U.S. Department of Defense
Office of Economic Adjustment

# Project Profile: Mississippi (University of Mississippi)

## Impact Statement

Based on extensive research about defense sector needs and exploration of instructional materials developed for related purposes, the University of Mississippi is developing the detailed outline for a broad, introductory Project Management course tailored to the skill needs of the defense suppliers in Mississippi. The course eventually could help better prepare hundreds of university students for careers working in the defense industry and address the need for talent in that sector. If there is wider distribution of selected modules, the course could address education and skill needs among thousands in the industry.

## Key Project Takeaways

A concerted effort is needed to understand and systematically address the skill needs of defense suppliers. The Industry Resilience (IR) grant enabled the University of Mississippi (the grantee) to convene the Defense Industry Curriculum Committee, which tapped into experts that understand the intricacies of the defense industry and its skill requirements within the overall context of the needs of the people involved in national defense. The grant also quantified and increased awareness of the importance of the defense sector in Mississippi, while building collaboration among stakeholders to support the needs of industry.

## Project Description

### Rationale

Mississippi is home to more than 3500 defense contractors and providers; these companies received over $4.5 billion in defense contracts in 2017.[1] New technologies, new products, vehicles, and vessels are all created and manufactured within the state. With a population of nearly 3 million, Mississippi boasts some of the most prominent names in defense industry manufacturing including Raytheon, General Dynamics, Northrup Grumman, Ingalls Shipbuilding, and many others. And yet, even recognizable companies are not immune to the same problems associated with the workforce and skills gap that are currently serving as obstacles to growth within this sector. Potential employees are hard to find that have the requisite training and education within STEM related fields as well as the "soft-skills" necessary for a highly functioning production team.

In September 2017, Mississippi's unemployment rate was 4.7%, more than half a point higher than the national average. With over 140,000 people unemployed and a growing need for more qualified workers, Mississippi is dealing with a workforce shortage. Those shortages are evident within technical job areas as well as with upper management positions requiring familiarity with skill-sets unique and specific to industry and manufacturing. This directly affects defense industry contractors that work to provide the Department of Defense with the best and most effective products for the war fighter. This project -- Mississippi (MS) Forge -- is designed to provide a holistic approach to address this gap using

[1] https://www.governmentcontractswon.com/department/defense/mississippi_cities.asp

collaboration, cooperation, and curriculum development and address the workforce shortage challenge in ways that provide tangible benefits to the defense manufacturing industry in Mississippi.

### Program Activities

The grantees' activities are organized into three components. The first involved conducting an economic impact study that provided data by region and a clear picture of the specific/individual geographic areas of highest defense industry concentration within the state. To determine the high concentration zones related to the defense industry in the state and among local community colleges, the research team conducted a spatial analysis to determine the geographic concentration and overlap between the defense industry and the community colleges within the state. The research generated information on: 1) the total dollar amount in defense contracts in MS; 2) the highest geographic concentration of defense contractors in MS; 3) the economic benefit to individual MS communities; and 4) the identities of companies within these concentrated areas.

The second component involved the creation and launch of the Defense Industry Curriculum Council (DICC). The project team consults regularly with this group of industry representatives, educators, workforce professionals, and public servants, equipped with the data accumulated through the economic impact study about the needs within these geographic areas of industry and how education can best meet those needs. The DICC has met and contributed significantly to shaping the activities in the third component related to curriculum development.

The third component involves leveraging the council's perspectives and recommendations to develop curricula for students. The project team received extensive input in the first two components above and tracked 3000 manufacturing-related courses available in Mississippi higher education. Based on that research, the team determined a need to develop a broad, introductory course focusing on Project Management with more robust and defense-specific materials incorporated than what is found in a typical project management course.

The team continues to gather materials for a detailed outline for this curriculum, which includes six major components: 1) Fundamentals (includes Cyber and Physical Security, ITAR requirements, Ethics, Sarbanes-Oxley, FARS and DFARS); 2) Initiation (How to do business with the government, Competition, Contracting); 3) Planning and Design (Systems Engineering, Scheduling, Human Resources, Risk Management); 4) Execution (Quality, Procurement, Materials Management, Supply Chain, Risk Management); 5) Monitoring and Controlling (Procurement/Supply Chain, Change Management, Audit Management); and 6) Closing (Procurement, Warranty Terms). The team is discussing how they might package individual components to market to specific target segments and expand the reach for the curriculum beyond university students.

## Resiliency Impacts

### Increasing Awareness of the Defense Industrial Base

The economic impact study collected data that confirmed the robust nature of defense spending in Mississippi. More importantly, the study provided details on the concentrations of the economic activity

related to defense spending, including the scope of the impact and the geographic distribution across the state and community college districts. Identifying high concentration zones and key actors in those areas provided information for the project team to educate partners and stakeholders about the nature and extent of this activity and its importance to the state's economy. In addition, the information provided a foundation for determining areas of need for curriculum development and informed the strategy for determining relevant content.

The formation of the Defense Industry Curriculum Council (DICC) also contributed to increasing awareness of the defense industrial base in Mississippi. The Council provided an opportunity for numerous representatives from diverse perspectives to better understand the needs of defense suppliers in the state and how their resources might contribute to addressing those needs.

### Enhancing Force Multipliers

Both the economic impact study and launching the DICC contributed to building the understanding and capacity of community intermediaries that can be engaged to support the defense industrial base. The study provided information for intermediaries and business services organizations to inform strategy for more effectively supporting the defense supply chain. The DICC convened, developed, and deepened relationships among key actors in the ecosystem that enabled better coordination of effort, shared knowledge, and enhanced engagement around a common objective of sustaining and growing the defense industry in the state.

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

If the course is ultimately developed beyond the detailed outline phase, and particularly if modules are packaged and marketed individually, it likely would provide cost savings to DOD through reduced training costs expended by defense suppliers, OEMs, and others in the industry.

## Readiness Impacts

### Examples of Training and People Support

MS Forge focuses on developing curricula that could provide an opportunity for the existing and future workforce within the defense industry to become more versatile and flexible in their careers. This new-found flexibility and versatility will likely have a direct impact on the efficiency, effectiveness, and quality surrounding products meant to support the war fighter. Improvements made within these areas could bring value to those who rely upon those products to carry out their mission.

## Cybersecurity Preparedness

Awareness of cybersecurity threats, defense industry requirements, and mitigation strategies are embedded throughout multiple components of the training curriculum outline that the project team is developing. To the extent that the curriculum is deployed beyond university students, it can make a broader impact helping increase awareness about cyber threats in the defense supply chain.

## Lessons Learned

### Greatest Challenge

Communication among interested organizations can be a challenge. There are numerous groups within the state that have a desire to improve the defense industry. However, difficulties abound when trying to bring all of those interested groups together, identify common goals, and develop a unified strategy to achieve these common goals. MS Forge has brought together industry, community college representation, four-year institution representation, state workforce development agencies, and other manufacturing related organizations through the DICC and related work for a robust conversation and enthusiasm to work together.

Navigating myriad organizations among partners and stakeholders, and figuring out who is doing what, was a significant challenge. Given the enormous size of the defense industry in Mississippi, the grantee spent considerable time identifying and pursuing opportunities for content and collaboration and assessing their potential contributions to the desired product. Related challenges involved thinking about how to develop and deploy the curriculum beyond the state and how to address soft skill deficiencies among young talent.