



Project Profile: Defense Manufacturing Assistance Project/Defense Cybersecurity Assurance Program

Impact Statement

The DMAP and DCAP projects increased the resiliency, lethality, readiness and cybersecurity preparedness of the DoD and defense industrial base by providing business support and cybersecurity implementation services to suppliers. Additional community support services resulted in the development of new local government programs supporting defense suppliers and local military installations. Altogether these programs benefit the DoD by raising the capacity of regional defense suppliers and communities in support of the defense industrial base and military installations.

Key Project Takeaways

The DMAP and DCAP programs provided critical support to small and medium-sized defense suppliers that increased the resiliency, lethality, readiness and cybersecurity preparedness of the DoD and defense industrial base. Working across Indiana, Michigan and Ohio, the Defense Manufacturing Assistance Project helped businesses develop new products, improve production processes and diversify into new markets, increasing the resiliency and lethality of the DoD. Additionally, community support services resulted in new programs in support of the defense industrial base and local military installations. Combining community and business-focused projects allowed for more effective programming that addresses multiple issues facing suppliers. The Defense Cybersecurity Assurance Program provided cybersecurity awareness and implementation services to defense suppliers that secured these businesses from cyber-threats and loss of contract due to violating DFARS requirements.

Project Description

Rationale

The DMAP/DCAP region includes Indiana, Michigan and Ohio. The Midwest supports a renowned manufacturing cluster, focused on the automotive sector. The “Big 3” automakers based in Southeastern Michigan, Ford, GM, and Fiat-Chrysler, support hundreds of thousands of jobs in the region alone. Other original equipment manufacturers (OEMs), such as Rolls Royce, Lockheed Martin, AM General, Ford, and General Dynamics also support vast supplier networks in the region. Many of these OEMs and suppliers also support DoD missions.

Further the region supports numerous military installations, including the Naval Surface Warfare Center – Crane Division and Grissom Joint Air Reserve Base in Indiana; the U.S. Army’s Combat Capabilities Development Command (CCDC) Ground Vehicle Systems Center in Michigan; and Wright-Patterson Air Force Base in Ohio. These installations support thousands of jobs at the manufacturers and service-providers supplying these installations. For example, Crane is the third largest navy installation in the world, and with 3,000 Navy and nearly 6,800 workers, it is Indiana’s third largest employer. With the importance of defense spending in the Midwest, any changes in defense expenditures or the closure of a military installation threatens regional supply chains.



Program Activities

The states of Indiana, Michigan and Ohio formed the Defense Manufacturing Assistance Project (DMAP) as a collaborative between the states to support local communities and businesses reliant on defense spending. Between 2014 and 2018 each state administered the project through a major university: Purdue University, the University of Michigan, and Ohio State University, respectively. This partnership continued beyond the period of OEA support for DMAP as the Defense Cybersecurity Assurance Program (DCAP).

DMAP originally applied for OEA support in response to the 2013 budget sequestration, which severely impacted local defense suppliers in the Midwest. DMAP programs supported both communities and businesses impacted by the changes in defense expenditures. DMAP business support programs included assisting critical defense suppliers with the resources to retool, develop new technologies, and identify new business opportunities. OEA funds helped defense suppliers diversify their product-lines into new markets, streamline production processes, acquire business certifications and identify new market opportunities. Companies eligible to receive services had to employ less than 1000 workers; have faced or anticipate facing a 5% reduction in sales, production or employment due to a change in defense spending; and must be a prime or sub-tier defense contractor. Each company was eligible to receive up to \$25,000 in business support services.

The ongoing DCAP program supports small defense suppliers in improving their cybersecurity posture and implement NIST 800-171 controls through cybersecurity awareness, assessment and implementation programs.

Resiliency Impacts

Increasing Awareness of the Defense Industrial Base

Indiana, Michigan, and Ohio are home to major manufacturing operations that include some of America's most-iconic corporations such as Ford, GM, and Fiat-Chrysler. With the prominence of these manufacturers, the critical role of defense spending in the Midwest was hidden. DMAP conducted an analysis of the defense supply chain across the three states to identify the businesses and communities most impacted by changes in defense spending. This supply chain map was hosted on the now-defunct DMAP site - <http://defensemap.org/resources/defense-supply-chain-map/>. The DMAP project's mapping of the defense supply chain, and the services provided to businesses by DMAP and DCAP raised the profile of the defense industrial base in the Midwest among policy makers. This awareness resulted in new programs in support of the defense industrial base and regional military installations.

Enhancing Force Multipliers to Support the Defense Industrial Base

The OEA grant resulted in the creation of stronger partnerships between regional business support and economic development entities that improved service delivery to defense suppliers. As a result of DCAP's programming, Michigan developed a close working partnership between its MEP center and the state-wide PTAC system. In other states, community outreach resulted in new strategies for economic development that address the needs of the defense industrial base and DoD. As a result of DMAP



services, Martin County, Indiana created a partnership with Purdue University to promote the Westgate Technology Park adjunct to the NSWC - Crane Facility as a regional center for innovation and entrepreneurship in support of the NSCW DoD mission.

Cost Savings to DoD through Business Diversification or New Products/Customers

While each DMAP partner operated independently, each state-partner delivered a similar set of programs. Overall, the DMAP program assessed 305 companies, of which 125 received DMAP business support services. Altogether participating firms completed 212 company projects and consulting engagements, creating 662 new and 13,555 retained jobs, and resulting in \$183 millions in new sales, an 18x return on investment. As a result of DMAP product development and market diversification support services, participating businesses reported developing 139 non-defense products and 26 technologies. OEA support through the grant enabled these firms to enter 93 new markets and obtain 880 new customers.¹

These projects enabled companies to diversify into non-defense markets and develop new products that can service both the DoD and commercial markets. While the current DoD budget posture favors to maintain the current level of defense spending, a change in the DoD mission could likewise leave these businesses without a significant portion of their revenue in the case they do not diversify into new commercial and DoD opportunities.

Opportunities in higher-volume commercial markets additionally provide these firms with new revenue streams with which to reinvest in new product development that can better support the current or new DoD mission. Higher-volume production enables these firms to supply goods and services to the DoD at reduced costs. DMAP support services helped Saline Electronics, based in Saline Michigan, to reconfigure its internal management procedures to allow the firm to grow its contract and customer base through improvements in the efficiency and quality of production.

Overall, the business support services provided by DMAP allow firms to better support the DoD and commercial markets, with returns to the DoD in the form of reduced costs through increased volume and new or improved products resulting from firms' participation in new markets with commercial customers.

Lethality Impacts

Innovation through the Development of New Intellectual Property or New Technologies

Product development and process improvement services provided by the grant enabled regional defense manufacturers to develop important new capabilities that resulted in new defense-relevant technologies. DMAP services supported the creation of new commercial and military technology focused capabilities by manufacturers. Michigan's Cobra AERO leveraged its expertise in motorcycle engine technology and production to develop a new drone engine that is now supplied to the DoD.

Readiness Impacts

¹ <https://web.archive.org/web/20190207232623/https://economicgrowth.umich.edu/dmap/>



Training and People Support

Collectively, the three DMAP projects engaged with 11,000 contacts between 2014-2018. DMAP helped these business-owners and employees learn about new management and more-efficient production processes through a series of workshops, trainings, and community events. More recent DCAP cybersecurity trainings helped over 2,000 individuals become more aware of cyber-threats and learn about the NIST 800-171 cybersecurity controls.

Improved Capabilities and/or Production Adjustments

DMAP business support services helped thirty-five companies obtain new industry certifications. Numerous regional defense suppliers benefited from this coaching and technical support. Skyward Ltd., a Dayton Ohio firm, used its certifications to obtain new contracts and customers that grew the engineering services firm by four new employees and a 30% growth in annual revenues.

Cybersecurity Preparedness

The Defense Cybersecurity Assurance Program (DCAP) provided cybersecurity assessments to 98 companies, and assisted 93 of these companies in instituting NIST SP 800-171 cybersecurity controls and becoming compliant with DFARS 252.204-7012. This exceeded the project's initial goal of helping 75 small and medium sized defense suppliers become compliant. The team educated over 2,000 companies and individuals in the defense supply chain on cybersecurity awareness. In Michigan alone, the DCAP team partnered with 8 of the 10 regional PTAC offices to spread cybersecurity awareness to their networks. Overall, cybersecurity implementation services secured \$2.62 billion in sales and 7,390 jobs.

DCAP assistance helped Michigan's Prosper-Tech Machine and Tool become cybersecurity compliant, which not only helped to secure its existing defense contracts but also assisted the small rural firm in growing its sales by 33% in one year.

Other Community Benefits

Industries Impacted and Communities Served

DMAP's community engagements provided critical support to communities, especially in defense-impacted rural areas across the region. DMAP services assessed 133 communities and supported 34 community development projects. Assessments helped local communities develop strategies to address pressing defense-industry related challenges, such as skills gaps and affordable housing options. These programs help communities improve their overall competitiveness and ability to attract new skilled workers. Examples include a workforce assessment for Martin County Indiana and an economic diversification strategy for Battle Creek Michigan.