Logistics

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Pushed by the success of early adopters, over 40% of manufacturers will have enterprise-wide digital transformation initiatives in place by 2021.

By 2022, 35% of manufacturing organizations will have created new ecosystems by implementing AI- and blockchain-centric platforms, thus automating 50% of processes.

By 2022, driven by rising customer expectations and competition from the platform economy, 25% of manufacturers will be engaged in cross-industry collaboration, resulting in a 10% revenue increase.

By 2020, to increase speed, agility, efficiency, and innovation, 80% of manufacturers will need to extensively restructure, placing data at the center of their processes.

By 2021, 60% of manufacturers will have empowered shop-floor workers with AR/VR, intelligent apps, and cobots, thus achieving productivity gains of up to 7% and more attractive work environments.

By 2024, over 60% of G2000 manufacturing organizations will rely on AI platforms to drive digital transformation across the supply chain, leading to productivity gains of over 20%.

By 2022, digital technologies will have enabled the automation of repetitive operational tasks, leading to 50% less planner intervention and "touchless" sales and operations planning.

By 2024, 50% of manufacturers will network related product and asset digital twins into digital twin ecosystems, for a systems-level view of their business and 5% reduction in cost of quality.

By 2021, 90% of manufacturers will leverage real-time equipment and asset performance data to self-diagnose issues in advance and trigger a service intervention to avoid unplanned downtime.

By 2023, 50% of the spend on DX initiatives in manufacturing will come from dedicated digital transformation budgets, instead of traditional IT or LoB budgets.
Drivers for Manufacturing

- **Rising Customer Expectations**: More Convenience, Customization, and Control
- **Sense, Compute, Actuate**: Turning Data into Value
- **Platforms, Platforms, Platforms**: Industry Competes for Innovation at Scale
- **The Race to Innovate**: Speed of Change, Delivery, and Operations Separates Thrivers and Survivors
- **Next Chapter of DX**: Technology-Driven Transformation Altering Business and Society
- **Legacy Inertia**: Retrofit the Old into the DX World
- **Emerging Autonomy**: Learning to Live With AI

For additional details on the above Drivers, please refer to report IDC FutureScape: Worldwide Manufacturing 2019 Predictions, Doc #43135818
1. Pushed by the success of early adopters, over 40% of manufacturers will have enterprise wide digital transformation initiatives in place by 2021.

2. By 2023, 50% of the spend on DX initiatives in manufacturing will come from dedicated digital transformation budgets, instead of traditional IT or LoB budgets.

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4. By 2024, over 60% of G2000 manufacturing organizations will rely on AI platforms to drive digital transformation across the supply chain, leading to productivity gains of over 20%.

5. By 2024, 50% of manufacturers will network related product and asset digital twins into digital twin ecosystems, for a systems-level view of their business and 5% reduction in cost of quality.

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Prediction 1 – Pushed by the success of early adopters, over 40% of manufacturers will have enterprise wide digital transformation initiatives in place by 2021.

**IT Impact**
- ✓ Substantial investment with respect to IT infrastructure, manpower, and support services.
- ✓ IT will need to move off siloed enterprise systems.
- ✓ More of the DX workload will shift away from IT only.

**Guidance**
- ✓ Build a road map for your company's DX journey.
- ✓ Approach DX in a holistic manner.
- ✓ Invest in a digital platform to serve as the foundation for your business' transformation.

Source: IDC, 2018
Prediction 10 – By 2023, 50% of the spend on DX initiatives in manufacturing will come from dedicated digital transformation budgets, instead of traditional IT or LoB budgets.

**IT Impact**
- ✓ Substantial investment with respect to IT infrastructure, manpower, and support services.
- ✓ IT budget will shift to newly created digital business units.
- ✓ Infrastructure assessment to support a digital enterprise.

**Guidance**
- ✓ Start with smaller projects that fund the next steps of your transformation journey.
- ✓ Form a dedicated business unit for digital transformation.
- ✓ Hire a chief digital officer to align the digital transformation roadmap with the business road map.

Source: IDC, 2018
Prediction 3 – By 2022, driven by rising customer expectations and competition from the platform economy, 25% of manufacturers will be engaged in cross-industry collaboration, resulting in a 10% revenue increase.

**IT Impact**
- The onus of supporting and even opening new business models is on IT.
- IT requires new approaches to managing technology.
- IT will be playing a bigger role than just an enabler.

**Guidance**
- Scan the business landscape to identify partners collaboration.
- Embrace "give up control to gain revenue" mindset.
- Change the "support" mindset to a "line" mindset.

**PREDICTION TIMING**

<table>
<thead>
<tr>
<th>Year</th>
<th>Data Hungry Plant</th>
<th>Self-Diagnosed Service</th>
<th>Platform Adoption</th>
<th>Touchless S&amp;OP</th>
<th>DX Adoption</th>
<th>Cross Industry Collaboration</th>
<th>DX Budgeting</th>
<th>Digital Twin Ecosystem</th>
<th>Thinking Supply Chain</th>
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<tr>
<td>2019</td>
<td>4</td>
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<tr>
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</tbody>
</table>

Source: IDC, 2018
Prediction 6 – By 2024, over 60% of G2000 manufacturing organizations will rely on AI platforms to drive digital transformation across the supply chain, leading to productivity gains of over 20%.

**IT Impact**
- ✓ AI will require substantial IT investment.
- ✓ Real-time data capture will be core to the success of AI-driven platforms
- ✓ IT security will be a major aspect that determines success.

**Guidance**
- ✓ Sell the idea of automation and AI internally.
- ✓ Integrate enterprise systems so that insights from various AI platforms can be utilized.
- ✓ Redefine processes so that the insights generated are integrated with enterprise systems.

**COST/COMPLEXITY TO ADDRESS**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
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<td>1</td>
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</tbody>
</table>

Source: IDC, 2018

**DIAGRAM DESCRIPTION**
- Data Hungry Plant
- Self-Diagnosed Service
- DX Adoption
- Touchless S&OP
- Augmented Workers
- Cross Industry Collaboration
- Digital Twin Ecosystem
- DX Budgeting
- DX Thinking Supply Chain

**PREDICTION TIMING**
Prediction 8 – By 2024, 50% of manufacturers will network related product and asset digital twins into digital twin ecosystems, for a systems-level view of their business and 5% reduction in cost of quality.

<table>
<thead>
<tr>
<th>IT Impact</th>
</tr>
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<tbody>
<tr>
<td>✓ Managing the influx of data from connected products and assets.</td>
</tr>
<tr>
<td>✓ IT will need to support business users with app development.</td>
</tr>
<tr>
<td>✓ Securing the data and models your team shares through digital twins.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Leverage twin data and innovation accelerators like IoT and cognitive analytics to optimize quality and customer experience.</td>
</tr>
<tr>
<td>✓ Apply digital twins using a scale of complexity need.</td>
</tr>
<tr>
<td>✓ Make security technology and policy upgrade a priority.</td>
</tr>
</tbody>
</table>

Source: IDC, 2018
Q&A

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Meet the Analysts

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- Dozens of KPIs specifically developed for the digital enterprise
- Research on the most appropriate organizational structures for your stage of DX
- Blueprints of DX capabilities
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