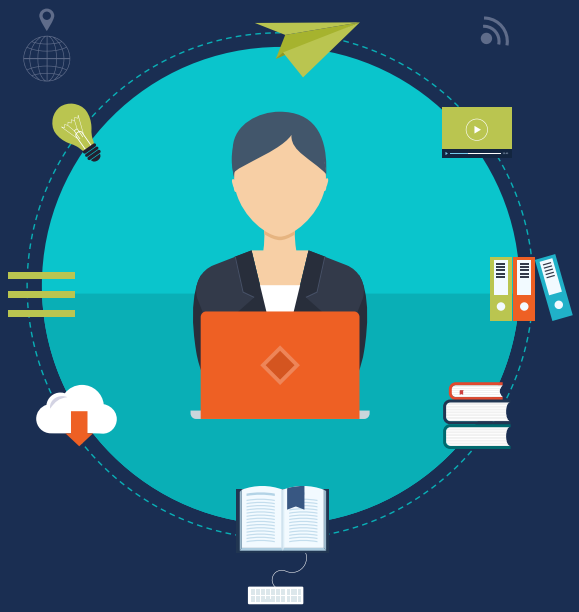
LIFT LIGHTWEIGHT INNOVATIONS

BUILDING 21ST CENTURY MANUFACTURING TALENT

Online Training Modules for LIFT Members

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



THE PROBLEM

The LIFT region, including Michigan, Ohio, Indiana, Kentucky, and Tennessee, is facing a skills gap that is expected to widen by more than 50% in the coming decade. Employers in the region posted 336,166 jobs during 2016 related to advanced manufacturing, and many of these jobs go unfilled due to lack of training for incumbent workers and too few new qualified workers joining the field. In 2015, only 110,247 individuals in the LIFT region completed relevant training for advanced manufacturing jobs. Comparing employer needs to relevant training "completers," the region currently faces three open jobs per newly trained individual. One way that companies can ameliorate this talent gap is to train their current workforce on new and emerging technologies. Training for new technologies is often expensive and difficult to coordinate, especially for small and medium-sized companies. Easy-to-access, affordable, high-quality training does not exist for many new technologies related to lightweighting. This further expands the already wide talent gap for companies seeking to upskill their current workers.

THE SOLUTION

To address this challenge, LIFT is sponsoring the creation of new online training modules related to lightweighting, in collaboration with EWI and 180Skills, with educational resources available to all LIFT member companies. This collaboration will allow LIFT members to access high-quality training for new lightweighting technologies without excessive cost or the need for workers to travel. Utilizing virtual training developed through LIFT, EWI, and 180Skills, LIFT members will be able to upskill their incumbent and new workers on new technologies, immediately reducing the talent gap they are facing.

- EWI is a recognized leader in training for new lightweighting technologies and provides frequent training classes, both onsite and at customer facilities for advanced welding and inspection technologies related to lightweighting.
- 180Skills develops interactive online technical education content making advanced manufacturing training available to companies of all sizes in all locations across the nation.

DELIVERABLES

Online training modules for LIFT members:

Nondestructive Evaluation for Lightweighting Materials

7

student contact hours

Fundamentals of Arc Welding for Lightweighting Materials

4.3

student contact hours

ABOUT THE PROJECT

EWI will develop key content for several training modules in collaboration with 180Skills.

These include:

MODULE 1:
Nondestructive Evaluation

Topics covered include:

- Visual Testing
- Liquid Penetrant Testing
- Magnetic Particle Testing
- Eddy Current Testing
- Ultrasonic Testing
- Radiography

Courses include basic principles, equipment functionality, and an introduction to advanced methods of Phased Array Ultrasonic Testing and Computer Tomography.

MODULE 2:
Basic Fundamentals of Arc Welding for Lightweighting Applications

PROJECT LEAD

EWI

EWI is a leading engineering and technology organization in North America dedicated to developing, testing, and implementing advanced manufacturing technologies for industry. EWI provides applied research, manufacturing support, and strategic services to leaders in the aerospace, automotive, consumer products, electronics, medical, energy & chemical, government, and heavy manufacturing industries.

PARTNERS

180 Skills

180 Skills is an online career and technical education experience with a library of over 650 courses and 1,100 hours of education, to enable career seekers to gain the skills they need to attain meaningful employment in the least amount of time.

LIFT members

ALIGNMENT TO LIFT STRATEGIC FOCUS AREAS

Creating enhancements to engineering curriculum using lightweighting technologies

Offering on-the-job training solutions for industry partners

Linking and leveraging resources and related initiatives on the ground today

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