

# Manufacturing Digital Services 2020-2021 RadarView™ – Report Excerpt

## Addressing Pandemic-related challenges

December 2020

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# Executive Summary

# Key Recommendations for Manufacturers

Accelerate transformation to smart manufacturing for remote accessibility and cost reduction

- Assess, prioritize, and invest in appropriate digital technologies across the value chain (such as 3D for product design or autonomous vehicles for logistics) to reduce cost and drive efficiencies.
- Digitize manual processes such as technical assistance, training, and inspection leveraging to reduce human dependency.

Digitalize supply chain for improving visibility and effective warehouse management

- Integrate AI and predictive analytics for supply chain disruption. Analyze supplier data and reoptimize inventory level based on demand.
- Digitize the warehouse by leveraging robots, drones, IoT, and analytics to facilitate order picking, product assortment, and real-time inventory monitoring for reducing cost and manual efforts.

Prioritize customer demands and reimagine the overall experience

- Explore investing in different business models such as direct-to-consumer (DTC) and as-a-service to engage directly with customers and expand customer base.
- Expand into higher margin business (aftermarket) by investing in advanced digital technologies such as intelligent automation to detect and avert fraud and AI for recommendations-based experience.

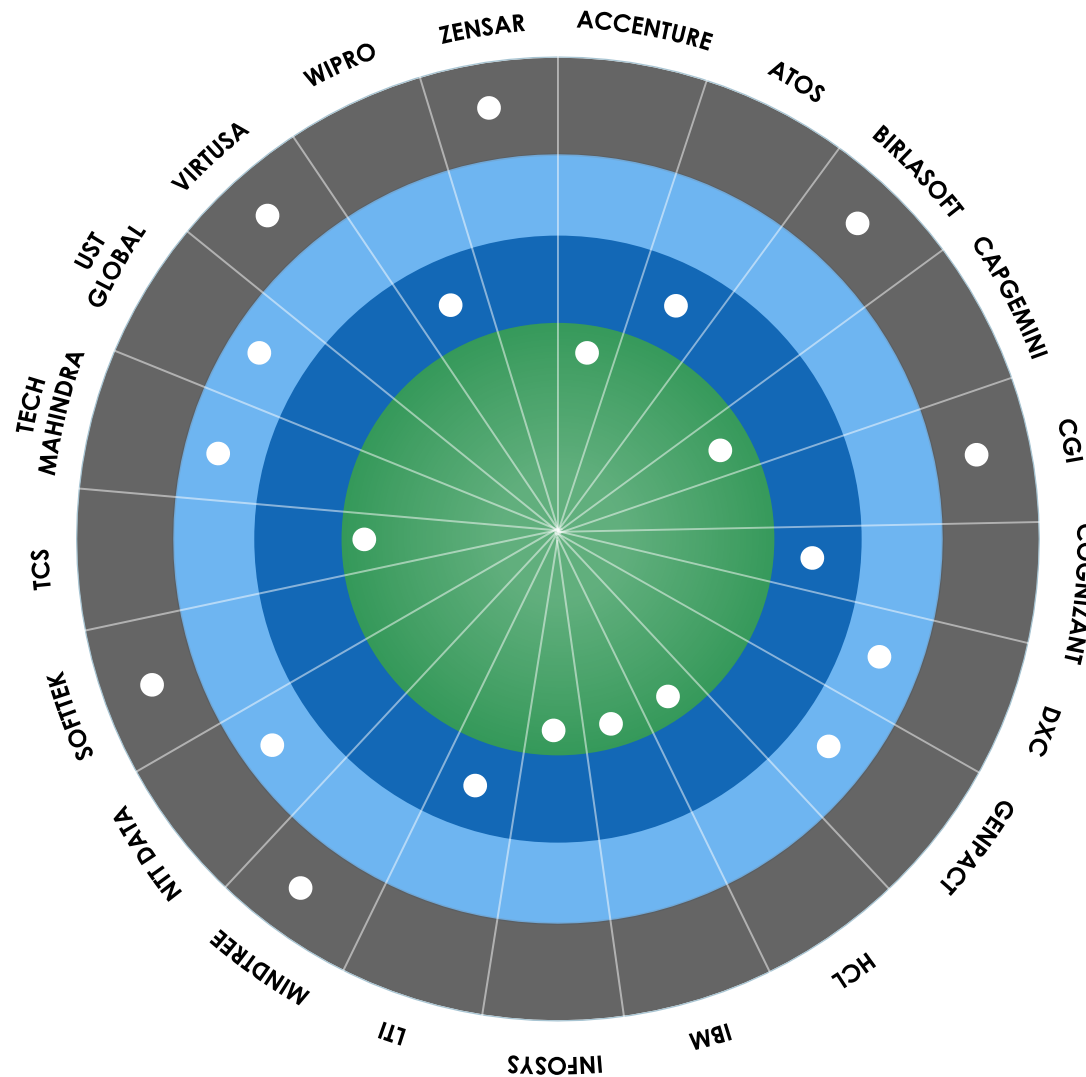
Focus on employee safety and training/upskilling

- Leverage digital training options such as AR/VR-based remote learning, app-based microlearning, and on-demand training modules.
- Deploy digitally-enabled safety measures specific to employees (wearables for health monitoring) and manufacturing facilities (sensors to track temperature) to reduce injuries.

Evaluate organizational restructuring and strategic alliances

- Evaluate divestment or launching new entities to reduce operational costs and increase revenue through monetizing evolving opportunities.
- Partner with IT and business process service providers to integrate digital capabilities and expedite transformation across the entire value chain.

# Avasant has recognized 21 top-tier providers supporting manufacturing industry in digital transformation



## LEADERS

|           |           |
|-----------|-----------|
| Accenture | Capgemini |
| HCL       | IBM       |
| Infosys   | TCS       |

## INNOVATORS

|      |           |
|------|-----------|
| Atos | Cognizant |
| LTI  | Wipro     |

## DISRUPTORS

|            |               |
|------------|---------------|
| DXC        | Genpact       |
| NTT DATA   | Tech Mahindra |
| UST Global |               |

## CHALLENGERS






|           |         |
|-----------|---------|
| Birlasoft | CGI     |
| Mindtree  | Softtek |
| Virtusa   | Zensar  |



# Sample Report Pages

# Transformation to 'Smart Manufacturing' is essential for improving efficiency and reducing costs

Growing financial pressures have led to increased investment in automation, IoT, 3D printing, and predictive analytics

|  |   |  |   |   |
|--|---|--|---|---|
| <p>~10-20%<br/>Reduction in cost through bot deployment and 3D simulation</p>  | <p>&gt;60%<br/>reduction in costs with 3D printing</p>  | <p>&gt;15%<br/>fall in maintenance cost through predictive analytics</p>   | <p>&gt;10%<br/>Employee productivity with reduction in manual data gathering</p>  | <p>&gt;85%<br/>reduced inventory management efforts and stock holding time</p>  |
| <p>Designing, optimizing and verifying production feasibility by leveraging AI-based industrial robots and 3D simulation</p> | <p>Creating prototypes and customized products, and manufacturing machine parts in-house by using 3D printing</p> | <p>Optimizing efficiency, identifying issues proactively, and controlling systems dynamically by using AI-based predictive maintenance</p> | <p>Monitoring equipment health and analyzing operations by deploying IoT sensors and advanced data analytics in the cloud</p> | <p>Optimizing inventory management, tracking movement of parts, and enabling real-time performance measurement indicators by deploying automation</p> |
|   |                                |   |    |    |

Manufacturers must integrate the right digital technology across the value chain to reduce cost, ensure product quality, and improve productivity

# To manage supply chain, manufacturers must reduce single nation dependency, explore substitutes, and optimize inventory

Manufacturers are restructuring their sourcing strategies to align with evolving challenges

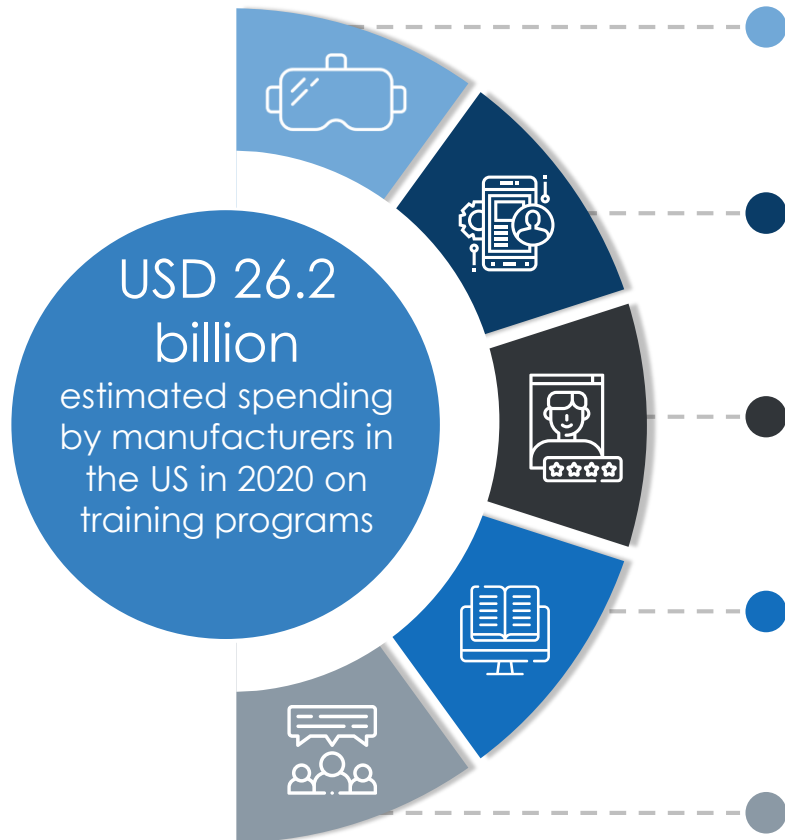
~75%  
Of US companies reported supply chain disruptions due to coronavirus-related transportation restrictions.



To hedge supply chain disruptions, manufacturers must conduct analysis to identify low-cost destinations, substitutes of raw material and manage the inventory.

# Achieve organizational goals and meet employee needs through upskilling

## Initiatives to optimize cost and time and increase customization















|                              |  |
|------------------------------|--|
| Remote Learning              | Increase focus on remote learning through immersive technologies – AR, VR and MR, for trainings with comparatively higher complexity   |
| Microlearning                | Use app-based microlearning that is focused specifically on a concept, skill or an idea, instead of extensive training   |
| Employee Performance Metrics | Implementation of cloud-based, real-time employee performance metrics, such as changeover time and capacity utilization  |
| On-demand Training           | Offer on-demand training by partnering with digital training companies, such as Coursera for 'Advanced Manufacturing Analysis,' to fulfil a specific need for a team or an employee                    |
| Open-source LMS              | Use open-source LMS, such as Moodle and Dokeos, and discussion forums to increase knowledge about a software/tool, and learn from people outside the organization who are familiar with the technology |

Manufacturers need to further increase spending on upskilling their employees to stay ahead of the competition and counter the widening skill gap in the sector.

# Explore acquisitions to increase outreach and optimize cost

## Manufacturers are acquiring companies to achieve strategic goals

## Illustrative examples

|   |  |   |   |
|---|--|---|---|
| Increase outreach and gain market share | Integrate with companies to compliment the product portfolio. For example, industrial machinery manufacturers acquiring other tools and equipment manufacturers                |    |    |
|   | Venture into adjacent space, such as CPG companies exploring sports and health segments through acquisitions   |    |    |
| Optimize cost                           | Acquire players within the ecosystem, like automakers acquiring parts and components manufacturers   |    |    |
|   | Co-invest in R&D initiatives with counterparts. For example, pharmaceutical companies acquiring oncology-focused biopharma companies   |    |    |
| Gain technological advancements         | Expedite product development by acquiring technological capabilities such as IoT, AI and machine learning, such as automakers acquiring CASE <sup>1</sup> technology providers |   |    |
|   | Focus on increasing customer base and elevated consumer experience by investing in immersive technologies like AR-based app developers   |  |  |

M&A can enable manufacturers to focus on the long-term strategy of maintaining continuity, growth and sustainability.

1) CASE refers to Connected, Autonomous, Shared, Electrified

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