2020 CIO Agenda: Global Perspectives in Heavy Manufacturing

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Initiatives: Manufacturing Digital Transformation and Innovation

This research, prepared for CIOs of heavy manufacturing companies, analyzes results from Gartner's 2020 CIO Survey with a focus on ability to navigate business and technical disruptions. CIOs benefit from insights and recommendations that enable them to navigate such unexpected events.

More on This Topic
This is part of two in-depth collections of research. See the collections:

- 2020 CIO Agenda: Industry Perspectives Overview
- 2020 CIO Agenda: Global Perspectives on Winning in the Turn

Table of Contents

1. 2020 CIO Agenda: A Heavy Manufacturing Perspective
2. Overview
3. Key Findings
4. Gartner Recommendations for Heavy Manufacturing CIOs
5. 2020 Gartner CIO Survey Objective and Overview
6. Sample Demographics
7. Identifying Fit and Fragile Enterprises

8. Addressing Cultural Organizational and Process Innovation Is Vital to Success From Technology Innovation

9. Following a Turn, Finding the Right Talent Challenges Businesses Most Among These 12 Performance Metrics Performance

10. Approximately Half of Enterprises Did Not Face Severe Disruptions. The Rest Were Split Between Success Navigating the Turns (Fit) and Disruption Setbacks (Fragile)

11. Companies Challenged by Obstacles Were Split Nearly 50:50 Between Overcoming the Challenges ("Fit") and Struggling or "Fragile" Because of Them

12. Heavy Manufacturers Are Slightly More "Fragile" and Vulnerable to Disruption Than the Cross-Industry Aggregate

13. Identifying What Puts Fit Enterprises Ahead

14. Surviving Disruption — Testing Fitness of Enterprises

15. Leadership, Corporate Alignment and Best Change Management Practices Put Fit Enterprises Ahead

16. The Top 10 Fitness Attributes Are About Aligning, Anticipating and Adapting

17. The Top 10: Comparing Heavy Manufacturing to Fit Enterprises

18. Section Introduction

19. Heavy Manufacturing Are More Likely to Face Operating Cost Pressures Than Fit Companies

20. Following a Disruption, Heavy Manufacturers Struggle Most to Overcome Operating Cost and Talent Gaps

21. The Heavy Manufacturer Group Is Moderately More Fragile Than the Composite Survey Group

22. The Heavy Manufacturer Group Is Moderately More Fragile Than the Composite Survey Group by Distribution

23. Heavy Manufacturing Faces the Greatest Gap Using IT for Competitive Advantage

24. Heavy Manufacturers Rate Themselves Lower in Alignment Than the Fit Group Across All Criteria Surveyed

25. Designing and Delivering Heavy Manufacturer Products Would be Impossible Without IT
26. Improving Performance Based on Adaptability Criteria Can Improve Heavy Manufacturer Overall Fitness

27. Heavy Manufacturing Leaders Must Think More Broadly About IT Value to Navigate the Turns More Skillfully and Become More Fit

28. Deep Dive: Heavy Manufacturing Fitness Category

29. Redefining the Culture of Heavy Manufacturing Companies to Digital Business While Retaining Practices That Deliver High-Quality Products Is a Top Priority

30. Heavy Manufacturing Lags in All Executive Leadership Fitness Attributes

31. Heavy Manufacturer Shortfalls in IT Leadership Undermine Fitness

32. On Average, Heavy Manufacturing Lags the Fit Enterprises in All Aspects of Strategy

33. As Traditional Industries Digitalize, Heavy Manufacturers Have Their Greatest Innovation Opportunities With IT-Enabled Services to Improve Customer Experiences

34. Heavy Manufacturer CIOs Have Key Opportunities to Improve Business Performance By Improving Their Use of the IT Opportunities Shown Below

35. As Some of the Earliest Users of IT to Develop and Deliver Their Products, Heavy Manufacturers Face Formidable Challenges Modernizing Deeply Ingrained IT

36. Fit Enterprises Are More Likely to Have A Flexible Technology Funding Model

37. Advancing Collaboration Culture and Cultivating New Skills That Promote Digital Business Advances Can Dramatically Improve Heavy Manufacturer Fitness and Agility

38. Heavy Manufacturer CIOs and IT Leaders Can improve Fitness by Rethinking a Broader, More Strategic Role of IT

39. Heavy Manufacturing Calibration

40. Section Introduction — Heavy Manufacturers Have Ambitious Plans And Roadmaps to Invest in Technologies to Improve Internally More Than Externally

41. Despite Shortfalls Compared to Fit Companies, Heavy Manufacturers Continue to Advance Their Digital Maturity

42. Maturity of Digital Initiatives by Industry

43. Digital Potential
When to Use

Download the attached PowerPoint presentation for key insights into how heavy manufacturing CIOs compare to “fit” organizations, as well as for recommended next steps to take in aligning, anticipating and adapting in order to be “fit for the next turn.”

Overview

Virtually all enterprises experience a market transformation or other crisis that requires a fundamental change in how they do business. If they cannot respond, they will fall behind their peers, making it even harder to rebound.

Key Findings

Heavy manufacturers face some of the most serious challenges related to such disruptions, which Gartner describes as “navigating the turns.” These companies are among the earliest adopters of IT, particularly for computer-aided design, computer-aided engineering and computer-aided manufacturing. They have continuously increased those investments, along with investments in ERP and manufacturing execution systems (MES), to improve their efficiency at financial activities and manufacturing operations. These 30-plus years of investment have aligned with an inwardly focused culture that has prioritized efficiency of design through manufacturing and service priorities.
The survey analysis indicates that while heavy manufacturers are continuing to adopt technologies that improve internal operations, they are not making the right investments to improve their ability to navigate the turns. For example, the survey analysis ranked heavy manufacturers behind all other industry sectors evaluated at digitizing processes and enabling digital business overall. They face substantial challenges in modernizing the use of IT that go beyond adoption of new technologies.

**Recommendations**

The greatest opportunity for manufacturers to transform their businesses is through closer partnerships between IT organizations, customers, and suppliers, creating a stronger ecosystem. Examples of such opportunities include “manufacturing as a service” ¹ and “remanufacturing” products. ² Both of these initiatives align with the principles of Industrie 4.0 ³ and circular economy. ⁴ The key to success in those initiatives depends on defining:

- Key performance indicators (KPIs) for the company that align to such business changes
- Role-based job performance metrics that align with the KPIs

**Methodology**

The 2020 Gartner CIO Survey was conducted online from 4 June 2019 through 5 August 2019 among Gartner Executive Programs members and other CIOs. Qualified respondents are the most senior IT leaders (CIOs) for their overall organizations or a part of their organizations (for example, a business unit or region). The total sample is 1,070, with representation from all geographies and industry sectors (public and private). The survey was developed collaboratively by a team of Gartner analysts, and was reviewed, tested and administered by Gartner's Research Data and Analytics team. Disclaimer: Results do not represent 'global' findings or the market as a whole, but reflect sentiment of the respondents and companies surveyed.

To isolate fit enterprises, we asked survey respondents whether their organizations faced various kinds of disruption within the last four years and how severe the crises were on a 1 to 7 scale (7 was most severe). We then asked how well the enterprises performed after the crises on 12 markers of performance — respondents answered on a scale ranging from 1 for “far behind” to 7 for “far ahead.” Enterprises that experienced crises of high severity and came out ahead count as fit. We call those that came out behind after a severe crisis fragile.

Additional research contribution and review: Melissa Rossi Wood.

**Evidence**

[Further discussion or data not visible in the image]
This report is based on Gartner’s annual survey of CIOs (see Survey Objective and Overview and Methodology slides in the presentation), which was conducted from 4 June 2019 through 5 August 2019. A total of 1,070 respondents participated, including 47 from heavy manufacturing. The respondents were members of Gartner Executive Programs and other IT leaders.

1 “7 Companies Advancing the Circular Economy by Selling Products as a Service”

2 Remanufacturing

3 “Jump-Start Your Industrie 4.0 Initiative by Leveraging Business Moments”

4 “4 Practical Steps to Engage Suppliers in Circular Economy Models to Improve Raw Material Availability”

Document Revision History

2019 CIO Agenda: Global Perspectives in Heavy Manufacturing - 29 March 2019

2018 CIO Agenda: Global Perspectives in Heavy Manufacturing - 9 March 2018

Recommended by the Author

The 2019 CIO Agenda: Securing a New Foundation for Digital Business

2019 CIO Agenda: Heavy Manufacturing Industry Insights

Manufacturing CIOs Must Advance the I&T Operating Model to Improve Digital Value

Jump-Start Your Industrie 4.0 Initiative by Leveraging Business Moments

4 Practical Steps to Engage Suppliers in Circular Economy Models to Improve Raw Material Availability

Recommended For You

2019 CIO Agenda: An Automotive Perspective

The Importance of OT Integration for Industrie 4.0

How to Protect Connected Vehicle Monetization From
How to Protect Connected Vehicle Monetization From Commercial Hackers
The Extended Vehicle and Neutral Servers: The Access to Car Data Monetization
Predicts 2020: Resilience in Industrie 4.0 for Advanced Manufacturing Builds on Data and Collaboration Models

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