Wearables and the ‘New Toolkit for Modern Manufacturers’

written by admin | February 2, 2016

With dozens of new products introduced at the Consumer Electronics Show, 2016 might really be the turning point for wearables on the factory floor. If you already implemented some of the new tech, get ready to upgrade. If you haven’t … why are you waiting?

(IW – Matt LaWell: 1-21-16) *Two seconds*. … In 1968, an IBM psychologist named Robert B. Miller presented a paper on computation response time at the Fall Joint Computer Conference that focused in part on that passed-in-a-flash stretch of time. Miller had been studying early computer operators for years and — long before the first personal computers, the first laptops, the first tablets, and certainly before the first connected eyeglasses and watches and rings — focused on what he called the *two-second response* theory.

“The tasks which humans can and will perform with machine communication will seriously change their character if response delays are greater than two seconds,” Miller wrote. More simply, we will shake our heads and walk away (or at least say we will) if our various devices fail to deliver what we ask within two seconds. Good thing wearables help cut down on that response time, technologically spoiling us that much more. The next round of wearables will continue the trend.

New hardware and software, some of it delivered at the most recent Consumer Electronics Show earlier this month in Las Vegas, could finally allow our dreams of a wired workforce to become reality. We all know that Google Glass sputtered for the consumer market and is a relative hit for the factory floor, and that Apple Watch has sparked more general interest than any other wearable, with strong potential for industry. There are plenty of other options out there now, though, and the number of choices will continue to climb.

The Daqri Smart Helmet and Kopin Smart Glass, for starters, “have the potential to give manufacturers more choices to support workers with real-time, on-body

connectivity to applications and data," said Plex CTO Jerry Foster, who is at work on new wearables apps for the floor and the warehouse.

"Wearable devices are part of the new toolkit for modern manufacturers," Foster said, "with cloud solutions making it easy to connect new products and innovation as fast as they hit the market." Which is a little slower than two seconds, but still really fast.

We are still in the early days of adaptation and implementation, but if this round of products delivers, 2016 really could be the turning point — especially for manufacturers.

Let's start with the scale of deployments, which could be even more important this year than the technology itself, at least according to Brian Ballard, CEO and co-founder of APX Labs, which has carved its early wearables niche in developing software for some major names in the oil, gas and defense sectors.

"Smart glasses really cemented themselves as something companies were using in 2015, but … it takes almost a year to get through everything," Ballard said. "You'll start seeing them used on a much larger scale than they were in 2015: Moving from one line to the whole factory, or from one factory to the whole bullpen of factories that support a process.

"There are still some areas inside logistics that we won't see — the hardware can't replace all the tools used today — but in field service and manufacturing, I think you're going to see a big uptick in the technology."

Ballard and APX Labs could play a part in that uptick, thanks to another recent round of funding that increased its total raised to $29 million and included considerable investment from General Electric, which is also a customer. (Boeing is another customer, as are two of the five largest companies in the oil and gas industries, though they don't allow their names to be used.)

"We started off in the defense space," Ballard said, "building software to power defense-focused wearable technology — almost entirely smart glasses and heads-up displays. … We thought you could eventually do anything and everything on

wearable glasses, so we built a flexible, powerful platform, then thought about our feature set in terms of specific verticals.

“If I’m a manufacturer, what are the five or 10 top things every manufacturer has to do? We put a lot of energy into those features, but it has flexibility for a bunch of different use cases.” Among those top 10 things are inspection and compliance, the collection and access of knowledge, and the implementation of an easy-to-use work process.

“The same platform your supervisors are using is the same one your technicians are using and the same one your supply chain is using. It’s a hyper-connected, multi-player work environment,” Ballard said. “We didn’t see this as just a bunch of individual users working together. We saw it as a team working together — with your existing legacy systems, with your robotics, with your IoT — and all that together could be a game-changer.”

What Will We Use? And Who Will Make It?

Glasses might not be the biggest game-changer, though. A recent study from IDC forecasts about 160 million wearables shipped in 2019, with more than 120 million of them headed for your wrist. (For the sake of comparison, about 25 million wearables shipped in 2014, and close to 80 million shipped last year.) Connected glasses, modular and clothing will make up almost all of the remaining quarter.

“A lot of companies will use ergonomic sensors,” including some in clothing, said Rana J. Pratap, principal technology consultant for LexInnova. Why clothing wearables? It’s a safety measure, more than anything else, and “safety is a huge area. I don’t see a lot of wearable applications used just for the heck of it. More will be used for safety, for improving the worker productivity.”

Clothing wearables could be used most prominently to help workers remain visible, especially to, say, forklift drivers, when they would otherwise remain hidden around corners or behind other machines. They could also, Pratap said, help maintain temperature in extreme conditions, though “those applications are more futuristic.”

At least as interesting as what the new wearables will be is *who* might be

manufacturing them. In a new paper titled “Wearable Technology: Patent Landscape Analysis,” LexInnova breaks down which companies have the most current wearable tech patent filings. Smartphone leaders Samsung and Apple do not top the list — ranking fourth and 12th, respectively, with 498 patents and 197 patents, with Fitbit even lower at 15th thanks to its 192 patents. Granted, those companies might have better patents — quality over quantity, which is also measured in the paper — but different companies at the top could open the door to more innovation and competition.

And the top three on that list? Microsoft and Philips, which are neck and neck at 757 and 756 wearable patents, respectively, and Alphabet (which is still just Google for all intents and purposes) at 602.

That number of patents, and the corresponding level of possibility, is exciting. “We’re in the first phase of wearables,” Plex vice president of development Jason Prater said. “In the next five to seven years, as the consumerization continues to drive the innovation, you’re going to see some amazing things. I think this iteration of wearables is going to continue to go faster.

“And even after that,” his Plex partner, CTO Jerry Foster, said, “you’re going to see ingestibles that start to monitor things inside you. That’s fascinating and kind of scary at the same time.” Technology, tracking you, measuring you, telling you about yourself … from your insides.

In a 2013 interview with *Wired*, Evernote CEO Phil Libin said that wearables will “make you more aware, more mindful. They’ll reduce the number of seconds in the day when you’re confused.” And they will keep you more aware and give you a sense of where you are, whether you wear them on your wrist, your fingers or your eyes, in your clothing … even whether you swallow them first.

“That’s what this whole connected universe will do,” Libin said. “It will make you a functionally smarter human.”

In just two seconds. Or less.

How the Internet of Things is Pivoting Manufacturers into Service Providers

written by admin | February 2, 2016

(Triple Pundit – Jennifer Tuohy: 1-27-16) Do you know the name of the company that made your doorbell?

If not, you're pretty typical: Many homeowners make a single purchase from a manufacturer and never return to buy updated models, instead moving on to another vendor or even another product. Industry insiders call it "one and done" – but the age of the smart home is turning this concept on its head.

Nowadays, baked-in Internet connectivity enables everything from your smart thermostat to your smart doorbell to upload new features "over the air." Thanks to the Internet of Things (IoT), one-and-done now means purchasing one product that gets better the longer a consumer has it.

It's a positive new spin on a perennial customer-loyalty problem, but it's one that poses some unique challenges.

Now, manufacturers must plan to continue to work on products, offering improvements and enhancements that can be delivered after the product leaves the loading dock. But this comes with a new responsibility for manufacturers: service and support. Manufacturers will need to be involved in the entire lifecycle of the product, not just its birth. Are they up to the challenge?

The start of a beautiful new relationship

The ability to improve a product after it is in the consumer's hands is the key for manufacturers looking to unlock the promise of IoT. Building sensors and Internet

connectivity into a product are just the beginning. What truly makes a product smart is the ability for it to develop intelligence — to learn and improve. It can either do this on its own through learning algorithms, or through after-market manufacturer input that improves the product with updates based on feedback from sensors and the users.

This new model is a reversal of the consumer-adverse process of making the initial product cheap, then increasing the price of the products needed to keep it functional (think: printers and ink or razors and blades). It hits on two of the core goals businesses should be striving for in today's market space:

1. **Increased profits.** By providing an Internet connection, a manufacturer can reach into a product after it's left the loading dock and fix any issues before they become bigger problems. As any company that has ever dealt with a recall knows, this ability will save millions of dollars. "A big part of the IoT's power comes in its ability to help businesses operate proactively instead of reactively; it essentially addresses problems before they've become problems," wrote Tom Chapman in this post for TriplePundit.

1. **Keeping Customers Happy.** The after-market value IoT can facilitate is almost limitless. By continuously adding value to its products, a manufacturer can transform its relationship with the consumer, creating brand loyalty that will extend to future purchases. For example, Nest Learning Thermostat debuted as a simple smart thermostat in 2011. It learned your routines and programmed itself for you, removing what was once a major pain for consumers.

Four years later, the Nest thermostat is the closest thing a smart home has to sentient brain. A Nest, whether it was bought in 2011 or 2015, can not only control the climate without input from the homeowner, but it can also control compatible lights: turning them on when it senses you are home and off when it senses you are away. It can activate Nest's compatible security camera to record when you leave the house, and shut down the HVAC system when its compatible Nest Protect detector senses smoke or carbon monoxide.

None of these features were a part of the original launch of the product, but now any

Nest owner can benefit from them. Nest also works with other manufacturer's products through its Works With Nest program, further extending its value to the consumer.

The new challenge: Service and support

Of course, this possibility of ongoing iteration presents a new challenge for manufacturers: No longer can a company simply manufacture the best doorbell engineering can produce and move on to the next model. The introduction of something changeable to a product, in this case connected "smarts," necessitates a service to go with it. Whether that service is simply support for the product, or whether it develops into an entire ecosystem that includes monthly fees (as Nest does with its cloud-based video recording for the Nest Cam), is a complicated choice. But in either case, the pivot to providing service and support with the product, while initially costly, will reap huge benefits.

For many Kickstarter-born or Silicon Valley startup products, support and the manufacturer go hand-in-hand, but for larger, more established manufacturers with legacy systems to circumnavigate, the pivot to becoming a service company poses a logistical challenge. Putting smarts into your product and then not providing support to back it up will, in the age of online customer reviews and Twitter, ensure a swift and brutal end to a product's lifecycle.

Better for the consumer, better for business

So, what are the benefits? The combination of data received through an IoT product and feedback through the service/support loop is incredibly valuable. After all, data is the currency of the new millennium. How that data is put to use will vary for each product, but first and foremost it can and should be used to inform product development, whether the product is already in the hands of consumers or still to come.

Take the example of Ring's Video Doorbell. The product was originally envisioned as a simple way to remotely communicate with whomever was at your front door. In an interview with TechCrunch, Ring's founder and CEO, Jamie Siminoff, said the company learned from early customers that many were finding strangers coming up

to their front doors and ringing the doorbell, then leaving when it was answered. This led the company to pivot from a simple connected doorbell to a full-featured security product, complete with motion alerts and motion-sensing recording, so that the doorbell doesn't even need to be pressed for the video to start recording. That video is then stored in the cloud, accessible anytime by the user for a monthly service fee.

The iteration didn't end there. Today, customers who purchased a Ring doorbell can have it unlock their front door, too, if they have a compatible smart door lock. Further integrations within the home are planned for Ring, meaning that while a $200 doorbell sounds like an extravagance, its current and future capabilities could one day save your home.

Service as a product

As manufacturers grapple with the changes IoT is bringing to their business, keeping the concept of service and support as a product foremost in the development process will serve them well. As we've seen, the benefit of a closer relationship with the customer will help produce products the consumer wants, driving up profits and minimizing the impact costly manufacturing mistakes have on the planet.

(Jennifer Tuohy is a tech enthusiast who is fascinated with Internet of Things smart products and the future possibilities they hold. She provides interesting insight on what IoT means for manufacturers.)

Manufacturing 4.0 on the Rise

written by admin | February 2, 2016

(Manufacturing Leadership – Jeff Moad: 1-21-16) A year ago, organizers of the massive German industrial trade show *Hannover Fair* released the results of a survey showing that, despite a rising chorus of attention devoted to the topic,

Industry 4.0 was a subject of conversation at only 50% of manufacturers. Keep in mind that many of the respondents to this study were from Germany, where the government embraced and invested in what it calls Industrie 4.0 as part of its High-Tech Strategy 2020 Action Plan in the hope of establishing the country as a leader in integrated digital industrial technologies.

That led some to note that there was a significant gap among manufacturers between the *attention being paid* to Industry 4.0 (*we call in Manufacturing 4.0)* and *interest in investment*. No big surprise there. Hype around technology-based innovation often outruns reality.

Recently, however, we've begun to notice signs that manufacturers are indeed beginning to take Manufacturing 4.0 much more seriously. In fact, results of a soon-to-be-released Manufacturing Leadership Council survey strongly suggest that, not only are manufacturers internally discussing M4.0, a great many—37%–are already implementing discrete or companywide M4.0-related projects. Twenty-nine percent said they even expect substantially all their production and assembly processes to be digitized within the next five years. That's up from 8% saying those processes are already digitized today.

Forty-eight percent of respondents to the MLC study said the M4.0 notion of digitizing and integrating core processes for the purpose of improving real-time visibility and agility represents nothing less than a new era in manufacturing. Another 44% called it a significant trend.

(Full details of the Manufacturing Leadership Council *Factories of the Future* study will be published in the February issue of the Manufacturing Leadership Journal.)

This was reinforced on a recent Critical Issues roundtable discussion call for Manufacturing Leadership Council Members entitled "Plant Floor Migration Strategies to Manufacturing 4.0." On the call, which featured a presentation by Prof. Dr. Detlef Zuehlke, Founder of Germany's Smart Factory Consortium and a leader in the Industrie 4.0 movement, several manufacturers said their companies are either researching and planning their M4.0 roadmap or actively implementing smart factory technologies.

A top manufacturing executive from a large industrial firm said his company is aggressively educating itself on M4.0 opportunities while assessing the current machine footprint in its factories.

An executive from a large maker of industrial materials, meanwhile, said his company has launched a M4.0 adoption effort. Central to that effort, he said, is training and education for workers and executives intended to help them understand how their roles and their thinking will need to change in a M4.0 era.

A manufacturing executive at a large pharmaceuticals manufacturer said his company is creating a roadmap that will allow it to transition from focusing on smart devices in its plants to entire smart factories. The initial focus, he said, is on strengthening connections between manufacturing execution systems and equipment control systems.

And an executive at a large, diversified industrial company said, after having spent the past two years researching M4.0 and planning for adoption, her company is launching pilot implementations across dozens of plants worldwide.

These manufacturers said the opportunity to reduce operating costs—through improvements such as predictive maintenance and greater equipment utilization—is only part of what's driving their interest in M4.0. Even more important, they said, is the opportunity to become much more agile and responsive to increasingly demanding customers by reducing cycle times, getting new products to market faster, and delivering greater value through smart, software-enabled products.

Indeed, said Dr. Zuehlke, M4.0 represents an opportunity for manufacturers to correct some of the damage that has resulted from a narrow focus on cost reduction over the past few years. That focus has resulted in outsourcing, long lead times, long product lifecycles and, ultimately, compromised customer satisfaction.

"Customers expect to be able to order by mouse click and to receive extremely fast deliver," said Dr. Zuehlke. "So we have to change our production strategy and bring production closer to the customer."

Dr. Zuehlke emphasized that the road to agile, digitized, and smart factory networks

will be a long one for most manufacturers. He estimated this will be a five-to-ten-year process, with plenty of challenges along the way. Standards that can support modular, plug-and-play smart M4.0 systems are still incomplete. And, he said, manufacturers will need to think differently to develop new business models that can take advantage of smart factories and smart products.

Given such challenges and the extended time frame that will be required for widespread adoption, it's certainly possible that manufacturers will, over time, lose their enthusiasm for the concept and that M4.0 will be just another buzzword footnote. (Remember Computer-Integrated Manufacturing?)

But, at least for now, manufacturers' commitment to M4.0 seems to be on the rise.

The State of Manufacturing Technology in 2016… and Beyond

written by admin | February 2, 2016

New technologies are changing the economies of scale so that large- and small-scale value chains can be successful.

(IW – Kimberly Knickle: 1-8-16) As an industry, manufacturing is "hot." Regions are creating manufacturing initiatives, countries are creating policies to lure manufacturing back and prepare the next generation of talent, maker fairs show entrepreneurs and small-scale artisans how they too can design and manufacture their own products, what manufacturers sell goes well beyond the 100-year-old recipe and the mechanical drawings, and new technologies are changing the economies of scale so that large- and small-scale value chains can be successful.

Worldwide manufacturers will spend an estimated $323 billion on external IT expenditures, according to IDC's Pivot Table: Worldwide Manufacturing IT Spending Guide, Version 2, 2013–2018. All of this change means that IT is increasingly an

integral part of manufacturing's success and we're on our way to a digital transformation.

Our predictions span topics that are relevant across the entire company, in the plant operations, engineering and R&D, supply chain planning and execution, and service delivery. Key themes relate to customer engagement and customer service, supply chain modernization to support evolving market requirements and manufacturers' "need for speed," the fundamental nature of innovation in processes, products and services, and the fact is it isn't enough just to have technology—companies must work to create value from their investments and have the right talent. And most importantly, the rapid adoption of new technologies and innovation accelerators is changing business models.

I'd like to set the stage with some background, essentially a few of the drivers or expectations behind manufacturers' business priorities, IT initiatives and the predictions we share below. Our first driver is digital business transformation (DX) (see graphic at the top of the page) and the fact that manufacturers are applying and must apply third-platform technologies and innovation accelerators to enable DX. In our graphic, you can see the core technologies that includes, from Big Data and analytics to next generation security. For manufacturers, DX is changing the way manufacturers design, make and deliver products and services, as well as how they define those products and services.

Our second key driver is cyber-IQ, combining technologies such as the Internet of Things (IoT) and cognitive with massive datasets and advanced analytics and improving the way people and machines interact. In the manufacturing industry, this impacts everyday work and processes in our organizations as well as connections to suppliers and customers.

A couple of our drivers relate to manufacturers' dynamic business environment, including the way geographic regions increase competition, add customer complexity and operating challenges. Regional variations above and beyond cost will continue to factor into many manufacturing decisions—for example, which markets are emerging, where the best talent is located, and which factors are most relevant when selecting a new location for a plant.

Similarly, change in the value chain is also a factor in our predictions. Regardless of how vertically integrated manufacturers are, they've always recognized the success of their products in the market is based on their ability to cooperate and collaborate as a network. In some manufacturing industry segments, OEMs are increasingly relying on Tier 1 or even Tier 2 suppliers for innovation or cost savings, with mixed results.

Similarly, manufacturers across all industry segments are putting more information and influence in the hands of their customers. This elevates the requirement for collaboration, communication and coordination in a secure, organized and resilient manner.

Two of our drivers are about key assets—information assets and the workforce. IDC estimates the digital universe is growing at 40% per year, and will reach 44ZB, or 44 trillion gigabytes by 2020. The challenge is to exploit information as an asset that can fuel digital transformation—to create new efficiencies or generate new revenue streams. Information must be usable for analysis and in turn analyzed; this will provide manufacturers with visibility into the actual product performance and create a foundation for continuous improvement and new products and services.

In the workforce, manufacturers have long-time, experienced workers close to retirement and a new generation of tech-savvy workers; knowledge is leaving the organization, and new ways of working are entering the organization. There are an increasing number of manufacturers without the talent and workers they need in their factories, supply chains, engineering, and research and development. As a result, manufacturers are embedding tech into everyday work life, to help their employees do their jobs—manage their operations, design products and develop new intellectual property from anywhere in the world and more easily access critical work-related information from anywhere.

And our final driver is about business-relevant security, spanning cyber and physical security across IT and OT (operations technology). In addition to securing data centers, networks, transactional systems, customer data and engineering designs, the convergence of IT and OT and the addition of sensor data on connected assets, products and supply chains are changing the security roadmap. An integrated

approach to security will also account for sensors, supervisory control and data acquisition (SCADA), GIS, GPS, data historians. Really a mix of IT and OT, or a mix of what's traditionally on the network and what's just getting onto the network.

Top 10 Manufacturing Predictions for 2016

With that introduction, let me share our predictions for 2016:

1. The Impact of Customer Centricity: By the end of 2017, those manufacturers that have leveraged customer-centricity investments will gain market share growth in the range of 2-3 percentage points.
2. Global Standards for Global Manufacturers: In 2016, 90% of manufacturers will impose their global standards on all operations, including outsourced operations and suppliers, to decrease risk and increase market opportunities.
3. Value Realization: By the end of 2016, 65% of manufacturers will have metrics in place to evaluate and drive pervasive changes in the workplace with their new technology investments.
4. Building on IoT-enabled Products and Processes. By 2019, 75% of manufacturing value chains will undergo an operating model transformation with digitally connected processes that improve responsiveness and productivity by 15%.
5: Redefining Modern Supply Chain Logistics. By 2019, 50% of manufacturers will have modernized their logistics network to leverage 3-D printing, robotics and cognitive computing to support innovative postponement strategies.
6: The Decline of Short-Term Forecasting. By the end of 2019, enterprise-wide improvements in resiliency and visibility will render short-term forecasting moot for 50% of all consumer products manufacturers and 25% of all others.
7: Enterprise Quality via the Product Innovation Platform. By 2018, 60% of top 100 global manufacturers will be using a product innovation platform approach to drive enterprise quality throughout the product and service lifecycles.
8: The Digital Twin. By 2017, 40% of large manufacturers will use virtual simulation to model their products, manufacturing processes, and service delivery to optimize product and service innovation.
9: Smart Manufacturing with Cloud, Mobile, and Big Data and Analytics. By the end of 2017, 50% of manufacturers will exploit the synergy of cloud, mobility, and advanced analytics to facilitate innovative, integrated ways of working on the shop

floor.
10: IT Transformation for Digitally Executed Manufacturing. In 2016, 20% of manufacturers will begin to break down organizational silos, reshape IT portfolios, and import new IT talent in the plant for digitally executed manufacturing.

New technologies and enhancements are necessary to achieve the digital transformation required for the next generation of manufacturing. Manufacturers must review their current application portfolio; modernize processes in the back office and the plant, and in all aspects of the value chain upstream and downstream; and upgrade their decision-making capabilities.

Consider the following to ensure you maximize the value from current and future technology investments:

• Help your IT talent learn new technologies and better understand the needs of their business customers.
• Ensure that IT and line of business are collaborating as true partners in the selection and implementation of new technology.
• Consider how your investments in IT and operational technologies can lead to business transformation, not just incremental improvements.
• Look to your employees and customers for innovative ideas for the use of new technology and best practices in terms of implementation and use.
• Work with partners to accelerate your IT capabilities and serve the line of business. As you embed more technology in how you operate, external resources and expertise can help you move quickly and effectively.

2016 promises to be an exciting year for those manufacturers that can move forward on their digital transformation journey.
(Kimberly Knickle is research vice president of IDC Manufacturing Insights.)

Manufacturers and Open Innovation

written by Lauri Moon | February 2, 2016

Check out the newly released video highlighting our manufacturing client, Gilson Boards. IMC, along with our IRC Network partners, is leading a statewide initiative to help manufacturers implement and utilize an open innovation business model. To learn more about how IMC can help you innovate, contact us at info@imcpa.com.

Gilson Boards Open Innovation Video

PA Soliciting Governors Cup Entries

written by Lauri Moon | February 2, 2016

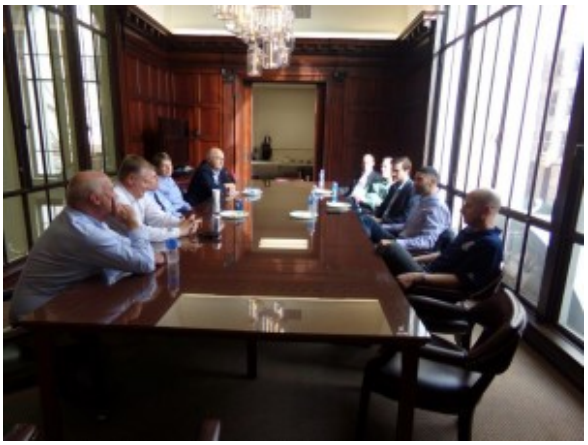
PA Dept. of Community & Economic Development needs your help to ensure every eligible PA project is included in the Governor's Cup entry. Entries that meet at least one (just one!) of the following criteria: 20 or more new jobs created, $1M or more in investment (construction cost, land and building), 20,000 sq ft or more in new construction or expansion qualify. Simply send project names and locations to Kara Golden at Red House Communications (kgolden@redhouse.com) no later than Friday December 4. Kara can answer questions via email or by calling 412-481-7275.

"The 2014 Governors Cup recognize the top performing states for capital investment

attraction in a season that lasts all year." by Mark Arend, www.siteselection.com. Click here for entire story.

IMC Tours Manufacturing Plants with PA House Legislative Manufacturing Caucus

written by Lauri Moon | February 2, 2016



IMC Meeting with PA House Manufacturing Caucus Members & WLCC Representatives

November 7, 2015 By MIKE REUTHER (mreuther@sungazette.com), Williamsport Sun-Gazette

State lawmakers and business leaders seem to agree that Pennsylvania lags behind many other states in economic development.

On Friday, several members of the House Legislative Manufacturing Caucus met locally to consider ways to improve business and industry opportunities.

“It’s a great opportunity to share what’s happening in manufacturing,” said Williamsport/Lycoming Chamber of Commerce Executive Vice President Jason Fink. “It’s also an opportunity to share the challenges they’ve been facing.”

State Rep. Fred Keller, R-Lewisburg, was among a number of lawmakers and others who toured the Kellogg Company in Muncy in the morning. Keller said he came away impressed by the company’s emphasis on safety. “They are doing this right,” he said.

But the company faces many of the same challenges as others across the state, according to officials. They noted the need for young people to pursue training that will help them find the work where they will be needed.

State Rep. Jeff Wheeland, R-Loyalsock Township, noted that the aging workforce locally will need to be replaced by the next generation. “For our youth there will be so many job opportunities for those that are in demand,” he said. He added that the local area is blessed to have educational institutions such as Pennsylvania College of Technology that offers curriculums that train people for such jobs.

State Rep. Eli Evankovich, R-Murrysville, chairman of the Manufacturing Caucus, said economic development should include government partnering with business. “We need to have government move at the speed of business,” he said.

He lamented that traditional strategies are not always the best approach to business. High taxes are yet another hindrance to growing jobs. On the plus side, the state’s manufacturing base is well positioned with access to natural resources, good highways and proximity to major markets. “We are well-situated for a renaissance,” he said.

Williamsport/Lycoming Chamber of Commerce President Vincent Matteo said it’s important for state officials to understand the needs of business.

“Manufacturing drives the economy and other jobs,” said James Shillenn, executive director of Innovative Manufacturers’ Center (IMC), Williamsport. “You have to be making things.” IMC is a public-private partnership dedicated to increasing Central Pennsylvania manufacturers’ innovation, productivity and profitable growth to drive

economic impact.

The group later toured First Quality Tissue in McElhattan.

IMC Client Releases New Product Video

written by Lauri Moon | February 2, 2016

IMC works with Gilson Boards, a Union County manufacturer and leader in revolutionizing snowboarding design and production, on product innovation and manufacturing process improvement.

GILSON SNOWBOARDS from Gilson Boards on Vimeo.