Manufacturing and Workplace Transformation:
Aligning People, Process and Technology in the Digital Era

An IDC Industry Brief, in research partnership with TELUS Business
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Why Workplace Transformation is Important for Manufacturers

Globally, manufacturers are facing disruption, widely referred to as "Industry 4.0" or "Factory of the Future." This includes increased automation, robotics and supply chain optimization through extended consumption signalling, and resilient lean production.

A number of transformational digital solutions are changing the nature of manufacturing while helping businesses solve a variety of subsector needs:

Brand-oriented
i.e., consumer packaged goods businesses

Focused on improving the consumer experience at scale.

Asset-oriented
i.e., pulp and paper, chemical and metal businesses

Seek to improve collaboration while lowering capital and operating costs.

Engineering-oriented
i.e., auto, aerospace and industrial machinery businesses

Aim to create experience ecosystems, like firmware upgrades delivered to cars to improve performance years after purchase.

Technology-oriented
i.e., semiconductor and consumer electronic businesses

Envision their fit in a world of "technology as a service."

In redefining their business model for success, **manufacturers must invest in technology and modernize processes**, directly influencing their workforce's ability to innovate through agility.

The Workplace Transformation Model, and its Significance
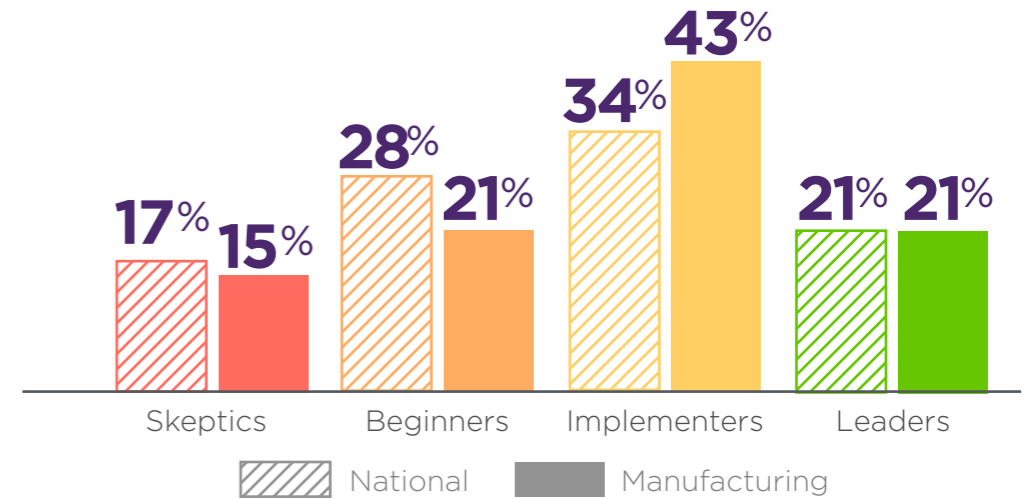
Why is this model significant?

The TELUS Workplace Transformation Model was created to showcase current realities across medium-sized businesses in Canada. A major study involving 203 Canadian organizations, each with 50–999 employees, was conducted by IDC in the second half of 2018. There were 30 manufacturing respondents in the study.

The results are significant. They provide four distinct stages of workplace transformation, driven by priorities and investments, each with distinct results as measured by their chosen KPIs.

Overall, manufacturing respondents are further along in their workplace transformation, and more likely to be Implementers when compared with other industries.

This Industry Brief was designed with your business in mind. Once you have recognized your placement, it provides insights, recommendations and a path to advancement.

Workplace Transformation Model
Medium-Sized Canadian Business Distribution

	Skeptics	Beginners	Implementers	Leaders
National	17%	28%	34%	21%
Manufacturing	15%	21%	43%	21%

Legend: National (hatched), Manufacturing (solid)

Note: Industry Brief figures may not equal 100% in some cases due to rounding.

Skeptics

Are unaware of, or uncertain about, the level of workplace transformation taking place today. They don't understand its advantages, and how fast they are falling behind competitors.

Beginners

Are just starting their transformation journey. They might be building a road map and readying to implement one or more foundational digital solutions.

Implementers

Understand the need to transform their workplace. This group has already implemented one or more digital solutions.

Leaders

Have integrated multiple digital solutions and seen sustained improvement in key metrics. They enable work anywhere / anytime, prioritizing automation and cloud-enabled solutions to improve collaboration.

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People
Workplace Transformation Pillar One

Why are *people* part of the equation?

In an era when customer demand changes overnight, talented employees have never been more sought-after. Exceptional employees choose companies that provide opportunities to succeed, which means being enabled to work anywhere, any time, on any device, with like-minded peers.

What are the findings in manufacturing, and how do they compare with the national average?

> **The skills gap is real.** 55% of manufacturing respondents report facing **a skills shortage, compared with 44% across other industries.** Manufacturing companies are trying to balance the needs of their human workforce with the expansion of robotics and automation. These tools don't entirely replace human employees, but instead reframe knowledge and collaboration requirements.

In contrast to other sectors, the primary decision manufacturers are making to address their skills shortage is geographic expansion (e.g., using overseas resources or factories). They are far more likely to adopt automation and outsourcing than other sectors.

> **Expecting change.** Manufacturers are more likely to anticipate a shift in the age and experience of their workforce compared with other industries. **60% expect extensive or very extensive change in the next three years**, compared with 50% expecting this outside manufacturing.

> **Somewhat prepared for change**. Despite their anticipation, manufacturers are in line with other industries regarding preparation. **Only 33% indicate they are very prepared**, and 60% indicate they are somewhat prepared.

Investing in expertise
Manufacturers are far more likely to have made major investments in outsourced IT services, with 55% doing so versus 37% nationally.

Process
Workplace Transformation Pillar Two

Why is *process* part of the equation?

The ways in which companies design, test, build, distribute, sell and service their products matters. As Marshall McLuhan said, "We shape our tools, and then they shape us." The technologies we use to get work done have evolved, but has your workflow kept pace?

What are the findings in manufacturing, and how do they compare with the national average?

> **Embracing physical automation**. In response to workplace evolution, the number of **manufacturers in the process of adopting physical automation is far higher than the national average** (55% compared with 39%). **Manufacturers primarily invest in automation to improve accuracy** (44% versus 26% nationally), while other industries primarily invest to improve productivity (prioritized by 26% of manufacturers, versus 48% nationally). While manufacturing aims to improve what it works on, other sectors are aiming to do more with less.

> **Enabling work in mobile environments.** Manufacturers are more than the factory floor. **85% of manufacturers have created or are creating** collaborative areas within their workplace, compared with 72% of businesses nationally. 54% of manufacturers have implemented or are implementing a work from home policy, while 27% are researching its value, similar to national results. Manufacturers are slightly more likely to have invested in hoteling offices to support workplace flexibility (24% versus 20% nationally).

> **Ensuring infrastructure readiness.** Regularly upgrading IT, network and mobile infrastructure is critical to supporting process and automation changes that serve digital workplace initiatives. **Manufacturers report being slightly more prepared than other industries.**

Characteristics/Actions of Leaders

> **Investing in IoT (the Internet of Things)**. Using connected technology to optimize processes isn't just for the production line. Smart buildings and their related systems save money through usage and tracking efficiencies. Fleet and freight telemetry enables real-time improvements to the supply chain. Connected products enable monitoring and realignment in real time, while connected building systems (i.e., lighting, HVAC, security) keep costs low.

> **Prioritizing their network**. Ensure your employees have a fast, robust, secure network backbone to support them wherever and whenever they need to be productive. Consider a cloud-managed network to automate, simplify and secure all data traffic while protecting against local outages.

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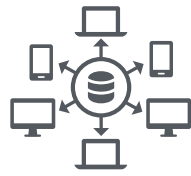
Technology
Workplace Transformation Pillar Three

Why is *technology* part of the equation?

When your workforce is provided with collaboration technology, on a robust and secure network, it is given its best chance to succeed. Companies that empower their employees to be productive anywhere, any time, on any device stand to surpass their peers in the digital era.

What are the findings in manufacturing, and how do they compare with the national average?

> **Prioritizing collaboration and IP-connected solutions**. Manufacturers are far ahead of other industries in cloud-based productivity suite adoption, lagging in VoIP adoption, and equal to the national average in their adoption of unified communications, videoconferencing and smart building technology. **There is a clear opportunity to advance.**

> **Embracing cloud and virtual applications**. The world is moving to cloud-enabled solutions delivered to any device, anywhere, at any time. This is noteworthy for manufacturers, which lag behind other industries in adopting mobile device management and mobile business applications. **Manufacturers meet the national average in adopting** **cloud computing infrastructure and cloud-enabled network management**, while leading other industries in augmented reality/virtual reality adoption.

> **Lacking a security partner**. Digital transformation opens the door to added security vulnerabilities, including areas previously considered secure, like plant floor operations. **Manufacturers report a slightly lower likelihood of working with a security consulting or managed security partner than businesses in other industries**. This is a real issue — steel mills and aluminum plants have recently had their operations completely halted by cyberattacks.

Characteristics/Actions of Leaders

> **Regularly upgrading network infrastructure**. This is essential to ensuring next-gen collaboration and IP-connected solutions can co-exist with the existing infrastructure stack.

> **Turning to a security expert**. Today's security threats are evolving — attacks occur through new vectors, at a higher rate than ever before.

Leaders work with security consultants or managed security partners to ensure customers, employees, data and applications are protected.

> **Combining IP-communication channels**. Consolidating communication channels such as email, instant messaging, voice, video, screen share and presence technology (i.e., unified communications) helps Leaders streamline, scale and optimize collaboration.

Workplace Transformation Recommendations for Manufacturers

Impact of workplace investments reported by manufacturers (KPIs)

Technology and process investments pay dividends. When asked about the results of investments in digital technologies and processes to improve how employees work, medium-sized Canadian manufacturers reported a 17%–41% surge in results, compared with an 18%–31% increase overall. Customer satisfaction scores saw the highest gain, followed by customer and employee retention, employee productivity and reduction in capital expenditures.

How manufacturing compares with other industries

Manufacturers are more likely to see improvements in customer satisfaction and retention benefits (+10%) and slightly more likely to see employee retention improvements (+4%) from their investments in digital workplace solutions than businesses in other industries.

Importance of closing the gap with Leaders

In most industries, market share and profits are being concentrated by the top companies. Early adoption of digital solutions and process governance has translated into increased productivity and profitability. Owning a leadership position in all facets of innovation, quality and customer experience enables a business to control all competitive levers and move entire industries forward.

Those furthest behind in their workplace transformation experience the opposite cycle, leading to a reliance on price cuts to retain clients, or sacrifices in one area of the business to save another area — diminishing morale and returns. The calibre of employees remaining on a sinking ship then reduces the likelihood of a turnaround in fortune.

Manufacturers can learn much from the investments Leaders have made and are planning to make. Workplace transformation creates an opportunity for exponential growth, and is forcing organizations to prioritize their attention, efforts and resources to it — without delay.

Manufacturers are more likely to see improvements in customer satisfaction and retention benefits (+10%)

Recommended Next Actions for Manufacturers by Stage

Workplace transformation ···>	Next steps
1 **Skeptics**	> Adopting **collaboration tools** is a strong first step toward increasing the availability and ability of your workforce to innovate — anywhere, any time, using any device. > Creating **collaboration areas** within the workplace gives employees the ability to form and re-form environments to suit the collaboration needs of each project.
2 **Beginners**	> To improve employee productivity and customer experience, your business should consider **automating key processes**, ensuring employees spend less time on repetitive tasks and more time innovating. > Your network supports most of your workforce. Ensure you have **fast, robust, secure network technology** to power your employees and avoid downtime. Consider the advantages of a **cloud-managed network** to automate, simplify and secure all your business does.
3 **Implementers**	> Migrating to **cloud computing infrastructure** drives increased agility, collaboration and cost savings. To store, manage and process data in real time, more manufacturers are turning to the cloud. > With an influx in device usage, each additional connection to your network and applications makes your company more susceptible to attack. Given security is likely not your company's core competency, consider **cybersecurity consulting** and/or a **managed security partner**.
4 **Leaders**	> Harnessing **IoT** and **physical automation** helps your business monitor and manage assets in real time. Investigate connected solutions to improve processes, reduce costs and delight your customers. > Streamlining tasks in real time adds value to employee work. Consider **knowledge-based automation**, including **industry-specific decision assistants, internal support systems**, and **sales and support automation**.

Methodology

Survey Details

> Internet survey of 203 medium-sized Canadian organizations (50–999 employees) in October 2018

> All qualified respondents:
>> Influenced or had decision-making authority for the technology used by employees in the organization
>> Had detailed knowledge of both the IT and telecommunication/networking products and services used by the organization

> 68% director or higher

> 31% IT and 69% LOB

> Industry demographics

> Size demographics

Maturity Model

> The eight questions shown below were used to build the scale. IDC equally weighted these questions.

> Questions included in the TELUS Workplace Transformation Model:
>> Number of major investments made to address workplace priorities (G03)
>> Number of workplace investments made (A03)
>> Number of workplace tech investments made (A04)
>> Level of investment in physical automation (B01)
>> Number of investments in knowledge-based automation (B04)
>> Number of talent sourcing solutions used (C09)
>> Number of major tech infrastructure investments made (D02)
>> Number of major consulting/services investments planning to be made (D04)

Message from the sponsor

Workplace transformation provides the greatest opportunity to enable a fast, agile business that innovates faster than its competitors. By aligning people and processes with measured investments in digital solutions, your organization is empowered to move at the speed of customer demand.

At TELUS, we are ready to help.

Over 10,000 Canadian medium-sized businesses trust TELUS to redefine their workplace, from initial roadmap through planning, implementation, monitoring, and optimization.

Learn more about business transformation and the technology required to redefine your workplace at
telus.com/**workplaceredefined**

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