

NEXTFLEX®



COLLABORATING WITH DOD MANUFACTURING INNOVATION INSTITUTES (MIIS)

NEXTFLEX SLIDES

MARCH 29, 2023

ESTABLISHING & GROWING MANUFACTURING ECOSYSTEM

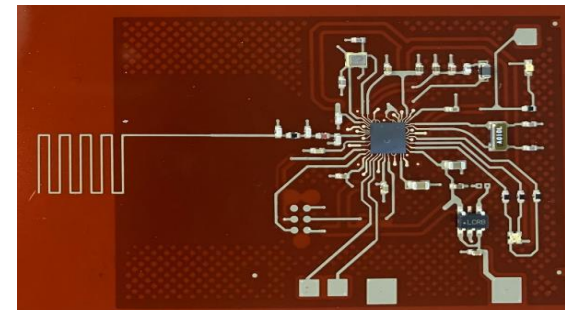
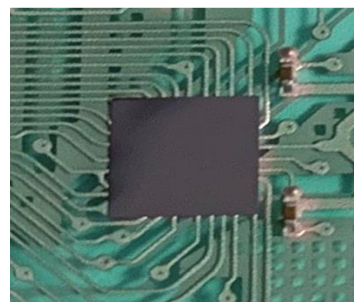
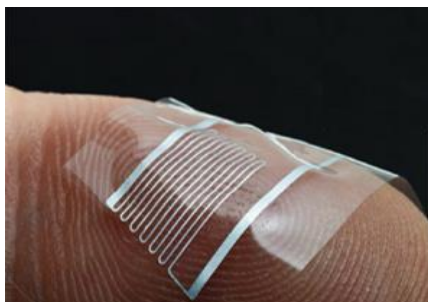
- Lead broad US industry base.
- Projects and technical working groups.
- Engage & include critical supply chains.
- Disseminate information and learning to the community.

ADVANCING TECHNOLOGY & MANUFACTURING

- World class pilot line and engineering services.
- Support US industrial base
- Additive manufacturing tools for advanced electronics packaging.
- Equipment and processes for complex electronics systems.
- Structurally integrated & wearable device manufacturing methods.

SECURING HUMAN CAPITAL

- Attract, recruit, train, and upskill a deep and diverse talent pool for the advanced manufacturing sector
- Expand NextFlex WFD programs into key manufacturing markets.
- Share Best Practices with MILs & industry



FHE - the intersection of additive circuitry, passive devices, and sensor systems that may be manufactured using printing methods (sometimes referred to as printed electronics) & thin flexible silicon chips or multichip interposer structures.

ESTABLISHING & GROWING MANUFACTURING ECOSYSTEM



DESIGN/MANUFACTURING



MEDICAL/WEARABLE DEVICES



INDUSTRY STANDARDS



SEMICONDUCTOR



EQUIPMENT



RESEARCH



DESIGN/COMPONENT MANUFACTURING



ACADEMIC



INDUSTRIAL/AEROSPACE



MATERIALS

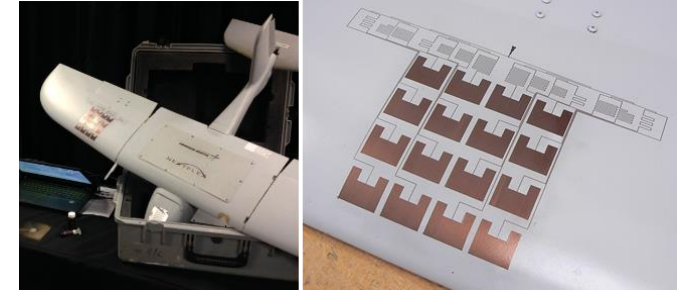


ADVANCING TECHNOLOGY & MANUFACTURING AND SECURING HUMAN CAPITAL

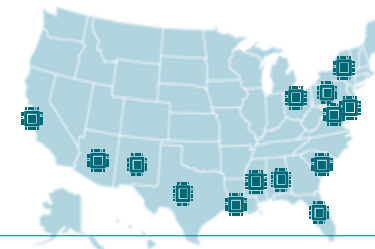
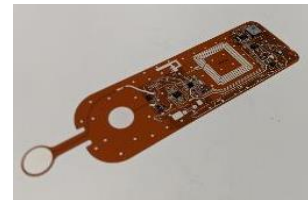


NextFlex convenes members around a shared vision to advance FHE technology and manufacturing and strengthen the industrial base and ecosystem.

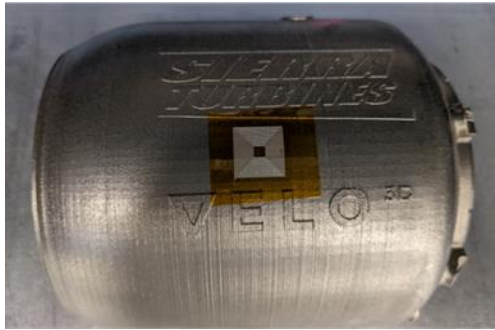
- Funded Project Calls to address roadmap gaps.
 - Create collaboration opportunities
 - Shared technical knowledge to benefit full ecosystem
 - Commercialized tools, materials, components, transitioned devices into industry.
- Support of US Gov't Agency Directed Projects
 - Leverage Members and Consortium Partners and/or
 - The NextFlex Technology Hub – where we develop advanced hybrid electronics processes and demonstrate pilot level manufacturing of complex electronic systems with high yield for DoD and commercial customers.
- NextFlex has a comprehensive portfolio of WFD programs focused on **awareness-building, recruitment, training, and upskilling**. Programs are being deployed in **14 states** and have reached over **12,000 participants** to date including approximately **39% women, 36% under-represented minorities, 48% low-income, and 8.7% military-connected**.



UAV Wing Antenna



EXAMPLES OF DIRECT SUPPORT TO SMES AND HIGHLIGHT OF THE CADENCE PROGRAM

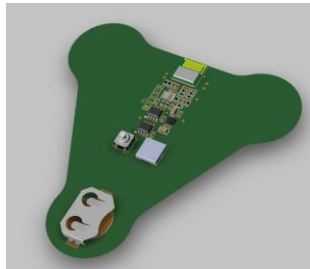


Conformal printing of custom sensor on turbine housing

SBIR Support (Small Business Innovation Research Program) - we provide SMEs with manufacturing and engineering support the NextFlex Technology Hub.

Under the DMCSF we participated with the California Advanced Defense Ecosystems & National Consortia Effort (CADENCE)

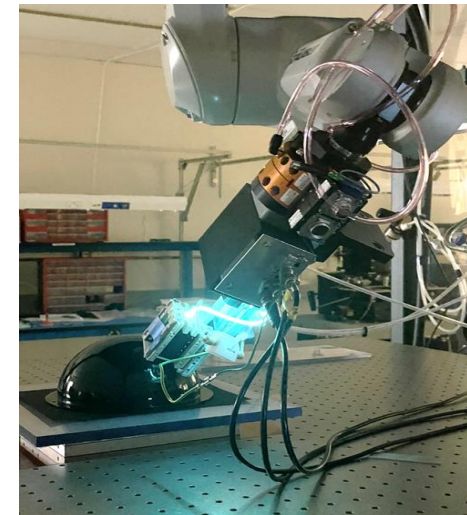
- NextFlex provided support to eight small businesses in the California by providing access to advanced hybrid electronics technology development and manufacturing.
- CADENCE focused on under-served communities within California – all eight of the SME’s were owned or led by veterans, women, or other under-represented populations.
- Support to these SMEs varied – ranging from evaluating fabrication capability, manufacturing process optimization, as well as enhancing product design through the application of Hybrid Electronics Technology.



Completed design of a copper-flex sensor module



Successful manufacturing & test of 4G/5G devices and labels



Installation, characterization & training & antenna design for plasma-jet printing platform.

