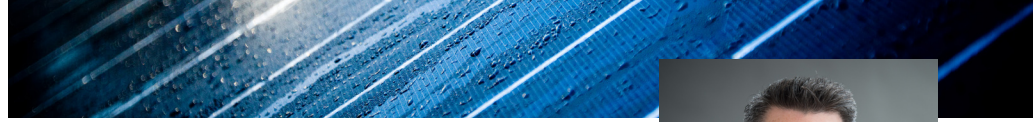


# Here IS HOW

**WE DEVELOP EXCELLENCE  
IN PEOPLE, PROCESS AND PRODUCT**



# Year in Review

To our many stakeholders,

For almost 30 years, our existence has been driven by the pursuit of fulfilling one purpose. We are here to connect you with assets of the University at Buffalo (UB) so that your business or organization operates better.

This year, UB's Center for Industrial Effectiveness (TCIE) placed greater emphasis on elevating the individual. Buffalo's status is rising as an attractive city for business investment. But the fact that some populations struggle to gain entry to the opportunities affiliated with these advances inspired us to diversify how we enable professional success. We are also committed to America's push for a return to manufacturing prominence, and doing our part in injecting the region with integral skills.

We believe in a collaborative approach to workforce development. The following are ways in fiscal year (FY) 2015-16 that we broadened opportunities for increasing competency, and are nudging ahead careers in every industry:

## **We opened a new avenue to manufacturing**

We introduced Western New York to the national Manufacturing Skill Standards Council (MSSC) in spring 2015 by becoming one of its authorized testing locations. Our partnership grew this year by adding MSSC's frontline production worker program – Certified Production Training (CPT) – to our lineup of courses. We also recognized the value in the Certified Logistics Technician (CLT) program, which would later debut in early FY 2016-17.

## **We helped the jobless**

A grant from the New York State Department of Labor (NYSDOL) was awarded to TCIE to train up to 50 dislocated workers for entry-level to mid-level manufacturing positions. The initiative, known as the Manufacturing Production Technician (MPT) program, involves a job readiness segment administered by UB's Educational Opportunity Center.

## **We built new relationships**

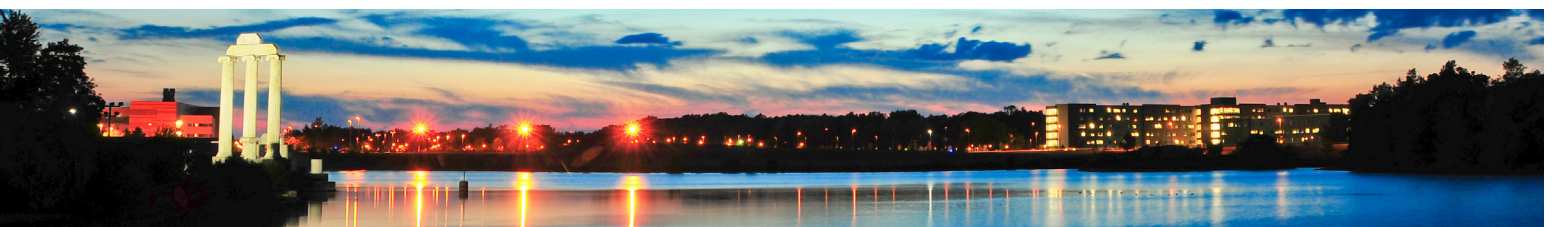
Whether contributing to national conversations or exposing resources closer to home, we expanded the list of those we call partners. Through an agreement with the Jamestown Community College Center for Continuing Education, we are bringing professional development classes to campuses in Dunkirk, Jamestown and Olean. In another breakthrough, funding from the Workforce Development Institute of Western New York lowered the cost for non-profit organizations to come together and learn the Lean methodology of reducing waste, as well as for manufacturers to pilot the CPT program. And on a national scale, we joined efforts with the Digital Manufacturing and Design Innovation Institute (DMDII), stepping up with top tier industry members and premier universities to support the advanced manufacturing workforce of the future.

The TCIE team and I are proud to assist in amplifying Western New York's workforce, making for stronger, sustainable enterprises.

Sincerely,

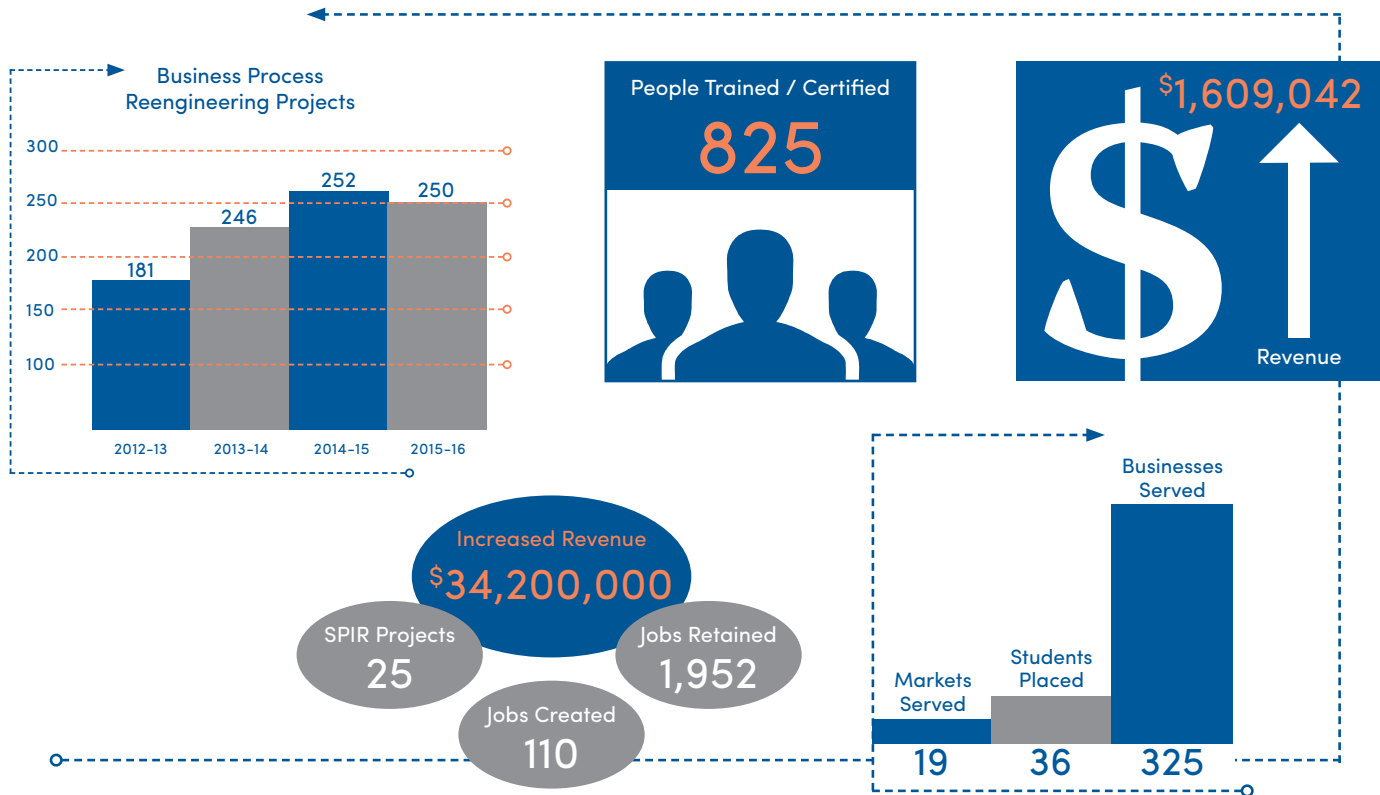
*Timothy Leyh*

Executive Director



# How We Measure Up

TCIE annually supports hundreds of public and private organizations to better support and sustain their strategy and execution. We do so by delivering operational excellence services to drive continual improvements, engineering solutions from UB's School of Engineering and Applied Sciences to ignite innovation, and professional development offerings to strengthen employee performance. We are also equipped to soften the financial impact associated with engaging technical expertise by administering the State University of New York's Strategic Partnership for Industrial Resurgence (SPIR) grant. The performance measures below provide a glimpse into our achievements.



## Our Mission & Values

The mission of TCIE is to be a leader in building the economy, by strengthening businesses and communities through excellence in service.

Our approach is to be a leading university extension service organization recognized for collaborating with diverse partners and providing a broad array of programming for our stakeholders.

### INTEGRITY Building our reputation by being

- Accountable
- Credible
- Ethical
- Respectful

### SERVICE Delivering results and fostering diversity by

- Being responsive
- Adding value
- Providing solutions
- Collaborating

### EXCELLENCE Exceeding stakeholder expectations by

- Achieving results
- Demonstrating leadership
- Leveraging our resources and expertise

### INNOVATION Fostering a culture of creativity by embracing

- Change
- Risk-taking
- Lifelong learning



*"I am heartened to see all around me at UB efforts to reach across the discipline boundaries to tackle the toughest challenges, and our SEAS faculty and students are at the heart of many of these efforts."*

Liesl Folks, PhD, MBA  
Dean, School of Engineering and Applied Sciences

# UB Engineering

UB is a premier research-intensive public university and a flagship institution in the 64-campus State University of New York (SUNY) system. UB Engineering, led by Dean Liesl Folks, is the largest and most comprehensive public school of engineering in New York. Annual research expenditures are \$58.6 million and the school's per faculty research expenditure places it in the top 10 percent of U.S. engineering schools.

The engineering departments are: Biomedical; Chemical and Biological; Civil, Structural and Environmental; Computer Science; Electrical; Industrial and Systems; Materials Design and Innovation (a collaborative effort with the College of Arts and Sciences); and Mechanical and Aerospace.

TCIE and UB Engineering support a university-wide initiative to boost the number of students who participate in experiential learning opportunities. Our three placement options – Graduate Student Engineering Projects, the Black Belt Certification Program and the Engineering Fellows Program – assist industry in solving problems, often leading to local employment opportunities upon graduation.

## TCIE Tools



### Operational Excellence

TCIE's skilled resource teams are highly effective agents, stressing a systemic and data-driven approach. A sampling of our services includes strategic planning, assessing gaps and identifying improvement opportunities, translating data, and implementing ISO, Lean and Six Sigma methodologies.



### Engineering Solutions

TCIE serves as a gateway to accessing high-quality research and development ventures provided through distinct faculty, talented students and state-of-the-art testing labs from all UB Engineering disciplines. Our technical assistance includes services such as facility layout and workflow analysis, finite element analysis and systems engineering.



### Professional Development

Facilitators with broad industry experience lead business improvement programs that range from workshops to certification courses. Engagement options include public enrollment and corporate contracts, through the formats of classroom-based learning, a blend of class and web-based learning, or a one-on-one approach of online education with private mentoring.



### Strategic Partnership for Industrial Resurgence (SPIR)

SPIR helps pay for technical expertise needed by New York State companies with fewer than 500 employees. Grant funds subsidize faculty and/or student projects, such as developing an innovation, introducing new technologies, or advancing product development and testing.

# Advanced Manufacturing Assets at UB

UB has long been committed to helping manufacturers – both regional and national – grow and sustain their competitiveness through numerous research initiatives and collaborations. The university has a reputation for being a leader in advanced manufacturing and design by integrating research, student learning and community engagement to provide impactful solutions.

The assets below are key ways that UB is engaged in elevating advanced manufacturing. These entities – whether a center of UB or a community-based collaboration – are educating future manufacturing leaders, shaping national policy and accelerating innovations.



# Litelab Corporation:

## Satisfying Customers and Employees

Leaders of Litelab Corporation in Buffalo, NY, have thought of themselves as entrepreneurs since the company's early days as a disco lighting pioneer. As they evolve toward employing advanced manufacturing practices in production of their lighting solutions, Chief Operating Officer Larry Christ views the Lean method of reducing waste as key.

Training and consultation provided by TCIE to Litelab employees has convinced him that Lean is a guidebook for success that also makes for a richer, more satisfying workplace. His commitment, paired with the dedication and enthusiasm of employees, is giving rise to a shift from indicting others to discussing processes. A culture of continuous improvement is taking shape.



*"You can use the [Lean] techniques in your personal life and in business. If you follow the book, you have a pathway to walk down. I keep copies of some of the key elements that I carry around in a folder."*  
Larry Christ, Chief Operating Officer

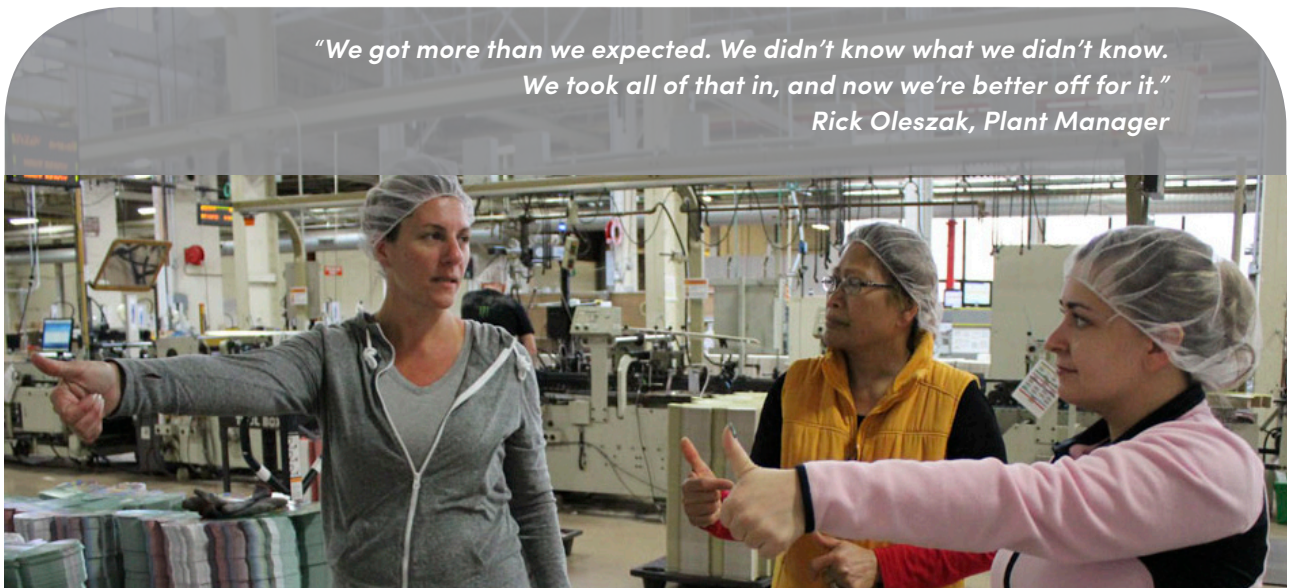
# MOD-PAC:

## Preventing Job-Related Injuries

Printers hum five days a week at MOD-PAC's Buffalo, NY, headquarters. Like any other manufacturing environment, the facility is a potential breeding ground for job-related injuries. MOD-PAC reached out to TCIE for expertise in objectively evaluating processes and identifying ways to minimize risk.

Industrial and Systems Engineering Assistant Professor Lora Cavuoto, PhD, and a graduate student assessed previous injuries, gauged ergonomic risk levels, suggested workstation alterations, developed a method for analyzing job risks, and trained employees in best practices. Their work prompted creation of new tools and a work rotation process, and greater focus on strategic machine use. The result is a significant reduction in lost work time due to injuries: 300 days lost in 2013, versus none in 2015.

*"We got more than we expected. We didn't know what we didn't know. We took all of that in, and now we're better off for it."*  
Rick Oleszak, Plant Manager





# NOCO Energy Corp:

## Fostering a “Show Me the Data” Mentality

The explosive growth of Tonawanda, NY-based NOCO Energy Corp. over the last 10 years has been accompanied by both growing pains and opportunities for improvement. With TCIE’s Six Sigma training programs, the company is building a “bench” of special project analysts equipped to solve problems with a systematic, data-driven approach.

One recruit is Fuel Billing Manager Emily Lynett, who quashed an issue that once consumed the majority of her work day and caused headaches throughout NOCO. The billing department was long blamed for the occurrence of an excessive number of incorrect invoices, resulting in customer credits or revised bills. Her Black Belt project uncovered that the problem originated well before it surfaced at her doorstep, prompting changes in earlier processes and diminishing credits/rebills by 90 percent.

*“We’re talking about more quantifiable things in meetings. It’s a lot less of ‘I think’ or ‘I heard.’ It’s more of, ‘Out of 35 deliveries, five were a problem,’ rather than, ‘All of the trucks have some problems.’”*  
*Michael Purinton, Business Analyst*

# Armstrong Pumps:

## Crafting a Layout to Match Manufacturing Demands

The physical structure of Armstrong Pumps in North Tonawanda, NY – where HVAC, plumbing and fire safety systems are made – is a hodgepodge of 12 facilities that have been gradually amassed since 1967. The resulting environment is one that stifles the manufacturing efficiencies typical of 21st-century operations. The floor plan is fraught with pipes, columns and varying ceiling heights. Ramps patch together buildings that were constructed on different ground levels.

TCIE was called upon to explore facility layout possibilities of the 8-½ acre company-owned property. The in-depth research efforts of Industrial and Systems Engineering professor Li Lin, PhD, with support from graduate-level students and a School of Architecture assistant professor, led to space configuration proposals that enable optimum operational flow and efficiency.

*“The thing that I enjoyed about working with UB is there’s a lot of talent. Dr. Lin had done other projects like this in Western New York, so we were able to tap into a lot of resources and network.”*  
*Jerry Najuch, Logistics Manager*





 University at Buffalo  
The Center for Industrial  
Effectiveness (TCIE)

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For more information, please contact:

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