BREAKING THE DEADLOCK AND ACCELERATING DIGITAL TRANSFORMATION

An IDC Whitepaper Sponsored by GBM

EXECUTIVE SUMMARY

The global digital economy is at a tipping point. IDC estimates that between 2018 and 2022, global IT-related spending on digital transformation will touch $7.5 trillion. Transformation is spreading rapidly through most industries as organizations in these industries are adapting to changes in their ecosystem by leveraging digital technologies to create digitally-enhanced products and services and build customer-centric business models.

Governments and other public sector organizations are striving to redesign citizen, resident and tourist experiences as part of their smart city initiatives and transforming sectors such as transportation, public safety, and utilities. Banks and other financial services organizations are leveraging digital technologies to transform customer engagement and improve back-office process efficiencies through increased automation. Similar examples can be found in other industries as well: from oil and gas and healthcare, to retail and telecommunications. Digital transformation is truly changing the way whole industries operate.

Broadly, the key outcomes that organizations across industries are looking to achieve from digital transformation are the following: achieving greater agility, improving operational efficiency, transforming customer experiences, and developing new revenue streams.

However, as organizations move forward on their digital transformation journeys, their progress is often hindered by barriers. Due to these barriers, they are unable to move beyond ad hoc initiatives and accelerate organization-wide digital transformation. Globally, nearly 60% of enterprises are trapped in this 'digital deadlock'. Many of these barriers are rooted in the history and legacy of the organizations – namely, infrastructure that is not geared to support the scale that they seek; data that is trapped in siloes, remains outside the reach of analytic tools and does not provide real business value; and outdated and inefficient business processes that are adversely impacting customer experience and impeding scalability.

To address these concerns, organizations should look to revitalize their digital transformation by defining specific strategies. They should begin by developing technology infrastructure that is agile, scalable, secure, cost-efficient, available as-a-service, and built on a cloud foundation. They should seek to develop an information architecture that can cope with ever-growing volumes of hybrid data - one that brings together structured and unstructured data, enables predictive and AI-enabled prescriptive analytics, and delivers actionable insights that provide business value. Finally, in order to achieve business agility and transform customer experience, organizations should seek to re-engineer their business processes, efficiently automate processes, and build "Cloud-ready" business applications. Adoption of the latest technologies such as the Internet of Things (IoT), AI and Cloud will be crucial to this strategy. Only then can they break the "digital deadlock", unlock the value of true digital transformation, and accelerate organization-wide transformation.

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IDC
ANALYZE THE FUTURE

LACK OF AGILE, SECURE TECHNOLOGY INFRASTRUCTURE

IDC expects that by 2022, more than 60% of the global economy will be digitized. Digital transformation is now a key priority for many organizations who view it as a major competitive differentiator. The key outcomes that they seek from digital transformation are many and varied. Organizations are looking to achieve **greater agility,** improve **operational efficiency**, create better **customer experiences**, and generate **new revenue streams**.

Digital transformation is spreading rapidly in the Middle East too. According to IDC's CIO Survey 2018, 53% of large enterprises in the Gulf countries (excluding Saudi Arabia) are currently undergoing digital transformation, while 19% are about to start and another 25% are developing plans for digital transformation.

FIGURE 1

Is your organization undergoing or about to undergo digital transformation in 2018?

Source: IDC, Middle East CIO Survey 2018

53%	25%	19%	14%
We're currently **underway**	We're **planning** our DX efforts	We're about to **start**	We have **no** DX plans

Unlike in other parts of the world, in this region, public sector organizations are leading the way, driven by federal and state-level transformation strategies. Organizations in the banking, retail, healthcare, telecommunications, and oil and gas industries have also initiated digital transformation initiatives.

By and large, organizations in this region are prioritising two key functional areas for transformation: operations and customer management. In these areas, each industry has identified specific functions for transformation (Figure 2).

FIGURE 2

DRIVERS FOR DIGITAL TRANSFORMATION IN VARIOUS INDUSTRIES

Customer Experience Leads the Way

GOVERNMENT
- Improving citizen/resident experiences of government services
- Developing smart cities
- Driving process integration and automation (utilizing technologies like AI, and blockchain)

RETAIL
- Improving customer experience
- Rationalizing and automating operations
- Enabling eCommerce business

BANKING
- Driving consolidation and rationalization projects
- Enhancing omni-channel customer experience
- Enabling branch and back-office automation

HEALTHCARE
- Enabling healthcare information integration
- Improving patient experience
- Automating operational processes

TELECOMMUNICATIONS
- Driving network transformation (with technologies such as SDN and NFV)
- Enabling 5G roll out
- Improving customer engagement
- Expanding new ICT and digital businesses

OIL & GAS
- Enabling operational automation and efficiency
- Driving business value through the monetization of data

TECHNOLOGICAL UNDERPINNINGS OF DIGITAL TRANSFORMATION

Rapid advances in technology over the past decade have enabled digital transformation. According to IDC, the global ICT industry is currently in the midst of a paradigm shift that occurs once in several decades. This shift is led by what IDC calls the **3rd Platform** – a group of technologies including cloud, mobile, big data and analytics, and social, that emerged in the mid-2000s. In recent years, the 3rd Platform has further expanded with the addition of a slew of disruptive technologies such as AI/cognitive systems, the Internet of Things (IoT), augmented and virtual reality, blockchain, 3D printing, robotics, blockchain and others, which IDC calls Innovation Accelerators. The 3rd platform and **Innovation Accelerators** are enabling and accelerating digital transformation by creating an unprecedented number of use cases across industries.

IDC'S 3RD PLATFORM AND INNOVATION ACCELERATORS
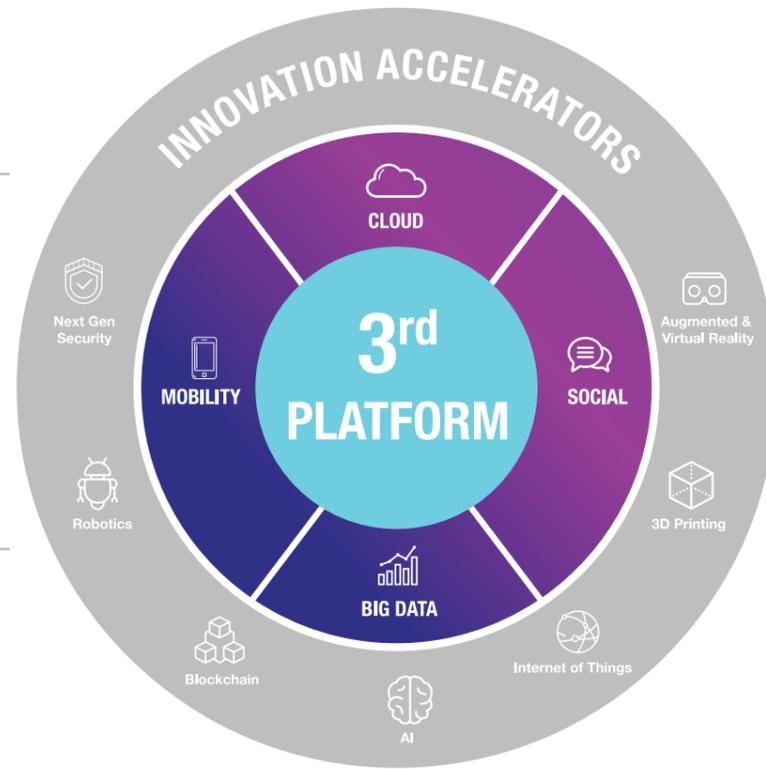
As the 3rd platform unfolds, we are witnessing the rapid shift of technology adoption away from older or 2nd platform technologies. In the data center, there is a shift away from traditional hardware-driven technologies towards software-defined alternatives, which improve infrastructure efficiency. According to the IDC CIO Survey 2019, this trend will continue for the next four years. 23% of large organizations in the Gulf countries (excluding Saudi Arabia) are currently using software-defined infrastructure in the datacenter, while 35% are planning to adopt it in 2019, and a further 21% will adopt by 2020. There is a similar trend in the use of enterprise networks - organizations are shifting towards software-defined networks that enable greater agility.

Cloud is becoming foundational for digital transformation as organizations in the region are beginning to appreciate its core benefits – it provides the capacity, functional capability and agility that digital initiatives require. Cloud adoption continues to grow in the region – across both private and public clouds. Increasingly, hybrid cloud models, that combine on-premise, private and public cloud capabilities, are emerging as the standard for enterprises in the region. 65% of large organizations in the Gulf Countries (excluding Saudi Arabia) have either already adopted hybrid cloud or are planning to do so by 2020, according to the IDC CIO Survey 2019. Software-defined infrastructure will be at the center of most hybrid cloud deployments.

The growing adoption and use of Innovation Accelerators is leading to rapid growth in the number of innovative industry use cases. The Internet of Things (IoT) has become mainstream as organizations in several sectors look to add an increasing number of "things" such as sensors and cameras to their networks to enable use cases such as surveillance, preventive maintenance, asset management and others.

In the Gulf countries (excluding Saudi Arabia), 75% of large organizations have implemented or are planning to implement IoT in their business operations by 2020, according to the IDC 2019 CIO survey. There is growing interest in AI and cognitive systems. Many organizations are now moving forward from pilot projects to their use in production. Use cases range from robotic process automation (RPA) to AI-based chatbots, and machine learning – enabled customer analytics. 67% of large organizations say they have implemented or are planning to implement AI/cognitive technologies by 2020. Blockchain adoption is still in its early stages; however, there is considerable demand from the public sector and financial services industries to enable various uses cases that support security, compliance and transaction automation.

DIGITAL DEADLOCK SETS IN

Although most organizations are undergoing digital transformation, they are not all at the same level of maturity. While many organizations are able to execute relatively smaller digital projects within departmental or functional silos, a large proportion of them are unable to move beyond these ad hoc digital projects and achieve scale. They are stuck in a "digital deadlock", unable to accelerate their digital transformation.

"Digital deadlock" is a common occurrence. IDC estimates that, globally, nearly 60% of organizations are stuck in the lower stages of digital maturity, mainly in the "digital explorer" and "digital player" stages, unable to progress towards becoming "digital transformers" or "digital disruptors". Majority of organizations in the Gulf display similar behavior. What are the challenges that create this scenario? How can they be addressed?
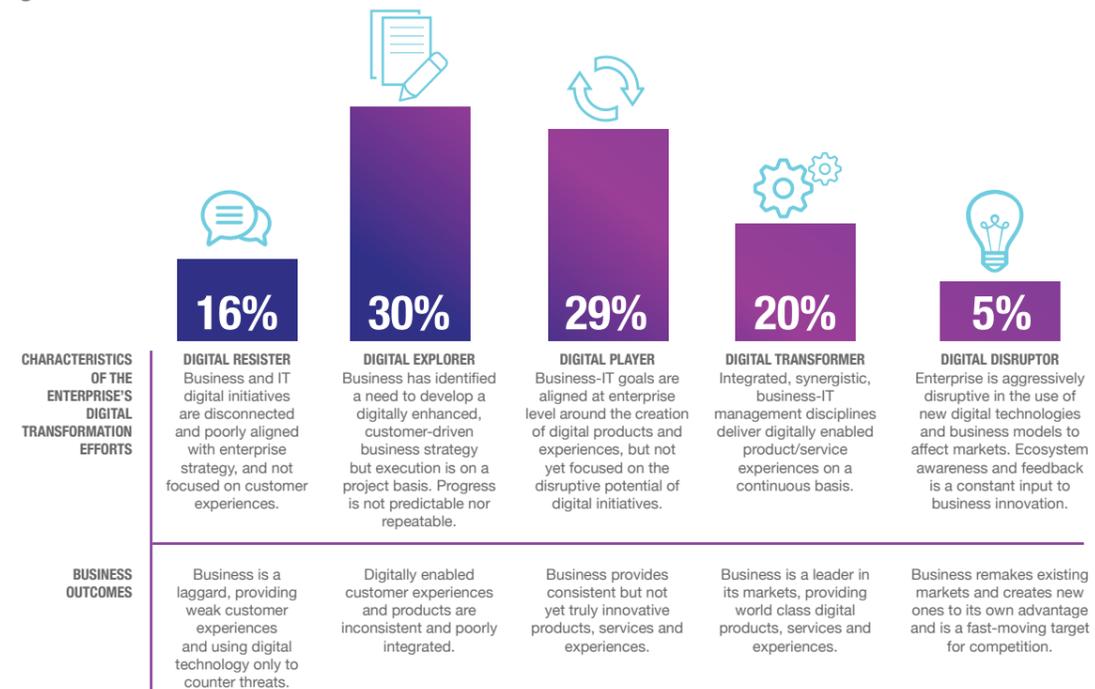
Source:IDC

nearly
60%

OF ORGANISATIONS STUCK IN A DEADLOCK

FIGURE 4

Majority of Organizations are Unable to Move Beyond Ad Hoc Initiatives and Accelerate Digital Transformation

CHARACTERISTICS OF THE ENTERPRISE'S DIGITAL TRANSFORMATION EFFORTS	**16%** DIGITAL RESISTER Business and IT digital initiatives are disconnected and poorly aligned with enterprise strategy, and not focused on customer experiences.	**30%** DIGITAL EXPLORER Business has identified a need to develop a digitally enhanced, customer-driven business strategy but execution is on a project basis. Progress is not predictable nor repeatable.	**29%** DIGITAL PLAYER Business-IT goals are aligned at enterprise level around the creation of digital products and experiences, but not yet focused on the disruptive potential of digital initiatives.	**20%** DIGITAL TRANSFORMER Integrated, synergistic, business-IT management disciplines deliver digitally enabled product/service experiences on a continuous basis.	**5%** DIGITAL DISRUPTOR Enterprise is aggressively disruptive in the use of new digital technologies and business models to affect markets. Ecosystem awareness and feedback is a constant input to business innovation.
BUSINESS OUTCOMES	Business is a laggard, providing weak customer experiences and using digital technology only to counter threats.	Digitally enabled customer experiences and products are inconsistent and poorly integrated.	Business provides consistent but not yet truly innovative products, services and experiences.	Business is a leader in its markets, providing world class digital products, services and experiences.	Business remakes existing markets and creates new ones to its own advantage and is a fast-moving target for competition.

Source: IDC's Digital Transformation Benchmark Survey

KEY TECHNOLOGY BARRIERS THAT LEAD TO A DIGITAL DEADLOCK

There are three key barriers that force organizations to be stuck in a "digital deadlock" and slow down their organization-wide digital transformation:

FIGURE 5

Key Technology Barriers that lead to Digital Deadlock

Lack of agile, secure technology infrastructure leave organizations unable to scale

Information silos prevent organizations from effectively utilizing their data

Manual, misaligned, and outdated business processes result in unpredictable outcomes

Source: IDC, 2019

LACK OF AN AGILE, SCALABLE AND SECURE INFRASTRUCTURE

Scalability of infrastructure is critical to the success of digital transformation initiatives. Outdated datacenter infrastructure, slow networks, and legacy service delivery models are impeding the ability of organizations to scale digital transformation. Without scalability, organizations will not be able to build, test, and rollout or rollback products and services quickly enough, or provide consistent, individualized experiences of high quality to a large number of customers. Being able to scale digital transformation provides significant competitive advantage, and infrastructure that does not support this, would significantly hamper organizations.

Scalability has to be complemented by security. As organizations offer more digitally-enhanced products and services, "digital trust" becomes critical for customers. CIOs in the region are well-aware of this - security continues to be among their top concerns. Most organizations are ill-equipped to deal with the ever-expanding threat landscape and growing regulatory compliance needs. Many CIOs say that their current security program is too reactive. As a result, many organizations are now considering implementing security architectures that can predict breaches. As managing security becomes increasingly difficult, organizations are looking to avail the services of external security service providers. Managed security services agreements are gaining prominence in the region.

INFORMATION SILOS

Organizations now have access to unprecedented volumes of a wide variety of data. With the proliferation of mobile devices, explosion in the number of applications, and the increasing adoption of IoT, the technology footprint is expanding rapidly, thereby creating substantial data challenges. Beyond this, there is increasing frustration among the business users with the lack of availability of meaningful insights from the data. Many organizations lack a cohesive data management strategy. Data still exists in silos; new types of unstructured data aren't accounted for or managed properly, and the technology architecture does not support new data-centric business models.

Ultimately, the information silos, and the lack of a cohesive information management strategy will inhibit organizations' ability to derive value from data.

OUTDATED, HIGHLY MANUAL BUSINESS PROCESSES

Many organizations are grappling with outdated and sub-optimal business processes. Automation of processes has been underway for a few years; however, emerging technologies are making even greater automation possible, thereby enabling greater agility and operational efficiency. 49% of CIOs in the Gulf (excluding Saudi Arabia) say that the achievement of cost efficiency by streamlining processes is a key business priority, according to the IDC CIO Survey 2019. The ever-rising bar for customer experience necessitates more rapid transformation of business processes. Most organizations in the region that are struggling with customer experience transformation are unable to accelerate due to their inability to bridge process siloes, and re-engineer business processes

BREAKING THE DIGITAL DEADLOCK AND ACCELERATING DIGITAL TRANSFORMATION

Organizations that are stuck in the digital deadlock will need to develop strategies to break out of it and propel the organization towards the end goal of becoming digitally transformed. Below are three key strategies to pursue:

1. Develop a digital infrastructure that is scalable, agile and secure

Organizations that have progressed to becoming "digital transformers" and "digital disruptors" are able to develop digitally-enhanced products and services and digitally scale customer engagements faster than their competition. A technology infrastructure that is scalable, agile and secure underpins this capability.

Such an agile infrastructure that enables digital transformation should have the following features:

- **Scalable:** The infrastructure needs to be able to scale with business needs. As organizations scale their products, services, relationships and customer experiences, they will need an infrastructure that is flexible enough to support business needs not just today but several years into the future.

- **Cost Efficient:** Organizations in the region are striving to drive "more with the same or less" IT spending as before. Therefore, it's important that the infrastructure is cost efficient.

- **Easy to deploy and maintain:** The IT department should be able to easily deploy and affordably maintain the infrastructure.

- **Highly secure and resilient:** The infrastructure should be highly secure, from the datacenter core to the end points at the edge to the cloud, capable of preventing breaches with the help of predictive features. In the event of a breach, it should be able to recover quickly without causing significant disruption to the business.

- **Available " As-A-Service":** Adoption of "as-a-service" models such as managed services and cloud (private, public or hybrid clouds) will help organizations shift from capital expenditure (CAPEX) to operational expenditure (OPEX)-based models that are governed by service level agreements (SLAs).

FIGURE 6

KEY FEATURES OF AN AGILE DIGITAL INFRASTRUCTURE

SCALABLE | COST EFFICIENT | EASY TO DEPLOY AND MAINTAIN | HIGHLY SECURE AND RESILIENT | AVAILABLE "AS-A-SERVICE"

2. Develop a robust information architecture

It is critical that organizations develop an information architecture that enables visibility into all the data within the organization, supports the integration of structured and unstructured data, enables real-time decision making and provides a unified and trusted view of data. Organizations need to shift from a "Data-Driven" approach to an "Insight-Driven" and real-time AI-backed decision-making business model.

A robust information architecture that supports digital transformation should have the following features:

- **Efficient management of volumes of data:** The information architecture should be able to collect, store, secure, process and manage significant volumes of data in near real-time. Organizations are increasingly creating substantial amounts of unstructured data, namely video, voice and text data, in addition to structured data. The information architecture should be able to manage this hybrid data model with emphasis on the 80% of unstructured data that is becoming more relevant to the decision making process.

- **Unified view of data:** Siloes of information on products, services and customers can severely impede business agility and undermine efforts to strengthen customer engagement. Creating a "unified view of data" will provide opportunities to extract greater insights, provide individualized products or services to customers, and improve market and business competitiveness while increasing customer satisfaction.

- **Enables data monetization:** The information strategy should be able to provide opportunities for monetization of data by creating new data-driven products and insights that offer monetary value for customers and partners.

- **Easy visualization and dissemination of information:** Data without the means to view and interpret it, and without ready access to those who need it, will not create much value. As the need for operational analytics spreads across various levels of the organization, from middle managers to front-line staff, user-friendly visualization of real-time and near real-time data and analytics supported by dashboards on mobile devices will become essential.

- **Leveraging AI:** As organizations aim to become disruptors in their own markets, their information architecture should enable them to not only reach a descriptive data analysis, but to apply predictive, and prescriptive insight based business models leveraging AI and machine learning technologies.

FIGURE 7

KEY FEATURES OF A ROBUST INFORMATION ARCHITECTURE
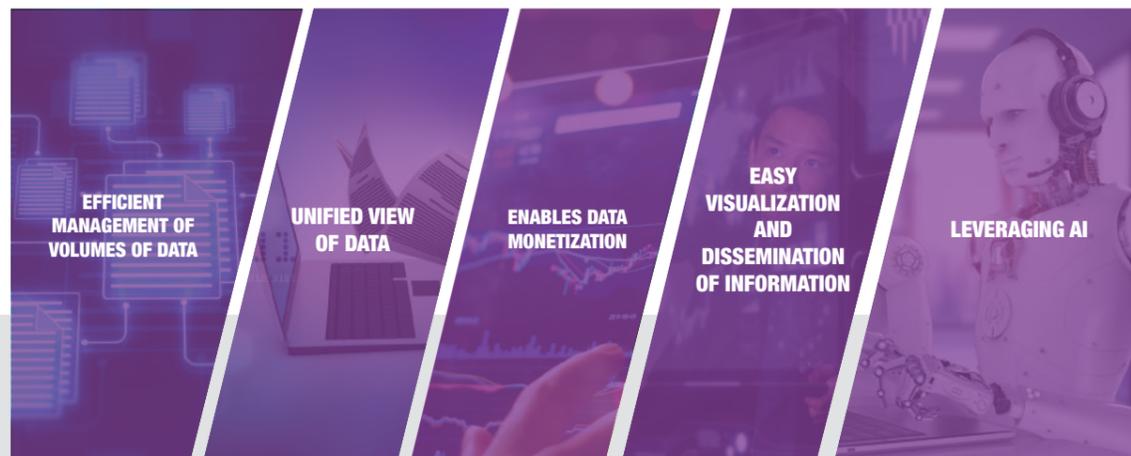
3. Digitally Transformed Business Processes

Digitally transformed organizations move quickly, and at a large scale. Manual, outdated, and suboptimal processes impede business agility.

The business process transformation strategy of organizations that aspire to become "digital transformers" and "digital disruptors" should have the following features:

- **Optimized Processes:** Applying methods such as Design Thinking and Business Design, many of the legacy processes can be re-engineered to account for the changes in the business environment. Enabling the legacy processes to support the digital transformation journey.

- **Automated Processes:** Substantial efficiencies can be achieved by automating mundane, repetitive, structured tasks and activities in the back-office in functions such as finance, HR and administration by leveraging emerging technologies such as Robotic Process Automation (RPA). Driving cost savings and operational efficiencies leveraging such technologies should be a key part of the transformation strategy.

- **Intelligent Enterprise Applications**: Organizations will need to modernize older enterprise applications such as ERP, CRM, HCM and others and leverage the industry and process best practices offered by the latest application suites. that have embedded AI capabilities and data-driven insights

- **Multi-Cloud Ready:** The applications portfolio needs to be cloud-ready to be able to take advantage of hybrid cloud environments. The applications also need to be developed or migrated to a microservices architecture using hyper-agile development methodologies that support easy deployment and integration with external applications.

- **Customer Experience Centric:** With the customer at the heart of the business decision of both front-office and back-office processes. Deployment of new customer engagement applications as well as re-design of existing processes will be required. Customer experience management functions that map with customer journeys and straddle across all customer channels.
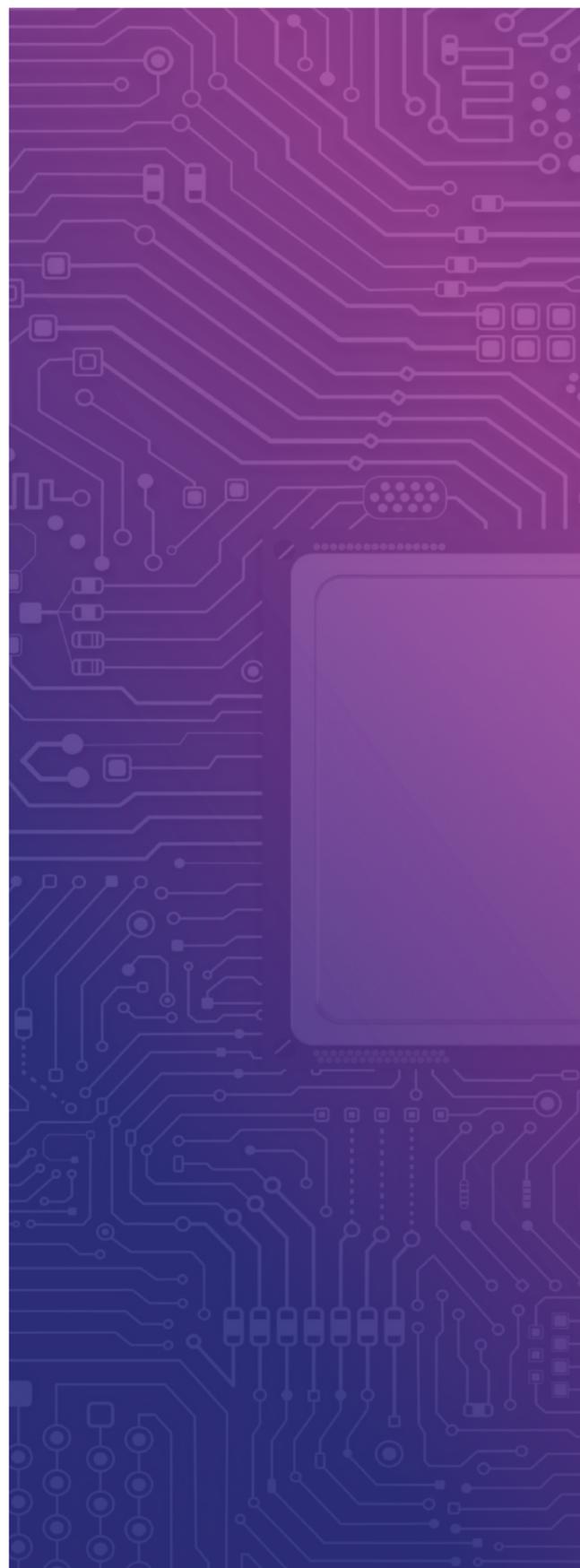
FIGURE 8

KEY FEATURES OF BUSINESS PROCESS TRANSFORMATION STRATEGY

ABOUT GBM

With more than 28 years of experience, 7 offices and over 1500 employees across the region - Gulf Business Machines (GBM) is an end-to-end digital solutions provider, offering a broad portfolio, including digital infrastructure, digital business solutions, security and services. GBM has nurtured deep partnerships with some of the world's leading technology companies and have invested in skills and resources to assist their customers on their path towards digital transformation.

GBM offers three pathways that enable organizations to break the "digital deadlock" and accelerate their digital transformation. Each pathway represents a strategy that organizations can employ, in partnership with GBM, to breakdown the hurdles that create the digital deadlock. Each of these pathways mirror the challenges that organizations experience in their journey towards true digital transformation:

• GBM designs, builds, manages, and secures digital infrastructure to help organizations accelerate their digital transformation, thereby helping customers move towards infrastructure that is agile, scalable and secure.
• GBM enables organizations transform data into actionable insights and business value, breaking down information silos that hamper the development of a single, accurate view of data, leveraging the latest analytics and AI/machine learning technologies.
• GBM enables organizations to optimize, automate, and redesign business processes, and adopt advanced "cloud-ready" enterprise applications, thereby assisting customers to transform business processes that are repeatable, optimized and capable of delivering excellent customer service.

Each pathway is supported by core technology elements that GBM brings to bear in assisting their clients. In enabling infrastructure, GBM offers hybrid cloud, network transformation, security, and next-generation data center solutions. GBM enables data transformation by supporting hybrid data management, and insights-driven business models by leveraging AI/Cognitive technologies. Finally, GBM assists in business process transformation by providing design thinking and process re-engineering solutions, advanced "cloud-ready" applications and efficient automation. GBM partners with some of the world's leading technology providers to assist their clients in navigating their digital transformation journey.

ABOUT IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

CONCLUSION

As organizations strive to break out of the "digital deadlock" and accelerate their digital transformation, they need to overcome significant organizational and technology barriers. It will become necessary to develop an agile, scalable and secure technology infrastructure, build a robust information architecture, and re-design and efficiently automate business processes. While doing so, organizations will need to identify and work with technology partners that not only possess suitable technology capabilities and skills but also have sufficient understanding of their industry and business. Such partners should also be able to engage with them over the longer-term and throughout the digital transformation journey.

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