



**NATIONAL  
DIRECTORS  
INSTITUTE**

# Rethinking Your Post-COVID-19 Supply Chain Strategies

June 24, 2020

 **FOLEY**  
FOLEY & LARDNER LLP

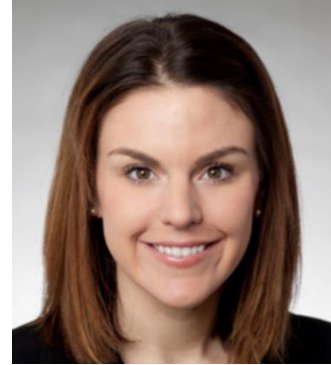
# Panelists



---

**Ann Marie Uetz**

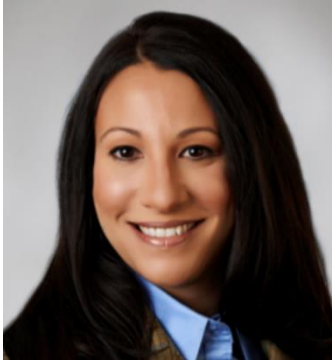
Partner | Detroit  
*Foley & Lardner LLP*  
auetz@foley.com



---

**Kate Wegrzyn**

Partner | Milwaukee  
*Foley & Lardner LLP*  
kwegrzyn@foley.com



---

**Vanessa Miller**

Partner | Detroit  
*Foley & Lardner LLP*  
vmiller@foley.com



---

**Jim Kalyvas**

Partner | Los Angeles  
*Foley & Lardner LLP*  
jkalyvas@foley.com

# Webinar Housekeeping

- Questions can be entered via the Q&A widget open on the left-hand side of your screen. We will address questions at the end of the program, time permitting
- The recorded version of this presentation will be available on Foley.com in the next few days or you can get a copy of the slides in the Resource List widget
- Foley will apply for CLE credit after the program. **To be eligible for CLE, you will need to answer a polling question during the program**
- If you did not supply your CLE information upon registration, please e-mail it to [jdelatorre@foley.com](mailto:jdelatorre@foley.com). Certificates of attendance will be distributed via email to eligible participants approximately 8 weeks after the web conference

**NOTE:** Those seeking Kansas, New York & New Jersey CLE credit are required to complete the Attorney Affirmation Form in addition to answering the polling question. Email the form to [jdelatorre@foley.com](mailto:jdelatorre@foley.com) immediately following the program.

# Today's Agenda

**Resiliency Review.** How manufacturers will review their processes to ensure a stable and resilient supply chain with key focuses on traceability and continuity of supply through diversification or other viable strategies

**Innovation and Efficiency.** The accelerated use of new technologies and businesses processes to facilitate innovation and efficiencies

**Re-thinking China.** Right-shoring considerations, as manufacturers consider the benefits and costs of a shift in supply chains away from China toward other countries

A low-angle photograph looking up at a large blue port crane with an orange lifting platform. The crane is positioned between two tall stacks of colorful shipping containers (blue, green, red, and white). The sky is a clear, bright blue. A dark blue horizontal band is superimposed over the middle of the image, containing the title text.

# Supply Chain Production Models



# 1. Just in Time (JIT) Production Model

- JIT manufacturing is a workflow methodology aimed at reducing flow times within production systems to achieve optimal efficiencies, based on an inventory system where you only produce if there is a demand for your production.
- However, material availability, pricing or demand fluctuations can cause a ripple effect across the supply chain and impact efficiencies associated with JIT inventory models.



# 1. Just in Time (JIT) Production Model

- The COVID-19 pandemic has laid bare the weakness inherent in the JIT production model, which is aimed at reducing times within the production system by aligning orders for materials and component parts with manufacturers' production schedules.
- To address this, manufacturers may consider building greater flexibility into their supply base, by requiring an increasing quantity of materials and component parts to be stored (also known as a “bank”) for future use.

# Possible Alternative Process / Change

1.1	Customer banks a supply of goods onsite to cover production for a set period of time.
1.2	Customer banks a supply of goods for storage offsite to cover production for a set period of time.
1.3	Customer shifts the burden to its suppliers by requiring suppliers (and their sub-suppliers) to maintain a bank of supply of goods for a set period of time.
1.4	Customer employs FIFO (first in-first out) method to utilize goods on hand.
1.5	Customer conducts a retrospective and prospective review to calculate bank quantities.



## 2. Single Source Production:

### Expanding options to mitigate the risk in dealing with a sole source supplier

- While today's global supply chain is premised on minimizing both lead times and cost, the post-COVID-19 supply chain will optimize stability and resilience, by accelerating multi-level sourcing. As volumes become more variable, being impacted by politics, health crises, and other global effects, supply chains may consider changes to adapt and become more resilient.

## 2. Single Source Production:

### Expanding options to mitigate the risk in dealing with a sole source supplier

- Most manufacturers still rely on a single source for the supply of many materials and components. However, stability and continuity of supply may begin to overtake manufacturers' over-reliance on piece price as a driver for success. Manufacturers may build supply chain risk into the full piece price, and begin to move away from sourcing decisions based primarily on cost, in favor of a more flexible and reliable supply base.

# Possible Alternative Process / Change

2.1	Mapping process to ascertain suppliers, their site locations, processes and even sub-suppliers.
2.2	Dual sources.
2.3	Multiple sources.
2.4	Work with customer to develop a short list of pre-approved alternate sources where limited additional testing is required.
2.5	Expedited approval process where customer approval is required to approve alternate source.
2.6	Consideration of tariffs and other taxes/costs of production in different or multiple locations.

### 3. Allocation of Risk/Force Majeure: Build-in and exercise contractual rights and protections if certain events occur to disrupt the supply chain

- Although each supply contract is different, there are some high-level guidelines that manufacturers should consider when tailoring and negotiating force majeure provisions. These considerations will differ depending upon whether the manufacturer is the buyer or seller and the various ways that the supply chain could be disrupted.



## The following are key considerations for **buyers**:

- The buyer may want to narrowly limit force majeure events to matters that are truly outside of the seller's control and buyer-friendly force majeure provisions may exclude strikes, labor issues or anything involving the seller's workforce.
- 
- The buyer will not want to include tariffs, government embargoes or acts of government among the enumerated events under a force majeure provision and may want to include an additional protection in the pricing provision that prices are inclusive of "all costs, including taxes, imports, duties and tariffs."



## The following are key considerations for **buyers**:

- Although it has become standard practice for force majeure provisions to contain the broad, catchall language at the end of the parade of horrors—“or any other circumstances beyond a party’s reasonable control which prevents performance”—this may allow the seller to claim that anything not explicitly listed that prevents performance is a force majeure event.
- 
- The buyer will want to require prompt notice of any force majeure event so that it can immediately evaluate the impact to its supply chain and execute its contingency plan.





## The following are key considerations for **buyers**:

- The buyer should ensure that there is a clause that allows the buyer to exit the supply agreement if the seller is not able to resume performance within a certain period of time. The amount of time should align with the buyer's contingency plan—whether it be a bank of parts or the ability to source from alternate suppliers. This is akin to a contractual “escape hatch.” Because the buyer will be required to turn to an alternate supplier if the original supplier is not able to resume performance, the buyer will be able to negotiate much more favorable terms by negotiating a new long-term agreement or higher volume PO with an alternate supplier than it would under a spot-buy scenario. Having the ability to exit the supply agreement if the seller's performance is prevented for a significant length of time is particularly important in the context of an exclusive agreement or a requirements contract if the buyer does not have the right to terminate for convenience under the contract.



## The key considerations for **sellers** are the inverse:

- Force majeure provisions typically favor the seller as the party that has the obligation to deliver parts or services. Therefore, the seller will want to negotiate as broad a list of force majeure events as possible, taking into account specifics about the contract such as the regions, parts/services at issue, volumes and timeframe for delivery. The seller will want to include strikes and labor issues that may result in delays or inability to perform under the contract. Even broader protections would cover equipment breakdowns, power outages and raw material shortages.
- 
- The seller also will want to list specific risks like epidemics, pandemics, quarantines, acts of government and government travel bans.



## The key considerations for **sellers** are the inverse:

- The seller will seek to include the broad catchall included for other circumstances whether foreseeable or unforeseeable beyond its reasonable control that prevent performance.
- 
- The seller will want to be aware of the notice period and strictly adhere to it when it becomes aware of any disruption or potential disruption.
- 
- Finally, the seller should consider what the buyer's rights are when it exercises force majeure. Force majeure is a mechanism for suspending performance under the contract. It is not a mechanism for demanding a price increase and, in fact, the exercise of force majeure may trigger the right for the buyer to terminate the contract and source from an alternate supplier if performance does not resume after a certain amount of time.

## 4. Shipping/Warehousing/Inventory Process: Improvements to flow and processing of products and materials in the supply chain

- As more businesses are implementing AI, big data analytics, and machine learning within their supply chains, there will be an increase in “anticipatory logistics,” where shippers and manufacturers anticipate customer orders before they are actually placed by the customer.



## 4. Shipping/Warehousing/Inventory Process: Improvements to flow and processing of products and materials in the supply chain

- Manufacturers will increasingly move away from paper and digitize their supply chain, which will be critical in order to have real-time visibility into any potential or existing disruptive factors. Digitization will provide manufacturers with diagnostic and predictive insights into their supply base, so that they can plan for future interruptions and fix problems before they disrupt production.



# Alternative Process / Change

4.1	Implementing technology for end-to-end supply chain connectivity to allow the exchange of information between business partners about sourcing and ordering raw materials.
4.2	Implementing technology for end-to-end supply chain connectivity to allow the exchange of information between business partners about tracking transit of components and tracking parts within a warehouse or plant, balancing availability of components with production schedules.
4.3	Assessing Third-Party Logistics (3PL) strengths and weaknesses to prepare contingency plans.
4.4	Assessing which tasks can be supplemented by robots, especially for low-value, highly repetitive tasks that are easy to replicate.
4.5	Assessing which tasks can be supplemented by cobots (“collaborative robots”) to work alongside humans to improve efficiencies (e.g., handling of materials and objects on assembly lines, including dangerous or toxic materials).



## **5. In-Housing Certain Operations and Services:**

Assess ability to shift certain operations or services away from outside suppliers where there are cost-saving opportunities or continuity of supply issues

- In addition to contingency planning by looking at alternative suppliers, many manufacturers are considering whether certain components or processes can be brought in-house. Beyond capabilities, manufacturers will need to determine whether there is a cost-saving opportunity, whether the quality is the same, and whether there are other contractual or logistical issues that need to be addressed if they decide to permanently in-house certain operations.

# Alternative Process / Change

**5.1**

Maintain the contractual option to transfer certain operations and services in-house.

**5.2**

Identify what production can be moved in-house, considering pricing issues.

**5.3**

Identify what production can be brought in-house, considering quality issues.

**5.4**

Identify whether there are acquisition opportunities to bring certain production or materials in-house.



# Supply Chain Innovation and Efficiency



# Overview

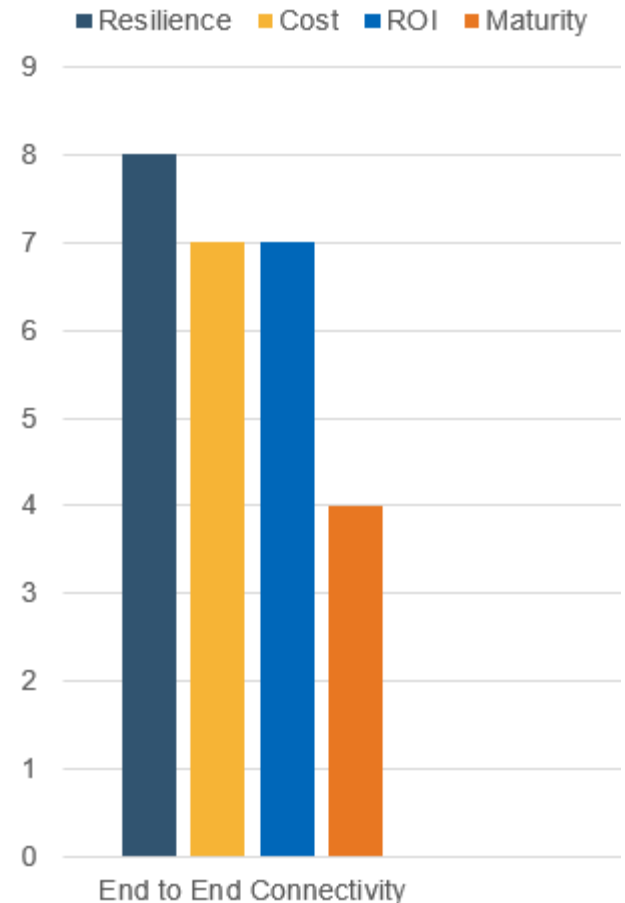
- Continuous improvement in supply chain processes and ongoing innovation is the norm
- Funding improvements and innovation in supply chain can often be a prioritized lower than competing enterprise initiatives (e.g., Do we really need a new WMS now? Cobots sound great, but can we continue with our current approach for a few more years?)
- COVID-19 has put a spotlight on supply chain resilience and vulnerability issues – moved innovation and efficiency up on the enterprise priority list and will accelerate adoption
- Look at the opportunities considering how they stack up against each other FOR YOUR ENTERPRISE on the following metrics:
  - Improving Resilience
  - Cost
  - ROI
  - Maturity

# Key Innovation and Efficiency Opportunities

- End-to-End Connectivity/Data Exchange
- Robots and Cobots
- Upskilling Workers
- Artificial Intelligence, Big Data, and Advanced Analytics
- Reconfigurable Manufacturing
- Driverless Transportation
- 3D Printing
- Supplier Marketplaces using Performance-Based Contracts

# End-to-End Connectivity/Data Exchange

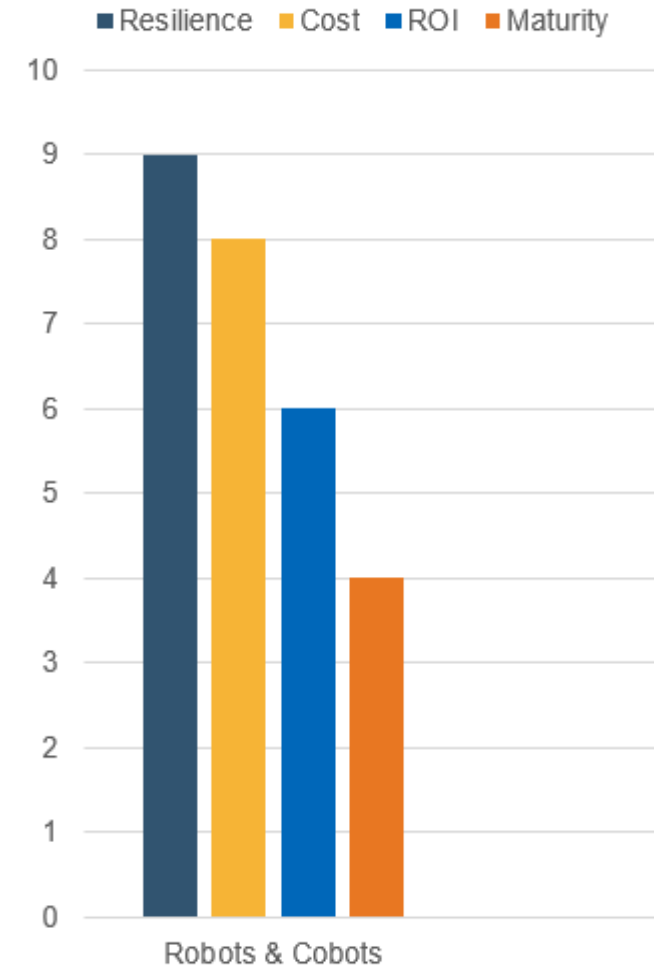
- Allows the exchange of information between business partners across the supply chain
  - sourcing and ordering raw materials
  - tracking transit of components
  - racking parts within a warehouse or plant
  - balancing availability of components with production schedules
  - improving customer delivery
- Stages
  - Systems Interface
  - Increased Transparency – IoT
  - Predictive Analytics/Joint Planning





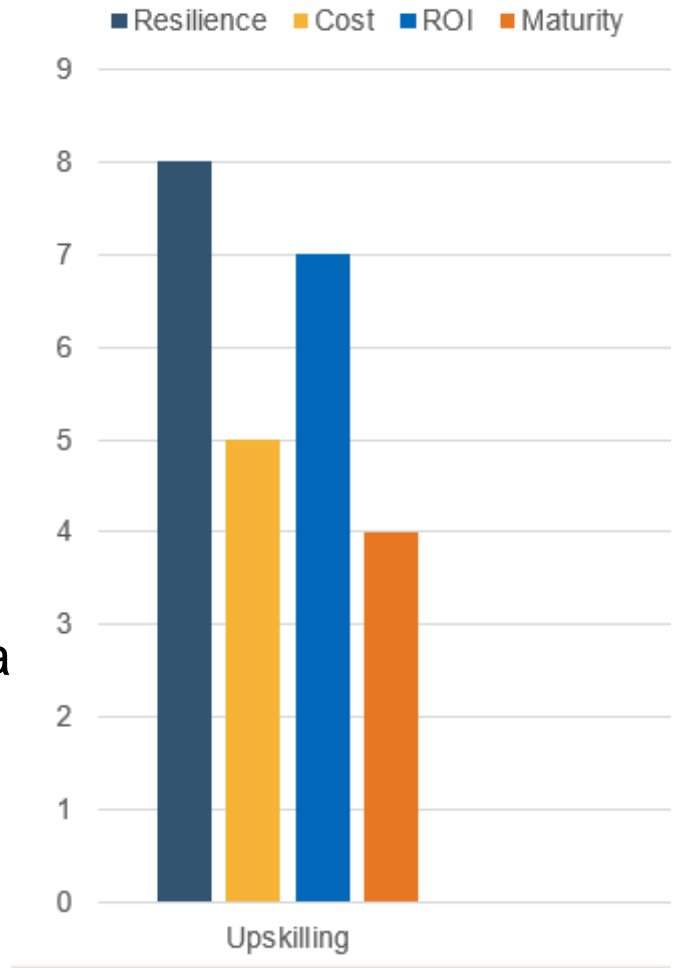
# Robots and Cobots

- Robots and cobots work with or replace workers on assembly lines
  - Perform highly repetitive tasks
  - Perform more intricate tasks by learning from human counterparts, such as handling delicate or dangerous materials
  - Use a combination of sensors, cameras, and artificial intelligence to learn from their human counterparts



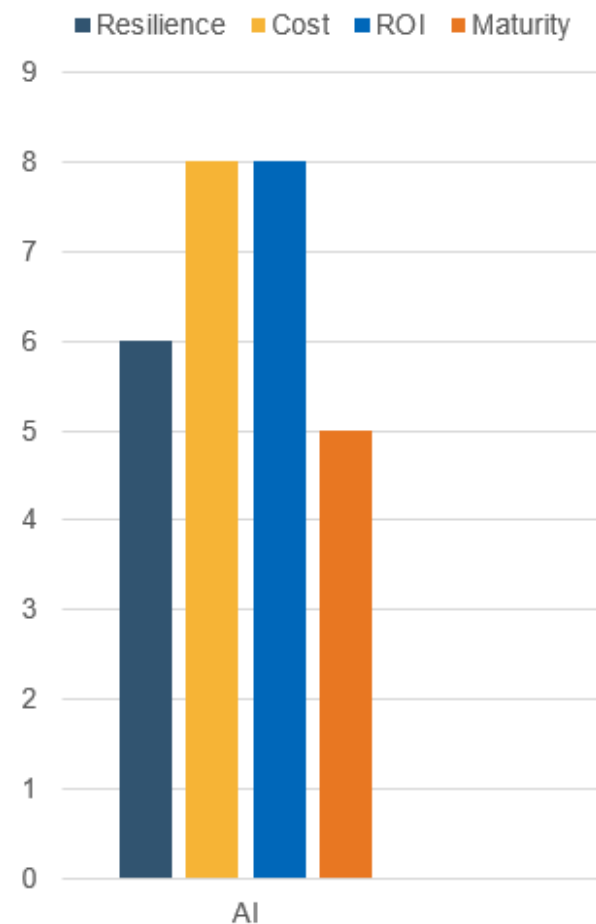
# Upskilling Workers

- Upskill the existing workforce to support new technologies and work in different ways
- Virtual Reality (VR) and Augmented Reality (AR) are making significant impacts on the ability to train and enhance the speed and efficiency of workers
  - Reduce the need for class room training, and error rates overall
  - For example, AR can allow instructions and other helpful information to be overlaid on a production line



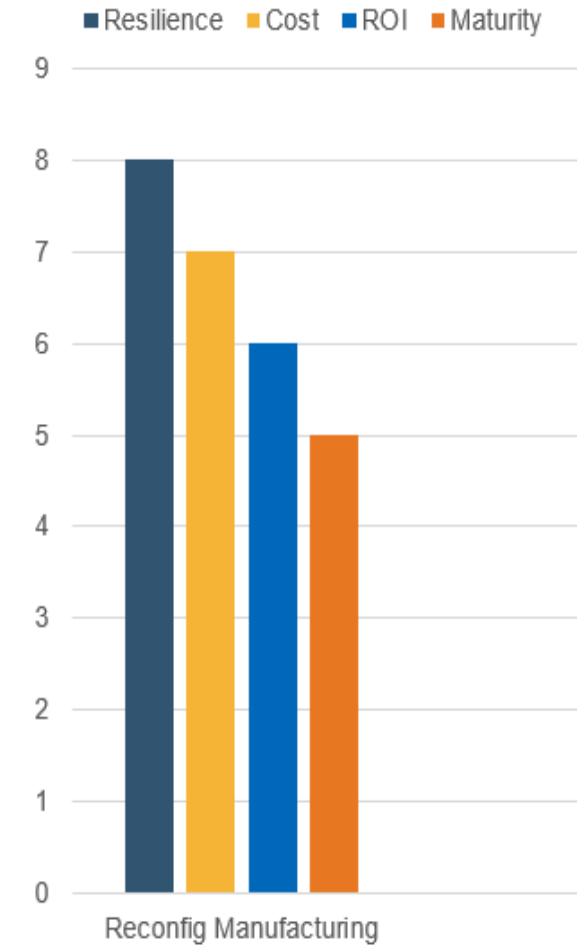
# Artificial Intelligence, Big Data, and Advanced Analytics

- Technology is producing vast amounts of data
- Data has limited value without the tools to gain insights from it
- Big data enables organizations to capture, store, and manage vast amounts of data, run analysis, and extract insights from the data
- Artificial intelligence, machine learning, natural language processing, sensor data all enhance the knowledge base
- AI enables “anticipatory” or “predictive” logistics



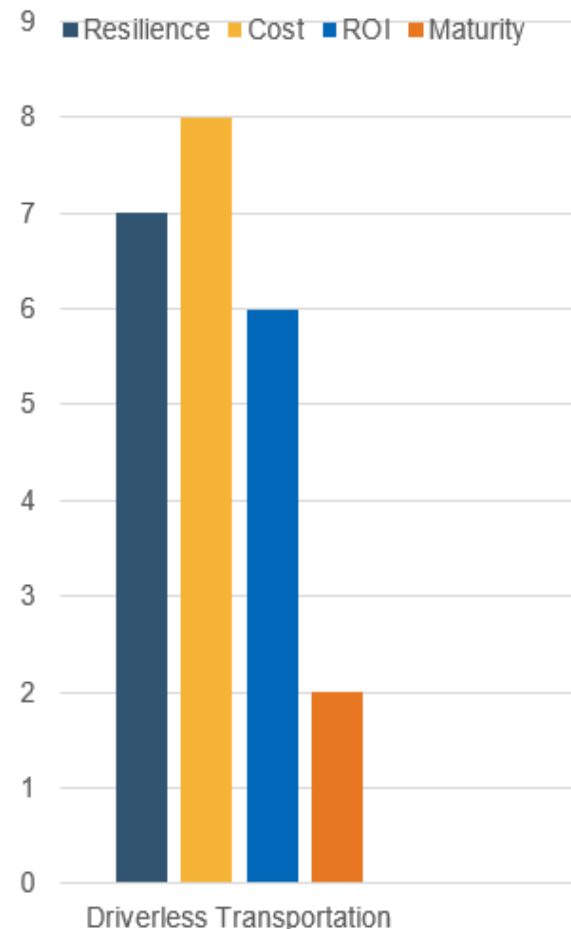
# Reconfigurable Manufacturing

- Customer demand and needs change quickly
- The capability to reconfigure a manufacturing line or facility to produce different products provides agility and resilience to adapt to market demands at a feasible cost and in rapid time frame
- Elements of a reconfigurable manufacturing system:
  - the control system
  - the material handling system, which involves the selection of material transport equipment that relates to the movement of the parts
  - the layout design, which involves the physical arrangement of production facilities such as machines, tools, and plant layout



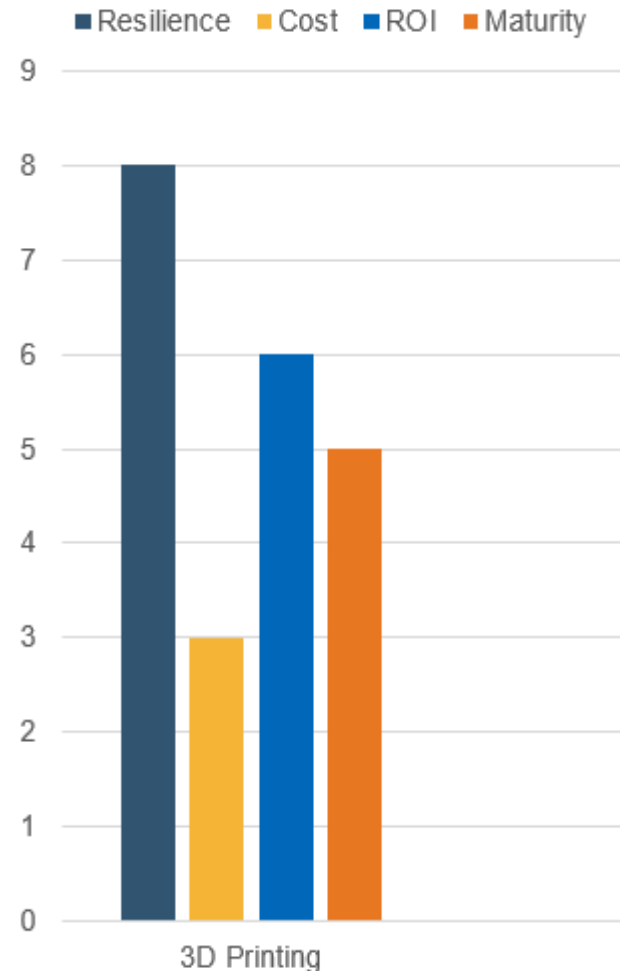
# Driverless Transportation

- Automated transportation technologies efforts have focused on drones, robots, and self-driving vehicles
- Drones can shorten delivery times, and are generally limited only by their speed, power, and regulation
- Autonomous trucks and vehicles allow for:
  - Savings in labor costs from automating driver positions
  - Avoidance of driving-hour restrictions
  - Increased fuel efficiency with the ability of computer systems to achieve optimal cruising speeds
  - Potential reduction in road accidents due to human error



# 3D Printing

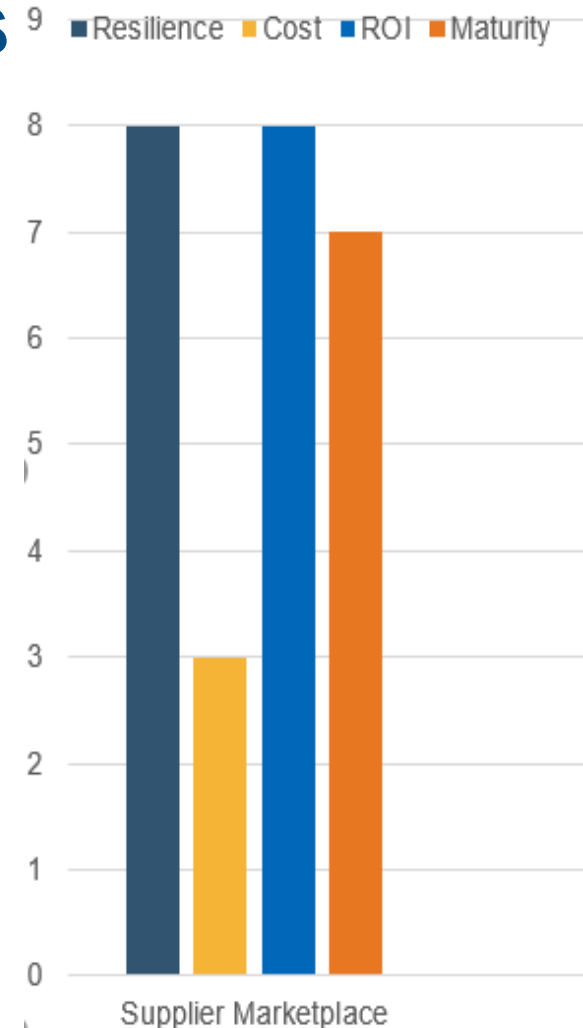
- 3D printers enable businesses to relocate production as needed, such as bringing production to local markets or customers quickly
- Enables businesses to shift away from mass production in low-cost countries in favor of more local assembly
- Benefits include
  - production cost savings
  - enhanced lead times
  - significantly improved product time-to-market





# Supplier Marketplaces using Performance-Based Contracts

- By creating a marketplace of suppliers capable of delivering the same service with substantially similar terms business maintain competition on performance and price
- Other benefits
  - Create smaller and more expert Internal supplier management capability
  - Drive continuous performance improvement and savings
  - Achieve uniform services delivery commitments
  - Create common performance measures/service levels
  - Enable comparison of vendor performance to maintain supplier competition





# Re-thinking China

What comes next?

# Re-thinking China

- US-China Trade War began a shift away from China
- COVID-19 may accelerate the trend
- In a recent survey of American companies operating in China:
  - Appx. 20% believe a decoupling from China will be accelerated by COVID-19.
  - Nearly 30% indicated that they have plans to move sourcing partially outside of China or completely outside of China due to the pandemic.

# Right-Shoring

- Right-shoring or Best-shoring – determining the most appropriate geographical locations
- Driven by considerations in that company's industry and for that company's particular product.
- Key Factors for Right-Shoring Analysis

# Options

- Reshoring to United States
- Nearshoring to Mexico
- Nearshoring to Brazil and other Latin American countries
- Offshoring to India or Southeast Asia
- Other options:
  - Stay in China
  - Europe

# Reshoring: Made in the USA

Pros	Cons
Logistics	Labor
Control	Regulation
Trade Issues	Immigration Restriction
Infrastructure	Automation
IP Protections	Variation in Global Demand
Sustainability	Scalability
Domestic Production to Boost to Sales	Property

# Nearshoring: Mexico

Pros	Cons
Trade Issues as a Pro	Trade Issues as a Con
Logistics	Logistical Security Concerns
Tax Benefits as a Pro	Tax Benefits as a Con
Labor as a Pro	Labor as a Con
Geo-Political Stability	Infrastructure
IP Protections	Complex Goods

# Nearshoring: Other LatAm

Pros	Cons
Logistics	Security Concerns
Trade Issues as a Pro	Trade Issues as a Con
IP Protections	Geo-Political Stability
Labor	Focus on Commodities
Local Currency as Pro	Local Currency as a Con
	Manufacturing Facilities
	Transportation and Infrastructure



# Non-China Offshoring: India & Southeast Asia

Pros	Cons
Labor as a Pro	Labor as a Con
Technological Advancement	Logistics
Trade Issues	IP Protections
Financial Incentives	Hidden Costs
Manufacturing Knowledge Base	Infrastructure
	Stability and Security

# Thank You



**Ann Marie Uetz**

Partner | Detroit

*Foley & Lardner LLP*

auetz@foley.com

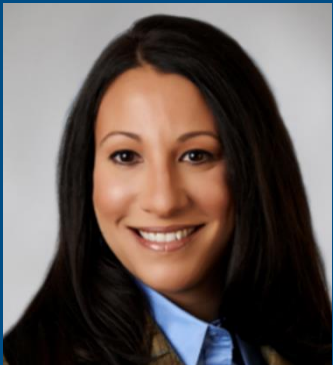


**Kate Wegrzyn**

Partner | Milwaukee

*Foley & Lardner LLP*

kwegrzyn@foley.com



**Vanessa Miller**

Partner | Detroit

*Foley & Lardner LLP*

vmiller@foley.com



**Jim Kalyvas**

Partner | Los Angeles

*Foley & Lardner LLP*

jkalyvas@foley.com

ATTORNEY ADVERTISEMENT. The contents of this document, current at the date of publication, are for reference purposes only and do not constitute legal advice. Where previous cases are included, prior results do not guarantee a similar outcome. Images of people may not be Foley personnel. | © 2020 Foley & Lardner LLP

**FOLEY**  
FOLEY & LARDNER LLP