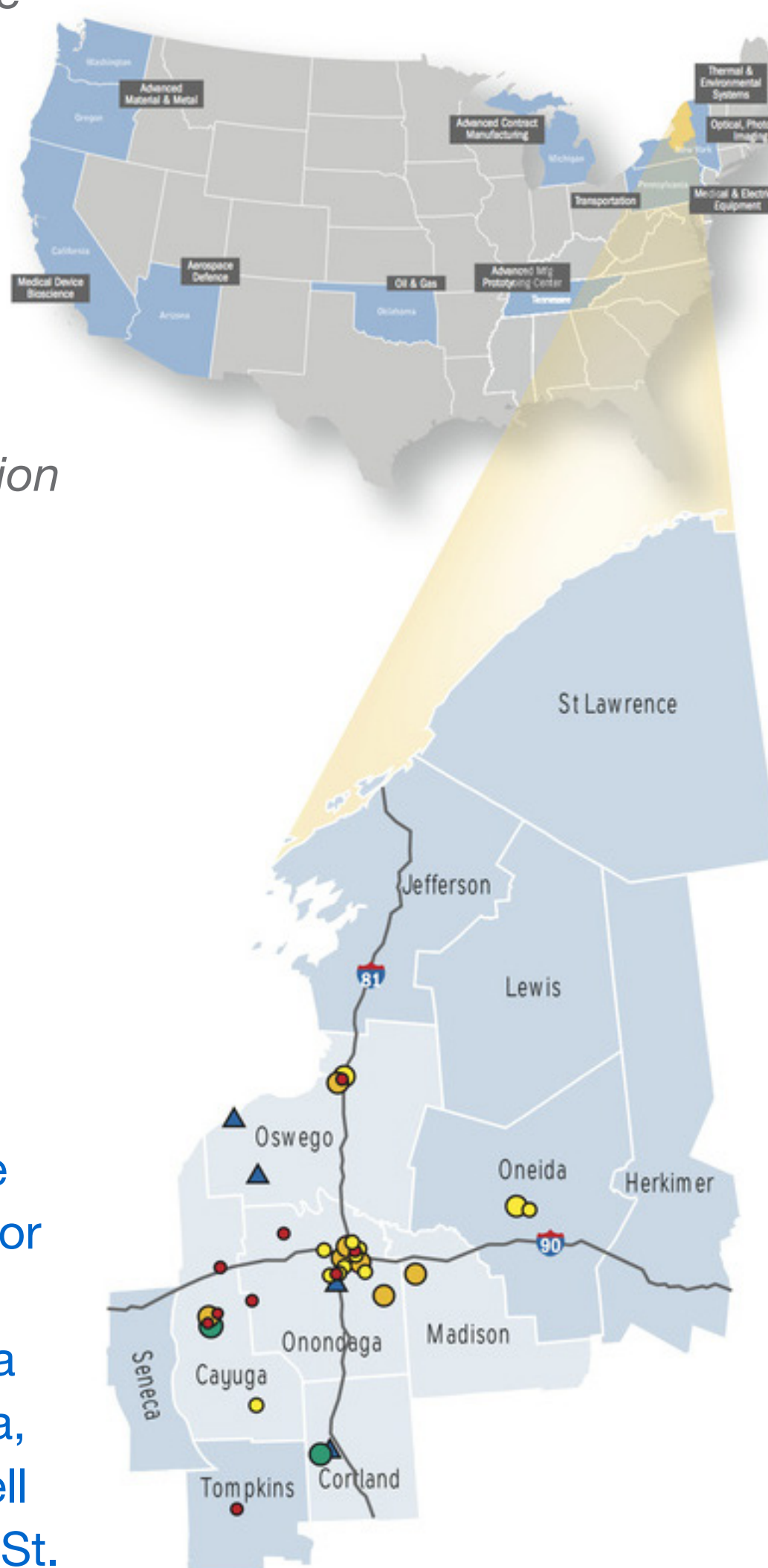


## CENTRAL NEW YORK'S TEC CLUSTER

The Advanced Manufacturing for Thermal and Environmental Controls (AM-TEC) project is a collaborative initiative designed to strengthen the cluster of Central New York manufacturers of systems that heat and cool buildings, refrigerate produce, control manufacturing processes, and enable a variety of other applications. To drive regional cluster growth, AM-TEC supports the following:

- Innovation and commercialization acceleration
- Export acceleration
- Advanced manufacturing training opportunities
- Research and development collaborations with area universities and faculty
- Workforce development and training
- Entrepreneurial assistance and support
- Networking opportunities

The AM-TEC initiative provides services to more than 35 manufacturers and suppliers in the sector – representing more than 8,500 employees – throughout the 12-county Central New York area that includes the counties of Onondaga, Cayuga, Cortland, Madison and Oswego counties, as well as Herkimer, Jefferson, Lewis, Oneida, Seneca, St. Lawrence and Tompkins Counties.



## PROJECT ACTIVITIES

### EDA — CLUSTER-BUILDING

- Monthly “TEC Tuesday” factory tours and networking opportunities, showcasing cluster firms’ capabilities and AM-TEC services
- Asset map and road map development
- Innovation acceleration services
- Promotion of advanced manufacturing and STEM activities, including annual “Manufacturing Day”
- Marketing the region and the TEC cluster capabilities at national conferences and with global and “gazelle” firms

### EDA — EXPORT DEVELOPMENT

- Create TEC Export working group and forums as part of CNY International Business Alliance, offering 1:1 outreach and streamlined export assistance
- Develop and engage trade missions focused on TEC capabilities and firms

### NIST — SUPPORTS FOR SMEs

- Innovation engineering support, including idea generation, screening and selection through development, prototyping, production ramp-up and market introduction

- Reduced cost training programs, including Six Sigma Black Belt certification

### DOE — R & D

- Research and development collaborations with area universities and faculty
- “TEC Collisions” ideation sessions exploring shared R&D needs and resources
- Aid researchers in developmet of research proposals for competitive solicitations

### DOL — WORKFORCE TRAINING

- Training offerings consistent with the DOL ETA’s tiered Advanced Manufacturing Competency Mode

### SBA — ENGAGEMENT OF DISADVANTAGED BUSINESSES

- One-to-one business counseling and training to New Yorkers who want to start a business or improve the performance of an existing business

## OUTCOMES

### CLUSTER BUILDING

**14 TEC TUESDAY**  
presentations and  
TOURS WITH  
**125** unique individuals  
attending

**37 FIRMS**  
actively engaged,  
**REPRESENTING**  
**8,500** employees in  
the region

### EXPORT DEVELOPMENT

**ENGAGEMENT OF  
15 TEC FIRMS**  
in comprehensive export activities

### SUPPORT THE SMEs

**19 INDIVIDUALS**  
FROM **8 FIRMS** participating in  
Six Sigma training

**WORKFORCE TRAINING  
106 INDIVIDUALS**  
completed Foundation competencies

**22 INDIVIDUALS**  
completed Green Production CPT

### MARKETING THE REGION

**3 TEC FIRMS**  
shocased at national green  
building conferences

**4 GLOBAL FIRMS**  
engaged to explore supplier  
relationships with TEC firms

### RESEARCH & DEVELOPMENT

**ENGAGEMENT OF  
13 TEC FIRMS**  
on DOE-funded R&D  
program, including  
**7 COLLABORATIVE  
PROPOSALS**  
for R&D funding

### ENGAGEMENT OF DISADVANTAGED BUSINESSES

**COUNSELING OF  
15** disadvantaged  
businesses  
**3 SMALL BUSINESS-  
LARGE BUSINESS**  
mentoring relationship  
established

## VISION, OBJECTIVES AND COLLABORATION

The vision of the AM-TEC project is to transform Central New York’s long-standing TEC industry cluster from one dominated by a single, large manufacturer and emerge as a vibrant, resilient, growing community of advanced manufacturers and suppliers that sell products to customers around the world.

To drive regional cluster growth, AM-TEC partners collaborate to:

- Elevate TEC advanced manufacturing as one of CNY’s signature strengths, leveraging regional initiatives on exports, advanced manufacturing, and clean energy and environmental systems.
- Strengthen cluster networks, enhance links to sources of innovations, and increase exports.
- Accelerate job creation in the region’s TEC SMEs through focused assistance including Innovation Engineering growth services, introduction to emerging technologies and manufacturing processes, and deployment of continuous improvement and quality systems.
- Conduct strategically targeted, market-driven research and development projects enabling next-generation TEC products to achieve national goals of reducing energy consumption by 50% across product life-cycles over ten years.
- Develop and deliver training to meet the needs of TEC cluster firms and local workers.
- Recruit and engage owners of disadvantaged existing and start-up small businesses into the cluster, including MWBEs and veterans, leveraging community initiatives to revitalize distressed neighborhoods in the region.

## LESSONS LEARNED

Companies in the cluster had not previously thought of themselves as a cluster-based economic sector and required time and leadership within the group to begin to explore opportunities of cluster-based growth and collaborations. There are opportunities to leverage cluster strengths to build a strong, cohesive view of the region as an attractive place to do business.

Team members also learned that providing in-house training to cluster firms offered high value to participating companies, as long as minimum class size could be ensured, as did recruiting for several related training opportunities available. For the AM-TEC project, this concurrent recruiting increased participation significantly for the Green Production CPT.



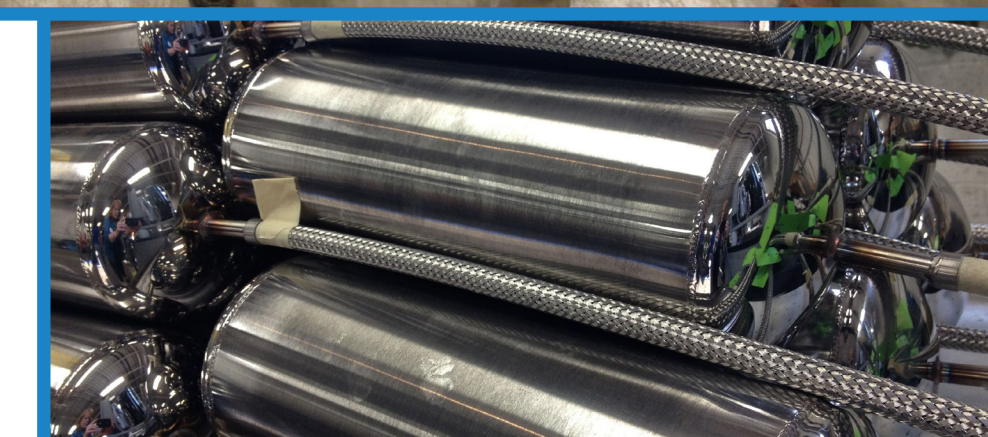
## GOALS AND IMPACTS

The AM-TEC cluster is beginning to be seen by firms outside the area as offering opportunity to build US-based manufacturing for components and assembly as the reputation of the cluster grows. While these collaborations have not yet resulted in new manufacturing opportunities for the region, we continue to work to forge these new relationships and strengthen TEC firms.



## SUSTAINING THE CLUSTER

- Continue to collaborate to optimize the delivery of unique, value-added services to AM-TEC firms
- AM-TEC firms may continue to collaborate as a cluster-based initiative through their engagement with the Syracuse Center of Excellence in Environment and Energy Systems (SyracuseCoE) and its Partner Program.
- Additional targeted funding for the cluster is already under discussion, based on engagements with State agencies, and will continue to be sought from federal, state and non-profit organizations, based on the success of this project.



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**WITH THANKS TO OTHER  
AM-TEC SPONSORS**

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**Empire State Development**