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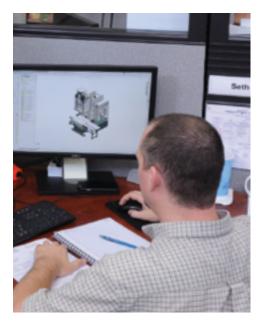
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HV MFG • FALL 2016



COMPANY PROFILE

Innovative engineering design at. MPI Inc. in

ON THE COVER



understanding.

Cover photo by Tom LeBarbera/Picture This Studios

FEATURES

- **BUILDING A BRIGHT FUTURE** A sit-down with Bianca Vogel-Quigley, Owner of ErtelAlsop.
- WORKPLACE DIVERSITY A customized approach for each business.
- **BREAKING THE MOLD** MPI's innovative equipment improves the Investment Casting Process.
- WHAT'S THE DEAL? Trade and Hudson Valley Manufacturers.
- QUALIFIED LEADS ARE THE HOLY GRAIL Direct Marketing and Lead Nurturing.

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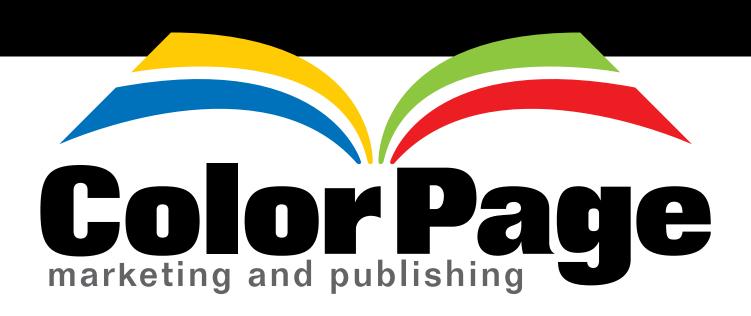
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Harold King Executive Vice President Council of Industry

INNOVATION AND INCLUSION

DEAR READER

elcome to the fall 2016 edition of HV Mfg. – the magazine by, for, and about Hudson Valley Manufacturing. We publish HV Mfg. to inform readers on the state of manufacturing in the region; what is made here; who makes it; why it's important and what are the sector's challenges as well as the opportunities for growth. This edition also includes our Manufacturing Resource Guide which lists state and federal elected officials, state and federal agencies, educational institutions, workforce development organizations, economic development organizations and more. The magazine, including the resource guide, is also available online at councilofindustry.org

Our cover story in this edition is a profile of Bianca Quigley, CEO of ErtelAlsop, her company manufactures liquid filtration equipment and filter media for the pharmaceutical, food & beverage, chemical, mining, and waste water industries. Ms. Quigley's path to becoming the head the family manufacturing business, and growing it to where it stands today, makes for very interesting reading.

Also of great interest is the profile of Poughkeepsie based MPI—the worldwide leader in wax-room equipment. Alison Butler writes about the strides the company is making and how their innovative equipment is leading to great improvements in the Investment Casting Process, a millennia old manufacturing process still used today to make parts for the aerospace and automotive industries, among others.

With the election season upon us several articles look at issues in the news, as well as public policy debates affecting Hudson Valley manufacturers. We start with a list of policy priorities for manufactures generated by the National Association of Manufactures (NAM). These include infrastructure and workforce development investment, as well as tax and regulatory reform. Christina Bark, Associate Professor at the SUNY New Paltz School of Business, looks at the value of a diverse and inclusive workforce, focusing not simply on race and gender but on other factors such as national origin and personality type. I take a look at the thorny issue of international trade with a focus on the effects free trade agreements have had, and will have, on Hudson Valley manufacturing firms.

Finally, David King looks at strategies to successfully generate sales ready leads. Marketing can be a big challenge for small manufacturing companies who tend to sell products to other manufacturers, but social media and tools such as pURL's offer possible solutions.

I want to also thank the many firms and organizations who are supporting the Council of Industry and manufacturing in the Hudson Valley with an advertisement in HV Mfg. Their commitment to our association and to the manufacturing sector is much appreciated.



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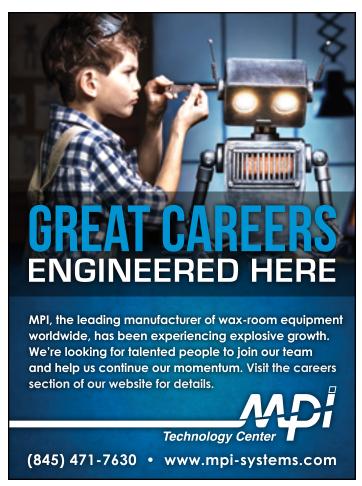


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BRIEFS

THE MANUFACTURING ECONOMY

NAM Survey: Large Manufacturers Slightly Optimistic, Small Manufacturers Mostly Pessimistic About Future Growth

Manufacturing sentiment appears to have stabilized after several quarters of declining assessments about the economic outlook, and the latest data appear to mostly back that assertion up, but with some caveats. Indeed, economic challenges continue in the sector, among them being concerns over rising health care costs, and dampening perceived growth rates.



As large manufacturers (i.e., those with 500 or more employees) were more upbeat about their company's outlook this quarter, but small (i.e., those with fewer than 50 employees) and medium-sized manufacturers experienced declines in their outlook in this survey. This was especially the case for the smallest of firms, with just 48.7 percent positive in their outlook in this survey. Overall, one could characterize manufacturers' current economic outlook as cautiously encouraging, but still less-than-desired and highly varied by firm size and export sales growth expectations.

Empire State Manufacturing Survey: Business Activity Edged Lower in New York State

Business activity edged lower in New York State, according to firms responding to the September 2016 Empire State Manufacturing Survey. The headline general business conditions index held below zero, and was little changed at -2.0. The new orders index fell eight points to -7.5 and the shipments index fell eighteen points to -9.4 developments that pointed to a marked decline in both orders and shipments.

Labor market conditions weakened, with both employment levels and the average work week reported as lower. Price indexes remained close to last month's levels, and indicated ongoing moderate input price increases coupled with a continued slight increase in selling prices.

Indexes for the six-month outlook suggested that respondents were more optimistic about future conditions than they were last month. The index for future business conditions climbed eleven points to 34.5. The index for future new orders advanced to a similar level, while the index for future shipments, though positive, declined. The index for future employment moved up into positive territory, suggesting that firms expected to expand employment in the months ahead. Indexes for future prices rose considerably, suggesting that firms expected both input prices and selling prices to increase more significantly over the next six months. The capital expenditures and technology spending indexes both climbed to 10.7.

Federal Reserve Considers Rate Hike

A Wall Street Journal survey of economists recently found that only 13.1% of the economists polled expect to see Fed interest rates rise this fall, while 73.8% said the central bank will wait until December, the Journal says. The same survey conducted in August showed similar results, with 11% saying September and 71% saying December. The National Association of Manufacturers' Chief Economist Chad Moutray is quoted as saying there's insufficient data to conclude the Fed will move at the September meeting. The Journal characterizes the survey results as somewhat surprising in light of recent comments by Fed officials indicating a possible short-term interest rate hike this month.

The NAM – in the previously mentioned Manufacturers' Outlook Survey – asked when manufacturers think that the FOMC should act. Roughly one-fifth said that they would like for the Federal Reserve to raise short-term rates this fall, but that was less than the 28.4 percent that had no opinion. Overall, 37.2 percent of manufacturers felt that the FOMC should act in 2016, and 34.5 percent believed that the Federal Reserve should move next year or later.

LABOR AND EMPLOYMENT

Kaiser Family Foundation Study: Employee Share of Healthcare Costs Increasing

An analysis by the Kaiser Family Foundation released on Wednesday shows that the share of employers offering coverage

remained steady this year, and that the cost of premiums for health plans remained largely unchanged. But underneath some of those figures, some important changes are underway. The





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biggest shift is that workers continue to pay an ever-greater share of their medical bills, a trend for several years now.

Over all, employees have deductibles that are about 50 percent higher than they were five years ago. Four out of five covered employees pay a deductible, which averages about \$1,500 each, Kaiser found. Employees who get insurance through a smaller company have deductibles that now average \$2,100.

Workers are also paying a greater share of the premiums, contributing \$5,277 annually toward a family plan, nearly a third of the total cost.

Federal Contractors Face Significant Challenges Under Fair Pay and Safe Workplaces Final Rule

In late August the Federal Acquisition Regulatory Council (FAR Council) released its Final Rule implementing President Obama's 2014 Fair Pay and Safe Workplaces Executive Order. At the same time, the U.S. Department of Labor (DOL) released its Final Guidance on the rule. In short, the rule requires federal contractors to attest to whether they have had any labor law violations when bidding on covered federal contracts. Federal contracting agencies may then assess a contractor's overall record of compliance with labor laws when awarding federal contracts. The rule also places new reporting and notification burdens on contractors. The Final Rule goes into effect on October 25, 2016.

Under the Final Rule – sometimes referred to as the "Blacklisting Order" - federal contractors must publicly disclose information about covered violations, including the law violated, the case identification number, the date of the decision finding a violation, and the name of the body that made the decision. The disclosure requirement applies not only to civil judgments and administrative merits determinations, but also arbitral awards, including awards that are not final or still subject to court review.

WORKFORCE AND TRAINING

The U.S. House of Representatives Passes Legislation to Reauthorize the Perkins Career and Technical Education Act



H.R. 5587, the "Strengthening Career and Technical Education for the 21st Century Act", is a bipartisan effort to continue addressing the employee skills gap that manufacturers across the country are facing. With 80 percent of manufacturers

reporting a moderate or serious shortage of qualified applicants for skilled and highly skilled positions, The Act would fund many manufacturing education programs across the country. The proposed bill is of critical importance for the future of manufacturing and closing the Skills Gap.

The Senate is expected to act on the measure in October.

US Household Income Rose 5.2% In 2015

The Census Bureau reported that the median household income for American families in 2015 rose 5.2 percent to \$56,516, – the largest one-year rise since at least 1967. The New York Times says the income gains show that recent economic gains "are being distributed more broadly," but notes that the median is "still 1.6 percent lower than in 2007" and "remains 2.4 percent lower than the peak reached during the boom of the late 1990's."

The poverty rate "was at 13.5 percent, representing 43.1 million Americans," down 1.2 percentage points from 2014, the agency said. According to Trudi Renwick, an assistant Census division chief, the rise in median income "was due mainly to an increase in employment and in full-time, year-round workers, with 1.4 million men and 1 million women added."

NYS Labor Department Report: 44,800 Working in Manufacturing in the Hudson Valley Region

For the 12-month period ending in August 2016, private sector employment in the Hudson Valley increased by 13,100 or 1.7 percent, to 796,800. Jobs were added in educational and health services (+7,100), trade, transportation and utilities (+3,900), other services (+2,000), natural resources, mining and construction (+1,000), and professional and business services (+700). Job losses were mostly centered in financial activities (-800). The government sector added 600 jobs over the period. Manufacturing added 100 there are now 44,800 people working in the sector.

In August 2016, the regional job market continued its positive trend. Private sector job gains were recorded in five of nine sectors. Educational and health services remained the region's leading job generator. Year-over-year, the sector grew by 3.7 percent or 7,100 jobs – its strongest August growth on record. Job growth was quite apparent in the region's trade, transportation and utilities industry. The sector grew by 2.1 percent over the period – its strongest August growth since 2000.

Manufacturing Job Openings Increase in July

Job openings in the manufacturing sector grew in July for the second month in a row, according to data from the Bureau of Labor Statistics. Postings in the sector jumped from 361,000 in June to 379,000 in July, even as openings remained below April's all-time high of 397,000. The increase in job openings stemmed from a pickup in activity for durable goods firms (up from 200,000 to 227,000); whereas, postings for nondurable goods entities (down from 160,000 to 152,000) declined for the third straight month.

Manufacturing Job Openings, Hires and Separations (July 2015-July 2016, in thousands of workers) 400 375 360 325 360 275 260 275 260 275 260 275

Net hiring was also encouraging, with positive growth for the second consecutive month following four straight months of net declines. This was true in July despite declines in both hiring (down from 281,000 to 274,000) and separations (down from 264,000 to 258,000). Hiring increased for durable goods firms (up from 161,000 to 167,000), but this was offset by reduced hiring among nondurable goods manufacturers (down from 119,000 to 106,000). At the same time, total separations – which include quits, layoffs and retirements – fell to a 12-month low. Overall, net hiring (or hiring minus separations) equaled 16,000 in July, off slightly from 17,000 in June.

GLOBAL TRADE

Obama Readies One Last Push for Trans-Pacific Partnership

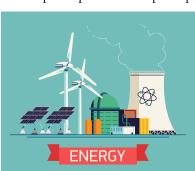
President Obama is readying one final push for approval of the Trans-Pacific Partnership, the largest regional trade agreement ever, between the United States and 11 other Pacific Rim nations, reports the New York Times. "And though the odds may be long, a presidency defined by partisan stalemate may yet secure one last legacy – only because of Mr. Obama's delicate alliance with the Republicans who control Congress."

Although the administration's push will begin in September, no vote on the accord will occur before the election. Just as the White House and Congressional Republican leaders mostly agree on the economic benefits of trade, they have parallel political interests in delaying debate.

ENERGY

Energy Costs Expected to Increase with N.Y. Regulators' Approval of Clean Energy Standard

New York state energy regulators last month approved the Clean Energy Standard, which requires that 50 percent of the state's power will come from clean and renewable sources of energy by 2030, including nuclear power. As part of the plan several upstate nuclear power plants will be paid up to \$965 million in subsidies



over two years to keep the reactors in service and meet the state's carbon reduction goals. The subsidies are part of an effort to keep the nuclear reactors, which produce almost no emissions, operating at a time of low prices for power as well as for natural gas, an alternative generator fuel.

Darren Suarez, Director of Government Affairs for The Business Council of New York State, Inc. is critical of the Clean Energy Standard. "With this action, it is clear the Public Service Commission has failed to properly evaluate the significant costs associated with the Clean Energy Standard. This failure will cost New York State businesses billions of dollars and put current and future New York manufacturing jobs, and jobs in other

energy-intensive sectors, in mortal danger. Had the PSC properly understood the cost of this policy, the Commission could have modified the Clean Energy Standard to ensure that electric power was provided at just and reasonable rates for all customers."

New York "Energy Highway Plan" Builds Energy Infrastructure leads to an increase In Monthly Bills

Ratepayers in New York have begun to see increases in their monthly bills, as the impact of the State's Energy Highway strategy starts to take hold. The plan included 13 actions designed to provide up to 3,200 megawatts of new generation and transmission capacity. One of those actions focused on improving and replacing older transmission infrastructure. Beginning in June, customers started to see charges on their monthly bills related to that portion of the plan.

In 2014, a number of Empire State investor-owned utilities and transmission owners formed New York Transco, a public-private consortium created to build, own, and upgrade transmission facilities that would help meet the goals of Cuomo's initiative. The partners are Central Hudson, Con Edison, National Grid, New York State Electric & Gas (NYSEG), Orange and Rockland Utilities (O&R), and Rochester Gas & Electric (RG&E).

Projects include the Ramp to Rock Tavern transmission line, which establishes a second 345 kV line between Central Hudson's Rock Tavern 345 kV substation and Con Edison's Ramapo 345 kV substation.





MANUFACTURERS' AGENDA FOR ECONOMIC GROWTH

very day, manufacturers go to work to serve their customers, strengthen their companies and improve their communities. This year, we will head to the polls for another presidential election. We will consider which candidate is best prepared to lead us in the right direction, to improve the quality of life in our country and to protect freedom and opportunity for the next generation.

The National Association of Manufacturers has outlined this agenda which they believe will be an asset to any candidate or officeholder working to chart a new way forward. Manufacturing is the backbone of our economy. We are about more than just machines; our industry is about people and the potential we can unleash. Now is the time to embrace a manufacturing resurgence to protect and preserve American Exceptionalism.

Tax Reform -

Inertia on modernizing our nation's tax code is no longer an option. Indeed, standing still is causing us to fall further behind as a nation while other peer nations compete to attract and grow their tax base.

Move past 30 years of outdated tax policies in exchange for a new focus on the economy of today by adopting a modern and competitive territorial international tax system that reflects the realities of our time; Encourage increased capital investment to achieve sustainable economic growth; and Reduce tax rates for companies of all sizes no matter how they are organized.

Trade

Manufacturers of all sizes can no longer rely on the U.S. market as the primary source of growth. To grow and thrive in today's competitive global markets, manufacturers must increasingly reach new customers and seize new opportunities overseas.

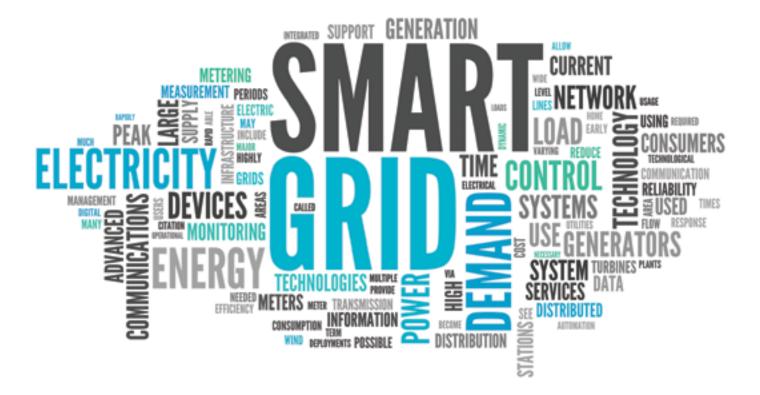
Open markets, break down foreign unfair barriers and improve global standards; **Adopt** custom, financing and export control policies and rules, as well as fully functioning Export-Import Bank financing, that facilitate trade and improve our manufacturers' cost competitiveness in the global economy; and **Enable** the United States to lead by example and enforce global rules.

The United States must ensure that our competitors play by the rules and that our country has the tools to hold other countries accountable to keep the playing field level and fair. To lead effectively, the United States must also abide by its own international

obligations.

Energy-

Unleashing new and existing technologies to access and deploy a wide array of domestic energy sources was once an unrealized dream that many believed would not be possible in a lifetime. Today, manufacturers utilize and benefit from all forms of energy—oil, natural gas, coal, nuclear and renewables—while making smart investments to become more energy efficient. Recognize the United States is globally unique and has the potential to chart an energy future that



benefits the entire nation, not just some regions; Ensure access to domestic and overseas markets; Commit to technology and innovation to ensure manufacturers will have access to all sources of energy while air quality improves and greenhouse gases are reduced; Remove regulatory barriers that slow access and improvements to traditional energy resources, electricity generation, renewable and alternative energy and the nation's privately funded energy delivery system; Expedite the onshore and offshore permitting process to allow greater access to domestic energy resources; Provide for a reliable electric grid that ensures manufacturers can access energy when they need it, even as policies and markets change; and Promote and continue an energy renaissance that advances research, development and deployment of new technologies that improve energy efficiency and support domestic energy production and manufacturing.

Environment -

Manufacturers have demonstrated a commitment to protecting the environment through greater sustainability, increased energy efficiency and reduced emissions. These improvements have helped usher in an era of cleaner air and a more sustainable environment.

Reform and modernize out-of-date laws and regulations so that these policies can better address 21st-century environmental challenges while minimizing costs and burdens; Fix regulations that unnecessarily limit fuel options for manufacturers and instead promote a true "all-of-the-above" energy strategy; Ensure strong oversight of federal agencies and eliminate duplicative regulations or regulations for which costs outweigh benefits; Apply good science and evidence-based approaches in new policy, regulatory and legislative proposals; and Recognize the United States as a global economic and environmental leader and maintain balance among these interests.

Transportation and Infrastructure -

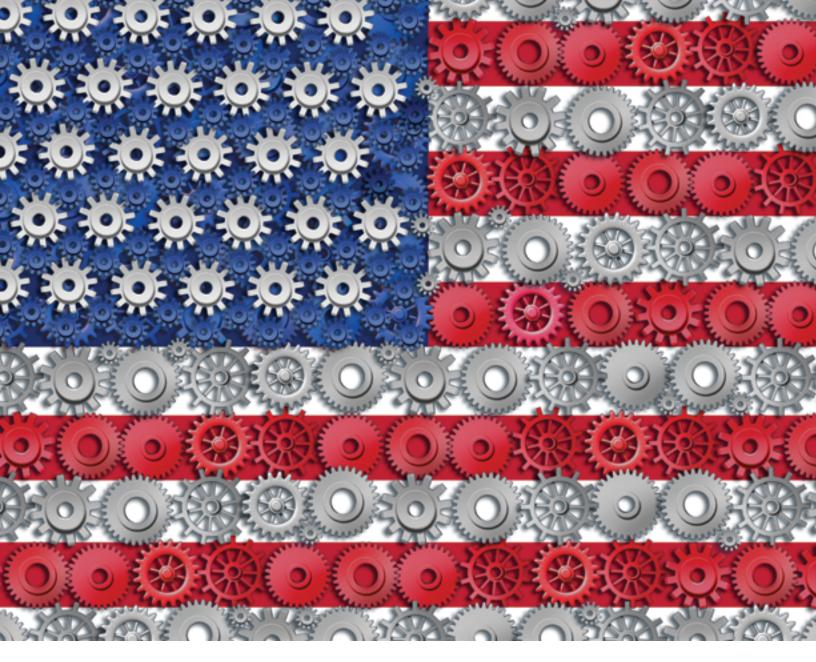
Manufacturers need competitive infrastructure to thrive in today's global economy. Unfortunately, the nation's infrastructure is outdated and resting on a legacy built by previous generations.

Seek new forward-looking solutions that prioritize and address the growing backlog of essential infrastructure projects; Robustly fund infrastructure as a high priority because congestion and deteriorating road conditions are real threats to manufacturers' competitiveness; Address persistent issues facing the nation's ports and inland waterways; Reform a broken permitting and approval system that adds years of delay and costs to projects while ensuring appropriate review; Keep transportation regulatory agendas in check so that critical transportation services that manufacturers rely on are not hampered by additional red tape; and Ensure our aviation system remains second to none and on the leading edge to ensure safety and efficiency.

Labor

The United States will not maintain its mantle of economic leadership unless all labor stakeholders work together to ensure the best and most productive workplaces. Labor law and workplace regulations do not reflect the changing dynamics of modern manufacturing and instead were designed for a previous era.

Return to a balanced and fair approach to labor policies and regulations; Eliminate regulatory burdens from complicated and outdated labor policies; Adapt to the changing needs of the modern manufacturing workforce and the changing attitudes individuals have toward their work; Focus on outcomes, encourage collaboration and highlight successful approaches manufacturers take with their employees and at their facilities; and Engage and work to align all stakeholders—employees, union officials and management—to develop achievable solutions that yield a safety culture, productivity and economic growth for the nation.



Immigration

Comprehensive immigration reform holds the power to transform not only manufacturing but also our nation and economy to new heights.

Ensure manufacturers reliable access to talented individuals at all skill levels; Offer opportunities to keep talent onshore; Address the estimated 12 million undocumented workers in the United States; Advance a rigorous and fair employment verification system to ensure employers have confidence in hiring workers; and Institute a border security plan that allows for free trade of goods while improving safety and security at all border crossings.

Workforce -

The skills gap is widening, and over the next decade, 3.4 million manufacturing jobs will need to be filled.

Organize manufacturers to speak with one voice regarding the workforce needed to sustain and grow manufacturing; Engage and align key stakeholders—community leaders, education institutions and local and state officials—to take action and build momentum; and Build a system that delivers a sustainable pipeline of strong, mid-skilled manufacturing talent.

Healthcare

Escalating health care costs continue to be one of the top concerns for manufacturers. In spite of recently enacted two-year suspensions of the employee benefits tax and the anti-competitive tax on medical devices, the Affordable Care Act (ACA) continues to impact manufacturers by adding costs and making critical health care services and treatments even more expensive for employees of manufacturers. Recent increases in health care premiums have deepened the frustration.

Decrease costs—fees, taxes, administrative paperwork, reporting requirements, benefit mandates and other policies stifle innovation and make it more expensive than necessary for employers to provide health coverage to employees; Encourage flexibility—expanding coverage options and enabling innovative models of care are essential for manufacturers' efforts to maintain a healthy workforce and provide competitive benefits; and Take on the challenge of reforming our medical liability system.

Research, Innovation and Technology-

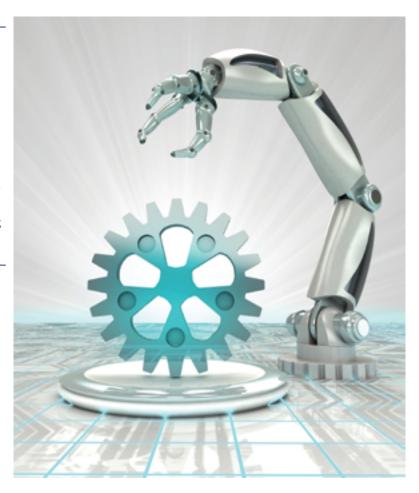
Manufacturers in the United States have created an innovation engine that has delivered new technologies and processes that have brought us energy independence, new lifesaving medicines and medical devices, more efficient automobiles and countless other everyday products that make lives better and secure our nation's global leadership position in manufacturing.

Adopt policies that will attract and retain investment in activities that drive innovation; vigorously protect all forms of manufacturers' intellectual property; Include cybersecurity policies that draw on the best industry practices; and Foster the growth of connected technology across all manufacturing industry segments.

Regulatory and Legal Reform-

A more competitive economy demands a reform of the nation's broken legal and regulatory systems.

Approach regulations with a focus on outcomes and relying on best-available science; Improve the quality of regulatory analysis to better inform regulators and agency leaders; Deliver a reformed regulatory system that efficiently meets regulatory objectives and minimizes unnecessary burdens; Seek proven strategies to reduce the abuse of our legal system; and Restore basic fairness in our legal system.



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BUILDING A BRIGHT FUTURE ERTELALSOP

HV Mfg sat down to talk manufacturing and engineering with ErtelAlsop's Bianca Vogel-Quigley. Under her leadership there is a good mix of communication, cooperation, innovation, and commitment to family that creates the perfect circumstances to promote long term growth for the company.

HV MFG: How did you come to work in manufacturing? Is it something you always wanted to do?

BQ: Well, the short answer is that I grew up around manufacturing. ErtelAlsop was founded by my grandfather and then my father ran it for another 40 or so years. In hindsight it seems obvious that it would become my career too, but when I was young, my heart was with horses. I was a competitive rider, and like many others, I dreamed of the Olympics. But, as anyone who has ever owned a horse knows, it is an expensive pursuit and perhaps not a realistic one. So, when I got to be 16 or so and my father asked me who was going to pay for this pursuit (and he clearly intended

for me to understand that it was not going to be him) I took stock of what I was good at and that happened to be science and math. I thought about what I could do with those talents. I considered becoming a veterinarian so I could be around horses, but in the end I followed the family footsteps into engineering.

HV MFG: So you have a degree in Engineering?

BQ: Yes, I have a Bachelor's degree in Industrial Engineering and Management from RPI.

HV MFG: When we first met – just a few years back – you were not with ErtelAlsop. What was your first job after you graduated from RPI?

BQ: Just a few years ago! My first job out of college was with IRECO in Port Ewen. Today they are Dyno Nobel and many, many years ago it was Hercules Powder. They made detonators for explosives, mostly for construction and mining but some military too. The Plant Manager at the time, Dave Nowlen, hired me as an Industrial Engineer.

HV MFG: That sounds like a pretty interesting first job.

BQ: It was very interesting and I learned a lot about manufacturing and business. It got to be a little hairy when there was a management shake-up and several people above me lost their jobs. After being there only a couple of years I was suddenly in charge of a few dozen people. There I was–24 years old and pretty much the only woman—it was scary but I think I did okay. I definitely learned a lot and gained confidence in both my engineering and leadership skills.

HV MFG: We are very interested in that point about the challenges of being a woman in manufacturing and we'll return to that subject. For now let's stick with your career track. When did you come to the family business?

BQ: I started working at ErtelAlsop in 1995. **HV MFG:** You said you are the third generation owner of ErtelAlsop. Could you share the history of the company, and tell us about what you make?

BQ: Sure. We manufacture liquid filtration equipment and depth filtration media for pharmaceutical, food & beverage, chemical, and wastewater industries. Our customers are big ones you've probably heard of like Jim Bean, Pepsi, Sanofi, Avon, as well as many smaller firms. The company was founded by my grandfather, Frederick Ertel in 1932, in New York City. He originally manufactured and



Final filter sheet coming out of the oven for inspection and cutting by operator.

sold depth filter media for the pharmaceutical industry. Around 1938, he moved the company here to Kingston. He expanded the products offered to other aspects of liquid filtrations, things like filter presses, pumps, agitators, bottle fillers. Interesting bit of trivia, during the Second World War he developed the first pyrogen retentive filter media for Bristol Laboratories that was used to manufacture penicillin. In 1976, we acquired Alsop engineering. Alsop was founded by Samuel Alsop in 1920 and their first product was an enclosed horizontal plate filter which was manufactured by Ertel. In the 1940's Alsop invented an accordion shaped filter cartridge, which provided an enclosed filtration environment and much shorter changeover cycles than plate and frame filter presses. This innovation proved to be a big productivity improvement for their customers.

So, between the 2 companies – the now merged ErtelAlsop's – we have lots of customers who have been buying from us for over 80 years. Our niche is really a commitment to our customers and the willingness and flexibility to modify our designs to meet their requirements. We want to be big enough to meet demand and keep our costs down, yet nimble enough to meet the emerging needs of our customers.

HV MFG: You and your husband [George Quigley] took over owner- ship in 2005. Given the changes in the economy I'm guessing these have been an exciting 11 years. Tell us about the past decade or so?

BQ: Wow. Yes, lots of "excitement." Seems like we were just getting our feet underneath us, starting to implement the changes we hoped to make, when 2008 hit and the bottom fell out. Everything ground to a complete halt. Honestly, for a month or so nothing happened; no orders, no payments, nothing. It was very scary. But when things started to turn around they turned around fast. Suddenly we needed to find ways to become more efficient to meet what turned out to be rapid growth. The first challenge was our facilities. As the company grew through the 1970's, 80's and 90's we acquired multiple locations and were spread throughout Kingston. This proved very inefficient. In 2011, the space we are in now-the former Colony Liquor Distribution Center-became available and we consolidated into one location. We worked with another local manufacturer [Council of Industry member] JBT Wolf-Tec to buy the building. We got plenty of assistance from Ulster County, Central Hudson, the City of Kingston as well the State to pull it off and we started moving in during July 2013. In all, between the building and new equipment, we have invested roughly \$6 million. Now, with the improved efficiencies and expanded capacity we are ready to grow.

HV MFG: What do you see as the biggest challenges to that growth for ErtelAlsop in the next 3 to 5 years?

BQ: Challenges...where to begin? First, no doubt is workforce, from entry level workers to engineers we find it is difficult to attract people to a small manufacturing business. Second, the cost of utilities, energy and water in particular. Much of our competition is overseas and their costs are much lower than ours. Finally, the strong dollar right now is hurting us. Again, we have a lot of competition from overseas manufacturers and 40% of our sales are exports. The strong dollar is making our product relatively more expensive than our competition's. We know that in terms of quality and reliability our products are as good as or better than anyone in

the industry and customers are willing to pay for that. But only to a point. If these trends continue we risk not only losing sales in the short run, but long term market share as well.

HV Mfg: What about opportunities?

BQ: We see opportunities in several industries, especially the Life Sciences. I mentioned we helped improve the manufacture of penicillin in the 1940's, and we have some new products that we think will do very well in the Pharmaceutical market. We also sell to distilleries, and the renewed interest in spirits worldwide, as well as the growth of smaller distillers, is an opportunity. We are small and agile. We provide real value added engineering services. And, we provide sales solutions to customers we've had long-term relationships with. I believe opportunities will continue to present themselves if we keep that focus.

HV MFG: Let's return to something you talked about earlier. Talk about your experiences as a woman in manufacturing and engineering.

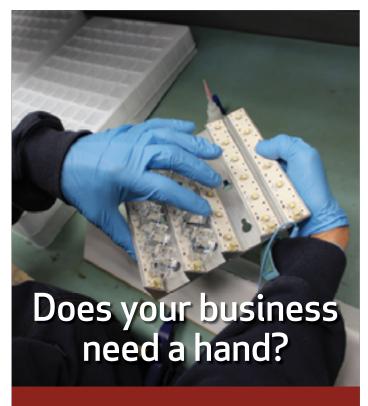
BQ: Well, it's different now than it was 30 years ago. It's far better, but there is still room for improvement. For starters, when I decided to go to an engineering school my father discouraged me because he thought, based on his experiences, it was too difficult for a girl. In truth, when I got to RPI the work was not too hard for me but the fact that there were so few other women did make it harder. In my first job, I was not only a woman but I was younger than the other engineers. When I sat in a room filled with men who were working on a problem I definitely felt marginalized. It's pretty frustrating to have your ideas dismissed out of hand either because of your gender or your age, but my boss, definitely encouraged me and respected my talents. The truth is men and women tend to approach technical problems in different ways and I often saw things differently than the male engineers. I think women bring a different set of skills to the field. Gradually I won people over. Today there are still more men than women in manufacturing and engineering. I still am in plenty of meetings where I am the only woman but I do think there is greater acceptance of women in the field today and most - not all - but most men treat women with respect.

HV MFG: Any advice for a young woman considering engineering and manufacturing?

BQ: Do it. It is fun, and you get to think and work on different challenges every day. There are lots of opportunities too – especially working for a small manufacturer.

HV MFG: What do you think makes a good Leader? Tell us about your leadership style and how it was shaped.

BQ: I believe a good leader is an effective communicator. I believe a good leader embraces change. I believe a good leader surrounds herself with talented people and I think a good leader doesn't ask anyone to do a job she hasn't done or isn't willing to do herself. I think my style is to try to be inclusive, to get everyone involved with ErtelAlsop to believe in the company and to work toward its success. I try to listen and to be responsive to every member of our team. As to what has shaped that – well, as we talked about earlier my experiences as a young woman taught me to seek diverse opinions and approaches to problem solving. My experiences working for my father also influenced my style. My father's style was very much the



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traditional "top down". He did become the owner/CEO in the 1960's and that was the more common approach. By the time I came into the business, I did not see that as the most effective way to get the most out of our employees. In 2016, in the competitive world of manufacturing with all its complexities, if you want to be successful you need to empower and rely on talented people. I think we do that.

HV Mfg: This is a family business and you work alongside your husband every day. What's that like?

BQ: (Laughing) It is an absolute joy every minute of every day! Honestly, it is great and we have built a terrific life together. On the business side we have different responsibilities. I am focused on operations and he is focused on sales. Because of that, and because of our personalities we see problems through different lenses. You could say we bring the traditional "sales/marketing vs. engineering/production" internal organizational conflict to a new level. But in

truth I think this is one of our company's greatest strengths. We know each other very well and we respect each other. The company gets the best of each of us and we are stronger for it.

HV MFG: You have been involved with the Council of Industry for more than a few years. What are we good at? What could we do better?

BQ: Really all of it is good. I guess the thing we find most valuable is the networking with other small manufacturers in the region. Manufacturing is a unique type of business and the Hudson Valley is pretty unique too. Connecting with others with the same issues really helps. It is also nice to have the Council "watching our back" in Albany. As for what you could do better – I would say using technology more for training and networking. It can be difficult for our people to get out of the office sometimes and the use of webinars and distance learning opportunities might be helpful.

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WORKPLACE DIVERSITY

The Search For The Golden Ticket

orkplace diversity refers to the variety of differences between people within an organization. People often equate the word "diversity" to multicultural issues. But diversity also spans differences in

age, sex, religion, personality, cognitive style, tenure, organizational function, position of power, and so on.

Decades of research has shown that a diverse workforce improves decisionmaking, problemsolving, creativity, innovation, and productivity. For many businesses, a commitment to diversity fills employee skill gaps and shortages, and improves employee satisfaction and retention. Moreover, competition

drives excellence; advancement is not achieved by protecting the status quo. Achieving the benefits of diversity requires more than adopting a diversity statement and hiring diverse individuals. Differences can divide instead of strengthen an organization. A crucial

component of realizing diversity benefits is to create a "culture of inclusivity" that penetrates every corner of an organization. It is important to create

workforce improves decision-making, problemsolving, creativity, innovation, and productivity.

Decades of research has shown that a diverse

a workplace that respects peoples' differences and recognizes the unique contributions of individuals. When employees are truly

included, they're more likely to share information, participate in decision-making, and build a bond.

Neuroscience studies show that our brains are hard wired to motivate us toward connection and belonging. Social needs are



managed by the same neural networks as primary survival needs such as food and water. Belonging and attachments to coworkers can be a better motivator than money. However, impediments often thwart the realization of diversity benefits. First, a company may have "prototypes for success" that perpetuate a similarity bias and squelch diversity of thought. Second, "diverse" employees may conform to the norm and adopt

characteristics of the majority in order to fit in. Third, the "we've always done it this way" mentality may silence new ideas and inhibits progress. Fourth, majority group members may perceive reverse favoritism, feel left out, and disengage. Studies show

that pro-diversity messages can trigger resistance, even among those who endorse the principles of diversity. Finally, legal compliance is a

poor motivator for change. Mitigating legal risk may get people's attention, but threats or negative incentives don't convert mindsets.

Tips for Realizing the Benefits of Workplace Diversity

Diversity does not have to be, nor should it be, a zero sum gain: one group wins, another group loses. Diversity, if done well, can be a win-win gain in terms of inventiveness, imagination, and profitability. Key elements for diversity success are:

- Management Endorsement. Management must truly believe, and act like, workplace diversity is essential to business excellence. If top management doesn't believe it, no one else will.
- Establish a commitment to the culture of inclusivity (not just legal compliance) by including diversity as a core value of the firm and its code of ethics.
- Engage managers in understanding the issues and shaping solutions to reduce diversity roadblocks.

Avoid the training/bias awareness crutch. Training may be seen mistakenly as the total solution to create inclusiveness. However, changing subtle biases and building diversity skills does not transform an organization. Make sure your plan includes more than training.

- Research indicates that diversity training programs generally do not change attitudes or behavior.
- People are easily taught to respond correctly to a questionnaire about bias, but they soon forget the right answers. Studies also suggest that such training can activate bias or spark a backlash.

Eliminate opportunities for bias. Studies show even those committed to promoting diversity fall prey to biases. This is not about pointing fingers at bad people. Acknowledge the subtle power of biases and design processes which are free from bias opportunities, rather than expect to eliminate bias.

- For example, in the 1970's, orchestras began using blind auditions to eliminate a bias toward male musicians. Before blind auditions, women made up about 10% of the musicians at major orchestras. Once musicians auditioned behind a curtain, women's presence in major orchestras grew to 40%.
- Best way to eliminate bias from employment decisions: stop going with your gut. Base promotions on objective measures of performance rather than the boss' feeling about an employee.

"No one is just male or just artistic. Each person is a whole package of interlocking attributes."

Rethink hiring for cultural fit. We generally look for someone with a personality that fits with a company/ department/team. However, this practice works against diversity; those that "fit" may not be very diverse.

- Big data can exacerbate this problem; the pool may be diverse in appearance, but intrinsically homogenous by hiring the same candidate profile even though from a different background.
- Look for the quirky creator, the candidate who doesn't fit your norm, but fits the culture of diversity and inclusivity. Hire an artist into an engineering firm. Hire an engineer into a graphic design firm.

Avoid force feeding. Studies show that the approaches designed to preempt lawsuits by policing managers' thoughts and actions, can activate bias rather than stamp it out. The stronger the controls, the greater the temptation to rebel.

- Managers do not transform into champions of inclusivity by blaming and shaming them with rules and re-education. A company can get better results by engaging managers in solving the problem, increasing contact between diverse individuals, and appealing to the desire to look good to others.
- Strategies such as rotating management trainees through departments, mentoring programs, and self-managed teams boost inclusion while advancing other business goals.

See the whole person. We tend to reduce things to orderly dichotomies: male/female, white/black, extrovert/introvert, and so on. But reality is not that tidy.

- No one is just male or just artistic. Each person is a whole package of interlocking attributes.
- By showing appreciation for the whole person, you are more likely to get contributions from the whole person. Don't let roles, responsibilities and stereotypes become barriers.

Embrace conflict. Don't be surprised by conflict – expect it and reframe it. Shed the fear of saying the "wrong thing" and discuss sensitive issues. Foster an attitude of openness in your organization.

- Tim Wolfe, former president of the University of Missouri system, did not lose his job because of racist incidents on campus. He lost his job because he didn't talk about them. While such dialogues can provoke anxiety or discomfort, they are essential.
- Every manager should be willing to proactively ask employees to talk about how they feel diversity (or lack thereof) has influenced their experience at the company.
- Share stories. As storyteller: you have an opportunity to show your own vulnerability, and share your mistakes and successes. As listener: you have an opportunity to see yourself in someone else's shoes.
- Paul Zak, a neuro-economist, has found that hearing a story with a beginning, middle and end causes our brains to release cortisol and oxytocin. These chemicals trigger our human ability to connect, empathize and make meaning.
- Story telling provides an opportunity for a moment of human connection, of belonging, without a formal initiative, policy change or forced diversity lesson.

9

Foster full participation. You may be missing contributions because of differing cognitive style or organization structure. Adopt practices that encourage everyone's participation.

- For example, don't miss the quiet ones. Extroverts contribute to decision-making in a disproportionate way. Introverts may formulate a recommendation too late to influence a decision, unless you solicit their contribution.
- Similarly, remote workers (out of sight, out of mind) may be excluded from decision-making because of the way conference calls are conducted, projects are assigned or work relationships are built.

So where do you start?

Every workplace is different. Certain tactics to overcome diversity challenges work better than others in certain environments. There are many paths to create a culture of inclusivity. For beliefs to change, people's experiences have to change first.

As with any cultural change, make sure to understand the unique situation of your organization as you proceed. Conduct a diversity assessment. Identify and prioritize your challenges and obstacles. Which policies need to be added or eliminated? What practices should be altered?

Positive change comes from a customized approach to diversity which is aligned with your business strategy and continuously adjusted as your organization changes. Make sure the plan is comprehensive, measurable and attainable.

Always keep in mind: diversity is useless without inclusivity.



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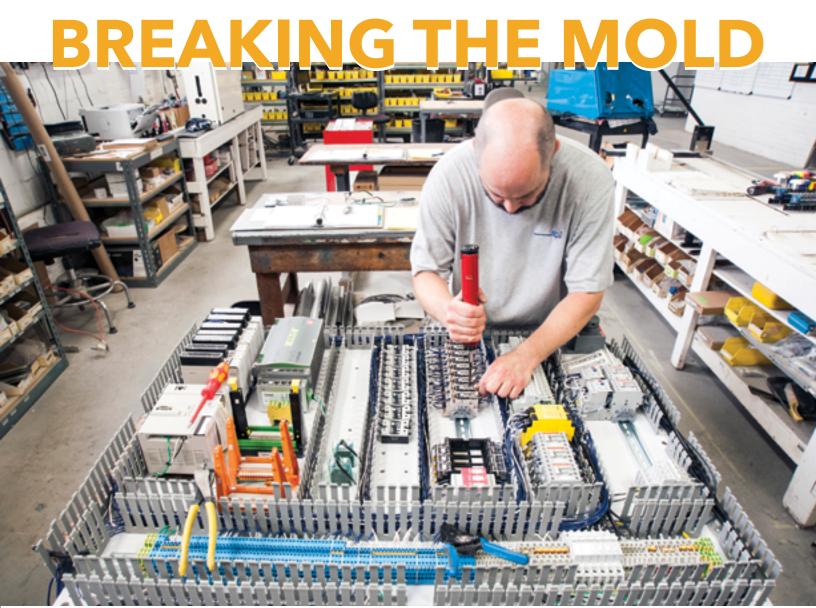
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COMPANY PROFILE

MPI INC., LEADING MANUFACTURER OF WAX-ROOM EQUIPMENT WORLDWIDE



Dominic Cocco is wiring an electrical panel.

hen most people hear the word "innovation" they think of the latest technological advancement, perhaps the latest iPhone or pharmaceutical breakthrough. But there is another type of innovation that, while perhaps not as glamorous, is equally important to the advancement of an industry and an economy. Process innovation is the application or introduction of a new technology or method for doing something that helps an organization remain competitive and meet customer demands. Poughkeepsie based MPI is advancing a millennia old manufacturing process by applying new technologies in creative and innovative ways. In doing so they are helping their customers compete in a global marketplace and advance their own technologies.

The manufacturing process known as investment casting, which uses the "lost wax" method, has been around for millennia. It dates back to the Shang Dynasty in China (1766 to 1122 B.C.) where it was used to produce fine bronze art work and in Mexico, where the Aztecs used this method to produce gold jewelry. Investment casting came into use as a modern industrial process in late 19th century, when dentists began using it to make crowns and inlays in 1897. During World War II, investment casting was able to aid an over taxed machine tool industry in the United States by providing a shortcut in the manufacturing of precision parts for arms and aircraft.

The process of investment casting has several steps, but is much simpler, faster, and more precise than creating each product by hand. An artist (or design engineer) creates an original pattern which can be quite intricate and detailed. In order to replicate



Bruce Phipps standing in front of a scale model of a machine built by Mark Sacher, an engineer at MPI.

this part, a die is made which is a negative of the final part. This is filled with wax. The wax part is then removed from the die. It is during this vital step in the process that it is critical to ensure all the undercutting and fine detail is preserved. The wax pattern is then dipped in ceramic to create a smooth and highly accurate ceramic shell. When the ceramic is fired, the wax melts out, and molten metal is then poured into the ceramic shell. The metal hardens and the shell is broken away to reveal the final product, an exact replica of the original pattern. This process actually takes place in the foundry at the customer's facility, not at MPI. MPI, Inc. designs and builds the machines that control the wax injection process and while most of us imagine this process being used to make large objects it is, in fact, also a process that is effectively used to make smaller, precise items used in the aerospace, automotive and energy industries.

MPI, Inc. was founded in 1968 as Mueller Injection Presses, by Hans Mueller manufacturer of the "Sherwood Wax Injector." In 1972 Bruce Phipps and his then partner, Fred Mueller (Hans' nephew) purchased the company changing the name to Mueller – Phipps International Inc. and in 1974 began producing a machine of their own design. By 1984, the partners had a difference of opinion about the direction the company should go, leading Phipps to purchase the company outright becoming sole owner and president and be able to focus on the Investment Casting industry. The name was changed to MPI Incorporated and the company relocated to the manufacturing facility where they currently operate on Smith Street in the city of Poughkeepsie. They became the first in the industry to introduce paste wax, new designs for frames, and other innovations.

The next water mark for the MPI came in 1999 when the company received a grant from NYSERDA to develop their wax welding process. This process would reduce both the energy used by their machines and the amount of wax scrap produced. "This was a big breakthrough for us." said MPI President and Founder Bruce Phipps. "The NYSERDA funding directly lead to the development and installation of our first APAS (Automated Pattern Assembly System) in 2004. We went from building manually operated equipment to computer controlled systems."

From there the process innovations from MPI accelerated. By 2006 MPI introduced "Smart Controls" which include a touch screen. With 60% of MPI's machines shipped overseas each year the screen includes a variety of language options to allow for international use. In 2010 the company began shipping the first Automated Injection Cell and in 2012, the first Automated Single Crystal Assembly Cell, which is used in the manufacture of jet engine blades.

Next for MPI was the integration of robotics into their wax room solutions for customers. MPI is a certified integrator for ABB and Fanuc six (6) axis robots which are part of the automated cells. "Now MPI can even put together a fully automated wax room," explained Phipps. "As the leader of wax room innovations, MPI has developed and introduced more systems and products than all of our competition combined."

Such innovation is the direct result of the efforts of a highly skilled and dedicated team. "I am always proud and amazed by what our people are capable of," added Phipps. "We have customers who believe in us enough to bring us some challenging problems to help them solve and even if we have never done it before we have

been able to design solutions for them, to build new products for them."

Along with this product development the company has expanded as well, from the early days in a 2,400 sq. ft. space, to the current 47,500 sq. ft. state of the art facility that also houses a fully functioning laboratory and showroom where MPI's state of the art wax room equipment can be demonstrated to clients. Customers occasionally come to MPI for testing to find the perfect wax mixture or the most efficient way to produce a part. The machines are not made for mass production of cheap parts but for large scale production of high quality parts for very specific uses.

MPI Inc.'s machines will travel to companies across the United States and more than half will travel overseas to become part of production lines for aerospace, automotive, commercial and medical companies. At any time the facility has a variety of machines being assembled that will eventually be part of a production line manufacturing turbine blades, medical implants, turbo wheels, and even parts for food processing equipment. Phipps recalls the MPI's first business deal in China, "We sold our first machine there and I thought that would be it. Now that is one of the biggest markets for our equipment." The companies purchasing MPI Inc. machines are high end, dealing in western technology like Pratt & Whitney Aircraft (USA), Rolls Royce PLC (UK, Italy, China), Hitachi Ltd. (Japan), Texmo Precision Casting (India), Zollern (Germany), Stryker (Ireland & USA), Master Power (Brazil), and Avignon Ceramiques (France) just to name a few.

The workforce at MPI is really a group of problem solvers, including mechanical engineers, electrical engineers, computer engineers and people that like to take things apart and put them back together. MPI employees travel with the machines to set them up for customers and then train operators on the proper use and maintenance of each machine. When companies hire new operators they can be sent to MPI for training or request a training session at their facility. MPI also conducts training for its own employees in various areas from LEAN manufacturing to the Council of Industry's Certificate in Manufacturing Leadership training. MPI has also hosted tours for Certified Production Technicians from the local community college programs.

"I give personal foundry tours to our people—engineers, subassembly, and assembly—so they really understand what our customer base does with our products. They meet machine operators, department managers, engineers, and the service technicians who handle the problems. We exchange ideas and work together in a very



Paul Hunt is assembling an injection nozzle.



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Machine operator programming the APAS (Automated Pattern Assembly System).

positive environment. Those trips allow our employees to interact in a meaningful way," explains Phipps. The employees at MPI Inc. produce between 60 and 80 machines a year and while there are some standard designs the models are highly customizable with numerous options.

The future of investment casting involves automation and robots. The first Automated Pattern Assembly machines were purchased in

2004 by aerospace, golf, firearms, and commercial companies. Today MPI's automated injection cells are equipped with their wax injector along with a variety of secondary systems including a pattern/ core conveyor, automatic tool change station, and six-axis robot. When designing the automated wax room, Phipps explains how "MPI has incorporated the best process controls into every automated function from inserting ceramic cores, wax injection, and pattern removal to pattern setting, injection runner trimming and inspection, and so on." Automation is an area that many companies in investment casting are still just looking into. MPI is already there. In fact MPI has consistently proven that an automated process can out perform operator controlled injection and assemblies in accuracy, repeatability, and efficiency.

MPI Inc. has become the successful company it is today because of the drive to innovate and improve. William Pollard, a 19th century minister, said, "Without change there is no innovation, creativity, or incentive for improvement. Those who initiate change will have a better opportunity to

manage the change that is inevitable." By embracing the automation in investment casting MPI has taken the reins of the inevitable evolution of the industry and is leading the way. By developing cutting edge machines and setting the industry standards for training and customer service, MPI is breaking the mold of the investment casting industry and creating a new pattern all their own.



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TRADE AND MANUFACTURING

BY HAROLD KING

What's the Deal? Trade, Trade Agreements and Hudson Valley Manufacturers

With all the negative talk this election season about the impact of globalization and trade on our economy we look at the pros and cons of trade and trade agreements and their effects on Hudson Valley Manufacturers.

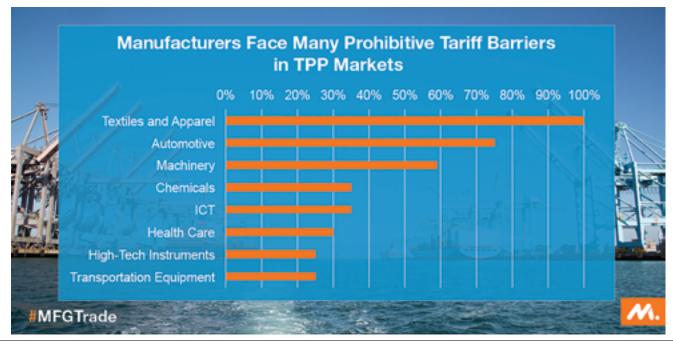
nternational trade and the rules that govern it are front and center in this year's national election campaigns. Both major party candidates, as well as the Green and Libertarian candidates, have to one degree or another, taken the position that trade deals have killed U.S. jobs and weakened the economy. This position surely taps into the angst felt by many voters, but is it accurate? Does free trade hurt the economy or does it help? As is usually the case the answer is complicated and depends on a variety of factors and since our interests at HV Mfg are specific to one industry in one region we will attempt to answer the question: "Are trade agreements a net positive or negative for Hudson Valley Manufacturers and their employees?

One variable that makes even this narrow question difficult to answer is the simple fact that when we say "Hudson Valley manufacturers" we are using a geographical moniker that describes only one aspect of what are really many different types of companies. Some are small firms with a single location here in the Valley whose customers are largely other local companies.

Others have a single location in the region but sell to customers around the world. Many are part of larger companies with multiple location throughout the nation and the world, while still others are foreign owned companies producing locally. Obviously trade agreements will effect these firms in different ways.

This is Not a New Debate

The role trade should play in our economy has been a subject of debate since the nation's founding. Tariff receipts were the major source of revenue for the federal government for the nation's first 50 years or so, accounting for fully 90% of annual revenues. Trade policy became contentious numerous times in the 19th century including during the Civil War, but one of the fiercest debates occurred at the turn of the 20th century. At that time the early progressives fought to tear down trade barriers which, they argued, protected cartels and made goods more expensive for the average citizen. President Teddy Roosevelt famously bucked his Republican Party to lower tariffs on many goods in 1909 while his successor Democrat Woodrow Wilson was elected largely on a tariff reduction



platform and accelerated the lowering of tariffs throughout his first term. That policy was reversed in what is perhaps the most well known tariff legislation – Smoot-Hawley – which dramatically raised them in 1930 forcing retaliation from other nations and the deepening of the great depression.

Since the end of the Second World War and the establishment of the General Agreement on Tariffs and Trade (GATT) in 1947 trade policy has been liberalizing steadily amongst capitalist nations with tariffs and other barriers steadily being reduced.

Alphabet Soup - Free Trade Agreements

During this liberalization there have been numerous multi-lateral and bilateral agreements to promote trade. In addition to the aforementioned GATT the most significant multi-lateral agreement the United States is a party to is the North American Free Trade Agreement (NAFTA) between the U.S., Canada and Mexico. As for bilateral agreements we are party to more than 20 with nations that include Australia, South Korea, Columbia, Israel and Singapore. The U.S. is also a member, along with 122 other nations, of the World Trade Organization (WTO) an intergovernmental organization which regulates international trade amongst its members.

It is a proposed new multi-lateral agreement that has thrust international trade back into the forefront of political debate: the Trans Pacific Partnership (TTP) involves 12 countries: the US, Japan, Malaysia, Vietnam, Singapore, Brunei, Australia, New Zealand, Canada, Mexico, Chile and Peru. The pact aims to deepen economic ties between these nations, slashing tariffs and fostering trade to boost growth. The agreement would create a new single market something like that of the European Union (EU). TPP was negotiated by the current administration under Trade Promotion Authority (TPA) where Congress gives the President of the United States the authority to negotiate international agreements that Congress can approve or deny but cannot amend or filibuster.

The Case For TPP

Supporters of TPP argue that the benefits of removing tariff and non-tariff barriers that restrict global trade and investment of goods and services are significant. First, the sheer volume of trade that exists between these nations is huge and reducing barriers will improve efficiencies. Second, the TPP – which seeks to govern exchange of not only traditional goods and services, but also intellectual property and foreign investment - would promote trade in knowledge-intensive services in which U.S. companies exert a strong comparative advantage. Third, killing the TPP would do little to bring factory work back to the U.S. or other countries involved, while the potential gains of the TPP for manufacturers of high value goods are significant. Finally, it is argued that although China is not part of the TPP, enacting the agreement would raise regulatory rules and standards for several of China's key trading partners which would, in turn, pressure China to meet some of those standards and cease its attempts to game global trade to impede foreign multinational companies.

The Case Against TPP

There are several arguments pointing at the risks to implementing TPP: First, given that many of the participating nations feature less expensive labor markets, it is feared the agreement would lead to an accelerated loss of good paying factory jobs. There are fears about the impact such a wide-ranging agreement might have on intellectual property laws and patent enforcement – there is concern for example that the deal may extend the scope of patents in sectors

such a medicine and prevent the distribution of generic drugs. More concerning to many is the suspicion that the deal would enable foreign corporations to skirt domestic courts and directly challenge our health, environmental and other public interest policies before extrajudicial foreign arbitration boards. Finally, a major criticism is that TPP was negotiated behind closed doors and the complete



agreement has been seen by few outside of Congress and the administration. That lack of transparency and accountability in this highly important agreement is a major concern.

Free Does Not Necessarily Mean Fair

Nearly all manufactures in the United States are for trade deals that are both free and fair, but free trade does not always mean the playing field is level. Critics point to 2 significant issues that make American goods and services less competitive with their overseas rivals – even where free trade deals are in place. The first is the Value Added Tax (VAT). Many nations – particularly in Europe employ this tax on all goods and services sold in their countries. VAT taxes goods – as the name implies – at each stage where value is added. Exports from VAT countries enjoy rebates of VAT taxes which goods sold domestically in those same countries would be subject to. U.S. exports to those countries receive no such rebate of federal taxes and much smaller relief from state sales taxes. This problem is compounded because imports into VAT countries are subjected to VAT at the border, while imports into the U.S. are not taxed at our border. As a result, U.S. exports are taxed twice, while exports from VAT countries are traded free of certain types of taxes.

When a U.S. made good – say a car – is exported to, Germany for example, a VAT is added to the cost of that car. Conversely, however, since the United States has no VAT when a German company exports its car to the United States, no such tax applies.

Currency manipulation is the second major concern of "Fair Traders." Currency manipulation is a policy used by governments and central banks of some of America's largest trading partners to artificially lower the value of their currency (in turn lowering the cost of their exports) to gain an unfair competitive advantage. Simply explained, in order to weaken its currency, a country sells its own currency and buys foreign currency — usually U.S. dollars. Following the laws of supply and demand, the result is that the manipulating country reduces the demand for its own currency while increasing the demand for foreign currencies. With its own currency weaker the cost of U.S. exports to that county increase,

making them less attractive to consumers. The converse is also true making their exports to the United States more attractive to consumers.

Any trade deals that do not address these issues, critics argue, are not creating a level playing field for competition.



Department of Commerce, International Trade Commission

The Question at Hand

With all that said the question remains, is free trade or more particularly free trade agreements, good or bad for Hudson Valley manufacturers and their employees? Given what we know the answer is –for the most part – good.

For all their diversity in terms of products, ownership and customer base, Hudson Valley manufactures tend to have a few important things in common, they produce innovative, high quality, high value added goods efficiently and effectively - and they export. The relatively high cost of producing goods in New York has

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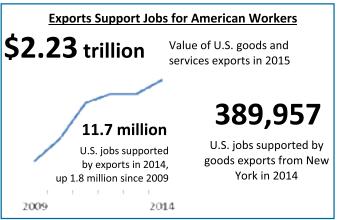


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meant that high volume, labor intensive lower cost goods have long since gone from our region. What remains are innovative companies with high quality products that are in demand around the world. (MPI and Ertel Alsop featured in this publication are good examples) Any agreements that reduce tariffs and other barriers to trade make these Hudson Valley products more attractive. What's more most of what is manufactured in the Hudson Valley are goods and equipment used in the production of other goods. Semiconductors for computers, food processing equipment and building materials for instance. High value products that are bought by firms overseas which in turn use them to make consumer goods that may eventually find their way back to the United States.

This is not to say that all firms benefit. Far from it in fact. Many firms, particularly some in the metal and plastic machining industry, face stiff competition from abroad. This is in spite of the fact that many have invested heavily in advanced equipment and technology. Reduced trade barriers have invited competition in these and other



Department of Commerce, International Trade Commission

industries to compete for customers. It is also not to say that trade agreements cannot be improved, or that future agreements should not include provisions on VAT and currency manipulation.

What About the Workers?

Research from the Bureau of Labor Statistics found that the total number of manufacturing jobs peaked in the United States in 1979, 15 years before North American Free Trade Agreement (NAFTA) and more than 20 years before China became a member of the World Trade Organization in 2001, which opened that market more fully.

Far more damaging to employment numbers in manufacturing has been the revolution in technology and automation. As mentioned earlier the high cost of doing business in New York forced Hudson Valley firms to invest in technology and automation. The result is fewer workers producing more, however these workers have more skills and higher earnings. Trade liberalization has – again on balance – opened markets to Hudson Valley products enabling them to grow and prosper. According to the Commerce Department New York state exported \$68.12 billion in manufactured goods in 2014 with \$22.21 billion of that with our free trade agreement (FTA) partners. What's more 24.20% percent of employment in the New York State stemmed from exporting in 2011.

It's a close call – but for the most part more free global trade benefits Hudson Valley manufactures.



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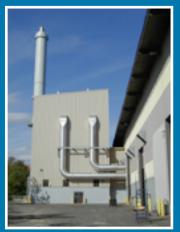












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MANUFACTURING TRENDS

BY DAVID KING

Qualified Leads are the Holy Grail for Small Manufacturing Sales Teams pURL's are Aiding Them in Their Quest

our sales team probably spends a lot of time and company money generating qualified leads, but how many of those result in sales? In reality, there's a big difference between "qualified" and "sales ready."

According to The Direct Marketing Association, (DMA) it takes 7-13 touches—defined as any method of contact between the prospective customer and the product—to deliver a qualified lead. Marketing Departments must step up to the plate and take on the responsibility of changing warm leads into qualified leads and qualified leads into "sales ready" leads. This is a major change for most marketing departments, and will require it to justify the resources required to make multiple "touches" with leads over e-mail, social media, and the telephone. It also means that marketing must become rigorous about tracking the metrics. For small manufacturing businesses

who may lack the resources to run an all-encompassing ad campaign the revenue generated from targeted sales is a lifeline, and the difference between a lead that pays off and one that goes up in smoke can be the difference between success and failure.

Lead nurturing is the process Business-to-Business marketers (or B2B marketers as they are commonly known) use to build relationships with their prospects, even when they're not yet ready to buy, in order to win their business when they are ready to make a purchase. Unlike consumer marketing, B2B marketing doesn't rely on emotional triggers like a product's status or popularity to make a sale. Instead B2B buyers are focused on price and potential to gain profit or build value, so marketers lean heavily on relationships fostered between them and potential buyers as a means to push their product. This is especially true in the small manufacturing

world where the job of a marketer is to give their prospects the information they need to make a buying decision, keep their brand frontand-center during this period, and be there when they're finally ready to commit.

Today, relying solely on a sales staff to weed through prospects for new business can be a costly endeavor. Many marketing companies are increasingly focused on strengthening personal ties with potential clients via social media and marketing automation practices. "There's a conversion happening between traditional marketers and IT," says Dr. Heather Weller, a professor at Marist College's Department of Marketing. The goal isn't simply to gather data anymore, but to nurture leads, create dialog, and build strong relationships. "Nobody has money for focus groups" Weller observes. Instead, she says companies today try a variety of new marketing tools that are in their budget for "content marketing." Content marketing



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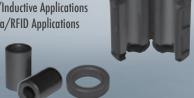
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is focused on creating and distributing eye-catching, relevant, and consistent content to attract and hold the interest of a specifically defined audience. Today companies should "leverage social media"

Weller says, in order to keep in touch with their leads and maintain their interest. The better a marketer knows their lead, the more effectively and efficiently they can market to them.

"There's an art to it," says Frank Campagna of ColorPage Marketing and Publishing. Campagna lists seven things he says are essential to making a successful sale.



Although that all may sound intuitive, the secret is in the execution of those points which is not only tricky, but generally requires a team with marketing experience and access to marketing automation tools. Taking this into account, Campagna's company is investing significant time and resources in a proven direct response technology using pURLs, or personalized URLs.

Clicking on a pURL takes the recipient to their own personalized landing page or microsite. Because each web page is unique to the recipient, marketers are able to connect with the potential buyer on a one to one basis and track the level of interest of each target individually while consumers have a place to learn about an offer online that's specifically tailored to answering their questions. "pURLs serve as the most effective way to add personalization, track a consumer's behavior and connect with them on an online

channel." Campagna explains, "Traditionally after your company sends a direct mail piece, your marketing team has no way of knowing if the prospective buyer actually received the piece or has further interest but is simply not ready to buy at that time. Adding pURLs in direct marketing pieces and emails gives your company the benefit of who exactly has or has not visited their pURL page as well as gathering important response information." Marketing and sales teams will receive email alerts when a prospect visits their pURL landing page or completes an online form (along with the data provided for it). Marketers can easily export the activity, and any data gleaned, to a direct mail campaign, or Excel in order to use it in following leads and generating subsequent targeted campaigns. "Using pURL's in direct mail and email is a direct response marketing best practice," Campagna enthuses, "as they are the best way to nurture leads, increase response

rates, and drive sales ready leads in a measurable way."

New tech driven B2B tools like pURLs will only gain more importance as social media continues to displace traditional methods of communication. A winning smile and a strong handshake are still important but they just aren't going to be enough in a world where purchases are made online and two people can have a conversation without saying a word. Direct marketing programs that include pURLS give consumers what they want—a place to go online to learn more about an offer—and it gives marketers what they want—information about their customers. Tools like this promise greater efficiency and communication if used properly by professionals. They represent the future of B2B marketing and lead nurturing



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ASSE American Society of Safety Engineers

Hudson River Valley Chapter hudsonrivervalley.asse.org

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http//groups.drupal.org/node/209048

HVP Hudson Valley Programmers

www.meetup.com/hvprogrammers/

HVTPF Hudson Valley Technology Professionals Forum

www.linkedin.com/groups?home=&gid=133393

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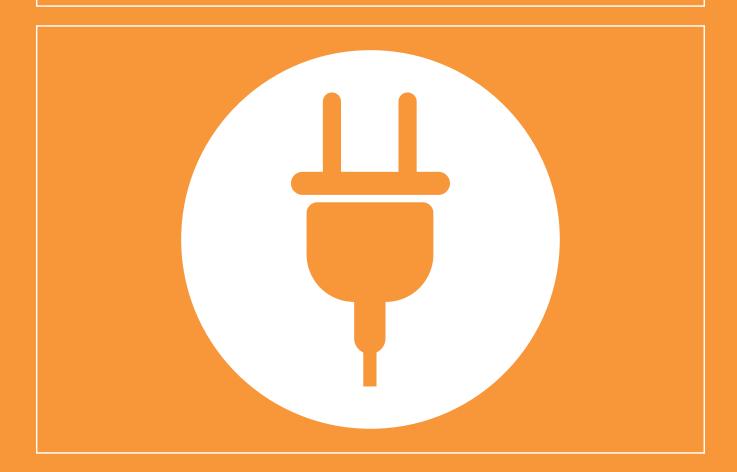
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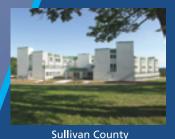
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