Unified Manufacturing

A vision for unifying people, processes, machines and technology

CGI

A sustainable and human-centric future

Manufacturing is at a turning point. The industry is poised to become increasingly automated, with intelligent analytics at its core. Hyper-personalization will drive production lines, and cognitive computing will hasten innovation. In addition, collaborative ecosystems will empower manufacturers to be far more responsive to customers, offering innovative services and sustainable products in a circular economy.

At the same time, with Industry 5.0 imminent, customers, investors, governments and regulators want manufacturers to go beyond using technology solely for profit to using its power to become responsible leaders of the future.

This shift requires embracing a circular economy that redefines growth, leading with sustainability objectives and ensuring humans and technology work together to support a digital, green future that offers:

- Significantly higher worker value, innovation and satisfaction

- Hyper-personalization and highly customizable offerings

- Sustainable manufacturing practices

- Collaborative ecosystems

- Agile, responsive and resilient production

Many manufacturers have only just begun implementing their Industry 4.0-driven digital transformation programs. Moreover, 5G, which underpins this journey, is still in its infancy. Yet, mounting pressure makes it critical for manufacturers to remodel their business to be more human-centric and turn challenge into opportunity.

We believe achieving this transformation requires the right combination of leadership, culture, mindset and technology.

Where we are now

Results from digital strategies remain elusive

The pandemic continues to place immense stress on manufacturers, calling for them to reimagine business and operating models. It revealed what was working (and what wasn't) and where manufacturers needed more agility. It hastened smart working initiatives and shone a spotlight on the power of ecosystems.

For many industries, the pandemic also accelerated progress with producing results from digitization strategies. This was not the case in manufacturing. Only 15% of manufacturing executives interviewed for the 2021 CGI Voice of Our Clients indicate they are achieving expected results from their digital strategies, a marginal increase from 13% in 2020. However, this year, 54% say they have an enterprise-wide digital strategy in place, up from 43% last year, demonstrating that digitization remains a top focus.

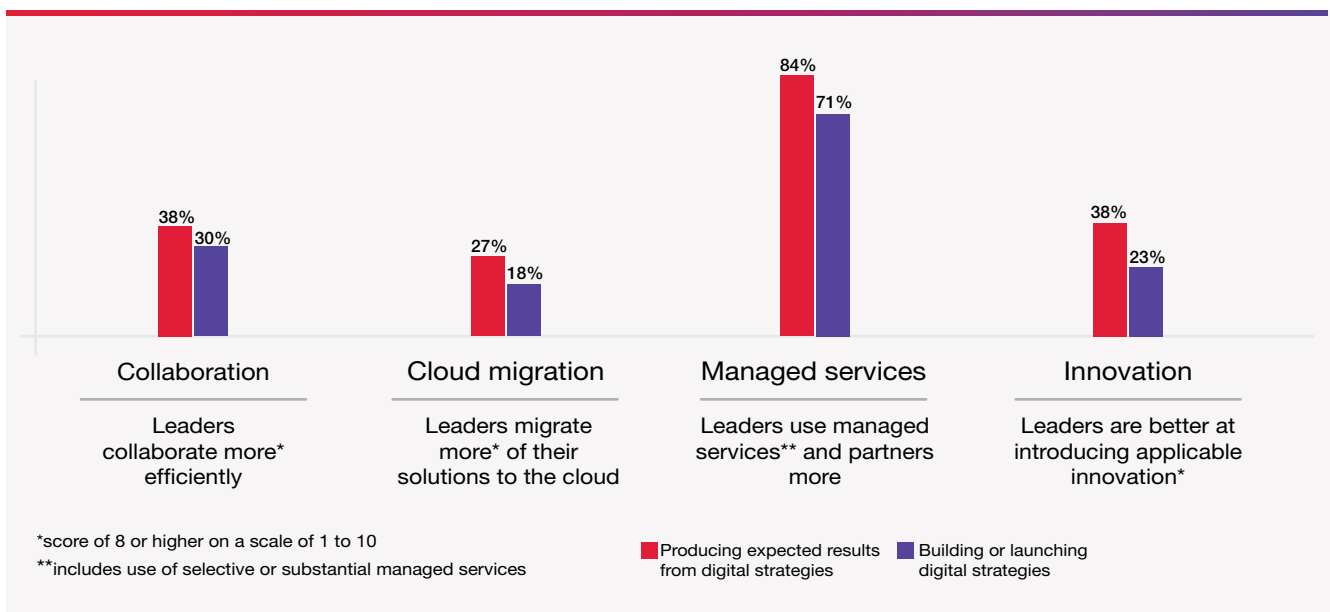**15%** are producing expected results from digital strategies

54% have an enterprise-wide digital strategy in place

What digital leaders do differently

We define digital leaders as those who are producing expected results from their digital strategies Among these leaders, we see several common attributes that help explain their success compared to those organizations who are just building or launching their digital strategies.

Digital leaders place a premium on collaboration and innovation to yield transformational results. Manufacturing's digital leaders are 15 percentage points better at introducing innovation, a core focus of Industry 5.0. They are also 8 percentage points more likely to collaborate more efficiently by building networks and connections that support innovation and resilience. In fact, digital leaders view their business as part of a larger ecosystem, leveraging partners effectively to create competitive advantage. They are also far more likely to use managed services and migrate more of their solutions to the cloud to gain the flexibility and adaptability needed to offer customers value-added and personalized services.

	Collaboration	Cloud migration	Managed services	Innovation
Producing expected results	38%	27%	84%	38%
Building or launching	30%	18%	71%	23%
	Leaders collaborate more* efficiently	Leaders migrate more* of their solutions to the cloud	Leaders use managed services** and partners more	Leaders are better at introducing applicable innovation*

*score of 8 or higher on a scale of 1 to 10
**includes use of selective or substantial managed services

■ Producing expected results from digital strategies   ■ Building or launching digital strategies

Digital leaders also identify lack of talent as the top constraint to their organization's ability to achieve its business priorities and are actively working to ensure they have access to the right skill sets for the future. Significantly, this constraint does not feature in the top 5 constraints for those manufacturers not yet producing results from their digital strategies.

Evolving business objectives to become future-ready

While strategies must continue to focus on sustained growth, cost reductions and operational excellence, manufacturers must now factor in the new Industry 5.0 goals of human-centricity and sustainability. This requires a complete rewrite of the rule book and a deeper understanding of production and business processes across the factory as well as digital and physical supply chains. It also requires manufacturers to operate with a common commitment across business, operations and IT.

Continued focus on optimizing operations

Build resilience

Improve business continuity and speed of response to disruptions

Become more agile

Respond faster to change while operating in the best possible way

Increase efficiency

Fine-tune production, maintenance and supply chain performance

Move toward Industry 5.0 goals

Embrace sustainability

Lead with sustainability objectives to create value for customers

Harmonize human-machine interaction

Leverage responsible AI for harmonious human-machine relations and worker well-being

Enable hyper-personalization

Develop a clear view of each unique customer's needs to offer personalized products

Unified Manufacturing

Unifying people, processes, machines and technology

Unified Manufacturing is our vision for the future of the industry. It aims to unify manufacturers within their plants, across their value chain and their wider ecosystem to become more adaptive and responsive to stakeholder demands. Through deep digital connection, integration of information technology (IT) and operational technology (OT), and the application of proven business methodologies, Unified Manufacturing helps manufacturers realize their strategic vision and achieve an insights-led digital continuum.

Unified Manufacturing is based on 5 core building blocks:

1. **Connected:** Leveraging wireless sensory technology and networks to connect machines, devices, systems and humans.

2. **Digital and paperless:** Streamlining, automating and digitizing processes to increase efficiency, improve throughput and quality.

3. **Data-driven:** Unlocking the value of data to enable monitoring, simulations and predictions for insight-led decision-making

4. **IT/OT security:** Assessing the risk of the IT/OT environment to implement the right security measures, preventing attacks before they happen.

5. **Factory cloud:** Hosting OT from the cloud to benefit from a global ecosystem that connects plants, people and partners across the entire value chain.
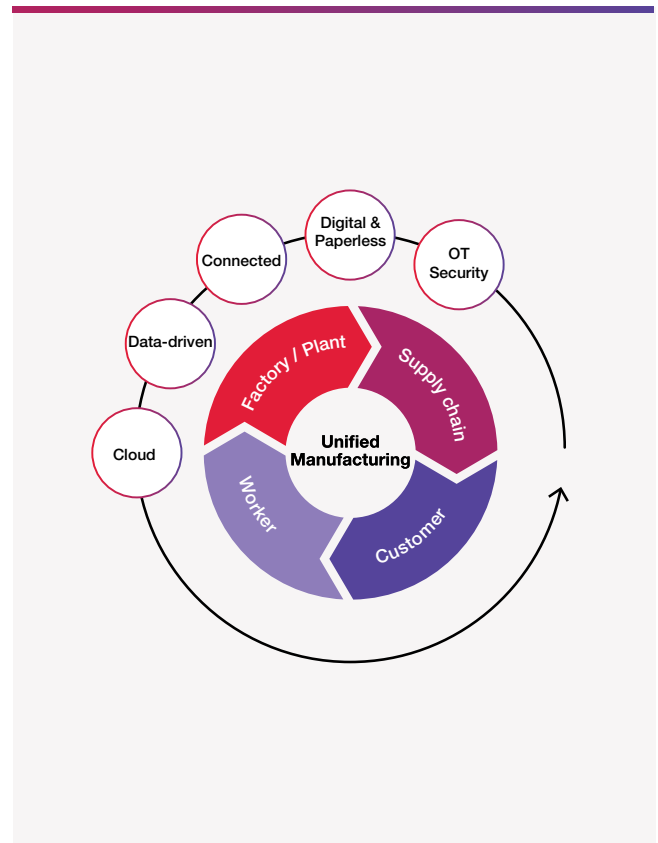
With this strong foundation in place, manufacturers can benefit from increased awareness and a 360-degree view of their operations (internally and externally). Together with integrated systems, this will enable them to act as a whole and become leaders of the future—resilient, responsive and adaptive to shifting landscapes.

Serving as your transformation partner

For over four decades, we have helped leading manufacturers navigate and seize the opportunities of change. Our deep-domain expertise and technical know-how supports over 600 manufacturing clients worldwide across multiple sectors including automotive, chemical, high-tech, metals, mining and natural resources.

Our professionals and consultants work with you to improve business agility so you can drive efficiencies and reduce costs as you continue to advance your strategic goals. Through strategic IT and business consulting services, systems integration, IT managed services and intellectual property solutions, we help you realize the promises of Industry 5.0 and beyond.

Contact us today at manufacturing@cgi.com to learn how we can support your transformation.

About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across hundreds of locations worldwide, we provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

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