Why Companies Fail at Digital Transformation: Clearing the Road to the Intelligent Enterprise

IDC MARKET SPOTLIGHT

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Introduction: The Emerging Role of the Digital Platform

Capturing the biggest possible share of the digital opportunity requires the generation of new, technology-enabled business models, such as data monetization, sharing economy, and platform-based revenue models. To drive this change, organizations are making massive investments — IDC forecasts that the worldwide spending on digital transformation (DX) will reach more than $1.2 trillion by the end of 2019.

Business models of the future require an integrated technology architecture that allows the automation of business processes to allocate more resources to innovation. This is driving the emergence of the "Intelligent Enterprise" — an organization with intelligent technologies embedded into all business processes. This automation of end-to-end business processes wouldn't be possible without a digital platform that enables the seamless flow of data across multiple systems and applications that might be distributed across on-premise, hosted, or public cloud.

In parallel, the trend to deliver "net new" digital products, services, and experiences is triggering the need to create entirely new business processes that have different data and integration demands. And this is growing at a breathtakingly fast pace. IDC believes that 500 million new apps will be created, equal to the number built over the past 40 years.

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Driving Agility to Excel in the Digital Economy

DX represents immense opportunities to business leaders, but also considerable challenges, as the ever-increasing requirements for digital operations, products, services, and experiences translate into a need to embed fluidity into all processes.
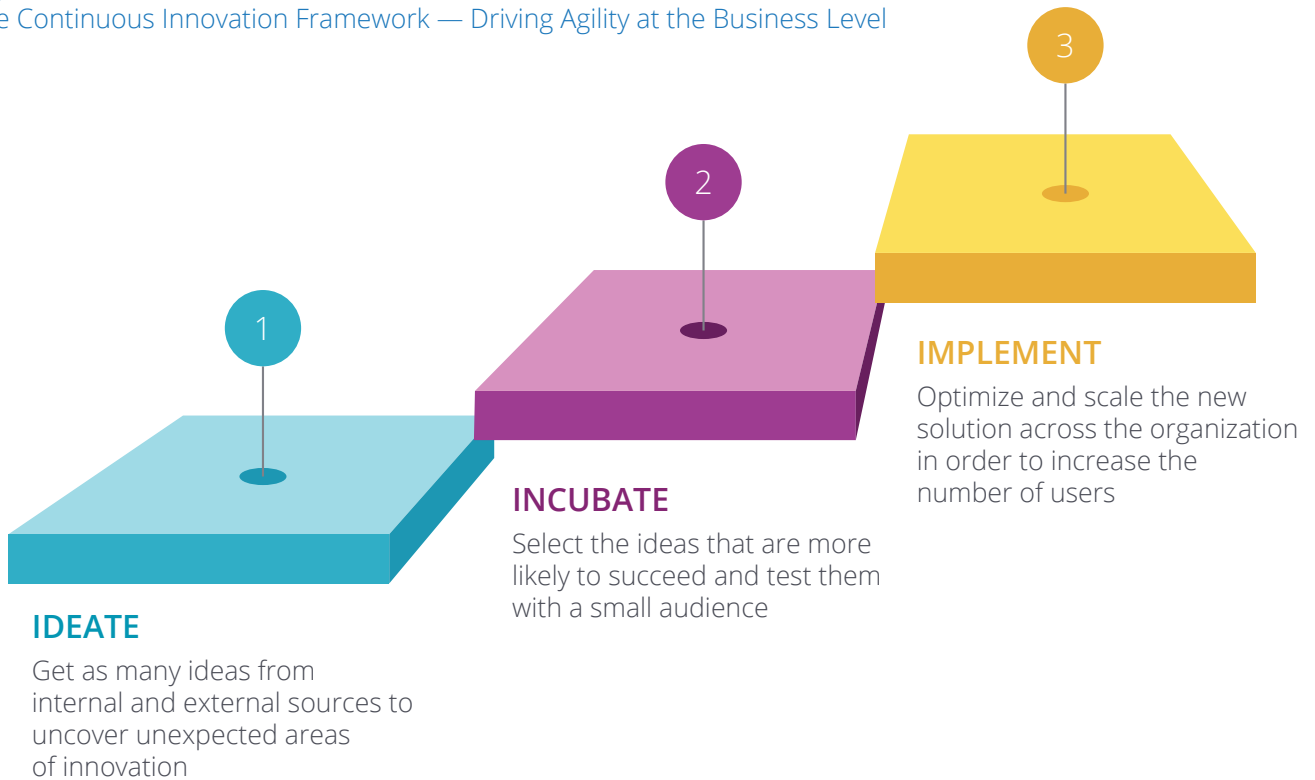
For most organizations, it is a race to create an agile mindset in the people for them to build on new core competencies that meet the demands of the ecosystem in a real-time fashion. Figure 1 provides an overview of the continuous innovation framework, which has become a standard for organizations across several industries that are looking to remain competitive by managing three distinct stages of the innovation process: ideate, incubate, and implement.

6 in 10

CEOs are under considerable pressure to deliver a successful digital transformation strategy

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Figure 1
The Continuous Innovation Framework — Driving Agility at the Business Level

IDEATE
Get as many ideas from internal and external sources to uncover unexpected areas of innovation

INCUBATE
Select the ideas that are more likely to succeed and test them with a small audience

IMPLEMENT
Optimize and scale the new solution across the organization in order to increase the number of users
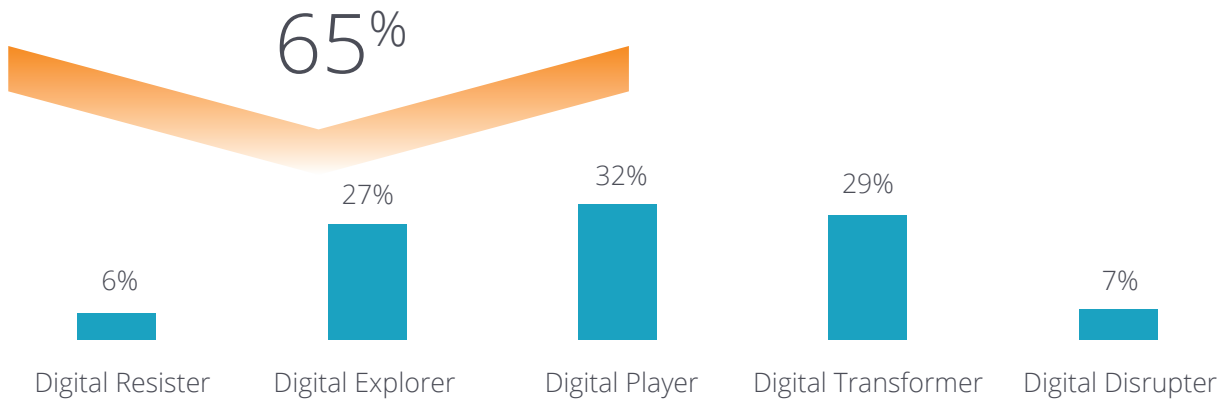
Source: IDC, 2018

IDC's research shows that there is a lot of activity in the first two stages (ideate and incubate), but the implementation stage is where organizations get stuck, since it is complex to integrate those innovative use cases rolled out at the edge with the core IT environment. While the pace of change accelerates at a breathtakingly fast pace, falling behind is not an option for IT organizations. This requires the ability to develop and deploy new applications (or apps) to the market in an agile manner and cloud has emerged as the preferred delivery model to deliver the necessary innovations. IDC believes that the digital platform highlighted previously needs to be able to provision these capabilities in a cloud-based delivery model.

Overview of the Digital Status of Organizations

IDC's research reveals that DX is at the top of the agenda for organizations across the world. In fact, there has been an increase of 43% in the DX spend between 2016 and 2018. Despite these efforts, our latest digital maturity benchmark shows that 65% of firms globally remain in the three lowest maturity levels. This implies that even though they are running digital projects and making progress, they haven't been sufficient to achieve their ultimate objective — to generate enterprisewide transformation across the five dimensions of DX. IDC calls this phenomenon the digital deadlock.

Figure 2
Worldwide Digital Transformation Maturity Benchmark

Source: IDC MaturityScape Benchmark: Digital Transformation Worldwide, 2017

Why Organizations Fail in Their Transformation Journey

There are several hurdles delaying digital transformation, including legacy culture, outdated process, and lack of financial resources. These obstacles pose a massive challenge for transforming a legacy organization into an intelligent enterprise, but they are present in any kind of transformation. However, IDC's research shows that lack of integration of digital projects is the number 1 challenge to deliver a successful digital transformation strategy.

Take, for example, a leading global manufacturer which set up a digital business unit separate from the rest of the traditional organization unit with the objective of delivering new revenue streams. It built an industry platform and established an ecosystem through partnerships with several technology vendors and acquired various start-ups. Its objective was to leverage this platform to sell new data-driven services to help its customers optimize their operation and gain end-to-end visibility of their industrial processes. However, there was a huge amount of skepticism from the business units, because of the standalone nature of this initiative. Hence, it was impossible to scale, the business did not deliver any results, and the CEO was ousted.

Moving From Islands of Innovation to an Integrated Strategy

As business leaders strive to transform their companies into intelligent enterprises, they struggle under a multitude of "islands of innovation," which impede them from scaling their digital efforts. The results from IDC's Global Digital Leader Survey show that lack of integration of their digital projects is the main challenge that stops business leaders from achieving their main goal — to transform their business model leveraging the power of technology.

In the early stages of maturity, the culture of digital experimentation and innovation in an organization is often being driven outside the realm of traditional IT — this leads to the creation of standalone digital projects that IDC calls islands of innovation. These islands are often created by the different business domains that develop new use cases. For example, it could be a predictive maintenance IoT use case in the after-sales services unit, or a mobile app/dynamic web application in marketing, or a cloud-based Hadoop environment for Big Data analysis in engineering.

Despite being standalone, islands of innovation often deliver significant business value and potentially deliver new revenue streams. However, it is very challenging to scale them across the organization (and integrate them to the core IT) because they are set up at the edge — outside the traditional IT environment. To avoid these islands of innovation, organizations should generate an integrated corporate strategy that has digital embedded and provides a single direction to all business domains.

IDC believes that generating an integrated enterprisewide technology architecture is the most important decision that CIOs will make in the next 10 years.
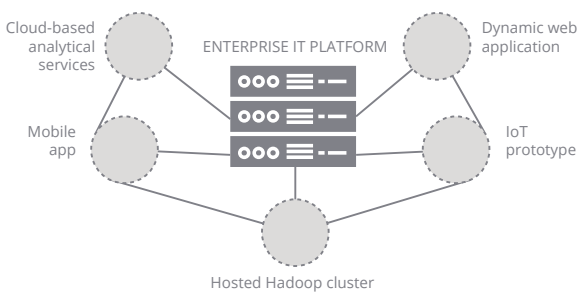
The number 1 challenge to enterprisewide transformation is the lack of integration of digital projects across the organization.

The Importance of an Integrated Technology Architecture Application Through to Platform

As it has been emphasized previously, IDC's research shows that the way an organization manages the data collected from internal and external sources is the main predictor of its capacity to digitally transform. The information stored within modern enterprises is growing approximately 40% every year, and this rapid expansion of the digital universe poses an incredible challenge for organizations. This highlights the need for an intelligent architecture that orchestrates data across a network of core and edge entities (machines, things, humans, apps, bots, data stores). Organizations need awareness of where all the data is and what it represents.

IDC's research shows that more than half (62%) of organizations worldwide have introduced new KPIs to measure the success of the DX strategy.

Has your organization introduced new KPIs related to its digital transformation?

|		
Yes		62%
No		38%

Source: IDC's Global DX Leaders Survey, May 2018 (n = 1,987)

Becoming an intelligent enterprise means accelerating the delivery of digital products, services, and experiences while aggressively modernizing the traditional IT environment toward an intelligent core. Therefore, the business models of the future will be underpinned by an integrated enterprisewide technology architecture where the systems of engagement are seamlessly connected to a modernized core IT, enabling the flow of data across the entire organization. This data is routed through APIs to the intelligent core, which can pull out insights that are injected back into your organization as improved internal processes (see Figure 3).

Figure 3
Integrated Enterprisewide Technology Architecture
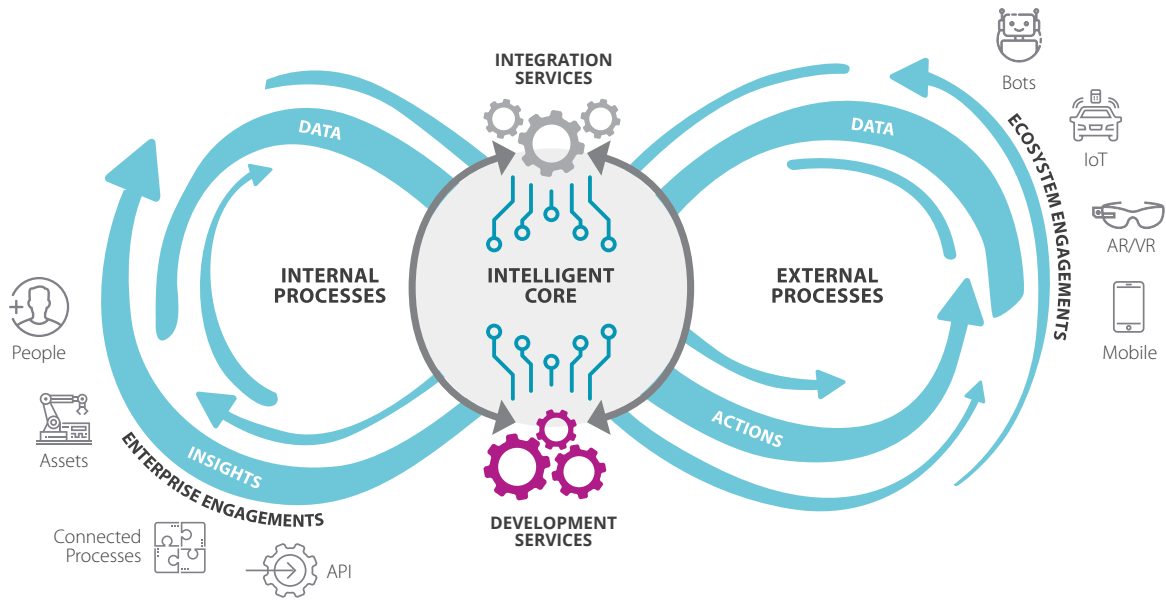
Source: IDC, 2018

The Role of the Digital Platform

The digital platform is the glue that connects every element of the technology architecture managing and enabling the seamless flow of data brought into your enterprise through connected assets, your employees, connected processes, and other streams. This platform is a flexible application infrastructure architecture that enables the orchestration and automation of end-to-end business processes as well as creating a launchpad for business innovation capabilities.

Business Innovation Capabilities

As previously highlighted, the appetite for net new digital products, services, and experiences is rapidly increasing. This requires the ability to develop and deploy new applications (or apps) to the market in an agile manner. And IT organizations that are unable to keep pace run the risk of becoming the bottleneck and increasing the digital backlog. IDC believes that a digital platform needs to provision these capabilities significantly quicker than in the past, and cloud is the primary delivery model to achieve this.

Data Management Capabilities

Data management relies on a deep understanding of all data including its definition, meaning, provenance, lineage, and relationships. Technical metadata needs to be augmented with business, relationship as well as the contextual metadata and needs to deliver three core data management competences:

○ Real-time insights: enable the seamless adaptation to the needs of the ecosystem by producing better actions and outcomes in real time as part of the day-to-day operations of the business by improving awareness of available data, augmentation of human decision making, and the automation of tasks and process decisions made by humans.

○ Data intelligence: help identify the most valuable as well as the most sensitive information for businesses by integrating data from many sources and determining if it is valuable, based on three criteria:

- Is it actionable?
- Does it improve the business outcome?
- Does it improve a customer experience?

○ Data governance: data catalogs, metadata discovery, data stewardship, data profiling, and self-service data access solutions are uncovering data supply chain intelligence, which can enable an enterprise data exchange that increases the level of data trust and delivers managed and secured data just in time for consumption.
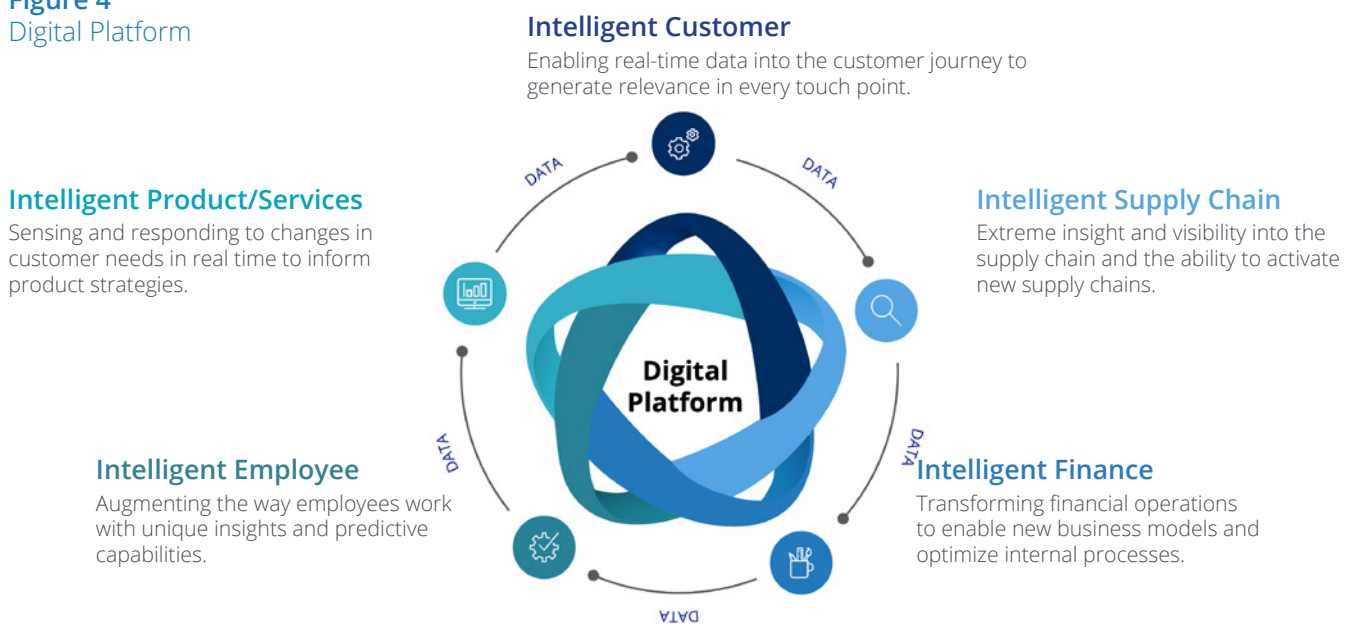
Integration and Extension Capabilities

Integration capabilities are critical to enabling the extension, integration, and development of key applications as part of the enterprise business process orchestration strategy. Integration capabilities are critical as they enable the unified view of data across multiple systems applications that might be distributed across on-premise, hosted, or public clouds. Thanks to the integration capabilities, the digital platform can be used to fast track integration and trigger new workflows/business processes leveraging applications that could be a mix of legacy on-premise and SaaS applications that used to require complex integration projects to achieve — custom extensions built on top of the core functionality such as custom reports, enhancements, workflows, or even interfaces that are not supported within the core functionality.

Business Innovation Capabilities

The intelligent business processes that will drive organizations toward the next phase of their digital transformation journey also require the development of innovation capabilities in an agile fashion. IDC believes that this requires a cloud-based application development and deployment environment that accelerates the delivery of new digital products, services, and experiences linked to those increasingly intelligent business processes. This includes the necessary developer and user experience services that will allow the creation of net new applications in a rapid fashion.

Figure 4
Digital Platform

Intelligent Customer
Enabling real-time data into the customer journey to generate relevance in every touch point.

Intelligent Product/Services
Sensing and responding to changes in customer needs in real time to inform product strategies.

Intelligent Supply Chain
Extreme insight and visibility into the supply chain and the ability to activate new supply chains.

Intelligent Employee
Augmenting the way employees work with unique insights and predictive capabilities.

Intelligent Finance
Transforming financial operations to enable new business models and optimize internal processes.

Source: IDC, 2018

The Role of the CIO in the Overall DX

While technology becomes a critical enabler for the business, the relevance of the chief information officers (CIOs) increases and they become one of the main drivers of DX across the organization.
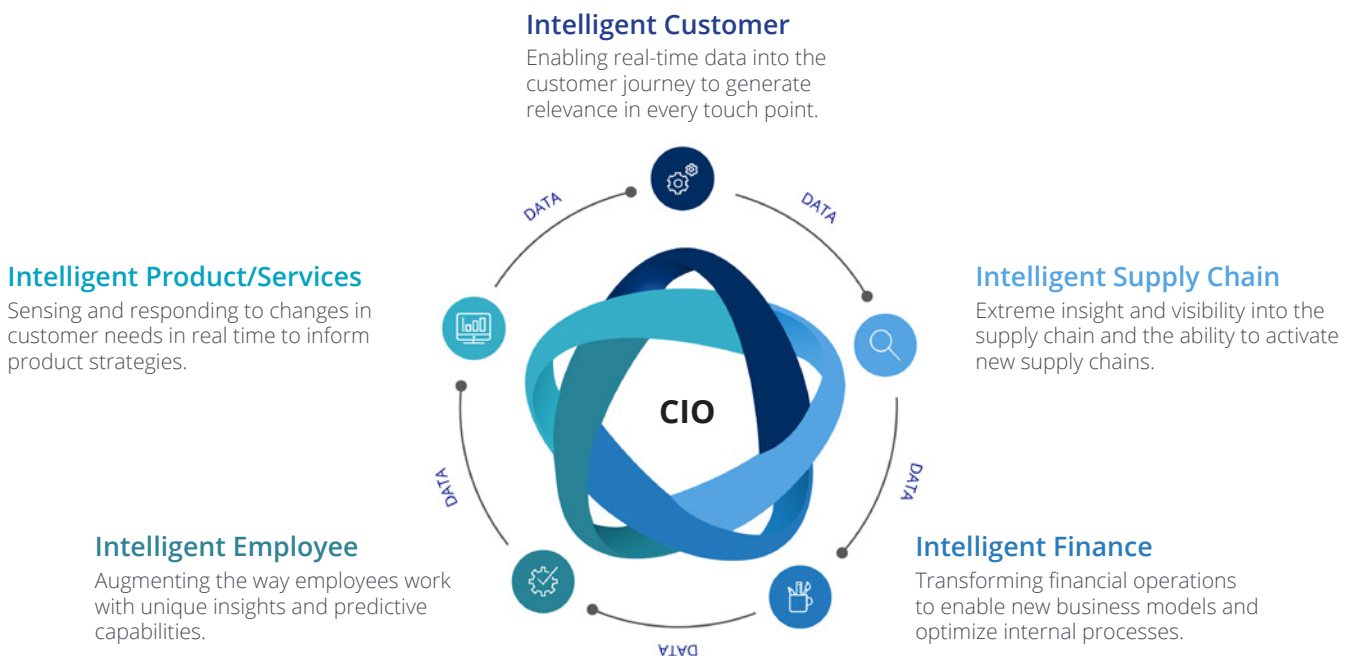
The Orchestrator

The five pathways to the intelligent enterprise are based on a foundation of data-driven, technologically advanced business processes. There is a need to link up the five pathways and drive better business outcomes across each pathway via the digital platform.

The Role of the CIO

Building a data management and platform strategy that supports the generation of business value:

◎ The CIO must enable and connect the digital journeys that leaders of the intelligent enterprise are embarking on, while avoiding data silos and islands of innovation.

◎ The CIO needs to orchestrate the key stakeholders, budgets, and the broader technology architecture for the intelligent enterprise.

Figure 5
The CIO as the Orchestrator of the Intelligent Enterprise

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Source: IDC, 2018

Conclusion

As highlighted in this document, the majority of organizations are in a digital deadlock. The lack of integration among the islands of innovation mentioned earlier between back-office and front-office initiatives is the number 1 challenge that organizations face in this respect. Above and beyond this integration challenge, accelerating out of this deadlock requires the creation of intelligent end-to-end processes that are increasingly data-driven in nature. Underlying this are three key capabilities:

- Integration — allowing the seamless flow of data across all systems, enterprise applications, and digital apps that are part of the technology architecture

- Extension — building out new workflows, templates, and add-ons to existing applications that enable these new business processes

- Business innovation — the ability to create net new applications in an agile fashion

IDC believes that it is critical for the IT organization (and the CIO specifically) to orchestrate these capabilities via the digital platform.

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