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**What is digital
transformation?**
Your top questions
answered

What is digital transformation?

We answer common questions and share lessons learned



Digital transformation is the integration of digital technology into all areas of a business, fundamentally changing how you operate and deliver value to customers. It's also a cultural change that requires organizations to continually challenge the status quo, experiment, and get comfortable with failure.

Digital transformation is imperative for all businesses, from the small to the enterprise. That message comes through loud and clear from seemingly every keynote, panel discussion, article, or study related to how businesses can remain competitive and relevant as the world becomes increasingly digital. What's not clear to many business leaders is what digital transformation means. Is it just a catchy way to say moving to the cloud? What are the specific steps we need to take? Do we need to design new jobs to help us create a framework for digital transformation, or hire a consulting service? What parts of our business strategy need to change? Is it really worth it?

A note: [Some leaders feel the very term "digital transformation" has become so widely used, so broad, that it has become unhelpful.](#) You may not love the term. But love it or not, the business mandates behind the term – to rethink old operating models, to experiment more, to become more agile in your ability to respond to customers and rivals – aren't going anywhere.

This article aims to answer some of the common questions around digital transformation and provide clarity, specifically to CIOs and IT leaders, including lessons learned from your peers and digital transformation experts. Because technology plays a critical role in an organization's ability to evolve with the market and continually increase value to customers, [CIOs play a key role](#) in digital transformation.

It's also worth noting that today's organizations are in different places on the road to digital transformation. If you are [feeling stuck in your digital transformation work](#), you are not alone. One of the hardest questions in [digital transformation](#) is how to get over the initial humps from vision to execution. It creates angst: Many CIOs and organizations [think they lag far behind their peers](#) on transformation, when that isn't the case.

This year, the [COVID-19 pandemic has brought new urgency to meeting digital transformation goals](#) – and forced many organizations to speed up transformation work.

Yet IT leaders continue to grapple with challenges including [budgeting](#), talent struggles, and [culture change](#). Let's dig in for advice from your peers and digital transformation experts.

What is digital transformation?

Because digital transformation will look different for every company, it can be hard to pinpoint a definition that applies to all. However, in general terms, we define digital transformation as the integration of digital technology into all areas of a business resulting in fundamental changes to how businesses operate and how they deliver value to customers. Beyond that, it's a cultural change that requires organizations to continually challenge the status quo, experiment often, and get comfortable with failure. This sometimes means walking away from long-standing business processes that companies were built upon in favor of relatively new practices that are still being defined.

Digital transformation should begin with a problem statement, a clear opportunity, or an aspirational goal, [Jay Ferro](#), CIO of [Quikrete](#), recently [explained](#). "The "why" of your organization's digital transformation might be around improving customer experience, reducing friction, increasing productivity, or elevating profitability, for example," Ferro notes. "Or, if it's an aspirational statement, it might revolve around becoming the absolute best to do business with, utilizing enabling digital technologies that were unavailable years ago."

Leaders, think about what digital transformation will mean – in practice – to your company and how you will articulate it. "Digital is a loaded word that means many things to many people," says [Jim Swanson](#), CIO of Johnson & Johnson. When you discuss digital transformation, unpack what it means, advises Swanson, who led digital transformation at [Bayer Crop Science](#) (and previously served as CIO at [Monsanto](#)) before joining Johnson & Johnson in early 2020.

At Monsanto, Swanson discussed [digital transformation in terms of customer centricity](#). "We talk about automating operations, about people, and about new business models," he says. "Wrapped inside those topics are data analytics, technologies, and software – all of which are enablers, not drivers."

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"In the center of it all is leadership and culture," Swanson says. "You could have all those things – the customer view, the products and services, data, and really cool technologies – but if leadership and culture aren't at the heart, it fails. Understanding what digital means to your

company – whether you’re a financial, agricultural, pharmaceutical, or retail institution – is essential.”

Melissa Swift, who leads [Korn Ferry’s](#) Digital Advisory for North America and Global Accounts, agrees with Swanson’s take that the word “digital” has a problem because it means a lot of things to a lot of people.

“Say ‘digital’ to one person and they think of going paperless; another might think of data analytics and artificial intelligence; another might picture Agile teams; and yet another might think of open-plan offices,” she notes.

“Digital” is a hot mess of a word. And this causes a lot of grief in organizations.”

“Imagine ordering a hamburger over and over, and getting everything from a hot dog to a chicken sandwich to a Caesar salad...” she says.

Leaders need to be fully aware of this reality as they frame conversations around digital transformation. For advice from Swift on how to speak to this topic without getting burned, read our related article, [Why people love to hate digital transformation](#).

Why does digital transformation matter?

A business may take on digital transformation for several reasons. But by far, the most likely reason is that they have to: It’s a survival issue. In the wake of the pandemic, an organization’s ability to adapt quickly to supply chain disruptions, time to market pressures, and rapidly changing customer expectations has become critical.

And spending priorities reflect this reality. According to the May, 2020 International Data Corporation (IDC) [Worldwide Digital Transformation Spending Guide](#), spending on the digital transformation (DX) of business practices, products, and organizations continues “at a solid pace despite the challenges presented by the COVID-19 pandemic.” IDC forecasts that global spending on DX technologies and services will grow 10.4 percent in 2020 to \$1.3 trillion. That compares to 17.9 percent growth in 2019, “but remains one of the few bright spots in a year characterized by dramatic reductions in overall technology spending,” IDC [notes](#).

At a recent [MIT Sloan CIO Symposium series](#) event, IT leaders agreed that consumer behavior has quickly shifted in many ways since the start of the pandemic. Sandy Pentland, a professor at the MIT Media Lab, described how optimized automated systems in areas like supply chain management broke down when faced with rapid shifts in both demand and supply – a reality that just about everyone has faced on a personal level during the pandemic.

It’s early to guess which long-term consumer behavior changes will stick. However, Rodney Zempel, global leader, [McKinsey Digital](#) of McKinsey & Company, says that on the consumer side “digital has been accelerating in just about all categories.” An important factor to watch will be the degree to which forced change – three out of four Americans tried a new shopping behavior, for example – will revert when possible, post today’s emphasis on stay-in-place.

McKinsey data shows that the accelerated shift towards streaming and online fitness is likely to stay permanently, Zempel says. But the biggest shifts were around food. Both home cooking and online grocery shopping – a category that has been generally resistant to getting moved online – will probably stay more popular with consumers than in the past. Cashless transactions are also gaining steam. On the B2B side, McKinsey data shows remote selling is working.

For CIOs, this means rapid experimentation is no longer optional.

Mark Anderson, senior director of solution architecture, [Equinix](#), described this year as “a forced test of many things we had thought about but not tried.” For example, he observed, “Many supply chains are not well understood and underpinned with paper. We’ve started looking at technologies like blockchain and IoT.”

As Dion Hinchcliffe, VP and principal analyst at [Constellation Research](#), writes: “The top IT executives in today’s rapidly evolving organizations must match the pace of change, fall behind, or lead the pack. That’s the existential issue at stake in today’s digitally-infused times, where bold action must be actively supported by out-of-the-box experimentation and pathfinding. This must be done while managing the inexorable daily drumbeat of operational issues, service delivery, and the distracting vagaries of the unpredictable, such as a major cyberattack or information breach.”

Improving customer experience has become a crucial goal – and thus a crucial part of digital transformation. Hinchcliffe calls seamless customer experience “[the most important discriminating factor for how a business will perform.](#)”

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How has the COVID-19 pandemic changed digital transformation?

“We’ve seen the COVID crisis rapidly re-shape both the “what” and the “how” of companies’ [digital transformation](#) agendas, [notes](#) Korn Ferry’s Swift.

Take employee experience for example, she suggests. “Even as employee experience has become a key theme in the HR community, in IT circles this notion had been getting a mixed reception – sometimes stereotyped as “spoiled employees expecting best-in-class consumer-grade tech on shoestring budgets,” says Swift.

“Today, with a vast portion of the workforce now remote, employee experience of digital technology has gone from “nice to have” to “the only way work gets done. Consequently, it’s getting the [problem-solving focus](#) it likely long deserved.”

Swift calls out some other areas of digital transformation efforts that COVID-19 pushed higher on CIO agendas:

- Furthering the reach of customer support via tools including chatbots
- Automation tools for resilience reasons
- Radical housecleaning of redundant or conflicting systems

In response to the pandemic, CIOs have also embraced the notion that “the perfect is the enemy of the good,” Swift adds. “Nothing silences an individual’s – or an organization’s – inner perfectionist like a full-blown crisis. In response to dramatic disruption, many organizations have undergone a healthy re-negotiation of their relationship to digital technology – prioritizing

“hey, it works!” over “after years of slaving over this initiative, we’ve assembled the very best bells and whistles.” The “working software” [lionized in the Agile Manifesto](#) is getting a true moment in the sun.”

For more, read Swift’s full article: [Digital transformation: 5 ways COVID-19 is forcing positive changes](#).

What does a digital transformation framework look like?

Although digital transformation will vary widely based on organization’s specific challenges and demands, there are a few constants and common themes among existing case studies and published frameworks that all business and technology leaders should consider as they embark on digital transformation.

For instance, these digital transformation elements are often cited:

- Customer experience
- Workforce enablement
- Operational agility
- Digital technology integration
- Culture and leadership

While each guide has its own recommendations and varying steps or considerations, CIOs should look for those important shared themes when developing their own digital transformation strategy.

A few examples of digital transformation frameworks include:

MIT Sloan: [The Nine Elements of Digital Transformation](#)

Cognizant: [A Framework for Digital Business Transformation](#)

Altimeter: [Six Stages of Digital Transformation](#)

Ionology: [A Step-By-Step Guide to Digital Transformation](#)

What role does culture play in digital transformation?

In recent years, IT’s role has fundamentally shifted. CEOs increasingly want their CIOs to help generate revenue for the organization. According to the [2018 Harvey Nash/KPMG CIO Survey](#) of more than 4,600 CIOs, the CIO’s top operational priority is “improving business process.” But among CIOs at ‘digital leaders’ – companies identified as top performers – the CIO’s top operational priority is “developing innovative new products.”

Rather than focusing on cost savings, IT has become the primary driver of business innovation. Embracing this shift requires everyone in the company to rethink the role and impact of IT in their day-to-day experience.

Bryson Koehler, CTO, Equifax, says, “There is a [very different mindset](#) at work when you take IT out of an operating mode of, ‘Let’s run a bunch of packaged solutions that we’ve bought and stood up’ to ‘Let’s build and create new capabilities that didn’t exist before.’ If you look at the vast majority of startups, they’re not starting with giant, shrink-wrapped software packages as the base of their company. If you’re trying to create innovation inside of a large enterprise then you shouldn’t start with that either. You’re not here to run the mainframe anymore. You’re not here to run the servers. You’re not here to run the data center, or the network, or operations. That is table stakes. That’s what you can outsource.”

Although IT will play an important role in driving digital transformation strategy, the work of implementing and adapting to the massive changes that go along with digital transformation falls to everyone. For this reason, digital transformation is a people issue.

IT leaders find themselves working in cross-functional teams more than ever. Digital transformation initiatives often reshape workgroups, job titles, and longtime business processes. When people fear their value and perhaps their jobs are at risk, IT leaders will feel the pushback. Thus [leadership “soft skills”](#) – which turn out to be rather hard – are in great demand.

Mattel EVP and CTO Sven Gerjets [says leading transformation starts with empathy](#). “When your empathy is genuine, you begin to build trust,” he says. “If you don’t have an organization that is supportive and fully onboard with the transformation efforts, it’s impossible to succeed. You need to have leaders that know what “good” looks like and who are motivated to help the organization understand why you’re doing what you’re doing.”

“This will become apparent when you hear things like, ‘Hey, we’re working with your team and it feels different,’ or, ‘We can’t believe that IT delivered this project early and it met my business needs.’”

Korn Ferry’s Swift, who leads Digital Advisory for North America and Global Accounts, finds in her consulting work that [three groups of employees tend to slow transformation momentum](#): Old-timers, by-the-book players, and lone wolves.

Companies must not ignore but engage these three groups – or face perilous stalls, she writes. How to do that? Her first suggestion: Think about your population in a segmented fashion, and work to meet different segments where they are.

“Many organizations,” she [writes](#), “have rolled out the digital journey in a highly uniform manner, with the same messages and techniques deployed throughout. “Re-skilling for everyone! New teams! Welcome to the new world!” From a [change management](#) perspective, this is pure folly – and a misuse of investment dollars that might be spent more strategically targeting smaller groups. Companies should consider both digital experience and behavioral preferences of different sub-populations within their organization, and they should craft messaging, programs, and even environments to hit the right starting point and realistic end point for different groups.”

Read the full article for more advice from Swift: [3 kinds of employees who hurt transformation momentum](#).

What drives digital transformation?

An important element of digital transformation is, of course, technology. But often, it’s more about shedding outdated processes and legacy technology than it is about adopting new tech. It’s also about enabling innovation.

In the area of government IT, for example, more government agencies are on the verge of realizing the cloud model’s full potential – beyond cost-cutting to using cloud for strategic advantage, notes [Dave Egts](#), chief technologist, North America Public Sector, [Red Hat](#). “Deloitte recently released a list of [nine technology trends transforming government](#), and one, in particular, will be key to enabling the future of technology in government: The [cloud](#) as an innovation driver,” Egts [says](#).

The prevalence of legacy technology in enterprise IT still hinders CIOs’ ability to successfully embark on a digital transformation strategy. As [Beth Devin](#), Managing Director and Head of Innovation Network & Emerging Technology, [Citi Ventures](#) has [explained](#), legacy tech can become a costly barrier to transformation. “If you’re spending 70 to 80 percent of the

IT budget operating and maintaining legacy systems, there's not much left to seize new opportunities and drive the business forward. And this expenditure will grow as technology ages and becomes more susceptible," Devin notes.

What's more, new technologies are built using [cloud architectures and approaches](#), she points out: "What is the long-term value of leveraging the best new technology for your business and customers?"

A critical factor driving legacy upgrades, according to a recent [Deloitte](#) survey, is technological relevance, she says.

"Legacy solutions lack flexibility and carry a significant technology debt due to dated languages, databases (and) architectures," Deloitte reported. "This liability prevents many organizations from advancing and supporting analytics, real-time transactions, and a digital experience." (Read Devin's full article: [Digital transformation: 9 ROI factors when upgrading legacy systems.](#))

If businesses want to evolve with the rapid pace of digital change today, they must work to increase efficiency with technology wherever possible. For many, that means adopting agile principles across the business. [Automation technologies also help many IT organizations gain speed](#) and reduce [technical debt](#).

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What are the key trends in digital transformation in 2020?

As Enterprisers' Stephanie Overby has [reported](#), "Ongoing [digital transformation](#) across industries became a given in 2019. At the same time, [digital transformation fatigue](#) also became very real." It's a good time to ask yourself if your team is getting tired or less engaged.

2020 will be a year of some reckoning for digital initiatives. Organizations that continue to underestimate the need for culture change do so at their own peril.

"2020 will still see the rapid scaling of digital initiatives across industries," says Steve Hall, partner and president of global technology research and advisory firm ISG. "In many areas, CIOs and organizations have prepped their organizations for change but haven't made the full leap to transforming their culture to fully embrace the change."

Here are eight key digital transformation trends that business and IT leaders should be aware of in 2020:

- Rapid adoption of digital operating models, including integrated cross-functional teams.
- A shakeout as those that have invested in big data governance and analytics leapfrog their competitors.
- Better use of AI and machine learning.
- Continued merger and acquisition activity in the IT outsourcing industry.
- Consultancies forming new digital partnerships.

- Expanding public cloud adoption.
- New digital transformation success metrics.
- More attention to long-term value of digital initiatives.

For more detail and advice on each of these items, read our related article:
[8 digital transformation trends for 2020.](#)

How can I measure ROI on digital transformation?

To prove the success of [digital transformation efforts](#), leaders need to quantify the return on investment. That's easier said than done with projects that cross functional and business boundaries, change how a company goes to market, and often fundamentally reshape interactions with customers and employees.

A project such as revamping a mobile application may have a short-term payoff but other projects are chasing longer-term business value.

Moreover, as we recently [reported](#), "Digital transformation efforts are ongoing and evolving, which can render traditional business value calculations and financial governance approaches less effective."

Still, quantifying success is crucial to continued investment. "Just implementing the technology isn't enough – the technology needs to be specifically tied to monitoring key performance indicators on customer insights and business process effectiveness," says Brian Caplan, director with management consultancy [Pace Harmon](#).

First, ask if you're taking enough risks.

"When determining how well digital transformation investments are performing, it's best to take a portfolio view and not a project level view," says Cecilia Edwards, partner with digital transformation consultancy and research firm [Everest Group](#). Just as a mutual fund manager or venture capital firm would look at overall performance to determine how well things are going, digital transformation leaders must take a holistic view of digital change efforts.

This is particularly important so that the underperformance of one particular project doesn't reflect negatively on the overarching efforts of IT. It also builds tolerance for the necessary risks that must be undertaken to achieve real digital transformation.

Next, consider best practices regarding digital transformation metrics:

- Set initial metrics in advance
- Develop micro-metrics for agile experiments: The goal is to learn and adjust.
- Incorporate business outcomes: Look at strategic impact (e.g., revenue growth, lifetime customer value, time to market), operational impact (e.g., productivity improvements, scale, operational efficiencies), and cost impact.

Want more detail on ROI best practices? Read our related article:
[Digital transformation ROI: How to check a project's payoff.](#)

How can I get started on digital transformation?

If all of this makes you feel woefully behind, fear not. One of [the biggest misconceptions](#) CIOs have about digital transformation is that all of their competitors are much further ahead of the game than they are. That's because "there's much admiration of (and popular press around) the fastest transformers, but little critique of how hard transformation is or how long it may take for a typical Global 2,000 company," says Tim Yeaton, CMO of Red Hat.

As businesses formulate their own digital transformation strategy, there is much to be learned from CIOs and IT leaders who have already begun their journeys. Below is a collection of stories and digital transformation case studies you can explore further.

[Matson CIO: The most painful, gut-wrenching part of leading transformation](#)

[Digital transformation: 5 uncomfortable truths in 2020](#)

[Digital transformation success: 5 takeaways from MIT Sloan experts](#)

[Digital transformation dream teams: 8 people you need](#)

[Digital transformation storytelling tips: How to explain your work](#)

[How hybrid cloud aids digital transformation](#)

[Budgeting smarts for digital transformation: 4 tips](#)

Where can I learn more?

Digital transformation is a massive undertaking, especially for larger, established companies. When done right, it will produce a business that is more aligned with customer demands and resilient in the fast-moving digital future.

For more insights on digital transformation, see these resources:

Our entire [article collection on digital transformation](#) offers more how-to advice.

[Teaching an elephant to dance](#) (Ebook on digital transformation)

[The automated enterprise](#) (Ebook on managing IT with automation)

How leading CIOs drive revenue: [Harvard Business Review Analytic Services report](#)