



Enabling End-to-End Digital Transformation with Micro Focus

An IDC White Paper, Sponsored by Micro Focus

Authors: Melinda-Carol Ballou, Stephen Elliot, Christopher Kissel, Dan Vesset



Sponsored by: Micro Focus

Authors:

Melinda-Carol Ballou
 Stephen Elliot
 Christopher Kissel
 Dan Vesset

March 2020

Enabling End-to-End Digital Transformation with Micro Focus

IN THIS WHITE PAPER

Digital transformation (DX) is essential for businesses that want to remain relevant in a constantly evolving and competitive landscape; however, the complexity, velocity, cost, and dynamism of digital innovation can be overwhelming. In this white paper, we recommend that businesses evaluate and adopt a strategic and methodical approach that coordinates four key pillars of DX: Enterprise DevOps; Hybrid IT Management; Security, Risk, and Governance; and Predictive Analytics. In addition, we stress that organizations must balance speed, agility, risk, quality, and business value for digital transformation initiatives, which benefit when these elements work synergistically and are linked with artificial intelligence (AI)/machine learning (ML) across areas, including back-end systems of record (SoRs). Finally, we analyze the opportunities and struggles that organizations encounter as they evolve in terms of digital innovation and describe process, organizational, and automation strategies that can support success, including “smart” digital transformation execution and the Micro Focus suite of technology and capabilities.

Situation Overview

The Digital Transformation Imperative

IDC interviews hundreds and surveys tens of thousands of IT and business decision makers annually. While we occasionally hear from individuals who view digital transformation as just another buzzword, most enterprises see it as an essential business mandate — one that will help them remain relevant in a constantly evolving and competitive landscape.

IDC expects the Global DataSphere — all data created and consumed worldwide — to grow at a 2018–2023 CAGR of 25.8%, resulting in 102.6ZB (that’s 1 trillion gigabytes) of new data in 2023, compared with 32.6ZB in 2018.

IDC predicts that 65% of organizations will aggressively modernize systems of record with extensive technology platform investments through 2023.

IDC also forecasts that by 2023, digital transformation spending will grow to over 50% of all IT investment, up from 36% today.

At IDC, we define digital transformation as a continuous process by which organizations adapt to disruptive changes in the market by leveraging a range of competencies, including innovative business models, products, and services that blend the digital and physical to improve both business and customer experiences. This definition helps us move beyond the hype so that we can focus on fully understanding the capabilities needed for success.

By homing in on enabling technologies, IDC is underscoring how urgent it is for decision makers to start (or continue with) digital transformation initiatives. We find that most enterprises take about three to five years to reach a point of substantial transformation. And we predict that those that ignore DX risk being left behind, unable to address business and customer needs in today's continually evolving digital environment. Digital innovation is vital to drive and enable competitive position.

At its most fundamental, the challenge involves integrating systems, processes, and people in new ways while modernizing the core to provide an agile and intelligence-infused backbone that can help redefine and create new business experiences. Indeed, IDC predicts that 65% of organizations will aggressively modernize systems of record with extensive technology platform investments through 2023. That's because infrastructure, security technologies, databases, middleware, and applications must be updated to reduce technical debts, improve risk postures and, most importantly, deliver the agility to drive the scale for digital transformation.

IDC also forecasts that by 2023, digital transformation spending will grow to over 50% of all IT investment, up from 36% today, with the largest growth in data intelligence and predictive analytics as companies create information-based competitive advantages; security is also a key focus for these organizations. These growth rates represent opportunities where traditional IT investments are force multiplied into digital capabilities that leverage existing traditional IT hardware, software, and services — creating process capabilities at scale for the digital economy.

Moving forward with digital transformation requires following a blueprint that encompasses not only technology but also culture and leadership; lasting change comes from transforming all aspects of the organization. However, in this white paper, we will focus exclusively on the key capabilities of the technology platform that are needed to enable critical digital transformation and its ongoing management.

By 2025, 80% of digital leaders will devise and differentiate end-customer value measures from their platform participation, including an estimate of the ecosystem multiplier effects.

A Lens for Digital Transformation

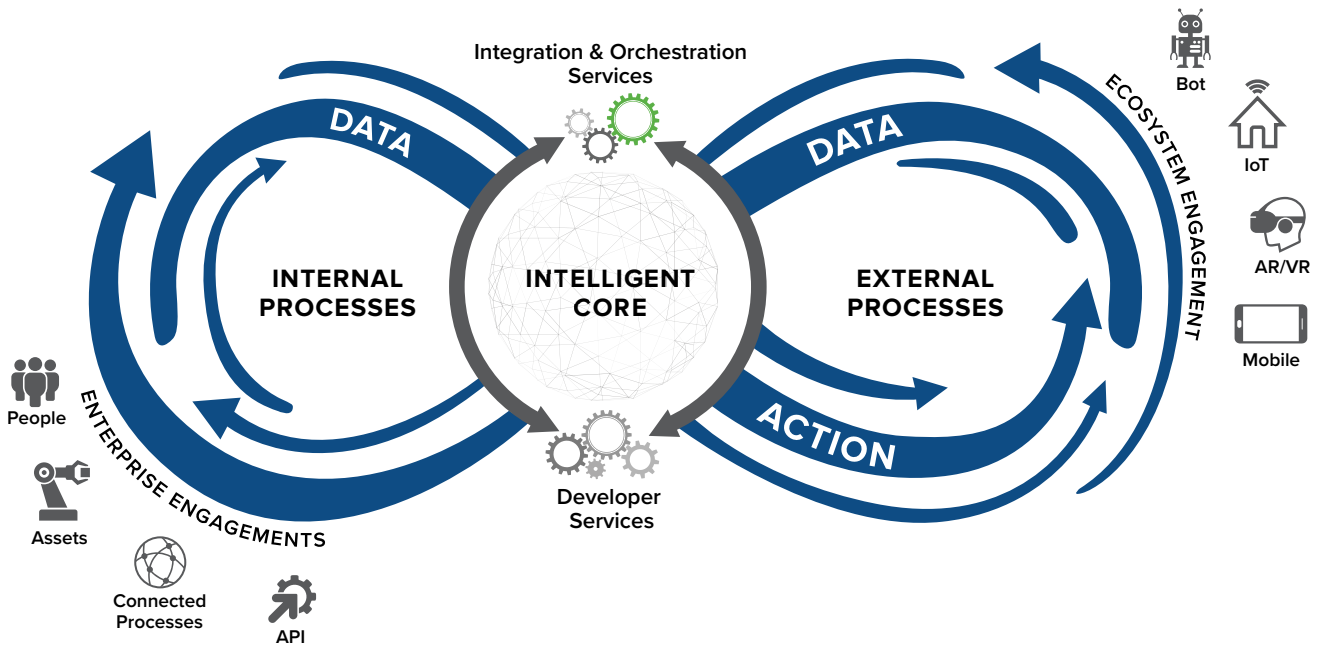
IDC defines a digital transformation platform as a transition technology and conceptual architecture that accelerates digital transformation initiatives for the enterprise. This can enable the rapid creation of externally facing products, services, and experiences while modernizing the internal IT environment toward an intelligent core that turns data into actions. Users of this approach can leverage existing technologies without needing to “rip and replace.” A digital transformation platform needs to balance agility, speed, risk, business value, and quality, along with access to back-end systems of record.

Digital leaders are creating competitive advantage by leveraging economies of intelligence through their platform ecosystems, and our research shows that by 2025, 80% of digital leaders will devise and differentiate end-customer value measures from their platform participation, including an estimate of the ecosystem multiplier effects. These leaders are defining their relevance through the strength of information flows and number of connections across their customer and partner networks.

We depict a digital transformation platform using the conceptual architecture shown in Figure 1. Using the infinity loop is intentional; it helps us rethink the boundaries imposed by traditional technology stacks and highlights the need for integration.

FIGURE 1

IDC’s Digital Transformation Platform



Source: IDC, 2020

The sections that follow describe four key axioms of a digital transformation platform: Enterprise DevOps; Hybrid IT Management; Security, Risk, and Governance; and Predictive Analytics. These elements can work synergistically to allow organizations to take a holistic, methodical approach to digital transformation.

The Micro Focus Advantage: Addressing Four Core Pillars of Digital Transformation

Enterprise DevOps — Accelerate Secure Innovation Delivery

Businesses are turning to DevOps to accelerate how applications are modernized or newly developed, delivered, and maintained to speed execution increasingly; however, transitioning to the velocity, cost, myriad environments, and dynamism associated with digital transformation tends to be overwhelming. IT needs a systematic approach that coordinates DevOps with not only operations and infrastructure management but also quality, security, and analytics. Because digital transformation includes application access via a vast range and number of user endpoints, we are seeing significant increases in the size and complexity of software portfolios and multi-form factor deployment that both enable and impact execution. That's why "enterprise" DevOps across these environments is an imperative to bridge the divide and help create efficiencies of scale, improve collaboration, and address these kinds of challenges. As the scope and complexity of software portfolios grow exponentially and infrastructures vary widely, it becomes difficult for enterprises to plan, prioritize, test, and release applications at scale.

We are seeing significant increases in the size and complexity of software portfolios and multi-form factor deployment that both enable and impact execution.

IDC predicts that by 2023, 66% of firms will be beyond piloting AI/ML as part of application development, with nearly 10% optimizing AI/ML across development, design, quality, security, and deployment.

This is then coupled with variations in toolchains comprising different products (including open source) with costs related to procurement, integration, maintenance, management, and modernization. As the scale and complexity of software portfolios continue to increase, planning, integration, automation, analytics, and use of artificial intelligence and machine learning can be critical to keep pace. DevOps and infrastructure automation that bring together the end-to-end pipeline from quality through to security, deployment, and monitoring while leveraging advanced analytics can be vital to improving execution as organizations must adopt and interweave agile processes across areas. We recommend educating teams to shift to adaptive processes and to leverage evolving automation capabilities, benefiting from governance and prioritization with overall DevOps pipeline and organizational strategies, which also include project and portfolio management (PPM) capabilities for visibility and prioritization across initiatives and value streams.

Pragmatic, actionable, and predictive insights with metrics and data surfaced by AI and ML leveraging data across that pipeline can empower organizations to improve team execution and inform decision making as part of DevOps. As a result, IDC predicts that by 2023, 66% of firms will be beyond piloting AI/ML as part of application development, with nearly 10% optimizing AI/ML across development, design, quality, security, and deployment. In addition, the number of organizations that release code to production daily for select applications will rise from 3% in 2019 to 40% by 2023.

IT and Business Impact

- » The demand for high-velocity software development to support digital transformation across multimodal platforms increases complexity radically. As a result, organizations will need to shift to agile process adoption, automation, and analytics to support business execution, continuous quality, performance, deployment, and security.
- » Businesses that do not implement digital transformation will fall behind competitors and ultimately fail. To succeed, agile DevOps responsiveness to business stakeholder needs via IT/business collaboration end to end (including modernization and systems of record) is key.
- » Coordination across DevOps areas that include quality, code analytics/security, continuous integration/continuous deployment (CI/CD), IT infrastructure, analytics, systems of record, and project and portfolio management can support effective execution for multiplatform environments and emerging technologies to drive both the run and transform imperatives for businesses.

Micro Focus offers capabilities across a deep and wide-ranging product portfolio to help address key DevOps bottlenecks and accelerate agile continuous integration/continuous deployment, quality, performance automation, analytics, execution, planning, and prioritization.

Micro Focus Solution

Micro Focus offers capabilities across a deep and wide-ranging product portfolio to help address key DevOps bottlenecks and accelerate agile continuous integration/continuous deployment, quality, performance automation, analytics, execution, planning, and prioritization. With a set of proprietary and open source tools designed for building a flexible DevOps toolchain, the company's approach is to address adjunct areas closely linked to agile and adaptive business stakeholder initiatives that also include PPM and analytics as part of a comprehensive DevOps strategy.

This can enable organizations to begin using smart analytics to bring together and make sense of diverse sources of information in DevOps environments, helping surface insights for better governance and decision making across projects, programs, portfolios, and other initiatives. By adopting this approach, organizations can better coordinate planning and prioritize governance with the combined capabilities of PPM; improve execution with agile quality, CI/CD, and monitoring; modernize existing systems of record assets to adapt and incorporate new technology; architect for quality and security across applications; iterate with adaptive analytics to drive value streams that support business demand; oversee SDLC with DevOps governance; and improve adaptive test automation.

Recommendation

- Establish value measurement, coverage, and prioritization by assessing current maturity levels for PPM, resource management (RM), and agile approaches, and then evaluate and adopt appropriate automation in conjunction with process and organizational change.
- Review and address iterative, continuous development and testing approaches from functional through security to performance testing and automation gaps to create continuous quality across teams.
- Create and mature continuous integration and continuous deployment strategies that are coupled with release automation and planning for efficient, systemic high-quality deployments.
- Unite quality, security, modernization, CI/CD strategies and agile value streams, and the ability to identify and correct bottlenecks to improve future delivery via analytics and to inform process and organizational improvements with actionable key performance indicators (KPIs).

Hybrid IT Management — Simplify Your IT Transformation

Successful digital transformation depends on an organization's ability to deliver services at the speed of DevOps in a standardized and simplified model — without sacrificing performance, security, or governance. Simplification can begin by using hybrid IT management, which can help accelerate enterprise DevOps, deliver operational and business insights, and strengthen security and governance. Hybrid IT management improves business and customer experiences while enabling tight integration between critical services, value streams, operational processes, service delivery, and process automation, across on-premises and cloud environments.

Siloed service delivery and fragmented IT operational management are no longer an effective strategy because customers have no patience for poorly performing application services. Today's IT landscape is a dynamic hybrid of traditional and cloud-based technologies, and conventional management methods cannot control this new level of diversity, unpredictability, and change. By contrast, hybrid IT management enables IT leaders to reduce complexity while supporting services delivered on premises and from multiple cloud providers. Without hybrid IT management, businesses are increasingly vulnerable to outages, cost overruns, security breaches, and compliance violations — and IT risks being marginalized as a result.

Increasingly, there is a need to integrate data and processes to enable analytic models that can improve performance and availability of revenue-driving application services, thus creating feedback loops from customers back to DevOps teams to drive new features and prioritize development investments. This delivers faster product innovation and an improved customer experience. Agility requires an integrated approach to service fulfillment and execution through a self-service catalog. Complexity should be reduced by automatically handling monitoring, backups, and related tasks in the background as part of the service deployment model. A layer of cost management and governance that spans hybrid IT is critical but missing from many environments as well.

Today's IT landscape is a dynamic hybrid of traditional and cloud-based technologies, and conventional management methods cannot control this new level of diversity, unpredictability, and change.

Micro Focus solutions are designed to generate a common data lake that can be mined to find patterns, such as change management issues that cause trouble tickets.

IT and Business Impact

- » Digital transformation increases demands on IT to identify and resolve problems fast, so there is a growing need for analytic models to reduce noise and target the metrics and information that matter while identifying problems before they cause customer impact.
- » The variety of service and resource requests in hybrid IT environments increase in tandem with provider diversity, making it more challenging to maintain a positive user experience in an increasingly complex environment.
- » Hybrid IT management must ensure services meet security, compliance, and cost control requirements — even as delivery models shift and evolve — while reducing the friction that inhibits IT service consumption by customers.

Micro Focus Solution

Micro Focus offers a broad set of capabilities aligned to the functional areas of service management, service fulfillment, service assurance, and service governance to simplify the complexity of delivering hybrid IT management and more effectively support digital transformation efforts. Using an integrated platform approach to hybrid IT management, Micro Focus solutions are designed to generate a common data lake that can be mined to find patterns, such as change management issues that cause trouble tickets. Armed with these insights, IT can adopt a more proactive posture and automate remedial business actions, reducing business downtime and the cost of IT operations. In addition, this integrated approach provides companies the capabilities to overcome existing tool limitations and provide consistent provisioning, patching, backups, and cost governance in cloud and on premises, thereby lowering the risk of security breaches and unplanned expenditures. Furthermore, the hybrid IT management platform is designed to reduce friction commonly associated with IT service consumption as users can access intuitive, personalized, no-wait self-service through a modern interface powered by ML. The sum total of these capabilities allows organizations critical IT agility required to successfully manage the business of IT.

Recommendation

- Deploy solutions that can accelerate delivery and simplify administration through integration and automation capabilities that span the hybrid environment.
- Use automated monitoring and remediation powered by AIOps to reduce business downtime, lower IT costs, and improve the user experience.
- Transform IT into a service-driven organization focused on simplifying IT service consumption and meeting demand at the speed of DevOps.

IDC predicts that by 2023, cybersecurity analytics, intelligence, response, and orchestration (AIRO) will be a \$16+ billion market with a CAGR of 11.5%.

Security, Risk, and Governance — Protect Apps, Identities, and Data

Security, risk, and governance are three mediums that are interrelated but become difficult considerations to balance within the enterprise. For example, if a company offers maximum protection and encryption over its data, often the data has to be unencrypted to apply analytics. Further, when the data is unencrypted, companies must still obfuscate information such as personally identifiable information (PII) or medical records because customers have a right to privacy, and, not incidentally, the punitive fines levied for companies that are found to be out of compliance for regulatory standards such as GDPR, NERC-CIP, and HIPAA/HITRUST are prohibitive.

Cybersecurity has never been easy, and the drive toward digital transformation adds even greater challenges. The public cloud, mobile devices, and IoT are reshaping the security landscape in ways that make conventional perimeter defenses impractical to deploy across the conventional perimeter's entire surface. Plus, there's increasing pressure to ensure privacy and govern risk across not only data itself but also those who access it. Businesses are eager to deploy preventative measures, and IDC predicts that by 2023, cybersecurity analytics, intelligence, response, and orchestration (AIRO) will be a \$16+ billion market with a CAGR of 11.5%.

As the foundation of their security strategies, businesses need to focus on challenges across three broad categories: applications, identities, and data. The first category, applications, demands immediate attention because as DevOps advances in speed and scale, traditional approaches to software development are becoming obsolete. Instead, security must be integral to the entire software life cycle. Identities have evolved as well, moving beyond human beings to include machines, connected devices, services, and websites — all of which must be kept secure, even when privileges are constantly changing, sometimes within minutes. And of course, all these concerns are centered around data, both structured and unstructured, which must be discovered, protected, governed, and made available to those who have rights to access it.

For reasons that are self-evident, data protection takes on special importance: The data contains credit card numbers, intellectual property, often the health status of people, and personally identifiable information. However, the potential of anonymized data is great: Adversaries can be identified if they attempt file extraction and data manipulation, and anonymized data can be analyzed to provide insights about customers or product trends. Last, a comprehensive data strategy needs to be in place at the time of data input, the indexing of data, the protection of data at rest and data in transit, and finally the disposal of data if an enterprise goes with different security and storage vendors or if information simply needs to be purged from databases.

Micro Focus can help organizations take a holistic approach to protecting applications, identities, and data.

IT and Business Impact

- » Cybersecurity and privacy go hand in hand, and effective solutions must provide data encryption and key management for both structured and unstructured data.
- » Businesses must understand that data discovery, classification, and controls for both structured and unstructured data are as important to security as the techniques used to secure it.
- » Applying point solutions to applications, identity, and data across on-premises, hybrid, and cloud environments can create complex management and budget issues that CISOs/CIOs look to consolidation to solve, which then impacts security and risk.

Micro Focus Solution

With a complete set of integrated security, risk, and governance solutions, combined with domain expertise and industry-leading analytics, Micro Focus can help organizations take a holistic approach to protecting applications, identities, and data. The company has capabilities that can span structured and unstructured data to defend against breaches, secure DevOps and the SDLC process, guard the privacy of individuals and their data, and help ensure compliance with worldwide regulatory and jurisdictional regulations at enterprise scale.

Recommendation

- Protect IT ecosystems and reduce risk to on-premises, hybrid, or cloud environments for all identities.
- Shift left and begin application security testing in DevOps and deploy best-in-class application security with speed, scalability, integration, and automation.
- Detect cyberthreats by combining security information and event management (SIEM) correlation with machine learning and automation.

Predictive Analytics — Predict, Act, Simplify

You can't create empathy at scale in customer experience without a deep understanding of your customers. You can't create trust as a foundation of your organization without continuous integration and analysis of behavioral, interactional, and event-driven activity. You can't scale resiliency in operations or security without high levels of process automation. And you can't empower employees without giving them "superpowers" in the form of augmented intelligence. Competitive differentiation is increasingly driven by enterprise intelligence and its key ingredients: data and analytics.

Today, data professionals, such as data architects, data engineers, data scientists, and business analysts, and business decision makers are faced with a complex data environment. IDC expects the Global DataSphere — all data created and consumed worldwide — to grow at a 2018–2023 CAGR of 25.8%, resulting in 102.6ZB (that's 1 trillion gigabytes) of new data in 2023, compared with 32.6ZB in 2018. A growing percentage of that data is now in constant streaming motion and in the form of text, video, or audio. Understanding and working with data and turning it into information and then into knowledge require analytics, ranging from descriptive and diagnostic to predictive and prescriptive.

Unifying all the available data and applying all the necessary analytics are helping organizations better adapt to changing environments and become more efficient and profitable. IDC predicts that over the next few years, enterprises that embrace new analytics and AI-driven solutions and processes will be able to double their knowledge worker productivity, halve the time it takes to respond to customers, and increase the success of new product and service introductions by 25%. These benefits will, in turn, enable new business models — driving a virtuous cycle of transformative innovation and value.

Yet many organizations struggle without enough data scientists and technology for breaking data silos, or delivery of insights at scale. The goal of every enterprise should include a solution that can address operationalization of analysis of the volume, velocity, and variety of data to drive accuracy in decision making, automation of data processing, and actionable recommendations to all decision makers.

IDC expects the Global DataSphere — all data created and consumed worldwide — to grow at a 2018–2023 CAGR of 25.8%, resulting in

102.6ZB (THAT'S 1 TRILLION GIGABYTES)
OF NEW DATA IN 2023, COMPARED WITH 32.6ZB IN 2018.

With predictive analytics solutions from Micro Focus, organizations gain the capability to accelerate data analysis at scale.

IT and Business Impact

- » Data needs to be aggregated from multiple diverse and complex sources, including data at rest and data in motion.
- » Machine learning and advanced analytics are required to accelerate decision making and outpace the competition.
- » All data types must be monitored, discovered, analyzed, and remediated, often in real time.

Micro Focus Solution

With predictive analytics solutions from Micro Focus, organizations gain the capability to accelerate data analysis at scale. For example, insights can be extracted from unstructured data — regardless of origin and format — enabling unified, context-sensitive search and knowledge discovery across video, image, audio, and text data. In addition, the company's predictive analytics solutions can help organizations store and analyze volumes of IoT and sensor data, providing insights that can help IT operations teams accelerate root cause analysis, improve mean time to resolution (MTTR), and spot issues before end users are impacted. Micro Focus also offers user and entity behavioral analytics (UEBA) that can help security operations center (SOC) teams detect, assess, and address threats.

Recommendation

- Use analytics and AI for understanding and extracting value from all data — both structured and unstructured — to help increase existing data utilization.
- Address the entire predictive analytics process from model training to inferencing to operationalize data science and speed business outcomes.
- Ensure that descriptive, predictive, diagnostic, and prescriptive analytics are available within decision support solutions for all functional areas of the enterprise, from business to IT, including the CIO and CISO organizations.

Merely 5.1% of the organizations we studied have realized sustainable performance excellence competencies around new digital technologies and business models thus far, demonstrating further opportunities to improve execution.

Challenges and Opportunities

Lately, as IDC has been working with organizations to better understand their digital challenges, a number of business leaders have expressed concern about whether their organization has the determination to stick with digital transformation initiatives. These leaders know what is required but do not feel empowered to get it done. Instead, they watch their CEOs shy away from complex organizational moves in favor of short-term funding arrangements and indiscriminate, ad hoc fixes.

Digital determination matters since it propels enterprises along the path to transformation — and that journey isn't always easy. Case in point: IDC's research shows that three out of four enterprises as they transition are at a digital deadlock, and they must evolve strategies to overcome the challenges of breaking away from past practices to achieve transformation that is aligned with new market needs. Furthermore, other research indicates that merely 5.1% of the organizations we studied have realized sustainable performance excellence competencies around new digital technologies and business models thus far, demonstrating further opportunities to improve execution.

In that context, establishing effective process, organizational, and automation strategies to execute on digital transformation is critical for success. Engaging organizations across the typical barriers between business stakeholders and development, security, operations, and analytics teams and across application portfolios for success demands a paradigm shift to and investment in adaptive approaches. Organizations must appropriately plan for and devote time and financial and human resources to this vital transition. As an example, we see businesses evolving by modernizing core business systems of record as a strategy versus rip-and-replace strategies (which can typically introduce unacceptable risk, cost, and time to market).

Similarly, automation solution providers for digital transformation must interweave process and organizational change support into their capabilities, leveraging cloud as a common platform where possible for consistent access for combined data and analytics (including digital portfolio prioritization) and partnering as needed for mentorship of customers as they emerge and mature their strategies.

Essential Guidance

Digital transformation involves integrating systems, processes, and people in new ways while modernizing systems of record to redefine and create new business experiences. This is a continuous, adaptive approach for organizations that can be overwhelming and involve massive cultural, process, and technology change.

To help address these challenges, businesses have an opportunity to adopt a strategic and methodical approach that focuses on four key areas: Enterprise DevOps; Hybrid IT Management; Security, Risk, and Governance; and Predictive Analytics. To be most effective, these four elements must work synergistically, balancing the need for agility, speed, risk, business value, and quality while enabling linked execution with AI/ML across the enterprise. When that happens and as the combined technologies mature, data can drive intelligence and yield the insight and knowledge needed for action and to create value. In addition, this process can happen repeatedly and continually, free from the boundaries imposed by traditional technology stacks. To succeed in today's constantly evolving and competitive landscape, businesses need to master these processes, along with organizational and automation strategies, to unlock the full potential of their digital transformation initiatives.

IDC Global Headquarters

5 Speen Street
Framingham, MA 01701
USA
508.872.8200
Twitter: @IDC
idc-insights-community.com
www.idc.com

Copyright Notice

External Publication of IDC Information and Data — Any IDC information that is to be used in advertising, press releases, or promotional materials requires prior written approval from the appropriate IDC Vice President or Country Manager. A draft of the proposed document should accompany any such request. IDC reserves the right to deny approval of external usage for any reason.

Copyright 2020 IDC. Reproduction without written permission is completely forbidden.

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.