EXECUTIVE SUMMARY

2018

State of Digital Business Transformation

State of Digital Business Transformation 2018

How companies are evolving their businesses through the use of technology to drive revenue and innovate at the point of the customer.

Digital business is described as the creation of new business designs by blurring the digital and physical worlds. As IDC describes it, digital transformation is the use of 3rd platform technologies to create value and competitive advantage through new offerings, new business models, and new relationships.

Connected devices are flourishing as predicted, with the number of connected IoT endpoints set to top 30 billion in 2020 and reach 80 billion by 2025 according to IDC. But for most enterprises, the transition to a digital-first business model has been more cautious and methodical, according to IDG's 2018 Digital Business Survey.

More than a third of organizations (37%) have already started integrating and executing a digital-first approach, and 7% say they're already an enterprise-wide digital business. Still, almost half (45%) of IT and business leaders surveyed say their companies are in the very early stages of becoming a digital business – either gathering information or just beginning to formulate a digital-first strategy.

Organizations say their biggest obstacles in achieving success with digital business initiatives include lack of sufficient budget (39%), lack of staff and/or correct skill sets (36%), the need to replace legacy systems (34%), and cultural issues (33%). This underscores the huge business and cultural challenges that must be overcome to even begin digital transformation – not to mention the dizzying array of technology options that must be analyzed and matched to business goals. The study finds that both technology and organizational change management must be considered equally.

89%
of organizations have adopted or have plans to adopt a digital-first strategy
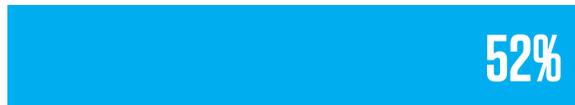
Introduction

What does being a "digital business" mean to organizations? IDG surveyed 702 IT and business management decision-makers to find out. Respondents were given nine "meanings of digital business to learn see which ones resonated the most with how their organization views digital business.

For about half of survey respondents, becoming a digital business means enabling worker productivity through tools such as mobile, data access and AI-assisted processes (52%), and the ability to better manage business performance through data availability and visibility (49%). For one-third or more of IT decision-makers, it means meeting customer experience expectations (46%), understanding customer needs through data collection and analysis (44%), providing secure, optimized anywhere/anytime access to assets (39%), digitally modifying business and/or processes (37%), developing new digital business/revenue streams (33%), and achieving top-line growth through digital product enhancements/new digital products or services (31%). For more than a quarter of companies surveyed (27%), it means digital globalization – the flow of data and information worldwide which enables the movement of goods, services, finance and people.

All of these objectives require a smart combination of technologies, both proven and some in their very early stages, to achieve their intended results.

What does "digital-business" mean to organizations?

|	
Enable worker productivity through tools such as mobile, data access and AI-assisted processes	52%
Ability to better manager business performance through data availability and visibility	49%
Meet customer experience expectations	46%

State of the 'Digital First' Approach to Business

More than a third of organizations (44%) have already started implementing a digital-first approach to business processes, operations and customer engagement. Some 19% are in the integration process of making operational and technology changes throughout the enterprise, and 18% are executing their digital plans and making process, operational and technology changes on a department and business unit level. Just 7% of companies have already fully implemented their digital first approach and are in the maintenance phase.

Big Expectations

When asked what their organization's top objectives were for their digital business strategy, the majority of organizations expect to improve process efficiency

Digital First Approach

Not at all 11%
Maintenance 7%
Integration 19%
Execution 18%
Research 17%
Development 28%

through automation (64%), create better customer experiences (58%) and improve employee productivity (50%). Some 43% of organizations expect digital business to drive revenue growth, and they may be on the right track.
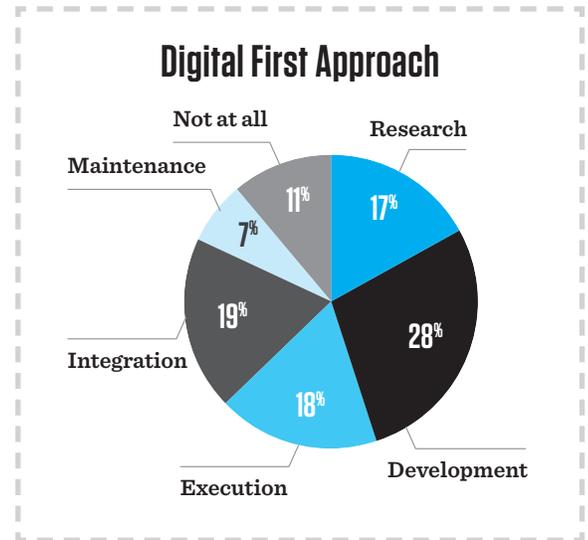
32%

of IT decision-makers say that digital business has already helped their organization achieve revenue growth

Close to one-third of IT decision-makers (32%) say that digital business has already helped their organization achieve revenue growth, with an average of a 23% increase. Meanwhile, 35% of respondents say their digital first efforts have not yet affected revenue, and another 30% don't know.
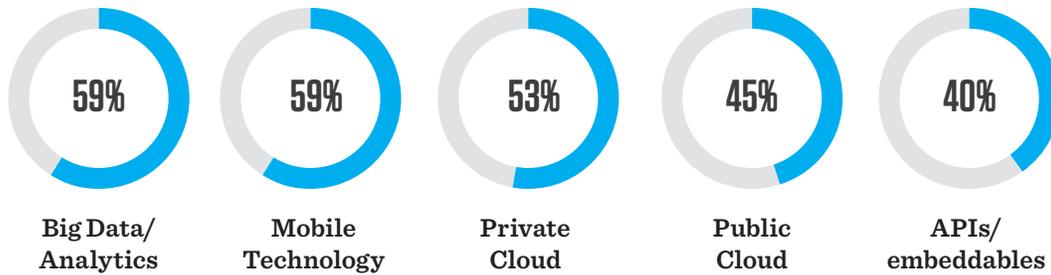
Many companies, however, are in the very early stages of becoming a digital business. More than a quarter of organizations (28%) are in the development stages of creating strategies, evaluating technology and the organizational changes that will be required for a digital transformation, and 17% are still gathering information before they develop a strategy. The majority of organizations surveyed plan to spend a significant portion of their IT budgets on these initiatives. Twenty-one percent of organizations will spend $1 million-$10 million on digital business initiatives, while 15% will spend $10 million or more on digital business projects in the next 12 months. While 21% of organizations plan to spend less than $1 million this year on digital business initiatives, the overall expected average spend is $14.3 million – which varies greatly by company size. Enterprise organizations (1,000+ employees) expect to spend $27.5 million compared to $1.8 million for SMBs (<1,000 employees).

'No thanks.'

Although digital business is expected to improve productivity, better the customer experience, etc., 11% of organizations have no plans of adopting a digital-first approach. When asked why, the majority say it's due to budget constraints (32%), while 15% of IT decision-makers say they're already achieving profits under their current business model.

Developing a digital-first strategy for technology adoption can get complicated. Cloud, IoT, artificial intelligence, bots, software-defined storage and networking, application performance monitoring and mobile technologies are just a few to be considered. Here is how digital technology adoption is playing out:

Top Five Digital Technologies Already Implemented

59%	59%	53%	45%	40%
Big Data/ Analytics	**Mobile Technology**	**Private Cloud**	**Public Cloud**	**APIs/ embeddables**

Big Data/Analytics

It's no surprise that digital-first enthusiasts have already jumped on the big data/analytics bandwagon. Big data/analytics helps organizations harness their data and use it to identify new opportunities. That, in turn, leads to smarter business moves, more efficient operations, higher profits and happier customers. It also drives process efficiencies and employee productivity, which are primary goals of digital-first initiatives.

Mobile Technology

The world is mobile, and enterprises have no choice but to adapt to workers' and consumers' habits. In the past, organizations shied away from integrating mobile technology because of the complex integration required with so many legacy processes and systems. Today, with more organizations now focused on digital transformation, it's time to leverage mobile as an integrated part of business strategy.
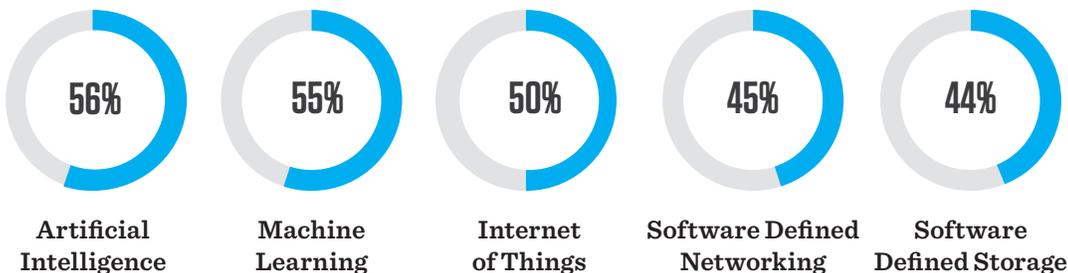
Public and Private Cloud

IDC reports that organizations are shifting to a "cloud-first" strategy for updating/replacing traditional systems and to "cloud only" when developing their next-generation competitive advantage systems and services, so it makes sense that most organizations already have public and private cloud in place. As organizations add digital-first technologies, public and private cloud will play a central role.

APIs

Application Programming Interfaces, the language for getting systems to communicate and share data with one another, are becoming essential business tools for sharing data among siloed systems and external data-sharing to allow collaboration that can improve operations and customer service.

Top Five Technologies in the Works

(Piloting, researching or on the radar of organizations in the next 12 months)

| 56%	55%	50%	45%	44%
Artificial Intelligence	Machine Learning	Internet of Things	Software Defined Networking	Software Defined Storage

Artificial Intelligence

As artificial intelligence (AI) proliferates, it's becoming an imperative for businesses that want to maintain a competitive edge. AI can process and analyze massive amounts of data far more quickly than the human brain. It can then recommend a course of action based on the data. Rather than replacing humans, AI can help them map out the consequences of actions and speed up the decision-making process. What's more, AI software can make decisions on its own, making it valuable to a wide range of industries for everything from answering customers' questions to predicting when factory equipment will break down.

Machine Learning

Machine learning (ML), a subset of AI, is a technology that allows systems to learn from data and continuously improve from experience, without being specifically programmed. Deloitte Global concurs with IDG's findings in a recent report, 2018 Global Predictions: Machine Learning – Things are Getting Intense, which says that while organizations are highly enthusiastic about the potential of cognitive technologies like ML, the majority had just a handful of implementations and pilots in the works. Deloitte contributes their caution to a lack of qualified practitioners, and immature and still evolving tools and frameworks for ML, among other drawbacks. Still, the consulting firm predicts that the number of ML implementations and pilot projects will double in 2017, and then double again by 2020.

Internet of Things

Internet of Things (IoT) devices are going to have a big impact on how companies do business. For starters, IoT devices collect massive amounts of data, and companies will have greater access to this data than ever before to track and record consumer behavior to make smarter advertising and targeted demographics decisions. IoT will also likely revolutionize how companies track and manage their inventory, further enhancing remote work and improve efficiency and productivity at work. Close to half (49%) of IT decision-makers say that IoT plays a role in their digital business strategy, with greater use among enterprise organizations (61%) compared to SMBs (39%). Currently, IoT is primarily being used to manage IT assets on performance, risk management, compliance and security (57%), monitor equipment (53%) and collect customer or product data via sensors (41%), to name a few functions.
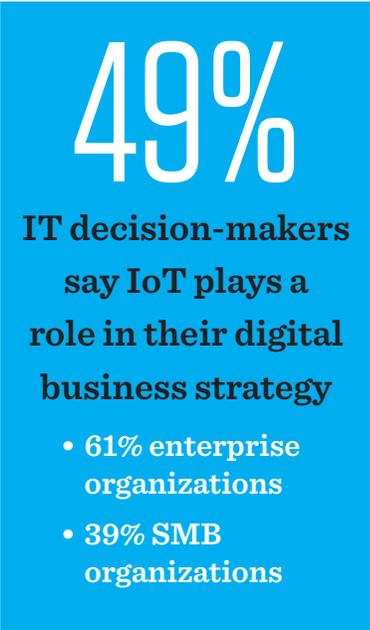
49%

### IT decision-makers say IoT plays a role in their digital business strategy

- **61% enterprise organizations**
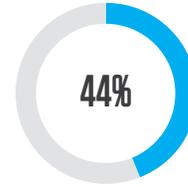- **39% SMB organizations**

SDN and SDS

Software-defined networking (SDN) technology can create more efficient, centralized networking management, reduce operating costs, and enable new technologies in the organization. With SDN, the network can direct traffic without relying on the hardware to make the decision. This capability has become critical to readying companies for new technologies such as cloud-based applications, IoT devices, and big data applications. Likewise, software-defined storage (SDS) is helping many industries better manage their growing stockpile of data by providing flexibility in how they store and retrieve data.

Top Two 'Not Ready for Prime Time' Technologies

(Companies "not interested" in these technologies in coming year)

44%
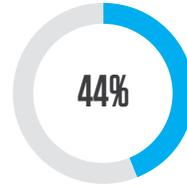
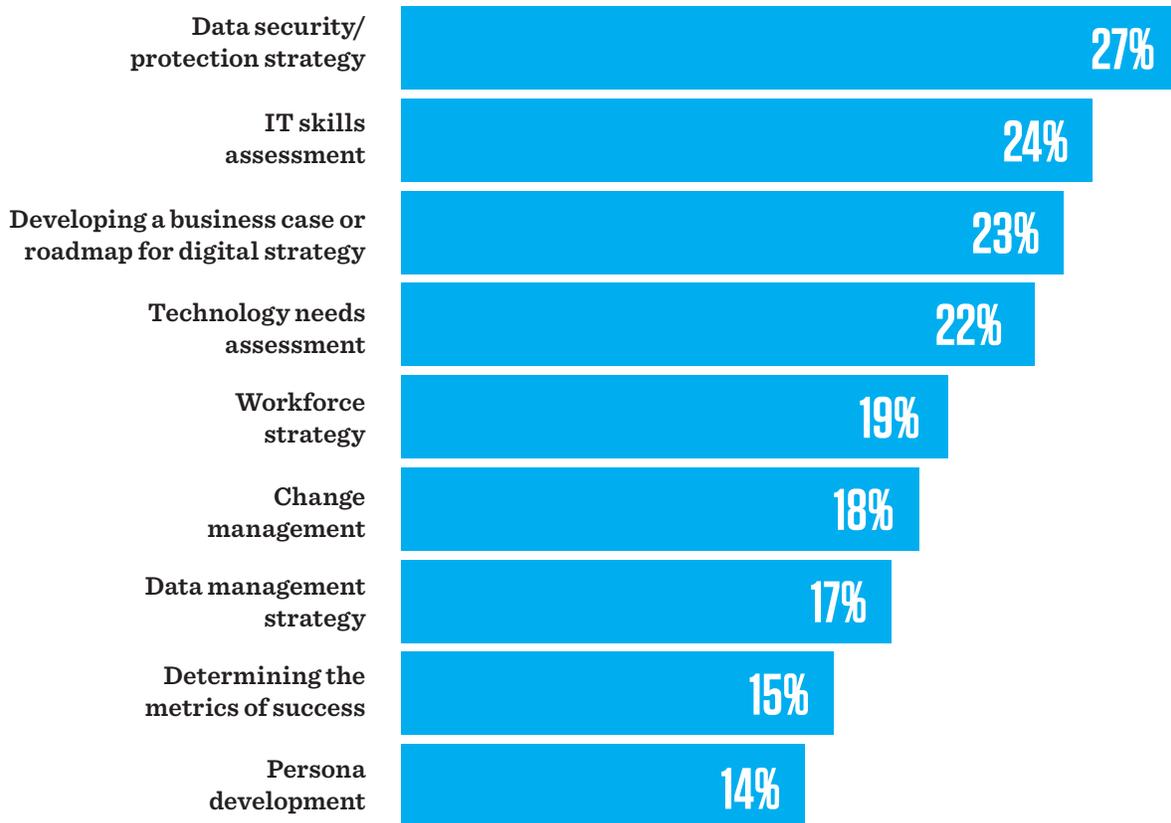**Augmented Reality/ Virtual Reality**

44%

Bots

Almost half (44%) of IT decision-makers say they're not interested in adding virtual reality or bots to their technology arsenal right now, but they may want to change their minds in a few years. A solid 29% of organizations are researching AR/VR, and 14% are already piloting; and the status is similar for bots. Twenty-six percent of organizations are researching while 13% are piloting bot technology. Today most people think virtual reality is geared toward gamers or the entertainment industry, but the technology is slowly moving to a wider audience. Engineers and manufacturers already use VR to experience their creations before they're built, and real estate agents are using VR to show people around properties. It also holds promise for training and recruitment where workers can simulate a problem and virtually correct it, and job candidates can virtually see what it's like to work at the company.

Adapting the Workforce to Digital is Slower than Adapting the Technology

In order to become a fully digital business, there are necessary steps and actions that organizations need to complete. The pace of technology change management runs slightly ahead of organizational change management for most organizations undergoing digital transformation. Over half of organizations have data/analytics, mobile technology and private cloud already implemented in their organization; and over half are piloting or researching AI, ML and IoT for use in the next 12 months. Yet, only 19% have fully implemented a workforce strategy. Organizations are still in the process of determining roles and responsibilities while adapting the culture of the organization to the new digital-first environment.

Which of the following steps has your organization completed on its journey to becoming a digital business?

Data security/ protection strategy	27%
IT skills assessment	24%
Developing a business case or roadmap for digital strategy	23%
Technology needs assessment	22%
Workforce strategy	19%
Change management	18%
Data management strategy	17%
Determining the metrics of success	15%
Persona development	14%

Conclusion

IT leaders are making steady and sequential progress to becoming digital-first organizations – though not at the same breakneck speed that the technologies themselves are proliferating. For many organizations, the foundational pieces are in place, and they're actively working on adopting newer technologies like AI and IoT. But successful digital transformation will also require equal attention to change management and workforce strategy for the entire organization. CIOs and top IT executives will play a central role on both fronts.

METHODOLOGY

IDG's 2018 Digital Business survey was conducted among the IDG audience via email promotions and social communities. The survey fielded online between October 10, 2017 and December 19, 2017 with the objective to gain a better understanding of how organizations are evolving to a digital business model in regards to how they are revising technology strategies, changing organizational structures and processes, and innovating to provide a unique customer experience. To be considered qualified respondents must work in an organization that has plans to adopt /or has already launched a "digital-first" approach.

Results are based on 628 qualified responses. Percentages on single-select questions may not sum to 100% due to rounding.

A broad range of industries are represented including high tech (16%), manufacturing (12%), financial services (12%), government/non-profit (10%), services (8%), education (8%), healthcare (7%), retail, wholesale & distribution (6%) and advertising/marketing/PR/media (5%).