

The NYSAC Workforce Intelligence Project: The Cornell Study of Advanced Manufacturing in the Southern Tier

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What is the Workforce Intelligence Project?

- Funded by a Grant from NYSDOL to NYSAC
- Goal: Counties, Regions can better direct their economic futures
- Two pronged approach
 - Develop a systematic method to better identify industry trends on a regional basis.
 - develop local strategies and action steps to address those trends.



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How this will be accomplished

- Grassroots: tools for local leaders to use to direct their own economic futures.
- Create models of workplace forecasting.
- Design research that makes sense.
- Mobilize key players
- Develop learning through local experience



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The Cornell Study on Advanced Manufacturing

- Conducted in November of 2006.
- Methods used:
 - Analysis of regional economic and workforce data
 - Census, NYSDOL LMI, Federal Reserve Bank and industry analysis published by private business and trade groups; and
 - Interviews with businesses and local leaders to “get behind the numbers.”



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Why the Southern Tier?

- Typifies challenges of the upstate New York Economy including loss of population and an aging workforce.
- History of Cooperation within the Region.



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Why Advanced Manufacturing?

- Advanced Manufacturing according to USDOL Labor is a specific set of industries with high-growth potential, using more advanced techniques in production.
- 15% jobs in the ST are manufacturing jobs.
 - 21% of the total payroll in the region.
- Advanced Manufacturing jobs make up 30% of all manufacturing jobs in the region.
 - high average annual wage of \$63,095.



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5 Key findings

- **Manufacturing matters in the Southern Tier**
- **Advanced manufacturing is present in the entire region.**
- **Wages are increasing for advanced manufacturing.**
- **The labor market is regional.**
- **The Southern Tier Paradox: fewer jobs in manufacturing overall, but there is a growing labor shortage.**



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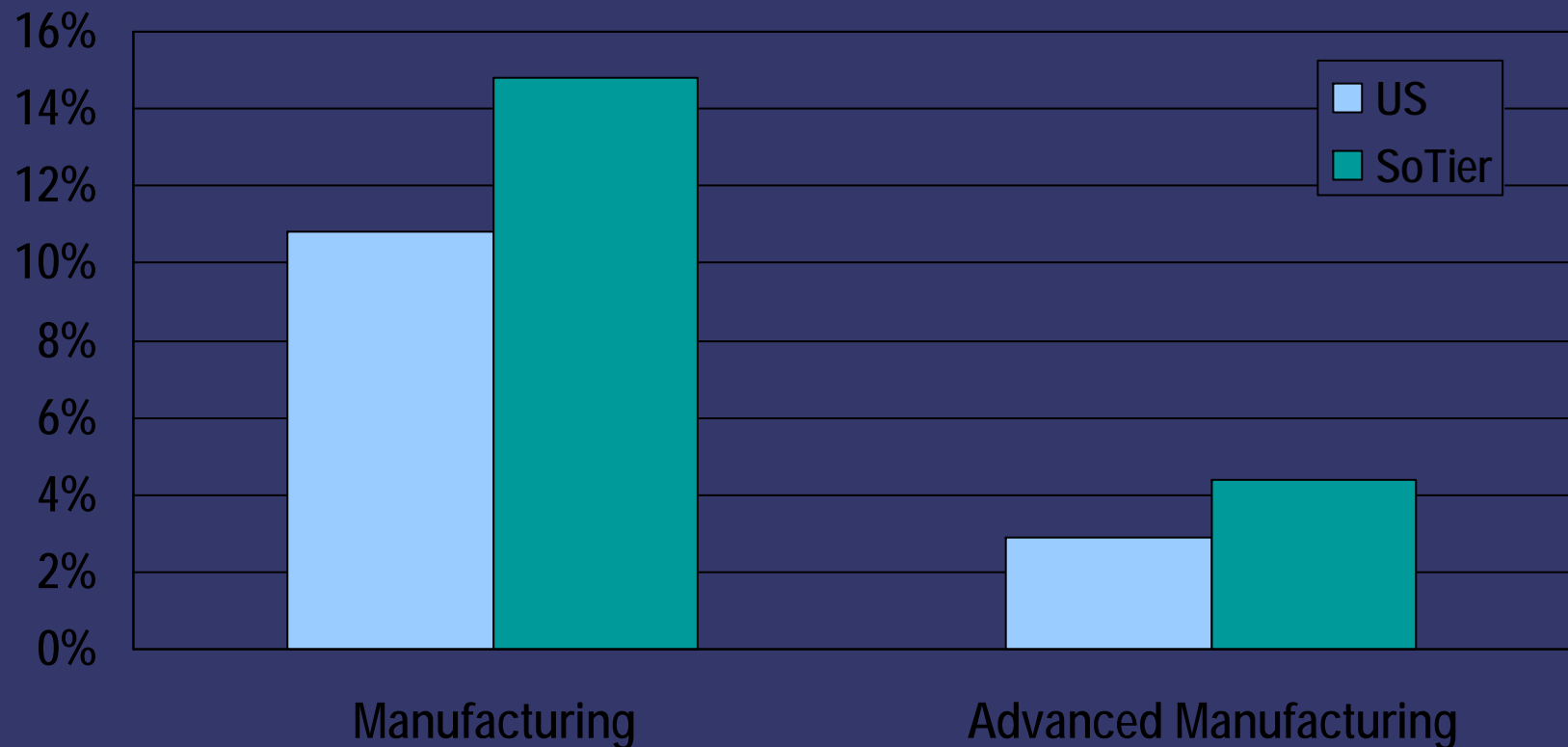
Finding 1: Manufacturing Matters in the Southern Tier

- Expertise = Competitiveness.
- Manufacturing Evolution: Traditional → Advanced. Skill levels in jobs are increasing.
- Manufacturing is a very strong part of the economy of the region, exceeding state and national averages.



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Southern Tier Economy is Strong in Manufacturing



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Finding 2: Advanced Manufacturing is present in the entire region.



BAE SYSTEMS

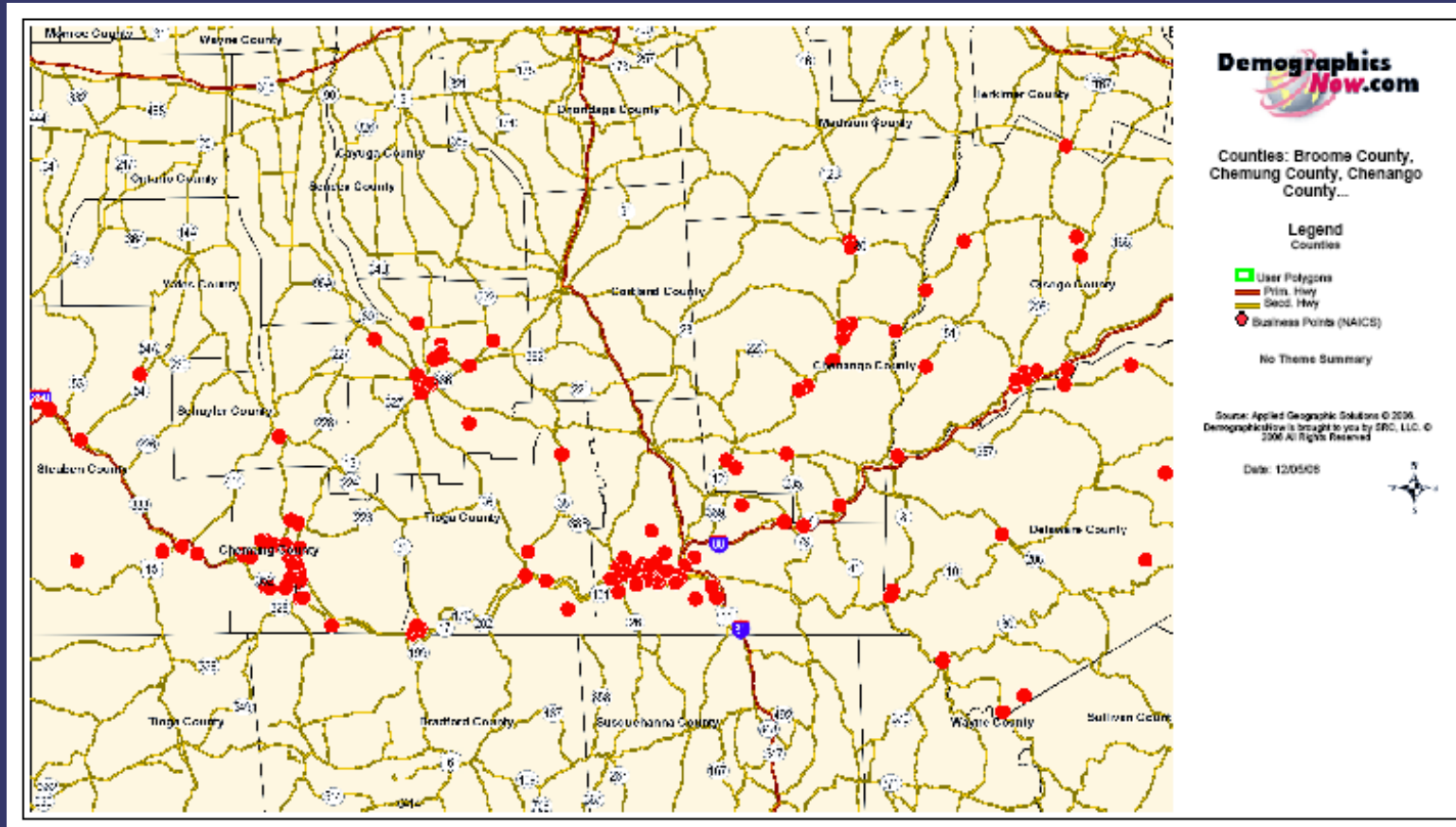


CORNING



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Location of Advanced Manufacturing Firms in the Southern Tier



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Finding 3: Wages are increasing for advanced manufacturing

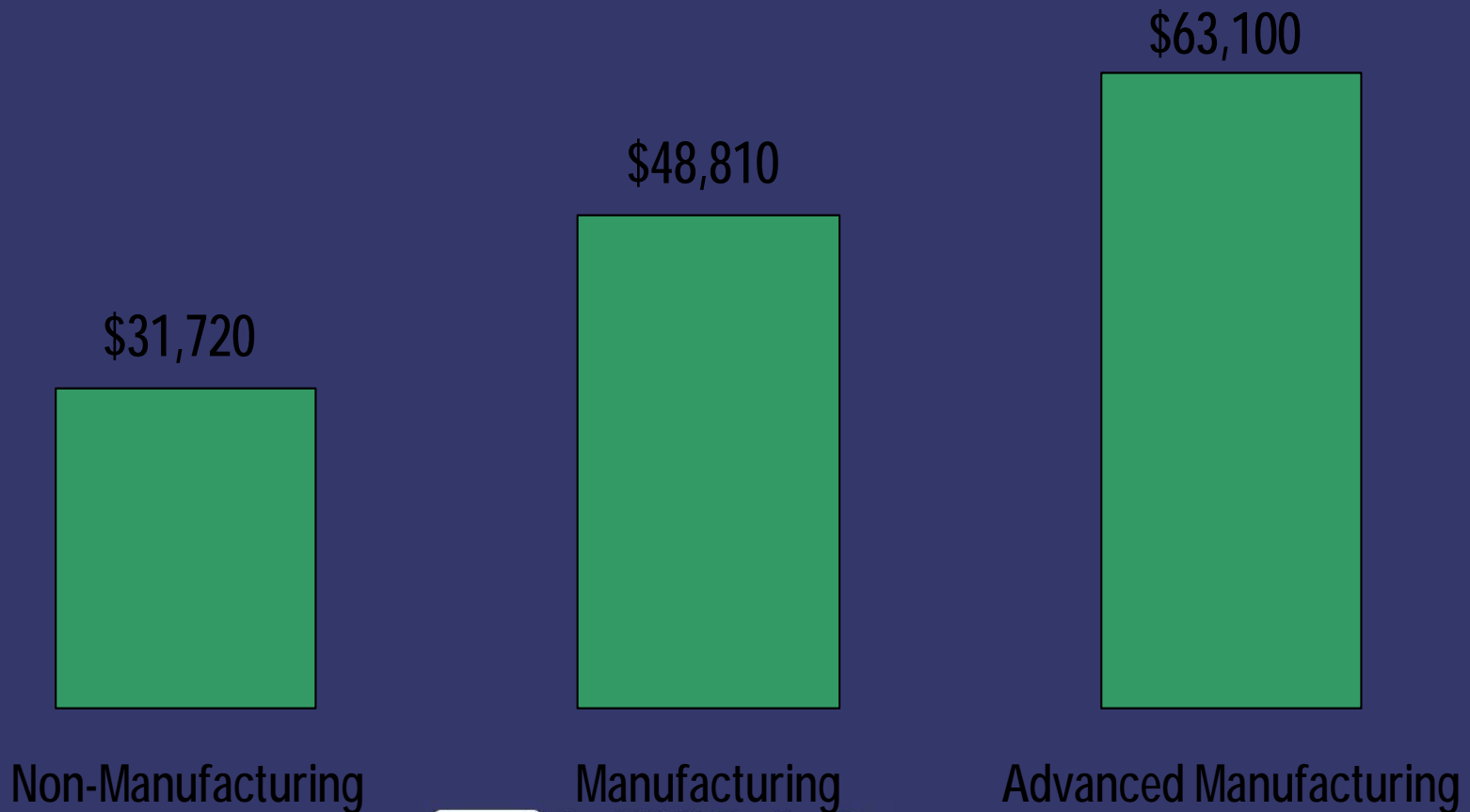
- Great paying jobs!



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Manufacturing Jobs in the Southern Tier are Paying Well ...

(Average Annual Income, 2005)



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Finding 4: The labor market is regional

- Workers do commute.

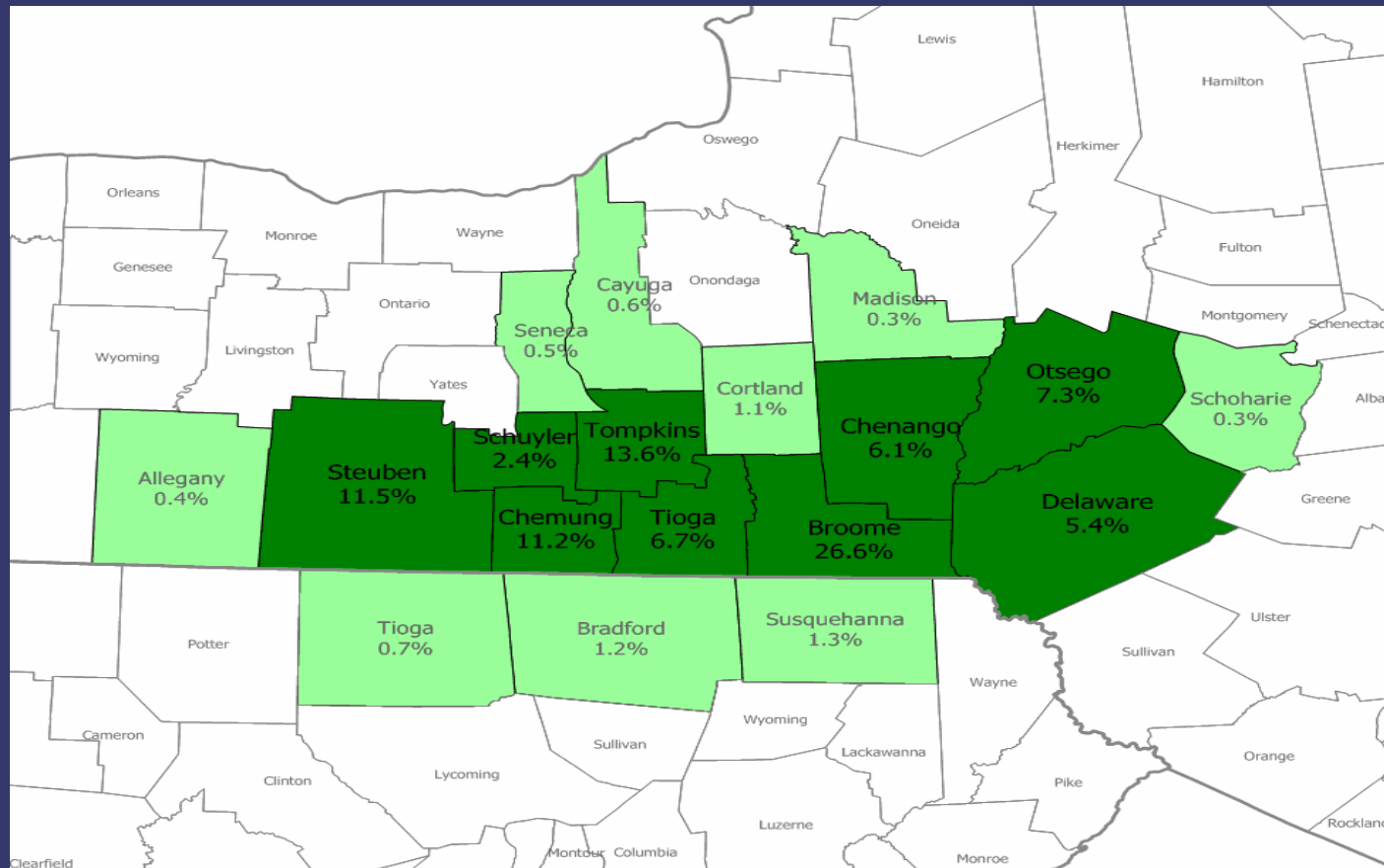
We're drawing engineers from a 40-mile radius, from two counties north all the way down into Pennsylvania.

--a medical equipment manufacturer



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Distribution of Workers Working in or Commuting to the Southern Tier, 2000



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Finding 5: The Paradox

The Southern Tier paradox: fewer jobs in manufacturing overall, but there is a growing labor shortage. Why?

- **Increased demand.**
- **Improved Productivity.**
- **Aging of Workforce and Retirements.**
- **Skill miss-match particularly for mid level jobs.**
- **Available workers in the region often don't have the right skills.**



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As a result...

There is a labor shortage crisis:

- **Employers are having a hard time finding workers, particularly at the mid and upper levels.**
- **Recruiting often = stealing workers from one another.**
- **Businesses are turning down work and thinking of relocating.**



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What Employers and Economic Developers Have to Say About Manufacturing

- High skill jobs are growing in manufacturing as industries restructure.
- A strong manufacturing sector has “ripple effects” throughout the economy, producing jobs in business and consumer services and retailing.



Employers speak out...

“We sell 100% outside the region, but we try to buy locally as much as possible in supplies and subcontracts because our founders are dedicated to the community. We do all of our fabrication locally.”

a medical equipment manufacturer

“We do, too. We use local assembly houses, then we do the testing and ship the product.”

a software/hardware maker



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Manufacturing Firms Are More Productive

- Large and small firms are oriented toward lean production.
- Small, growing firms have less visibility than large, down-sizing firms.



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A word about Lean

“Lean Manufacturing is the only way we’re going to stay competitive. We have a plan for growth, but the only way we can do it, given the workforce and the size of our factory, is lean manufacturing. We put our people through a year long program in lean manufacturing. It was a big commitment and a lot of work, especially front end, sending 10 to 12 people out for a three-day event. But the interesting payoff was a night-and-day change in attitude, those day-to-day hassles. Suddenly our people were thinking, “Someone actually *cares* about us and what we think.”

a medical equipment manufacturer



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How Do Firms Get the Workers They Need?

“We considered opening a satellite office in Orlando, because you have to go where the talent is.”

a simulation software firm CEO

Large Firms

High-Skilled : National recruiting

Medium-Skilled: Promote from within; national and regional recruiting

Entry-level: Regional recruiting

Small Firms

High-Skilled : Regional recruiting

Medium-Skilled : Promote from within; Some regional recruiting

Entry-Level: Applications from local labor market and training



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What Attracts High-Skilled Workers to the Southern Tier?

- **Previous experience with the area.**
- **The quality of life.**
- **The quality of schools**
- **The quality and range of cultural opportunities**



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A strategy for attracting workers:

“We’ve had around 120 **interns** in the past year. If you can get them to come here for a summer, and especially *two* summers, it’s a lot easier to persuade them to hire on: they had fun, they learned a lot, they see we have some cool programs and a ton of talent ... and they become a part of the technical community, which in turn helps sell the area.”

a large defense contractor



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What Limits the Region's Ability to Attract High-Skilled Workers?

“I think the key is the infrastructure to make people feel good about living here, the way it looks as they drive around, and socially, to support a sense of community.

1. Our **downtowns** need help. The kids – young singles – need a place to have a social network: nightlife, sporting events. The arts community, that's been a tremendous benefit.
2. We need to entice builders to build new, mixed, **planned communities**, not just one house at a time like they do here.
3. **Indoor recreation centers** for families during the winter months.
4. All the layers of government you see here, especially when people look at: ‘What value am I getting in **government services quality** for my money versus elsewhere.’
5. The **inflexibility of state monies** – to respond when the floods hit Binghamton or to jazz up downtown, for example.
6. A very **negative press.**”



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a large aerospace contractor

Employer Insights on Skill Needs and How to Better Meet Them

- Community Colleges are key but they need help
- Small and medium size employers have different labor force needs than large firms.

“Because of the difficulty of recruiting engineering talent from outside, we have to have a pretty solid engineering base that is local. That means we need solid K-12 schools and a good **community college** system. A lot of our engineers started in the engineering program at the community college, then went on to a 4-year school, the Clarksons and Cornells. Now I hear the community colleges are going in a different direction, more focused on the liberal arts. Wrong direction. I think that’s not well suited to our economy or our needs in this region.”

a large aerospace contractor



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Next Steps:

- Mobilize the key players
- More research in the Southern Tier.
- Spread the Learning



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What do you think?



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For more information...

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