BUILDING 21ST CENTURY MANUFACTURING TALENT

Piloting a New Model to Prepare Today's Military Personnel for Tomorrow's "Operation Next" Advanced Manufacturing Lightweighting Jobs

An Education & Workforce Development Initiative for LIFT...Lightweight Innovations for Tomorrow

THE PROBLEM

The need for individuals with the knowledge, skills and abilities to fill the projected job growth in advanced manufacturing – particularly in manufacturing that utilizes emerging technologies such as those related to lightweight metals – is well documented. There are projected to be 3.5 million available manufacturing jobs over the next 10 years and more than 2 million of those jobs will likely go unfilled unless something changes that trajectory. This 'gap' represents a daunting challenge to private sector manufacturers in general, but perhaps more critically, it represents a potentially significant threat to our nation's defense industrial base.

The National Problem Explained at a Regional Level

The national skills gap problem can be described locally. Tennessee and Kentucky are two of the top manufacturing states in the nation with employment in lightweight-related advanced manufacturing jobs in 2016 at 418,000 and 280,000 people, respectively.

With employment in lightweighting-related jobs already high, demand for additional workers is also strong. In the 4th Quarter of 2016, more than 7,800 lightweight-related advanced manufacturing jobs were posted by manufacturers in Kentucky, while Tennessee employers posted about 9,000 jobs.

Kentucky

- **280,000 people** employed in lightweight-related advanced manufacturing jobs in 2016.
- **More than 7,800** lightweight-related advanced manufacturing jobs posted in the 4th quarter of 2016.

Tennessee

- **418,000 people** employed in lightweight-related advanced manufacturing jobs in 2016.
- **About 9,000** lightweight-related advanced manufacturing jobs posted in the 4th quarter of 2016.

THE SOLUTION

OPERATION NEXT
POWERED BY lift

Separating military men and women can help to answer this challenge.

Service men and women are cited often for the leadership, integrity, work ethic and team work skills obtained through their service. The opportunity to add technical manufacturing skills to their portfolio - though Operation Next - will ensure they are highly sought after candidates for the most in-demand advanced manufacturing jobs and careers.

While there are many programs and initiatives that aim to support veterans after they make the transition from military to civilian careers, this program is different in several ways.

Separating Personnel Are In Transition Status for 6 Months

First, because separating personnel are in transition status for up to six months, Operation Next will begin before they even leave their military careers. The individuals will be able to make the most of any off-duty hours during their transition time by gaining critical skills needed in the civilian economy and, most importantly, earning nationally portable, standards-based, industry-recognized credentials in the most in-demand occupations in advanced manufacturing today.

Second, the regional manufacturers will be involved in the program even before training begins. They will meet and get to know the individuals in training. The manufacturers will offer facility tours, job-shadow opportunities and mentorship so when individuals complete their training and transition out of the military, they have the skills and the relationships to walk directly into a civilian career.

ABOUT THE PROJECT

The key components of Operation Next are:

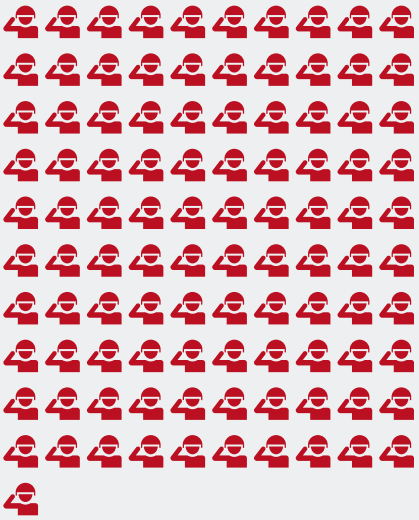
1. Enroll in Operation Next Before You Transition
2. Connect to Program Manager and Connect to Virtual Learning Platform
3. Take Self Assessments to Determine Customized Learning Plan
4. Select Job Focus Area
5. Complete Self-Paced Online Learning
6. Complete Applied, Real-World Lab Work
7. Earn Industry Credentials
8. Connect to Employers and In-Demand Jobs

- The opportunity is accessed through a dedicated website to include exciting and engaging materials and videos about the training and advanced manufacturing careers.
- The participants can then conduct a virtual self-assessment to understand their transferable skills. They will also develop a Customized Learning Plan which considers existing skills and competencies so that 'credit' is given for what each individual already knows and can do.
- A major is then chosen: Precision Machining or Industrial Technology Maintenance.
- They sign up for lab experience - the necessary hands-on portion of the learning continuum - from a participating area post-secondary institution.
- The virtual learning portion of the training then begins. This training, including simulated hands-on application, can be done anywhere and during any time the individual has available after their daily duty assignments are complete.
- As milestones are reached in the virtual learning, the individual will be triggered to schedule on-campus college labs, hands-on learning and then, ultimately, performance assessments to earn the credential in their chosen field.

PARTNERS

Fort Campbell , US Army, Tennessee Department of Labor

IMPACT



101 Fort Campbell soldiers will participate in the pilot beginning in 2017. These soldiers will earn NIMS credentials for Precision Machining or Industrial Technology Maintenance. Based on the success of this pilot initiative, the model will be available for replication at military bases across the country.

ALIGNMENT TO LIFT STRATEGIC FOCUS AREAS

Creating enhancements to engineering curriculum using lightweighting technologies

Attracting students and workers to educational pathways and careers in manufacturing

Linking and leveraging resources and related initiatives on the ground today

Ensuring students gain STEM foundational skills for success in manufacturing careers

For more information, please see lift.technology or contact LIFT Education & Workforce Director Emily DeRocco at ederocco@lift.technology.