

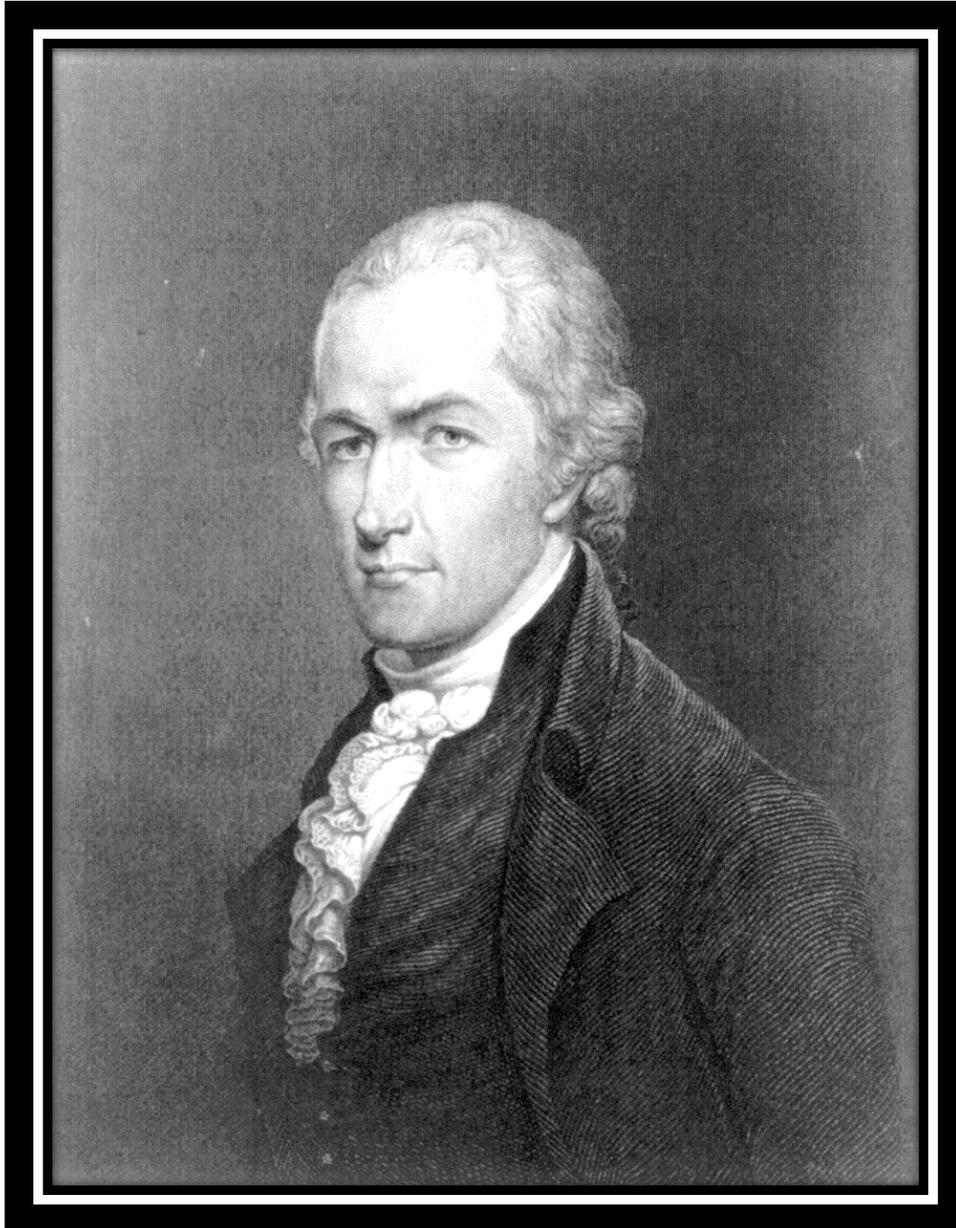
Industry Perspectives on Manufacturing USA

The National Academies Innovation Policy Forum

**Washington, DC
23 May 2017**



**Jeff Wilcox
Vice President,
Corporate Engineering & Program Operations**



U. S. Treasury dept.

63D CONGRESS } 1st Session	SENATE	{ DOCUMENT No. 172
HF 1754 H2 1913	REPORT ON MANUFACTURES	HF 1754 H2 1913
COMMUNICATION TO THE HOUSE OF REPRESENTATIVES DECEMBER 5, 1791		
FROM ALEXANDER HAMILTON SECRETARY OF THE TREASURY		
ON THE SUBJECT OF MANUFACTURES		
		
PRESENTED BY MR. SMOOT AUGUST 30, 1913.—Ordered to be printed		
WASHINGTON 1913		

Lockheed Martin by the Numbers



97,000
Employees



49,000
Scientists
and Engineers



400+
Facilities
Worldwide



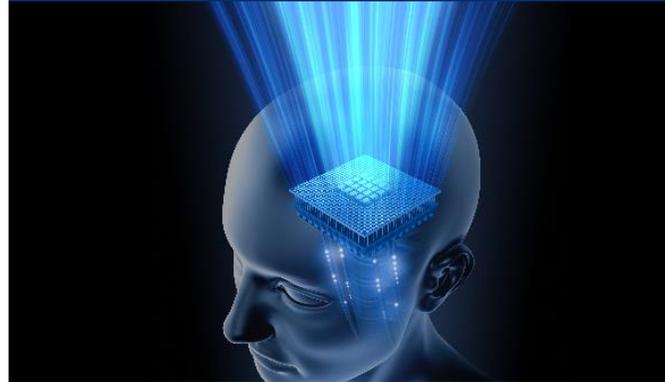
Operating in over
58 Countries
With **7,100+**
Employees



Advanced Design Synthesis



Cognitive Assistants

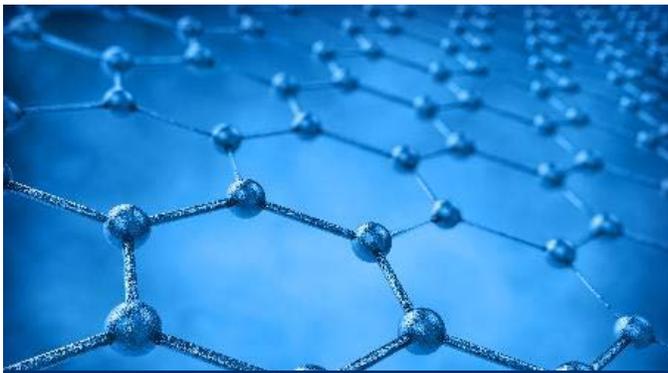


Human Augmentation

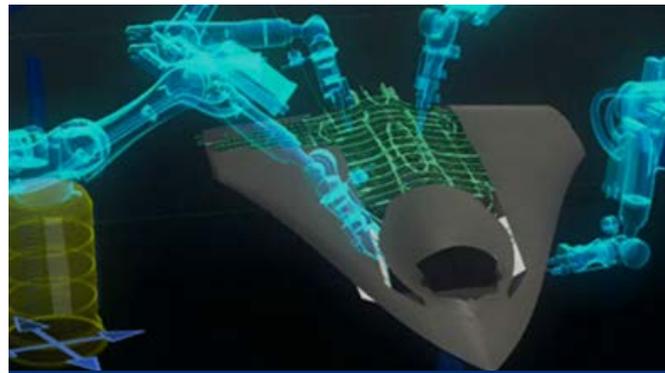


Emerging Capabilities at LM

Designer Materials



Intelligent Machines



Transformative Computing



Lockheed Martin Investment in MfgUSA



America Makes



LIGHTWEIGHT INNOVATIONS
FOR TOMORROW



DMDII

DIGITAL MANUFACTURING AND
DESIGN INNOVATION INSTITUTE



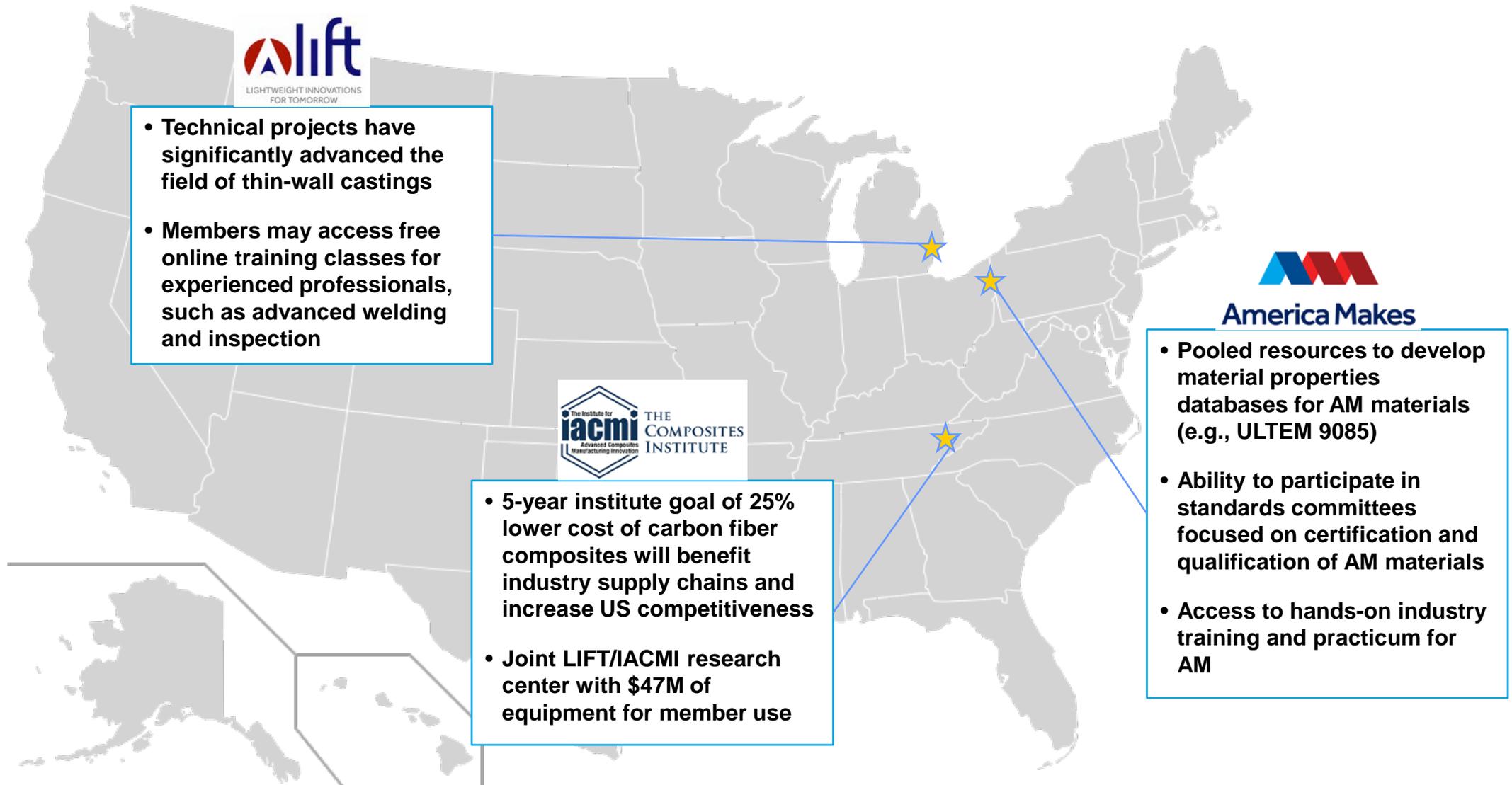
POWERAMERICA



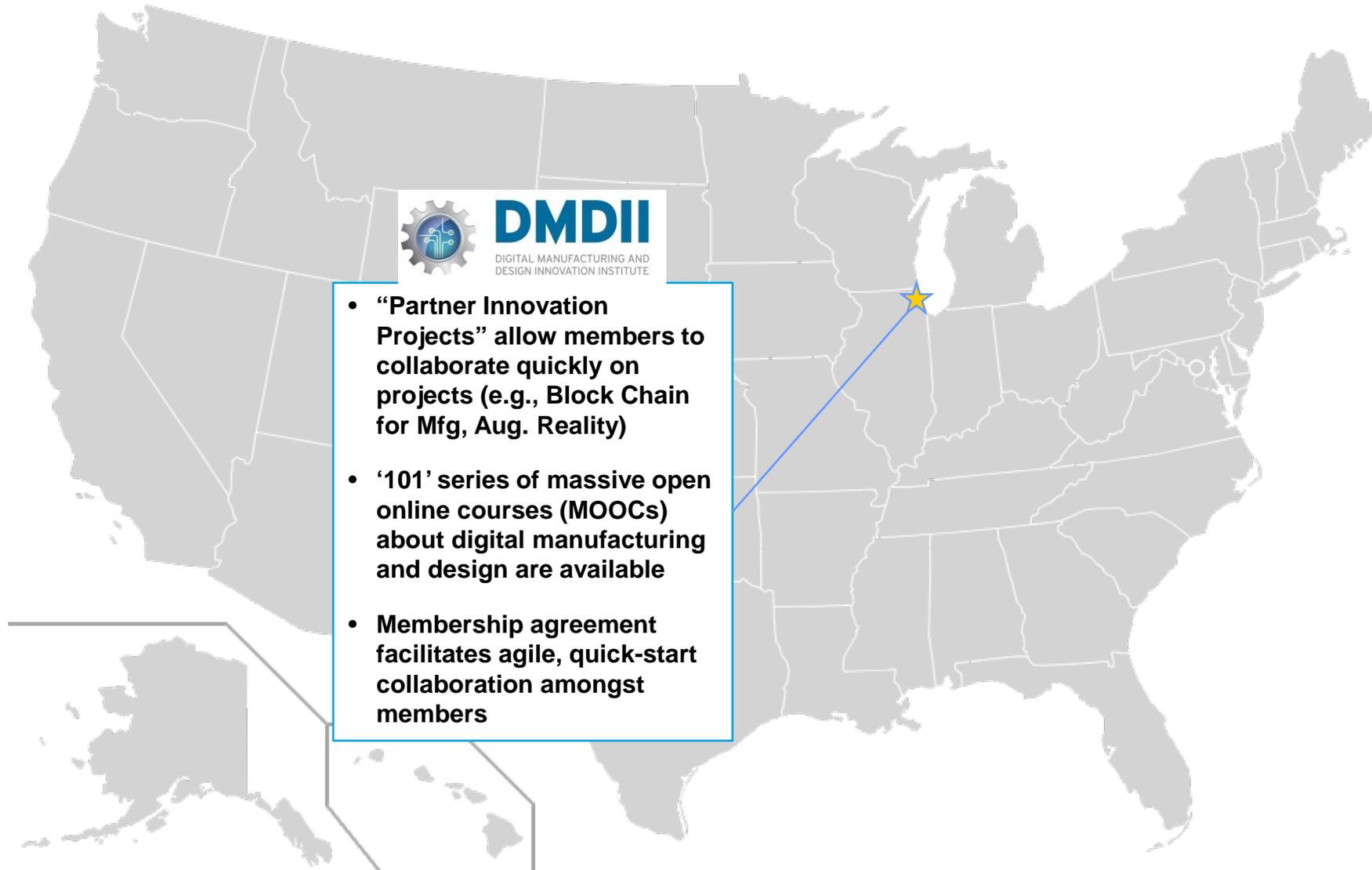
THE
COMPOSITES
INSTITUTE



Materials & Manufacturing Benefits

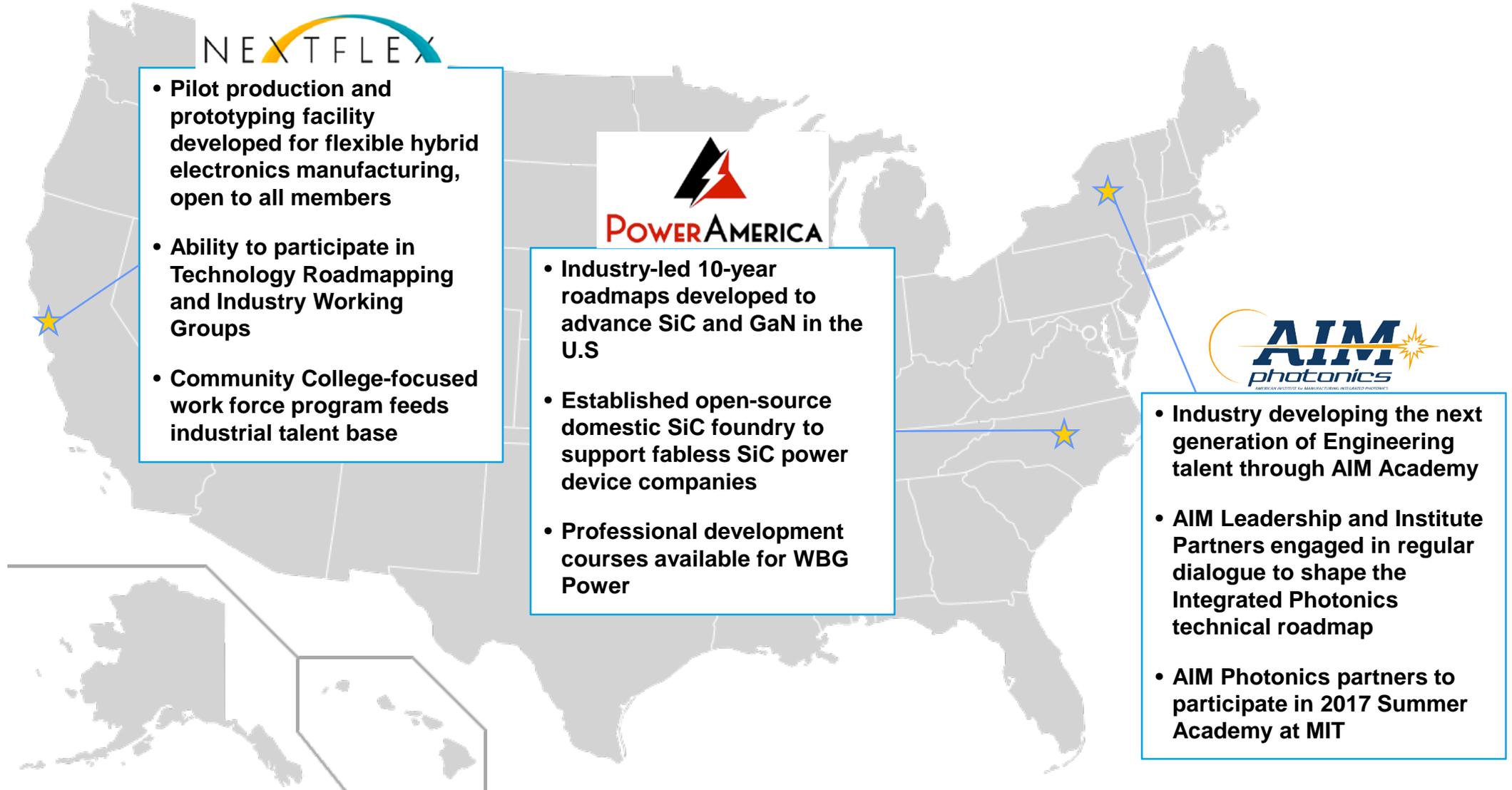


Digital Manufacturing Benefits



- **“Partner Innovation Projects”** allow members to collaborate quickly on projects (e.g., Block Chain for Mfg, Aug. Reality)
- **‘101’ series of massive open online courses (MOOCs)** about digital manufacturing and design are available
- **Membership agreement facilitates agile, quick-start collaboration amongst members**

Advanced Electronics Benefits

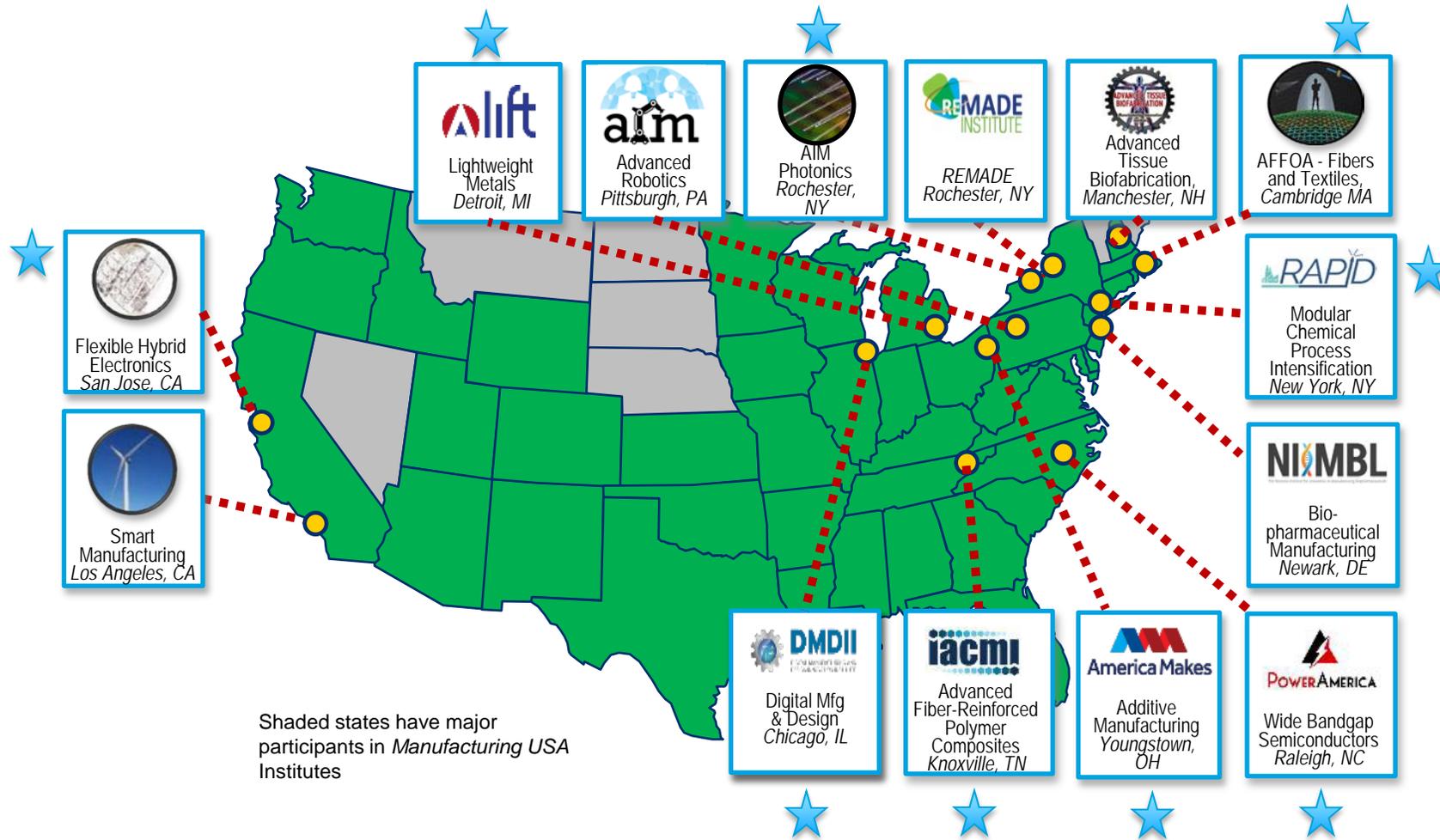




Overall Value and Benefits of MfgUSA

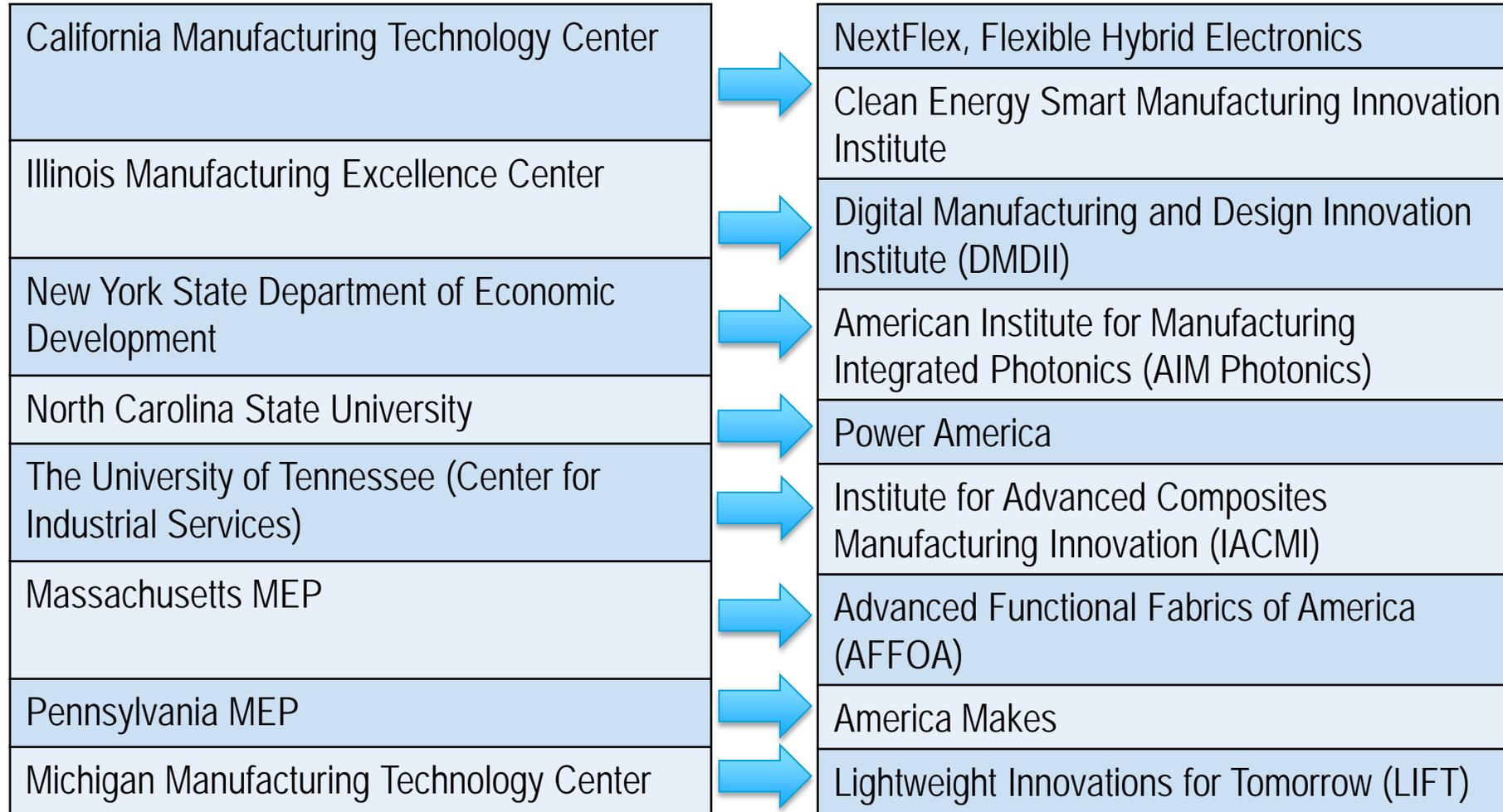
- **Demonstrated ability to collaborate with non-traditional partners, large and small**
- **Realized significant project ROI when leveraging resources from industry, academia, and the Institutes**
- **Industry-driven research projects ensures industry relevance and facilitates tech transition/commercialization**
- **Education and training programs provide opportunities for member companies' workforce development**
- **Access to advanced manufacturing equipment at institute facilities and partner sites**

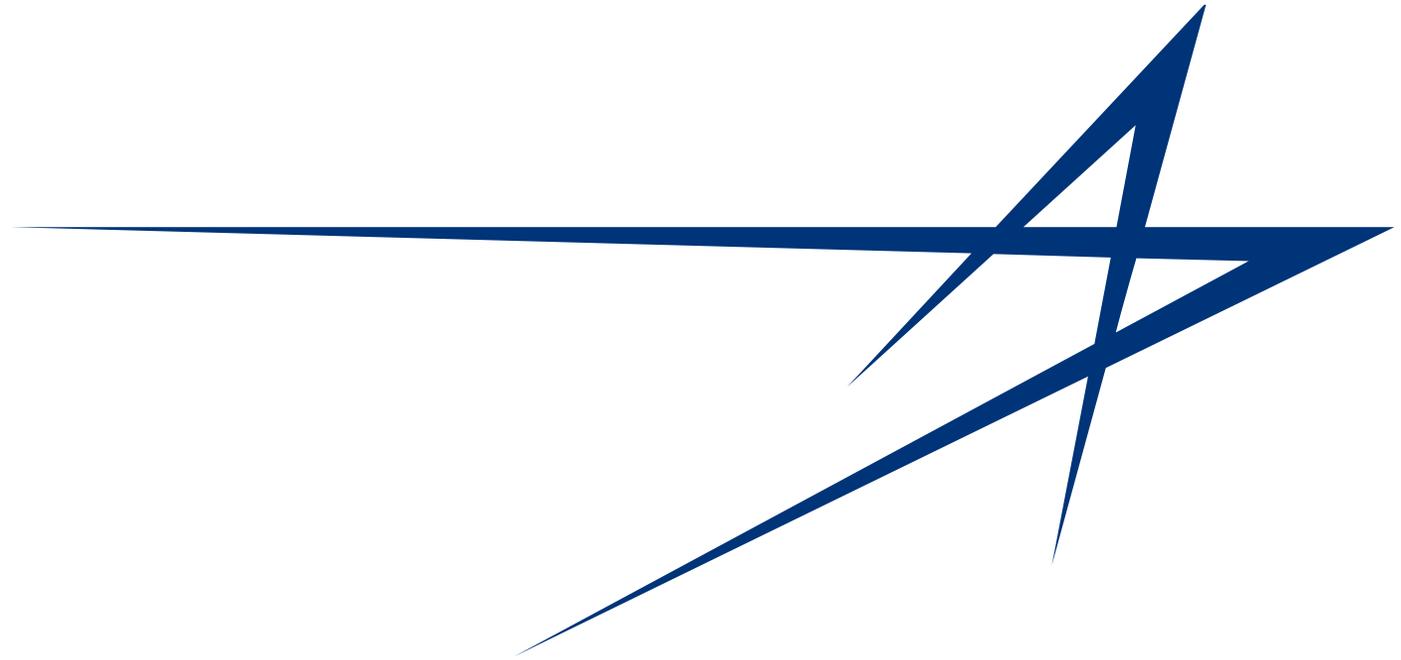
Manufacturing USA: Partnerships through Embedding MEP Center Staff at Institutes



★ Current MEP/MFG USA Embedding Projects

MEP / Institute Embedding Pilot







Objectives of Manufacturing USA

- **Initiated as recommendation from April 2011 PCAST Report**
- **Envisioned a National Network for Manufacturing Innovation**
 - **Up to 15 Manufacturing Innovation Hubs**
 - **Focused on maturing technologies from TRL 4 – 7**
 - **Education and Workforce Development is key tenet for each Institute**
- **Architected as a Public-Private partnership bringing together Government, Industry, and Academia**
- **Intended to foster pre-competitive collaboration**
- **Grow the US economy (i.e., more jobs)**
- **Increase US competitiveness in Manufacturing**

Rollout of Manufacturing USA Institutes



2012	2013	2014	2015	2016	2017
	 	 	 	     	