



## Project Profile: Illinois

### Impact Statement

Through the Illinois Defense Network (IDN), the Illinois project team engaged with defense suppliers and key partners in five regions across the state to mobilize support for the defense industry. This work has involved increasing awareness of and developing strategies to support defense supply chains, targeting key strategic industries, and increasing cybersecurity compliance. The companies that the Illinois Defense Network has engaged are important components of the region's supply chain, responsible for over \$5 billion in defense sales and nearly 50,000 jobs in the Chicago region, plus another \$1 billion in DOD contracts and over 7000 jobs in the Rockford, Peoria, and Quad Cities regions.

### Key Project Takeaways

Through its Industry Resilience (IR) grant, the Illinois project team has formed new partnerships between government and industry that leverage individual and regional strengths as collective strengths to increase the entire defense industrial base's economic competitiveness. The team conducted planning meetings, provided briefings to relevant stakeholders, researched regional assets and opportunities, solicited feedback from companies and local groups, and refined the Illinois IR Program's value proposition for potential partners and the companies they serve and represent. This led to important advances, like the development of Technology Playbooks and a sustainable Defense Supply Chain Mapping Tool, which are valuable to the state and DoD strategic efforts. The Illinois Defense Network (IDN) is now in place, allowing the state to take a holistic look at the parts of the economy most impacted by defense and to better support the local companies and workers that are vital to DoD activities.

From the project's outset in 2016, the Illinois team identified five defense-intensive regions as the focus of its work – Quad Cities, Chicago, Peoria, Rockford, and Southwest Illinois. The project team reached out to key stakeholders in each region and secured the participation of key EDOs in the implementation of its Phase I project objectives. In Phase 2, the Illinois project formally included as sub-recipients of OEA Grant funds three additional (The Quad Cities Chamber of Commerce was sub-recipient OEA in Phase I) EDOs active in their respective regions (Chicago, Peoria, and Rockford) that were collaborating with the team in Phase I. With the active participation of four regional EDOs, continued outreach is underway in the regions to build awareness of and support for the project.

Through training and technical assistance to both economic development organizations and defense companies, the project is helping companies to diversify and improve their operational effectiveness. The project also is beginning to support companies in addressing cybersecurity concerns including risk management. The key takeaway is that defense-intensive regions around the state represented by the three EDOS are finding the model launched and tested in the Quad Cities region to be flexible, robust, and effective. A related takeaway is that some of the approaches used by Quad Cities, such as using findings from the regional defense economic impact studies conducted by the UIC Voorhees Center, are



now being used by the Illinois Defense Network to educate stakeholders about the importance of the defense sector in their respective regions.

## Project Description

### Rationale

Illinois is not traditionally regarded as a major center for defense contracting activity, but the state is home to sizable levels of defense spending. The total economic impact of defense spending in Illinois was nearly \$12 billion, representing approximately 1.5 percent of the state's gross domestic product and contributing to more than 136,500 jobs. Active military installations in the state include the Rock Island Arsenal in the Quad Cities, Scott Air Force Base near Belleville, Naval Station Great Lakes near North Chicago, and National Guard units based in Peoria, Springfield and North Riverside. OEA awarded the University of Illinois System a grant to conduct economic analysis and pilot programs to develop meaningful opportunities for defense companies and the local organizations and economic development stakeholders that support them.

### Program Activities

With OEA funds, Illinois targeted program activities at the state, region, and company levels. At the state level, the program is working with the Lieutenant Governor's Office to strengthen the Illinois defense industry and its overall positioning. At the community/region level, new data and tools help to guide communities in addressing any decrease in defense spending and to identify new opportunities for diversification. At the company level, businesses are receiving services and technical assistance.

Specifically, the Illinois IR team and its partners:

- Compiled state-wide and regional data and produced reports analyzing demographic and economic conditions both at the regional and state-wide levels.
- Comprehensively mapped the defense manufacturing supply chain in the State of Illinois.
- Created a statewide Illinois Defense Network (IDN) comprised of economic development organizations, manufacturing service providers, government, industry, academia, and local champions across defense-intensive Regions (DIRs) to develop scalable solutions.
- Piloted a variety of business and technical assistance programs that could be scaled or replicated in other parts of the state using the Quad Cities region (home to the Rock Island Arsenal and a robust defense industrial base) as a testbed.

Phase 2 of the Illinois project began in Summer 2018 and is in the process of:

- Translating the lessons from the pilot project in Quad Cities to three regional partners in Peoria, Chicago metro, and Rockford.
- Strengthening the project's statewide network and conducting trainings and technical assistance in defense-intensive regions in the state.
- Conducting new studies on subjects including understanding the current and projected supply of workers for defense occupations in the region, identifying issues and trends, and developing



strategies to address these issues. The team is also researching best practices in workforce from other IR projects.

- Supporting companies in enhancing their cybersecurity.

Regional partner organizations in Phase 2 include the Quad Cities Chamber of Commerce (Western Illinois/Eastern Iowa); The Chicago Metro Metal Consortium (CMMC) housed within the Cook County Bureau of Economic Development (Northeastern Illinois); Rockford Area Economic Development Council (RAEDC) for Rockford; and the Greater Peoria Economic Development Council (GPEDC) for Peoria. These organizations are the foundation of the Illinois Defense Network.

## Resiliency Impacts

### Increasing awareness of the defense industrial base

The Illinois IR project collected, compiled, and analyzed socioeconomic data, produced reports for five defense-intensive regions and the state of Illinois as a whole, and conducted discussions with both regional and statewide stakeholders. The reports are available at: <http://illinoisdefense.org/data-reports/>. The project team conducted additional research on the Economic Impact of Defense Related Spending in Illinois, Defense Industry Cluster Analysis, and Regional Profiles. And recently, the team completed a regional defense economic impact analysis and workforce study.

The Strategic Development Group (SDG) helped build and deploy the Illinois defense Supply Chain Mapping Tool. The tool pulls data from over 20 different sources to create a picture of the defense supply chain in the state. Partner organizations use the tool to understand and quantify DoD's impact on the companies they serve, identify firms that are at-risk, and identify new opportunities to help companies grow. Since the tool is cloud-based and automatically pulls in new data, maintenance and support costs are low, strengthening the state's ability to sustain the platform in future years. Illinois leadership made the decision to pay an upfront premium for this approach and planned from the outset to eventually bring management of the tool in-house, which has made maintenance of the tool easier. Further, Illinois provided training and technical assistance to their regional partners on the supply chain tool, further empowering them to use the tool and deepen their understanding of the local defense industrial base.

The Illinois IR project team formed the Illinois Defense Network (IDN) to connect the Illinois IR program with defense-impacted communities and build a network of stakeholders from industry, government and academia to develop and implement programs that strengthen Illinois' defense economy. Phase II of the grant engaged these local economic development organizations to bridge with local manufacturers and facilitate the sharing of insights and information across the state.

Quarterly meetings (involving 20 participants representing 7 members of the statewide network) provide opportunities to discuss work, learn from peers, and coordinate projects. Phase I work including creating economic profiles and the supply chain mapping tool provided a deeper understanding of the impacts of the Department of Defense in their regions. Outreach to the local community (e.g., a website and newsletter) also support their network building activities.



### Enhancing Force Multipliers to Support the Defense Industrial Base

The partner regions meet with companies to gather information and create company profiles. They use this information to provide targeted trainings, technical assistance, and events to support companies, especially in diversification. The supply chain mapping tool has advanced regional efforts to identify, contact, and support the defense industrial base in the region. The work of UIC to train regional economic development organizations on the supply chain mapping tool and the availability of the tool itself strengthens the support system for the defense industrial base. Regional EDOs are now better able to identify defense-related companies and determine what support they need. In Chicago and Peoria alone, there are over 200 partner organizations collaborating on this effort representing the public and private sectors, higher education, economic and workforce development organizations and organized labor, the financial sector and utilities.

### Commercial Diversification of Defense Companies to Sustain the Industrial Base

In the first year, the Quad Cities Chamber of Commerce was a critical partner for the Illinois IR Program. With financial and staff support from Deere & Company, an infusion of capital through the OEA grant, and planning support by the University of Illinois System/UIC Voorhees Center, the Chamber tested a mix of diversification services and offerings through the Quad Cities Manufacturing Innovation Hub to determine which worked best for defense contractors and manufacturing firms. The Quad Cities Manufacturing Innovation Hub delivers resources and provides new insights that help companies and communities grow, diversify, and become more resilient.

Through the IR grant, the project team developed a menu of business services and technical assistance to support the region's at-risk firms and filling the pipeline of companies that were ready to receive that assistance. The Illinois Manufacturing Excellence Center (IMEC) and the regional economic development organization partners provided direct consulting services to companies leveraging the Hub's "Critical Talent Network" of retired industry professionals and other Hub staff to tackle multiple critical needs, including: ISO 9001 upgrades, operational efficiency, joint bidding for new contracts, "digital-ready" assessments, succession planning, website assistance, and supply chain management, including market diversification through a partnership with IMEC and Iowa's MEP Center, CIRAS. The Illinois project also builds awareness about the need for defense-dependent companies to diversify or change course, enabled through several Hub-organized forums reaching nearly 1,000 attendees including:

- Hub Huddles – Ongoing, early-morning meetings of local manufacturers to discuss and work through shared problems.
- Technology User Group Meetings – Ongoing meetings where local companies hear from speakers and subject matter experts about disruptive technologies impacting their business and what they can do about it. Participation has steadily increased with each successive workshop, garnering anywhere from 20-40 attendees each.
- Workshops – The format and areas of focus vary from event-to-event, but major topics covered have included combatting cyber threats, diversification planning, and technology demonstration.



Illinois has developed a Technology Roadmap and how-to guides to drive adoption of tools and technologies that are essential for the future growth of all manufacturers. The team identified eight technology areas through an iterative, months-long planning process involving interviews and focus groups with over 35 participants including local manufacturers (large and small), economic development organizations, educational institutions, and other stakeholders. Those technologies include additive manufacturing, augmented reality/virtual reality (AR/VR), automation/robotics, computer-aided design & manufacturing (CAD-CAM), cybersecurity, data/analytics, digital B2B connection, and enterprise resource planning (ERP). These “Technology Playbooks” (one for each technology area) are available online at: <http://quadcitieschamber.com/playbooks>.

Finally, Illinois communicates best practices from the Hub to other Defense-intensive Regions (DIRs) and companies facing similar concerns. The Quad Cities Hub team is working closely with the University of Illinois IR team on information dissemination. Staff from the Quad Cities has joined the University of Illinois team on visits to all the DIRs in the state to share their work, experiences, best practices, and publications. Phase II of the grant focused on translating the lessons learned from the Quad Cities Pilot Project state-wide, by bringing regional EDAs onboard to help implement direct assistance to manufacturers and businesses in their respective regions.

In building out their component of the IR grant, Peoria recognized that small- and medium-sized enterprises in the region are primarily Caterpillar vendors and are over-reliant on the OEM. Using the supply chain tool, Peoria is better able to identify these companies and then direct them to new opportunities. The region spent their first months hiring two program managers who have been meeting companies and using an assessment tool to create a profile of companies; they have recently been attending trade shows and learning about the region. Rockford has found that the supply chain mapping tool has helped them demonstrate connections to the defense industrial base among smaller suppliers unaware of their DoD reliance, making them more amenable to support.

In the Chicago region, CMMC used data from the supply chain mapping tool to create a comprehensive profile for each county. This provided a more granular understanding of the diversity of defense contracting within the region and deepened partnerships with the EDOs representing these counties. CMMC developed materials showing each county’s DoD composition, industry trends, and key DoD contributors and presented to Choose DuPage, Lake County Partners, Kane County Development, Economic Development of Kendall County, McHenry County Economic Development Corporation and Will County Center for Economic Development. This led to more coordinated efforts among partners including outreach and services to defense contractors, events on risk management & cyber security awareness, and engagement with local Procurement Technical Assistance Centers (PTACs).

Specific impacts resulting from this effort include \$220 million in new sales from exports across 360 companies in Chicago and Peoria alone. Manor Tool & Manufacturing Company, a family-owned metal stamping business and partner in the Chicago Metro Metal Consortium, reported a 30% increase in export sales because of programs designed to help manufacturers diversity into global markets.



## Lethality Impacts

### Innovation through the Development of New Intellectual Property or New Technologies

The Chicago and Peoria regions combined report that, as a result of this project, over \$50 million in public and private investment was leveraged to support manufacturing in the state, helping to drive innovation among Illinois manufacturers in the defense supply chain.

## Readiness Impacts

### Training and People Support

The Chicago and Peoria regions reported holding 68 events promoting careers in manufacturing. Five different organizations attracted nearly 590 young adults (of which 77% were hired or enrolled in additional training), engaging 2250 high school students, 7400 8<sup>th</sup> graders, and nearly 200 manufacturing and engineering firms.

### Improved Capability and/or Production Adjustments

SMF, Inc., a welding/machining facility participating in the Greater Peoria Manufacturing Network, received an award from the Rock Island Arsenal TACOM that allowed them to expand operations, retain employees, increase pay, and hire new employees.

## Cybersecurity Preparedness

IMEC began working with the Illinois project on cybersecurity in Phase II, beginning with an awareness campaign including articles, blog posts, and informational flyers on cybersecurity topics such as risk management. Following this campaign, the regional partner economic development organizations are hosting informational events to identify companies in need of support. The plan is for IMEC and partners to implement projects that will help to mitigate risk.

## Lessons Learned

### Greatest Challenge

In a state with a large, diversified economy like Illinois, it is easy to miss the magnitude and significance of defense spending in the state. The Illinois project team found that it needed to educate stakeholders of this reality to get buy-in for the project.

### Most Important Lessons Learned

Strong regional support is essential when planning a project. For example, the Quad Cities team met with the board of the Chamber of Commerce frequently and worked with multiple other stakeholders and the local meIR to build awareness.

It is important to identify, understand, and engage your innovation assets, including academia, subject matter experts, intermeIRies, users, innovation labs, companies, economic development organizations, and others. It takes an ecosystem to support businesses looking to diversify and become more resilient.

Regional partner organizations find the supply chain tool comprehensive; it consolidates from several sources the information economic developers need. Also, a compendium of data requests received



documented the evolution of how economic development organizations focus on the data they need with greater specificity over time and develop niches.

Building support with state leadership, including the Lt. Governor's office, has been essential. Demonstrating the value of the team's work to the military affairs committee through examples garnered support and will assist with sustainability and funding support.

#### Changes to the Work Plan

The regional partner economic development organizations experienced a significant learning curve as they began their projects, especially when considering a late start to the Phase 2 grant due to delays in getting funded. The team credits the quarterly meetings and exchanges, in addition to lessons learned from the pilot region, the supply chain tool, and the various studies compiled by UIC-Voorhees for helping the EDOs catch up.

#### Sustainability

The Illinois IR project must leverage the newly developed networks to maintain sustainability. By bringing companies together, their relationships should grow more enduring, and sustainable. The Illinois project team has become part of the state military coalition and is sharing news and best practices with the state. To ensure the sustainability of the supply chain mapping tool, the Illinois team planned from the outset to transfer control of the platform from the consultants to in house staff and has hired staff to handle technical upkeep and transfer.