with a large organization. This, in turn, can help businesses secure both additional contracts with other companies as well as the financial capital businesses need to grow.<sup>6</sup> Consequently, contractor diversity is a tool for public agencies at the federal, state and local level to use alongside tax incentives, low-interest loans and other economic development programs.

**Percent of Contract Spending in Minnesota by Ownership Type, FY2018**



Source: USASpending.gov

### Diversity Spotlight

Ion Corp is a veteran and minority owned manufacturing company based in Eden Prairie that specializes in producing and testing high-tech electronic flight and ground support equipment. Ion Corp works as both a prime and subprime contractor and has partnered with the Air Force, Navy, Army, Marines and major defense contractors such as Boeing, Lockheed Martin and Northrop Grumman. Ion Corp’s engineering services and manufacturing capability have supported environmental control and life support systems aboard the International Space Station, and various payload, guidance and communications systems for satellites and Mars rovers.

## SMALL BUSINESS CHARACTERISTICS

Like most large federal agencies, DoD reserves some of its contract spending to be administered through the federal Small Business Association’s Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

<sup>6</sup> Access to capital is particularly important for business growth, and both past and present day discrimination in that access limit opportunities available to businesses owned by people of color, women and other marginalized groups. For example, research shows that a business owner’s race and gender influence their access to bank loans, venture capital and fair interest rates.



The SBIR program was founded in 1982 to support small businesses engaged in research and development for products that have commercialization potential. The STTR program supports similar efforts by facilitating cooperation between small businesses and nonprofit research institutions. To-date, the two programs have together awarded \$53 billion nationally through more than 177,000 grants and contracts. Forty-eight percent of that spending was funded by the DoD.

Minnesota’s share of SBIR/STTR awards do not lean as heavily towards the DoD. Minnesota has received 2,488 awards since 1982 worth \$725 million, 35 percent of which were funded by the DoD. In recent years DoD’s share of awards to Minnesota businesses has decreased. In 2018, the DoD funded 24 of the state’s 79 SBIR/STTR awards, accounting for \$11.3 million and 26 percent of total award amount.

**Small Business Spotlight**

SBIR contract recipients in Minnesota often reflect the state’s specialty in medical innovation and devices. For example, Edina-based Humanetics is a pharmaceutical company working to mitigate the effects of radiation exposure. Its BIO 300 radioprotectant drug emerged from a research project with the Armed Forces Radiobiology Research Institute and has applications as a medical countermeasure for fighters, first responders and civilians at risk of radiation exposure from a nuclear accident or terrorist threat. The drug also has clinical applications in mitigating side effects of cancer treatments and in aerospace protecting astronauts during long space flight.

Roseville-based Advanced Circulatory Systems also used SBIR funds from the DoD and National Institutes of Health to develop an intrathoracic pressure regulation device that assists with performing CPR. The company was acquired by acute care medical device manufacturer Zoll in 2015.

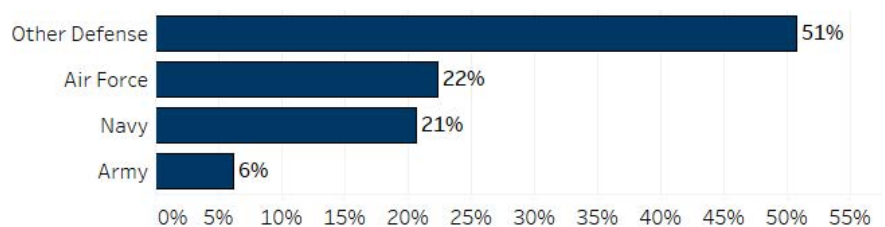
**MILITARY BRANCHES SERVED**

Similar to prime contract spending in Minnesota, the majority of SBIR/STTR awards supported “Other Defense” activities.

**IMPORTANCE OF DEFENSE SPENDING**

DoD contracts and small business grants can provide an important revenue stream for companies, states and local communities. Regardless of whether DoD contracts support manufacturing, services, or research and development, states and the private sector recognize the economic and business impacts of defense procurement and actively pursue contracts. From an economic development perspective, many DoD contracts require innovative products and services that have commercial applications, which means federal contracts can help foster the innovation needed in a competitive regional economy.

**Percent of Contract Spending in Minnesota by Ownership Type, FY2018**



Source: DoD Office of Economic Adjustment

**Defense Contractor Spotlight**

Minnesota Wire, a Saint Paul-based manufacturer of electrical interconnect assemblies, has successfully leveraged DoD contracts through SBIR and other R&D and contract programs to innovate and become an industry leader in carbon nanotube (CNT) material. CNT allows Minnesota Wire to build and market lighter and non-corrosive wire harness assemblies. Though originally developed for the Air Force under SBIR contracts and much larger follow-on development contracts like DoD’s Rapid Innovation Fund, the material also has applications in the commercial space industry. Over the past several decades, the company has won more than \$6.6M in federal R&D funding through 16 SBIR awards and other contracts. The company’s leadership decided to create the Defense Alliance industry group in 2004 to share lessons and strategies from their time spent applying for DoD contracts. It has since grown into an SBA-funded Regional Innovation Cluster, endorsed by the DoD.



## SMALL BUSINESSES

A 2017 report from the University of Minnesota’s Extension Center for Community Vitality estimated the impact of all SBIR/STTR grants (not just those for the DoD) between 1983 and 2015. During that time, Minnesota small businesses received 2,236 grants totaling nearly \$1.1 billion in funding (including direct SBIR/STTR funding and private investments), employed nearly 4,000 people and generated \$392.2 million in total wages. In 2015, the most recent year in the analysis, businesses won 73 grants totaling \$29.3 million, employed 110 individuals and generated a labor income of \$11 million.

Accounting for the ripple effects of these business’ interacting with the wider economy, the report also estimated the total economic impact of the grants between 1983 and 2015. Together these grants generated \$2.1 billion in economic output, supported 10,770 jobs and produced a total labor income of \$766.4 million.

## RESOURCES FOR CONTRACTING SUCCESS

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Though the ebb and flow of DoD procurement can impact the long-term viability of businesses that rely too heavily on those partnerships, contracting nonetheless remains an exciting opportunity for businesses to pursue and one that can benefit Minnesota’s whole economy.

There are a variety of state and national resources available for business interested in learning more about defense and other federal contracting, and to guide businesses through the procurement application process. Additionally, through often overlooked, subcontracting is another way for both large and small businesses to work with DoD. In fact, DoD encourages prime contractors to work with small businesses, and requires such activities if a single contract award is at least \$500,000 (\$1 million for construction). Interested businesses should also consider the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

- **Contract Opportunities** (<https://beta.sam.gov>) is the point of entry system for federal procurement.
- **MN Procurement Technical Assistance Center** ([www.mn.gov/admin/business/vendor-info/ptac](http://www.mn.gov/admin/business/vendor-info/ptac)) provides technical and marketing assistance to Minnesota businesses interested in becoming government contractors.
- **U.S. Small Business Administration** ([www.sba.gov/federal-contracting](http://www.sba.gov/federal-contracting)) provides guides for finding and winning contracts, business development programs, and counseling and training.
- **Defense Alliance** ([www.defensealliance.com](http://www.defensealliance.com)) is an industry association for defense contractors in the Upper Midwest providing consulting services, industry analysis, and networking opportunities.
- **Minnesota High Tech Association** ([www.mhta.org](http://www.mhta.org)) is a science and technology association focused on the state’s innovation economy. And MNSBIR ([www.mhta.org/msbir](http://www.mhta.org/msbir)), hosted by the MHTA, helps new and established companies secure grant funding through the federal Small Business Innovation Research and Small Business Technology Transfer programs.
- **“Doing Business with DoD”** ([www.dod.defense.gov/Resources/Contract-Resources](http://www.dod.defense.gov/Resources/Contract-Resources)) provides contracting resources from the Department of Defense.
- **Enterprise Minnesota** ([www.enterpriseminnesota.org](http://www.enterpriseminnesota.org)) provides consulting services to manufacturing companies and is the state’s official representative of the Manufacturing Extension Partnership National Network.
- **Minnesota Department of Employment and Economic Development** ([www.mn.gov/deed](http://www.mn.gov/deed)) is the state’s principal economic development agency.



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