# Delivering on the Promise of Digital Requires IT Modernization and Transformation

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## IDC OPINION

Digital transformation (DX) is the process of creating value, revenue growth, and competitive advantage through new product and service offerings, innovative business models, and deeper business relationships. The term *DX* includes two mandatory components: the first is digital, which means some combination of cloud, analytics, mobile, and social technologies, and the second is transformation, which implies a business process, model, or organizational change made possible by one of these four technologies. The major threat to successful transformation for most businesses is the failure of their IT organizations to convert from being the back-office enabler of internal business processes to playing a leading role as the engine powering digital business flows between people, things, and data. This is the fundamental, core transition that is at the heart of IT transformation (ITX) – namely, how ITX can enable new business in the DX era, which began in earnest several years ago and which will continue for the foreseeable future. Organizations that forego ITX will find themselves increasingly less relevant and replaced by substitutes. Without ITX, the new and innovative business models that are possible via DX will never get implemented.

At its core, IT transformation is about enabling your IT organization to constantly balance the three workload priorities that underpin all DX:

- Low latency to ensure optimal experiences for employees and customers
- Rapid resource delivery to ensure rapid response to changing business requirements
- Data control to ensure optimal and secure use of data by you and your customers

In many cases, this means keeping data and applications in existing datacenters, near existing employees, customers, or devices whenever possible, but this is possible only if your IT organization has a modernized facility that can grow and evolve quickly with changing requirements. In some cases, workloads need to move to cloud-based platforms, new datacenters, or edge locations that enable you to connect with people and machines in new geographies and locations more effectively. Your IT organizations must play the leading role in managing the orderly migration and modernization of data sets and applications without jeopardizing service reliability or data control. Implementing modern applications and data architectures is a critical success factor for harnessing insight about data, whether the IT organization does this work on its own or with the help of a strategic implementation partner.

The key to sustained IT modernization and transformation success will be to find an implementation partner that can provide the expertise, resources, and ongoing support required to initiate, accelerate, and sustain this transition. The right implementation partner will:

- Help you successfully migrate workloads onto new infrastructure at core and edge datacenters, modernize application and data architectures, and update operating models.
- Continuously facilitate ongoing architectural decision making and new service innovation by keeping up to date with technology and service delivery models.
- Support the organization not only through the initial journey but also through the ongoing management and optimization of the environment as DX efforts evolve.

## Digital Transformation Is Happening, But Impasses Are Too Common

For the past three years, many enterprises across all industries have initiated a series of digital transformation programs and projects as they sought to react to new competitors and/or drive new products and services, business models, and business relationships. According to *IDC MaturityScape Benchmark: Digital Transformation Worldwide, 2017* (IDC #US43220117, December 2017), 67% of respondents indicated that they had reached the third stage of DX maturity, or higher. In 2015, 42.5% of respondents had reached the third stage or higher. (IDC rates DX maturing on a five-stage scale). Examples of companies taking specific DX steps today include:

- A European utility linked its efforts with partners and customers as part of the "Smart City" ecosystem.
- An insurer accelerated product innovation and development through data analytics, customer insights, and risk management.
- A leading online retailer is using DX to aggregate fashion brands and create new fashion retail ecosystems.
- A logistics company is building an industry cloud to connect suppliers and customers in the steel distribution industry.

While the companies discussed previously are experiencing DX success, IDC finds that many organizations are "stuck" as they look to get pilot programs and projects to sustainable DX platforms that scale. One of the primary reasons cited for this "impasse" is the need to address an absence of the right technology architecture to accelerate new capabilities while struggling with the need to aggressively modernize legacy environments to make them capable contributors. DX is challenging because it requires significant organizational change, and this can be another sticking point as not all stakeholders may agree on the clear and compelling need to change. At a minimum, getting the ITX right prevents technology from being used as the excuse for why DX is not possible and keeps the focus on what the business needs to do to thrive.

To get around potential impasses, ITX initiatives must address all three workload priorities listed previously to enable the rapid creation of externally facing digital products, services, and experiences while supporting aggressive modernization of the internal IT environment. To that end, ITX technology and service investments must align to one or more of the following goals:

- Enable leadership teams to more quickly identify opportunities, assess risks, and guide organizational change in response to new technologies and market developments.

- Ensure that workforces have all the skills, tools, data, and insight they need to deliver the optimal customer/constituent/patient experience without degradations due to application or data latency.

- Guarantee that the organization can consistently engage with customers, suppliers, partners, and employees across all personal and digital forums without jeopardizing personal privacy, intellectual capital, or corporate reputation.

- Accelerate transformation of operations by reducing the complexity and risks associated with major changes in business/treatment processes.

- Speed the ability of the entire organization to achieve maximum insight and return from all data the organization generates, accesses, manages, and shares.

The ability to support more new apps and reduce development cycles that results from these ITX efforts ensures that the workforce has all the tools, data, and insight needed to deliver the optimal experience and reap the maximum reward without degradations in quality due to application or data latency. Consider the possibilities in the healthcare industry – employees, partners, and caregivers can consistently engage with customers, constituents, students, and patients across all personal and digital forums without jeopardizing personal privacy, intellectual capital, or reputation. They can do so in the hospitals, minute clinics, doctors' offices, or the wide range of other places where connected people and "smart" things are concentrated and digital transformation is happening. The capabilities and benefits noted previously are at the core of ITX, but many businesses still wonder where to start.

## SETTING PRIORITIES FOR ITX: CLOUD-BASED IT AND DATA CONTROL

The first step is to move to a modernized cloud-based IT environment. Cloud, however, is not about a specific datacenter or a specific cloud IaaS, PaaS, or SaaS environment. Cloud must be everywhere in your organization, in large shared facilities, in internal datacenters, and in critical business facilities at the edge of the business. The mix of data and resources in each of these locations should depend upon where you can best meet the latency, resource availability, and data control needs of your new digital services and should not be based upon historical investments (technical debt).

The benefits that you should demand from the move to cloud-based IT include:

- Enabling agile resource delivery at all levels (instances, containers, functions, bare metal IT systems, and whole datacenters) so that the business can take early advantage of innovative technologies

- Utilizing self-service functionalities across a hybrid delivery model of dedicated on-premise and hosted cloud environments for automated configuration of servers, allocation of storage capacity, and launch of applications

- Automating/offloading the IT "chores" associated with deploying, maintaining, and updating IT hardware (compute, storage, and network) as well as infrastructure software and network connections so that internal IT personnel can focus on the more strategic tasks of service creation, data control, and governance

- Leveraging more flexible asset and service acquisition, financing, and cost control models so that business leaders can reduce "the risk of taking risks" by closely aligning technology investments with the near- and long-term revenue and cost impact of new business initiatives

- Creating environments and establishing business-level KPIs and digital service-level agreements for all workloads that ensure the same customer experience whether these workloads are hosted offsite or on-premises

Organizations need to understand how the capabilities and placement of the underlying infrastructure can affect pace, reliability, and trust. Over time, with the shift to a more cloud-based model, "physical data gravity" will be a key driver of infrastructure placement/consumption model decisions. Issues related to the aggregation of many data sets versus the value of real-time data analysis will challenge many current assumptions about physical data placement and movement.

The second step of an ITX effort is to focus on the data.

Organizations around the world are talking about digital transformation and its implications for their people, their customers or constituents. For most, this conversation could just as easily be about data transformation. The most fundamental objective of any ITX effort must be enabling the entire organization to achieve maximum insight and return from all the data it generates, accesses, manages, and shares. The goal of ITX must be to enable you to trust your data. With data trust in place, DX becomes more feasible.

With trust, the entire organization can achieve maximum insight and return from all the data that it generates, accesses, manages, and shares. Companies that excel at ITX adopt new thinking when it comes to the placement and coordination of traditional and new cloud-native workloads like AI and machine learning within their own modernized datacenters as well as cloud service providers' facilities. These companies are also taking the lead in establishing effective controls for the use of data to power digital business flows between organizations, people, and things without jeopardizing personal privacy, intellectual capital, or reputation. This is a strategy that IDC calls establishing data controls.

What are data controls? The best way to understand the concept is through an analogy with the concept of internal controls, a critical part of any organization's finance and business structure. Internal controls are the processes/practices put in place to ensure the achievement of an organization's objectives for monitoring operational effectiveness/efficiency, ensuring reliable financial reporting, and complying with laws, regulations, and policies. Internal controls involve everything that minimizes financial risks for organizations as well as providing a trusted foundation for making decisions on how resources are directed, monitored, and measured.

Data controls are about applying similar processes/practices to data, the new currency at the heart of many digital transformation efforts. These controls apply to all the data the organization generates/collects as well as what it gets from partners or other public sources. The controls also cover all the data distributed, analyzed, and retained to meet compliance requirements. In ITX, securing the data environment and limiting operational risk related to data require a data control strategy that addresses the following questions:

- Do we always know what data we have and where it is?
- How accessible is our data? Do we know who, or what, is accessing it? How easy is it to alter accessibility rules?
- Is our data safe from loss, theft, or misuse?

Setting up and operating a scalable and trusted data control platform will be critical to any efforts to create and deliver innovative, data-driven digital transformation services that customers, constituents, or other stakeholders can depend upon to make their businesses and lives better.

## FINAL THOUGHTS

Companies that undertake ITX efforts can make their development efforts and IT operations much more responsive to the new business needs of the DX era. These changes can enable the companies to improve their competitive positions and capture substantial additional revenue growth. The three ways that organizations are realizing revenue gains through ITX efforts are:

- Reducing the time to market for customer-facing applications and services, thus taking advantage of more business opportunities and winning more business
- Improving the quality of existing applications, data, and services, including increasing employee productivity levels, thereby better serving customers
- Having the capacity and capabilities to create new products, services, and offerings that address market demand

For an organization that does not have all the ITX skills already in-house, the other common element in successful ITX efforts is the organization's selection of a strategic IT service provider to accelerate IT modernization, ease the shift to cloud-based IT, and establish data control policies and procedures. Successful IT service providers can act as a partner in the evaluation, deployment, and use of the right hardware, software, IaaS, and SaaS solutions across large-scale environments. The right strategic IT service provider balances all three workload priorities (mentioned previously) for you in an effort to:

- Help IT determine which workloads can move to a cloud model (often test and development and disaster recovery).
- Successfully architect/migrate workloads into new facilities (datacenters), application architectures (cloud), and operating models (DevOps and data controls).
- Continuously facilitate ongoing architectural decision making and new service innovation by keeping up to date with technology and service delivery models.
- Extend the reach of IT teams by covering skill set gaps, which helps internal IT focus more on strategic business initiatives versus just managing technology.
- Support the enterprise not only through the initial implementation but also through the ongoing management and optimization of the hybrid delivery environment over time.

The right strategic IT service partner will have a long and extensive track record of helping organizations manage the asset and operational challenges associated with major datacenter and technology transitions and will have the expertise and resources required to keep a digital business running 24 x 7, which is at the heart of digital transformation.

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