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Issue Brief

Under the Radar: Minnesota's Defense Industry

Analysis and Evaluation

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Minnesota is well-known for its natural resources. But the state's business, worker skill and innovation resources provide the foundation for the \$1.7 billion in U.S. Department of Defense prime contract procurement spending in the state.

For Minnesota, as for most states, procurement spending by the U.S. Department of Defense (DoD) accounts for the majority of federal contract spending, but it's largely unknown and "under the radar." This study was conducted in response to client interest in learning more about the defense business in Minnesota.

Product diversity is one reason why so little is known about DoD spending in Minnesota. While state businesses produce such traditional defense products as precision guided munitions, a wide variety of other products are also produced – from high-end eyewear and electronic interconnect and communication solutions, to anger management course design and medical transcription. DoD also funds high-tech research and development at the University of Minnesota.

Defense Spending 101

Defense spending has long been one of the nation's largest big-ticket budget items. In fiscal year (FY) 2005, the United States spent an estimated \$466 billion on national defense, second only to Social Security among budget outlays.

Given current military conflicts, it is no surprise that spending has increased 58 percent (37 percent, inflation-adjusted) since 2000. Military procurement accounts for a large share of defense spending with prime contracts awarded to companies providing products and services to DoD representing about half of national defense spending in FY 2005, or \$237 billion.¹

¹ This data only includes DoD data and excludes other related contracts including those for the U.S. Department of Homeland Security.

DoD has three primary types of awards that are available to U.S. businesses. Prime contracts allow DoD to purchase supplies, materials, equipment and services, and subcontracts allow prime contractors to use DoD-approved companies to fulfill part of their contract.² Lastly, Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants are given to businesses for early stage research and development (R&D) projects that meet defense needs and will have a commercial application.

Prime contracts are the largest component and the focus of this issue brief. This procurement activity represents only the \$1.7 billion in prime contract awards to Minnesota companies and does not include other DoD expenditures at military bases, subcontracts or SBIR/STTR grants. The Defense Alliance of Minnesota recently concluded that total DoD spending in the state exceeds \$3 billion.

Regardless of whether prime contracts are for manufacturing, services, or research and development related efforts, states and the private sector recognize the economic and business impacts of defense procurement and actively pursue contracts. Minnesota and companies operating in the state are no different. From an economic development perspective, many DoD contracts require innovative products and services that have commercial applications. This activity provides the foundation for a competitive regional economy.

DoD awarded 1,482 prime contracts valued at more than \$1.7 billion to more than 450 companies operating in Minnesota in FY 2005. The largest single contract was for \$221 million.

² Prime contract data generally reflects place of performance. If work involves more than one facility, the contract is attributed to the site where the largest dollar amount of work was completed. Although subcontracted work is not available by place of performance, prime contract awards are generally believed to be a good indicator of defense spending in a state.

A select few companies represent the lion's share of prime contracts. The top 10 recipients accounted for nearly 78 percent of Minnesota's total DoD awards, with the top three holding 57 percent.

Companies with Largest Share of DoD's Minnesota FY05 Prime Contract Awards

<u>Company</u>	<u>Total Contracts (millions)</u>
Lockheed Martin	\$504
ATK (Alliant Techsystems)	\$282
General Mills	\$174
Honeywell	\$ 76
BAE Systems	\$ 69
Rosemount Aerospace	\$ 50
General Dynamics	\$ 44
Hormel Foods	\$ 40
3M Company	\$ 36
Meggitt Defense Systems Caswell	\$ 33

Source: Statistical Information Analysis Division, U.S. Department of Defense. Calculations by the Analysis and Evaluation Office, Minnesota Department of Employment and Economic Development.

Prime contract production activity reaches all corners of the state with contractors located in more than 160 Minnesota communities and 74 of the state's 87 counties. Despite this widespread economic activity, national defense-related prime contract work in the state is largely unknown and is the focus of this issue brief.

Spending Trends

National defense has long been an important economic activity nationally. 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 spending remains a major spending item. In FY 2005 alone, DoD awarded nearly \$237 billion in prime contracts – nearly double the \$134 billion spent in FY 2000.

Minnesota does not rank very highly in the value of prime contracts, ranking 35th nationally (including the District of Columbia) in prime contracts in FY 2005

with \$1.7 billion. Collectively, the top three states (California - \$31.1 billion, Virginia - \$26.8 billion and Texas - \$20.7 billion) accounted for 33 percent of the all prime contracts awarded to contractors in the 50 states and the District of Columbia.

The state's recent performance has lagged national trends. Between FY 1995 and FY 2002, the state's ranking ranged from 22nd to 27th. Since then, the state's prime contract award ranking has fallen to 29th in FY 2003, 34th in FY 2004 and 35th in FY 2005.

Minnesota's prime contracts have increased about 11 percent since FY 2002, but that increase pales in comparison to the 39 percent expansion nationally. A 30 percent decline in state Army contracts compared to the 75 percent national increase explains much of Minnesota's ranking decline during this period.

While total awards were at similar levels for the Army (30%), Navy (26%) and Air Force (22%) at the national level, Minnesota's awards tended to be Navy procurement (40%), Army (30%) and "Other Defense Agencies" (ODA) (18%).³ The award distribution has changed over time with the biggest shift occurring between the Army and Navy. Army contracts accounted for 47 percent of Minnesota's awards in FY 2002 while the Navy represented about 31 percent. The decline in Army contract dollars combined with an increase in Navy contract values explains much of the change.

Among neighboring states, only Wisconsin received more prime contracts in FY 2005 with \$2.6 billion, ranking 27th highest in the nation. With more than \$1.4 billion, the Army was the largest procurement area with most of the dollars going to Wisconsin's transportation equipment sector.

³ "Other Defense Agencies" includes a variety of DoD departments not listed separately. For example, Minnesota is a major supplier for the Defense Commissary Agency.

Minnesota's Defense Roots

Despite the lack of relative prominence, Minnesota has a long history of national defense contributions – from the iron ore industry in Northern Minnesota providing crucial resources to war efforts, to serving as the site where the B-25 bombers used by the “Doolittle Raiders” were modified. And the “K” ration was named in honor of Dr. Ancel Keys, a University of Minnesota scientist who developed the food rations supplied to U.S. GIs.

On the company side, Honeywell defense (now Alliant Techsystems) businesses supplied defense products and systems to the U.S. and its allies for 50 years, including the first electronic autopilot that enabled B-17 aircraft to accomplish pinpoint bombing missions during World War II. United Defense (recently purchased by BAE Systems) initially supplied fire pumps to the Navy as Northern Pump and later grew into a major defense contractor.

Minnesota is home to more than 450 prime contractor companies that supplied DoD in FY 2005, and the Defense Alliance of Minnesota, an industry association, has more than 300 registered and affiliated businesses and organizations. Many provide defense products used on the battlefield while others provide services and products that support defense operations.

Many of Minnesota's defense contractors are well known – whether they have headquarters or major production operations in the state. Of the latter, several firms have roots in former Minnesota companies. The Minnesota operations of General Dynamics Advanced Information Systems traces its roots back to Control Data's government systems group, which was spun off to Ceridian and eventually sold to General Dynamics. Lockheed Martin's Minnesota operations had several previous owners including Sperry, Unisys and Loral.

Today, Lockheed-Martin's Tactical Systems facility in Eagan develops information management systems including maritime surveillance aircraft systems, air defense systems, and naval shipboard systems.

General Dynamics' Advanced Information Systems in Bloomington designs, develops and manufactures mission computers. BAE Systems in Fridley produces artillery, naval guns, missile launchers and precision munitions

Minnesota's legacy strengths in the computer and software industry propelled these and other facilities. Many companies providing products and services to the military operate much like Minnesota's other high-tech developers and manufacturers. They employ a variety of systems, software and hardware engineers. They also employ testing, verification, quality assurance and technical manufacturing workers whose skills are easily transferable to other Minnesota high-tech companies.

Defense spending also flows to companies that don't fit the expected profile of a defense contractor. General Mills, Hormel and 3M are among Minnesota's largest contractors in FY 2005 – hardly the stereotypical defense contractor. Other Minnesota companies that supply DoD with at least \$10 million in goods and services might come as a surprise including Land O'Lakes, Schwan's and Champion Air.

DoD contracts not only benefit the state by providing jobs for residents working for contractors and by investing in university research, but the spin-offs from product development also can be advantageous. When the military needed a better insect repellent, 3M developed and patented a new time-release repellent application. The product, called Ultrathon™, is now available in stores for all consumers.

Other companies apply knowledge gained through DoD contract work to the marketplace. For example, Minnesota Wire & Cable produces customized interconnect solutions for the military and takes lessons learned back into the medical device and other markets.

Minnesota Defense Products

The wide variety of businesses supplying DoD speaks to the diversity of the nation's defense needs. Nationally, miscellaneous services is the single largest area of DoD procurement, representing about 26.9 percent of awards in FY 2005; airframes and

electronics/communications accounted for the second and third highest shares – 11.6 percent and 10.6 percent, respectively.

Four areas represent more than two-thirds of Minnesota's DoD prime contract awards: ammunition (17.7%), electronics and communications equipment (16.7%), and subsistence (15.8%). A miscellaneous category – all other suppliers/equipment – accounted for 17.3 percent. The Navy awards accounted for most of the procurement noted in three of Minnesota's four largest areas with ODA representing the largest for subsistence.

Minnesota's DoD Prime Contract Awards by Procurement Program, FY 2005

Procurement Program	Value of Awards (thousands)	DoD Agency With Largest Share	Distribution of Awards	Distribution of U.S. Awards	Minnesota Share of U.S. Awards
Aircraft Engines & Spares	\$ 16,716	Air Force	1.0%	2.8%	0.2%
Airframes and Spares	\$ 49,226	Army	2.9%	11.5%	0.2%
All Other Supplies/Equipment	\$ 294,462	Navy	17.3%	7.4%	1.7%
Ammunition	\$ 302,212	Army	17.7%	1.5%	8.4%
Building Supplies	\$ 112	Army	0.0%	0.0%	0.4%
Combat Vehicles	\$ 15,564	Army	0.9%	3.3%	0.2%
Construction	\$ 51,194	Corp of Eng.	3.0%	6.5%	0.3%
Construction Equipment	\$ 20,921	Other	1.2%	0.5%	1.9%
Containers & Handling Equip.	\$ 26	Air Force	0.0%	0.0%	0.0%
Electronics & Communications	\$ 283,875	Navy	16.7%	10.6%	1.1%
Materials Handling Equipment	\$ 7,161	Air Force	0.4%	0.1%	3.9%
Medical & Dental Supplies	\$ 13,516	Army	0.8%	1.6%	0.4%
Missile & Space Systems	\$ 17,844	Army	1.0%	7.0%	0.1%
Non-Combat Vehicles	\$ 5,164	Army	0.3%	2.4%	0.1%
Other Aircraft Equipment	\$ 56,708	Navy	3.3%	3.5%	0.7%
Other Fuels & Lubricants	\$ 33	Logistics	0.0%	0.5%	0.0%
Petroleum	\$ 4,187	Logistics	0.2%	2.4%	0.1%
Photographic Supplies	\$ 441	Army	0.0%	0.0%	0.5%
Production Equipment	\$ 1,224	Army	0.1%	0.1%	0.4%
Services	\$ 176,256	Navy	10.3%	26.9%	0.3%
Ships	\$ 24,523	Navy	1.4%	5.2%	0.2%
Subsistence	\$ 269,027	Other	15.8%	3.3%	3.4%
Textiles & Clothing	\$ 20,180	Logistics	1.2%	1.1%	0.8%
Transportation Equipment	\$ 7	Army	0.0%	0.0%	0.1%
Weapons	\$ 72,676	Navy	4.3%	1.6%	1.9%
Total	\$1,703,252	Navy	100.0%	100.0%	0.7%

Note: "Logistics" refers to the Defense Logistics Agency and "Other" refers to DOD agencies not noted. The Defense Commissary Agency accounted for most of the contract value in the "Other" category.

Source: Statistical Information Analysis Division, U.S. Department of Defense. Calculations by Analysis and Evaluation Office, Minnesota Department of Employment and Economic Development.

Contractor Locations

DoD's procurement awards touch most of Minnesota with 74 of the state's 87 counties receiving awards and 26 receiving at least \$1 million in contracts. However, about 86 percent (\$1.5 billion) of Minnesota's FY 2005 awards were given to recipients in the seven-county Minneapolis-St. Paul metropolitan area.

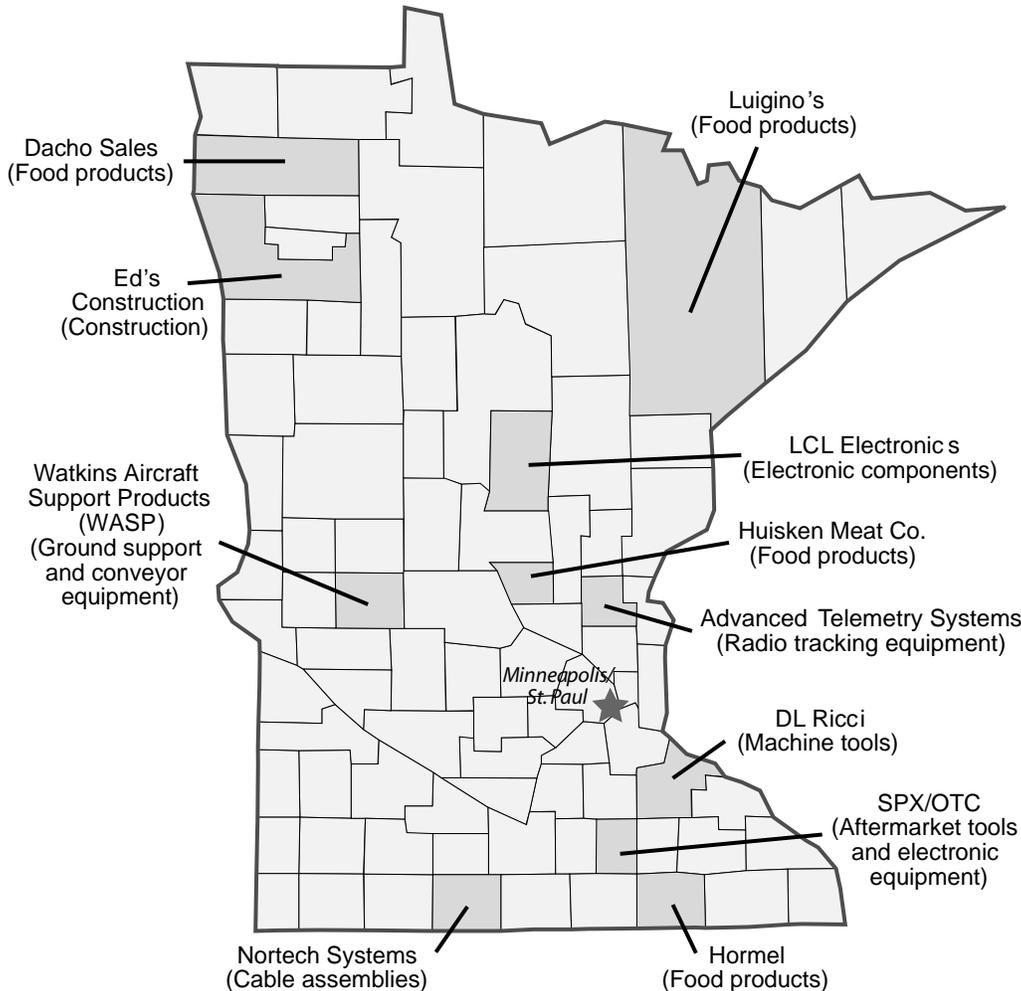
Hennepin County businesses accounted for more than 44 percent (\$758 million) of the state total, followed by Dakota County (20%, \$345 million) and Ramsey County (14%, \$247 million) and Anoka County (7%, \$114 million). Outside the Twin Cities area, the prime contract awards were concentrated in St. Louis County (5%, \$87

million), Mower County (2%, \$41 million), Polk County (1%, \$21 million) and Waseca County (1%, \$20 million).

These awards represent an important revenue stream for businesses throughout the state and especially in Greater Minnesota and benefit workers and communities as well as businesses. Although the average contract was \$1.1 million, this value is skewed by a few large contracts. The \$80,000 median contract value is more representative of typical procurement contract awarded to Minnesota businesses.

Examples of companies representing a significant share of prime contract awards in an individual county are shown below.

Examples of DoD Prime Contract Awards in Greater Minnesota for Selected Counties, FY 2005



Source: Statistical Information Analysis Division, U.S. Department of Defense.

Procurement Success

For some businesses, working with the federal government's procurement process can be intimidating and frustrating.

Fortunately, the process has become easier in recent years due to information available via the Internet.

10 Steps to Success Guide, produced by the U.S. Navy, provides important guidance to improve business procurement success. Key recommendations by the guide include:

- Identify your product or service using appropriate classifications
- Become familiar with contracting process and the FedBizOpps website (www.fedbizopps.gov)
- Explore subcontracting opportunities.

Subcontracting is often an overlooked 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 activity if a single contract award is at least \$500,000 (\$1 million for construction). In FY 2005, prime contractors participating in DoD's Subcontracting Program distributed \$121 billion to small business subcontractors.

Businesses can also access DoD's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. DoD funds \$1 billion annually to early-stage R&D projects at small technology companies that meet a DoD need and have commercial applications. The Minnesota Procurement Technical Assistance Center (PTAC) is a DoD funded organization designed to help businesses market products and services to the federal, state and local government agencies.

Although DoD prime contracts can provide a strong source of additional business revenue, business strategies may not want to be overly dependent on defense spending. Long-term business viability will be difficult to achieve given the ebb and flow of defense spending.

Key Defense Links

For businesses interested in learning more about the opportunities through defense contracting, there are a variety of Minnesota and national resources available:

- Defense Alliance of Minnesota (www.defensealliance.com)
- "Doing Business with DoD," (www.acq.osd.mil/sadbu/doing_business/index.htm)
- Point of Entry for Federal Procurement (www.fedbizopps.gov)
- Minnesota's SBIR/STTR Program (www.deed.state.mn.us/sbir)
- DoD's SBIR/STTR Program (www.acq.osd.mil/osbp/sbir/)
- Minnesota's PTAC Program (www.ptac-meda.net)

Next Steps

DoD's \$1.7 billion in procurement spending in Minnesota has a significant impact on the state's workers, businesses, communities and economy. This brief takes the first step in understanding these impacts – what is being produced for DoD by Minnesota companies. Future analyses will take a closer look at other impacts of this spending including how it drives business innovation, quality processes and other operational changes that improve the competitiveness of prime contractors and subcontractors.

The Minnesota Department of Employment and Economic Development is the state's principal economic development agency, with programs promoting business recruitment, expansion and retention, workforce development, international trade and community development. The department employs all available state government resources to upgrade the skills of Minnesota's workforce, foster economic independence and self-sufficiency, and facilitate an economic environment that produces net new job growth in excess of the national average.

The department consists of four divisions:

Business and Community Development

The Business and Community Development Division provides a variety of financial and technical services to businesses, communities and economic development professionals. The division promotes and assists in the expansion of exports, works with companies to expand in or relocate to Minnesota, and helps communities with capacity building and infrastructure financing.

Workforce Development

The Workforce Development Division works with local and statewide partners to provide training and support to unemployed and dislocated workers, and financial assistance for businesses seeking to upgrade the skills of their workforce. Additional services include State Services for the Blind, Rehabilitation Services, Local Labor Exchange, and Disability Determination. Many of these services are provided at Minnesota WorkForce Centers located throughout the state.

Unemployment Insurance

This division provides temporary income to people who have lost their jobs through no fault of their own.

Information and Marketing

The Information and Marketing Division supports the department's activities through centralized communications and marketing, labor market research and economic analysis products and services.

Department of Employment and Economic Development