



CADENCE

California Advanced Defense Ecosystems & National Consortia Effort

Project 9: Kickoff Orientation and Training

April 30, 2021

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Agenda

- **Welcome and Introductions**
 - Introduce OPR team
 - Icebreaker where each College takes 2-3 minutes to introduce themselves and the faculty
- **Overview of CADENCE Grant**
 - Key Players (OLDCC, OPR, NextFlex, 15 Project Partners)
 - Defense Modernization Priorities
 - Summary of 15 Projects
- **Overview of Project 9**
 - Purpose of Project 9
 - Dual Use Innovation and why it is important to DOD
 - Overview of SBIR Program to help understand the needs of the target companies
 - Project 9 Objectives and Deliverables
- **Developing a work plan to accomplish project objectives and deliverables**
 - Key components of the work plan
 - Sample work plan
- **Community of Practice**
 - Monthly meetings
 - Monthly e-newsletter
 - Resource Website
- **Preview of Part II Training– Focused on “how to” conduct internships**



Overview of CADENCE Grant

- Funded by DoD Office of Local Defense Community Cooperation
- Part of U.S. Department of Defense (DOD), Defense Manufacturing Community Support Program (DMCSP)
- Managed by Governor's Office of Planning and Research (OPR)
- 15 project components executed by a consortium comprised of community, industry, state agencies, and educational institutions
- NextFlex is the Defense Manufacturing Institute Partner
- CADENCE project activities will focus on supporting California suppliers in the defense innovation and manufacturing base who are involved in the advancement of specific key technologies or supply chains including microelectronics, fifth-generation (5G) wireless technology, cyber, space, artificial intelligence, and fully networked command, control and communications (FNC3)

Laser Focus: Defense Modernization Priorities + DMCSP

Modernization Priorities

Specifically

Mi

Microelectronics

FHE

Flexible Hybrid Electronics

Space

Space & Aerospace

5G

5th Generation Wireless

FNC3

Fully Networked Command & Control Comm

AI

Artificial Intelligence

Cyber

Cyber

CADENCE Priorities

Specifically

Supply Chain Diversification

- Faster
- Better
- Less expensive
- Secure

Workforce Development

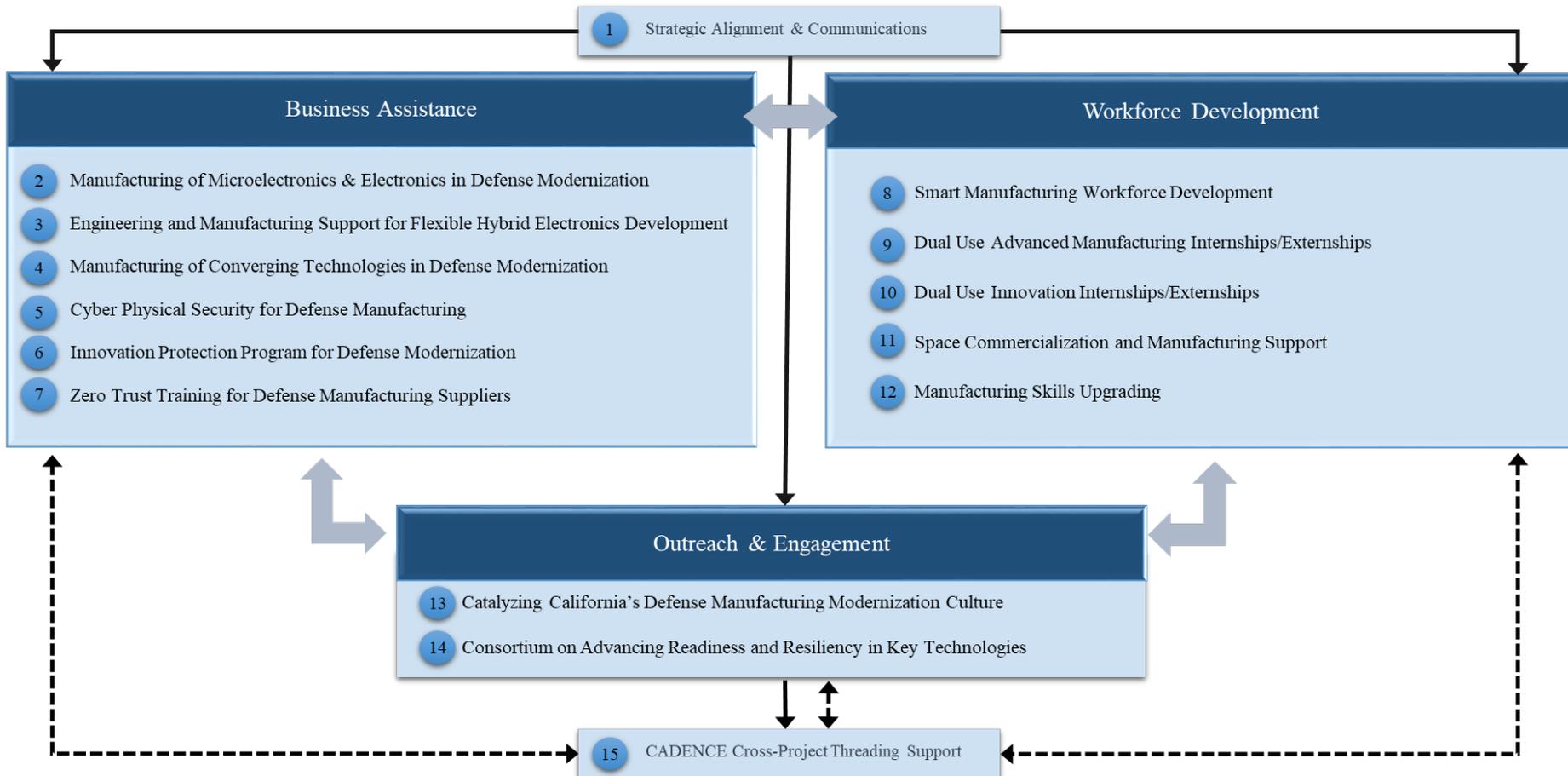
- Upskilled workforce
- Increased capacity
- Tech Platforms + Security

Procurement

- Reduction of defense procurement costs
- Improvement of procurement process



CADENCE Projects for the Defense Innovation & Manufacturing Base *By Deliverable Components*



DoD Challenge: Dual-use Capabilities in the Innovation Ecosystem



Dual-use capabilities support innovation in the defense industrial base

Dual-use strategies allow the DoD to exploit the rapid rate of innovation and market-driven efficiencies of commercial industry. Conversely, the innovation and accomplishments that originate in defense programs and laboratories can move rapidly to the commercial sector to help advanced manufacturing ecosystems built on common manufacturing and design challenges.

DoD Driver: DoD Needs Access to Pipeline of Skilled Talent



Access to a workforce pipeline is critical for Defense Industrial Base

Providing an experiential learning opportunity where both faculty and students can benefit from real world applications allows Colleges to benefit from Faculty who understand and subsequently bring the needs of industry to the classroom and infuse industry-validated curriculum into their educational programs. Defense manufacturing community consortium firms will benefit from access to a pipeline of talent to meet their workforce needs.

OBJECTIVE ONE

Provide experiential learning opportunities for California Community College Faculty externships at identified California defense supply chain or manufacturing companies.



OBJECTIVE TWO

Provide work-based learning opportunities for California Community College students through student internships at identified California defense supply chain or manufacturing companies.



OBJECTIVE THREE

Build a pipeline of workforce talent for California defense supply chain or manufacturing companies.



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DELIVERABLES

Ten colleges participating in the student internship/faculty externship project working with California defense manufacturing community consortium firms



***Phase One
Summer 2021***

***Ten primary (and optionally ten secondary)
Advanced Manufacturing Sector Faculty
participating as faculty externs to coach student
interns placed at California defense manufacturing
community consortium***

Phase Two

Fall 2021 – Spring 2022

***20 Student Interns placed with California DoD
defense innovation and manufacturing firms***



Ongoing

Monthly community of practice meetings with faculty and consortia representatives via online web conferencing (i.e., Zoom)



Reporting

Monthly report out of achievements, best practices identified, and outcomes from the project, including end of project survey of student interns and DoD dual-use advanced manufacturing firms to capture the benefits to both students and DoD firms and lessons learned.

- Identify at least one faculty member to participate in externship and act as faculty coach(es) for student interns
- Colleges selected to participate will receive an \$8,000 award to provide stipend to faculty member(s) and a \$500 travel award for the anticipated in-person meeting later in 2021.
- Set up process for paying stipend to faculty.

- Selected faculty extern(s)/coach(es) will attend a faculty orientation meeting planned for April 30, 2021 and participate in monthly Zoom community of practice meetings hosted by the Statewide Director for Advanced Manufacturing, Statewide Director for Business and Entrepreneurship, and Project Coordinator.

- Recruit a minimum of two students to participate as student interns with DoD companies.
- Assist in matching student interns with DoD companies.
- Promote and assist students with enrollment in the college's Work Experience/Work Study course so that students can earn college credit for their work experience as interns.

- Faculty coach will work with the DoD companies and students to develop a scope of work for the internship project and then provide guidance and advising to the students in completing the internship project.
- The 75-hour internships must be completed by August 31, 2022.
- Submit final report documenting the results and outcomes of the project using provided final report template (see Appendix A).



Project 10: Internships/Externships for Dual Use Innovation

Place student interns and faculty externs at DoD SBIR/STTR companies

Objectives

- Provide experiential learning opportunities for California Community College students through student internships at California DoD SBIR/STTR Phase I, Phase II, Phase III firms.
- Build a pipeline of workforce talent for California DoD SBIR/STTR Phase I, Phase II, Phase III firms.

Deliverables

- 10 colleges participating in the student internship/faculty externship
- 10 Business and Entrepreneurship Sector Faculty Externs/Coaches
- One-day faculty coach training
- Monthly community of practice meetings with faculty coaches.
- 20 Student Interns placed with CA DoD SBIR Phase I,II,III firms



Scope of Work



1. Identify at least one faculty member to act as faculty coaches for student interns and set up process for paying stipend to faculty.
2. Selected faculty extern/coach will participate in monthly Zoom community of practice meetings hosted by the Statewide Director for Advanced Manufacturing, Statewide Director for Business and Entrepreneurship, and Project Coordinator.
3. Recruit a minimum of two students to participate as student interns with DoD companies.
4. Assist in matching student interns with DoD companies.
5. Promote and assist students with enrollment in the college's Work Experience/Work Study course so that students can earn college credit for their work experience as interns.
6. Faculty coach will work with the DoD companies and students to develop a scope of work for the internship project and then provide guidance and advising to the students in completing the internship project. The 75-hour internships must be completed by August 31, 2022.
7. Submit final report documenting the results and outcomes of the project using provided final report template (see Appendix A).

Potential Advanced Manufacturing Processes

Project Management

- Business needs

- Suppliers

Market Research

- Competitors

- Leveraging Technology

Technology Applications

- Parametric Design in CAD/CAM applications

- Manufacturing methods for production

- CyberSecurity

New Technology

- Flexible Hybrid Electronics

- 5G

- Microelectronics

- Artificial Intelligence

Workforce Development

- Training programs

- Certifications





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Preview of Part II Training

- The Intern's Journey
- Faculty Coach Handbook
 - o Role of the Faculty Coach
 - o Student Application Process - Recruiting Companies to participate in student internship project
 - o Recruiting student to participate in student internship
 - o Negotiating Internship Scope of Work with Companies
- Working with FCCC as the Employer of Record through the Career Catalyst Program
 - o Work Site Agreements
 - o Onboarding Students (I-9, etc.)
 - o Time Keeping (approving timesheets)
- Reporting Requirements
 - o Success Stories
 - o Final Report



Project 9: Internships/Externships for Dual Use Advanced Manufacturing

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