The 2020 MHI Annual Industry Report

Embracing the Digital Mindset

Keynote Panel Discussion
Survey Participants

The 2020 MHI Annual Industry Report, for the sixth consecutive year, reflects the views of 1,001 manufacturing and supply chain industry leaders on supply chain innovation.

- **20%** of supply chain leaders believe the digital supply chain is already the predominant model.
- **80%** expect it to become predominant model within five years.
- **79%** are manufacturers, distributors or service providers.
- **78%** of participants are executives holding the role of CEO, Vice President, General Manager/Department Head or Engineer.
- **48%** reporting annual sales in excess of $50 million, and 17% reporting $1 billion or more.
Keynote Discussion Panel

Keynote Moderators

- George Prest
  CEO, MHI

- Thomas Boykin
  Supply Chain Specialist Leader, Deloitte
Keynote Discussion Panel

Panel Members

• Arpana Brahmbhatt, US Industry Solutions, Manufacturing, Microsoft
• Gerry Collins, VP Strategy & Services, Johnson & Johnson
• Randy V. Bradley, Assistant Professor of Information Systems and Supply Chain Management, Haslam College of Business, The University of Tennessee
• Rick Faulk, CEO, Locus Robotics
Key Survey Highlights – Adoption
Key Survey Highlights – Technology Impact

- **Robotics and Automation**: 67% potential to disrupt or create competitive advantage, 21% support ongoing improvements, 12% little to no impact.
- **Sensors and Automatic Identification (e.g., RFID, voice, ...)**: 59% potential to disrupt or create competitive advantage, 31% support ongoing improvements, 10% little to no impact.
- **Predictive and Prescriptive Analytics**: 57% potential to disrupt or create competitive advantage, 31% support ongoing improvements, 12% little to no impact.
- **Artificial intelligence technologies**: 56% potential to disrupt or create competitive advantage, 28% support ongoing improvements, 16% little to no impact.
- **Inventory and Network Optimization Tools**: 54% potential to disrupt or create competitive advantage, 36% support ongoing improvements, 11% little to no impact.
- **Industrial Internet-of-Things (IoT)**: 54% potential to disrupt or create competitive advantage, 31% support ongoing improvements, 16% little to no impact.
- **Autonomous Vehicles and Drones**: 53% potential to disrupt or create competitive advantage, 25% support ongoing improvements, 22% little to no impact.
- **Wearable and Mobile Technology (e.g., glasses, headsets, ...)**: 47% potential to disrupt or create competitive advantage, 36% support ongoing improvements, 17% little to no impact.
- **Cloud Computing and Storage**: 44% potential to disrupt or create competitive advantage, 39% support ongoing improvements, 17% little to no impact.
- **Blockchain and Distributed Ledger Technologies**: 33% potential to disrupt or create competitive advantage, 35% support ongoing improvements, 31% little to no impact.
- **3D Printing (Additive Manufacturing)**: 30% potential to disrupt or create competitive advantage, 30% support ongoing improvements, 40% little to no impact.
Key Survey Highlights – Investments

- Less than $1 million: 50%
- $1 million - $5 million: 25%
- $5 million - $10 million: 12%
- $10 million - $50 million: 8%
- $50 million - $100 million: 3%
- Greater than $100 million: 2%
Key Survey Highlights - Challenges

COMPANY CHALLENGES
The top 6 company challenges - rated extremely or very challenging.

- Hiring and retaining qualified workers (57%)
- Customer demands for lower costs (52%)
- Customer demands on response times (49%)
- Rising customer service expectations (47%)
- Forecasting (46%)
- Customer demands for customization (41%)
Key Survey Highlights – Talent Challenges

**TARGETING TALENT**
Top 3 ranked challenges faced in attracting targeted talent

- **78%** High competition for talent
- **63%** Access to targeted talent groups
- **48%** Ability to offer work/life balance and PTO

**RETAINING TALENT**
Top 3 ranked challenges faced in retaining targeted talent

- **57%** High competition for talent
- **44%** Lack of an adequate employee compensation package
- **45%** Leadership vision and organization direction

**TALENT SHORTAGE SOLUTIONS**
Top 3 ranked steps taken to bridge the talent gap

- **55%** Reskilling existing workers/promoting from within
- **48%** Supporting job training & mentoring programs
- **46%** Partnering with institutions to identify/cultivate candidates
CONNECTING TALENT & TECHNOLOGY

THE CONNECTED WORKER

AUTOMATION
- Robotics & Automation
- Wearable/Mobile Tech
- Autonomous Vehicles/UAVs
- 3D Printing

DIGITAL CONNECTIVITY
- Internet of Things (IoT)
- Cloud Computing & Storage
- Sensors & Automatic Identification
- Blockchain & Distributed Ledger Tech

ADVANCED ANALYTICS
- Inventory & Network Optimization
- Predictive Analytics

ARTIFICIAL INTELLIGENCE
- Machine Learning
- Natural Language Processing
- Robotic Process Automation

SUPPLY CHAIN SKILLS APPLICATION
- Project Management/Leadership
- Global Experience/Cultural Diversity
- Change Management
- Strategic/Critical Thinking
- Systems Implementation
- Supply Chain Management
- Process Improvement/Lean/Six Sigma
- Analytics/Modeling/Visualization
- Gen. Business/Cross-Functional
Critical Skillsets in the Next Five Years

- Project Management/Leadership: 41%
- Strategic/Problem-Solving Skills/Critical Thinking: 40%
- Supply Chain Management (e.g., degrees/certification programs): 32%
- Analytics, Modeling, and Visualization: 31%
- Process Improvement/Lean/Six Sigma: 31%
- General Business Acumen and Cross-Functional Knowledge: 30%
- Change Management: 30%
- Systems Implementation: 28%
- Global Experience and Cultural Diversity: 13%

30% of respondents plan to address future technology adoption challenges through reskilling.

Deloitte

MHI: THE INDUSTRY THAT MAKES SUPPLY CHAINS WORK®
Bridging the Generation Gap – Change in Workforce by Age from 2014-2024

Workers age 65-74 are expected to grow by more than 5.1 million, more than any other age group.
Bridging the Generation Gap - Gender

- 18-24: 29% Female, 68% Male
- 25-34: 27% Female, 72% Male
- 35-44: 20% Female, 80% Male
- 45-54: 21% Female, 78% Male
- 55-64: 14% Female, 84% Male
- 65+: 6% Female, 94% Male
Bridging the Generation Gap – What Workers Value by Age Group

- Corporate responsibility / community involvement / sustainability: 17% (Age 25-34) - 53% (Age 55-64)
- Employee compensation competitiveness: 11% (Age 25-34) - 74% (Age 55-64)
- Diverse workforce: 30% (Age 25-34) - 57% (Age 55-64)
- Market stability: 47% (Age 25-34) - 54% (Age 55-64)
- Market growth potential: 57% (Age 25-34) - 63% (Age 55-64)
Supply Chain Digital Consciousness Index Toolkit
Supply Chain Digital Consciousness Framework

DIGITAL CATEGORIES

Leadership - focused alignment
Talent - attracting, retaining, and growing
Customer Engagement - connecting with customers
Workplace Environment - cultural embrace of technology
Innovation/Technology - experimenting to drive digital advancement and pairing innovations with core business

04 | Intelligent analytics to support decision making
03 | Innovation to collect/analyze digital information
02 | Low levels of automation or connections
01 | Waiting for adoption
Summary of Supply Chain DCI - 2019

- 10% DORMANT
- 61% DEVELOPING
- 26% HEIGHTENED
- 3% ELEVATED

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Summary of Supply Chain DCI by Category

- Engagement - Current: 14.1% Dormant, 20.5% Developing, 7.0% Heightened, 6.6% Elevated
- Innovation - Current: 32.3% Dormant, 22.3% Developing, 5.2% Heightened, 6.6% Elevated
- Leadership - Current: 45.0% Dormant, 25.5% Developing, 7.3% Heightened, 6.6% Elevated
- Talent - Current: 46.6% Dormant, 20.9% Developing, 6.1% Heightened, 6.1% Elevated
- Workplace - Current: 46.4% Dormant, 24.8% Developing, 6.1% Heightened, 6.1% Elevated
# Supply Chain DCI Toolkit

Complete your DCI assessment at mhi.org/dci then utilize the toolkit to prioritize and develop your DCI plan

## LEADERSHIP

**Priority**

**Start to elevate**

- Plant land and technology to collect and interpret unbiased feedback from external and internal sources of data.
- Develop a leadership team of "digital champions" within your organization to drive digital culture through all levels of engagement.

## TALENT

**Priority**

**Start to elevate**

- Leverage recruiting platforms to target digitally savvy talent.
- Reduce and frame job titles and responsibilities to attract talent with digital capabilities.
- Transition from skills-based to talent-based hiring practices.
- Provide industry reference materials and communications for new information for employees.
- Establish a dedicated budget plan for people and technology investments.

## WORKPLACE ENVIRONMENT

**Priority**

**Start to elevate**

- Leverage learning environments through internal research and trade shows.
- Automate, reevaluate, reprioritize to keep the top competitors in the value chain.
- Leverage the potential to improve internal operations and reduce costs.

## INNOVATION/TECHNOLOGY

**Priority**

**Start to elevate**

- Start with small investments and scale to connect your question. Require access to a small setup and sell success quickly.
- Construct and streamline data analytics system into an organized data repository for cross-functional analytics.
- Recognize if multiple supervenion of such as unique representation of different perspectives.
- Identify the in front opportunities for innovation with increased operational impact.
- Seek to automate processes that are routine, repetitive, and time-intensive.

## CUSTOMER ENGAGEMENT

**Priority**

**Start to elevate**

- Develop customer-centric culture to better understand the needs and desires for an elevated customer experience.
- Develop advanced analytical capabilities to optimize customer feedback and predict areas for improvement of the customer experience.
- Collect and leverage customer feedback through surveys, social media, and online support to analyze through artificial intelligence to respond to customer needs.
- Leverage the data profile value to provide more personalized customer service and experience.
- Provide targeted recommendations and prioritized actions through known insights into customer data.
Panel Discussion
**What Leaders Should Do**

- Measure your Supply Chain Digital Consciousness Index (DCI) at mhi.org/dci and use it to determine and prioritize gaps
- Use the Supply Chain DCI Toolkit to identify and manage priorities, develop action items and set realistic timelines for development to your desired DCI state
- Establish an innovation think tank within your organization to keep up-to-date on new technologies
- Develop a customer-experience mindset that seeks to connect with customers in order to anticipate and shape their needs
- Appoint a C-suite champion for talent and create a socially responsible brand to attract your future workforce
- Implement a reverse or dual mentoring program to pair younger, digital native talent with seasoned leadership
- Partner with regional STEM, career and technical education and university programs to develop future talent pools
- Establish a culture with the freedom to fail on the path to success
Q&A

Submit your questions at modexshow.com/feedback

Download the complete report and complete your DCI assessment at MHI.org/DCI