

FUTURE-PROOFING MANUFACTURING & THE SUPPLY CHAIN

*2020 Predictions from
Manufacturing & Supply Chain Executives*



Presented by



Future-Proofing Manufacturing & the Supply Chain

2020 Predictions from Manufacturing & Supply Chain Executives

Economic volatility and uncertainty were the new normal in 2019. As trade wars escalated, labor costs continued to rise in countries outside of the U.S. and working capital concerns increased, manufacturers started to rethink sourcing, manufacturing and supply chain strategies. Add significantly increased customer expectations into the mix with the continuation of the Amazon Effect, and manufacturing and logistics organizations must become agile, proactive, and even disruptive, to merely survive.

It is all about the customer experience. Manufacturers that embraced, dissected and responded to customer needs, preferences and demands, are developing a significant competitive advantage. More importantly, those that went beyond what the customer says to what the customer needs by proactively predicting and creating customer needs are leaving the competition in the dust.

The most successful organizations are doing a deep dive into human capital, technologies and strategies that will achieve the trifecta - a superior customer experience, profitable growth and improved working capital, simultaneously. With the promise of additive manufacturing, artificial intelligence (AI), IoT, robotics and blockchain, technology can play a pivotal role. On the other hand, technology alone is never the answer. Instead, it is the smart application of the appropriate technologies by top talent, aligned internally and across the extended supply chain and following a well-thought out strategy that wins the race.

To succeed in 2020, rapid customization of products and services will be integral to success. Nimble, local advanced manufacturing operations and collaborative, connected logistics networks will need to work in concert with predictive analytics and advanced technologies to get the right product to the right place at the right time at the right cost. 3D printing, JIT and predictive positioning will win the day. Add the tight labor market, retiring baby boomers and widening skills gap with advanced technologies, and only those with a vigilance on providing a superior customer experience and a focus on Future-Proofing Manufacturing & the Supply Chain will succeed.

There has never been a better time to stand out from the crowd amidst the chaos. I asked experts in various disciplines to provide their insights into 2020. From trade and regulations to accelerated vision and mobility, success requires futureproofing.

Lisa Anderson
President
LMA Consulting Group



“Automation will no longer be just for processes. Increased focus on automated analytics will drive efficiency and productivity and change the role of the Supply Chain in 2020 and beyond.”



Leigh Boghoussian

SVP Supply Chain - Green Dot Corporation

Firms will continue to focus on leveraging data, particularly IoT and Blockchain, to support process automation and continued efficiency gains in traditional operational activities like order and inventory management. In addition, there will be increased focus and attention placed on intelligently leveraging this same data with spend, revenue and other product and financial information so as to accelerate the analysis necessary to support more strategic customer-, supplier- or even consumer-facing decisions.

The combination of these historically disparate data, structured in an intelligent and thoughtful way, coupled with automated review and analysis, places the Supply Chain team in a unique position in organizations. Not only will they supply information, but also deliver unbiased, data-driven analysis and equally partner in and influence business decisions like never before.

As results follow, Supply Chains will be viewed inside the organization as an equal partner in decision making and strategy rather than simply departments tasked with driving increased productivity and reducing costs. This shift will result in Supply Chain talent being valued as much for their cost-management, process-improvement and logistics expertise as they are for their ability to mine data, manage products and generate new demand. Supply Chain training, roles and expertise requirements will shift as a result.

“Full steam ahead for 2020....”



Chris Vansell

Owner - Mission Rubber

I'm cautiously optimistic for 2020. I believe we still have a couple more puffs on this cigar (the economic cycle). And, when the economy slows down, I believe it will be a gradual one - not like 2009/10.

At Mission Rubber, we made over \$1million in capital expenditures in 2019 and will do so again in 2020, maybe more, if we move forward with a new ERP system. Full steam ahead for 2020...

“...Adapting Accelerated Vision will be the differential advantage.”



Rick Moroski

*Chief Operations Officer - Americas
Sr. Vice President - Schenck Process, LLC*

As we look forward into 2020 and beyond, there are many facets that will impact business success.

Adaptation will be the pivot-point, be it adaption of a new technology, new business processes, new products and/or strategic customer relationships.

Although this factors into growth and success, the one that I believe that needs more focus, is a term I picked up last year from Frank Reich, Head Coach of the Indianapolis Colts. In an interview, Frank was asked what separates a good NFL quarterback from a great NFL quarterback; he said, “Accelerated Vision”. I thought about that statement and believe it is the core element of great leaders, as well.

Seeing patterns as they are taking place, being able to shift a plan to adapt to the changing market or economic conditions. Execution of our strategies will always be important, but adapting Accelerate Vision will be the differential advantage.

“Specialization and thinking through the tradeoffs between automation and flexibility will be the key to drive success.”



Craig Young

Senior Director of Operations - Nellson, LLC

There will continue to be significant pressure for U.S. manufacturers to reduce costs to remain relevant. The trend towards local manufacturing will continue, especially due to tariffs, rising labor costs elsewhere and working capital requirements. Financial operations and the power of good data will be critical.

While relevant, robots will be focused on a small part of the process. This is why Third Party Logistics (3PL's) haven't been able to implement robotics widely. Specialization and thinking through the tradeoffs between automation and flexibility will be the key to drive success. Additionally, postponement of package sizes supports specialization, as well as the Amazon Effect since it allows for last minute changes to customer demand.

“New year, new decade – same legal problems for employers (only worse).”



D. Brian Reider

Attorney at Law, Partner - Best Best & Krieger

New year, new decade - same legal problems for employers (only worse). 2019 saw some events which are going to resonate for a long time.

For any business utilizing “independent contractors”, California’s passage of AB 5, which is now mostly in effect, means that every company needs to look at each of those relationships and ask three questions:

1. Is the “contractor” free from your control and direction in connection with the performance of the work (under a contract and in fact)?
2. Does the “contractor” perform work that is outside the “usual course” of your business?
3. Is the “contractor” customarily engaged in an independently established trade, occupation or business of the same nature as that they are doing for you?

If the answer to any of these questions is “no”, that “contractor” is really your employee and must be paid and treated as such. For the moment, this does not apply to certain truck drivers covered by the FAA Act, as a court has issued an injunction barring enforcement. There are also a few professions (including attorneys) that have been exempted.

California also is trying to outlaw all employee arbitration agreements by newly passed AB 51, but that has also been stopped by the courts – again, for now.

So, my prediction is: It will be a year of lots of lawsuits by “contractors” who want the pay and benefits of an employee.

“These are different times to say the least.....it is the externalities that I worry about.”



Fran Inman

Senior Vice President - Majestic Realty, Co.

These are different times to say the least. Despite our geopolitically charged environment, the basic economic indicators are good - while not as robust, the economy is still fundamentally strong, and employment continues at an all-time high. Yet, the election will have an impact. Now is the time to polish your crystal ball because the effects are anyone’s guess.

Yet, from my perspective, it is the externalities that I worry about. Top of mind is the coronavirus. We live in a very connected world, so a pandemic in one region is no longer isolated. It is quickly becoming a worldwide pandemic and too soon to predict the economic effects from shock waves of closing off an entire region or regions. While somewhat settled, there remains uncertainty around the tariffs which will result in shifts in trading patterns. And, in this interconnected world, there is still Brexit which will unfold with some type of ripple effect.

“I see three major themes that can possibly have market and economic impact in the coming year.”



Anne Norris

Director - Pelorus Capital Management

I see three major themes that can possibly have market and economic impact in the coming year:

A record long economic expansion that seems to be showing signs of being late cycle and may have an impact on the domestic economy this year or next.

Uncertainty about the presidential election with the potential of a democratic nominee who may not be market friendly and could cause significant market volatility.

The effects of the coronavirus which has already shut down a significant portion of the global supply chain in China, causing global port restrictions which will ultimately be painful for logistics and trade.

“...merging of people mobility and freight mobility... Shared transportation is advancing and could be here at full speed by year’s end.”



Tim Brown

*Managing Director, Supply Chain and Logistics Institute -
Georgia Institute of Technology*

With increasing complexity in the supply chain and the added demands of omni-channel distribution, robotics and artificial intelligence are becoming more important. Omni-channel distribution enables customers to interact with the seller in multiple ways to select, purchase and deliver items. Companies are looking to AI, robotics and related technologies to help them manage the complex channels,

different flows and different inventory pools. Additive Manufacturing or 3D printing is also a major game changer in supply chain and logistics. Previously, products left the factory only to be stored for weeks, months or even years. Now, an increasing number of products are created on demand.

Looking ahead to the future, I’m hopeful for the merging of people mobility and freight mobility. While some forms of transportation, such as air transportation, move both cargo and passengers, most forms of transportation keep them separate. For example, MARTA could be moving freight through Atlanta, particularly at night. Even during the day, there could be a couple of cars moving freight under the city instead of through it on trucks. While shared people and freight initiatives are new concepts, start-up companies are exploring a transportation networking system. With a transportation networking firm, you find somebody who happens to be traveling between those two points and they agree to stop by, pick it up and move it.

Shared transportation is advancing and could be here at full speed by year’s end.

“...We will see an acceleration in moving “the factory” to the customer’s site and put the means of production in the customer’s hands.”



Steven Bleistein

Founder and CEO - Relansa

Organizational Change Expert, Tokyo, Japan

In 2020, we will see an acceleration in moving “the factory” to the customer’s site and put the means of the production in the customer’s hands. Companies like Adidas have already been experimenting with in-store shoe printing, where the machines, materials and processes are available at the point of sale.

Cosmetic and personal care manufacturers will move toward giving customers that operate boutiques and salons not only the know-how for optimum personalized formulation of products, but also the means to produce those formulas on site—client by client, in real time.

Manufacturers will increase investment in developing the technology for such flexible on-site production capability. In addition, the human sales and marketing processes and capabilities will develop and support such customers with a high degree of technical expertise and rapid responsiveness.

As a result, we will see a trend of disintermediation with distributors of manufactured products, as well as movement toward local sourcing of materials and/or ingredients to better streamline the supply chain for speed of response and flexibility. This business model will be viewed by many as a degree of insulation from the uncertainty that trade disputes bring to manufacturing.

“Staying on top of the sourcing landscape, remaining open to transition as conditions change and ensuring you have a backup plan are the keys to success.”



Steve Erickson

President - Corona Clipper, Inc.

We moved a significant portion of our supply base to Vietnam as we saw costs rising in China. It has turned out to be a great decision, especially with the tariffs and coronavirus. And, we have projects with partners from India which look promising.

Staying on top of the sourcing landscape, remaining open to transition as conditions change, and ensuring you have a backup plan are the keys to success.

“And, the good news for manufacturing is that there is vast opportunity in export for U.S. manufacturers.”



John Tulac

Attorney at Law, International Specialty

Be aware of the many risks of doing business with China. A new data protection law went into effect in December 2019 in China that creates significant risk for data privacy. In essence, anything that goes through a server in China will no longer be private. Designs, intellectual property and/or trade secrets can become public. And, certainly, there are serious challenges with the coronavirus, many of which are still to be determined.

Rare earths are getting attention. While the U.S. is close to 100% reliant on China for rare earth elements, it seems likely that this is about to change. There are options in Asia and other parts of the world that companies can pursue as the U.S. government gets serious and takes a closer look at cooperative options.

Despite these challenges, trade with Mexico and Canada is looking up. With the new USMCA agreement and heightened awareness of the Amazon effect (customers expecting immediate delivery and changes to orders), opportunities abound with these trading partners. And, the good news for U.S. manufacturers is that there is vast opportunity in export.

“Aligning your hiring practices with company culture and goals will bridge the war for talent...”



Eileen Angulo

Chief Solutions Officer - HR Solutions & Services LLC

Analysts predict a major decrease in the working population in the coming years due to lower than average birth rates and baby boomers exiting the workforce. Employers need to identify creative solutions for attracting and retaining right fit employees.

It's essential to review hiring practices to bridge the war for talent. This includes consideration in modifying the recruitment and hiring criteria, supporting employees interested in broadening knowledge base and aggressively supporting 'upskilling' employees.

Companies who think outside the box, identify skills gaps and find innovative ways to help employees stay engaged and advance will be the leaders who create a culture that retains the best and the brightest and stands attractive to key talent.

“2020 will advance the capabilities and competitiveness in the opportunity-rich manufacturing and logistics industries...”



Paul Granillo

CEO - Inland Empire Economic Partnership (IEEP)

2020 will advance the capabilities and competitiveness in the opportunity-rich manufacturing and logistics industries in Inland Southern California.

IEEP and their partners are focused on creating a consortium for excellence in logistics to establish Inland Southern California as a global leader in logistics technology and a world leader in top-performance, smart, clean, sustainable, hyper-connected logistics and goods movement. Additionally, we are creating an import and export advanced manufacturers alliance to support a more efficient and opportunity-ready sector that capitalizes on foundational strengths to become a competitive leader in the global marketplace. By aligning a strong network of industry, educational partnerships and public policy support, programs will be designed to help manufacturers and logistics organizations take advantage of growth opportunities such as export, advanced technologies and the latest research to thrive in the next decade.

“...people who can drive sales and/or process efficiency in the supply chain will continue to be in very high demand...”



David Porter

Partner - Orion Solutions Group

The talent shortage continues but demand is shifting. In 2019, basic operational roles without a specialty had very limited demand and were filled easily. Operational roles with a high degree of specialty, such as all technical roles, were and continue to remain high in demand. With lackluster freight volumes in 2019, we saw a high demand for individuals who could either generate business or implement technology-driven solutions to reduce costs and increase efficiencies.

As 2020 unfolds, people who can drive sales and/or process efficiency in the supply chain will continue to be in very high demand at least until mid-summer when the seasonal pendulum will improve the outlook for those who can secure and optimize carrier capacity.

The unknowns associated with the coronavirus will affect the hiring outlook. It is too early to determine what this impact will be as there is potential for companies to put some hiring decisions on hold until there is more clarity on the economic environment for transportation. However, many companies will take the longer-term view and continue to make necessary investments to strengthen their company by bringing on high-impact performers.

“Manufacturing in California is a costly proposition and can put manufacturers at a competitive disadvantage.”



Kusum Kavia

Co-Founder and President - Combustion Associates, Inc. (CAI)

The labor market remains tight and CAI, like other manufacturers, has experienced first-hand the difficulties in finding high-quality, qualified professionals for our workforce. Also, manufacturing in California is costly and can put manufacturers at a competitive disadvantage. The slow-down that began with the rise in tariffs on imported raw materials will continue to be an issue for manufacturers in 2020.

Because of cheap labor and the tariff situation, Chinese manufacturers continue to win power infrastructure projects, mainly in Africa, CAI's primary export market. It is difficult for an American company, especially one that manufactures in California, to compete with their cost advantages. In response, we have re-structured and become more agile. We are modifying by client/market requirements which could be the key to remaining competitive. This means that it's important to forge collaborative alliances that pool and leverage combined abilities to enhance cost-efficiency and win business.

“...New technologies are disrupting industries...Ultimately, the possibilities are unlimited.”



Kash Gokli

Professor - Harvey Mudd College

With over 500 project partners in many industries, we see exciting opportunities. Manufacturing continues to be a fast changing, adaptive industry, constantly searching for ways to improve product design, the manufacturing process, delivery, profit and, ultimately, customer satisfaction. What has changed is the tools and methods used to succeed. Increasingly, companies are using robotics, cobots, IOT, drones, artificial intelligence, machine learning, blockchain technologies and other tools to make a quantum leap.

While embracing new technologies to become more competitive, almost every industry will be disrupted by new technologies. And, the trend of new technologies disrupting industries will continue. A big disruption is currently happening in the automotive industry where technologies developed by startups and large firms are making autonomous cars a reality. This, coupled with the push to change the energy source used to fuel the vehicle - Toyota with hydrogen fuel cell technology versus Tesla's battery – leaves questions about free or inexpensive options. Ultimately, the possibilities are unlimited.



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