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A Division of Empire State Development



New York Manufacturing Extension Partnership 2024 Report

December 2024

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PROGRAM OVERVIEW AND PURPOSE

Empire State Development (ESD) is New York's chief economic development agency. The mission of ESD is to promote a vigorous and growing economy, encourage the creation of new job and economic opportunities, increase revenues to the State and its municipalities, and achieve stable and diversified local economies. Through the use of loans, grants, tax credits and other forms of financial assistance, ESD strives to encourage private business investment and growth to spur job creation and support prosperous communities across New York State.

ESD's Division of Small Business & Technology Development (SBTD) supports the growth of small businesses, defined as firms with 100 or fewer employees, providing and implementing programs and services that facilitate access to capital, technical assistance, technology assistance, and venture funding.

ESD's Division of Science, Technology & Innovation (NYSTAR), within SBTD, is designated as the New York Manufacturing Extension Partnership (NY MEP). NY MEP is part of the National Institute of Standards and Technology's Hollings Manufacturing Extension Partnership (NIST MEP), which is a public-private partnership with centers in all 50 states and Puerto Rico dedicated to serving small and medium-sized manufacturers. NY MEP was awarded over \$6 million in federal funds per year for the period 2016-2025. New York State adds approximately \$3.7 million in state funding.

NY MEP is a network of 11 organizations that provide growth and innovation services to small and mid-sized manufacturers in every corner of the state. NY MEP directs funding it receives to one sub-recipient organization in each of New York State's 10 economic development regions, along with one statewide center, for a total of 11 centers. Each regional center works independently with manufacturers in their region and will collaborate with other centers as additional assistance or expertise is needed. Each center offers a broad range of services that include, but are not limited to:

- Re-shoring production;
- Manufacturing scale-up;
- Sustainable manufacturing;
- Supply chain;
- Innovation strategies;
- Process improvements;
- Quality control;
- Technology acceleration;
- New market strategies;
- Product development and prototyping;
- Workforce development;

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- Entrepreneurial and start-up assistance, including financing and grant information; and
- Other services tailored to regional priority industry clusters.

This report covers calendar year 2023 and lists each center with required and additional information included. Information about each center includes:

- Activities and accomplishments (including new services developed) as reported by the centers;
- Types of companies assisted;
- Impacts generated;
- Support for a Regional Cluster;
- State, federal and match (other sources) funding; and
- Industry-oriented workforce training.

FuzeHub, the statewide center, primarily focuses on marketing system capabilities; hosting awareness and training events; serving as a trusted advisor; and referring companies to the most appropriate regional MEP or other innovation asset for necessary assistance.

NIST MEP reviews and scores the work of NY MEP centers as a collective and not each individual center. They collect impacts from companies receiving assistance from our 11 centers using a third-party survey house. Below is a summary of the collective impacts, followed by a report on each individual center and their impacts. On the non-job impacts alone, the program is seeing 100:1 ratio on recognized impacts to dollar of government investment (state + federal). The final section of the report includes additional charts with greater detail on the NY MEP impact metrics.

NYMEP Impacts:

	01/01/2023 - 12/31/2023
Number of unique companies served	705
Number of jobs created	1,113
Number of jobs retained	5,162
Increased/retained sales	\$982,543,911
Cost Savings	\$43,651,127
New investment	\$221,381,076
Non-job Impacts Total	\$1,247,576,114

NYMEP Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$3,773,000
Federal Funding	\$6,877,960
Matching Funds	\$3,104,960
MEP-Dedicated Employees	74.43

ESD has prepared this report to fulfill disclosure obligations set forth in NY Public Authorities Law Sections 3102A (Industrial Technology Extension Services) and 3102D (Technology Development Organizations). The following reports are collected directly from the MEP centers and included below for public review.

Insyte Consulting
Western New York Region
Benjamin Rand

Activities and Accomplishments:

In 2023, Insyte Consulting was part of two Tech Hub designations from U.S. Economic Development Agency (EDA) and hosted the MEP National Network Forum in Buffalo in September, where Insyte had the opportunity to showcase the unique cooperation and coordination of the “Northland Partners”: Insyte Consulting, Buffalo Manufacturing Works, the Buffalo Niagara Manufacturing Alliance and the Northland Workforce Training Center. Insyte continued to provide its core consulting services to manufacturers throughout WNY with 2023 marking our second-best bookings year ever.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts

	01/01/2023 - 12/31/2023
Number of unique companies served	17
Number of jobs created	219
Number of jobs retained	1277
Increased/retained sales	\$288,035,721
Cost Savings	\$3,763,468
New investment	\$40,204,502
Non-job Impacts Total	\$332,003,691

Summary of Centers Support of Regional Cluster:

Insyte Consulting continues to serve our Priority Clusters (materials and machinery) and to work closely with our Regional Economic Development Council (REDC) and other partners to further WNY’s strategy, particularly as it pertains to advanced manufacturing and entrepreneurial support.

In 2023, Insyte Consulting, Buffalo Manufacturing Works/EWI and Launch New York rolled out SHIFT 2.0, a program designed to help small manufacturers implement advanced technology utilizing funding from a \$25 million EDA “Build Back Better” grant. The grant application was led by the WNY Regional Economic Development Council with Insyte Consulting and many others are part of the consortium. To date, SHIFT 2.0 has touched over 150 WNY manufacturers, completed over 48 business assessments, conducted 18 technology implementation audits with three implementation projects currently underway. SHIFT 2.0 is scheduled to run for three years.

Insyte Consulting was also part of groups that won two of the 31 Tech Hub designations awarded nationwide by the US EDA. The NY SMART I-Corridor consortium addressed semiconductor manufacturing and included Buffalo, Rochester and Syracuse along with our sister NY MEP centers: NextCorps and TDO. The second effort was the NENY (New Energy New York) Tech Hub proposal in which Insyte coordinated with our sister MEP center for the Southern Tier, AMT, and with the University of Binghamton. In both cases, Insyte proposed to work with our WNY manufacturing supply chain to assist them in understanding and meeting the requirements of these industries in order to penetrate these supply chains, as well as boosting their capacity to provide product to support these industries.

Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$290,000
Federal Funding	\$560,000
Matching Funds	\$270,000
MEP-Dedicated Employees	11.90

Industry-Oriented Workforce Training:

The best practice workforce training example of Northland in WNY was documented in an article authored by the Urban Manufacturing Alliance and the University of North Carolina which circulated widely in 2023. The article describes the unique level of cooperation and coordination of the Northland Partners: Insyte Consulting, Buffalo Manufacturing Works/EWI, the Buffalo Niagara Manufacturing Alliance and the Northland Workforce Training Center (NWTC) which has achieved graduation rates twice the national average with over 50% minority and women graduates. Insyte Consulting's president, Benjamin Rand, continues to serve as the Secretary of NWTC's Board of Directors where he led the Steering Committee for NWTC's 2023 Strategic Planning effort.

NextCorps, Inc.
Finger Lakes Region
James S. Senall

Activities and Accomplishments:

NextCorps MEP project activity was strong in 2023, with a total of 98 projects completed, and more than 100 ongoing at the end of the period. The 98 projects completed were in the following areas:

- Lean (10)
- Quality (15)
- Engineering Services / Plant Layout (17)
- IT Services (17)
- Growth Services (9)
- Strategic / Business Mgmt (5)
- Technology Services (8)
- Sales / Marketing (17)

The NextCorps Scale for ClimateTech program, which is aimed at helping hardware-based startups looking to ramp up production, continued to support cohort companies with Manufacturing Expert in Residence (MEIR) projects. Those projects wrapped up on 6/30/23, thus concluding the current S4C program activities. Programming also included manufacturing tours and education workshops. Sessions included training on the use of Manufacturing Readiness Levels, as well as Product Design and Manufacturing, Green House Gas calculations, and Bill of Materials and Bill of Process development, among others.

The Manufacturing Readiness Program, part of the NIST MEP Competitive Awards Program (CAP), continued through this period. Objectives are to bridge gaps between hardware technology inventors/entrepreneurs and contract manufacturers to increase the rate of new product commercialization, job creation and economic growth. An online platform was developed with resources and self-assessment capabilities to guide startups through the manufacturing process. The first pilot program took place in the Finger Lakes region of New York in early-mid 2022, followed by a pilot in Pittsburgh that launched in the 4th quarter of 2022 and continued into 2023. A 3rd Cohort was launched in Mar. 2023 with 32 companies completing the program in May 2023.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts

	01/01/2023 - 12/31/2023
Number of unique companies served	33
Number of jobs created	212
Number of jobs retained	536
Increased/retained sales	\$96,809,175
Cost Savings	\$4,942,625
New investment	\$45,762,992
Non-job Impacts Total	\$147,514,792

Summary of Centers Support of Regional Cluster:

NextCorps continued its support of the regional Optics, Photonics, and Imaging cluster, through direct project work with manufacturers in this sector, as well as additional initiatives across the organization that supported the cluster.

In 2023, NextCorps completed 33 projects with Optics, Photonics, and Imaging companies, in the following areas:

- Lean (2)
- Quality (8)
- Engineering Services / Plant Layout (4)
- IT Services (9)
- Growth Services (2)
- Strategic / Business Mgmt (1)
- Technology Services (4)
- Sales / Marketing (3)

In addition, NextCorps continued to support regional cluster workgroups and organizations (e.g., NY Photonics Cluster), and has been an active participant of the Optics, Photonics, Imaging, and the Advanced Manufacturing working groups of the Finger Lakes Regional Council.

NextCorps' Luminate Startup Accelerator program, focused on supporting early stage OPI companies, received a four-year funding extension through Empire State Development and the Governor's office, to support four additional annual cohorts through the year 2026. Ten startups were selected for Cohort 6 in 2023 from 120 global applicants. The teams began their 6-month program in Rochester in mid-April '23 and concluded their program in late Sept. '23, with final presentations and awards.

Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$290,000
Federal Funding	\$560,000
Matching Funds	\$270,000
MEP-Dedicated Employees	3.63

Industry-Oriented Workforce Training:

NextCorps supported and participated in several workforce-oriented activities throughout 2023, including initiatives such as Finger Lakes Works With Their Hands, the Rochester Technology and Manufacturing Association's workforce conferences, a DoD / Apex Accelerator conference, and others. NextCorps also maintains close relationships with our local community colleges and Workforce Investment Boards, whom we often refer client companies to for support.

Alliance for Manufacturing and Technology
Southern Tier Region
Carol Miller

Activities and Accomplishments:

AMT advanced its 2020-2023 strategic plan, delivering strong organizational performance aligned with stakeholder and market priorities. By leveraging expanded in-house capabilities and third-party expertise, AMT provided high-impact services in Workforce Development, Industry 4.0, and Supply Chain Management, driving client growth and innovation.

A new consultant was onboarded in 2023 to support clean energy initiatives under the ARISE five-state program, led by Catalyst Connection, and the New Energy New York (NENY) ARC effort, headed by Binghamton University. AMT also continued its contributions to the NENY Supply Chain initiative, funded under Build Back Better, and led by Binghamton University.

AMT successfully completed a diverse range of projects focused on growth and process improvement, including succession planning, continuous improvement, quality management system implementation and support, cybersecurity assessments, marketing and branding, technology services, feasibility studies, equipment selection, and financial, leadership and OSHA training. These efforts directly improved client efficiency and fostered business growth.

During 2023, AMT expanded its services with tools to support organizational development, including DiSC assessments for team dynamics, Toyota Kata for continuous improvement, and Celemi's PartnerStock for supply chain collaboration. These tools were selected to address client challenges and deliver measurable results.

AMT's efforts in 2023 contributed to meaningful client success and growth. Through collaboration and leveraging expertise, AMT worked to improve client operations and continue supporting key areas initiatives. Moving forward, AMT remains dedicated to providing valuable services that address the evolving needs of its clients and stakeholders.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts

	01/01/2023 - 12/31/2023
Number of unique companies served	60
Number of jobs created	79
Number of jobs retained	1216
Increased/retained sales	\$197,477,752
Cost Savings	\$4,549,846
New investment	\$13,876,355
Non-job Impacts Total	\$215,903,953

Summary of Centers Support of Regional Cluster:

Transportation and Advanced Manufacturing Products, Components and Systems Control Cluster and Agriculture are priority REDC clusters in the Southern Tier. Supporting these critical sectors remains a long-term strategic priority for AMT, as we continue to offer guidance and assistance to companies in the region.

In 2023, AMT completed 17 projects within its priority cluster. The organization delivered OSHA Ergonomics training to Southern Tier small and mid-sized manufacturers, reaching 338 participants across 21 companies, including 195 participants from the priority cluster. As part of the NENY initiative, AMT worked with manufacturers to identify opportunities for involvement or growth in the Battery and Energy Storage (BESS) supply chain. In partnership with NY-BEST, AMT hosted a webinar "Battery and Energy Storage Supply Chain Opportunities," educating Southern Tier manufacturers in BESS supply chain opportunities, which attracted 53 attendees, including 5 from the priority cluster.

AMT actively participated in regional meetings, such as the REDC Executive Committee, Advanced Manufacturing Workgroup, and Workforce Development sessions. AMT also collaborated extensively with economic development and educational partners to secure grants and provide support to manufacturers.

AMT achieved significant milestones in 2023, including the approval of the ARISE clean energy proposal, led by Catalyst Connection, securing our second Susan Harwood OSHA Grant for Safety & Health Management Systems, and being awarded the NYSTAR i4.0 contract. All of these programs have positioned AMT for continued success in driving growth and innovation in the Southern Tier's priority clusters.

Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$195,000
Federal Funding	\$380,000
Matching Funds	\$185,000
MEP-Dedicated Employees	4.25

Industry-Oriented Workforce Training:

In 2023, workforce training remained a priority for AMT, with 24 training projects supporting regional manufacturers through a range of targeted training topics. AMT collaborated with IDAs, DOL, Workforce Boards, SUNY partners, WDI, County Chambers, and the REDC workgroup to address the training needs of small-to-mid-sized manufacturers.

AMT conducted OSHA Ergonomics training through a Susan Harwood grant. AMT also developed content for a second OSHA grant in 2024, focused on an eight-hour Safety & Health Management Systems training.

In partnership with Job Corps, AMT launched a manufacturing program at the Oneonta facility, including Tooling U-SME training and certification exams. The pilot's success led Oneonta Job

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Corps to explore the establishment of a permanent manufacturing program. This initiative was partially funded by an America Works Grant, and AMT presented an overview at the Fireworks conference in Cleveland in June 2023.

In partnership with Ithaca Area Economic Development (IAED), AMT completed Phase 2 of the Direct to Work program, utilizing Tooling U-SME and VR training content. Phase 1 saw all participants successfully hired by participating manufacturers.

AMT continued its partnership with the Otsego Refugee Resettlement Coalition, offering manufacturing employment support to refugees.

AMT engaged middle and high school educators through manufacturing career presentations, training exercises, and manufacturing tours.

2023 was a successful year for AMT's workforce training initiatives, strengthening regional manufacturers through strategic partnerships and innovative programs. These efforts have laid a strong foundation for continued growth and collaboration in the future.

Central New York Technology Development Organization
Central New York Region
James D'Agostino

Activities and Accomplishments:

The Technology Development Organization (TDO) provided numerous services throughout the year including: lean/process improvement support to improve productivity and overall operation; Kaizen support to improve shipping processes and overall productivity across the operation; ISO9001/AS9100 support for formal ISO 9001/AS9100 certification; Toyota Kata coaching resulting in numerous impactful process improvements including productivity, quality, and delivery; and reshoring/supply chain to develop/locate local injection molding tooling suppliers.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts

	01/01/2023 - 12/31/2023
Number of unique companies served	177
Number of jobs created	72
Number of jobs retained	419
Increased/retained sales	\$134,531,536
Cost Savings	\$7,002,510
New investment	\$18,593,600
Non-job Impacts Total	\$160,127,646

Summary of Centers Support of Regional Cluster:

TDO trained 20 individuals in Lean Six Sigma Green Belt (LSSGB) and Lean Six Sigma Black Belt (LSSBB) methodologies including data-based decisions and advance analytics. In addition, TDO provided follow-up coaching to 40 LSSGB and LSSBB trainees using data-based decisions and advance analytics.

TDO continued facilitating a local food manufacturer seeking Industry 4.0 solutions through a CESMII grant. The project utilized the CESMII Smart Manufacturing Innovation Platform to collect and contextualize data from sensors connected to the Cooling Tunnel/Kettle/Mixer system, create and implement a data-driven algorithm that predicts product quality and suboptimal performance based on operational performance all along the enclosed 70-foot cooling tunnel, and advise what interventions are needed to ensure conforming product.

TDO continued the development of a Toyota Kata / lean six sigma “dojo” environment for local manufacturers to promote the use of data and quantitative analysis to inform decisions. TDO continued working with RIT's COE for the Industry 4.0 Transition Assistance Program. The program's overall goal was to obtain data through regional surveys and ultimately identify

manufacturers seeking Industry 4.0 solutions. TDO developed webinars as a part of this program that were delivered in 2022, and formal projects were scoped in 2023. TDO continued its Kata Storyboard related to Industry 4.0 and Data to Decisions (D2D). The objective was to provide regular D2D projects each quarter in support of the cluster focus.

Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$195,000
Federal Funding	\$380,000
Matching Funds	\$185,000
MEP-Dedicated Employees	6.50

Industry-Oriented Workforce Training:

In 2023, TDO provided foundational blueprint reading and GD&T (Geometric Dimensioning and Tolerancing) workforce training to numerous manufacturers and apprentices through a number of cohorts. TDO provided workforce training and mentoring to multiple maintenance apprentices at various local precision machine shops. Critical workforce skills that were developed included maintenance troubleshooting and programming. TDO facilitated leadership development workforce training at multiple local precision machine shops. The training allowed the manufacturing teams to develop critical workforce leadership skills.

TDO continued to facilitate industry-oriented sales training for a printing manufacturer. The training allowed the manufacturer to grow their top-line and develop foundational workforce skills. TDO provided Job Relations training to numerous manufacturers. This training enabled better front-line supervisory skills and an improved overall workplace culture. TDO provided Job Instruction training to numerous manufacturers. This instruction improved training and reduced learning curves while improving overall workplace cultures.

TDO provided environmental, health, and safety training to numerous manufacturers. This training improved safety levels and awareness at each manufacturer while improving overall workplace cultures.

Finally, TDO facilitated leadership development training at numerous manufacturers. The training allowed the manufacturing teams to develop critical industry-oriented workforce leadership skills.

Mohawk Valley Community College Advanced Institute for Manufacturing
Mohawk Valley Region
Cory Albrecht

Activities and Accomplishments:

The Advanced Institute for Manufacturing has been working in partnership with the SUNY apprenticeship team to bring no-cost technical training to manufacturing employees. This training enables companies to enroll employees in a self-paced coursework for a wide variety of technological subjects including IT, programming, graphic design, office software, and general computer skills. Some of these courses include certification exams that will allow employees to bolster their knowledge and technical skills and will contribute to the overall elevation of the knowledge level of manufacturing in the area. Since the initial launch of this program in 2Q 2023, more than 50 employees have received access to these programs. MVCC's apprenticeship team has direct access to funds provided by New York College Apprenticeship Network (NYCAN).

The growing reliance on digital technology has made manufacturers among the most viable targets for a cyber-attack. It is important to know exactly what companies may be facing and find solutions to avoid being the next victim. As an incentive to support the manufacturing community through the New York State Cybersecurity Assistance Grant, AIM partnered with FuzeHub to create the NY MEP Cybersecurity Guidebook. This guidebook was created to help businesses across New York State create the best cyber practices and keep their digital assets safe. Although in 2021 this book was distributed to our clients and to our partners, AIM has decided to electronically distribute the guidebook as a second initiative to enhance the need for cybersecurity assistance as manufacturing companies are at high risk of security breaches. AIM's release of this digital cybersecurity guidebook can impact hundreds of manufacturers in the state.

Mohawk Valley Community College will create a new \$38 million state-of-the-art semiconductor and advanced manufacturing training center to help create a pipeline for local technology companies such as Wolfspeed, Danfoss, Indium, and Micron. U.S. Sen. Chuck Schumer announced \$2 million in federal funding to support the project. This money will go toward industrial-grade equipment and the overall renovation and expansion of MVCC's Science and Technology Building on the Utica campus. As the semiconductor industry expands in Central New York and Mohawk Valley, the training center will connect students with job opportunities, keeping them in the area. During the first three years, it is expected that more than 2,400 students will come through the building.

Mohawk Valley Community College was recently awarded with a U.S. Department of Energy funding opportunity. MVCC will use the \$440,000 in federal funding to work with the regional Manufacturing Extension Partnership (MEP) and other community and industry partners to provide assessments to local manufacturers while training students for heating, air conditioning, and refrigeration (HVAC) and advanced manufacturing technician roles. The College will also develop and disseminate training modules to manufacturing workers in clean energy techniques and work with local partners to expand pre-college training programs, with a focus on serving Utica's low-income communities. Over the three-year span, MVCC envisions the creation of 60 new jobs, the reconfiguration of 90 existing positions, the development of 15 courses, and the enrollment of at least 100 trainees.

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In addition, AIM has continued to partner with the Expertise Project (ExPr). The Expertise Project bridges the awareness gap as they develop short videos to showcase careers in advanced manufacturing. These videos are then shared within a video platform that can be accessed by students, parents, teachers, and industry. The Expertise Project is part of the \$10 million awarded to the Mohawk Valley REDC for the workforce development challenge competition. ExPr will be awarded a fully immersive 360-degree virtual reality room for video viewing. The Advanced Institute for Manufacturing is currently collaborating with ExPr to showcase this new technology to regional school districts and is developing the plan to have this new technology embedded at our Community College.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts

	01/01/2023 - 12/31/2023
Number of unique companies served	29
Number of jobs created	117
Number of jobs retained	243
Increased/retained sales	\$35,215,000
Cost Savings	\$1,856,000
New investment	\$13,164,040
Non-job Impacts Total	\$50,235,040

Summary of Centers Support of Regional Cluster:

The Cybersecurity program at the Advanced Institute for Manufacturing began in 2016. For more than 8 years, AIM has been able to provide meaningful and impactful cybersecurity awareness, education, and training to more than 300 small and medium sized manufacturers in New York State. To support this regional effort with our manufacturing clients in 2023, AIM focused on assessments and remediation projects for local manufacturers. AIM observed an increased demand for vulnerability scanning, phishing testing, and ongoing consultation through remediation that led to projects that fell outside of our usual activity. Also, during this time, AIM began the planning and coordination for the proposal for the New York State Cybersecurity Advanced Manufacturing Initiative Grant. This coordination included discussion for allocation of funds as well as strategies for the implementation of both assessments and solutions application. In addition to this, AIM has continued to provide assessments to small and medium manufacturers in our region and coordinate with other MEP centers to provide services for companies in their respective regions. The third quarter of 2023 saw the beginning of implementation of the New York State Cybersecurity Manufacturing Initiatives Grant. This event was kicked off with a Cybersecurity Workshop held at SUNY Stony Brook University at the end of September. This event saw representatives from Cybersecurity in the academic, government, and service fields come together to provide information and solutions to Long Island manufacturers. During this time, AIM worked with FuzeHub to develop marketing strategies and an intake page for the grant applicants.

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AIM continues to keep an eye on the ever-evolving CMMC standards as rule making enters the final stages. AIM staff will work to inform manufacturers in the DoD supply chain of the guidelines they are required to meet and the best way to meet them within their respective budgets and company resources. AIM is also in the early planning stages of a state-wide MEP cybersecurity working group that will provide a regular meeting time for MEP centers to connect and discuss cybersecurity needs as well as to receive updates regarding the quickly evolving cybersecurity requirements for manufacturers.

AIM has been coordinating with cybersecurity service providers throughout New York State to provide an expansive network of professionals to recommend to manufacturers in need of ongoing service assistance. This effort has required AIM to schedule discovery meetings with these organizations to check credentials and references in the manufacturing sector to ensure they are a good fit for small and medium manufacturing organizations. AIM is also currently looking into expanding its vulnerability scanning capabilities to allow for an increased volume of scans to keep up with demand from organizations because of the New York State Cybersecurity Manufacturing Initiatives Grant.

Looking into the future, based on these experiences, we feel that the need for cybersecurity programming is persistently growing. The landscape for cybersecurity standards and requirements will continue to evolve and present challenges to manufacturers in New York State. AIM will continue to support these manufacturers and encourage them to maintain their cybersecurity priorities in the future.

Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$195,000
Federal Funding	\$380,000
Matching Funds	\$185,000
MEP-Dedicated Employees	4.50

Industry-Oriented Workforce Training:

The Advanced Institute for Manufacturing (AIM) supported by SUNY Mohawk Valley Community College served a diverse range of manufacturers during the 2023 business cycle. These initiatives utilized AIM's unique resources that leveraged high quality manufacturing consultants/instructors to lead programs that directly supported the hiring and employee development efforts of the major manufacturing employers in our region. This primary and most important consideration consist of technical training programs, process/productivity improvement, employee workforce development trainings, and operational assessments. These programs have helped manufacturers reduce costs by improving operational efficiencies while increasing the technical skill levels of the workforce.

One training success for 2023 was at the Wolfspeed-Mohawk Valley Fab Facility. AIM facilitated new employee training for maintenance technicians, allowing the business to achieve hiring requirements. The program provided four sessions consisting of introductory tool training to specific

training on vacuum systems and helium leak detection. Another 2023 success would include the training completed at Indium Corporation. At Indium, AIM provided instruction and practical application of LEAN/Six Sigma training to existing employees to raise awareness and develop skills that improve the efficiency and effectiveness of the processes used. A very similar training approach was applied by the AIM technical training team at Utica Coffee Roasting, as they also engaged in LEAN/Six Sigma training for process improvements and cost savings. H.P. Hood Inc., located in Vernon, NY, is a manufacturer of high-quality dairy products. AIM provided technical instruction to maintenance technicians across four locations of H.P. Hood facilities using in-person and virtual instruction to develop skills in maintaining PLC and logic program used to produce high-quality dairy products accurately and consistently. The FX Matt Brewery in Utica, NY, is a manufacturer of beer and soda products and is one of the larger manufacturers in Oneida County. AIM consultants worked with the FX Matt management team and line staff to develop process manuals and operating procedures to add consistency to their manufacturing processes and to the way in which new employees are trained. AIM also provides training within the region's Aerospace Industry. One of the Aerospace Industries training courses conducted in 2023 was with Pursuit Aerospace. Pursuit is a global company that manufactures extraordinarily complex aircraft engine components. AIM and MVCC technical instructors offered several cohorts of hands-on training courses in GD&T, Blueprint, and Basic Shop Math.

This summary provides a sample of the diversity of projects AIM facilitated in 2023, which does not include multiple smaller scale projects that benefited the manufacturing environment in the six-county region. The Advanced Institute for Manufacturing is the only SUNY Community College in New York State to host a Manufacturing Extension Partnership Center. For over 8 years of the MEP regional designation, this has proved to be a perfect fit as MVCC has specialized in providing technical education to students for 75 years. Established in 1946 to help educate and train veterans returning from WWII, MVCC has evolved to become NYS's first community college, the largest college between Syracuse and Albany, and the region's primary provider of college education and non-credit training.

CITEC Business Solutions
North Country Region
Steve Lockwood

Activities and Accomplishments:

2023 was a success for CITEC in New York's North Country, both in terms of impacts and finances, reflecting a relatively stable economy and the need for growth and problem-solving for area manufacturers.

Top line growth was an unexpected focus for many clients and aligning companies with standards including ISO, IEC for laboratory management, GMP and others became a big focus for the year allowing our clients to maintain clients and build relationships with new markets as well. Strengthening our QA coaching and training expertise was a 2023 focus.

CITEC's clients continue their emphasis on bottom line growth, as well focusing on Operational Excellence. This is driven by workforce challenges. The intended aims are process improvements to increase efficiency, eliminate waste, reduce scrap and rework, but the biggest impact is often on improving employee engagement. When workers are engaged to solve problems, not only do they solve problems, but they also feel more committed to their company and to solving more problems. Efficiency improvements also offer some relief on the workforce issues.

Another way CITEC addresses workforce concerns for our clients is through Leadership Training. Effective leaders, supervisors and managers can reduce employee turnover by creating an organizational culture that attracts and retains a strong workforce. Training and developing high-potential employees for internal supervisory and leadership roles is an important way to reduce hiring costs and turnover. CITEC partnered with the Alcoa Foundation in 2023 to be able to offer leadership training at a reduced cost which allowed companies to send more individuals through this kind of training which amplifies the impact, improves accountability and changes company culture. Through this partnership alone we trained 75 individuals with 30 companies.

One area that can be particularly difficult is finding skilled experts to fill permanent positions or to manage specific projects. CITEC's team has deep experience in manufacturing, production, sales, marketing, and more. CITEC's staff fills roles as project managers and serves on teams in a temporary capacity until the exact right candidate fills the post. CITEC is able to offer mechanical engineering support on an ongoing basis to several North Country companies to stabilize projects and departments, so they are ready for permanent hires. New for 2023, CITEC added QA to the portfolio and worked with a Lewis County paper company to build their quality program and train their staff to manage it on their own.

The field of Human Resources is in a state of constant change and challenge, and keeping up with labor law changes and compliance can be difficult and time-consuming. CITEC's HR specialists offer point source solutions for particular challenges as well as convening HR professionals across the region for regular updates and networking.

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CITEC completed a workforce development project funded by the Arconic Foundation to determine if basic workplace readiness training for entry-level workers would improve retention. The training covered general workplace expectations because many of our clients reported entry-level workers did not understand basics like the importance of regular attendance, teamwork, appropriate workwear, communication or conflict resolution. We found that for the right companies, this kind of program really does pay off, but it is difficult for many companies to invest the time and resources in basic workforce training for new employees.

The importance of Safety is often underrated in terms of cost savings, workforce retention, and overall profitability. CITEC's safety programming keeps up with the needs of the community through regular training and an annual Safety Day that convenes safety professionals to share best practices and upcoming concerns.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts

	01/01/2023 - 12/31/2023
Number of unique companies served	11
Number of jobs created	46
Number of jobs retained	343
Increased/retained sales	\$60,009,745
Cost Savings	\$2,931,000
New investment	\$19,178,000
Non-job Impacts Total	\$82,118,745

Summary of Centers Support of Regional Cluster:

The North Country's Regional Cluster is transportation equipment and materials, and aerospace. CITEC's Executive Director serves on the board of advisors of NAMTrans, the North American Center for Excellence in Transportation, which serves more than fifty manufacturers in the sector across the region building active working partnerships between the cluster and other clusters across NYS, Quebec, Ontario, and beyond. NAMTrans is an important funding partner for cluster clients.

In 2023 CITEC provided services for cluster companies including Alcoa, Arconic, Camso, Elegance Coatings, MetalCraft Marine, Norsk Titanium, NY Airbrake, Prelco, and NovaBus.

Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$195,000
Federal Funding	\$380,000
Matching Funds	\$185,000
MEP-Dedicated Employees	6.00

Industry-Oriented Workforce Training:

Several years ago, CITEC's clients started sharing stories that seemed shocking at the time. Stories about people wearing cutoff shorts, or vaping, or texting during job interviews; showing up late on their first days of work or leaving after the first lunch break. Employers had stopped doing drug testing because they would have no one to hire if they did. All of this, sadly, barely raises eyebrows anymore. At CITEC we wondered what we could do about it. Could we train people to be "workforce ready?" And if so, would it make a difference to them or the companies who hire them? Would it reduce turnover and set people on a path to earn more money? Our clients told us they would be on board to try it out but were not willing to invest in paying for it. In 2021 the Arconic Foundation was willing to fund an experiment. We would develop a training module and deliver it to 100 new hires at various businesses across the region and then compare the turnover rates to cohorts who had not received the training. The goal was a 50 percent improvement in retention after six months.

Business Advisor Sharon Van Auken developed the program to cover general workplace expectations including proper work attire, respect for company property, and cell-phone use policies, as well as effective problem solving, communication skills, time management, conflict resolution and more in a full-day interactive program, which could also be broken up and delivered virtually. While many companies thought the program would be helpful, few found themselves in a position to participate. Either they could not spare the time for the people to be away from their plants, or they did not want to invest in brand-new hires in this way. In response, we shortened the program to a half-day. It took two years before we had reached the milestone of training 100 participants, and it was nearly impossible to collect the follow-up data because the participating companies were struggling with workforce shortages in their HR offices as well as on shop floors. The feedback we did receive was positive, but there was not enough data to make any quantitative claims.

Still one of the non-manufacturing companies trained through the program, The ARC of Clinton County, has decided to continue offering the Workforce Readiness program on an ongoing basis for their new hires. This development confirmed our belief that there is a need for this type of training. As mentioned above a 2022/23 grant from the Alcoa Foundation allowed for more individuals and companies to participate in CITEC's Manager Development Essentials and Leadership Development Essentials by offering a cost share for the training. This allowed 75 individuals from 29 different companies to participate, amplifying the impact of this program.

Again, Lean training that is intended to boost productivity also has the advantage of boosting employee engagement. Many of our clients are rebuilding company culture through prioritizing

“respect for the people,” as their basic tenet and it is paying off. Workforce challenges are not limited to entry- or floor-level employees. It is also particularly difficult to find skilled experts to fill permanent positions or to manage specific projects. CITEC's team has deep experience in manufacturing, production, sales, marketing and more and throughout 2023, we filled roles as project managers, process engineers, quality managers, and operations managers. As temporary leaders, our business advisors model appropriate leadership skills and practices for the companies we work with that are facing difficulties filling those more technical roles.

CITEC serves on a Workforce Working Group in St. Lawrence County. The working group builds training programs through BOCES for area high schoolers and adults to meet the needs of local businesses. At Clinton Community College, CITEC's Executive Director serves on the advisory board of the Institute for Advanced Manufacturing. In 2023, the IAM, in partnership with the NAmTrans group mentioned in cluster activity, developed a welding academy to address the shortage of welders in the area. The first two cohorts produced 50 welders with 90 percent of them finding work in the area. The region hosted two large Manufacturing Day events. In Jefferson, Lewis and St. Lawrence Counties, on the west side of the North Country region, more than 750 high school students from 15 different schools visited more than 15 manufacturing facilities. The hosts led tours, did demonstrations, and presented a wide variety of career opportunities in industry to the students. On the east side of the region, the Clinton County's IAM hosted 800 students and 15 manufacturers who offered hands-on demonstrations and activities to show students about manufacturing careers that are available.

Center for Economic Growth
Capital Region
Don Wiesenforth

Activities and Accomplishments:

CEG tripled sales from 2022 with projects focusing on lean/operational excellence, Sandler sales training, ISO related training as well as leadership and workforce development projects. CEG's newly established Manufacturing Innovation Network continues to grow spurred by the eight "Lunch & Learn" Webex's conducted around such topics as predictive analytics, AI, sustainability, effective onboarding etc. and the two "Bot & Brew" events held, introducing manufacturers to automation/cobots.

CEG was commissioned to lead the Regional Economic Development Council 5-Year Strategic Plan which focused on four key areas, People, Place, Innovation & Growth with analysis, prioritization, and recommendations.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts

	01/01/2023 - 12/31/2023
Number of unique companies served	97
Number of jobs created	34
Number of jobs retained	81
Increased/retained sales	\$17,151,500
Cost Savings	\$591,000
New investment	\$9,961,500
Non-job Impacts Total	\$27,704,000

Summary of Centers Support of Regional Cluster:

CEG continues to support the Tech Valley Center of Gravity (Maker Space) which includes advising startups such as Meta Ornate which utilizes the NYMEP UR5 robotic arm to create ceramic architectural facades. Meta Ornate is working on a 3D printed architectural facade which will be the first 3D-printed ceramic facade in the western hemisphere. Additionally, CEG partners with the State University at Albany to run the ESD Innovation Hotspot for the Capital Region. CEG's primary role is to ensure the program leverages other assets (like the MEP program) as well as continued collaboration among the partners.

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Finally, CEG commissioned a study conducted by Newmark to evaluate the region's existing industry clusters and identify new and emerging opportunities which recommended four primary areas of focus:

- Digital Gaming
- Semiconductors
- Clean energy
- Life science

CEG is forming work groups to address the recommendations.

Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$195,000
Federal Funding	\$380,000
Matching Funds	\$185,000
MEP-Dedicated Employees	14.00

Industry-Oriented Workforce Training:

CEG is a NYSDOL designated Group Sponsor for the apprenticeship program and had **54 active apprentices** and **18 signatories** in 2023. 2023 included the first graduate apprentice from the *Cloud Engineer* program. In addition to individual meetings with companies, CEG participated in the **411 on Registered Apprenticeship** with the *Manufacturing Intermediary Apprenticeship Program (MIAP)*. The presentation was available to companies across NYS to learn more about Registered Apprenticeship.

In partnership with the *Capital Region Workforce Development Board* and the *NYS Department of Corrections and Community Supervision*, CEG launched ***Straight out of the Gate*** program. The program links incarcerated individuals who are approaching their release date with jobs with partnering employers.

**Manufacturing & Technology Enterprise Center
Mid-Hudson Valley Region
David Carter**

Activities and Accomplishments:

In 2023, MTEC significantly expanded its support for manufacturers across the Hudson Valley, achieving stronger outcomes compared to the previous year. Our efforts focused on delivering tailored solutions to improve productivity, reduce costs, enhance quality, and drive market competitiveness. Utilizing Lean methodologies, ISO certification, leadership coaching, equipment automation, ERP implementation, product and facility design, and process improvement initiatives, MTEC addressed the diverse needs of the manufacturing sector.

New initiatives in 2023 included sexual harassment prevention training and leadership training, reflecting MTEC's commitment to fostering a safe and effective workplace culture. Emerging priorities such as cybersecurity, supply chain resilience, and product innovation remained central, with expanded resources to support manufacturers in these areas. These efforts ensured that manufacturers were better equipped to overcome challenges and achieve long-term success.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts:

	01/01/2023 - 12/31/2023
Number of unique companies served	5
Number of jobs created	6
Number of jobs retained	62
Increased/retained sales	\$6,870,000
Cost Savings	\$1,197,500
New investment	\$2,109,000
Non-job Impacts Total	\$10,176,500

Summary of Centers Support of Regional Cluster:

The Food and Beverage Manufacturing sector remained a significant focus in 2023, recognized as a vital component of the regional economy. MTEC conducted 14 engagements with Food and Beverage manufacturers, up from 12 in 2022, bringing the total to 147 since the program's inception.

Projects supported this year focused on improving food safety, providing safety training such as OSHA compliance and forklift training, sexual harassment prevention, and prototype design for new products. Proposed projects for the following year include advanced automation integration, sustainability initiatives, and expanded workforce development programs.

Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$290,000
Federal Funding	\$560,000
Matching Funds	\$270,000
MEP-Dedicated Employees	10.00

Industry-Oriented Workforce Training:

In 2023, MTEC continued to deliver workforce training programs tailored to the evolving needs of manufacturers. These programs covered a wide range of topics, including process improvement, human resources, quality management, finance, cybersecurity, leadership, environmental health and safety, and sexual harassment prevention.

MTEC's STEM college intern program maintained its robust performance, with five interns actively supporting client projects throughout the year. This program provides students with valuable, hands-on opportunities to contribute to manufacturing projects focused on innovation, product design, and prototyping. By connecting students with real-world challenges, MTEC continues to help build a skilled workforce for the region.

ITAC
New York City Region
Kinda Younes

Activities and Accomplishments:

ITAC's Digital Marketing Boost for Small Businesses Program was created to provide targeted marketing assistance to New York City manufacturers. The ITAC team provided free, direct, one-on-one coaching/consulting to NYC manufacturers to help them identify and troubleshoot their marketing challenges and boost their revenues. In total, eighteen companies applied for the program and ten were selected to participate. Opportunities were identified to help small businesses define and achieve their marketing goals. Each participant then received a custom plan tailored to their unique business needs.

ITAC completed Year 3 of its Business Best Practices – Rapid Intervention Program, aimed at strengthening manufacturers in NYC's Garment District and helping them to develop strategies to address their biggest challenges. We worked with thirty manufacturers in the district as part of the program.

ITAC collaborated with partners to help develop a training initiative/apprenticeship program specifically for stage crafts, as their needs are quite different from a typical garment worker.

ITAC is working towards creating a more engaging social media presence. We are expanding our Faces of Manufacturing spotlights to help raise awareness of NYC manufacturers, create community, boost our website SEO, and improve our relationships and initial discoveries for companies we have not yet worked with.

ITAC completed two FuzeHub Jeff Lawrence Innovation Fund Manufacturing Grants in 2023, one with a robotics manufacturer and another with an apparel manufacturer.

ITAC provided no cost audits to NYC manufacturers:

- **Operating Cost Reduction Assessment:** We provided no-risk, no-cost audits to find and correct hidden errors or overcharges. Whether it is waste, telecom, industrial laundry, or utility charges, there are many components affecting how much a business is paying. ITAC partners specialize in cost reduction to help companies overcome their challenges and meet their objectives. So far, ITAC has performed assessments for seven manufacturers.
- **HR Risk Audit:** ITAC and its HR specialist reviewed HR policies and handbooks for compliance and best practices. ITAC then provided a summary detailing any areas that may require attention. As laws are constantly changing, up-to-date employee handbooks and HR policies reduce a company's liability risks, help employees understand expectations, and enhance the work environment. So far, ITAC has completed twelve HR audits.

In 2023, ITAC served over 240 NYC manufacturers and ended the year with seventy-eight projects in its active pipeline. Over the last four quarters, clients reported impacts of over \$29.5M in new sales, \$28.1M in retained sales, \$26.9M in new investments, \$6.5M in cost savings, and 526 new and retained jobs.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts

	01/01/2023 - 12/31/2023
Number of unique companies served	85
Number of jobs created	160
Number of jobs retained	541
Increased/retained sales	\$107,715,999
Cost Savings	\$5,125,561
New investment	\$36,075,309
Non-job Impacts Total	\$148,916,869

Summary of Centers Support of Regional Cluster:

To support the Regional Cluster as it relates to Manufacturing and Technology, ITAC:

- Provides early-stage companies with technical assistance and access to NYC and NYS resources.
- Assists small manufacturing and technology companies in scaling up through training, coaching, and consulting on manufacturing basics. The ultimate objective is to accelerate commercialization of new products, thereby creating revenue and jobs for NYC and NYS.
- Partners with workforce organizations to increase the pipeline of available candidates for existing and emerging jobs and continue helping clients with their workforce needs.
- Links small and medium-sized businesses with NYC and NYS suppliers.
- Helps with industry expansion and cultivation.

For example, with ITAC's assistance, a NYC manufacturer was awarded a FuzeHub DoD Modernization Grant to build a heat pump to meet the requirements of the DoD's portable climate control systems. Work was completed this year. Several clients are interested in Open-Source ERP software. Traditional sources are proprietary and expensive; Open-Source allows the business to purchase one module at a time and does not require licenses to be purchased. ITAC has introduced several NYC manufacturers to experts in this area.

ITAC advised a manufacturer who has a design idea to build a unified water purification system and thermal desalination plant. This would require software simulation testing, which they do not have access to.

A member of the REDC, Kinda Younes participates in all meetings and initiatives and serves on the Citywide Career and Technical Education Advisory Council. In addition, she co-chairs the NY Forward/Downtown Revitalization Initiative Committee as well as the Local Planning Committee for the Garment District (NY Forward award recipient).

Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$315,000
Federal Funding	\$635,000
Matching Funds	\$320,000
MEP-Dedicated Employees	6.00

Industry-Oriented Workforce Training:

ITAC held two Manufacturing Day events, focused this year on the new generation. ITAC's objectives were to tell students about manufacturing; give them a feel for the equipment used in manufacturing; and connect them with people that they could go back to if they wanted more information on manufacturing, including potentially becoming an apprentice. ITAC invited two high schools to the MakerSpace at the Brooklyn Army Terminal, which is the largest one in NYC, took them through a tour, had them participate in a hands-on activity, and Al Mangels (ITAC's Board Member and CTO at Lee Spring) spoke with them about the advantages of a manufacturing career. The feedback on both events was excellent.

ITAC assists small manufacturing and technology companies in scaling up through training, coaching, and consulting on manufacturing basics. The ultimate objective is to accelerate commercialization of new products, thereby creating revenue and jobs for NYC and NYS. The growth in sophistication of technologies in the maker market and in the overall manufacturing process continues to trickle down to smaller companies, making them more agile and competitive.

ITAC continues to promote grants to NYC manufacturers to subsidize important projects: workforce training; innovation and cybersecurity assessments; export; recovery from losses due to foreign competition; training and implementation; workforce, growth, and efficiency; etc.

Long Island Manufacturing Extension Partnership (LI MEP)
Long Island Region
Amy Erickson

Activities and Accomplishments:

In 2023, the Long Island Manufacturing Partnership (LI MEP, formerly MTRC - Manufacturing and Technology Resource Consortium) made strides to support the manufacturing industry on Long Island by driving strategic initiatives and providing programs that met the manufacturing industry's needs in cybersecurity, supply chain resilience and workforce development.

In order to further solidify regional supply chains, LI MEP attended the Hauppauge Industrial Association (HIA) Supply Chain event, themed around 'adapting to evolving supply chain trends' and the role AI technology may play in building resilience. Through LI MEP's new working relationship with the Supplier Scouting Group at NIST, LI MEP helped companies such as Mechanismic, Xert Fitness, and East Hampton Shucker identify invaluable resources and streamline supplier relationships, which will lay the base for further work in projects dealing with the optimization of supply chains.

LI MEP co-hosted a Cybersecurity Maturity Model Certification (CMMC) event with FuzeHub and the Advanced Institute for Manufacturing (AIM) at Stony Brook University's (SBU) Center of Excellence in Wireless and Information Technology (CEWIT). This event provided guidance for manufacturers to better understand the DoD's cybersecurity requirements and how to become cybersecurity compliant. LI MEP also used implementation consultants to manage one-on-one cybersecurity projects for various manufacturers, such as East/West Industries and McGuigan, Inc. These projects also enabled manufacturers to comply with the NIST SP 800-171 framework to achieve the required scores in the Supplier Performance Risk System (SPRS) thereby positioning local manufacturers to retain and secure additional government contracts.

LI MEP's workforce development activities, in collaboration with the Institute for Workforce Advancement and the Navy League of Long Island, included cybersecurity readiness for companies serving the Submarine Industrial Base. Furthermore, collaboration with the Workforce Development Institute (WDI) enabled manufacturers to have their employees registered in a composite manufacturing certification program related to the aviation, automotive, and offshore wind industries. Each of these programs had varied certification and reimbursement options via the WDI to improve the credentials of our manufacturer's employees.

Supporting sustainability and emerging technologies, the LI MEP sponsored the presence of companies such as Pupfish USA and Mechanismic at the New York State Innovation Summit, a showcase for technology advancement in biotech, material science, and AI. In addition, LI MEP received the Phase 1 MAKE IT Prize, jointly with SecondMuse, to build clean energy manufacturing resilience on Long Island. This award provides additional resources to develop climate technology and create clean energy job growth in the region.

During the reporting period, LI MEP underwent a rebranding initiative to improve visibility of the Center to Long Island manufacturers. LI MEP contracted and worked with The Martin Group to rebrand the

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Center as the Long Island Manufacturing Extension Partnership (LIMEP). This project included the redesign of the Center's website with improved search engine optimization (SEO), targeted public relations campaigns, social media outreach and awareness of LIMEP's work in manufacturing with the intent of extending our presence throughout the region.

Each of these activities and achievements has helped further establish LI MEP as a core asset for Long Island manufacturers, providing a focused conduit of support for competitive growth throughout the region.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts

	01/01/2023 - 12/31/2023
Number of unique companies served	80
Number of jobs created	102
Number of jobs retained	345
Increased/retained sales	\$36,483,691
Cost Savings	\$5,849,699
New investment	\$14,600,097
Non-job Impacts Total	\$56,933,487

Summary of Centers Support of Regional Cluster:

In 2023, LI MEP was a pillar supporting the Long Island manufacturing cluster through initiatives in workforce development, cybersecurity readiness programming, and supporting emerging industries such as offshore wind, defense and biotechnology. Focusing on the region's evolving needs, LI MEP made impactful strides on Long Island.

LI MEP co-hosted an in-person panel discussion titled "Bring Your New Technology Innovations to Life Through Prototyping and Manufacturing." The Center partnered SBU's Intellectual Property Partners (IPP), the SBU Chapter of the National Academy of Inventors (NAI), biotechnology startups and small sized manufacturers to provide first-hand experiences from moderator President, CEO and Chairman of Applied DNA Sciences and other panelists that shared best practices for prototyping and manufacturing a new concept in biotechnology. Attendees gained an understanding of what resources are available as they advance prototype designs towards production.

To address workforce needs in the manufacturing sector, LI MEP implemented focused training and career development programs to address specific skill gaps. In partnership with WDI and Institute for Workforce Advancement (IWA), LI MEP was instrumental in the successful launch of a composite manufacturing certification course that provided critical upskilling for Long Island's aerospace and renewable energy sectors. The program, with a focus on underserved communities,

created on-ramps to stable, high-skill jobs while helping manufacturers build a resilient workforce pipeline.

LI MEP also took a proactive approach to inspire the next generation of talent through Manufacturing Day events held at the Cradle of Aviation Museum and Suffolk Community College. These events showcased career paths available in manufacturing and demonstrated to students and young adults the dynamic role that this region plays in advanced technology and manufacturing. By providing hands-on learning experiences and insight into new technologies, LI MEP solidified its commitment to developing a future-ready manufacturing focused workforce.

In recognition of the emerging potential in the offshore wind industry, LI MEP co-hosted the "Offshore Wind Ready" workshop with the Business Network for Offshore Wind and Community Offshore Wind. This one-day training event gave 40 manufacturers insight into the supply chain requirements and entry points of the offshore wind industry so that they could diversify and expand their businesses in this growing sector. Additionally, LI MEP supported the regional biotech cluster by collaborating with the Long Island Bio Association to assist local biotech companies such as American Health Formulations. Focusing on compliance needs, LI MEP addressed critical infrastructure demands within biotech, helping to further the sector in terms of innovation, job growth, and regional economic impact.

Lastly, LI MEP increased its visibility and outreach within the manufacturing community through its partnership with First Ignite. As a result of this engagement, LI MEP reached out to more than 300 manufacturers, gaining valuable insight into industry needs. This heightened visibility helped LI MEP build relationships and grow its network.

Center Funding:

01/01/2023 - 12/31/2023	
State Funding	\$315,000
Federal Funding	\$635,000
Matching Funds	\$320,000
MEP-Dedicated Employees	1.75

Industry-Oriented Workforce Training:

A key focus area in 2023 was to prepare local manufacturers, particularly DoD suppliers, to meet the rising demand for cybersecurity readiness. Through various workshops and projects, LI MEP began initiatives to help equip manufacturers with necessary cybersecurity skills for compliance with newly updated standards such as CMMC and NIST. Key events included a strongly attended, interactive cybersecurity workshop with expert panelists from the FBI, AIM, and DataSoftNow that provided in-depth knowledge sessions on threat identification, compliance requirements, and evolving security protocols. These sessions underscored LI MEP as an important resource for companies dedicated to safeguarding sensitive information while remaining competitive.

In addition to cybersecurity, LI MEP broadened its workforce development scope to include composite manufacturing. The collaboration of IWA, LI MEP began offering an Introduction to

Composite Manufacturing course, developed to provide workers with fundamental skills and certification in composite materials for the aviation, automotive, and renewable energy fields. This is one of the courses whereby WDI applied its reimbursable training options, enabling manufacturers to support their employees' development of new skills and retain their workforce with job stability and economic mobility.

Understanding the importance of engaging the next generation, LI MEP also developed a Summer Youth Workplace Program with the Suffolk County Labor Department and the Urban League of Long Island. Focused on addressing immediate industry skills gaps, this program introduced young adults to foundational training in STEM disciplines relevant to manufacturing. This program was designed as a hands-on opportunity, preparing students for a career in manufacturing and equipping them with the required entry-level skills.

LI MEP's participation in the New York Talent Pipeline Program (NYTPP), a program funded by Naval Sea Systems Command, only served as further testament to its commitment to workforce development. Long Island is a critical region supplying the Defense Industrial Base (DIB) by maintaining a skilled talent pool focused on the unique needs of maritime and defense manufacturers.

Complementing these initiatives, LI MEP made regular site visits to Long Island manufacturers, which provided the opportunity for the team to identify company-specific training needs and come up with solutions for job entry, technical training, and upskilling. Every visit called attention to LI MEP's relationship-based approach to workforce development, where local manufacturers can receive just the right assistance to boost their productivity and retain skilled workers in an increasingly competitive labor market.

Through these efforts LI MEP has continued to be a regional leader in workforce development, outfitting our manufacturers and their employees with information, support, resources and guidance required to succeed in an ever-changing economic environment.

**FuzeHub
Statewide
Elena Garuc**

Activities and Accomplishments and Types of Companies Assisted:

FuzeHub supports a statewide client base and New York's regional MEP centers through the following programs.

Solutions Programs

In 2023, FuzeHub's Solutions Program responded to 211 requests for assistance from manufacturers, technology companies, and startups, and provided them with 413 resource referrals. Key stats include:

- Early stage manufactures combined with very small companies to account for 84% of requests.
- Requests primarily originated from the NYC region (23%), the Capital Region (16%), Finger Lakes Region (10%), and Long Island (10%).
- Requestors were most involved in the fields of Consumer/Industrial Products (25%), Clean Technology (18%), Bio-Tech & Life Sciences (15%), and Advanced Materials (15%).

FuzeHub has continued to increase programs encouraging adoption of advanced technologies. Working with two regional MEP centers, FuzeHub completed a pilot program to make Virtual Reality (VR) training available to manufacturers. By acquiring a user's license for multiple headsets and curriculum FuzeHub, along with regional partners, was able to provide manufacturers the opportunity to test technology that would otherwise have been cost-prohibitive.

Additionally, FuzeHub has expanded access to its Universal Robot UR-5e collaborative robot. Loaned to a regional MEP center, the robot was made available for event demonstrations, highlighting NYMEP's involvement in robotic technologies. The robot has also been made available to small entities through a local maker space, with at least one manufacturing start-up successfully leveraging the technology to develop a product, form an LLC, and make an initial product sale.

FuzeHub Hardware Manufacturing Workshop

In August, 11 entrepreneurs from across New York teamed up with 8 experts/mentors for FuzeHub's collaborative Hardware Manufacturing Workshop at SUNY New Paltz. This in-person bootcamp provided entrepreneurs with expertise, tangible exercises, and the necessary tools to help improve their products, reduce costs, and accelerate commercialization.

Industry experts led engaging sessions on topics that included: Design for Manufacturability, Developing an Intelligent Bill of Materials, Steps for Working with a Contract Manufacturer, Marketing Strategies to Generate Product Interest, and Upcoming Funding Opportunities. In between sessions, mentors met with entrepreneurs 1-on-1 to provide design feedback and guide them through worksheets specifically created to advance their prototypes to production-ready products. The event also included a walking tour of the Hudson Valley Additive Manufacturing Center (HVAMC) and culminated in a networking reception.

Jeff Lawrence Innovation Fund

In 2023, FuzeHub administered 56 ongoing manufacturing commercialization awards, adding 27 more to its portfolio totaling over 180 projects since the lifetime of the Fund. The Innovation Fund also received additional funding from the EDA.

Other Events and Marketing

FuzeHub organized 14 events, attracting over 1,600 attendees. Highlighting a few for food manufactures: Growth of the Urban Foodscape, a manufacturing forum held at Farmingdale State College on Long Island; and Vitality in the Valley, a manufacturing expo held in the Mohawk Valley. Each event attracted over 125 attendees.

FuzeHub also organized two hands-on workshops in 2023. The first was a Hardware Prototyping Workshop at SUNY New Paltz with 25 participants. The second was a Marketing Essentials for Growth Workshop on September 19th with 35 participants.

In addition, FuzeHub organized a Cybersecurity Workshop for manufacturers who are part of the U.S. Department of Defense Supply Chain. This event was at the Center of Excellence for Wireless and Information Technology (CEWIT) at Stony Brook University and had over 75 attendees.

As part of FuzeHub's ongoing support for the transportation supply chain, FuzeHub was also the lead sponsor for a delegation of New York State manufacturers to Aeromart Montreal in Montreal, Canada. To help offset the cost of this biennial event, FuzeHub applied for and received a grant from Global NY.

Finally, FuzeHub organized the annual New York State Innovation Summit, which was held at the Saratoga Convention. This event attracted more than 500 registrants and over 100 exhibitors.

Through its marketing efforts, FuzeHub received over 70,000 website views across its various website and 100 media hits.

Attracting Federal Funding

FuzeHub administered a \$325,000 grant from the Department of Defense (DoD). The program will result in 12 awarded project grants up to \$25,000 each, which will assist defense manufacturers in NYS with industry 4.0 and modernization services.

FuzeHub applied and was selected as a finalist for a \$160M National Science Foundation (NSF) Engine Program. Upstate Makes: A Manufacturing Innovation Engine for Manufacturing Sustainability advanced to the final stage of the merit review process. Of the 188 applications, 16 finalists were selected for an onsite visit.

FuzeHub put in an appropriation request to Senators Schumer and Gillibrand. Manufacturing Readiness for Distressed Communities.

FuzeHub was awarded \$600k for an Advanced Materials Project through Empire State Development/NYSTAR and the NY MEP program.

Types of companies assisted:

Primarily small and mid-sized manufacturers.

Impacts

	01/01/2023 - 12/31/2023
Number of unique companies served	111
Number of jobs created	66
Number of jobs retained	99
Increased/retained sales	\$2,243,792
Cost Savings	\$5,841,918
New investment	\$7,855,681
Non-job Impacts Total	\$15,941,391

Center Funding

01/01/2023 - 12/31/2023	
State Funding	\$1,298,000
Federal Funding	\$1,135,194
Matching Funds	0
MEP-Dedicated Employees	5.90

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NYMEP OVERALL

The charts below reflect information and impacts generated by all 11 centers during calendar year 2023.

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2023-4 - IMPACT Metrics as of Wednesday, January 8, 2025

CAR Operations Performance Management IMPACT Metrics						
CAR Current Quarter Performance			90			
Federal Funding - \$6,877,960.00 Total Cash Resources - \$13,477,620.00 (Four Quarter Rolling Average)						
Impact Metrics						
Metric	CAR Reported Impact	Normalized CAR Performance	Performance Standard	CAR Metric Points	NatNet Median Performance	From Threshold
Impact data based on MEP Client Survey responses (60/70)						
New Sales (10)	\$194.5 M	\$28.3	\$15	10	\$25.6	189%
Retained Sales (10)	\$788.1 M	\$114.6	\$35	10	\$52.3	327%
Jobs Created and Retained (10)	6,275	912.3	500	10	606.6	182%
New Investment (10)	\$221.4 M	\$32.2	\$15	10	\$28.3	215%
Cost Savings (10)	\$43.7 M	\$6.3	\$7	0	\$9.6	91%
Percent Improving Competitiveness (10)	586.0 / 667.0	87.9%	80%	10	83.1%	7.9 PP
Net Promoter Score(r) (10)	86.4 - 3.2	83.2%	75%	10	85.2%	8.2 PP
Impact data based on Client/Project Submissions (30/30)						
Mfg.Clients / \$M Fed (15)	538	78.0	73	15	78.4	107%
New Mfg.Clients / \$M Fed (15)	242	35.0	29	15	33.8	121%
Supplemental Data (/)						
Survey Response Rate (0)	667.0 / 966.0	69.0%	70%	N/A	76.9	-1 PP

- This performance measurement tool is one component of a broader evaluation process used to assess the health and success of a MEP Center.
- The Surveyable Clients Per \$M Fed and Supplemental Metrics are new indicators for the IMPACT Metrics starting in the 2024Q3 performance period, so trend charts have limited information. They will improve as more data is collected in future periods, but may appear incomplete in the meantime.
- Net Promoter, Net Promoter System, Net Promoter Score, NPS and the NPS-related emoticons are registered trademarks of Bain & Company, Inc., Fred Reichheld and Satmetrix Systems, Inc.
- PP - Percentage Points

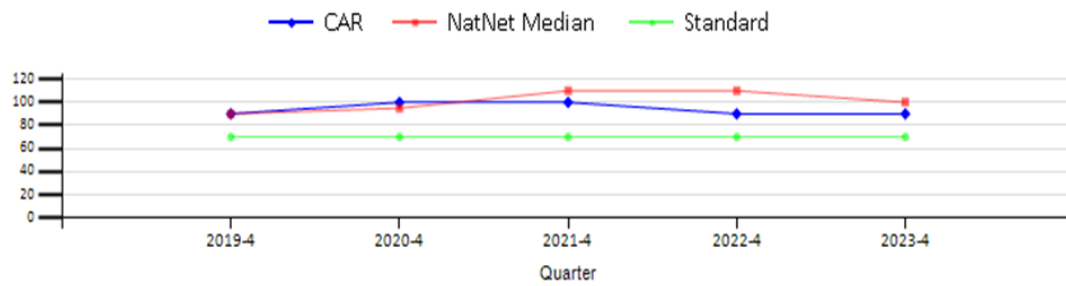
1

¹ CAR stands for Competitive Award Recipient

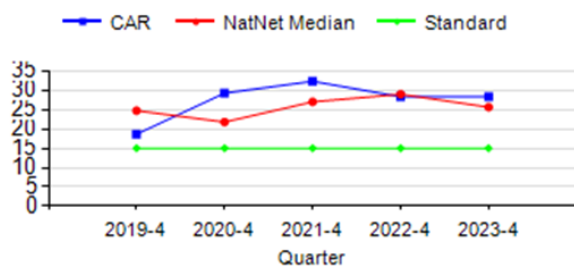
NatNetMedian is the National Network Median Performance across the entire NIST MEP Network

NYSTAR's New York Manufacturing Extension Report (2024)

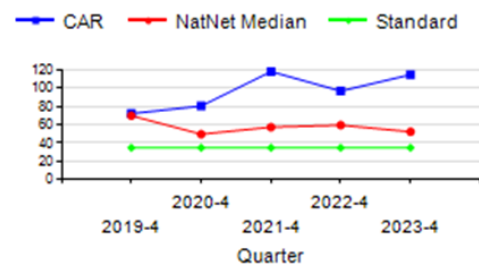
Impact Metrics - New York Manufacturing Extension Partnership



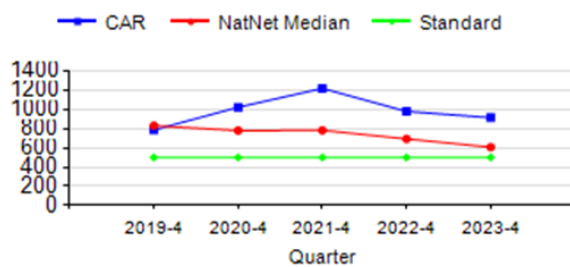
New Sales (10)



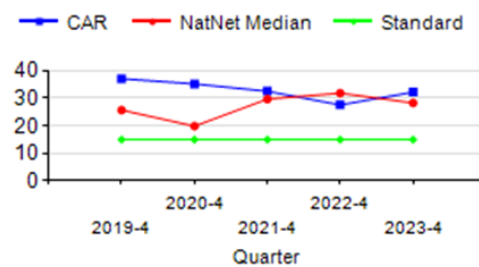
Retained Sales (10)



Jobs Created and Retained (10)

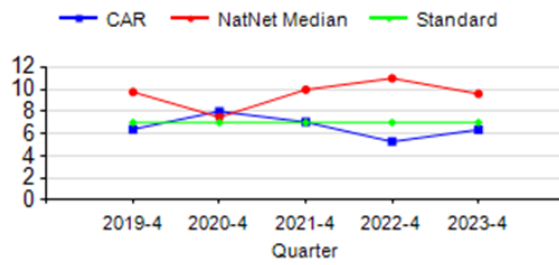


New Investment (10)

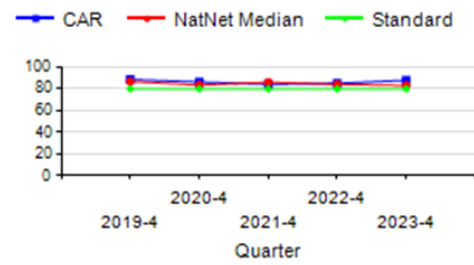


NYSTAR's New York Manufacturing Extension Report (2024)

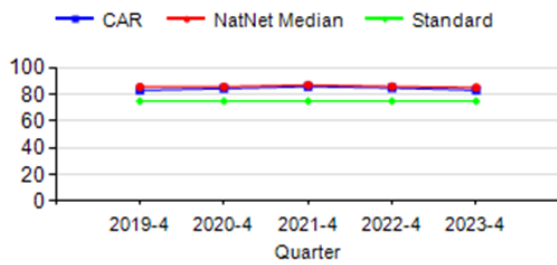
Cost Savings (10)



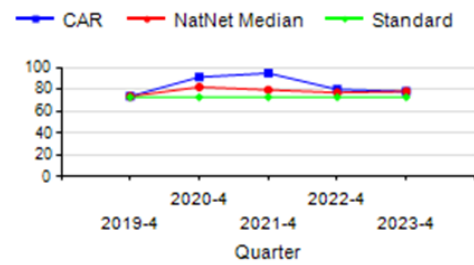
Percent Improving Competitiveness (10)



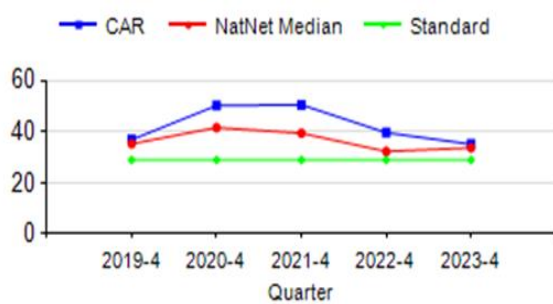
Net Promoter Score(r) (10)



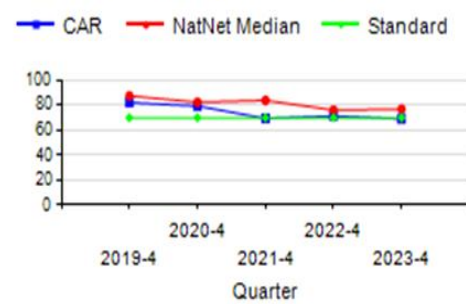
Mfg. Clients / \$M Fed (15)



New Mfg. Clients / \$M Fed (15)



Survey Response Rate (0)



APPENDIX

NIST MEP Score Card – NIST MEP creates Score Cards for each state center. All calculations are based on the sum (or aggregate) of the impacts reported by the center's clients over a rolling 4 quarter period. Each category is listed in the table below.

NIST MEP Operations Performance Management Score		
For each metric category, a score of 10 is given for meeting or exceeding the metric threshold. If a metric is below the threshold, a score of zero is given. Scores are based on a rolling four quarter average of survey results.		
Metric	Threshold	
New Sales	\$15	Per million federal funding
Retained Sales	\$35	Per million federal funding
Jobs Created and Retained	500	Per million federal funding
New Investment	\$15	Per million federal funding
Cost Savings	\$7	Per million federal funding
Percent Improving Competitiveness	80%	% of companies that realized a benefit
Survey Response Rate	70%	Percentage % of companies submitted for survey and complete the survey
Net Promoter Score	75	Companies rank from 1 to 10 the likelihood of recommending the center to others
Manufacturing Clients / \$M Fed	65.0	Per million federal funding
New Manufacturing Clients / \$M Fed	28.0	Per million federal funding