

WORKFORCE PROFILE 2017



THE MISSION

Innovation – or bringing “mind to market” – is only possible if we have the talent to put that new idea or new technology to work in our economy. So LIFT’s vision, to be the world leader in lightweight materials manufacturing, can only be realized if we develop the educated and skilled workforce necessary to use new lightweighting technologies and processes.

Our plan to develop that educated and skilled workforce is comprehensive and spans both the continuum of jobs in manufacturing where the nation is now experiencing a “skills gap,” and the continuum of education and training that must be available in communities and states seeking to sustain, grow, and attract manufacturing jobs in their economy.

The underlying principles of our work plan are:

First, be **“demand” and data-driven**. We will educate and train to the knowledge, skills and abilities in demand by manufacturers. Our first priority is to conduct regular demand-supply-and gap analyses on workforce needs in the 5 states directly related to the jobs in our impact sectors. >

Second, be **transformational for sustainable results** in producing workers with the right skills. You can find thousands of “random acts of excellence” in workforce development with little or no impacts on the talent supply chain. >

Third, **drive from the bottom up**. Recognize that all the systems we need to engage and use – education, economic development, and the workforce investment system – are highly devolved to state and local authorities. A top-down strategy will not work. >

Fourth, **strategically focus** on opportunities, for example, target populations such as separating military personnel and “gaps” in the talent supply chain where there are clear disconnects between the demand for skills and the supply of skills. >

Finally, **link and leverage the assets** available. Capture the initiatives to build educational pathways and link them via stackable credentials and articulation agreements across the education continuum. Align strategies to gubernatorial initiatives to increase educational attainment and put people back to work. Ride the wave of bipartisan support for restoring U.S. leadership in manufacturing globally.

PROCESS FOR IMPACTFUL INVESTMENTS

- Analyze the demand-supply-and gap data to identify where investments and strategies need to be focused. Publish bi-monthly demand-supply-gap analyses for each of the five LIFT states.
- Establish a high level Workforce & Education Working Group for the region, representing national expertise and the 5 states’ education, workforce development, economic development, and industry sectors. Charge that working group with supporting the state teams that will be designing and implementing solutions that are demand-driven, results-oriented, replicable and scalable. The Workforce & Education Working Group was launched on September 23, 2014, and set the broad agenda for our work.

- Build five state core teams that will design and implement solutions appropriate to their state assets, demand/supply analysis, and roadmap to an educated and skilled manufacturing workforce. These solutions will fill “leaks” in their pipelines delivering talent to manufacturers. The 5 State LIFT Teams have been launched, involving over 135 top officials in education, workforce development, economic development, and labor.
- Align solutions to the 11 strategic focus areas identified by the high level working group.



Understanding
workforce demand-
supply gaps



Reconnecting
disconnected youth to
high quality, middle
skills jobs



Teaching the
teachers



Expanding work and
learn opportunities
for students



Creating enhancements
to engineering
curriculum using
lightweighting
technologies



Offering on-the-job
training solutions
for our
industry partners



Attracting students
and workers to
educational pathways to
careers
in manufacturing



Connecting separating
military personnel and
veterans to fast track
skills development and
manufacturing careers



Deploying pathways from
K-12 through community
colleges to university
four-year degree programs,
with more on and off ramps
to employment



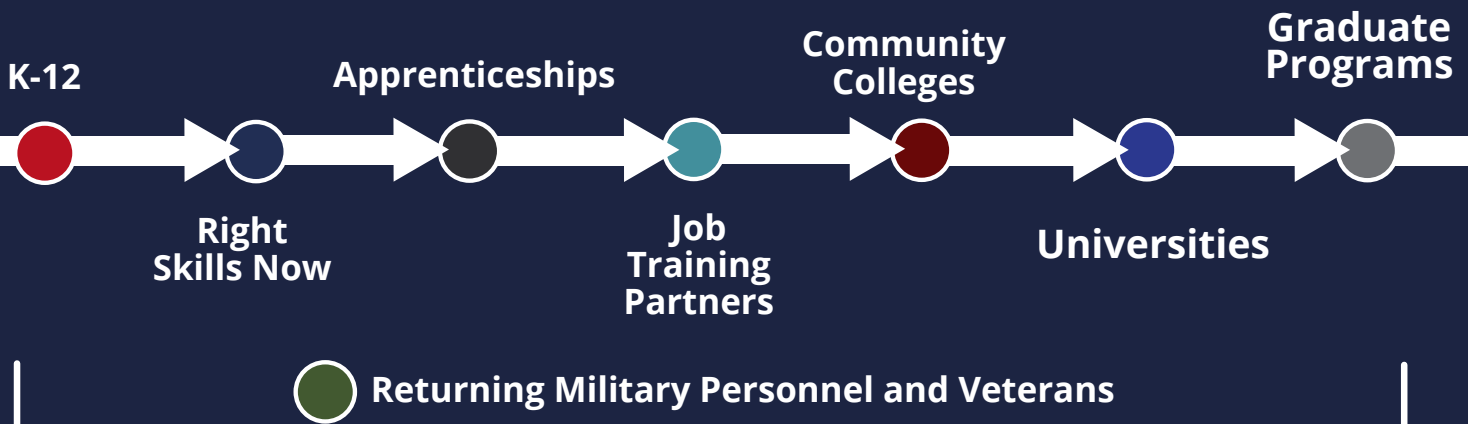
Ensuring students gain
STEM foundational
skills for success in
manufacturing careers



Linking and leveraging
resources and
related initiatives on the
ground today

- Identify appropriate metrics and capture data as necessary to assess success.

INVESTMENTS THROUGH AUGUST 2017



LIFT Learning HUB

Across the talent continuum with an early emphasis at university level



Industrial Technology Maintenance Standards/Credentials/ Instructor Training

Community & Technical Colleges; Incumbent Workers



Tennessee's New ASM Bootcamps for Teachers

Community & Technical Colleges for Adult Workers and Incumbent Workers

* Reinvested in 2016



Kentucky's FAME 2.0 Initiative

Community & Technical Colleges for Adult Workers and Incumbent Workers



Tennessee's Student Engagement Strategy/Video Contest

STEM Education/K-12/CTE Community & Technical Colleges



National ASM-LIFT Materials Science Bootcamps for Teachers

Community & Technical Colleges for Adult Workers and Incumbent Workers

* Reinvested in 2016



Learning Blade: Mission LIFT interactive web-based curriculum (K-12)

Online curriculum for students serves K-12



Indiana Vincennes University Right Skills NOW: Machinist training for veterans

Veterans and Right Skills NOW



Kentucky's Externships

K-12 Teachers & Community College Instructors



Virtual Reality Lightweight Vehicle Manufacturing System: Virtual reality technology to teach lightweighting principles

Across the talent continuum



Ohio Manufacturing Careers Council: Industry-led council to inspire future manufacturing talent

Across the talent continuum



Work & Learn in Indiana: Career Exploration in Lightweight Metals Manufacturing

Apprenticeships, Jobs Training Partners, Community Colleges, Universities



High School evGrandPrix: Engaging High School Students in STEM Education for Manufacturing (HSevGP)

K-12, Universities, Job Training Partners, Graduate Programs



Pathways to Jobs in Detroit: Connecting Disconnected Youth & Adults to Manufacturing Careers

K-12, Jobs Training Partners, Community Colleges, Universities



Growing a Skilled Manufacturing Workforce: Work-Based Learning in Ohio

K-12, Jobs Training Partners, Community Colleges, Universities, Apprenticeships



Foundations for Manufacturing Careers: Worker Readiness in Ohio

K-12, Jobs Training Partners, Community Colleges



Ohio Means Internships & Co-ops 2.5 Program

Community Colleges, Universities, Graduate Programs



Manufacturing Technology: High School Career Pathways

K-12, Jobs Training Partners, Community Colleges, Universities



Adult Education: Pathways to Manufacturing Careers in Kentucky

Community Colleges, Universities, Job Training Partners, Apprenticeships



Leading a MakerMinded Vision

K-12, Job Training Partners



State Manufacturers Associations Collaboration Initiative

Across the talent continuum



The LIFT Prize in Robotic Blacksmithing

K-12, Job Training Partners, Community Colleges, Universities



On Track: Filling the Manufacturing Workforce Pipeline in Kentucky

K-12, Job Training Partners, Community Colleges



Modern Manufacturing Work-Study Program

Job Training Partners, Community Partners



Expert Educator Team

Expanding Work and Learn, Understanding Workforce Demand-supply Gaps, Foundational Skills



Professional Certification in Lightweight Additive Manufacturing

Foundational Skills, Attracting Students



Teaching Factory

Foundational Skills, Attracting Students



Online Training for LIFT Members

On-the-job Training, Enhancing Engineering Curriculum



Lightweighting Open Source Curriculum

Attracting Students, Foundational Skills



A Resource for Career Counseling

Attracting Students, Foundational Skills



Operation Next

Preparing Veterans, Enhancing Engineering Curriculum



Heroes Alliance

Attracting Students, Foundational Skills



LIFT Learning Lab Internships

Expanding Work and Learn Opportunities, Enhancing Engineering Curriculum



For more information about the education & workforce development initiative visit www.lift.technology

