

Pivot to Compete Locally

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When we come to a point of uncertainty, as we certainly have come to that point currently with a pandemic virus impacting every aspect of our day-to-day personal and worklife, it allows us to truly focus on the need to focus and plan our next move. In these past weeks many of my clients and business customers, operating

in a myriad of industry sectors, are asking themselves “how they came to be in the position being so dependable on having their business impacted by such a disruptive supply chain” – and how am I going to meet the demands of my customers in the coming weeks and months ahead.

Meeting the demands of today’s customers may help us if we can step back and pivot to a time when we were operating with a vision to simplify work processes and strive to do significantly more with much less. Taking a deep dive view to simplify business practices with a model that reduces the complexities, in order to streamline operations, and continuously remove all process steps that are not adding customer value. Let’s take an overview look at where we have been and the amount of change all industries and markets have moved over time in order to discuss a pivot in our ways of conducting business with a vision going forward.



As a front row participant, observer, and fixer of several hundred client projects over more than four decades, I truly believe I could recognize when change was about to take place. I typically was on the change process team in several different capacities, in various industries needed to initiate a plan, in order to make these necessary changes to remain competitive and profitable. I have now come full cycle to 100% believe the times we are in today are like no others in other business market shifts. Over the course of my experience working with

small, medium enterprises (SMEs), large factories and distribution centers and giant Fortune 500 companies I believe I am now in a completely new space of what would be considered any normal business as usual practices.

Some who typically state that it is now a good time to execute business change also are recognizing something is very different this go around. It is now a time for quick action and put a team in place to create an updated and sustainable strategy. A timely example is that a flexible plan needs to be in place now to deal with this current pandemic crisis of 2020 and answers to questions must be addressed to why, when, what, where and how to move toward a new form of operational simplification. Looking back to help us look forward can bring some diversified insight to making that critically important next move. After all, in many cases today business survival could be a stake and what have we really learned from a lifetime of industry change – it’s still about the customer and as we moved from one stage of industry advancement have we really understood why it is

so important to resolve the complexities of everyday day operations and simplify process workflow intralogistics in order to best serve the demands for making, protecting and delivering the perfect order with timely communication and feedback capabilities. The vision must be connected to first eliminating waste to simplifying with a focus on the customer being served in the same manner they always expected to be serviced with their interactions in doing any transaction with businesses.

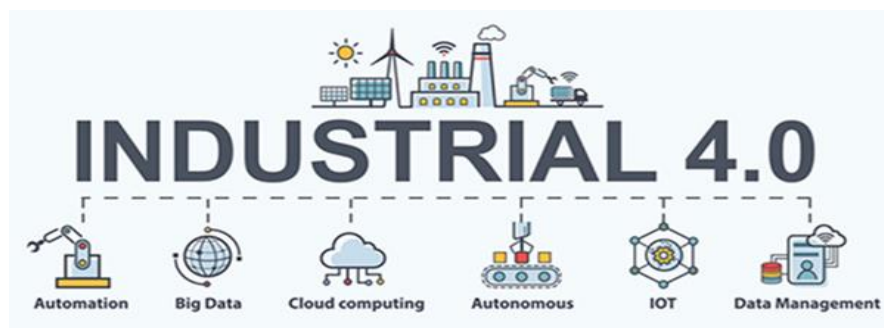


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This statement is so important to keep in perspective with a vision that will always focus on the customer. Now that things are quickly changing around us in so many aspects of running our businesses, we are discovering that one thing remains unchanged – customers now have positive experiences and have for some time now have become accustomed to the convenience and speed with placing orders-on-demand and want to on-line shop anytime, anyplace and have orders in many cases delivered anywhere. They are also requesting customized selection of items that need hour by hour tracking for same day delivery - with returns refunded immediately when deciding the product ordered on-line is not what was expected.

Wow did that change ever come so fast into our economy - and now technology is forever changing these now normal practices to even more intense levels for business to perform in our highly complex international supply chains, intralogistics operations, pack-out/ship and delivery in the last-mile for profitably serving localized customers' expectations.

Today, this has come to be the “new normal” and consequently the industry finds itself in the midst of advancing these practices in what is now has become known as the Fourth Industrial Revolution. This has placed manufacturing, the supply chain, distribution, fulfillment, packing/shipping and local same-day delivery poised to transform work at an unprecedented pace through executing exponential technologies such as artificial intelligence, advanced robotics and cognitive automation, advanced analytics, and the Internet of Things (IoT) to name a few of the digitalization advances being constantly introduced.



Additionally, the Fourth Industrial Revolution is creating a mismatch between available workers and the skills necessary for open jobs. In fact, Deloitte and The Manufacturing Institute anticipate the shortfall in US manufacturing during the next decade to reach the highest levels ever recorded, higher than the earlier estimates of 2 million unfilled jobs during 2015–2025.³ Part of the challenge the industry faces is

understanding how today's jobs and associated skills are morphing into new jobs and career pathways that continue to evolve along with advanced technology. How can the manufacturing industry prepare for this future workplace and ready its workforce to work beside robots and advanced technologies? What are the changes from recent past practices that will become "must-haves" in the future workplace?

The rise of automation in the workplace has brought with it an interesting corollary for skills needed in human workers. As technology replaces many of the manual or repetitive tasks many jobs entail, it frees up space for skills that are uniquely human, often called "soft" skills. A recent World Economic Forum study found that the top 10 skills for the next decade include essential human skills such as critical thinking, creativity, and people management. Companies need workers that can exhibit these skills as well as the digital skills necessary to work alongside automation.

A recent McKinsey Global Institute study estimates that it is technically feasible to automate 78 percent of these activities, the highest rate of the seven job categories reviewed. The highest percentage of these types of jobs are in manufacturing, distribution, warehousing, food services fulfillment for pickup and delivery and the up and coming trend to grow food in localized vertical farming urban facilities. The ability to digitize information and data is spurring redesigns of end-to-end processes, improving the customer experience, and creating more efficient operations that are lean, flexible, highly efficient and sustainability

Productivity will increase with automation, and this can benefit workers and companies. The technology can fuel company growth and, in turn, create new jobs and product lines. More critical is for companies to re-invest in workers' capacity and in retraining. When automation can handle up to 45 percent of repetitive work, it gives workers time for more higher-value tasks such as problem-solving, finding solutions and developing new ideas. This will empower employees and generate a more engaging and challenging work experience. I foresee a positive future for manufacturing where through automation and other technological advances, such as digital and analytics, we realize greater manufacturing output per employee. That could fuel significant growth for both companies and workers and help us maintain the high rate of manufacturing job growth we have seen recently.

U.S. manufacturing productivity—and competitiveness—rose rapidly since the 1980s. Where it once took 25 workers to generate \$1 million in output, it now takes only 6.5, according to Mark Muro, who studies manufacturing at the Brookings Institution. Still, while smart factory technologies promise future growth, manufacturing productivity has hardly budged.

- Faster to Lean
- Faster to Train
- Faster to Execute
- Faster to Simplify
- Faster to ROI

- Easy to Manage
- Ease to Operate
- Easy to Change
- Easy to Maintain
- Easy to Integrate

- Less Cost
- Less Space
- Less Labor
- Less Waste
- Less Energy

**How Does Micro-Material Handling
Deliver Operational Benefits?**

Quality • Innovation and technology • Proximity to market • Freight time and cost • Proximity to factory, easier to communicate • Quick turnaround time when design changes > Skilled workforce • Positive business environment > Quality of life > Skilled workforce • Government incentives > Delivery • Freight cost • IP risk • Rising wages • Labor concessions • U.S. energy prices > Quality control issues overseas > Customers willing to pay more for high precision quality > Lead time/time to market > Cheaper to ship parts instead of assembled equipment because they fit into a container > Savings in wages and benefits > To meet growing North American demand • Proximity to customers • Government incentives > Lead time > Freight cost and lag time | Inventory > Rising wages in China > Flexibility in design turnaround > Government incentives > Proximity to raw material suppliers | Skilled workforce availability > Total cost • Flexibility and responsiveness • Time to market • Image/brand, tradition > Freight cost | Lead time/time to market > Rising wages | Communication | Quality | Automation/technology > Rising costs in China • Turnaround time • Lean manufacturing • Quality • Customers have reduced their inventories, calling for a faster delivery time • Innovation > Shipping delays at West Coast ports > concern for contaminants in plastics used in utensils > Skilled workforce • Rising wages in China • Differences in production philosophies (ex: 3-week shutdown for Chinese New Year) > Rising costs of importing from China | Concern for harmful additives > Environmental considerations | 'Made in the USA' brand appeal > Competitive cost structure > Lead time | Improved customer service > Government incentives > Fast delivery vs. 5 weeks on the water > Fewer supply chain problems > If a quality problem, no more bad units in-route > Communications > Total cost • Automation/technology • Government incentives • Skilled workforce • Buy American Act > Shop expertise > Minimize transportation costs > Lean manufacturing > • Vertical integration, in-house manufacturing • Quality • Innovation / technology • Intellectual property protection • Time and proximity to market > Proximity to market > • "Difficult to manage" offshore > • "International economics changed" > Turnaround time | US made goods are luxury items abroad > Domestic production allows for verticalization > Cost is nearly equivalent to make in US vs. China > • Marketing potential of "Made in America" stamp > Government incentives • Skilled workforce availability • Training programs • Lead and shipping time: 6 weeks instead of 10 weeks • Shipping and energy costs > Customers wanted the 'Made in the USA' brand • Ability to react quickly and provide just-in-time manufacturing • Eliminates inconvenience of flying to China to oversee production • Innovation > Discovered that their product was being sold on the black market > Quality issues > Complexity of materials and process > • Consistent high quality • High productivity rate • Company is well known for "Consumer Driven Product Design" (CDPD) which necessitates that the factory be in close proximity to the customer base > Freight costs / proximity to market > • Synergies > Total cost: found domestic inhouse manufacturing was 25% cheaper than importing from China > Ideal location to transportation infrastructure | Large skilled workforce | "Outstanding business climate" > Cut in half the time it takes to get product to market | Product development time > Long communication and expensive overseas trips > Quality and the ability to fix problems faster > • "Just in time" product turnover / improved time to market > Cheap energy in US | Manufacturing expertise > Image/brand • Vertical integration > Lean/other business process improvements • Freight cost • IP risk > Communication issues > Noncompliant parts, deteriorating quality > Lead time > Price increases > Loss of control and IP risk > • Reduced production budget by 40% > In response to customer complaints about quality of service > Niche market • Diversification > Much shorter lead times > Good marketing | Low MOQ's and flexibility in creating various versions of our products > Avoid language, cultural, and time zone differences > Higher worker productivity > Walmart pledge • Automation • Rising wages and fuel costs • Tariffs > Customer responsiveness improvement • Proximity to customers > Distance between manufacturing and design > More rapid production > Increased control over manufacturing inventory and distribution > Spent too much money fighting counterfeits • Government incentives • Infrastructure • Labor concessions • U.S. price of natural gas • Environmental regulations • Natural resources > | Ability to control own destiny > • Eco-system synergies > "Competency always trumps cost" > Tribal knowledge loss > "Competitive advantage" > Meet growing North American demand > Skilled workforce and training opportunities through the technical college system > • Design and process control • Quality, reliability, and performance > | Improve operational efficiency > "IT is back home where it should be" > | R&D and manufacturing proximity > "Fits best with our core values of supporting our local community" > Flexibility of scale > • Lean process implementation > MOQ (Minimum Order Qty) > New way of thinking! > To "improve the company's bottom line" > Proximity to market > | Intellectual property risk > • Supply Chain Interruption Risk > Nimble companies are better able to capitalize on a trend > Infrastructure and connectivity > Green considerations > • Simplify logistics > Shorter supply chain > Time to market > | "Buy American Act" > Foster local economic development > Sustainability > | "American Labor, American Robots, American Brand"