

**Mohawk Valley:  
Inventory of Sector-Based Workforce Strategies 2016**

Developed by:  
Workforce Development Board  
of Herkimer, Madison and Oneida Counties  
Fulton, Montgomery and Schoharie Counties  
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## Executive Summary

The Mohawk Valley has long been America's innovation incubator. Early in the 19th Century, the construction of the Erie Canal vaulted New York into the role of a world leader in design, engineering, technology and entrepreneurial dominance. Two centuries later and just a few miles down the road from where that shovel was turned for "Clinton's Ditch", the first shovel of earth was turned on Nano Utica and Marcy Nanocenter. This new investment will help expand the State's growing nanotechnology hub – and it will transform the Mohawk Valley in the process. Nano Utica and Marcy Nanocenter are expected to leverage more than \$20 billion in high technology investments and 300 corporate industry partners from the SUNY Polytechnic Institute's College of Nanoscale Science and Engineering's (CNSE) Albany campus, by establishing an expanded nanotechnology footprint at the newly merged SUNYPI campus in Utica and a key focal point along the Nano Canal Corridor.

But the Workforce Development partners of the Mohawk Valley understand that opportunity runs deeper than just the Nano Utica project, and are working in high-growth emerging sectors as well as regional mainstays to bring together employers, educators and economic development to ensure that the workforce needs of the present are met as the region builds for the future.

**Cyber:** Led by the Air Force Research Laboratory Information Directorate in Rome with its \$284,358,928 economic impact, the Mohawk Valley has developed a significant niche in the IT industry over the last half century. Today, international firms such as PAR Technology, BAE Systems, and ITT Industries have offices in the region, and homegrown companies such as Black River Systems and Assured Information Security are becoming forces in the industry. Fueling the growth of this industry in the region is the expansive IT talent pool generated by our eleven local colleges and universities.

**UAS:** Griffiss International Airport is one of six national sites to test the commercial use of Unmanned Aerial Systems, an effort that is being led by a two-state consortium known as the Northeast UAS Airspace Integration Research Alliance, or NUAIR. With more than 40 industry, technology and academic partners in New York and Massachusetts, NUAIR will lead the formation of a new industry cluster to make making the Upstate economy a pioneer in the development and commercialization of UAS systems that will help make the Region a hub of new economic activity. NUAIR is also a multi-regional partnership between MVREDC and the Central New York REDC.

**Manufacturing:** While manufacturing has not disappeared from the Mohawk Valley, it has changed dramatically, both in terms of use of ever expanding technology and the need for a skilled workforce, a workforce well versed in science, technology, engineering and math skills. From high-quality metals manufacturing to a food processing sector that is growing, manufacturing remains a vital element in the Mohawk Valley's economy as well as a career option for individuals who need hands-on, high-wage employment.

**Health care:** The health care sector continues to grow and evolve as the needs of the region's population change. The population has grown older, with many more retirees, but the expectations of this group for health care that addresses and offers services to increase and extend quality of life has likewise grown. Training programs have forged partnerships with

employers to ensure that as the health care industry changes, the workforce system continues to help employers meet needs.

### Workforce Sector Strategy Grids:

<b>Name</b>	<b>Nanotechnology Career Pathways</b>
<b>Phase</b>	Implementing
<b>Need</b>	The Quad-C Development and Marcy Nanocenter projects, developed through a collaboration by Mohawk Valley's REDC, Empire State Development, and Gov. Andrew Cuomo, have the potential to bring 5,000 jobs to the region, providing a tremendous opportunity for individuals with the right skill sets.
<b>Relation to REDC / WIOA</b>	The Marcy Nano projects have been at the top of the MVREDC agenda since the formation of the REDC.
<b>Strategy</b>	<p>The Marcy project will include a wide range of jobs. With this project in mind, the Workforce Development Board of Herkimer, Madison and Oneida Counties secured an American Apprenticeship grant from the U.S. Department of Labor to augment traditional apprenticeships with high-tech sector apprenticeships that can move lower-skilled area residents into higher-skilled jobs. With multiple pathways to multiple careers, the project offers the opportunity for long-range workforce transformation and the creation of a vibrant apprenticeship system that can grow the long-range workforce.</p> <p>Secondarily, the region is looking at a longer-range transformation through the development of STEM Hubs through the local BOCES. The logic is simple: As the region grows more jobs that require higher education and training, efforts to build the science and technology workforce of the future must begin at the pre-college level.</p> <p>Further, through the BEAM project, the HMO WDB is seeking to attract young adults who "stopped out" in college, or graduated with degrees that did not result in employment, into the many fields that will be growing jobs at Marcy so that young adults with some education can make a rapid transition to the workforce.</p>
<b>Use of Available Resources</b>	<p>The WDB, along with educational partners including Mohawk Valley Community College and SUNY Polytechnic, has been operating a Working Solutions American Job Center office on the SUNY site to serve as a point of contact for individuals interested in jobs. Through this office, potential trainees who need college degree courses can be referred to local colleges, where they can use Pell and other benefits.</p> <p>Local BOCES are currently developing projects and pathways within their existing resources.</p>
<b>Critical Elements Unaddressed</b>	<p>With limited employment on site as of mid-2016, traditional grant funding streams requiring employer support for training cannot address needs.</p> <p>Major curriculum transformations that could be brought to scale regionally would require funding for a years-long process of changing how schools teach technology</p>

<b>Name</b>	<b>Cybersecurity Workforce Development</b>
<b>Phase</b>	Implementing
<b>Need</b>	With the Air Force Research Lab as its nucleus, the region has developed a successful and growing cybersecurity sector. As the spread of cyber processes continues, and the threat of cyber-attacks grows, cybersecurity is adapting into two distinct spheres – the software developers and engineers who design systems to protect vital data and those who – in a manufacturing, health care, or finance environment – need cybersecurity skills as part of their jobs.
<b>Relation to REDC / WIOA</b>	Growing the cyber sector is among the top goals in every MVREDC plan.
<b>Strategy</b>	<p>Cybersecurity requires advanced education. Thus, long-range workforce development is essential. For that reason, the WDB developed and is implementing the grant-funded Career Pathways for Youth project, which also addresses the regional Opportunity Agenda to help low-income young people acquire the skills they need for the future. As part of a project providing summer employment, youth will be learning about cyber systems in the context of Unmanned Aerial Systems.</p> <p>The WDB is also partnering with MVCC to create a regional Cybersecurity Workforce Development Council that would unite the many agencies and employers involved in the sector to focus on the key needs of the sector and create a collaborative, regional plan for increasing the numbers of students entering cybersecurity education and training programs.</p> <p>The WDB also seeks to work with educational and employer partners to broaden the local internship pool to assist local students in acquiring the real-world experience that can help them pursue a career in this sector.</p>
<b>Use of Available Resources</b>	The WDB uses existing staff to support its outreach efforts in the cyber sector; it secured a USDOL grant to fund the Career Pathways for Youth project.
<b>Critical Elements Unaddressed</b>	The cyber sector often needs high-cost training for certifications and credentials. In a sphere of limited resources, these high-cost trainings are often not something that the workforce system can support.

<b>Name</b>	<b>Unmanned Aerial Systems (UAS) Career Training</b>
<b>Phase</b>	Developing
<b>Need</b>	Oneida County is one of only six sites in the nation testing the use of UAS in domestic airspace. Through the NUAIR Alliance, Griffiss Park has become a focus on UAS activity. The sector is widely considered to be a high-growth one, with a projected 2,500 jobs possible by 2020.
<b>Relation to REDC / WIOA</b>	Attracting and enhancing the UAS presence in Oneida County is a prime goal for the MVREDC.
<b>Strategy</b>	From a skill set perspective, Unmanned Aerial Systems combine many of the threads of key Mohawk Valley sectors, plus there is a very high community interest in learning more about them. For that reason, the WDB focused upon this sector in its Career Pathways for Youth project, which is a long-range workforce development project aimed at helping low-income youth learn key basic skills in science and math and develop career awareness about what the region has in store in these areas. The WDB is also supporting the efforts of MVCC, which is both enhancing its programmatic offerings and degree offerings but also adding key hardware that is essential for training the UAS workforce.
<b>Use of Available Resources</b>	Current efforts to support UAS have involved existing personnel and grants secured through New York State and the U.S. Department of Labor.
<b>Critical Elements Unaddressed</b>	UAS is a sector of tremendous potential. Job opportunities remain limited in the present. Thus, although the WDB and its partners know the kinds of programs needed to train UAS workers, full implementation cannot move forward until the FAA clears the way for UAS to fly in domestic airspace.

<b>Name</b>	<b>Advanced Manufacturing Recruitment &amp; Training</b>
<b>Phase</b>	Implementing
<b>Need</b>	The region has a strong manufacturing presence that involves multiple sub-sectors, from food processing to high-quality metals manufacturing.
<b>Relation to REDC / WIOA</b>	Retaining the current employers and jobs, while helping those employers add jobs, has been and remains a key piece of the MVREDC strategy across all six of its counties.
<b>Strategy</b>	<p>The HMO WDB is working with manufacturing partners to replicate existing apprenticeship programs through the American Apprenticeship grant referenced above. This strategy aligns with the workforce, which often has many barriers to employment. Both the HOM and FMSWDBs has secured, and continues to seek, OJT Funding to assist manufacturers with the development of their workforce. Most manufacturers are small, and their needs require adding employees one at a time. This approach allows them to find workers with limited skills, which reduces the region's unemployment, and train them in the specialized process of their workplace. The FMS WDB just completed a three-year USDOL Workforce Innovation Fund grant that focused on two-step contracts beginning either with pre-employment classroom training or with an OJT with the second step being an OJT or upgrade training. The ability to keep, train, and promote a workforce is very important when manufacturers are small and their applicant pool is limited.</p> <p>In partnership with MVCC, the region is implementing a re-focused Manufacturing Extension Project that is designed to help manufacturers address a wide variety of training and operation issues that can impact productivity.</p> <p>As the region's unemployment falls, innovative approaches are needed to sectoral development. At the Oneida County Correctional Facility, the Oneida County Office of Workforce Development is partnering with MVCC to provide skills training that could allow young adults to leave the jail after a first offense and find work in entry-level manufacturing opportunities.</p> <p>The FMS WDB has been working in partnership with FMCC and a group of employers to identify training needs and develop training programs for electro-mechanical technicians. As the current group of these employees reaches retirement age, it would be logical to fill these positions with less skilled employees - but only if training programs exist to up-skill them.</p>
<b>Use of Available Resources</b>	The local One-Stop system has made strong connections with manufacturing partners, and serves as the main conduit for employers to contact the WDB and other partners about their needs. This use of the existing system allows for a wide range of

	partners staff and programs to provide assistance to this key sector.
<b>Critical Elements Unaddressed</b>	Manufacturers generally report their highest level of training need is to comply with various OSHA and safety training issues that can be costly. Because these training efforts are generally not eligible for support through WIOA and other funding streams, they are a cost to the manufacturers.

<b>Name</b>	<b>Healthcare</b>
<b>Phase</b>	Initial Implementation
<b>Need</b>	The health care sector continues to grow and evolve as the needs of the region's population change. Training programs have forged partnerships with employers to ensure that as the health care industry changes, the workforce system continues to help employers meet needs. FMS has a Business Services Representative that targets the healthcare industry and its needs specifically. Examples of medium to high priority jobs in the region, the FMS LWDA, and the HMO LWDA include Registered Nurses, Licensed Practical Nurses, Radiologic Technologists, Physical Therapists, and other Healthcare Workers. In light of an aging population particularly in upstate New York, and the retirement of many older workers, the need for new health care workers in the pipeline will be ongoing as we try to meet the health care expectations of an older, but still active, population.
<b>Relation to REDC / WIOA</b>	Healthcare has been, and remains, a priority for the MVREDC. Healthcare offers many entry level job opportunities for the target participants under WIOA.
<b>Strategy</b>	Work with educational and employer partners to increase entry and advancement in the healthcare industry. Training dollars used to help fund certifications through OJT, customized training, and classroom training. Develop career awareness with our job seekers and out-of-school youth.
<b>Use of Available Resources</b>	A federally-funded Workforce Innovation Grant (WIF) has funded much of FMS' healthcare training for the past 4 years. Now that the WIF grant has ended, we are committed to continuing to seek funding beyond WIOA to provide training in the Healthcare sector. Work Experience funds will help support career exploration for youth willing to explore the healthcare industry.
<b>Critical Elements Unaddressed</b>	Several local healthcare facilities are supporting related up-skill training for their current staff. Although beneficial to their own facility, this reduces the availability of training slots for the

	unemployed. Currently there are more potential students than openings in many health programs.
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Name of Strategy

Mohawk Valley Workforce Coalition

Phase of Development

Conceptual, Initial Implementation Date of October 2016

Workforce Demand (Need)

Based on data from NYS Department of Labor's Regional Economist, information from our Regional Business Services Team and individual LWDB Business Services Teams and Boards, it is easy to document the abundance of middle skill job openings across the Mohawk Valley Region in Health Care. Examples of medium to high priority jobs in the region, the FMS LWDA, and the HMO LWDA include Registered Nurses, Licensed Practical Nurses, Radiologic Technologists, Physical Therapists, and other Healthcare Workers. In light of an aging population particularly in upstate New York, and the retirement of many older workers, the need for new health care workers in the pipeline will be ongoing for the future.

Based on data from NYS Department of Labor's Regional Economist, information from our Regional Business Services Team and individual LWDB Business Services Teams and Boards, it is easy to document the many middle skill job openings across the Mohawk Valley Region in Advanced Manufacturing and associated fields such as Transportation. While the belief is that Manufacturing is no longer a demand occupation in upstate New York, the fact is that the industry has not gone away, but that it has changed, requiring employees with greater skills in science, technology, engineering and math. Examples of medium to high priority Advanced Manufacturing jobs in the region, the FMS LWDA, and the HMO LWDA include Computer Controlled Machine Tool Operators; Machinists; Welders; Electricians; Heating, Air Conditioning and Refrigeration Mechanics, Multiple Machine Tool setters, Fork Lift Operators, Automotive Service Technicians and Mechanics, and Commercial Truck Drivers.

Relevance of Demand (Need) to REDC and WIOA Priorities

Both of these industry sectors show job demand and growth across the region. If businesses cannot acquire employees locally or regionally, they will either recruit from outside the region or move their industry to where the workforce is.

Strategy

The Coalition will be committed to a strategy that is regional, skill focused, systemic, and collaborative. The goal of the Coalition is to play an integral part in the transforming the region into a globally competitive economy characterized by a highly skilled workforce as identified in the MVREDC. Partners include the two Workforce Development Boards, state, regional and local economic development agencies; educational institutions, local government, organized

labor, education, and other workforce partners such as vocational rehabilitation, literacy, and community based organizations representing an emerging worker population.

#### Use of Available Resources

Utilizing the Mohawk Valley Workforce Coalition in an advisory capacity, the WDBs of the Mohawk Valley, either separated or together, will work to identify and access workforce funding available through a number of sources including NYSDOL'S Sector Partnership National Emergency Grant and Job-Driven NEG grant.

#### Critical Elements that Cannot be Addressed with Available Resources

Critical Elements include identification of specific training programs needed, staff training and getting buy-in from local Career Center staff, and working with a variety of partners to reduce silos.