The Autonomous Digital Enterprise

bmc

The Changing World

Over the next five to ten years, there will be seismic changes across every industry sector as people, technologies, data, devices, and ever-expanding networks converge to transform every aspect of work and life. The resulting shifts are spawning new industries and reinventing existing industries, forcing organizations to adapt and evolve[1].

Technology will drive the business versus being the utility it has traditionally been.

Successful companies will share core operating model characteristics that allow them to thrive, enabled by key technology tenets that support agility, customer centricity, and actionable insights to keep pace amidst the rapidly-increasing pace of change.

[1] As of the date of first publication of this document, the novel coronavirus COVID-19 has caused major declines in global markets, with full consequences not yet known.

The Case for Change

Across sectors, disruptive technologies have brought about dramatic changes to the way public and private organizations operate, recognizing that the future of business will look far different than it does today. A combination of technology, socioeconomic, and geopolitical trends will create the new normal for organizations, a state in which every company will be a tech-driven company—and success results from the ability to stay relevant.

The future is one where technology will be firmly embedded in human lives, shaping how we work and live. By 2025, nearly two-thirds of enterprises will be prolific software producers with code deployed daily; over 90 percent of new apps will be cloud-native, 80 percent of code will be externally sourced, and there will be 1.6 times more developers[2]. Technology will underpin every successful company and drive every business function, spanning customer relationships, business operations, and people management.

In addition to an innovation mindset, these successful companies will have three common traits:

Agility

They create new operating models that integrate business, operations, and technology into standalone businesses-within-the-business domains. This approach allows organizations to run and reinvent themselves—they can be truly disruptive in one area while still supporting traditional businesses.

Customer centricity

They leverage a connected economy to ensure they can meet and exceed customer expectations. By creating an ecosystem that uses technology to cater to every touchpoint of the customer journey, these organizations seem to anticipate their customers' requirements and deliver the goods and services needed at the right time—via the customer's preferred channel.

Actionable insights

They know how to turn data into insights that drive actions which serve and anticipate customer needs. Organizations that know how to pull all the relevant information, capabilities, and people into the same place can act quickly and efficiently in making the right decisions.

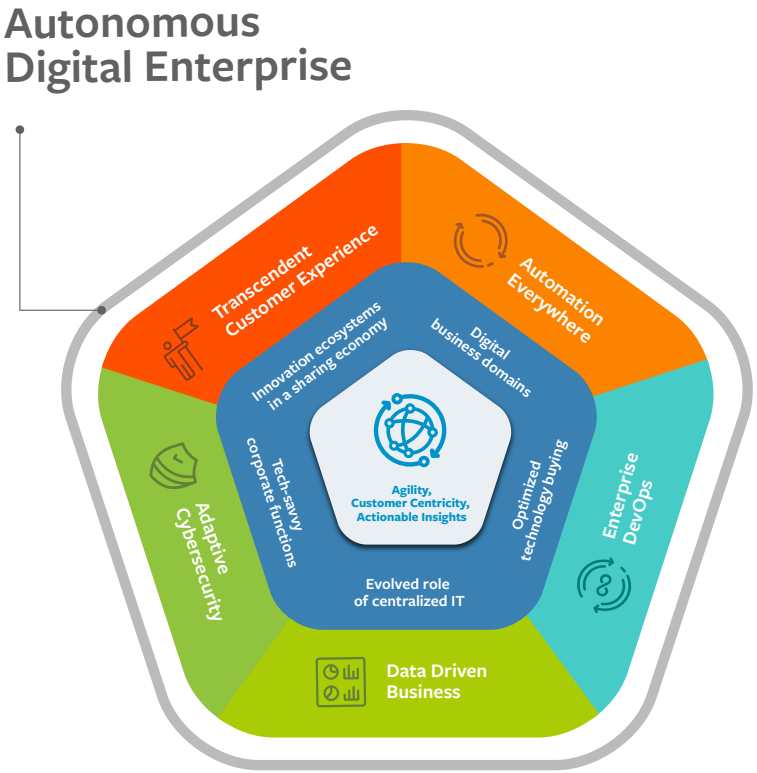
Mastering these traits in a shifting landscape requires the evolution of companies to a state that supports the business today, while keeping the future in mind. This is the path to an Autonomous Digital Enterprise (ADE).

[2] Frank Gens, et. al, IDC FutureScape: Worldwide IT Industry 2020 Predictions, (IDC, 2019).

What is an Autonomous Digital Enterprise?

The ADE comprises intelligent, interconnected, technology-enabled, value-creating systems that operate with minimal human involvement across every facet of the organization and its ecosystem of partners. It is the evolution of growth-minded organizations looking to deliver value with competitive differentiation enabled by agility, customer centricity, and actionable insights. The roles of people in the enterprise will evolve to positions that require human judgement and support the autonomous systems that run the business. Work in the future will shift as technology takes on the mundane and repetitive tasks across the business and employees migrate to higher-value responsibilities.

In order to support the evolution to an ADE, organizations will need to adopt a next-generation business model, embrace new approaches to talent management, evolve their IT organizations, work across the value stream with an ecosystem of business partners, and optimize technology buying.



Five Fundamental Operating Model Characteristics That Define an Autonomous Digital Enterprise

1. **Innovation ecosystems in a sharing economy**
   A network of internal, traditional, and non-traditional relationships that innovate collaboratively to deliver new products and services to market.

2. **Digital business domains**
   The "business-within-the-business" that integrates multiple functions responsible for end-to-end delivery with full accountability, and little-to-no reliance on the rest of the company.

3. **Optimized technology buying**
   The natural evolution of organizations that eases technology purchasing and integration across the organization, in partnership with central IT, to support the day-to-day activities and operations of the business.

4. **Evolved role of centralized IT**
   The shift from traditional IT service delivery to being responsible for digital transformation through Centers of Excellence that deliver technology to support innovation initiatives across the company.

5. **Tech-savvy corporate functions**
   An enterprise-wide work transformation initiative that leverages technology for intimate collaboration across digitally-enabled functions to support greater business efficiencies and increase productivity and worker engagement and satisfaction.

These operating model characteristics also support the following five key technology-enabled tenets that define the ADE and use artificial intelligence (AI) as a core constituent:

1. A transcendent customer experience

Create better customer experiences by fostering real connections that make technology feel more human and give employees what they need. Some ways to do that include:

Integrating and securing customer data. Invest in a secure big-data infrastructure as the foundation for full-lifecycle management and potential monetization of customer data.

Journey analytics and orchestration for a frictionless experience. Use an integrated ecosystem of customer experience tools to understand the entire customer journey and capture value from journey-related investments.

Mobile devices as the primary online interaction channel. Providing an unbeatable mobile-first experience will become even more important across many sectors and industries.

Moving from a reactive to a proactive customer experience. Identify specific differentiated use cases with the appropriate machine learning (ML) and other AI techniques to help anticipate customer needs.

Do-it-yourself as the first choice in customer service. Provide digital customer solutions that support brand engagement according to the customer's preference. Invest in AI, augmented reality/virtual reality (AR/VR) technology, and virtual assistants to enrich customer experience (CX) in both B2B and B2C.

Judicious blend of human and technology engagement. Leverage AI and ML to understand when the human element is needed. Invest in enriching the employee experience (EX) so frontline employees are augmented by digital tools to deliver a transcendent customer experience.

2. Automation everywhere

Organizations that are well on the path to becoming ADEs share one key characteristic—their customer interactions and operations are radically automated. This results in lower costs, reduced errors, much faster execution, fewer mundane tasks for employees, and ultimately, better customer experiences. They embrace the idea of technology as a complementary business function that works with—not in place of—human workers. Moving to automation everywhere means watching the line between IT automation and business automation fade as the following come to the forefront:

Hyperautomation enables machines to automate business processes by automatically executing a set of procedures and minimizing human involvement and errors at the confluence of digitization, connectivity, and AI.

Operations automation offers solutions for preemptive and reactive remediation capabilities that are enabled by observable insights and automated actions. It combines application performance management (APM) and traditional IT infrastructure monitoring (ITIM) solutions into a full stack application and infrastructure performance management (AIPM) solution. It begins with a foundation of full-stack monitoring as a basis for AIOps-enabled observable insights as the next set of additive capabilities, extending to auto-remediation and self-healing driven by actionability.

Enterprise service management (ESM) is the evolution of traditional service management beyond IT to deliver services via a structured system with an automated process framework for fulfillment.

AI is at the heart of automation everywhere, spanning AI-enabled process automation, AIOps for observability that leads to actionability, and collaborative AI within ESM.

3. Enterprise DevOps

A natural evolution that extends the principles of software DevOps to surrounding processes, including release planning, change management, product operations, and more, to optimize for the rapid and continuous delivery of software applications and services. It is a set of continuous improvement principles, as well as cultural and behavioral changes that rely on a frictionless environment for success.

4. A data-driven business

A data mindset and analytical capabilities will be the most significant factors in determining future success. Considerations in creating a data-driven business include:

Exponentially more data from many sources. Capture new data from IoT, social media, and customer engagement systems, in addition to traditional data sources.

Value from data assets. Treat data like any other asset and look for opportunities to monetize that asset with high-value business use cases.

AI and analytics to extract value from data assets. Create predictive models with ML systems that can be used to optimize, improve, guide, and execute actions. More importantly, leverage the right set of technologies for the business use case under consideration.

5. Adaptive cybersecurity

The evolution of security functions that can automatically sense, detect, react, and respond to access requests, authentication needs, and outside and inside threats, and meet regulatory requirements. It combines AI-enabled solutions with a crowdsourcing environment, employs security-integrated DevOps (DevSecOps), uses cloud-native infrastructure, and services and adopts mature access and authentication practices with a zero-trust framework.

The ADE is achieved when organizations systematically work towards improving maturity across all five of these technology-enabled tenets.

Run and Reinvent to an Autonomous Digital Enterprise

Your journey to an ADE will not be static or sudden. It requires your organization to take the progressive steps to leverage more automation and AI/ML capabilities to support the evolution and maturity of the technology-enabled tenets. Building on the strengths of today's success, you will need to continue to run your business as it evolves and reinvent your operations for the future.

BMC has long been a recognized leader for robust and scalable software solutions across both mainframe and distributed systems. As digital transformation has mandated an evolution that embeds technology across the enterprise, BMC has embraced the opportunity to leverage advanced analytics and automation in our portfolio. As a result, customers are better able to optimize the performance, cost, and security of their technology investments. Distinctive professional services complement the innovative portfolio to support the process of becoming an ADE, allowing organizations across industries to easily leverage its scale, resilience, and reliability.

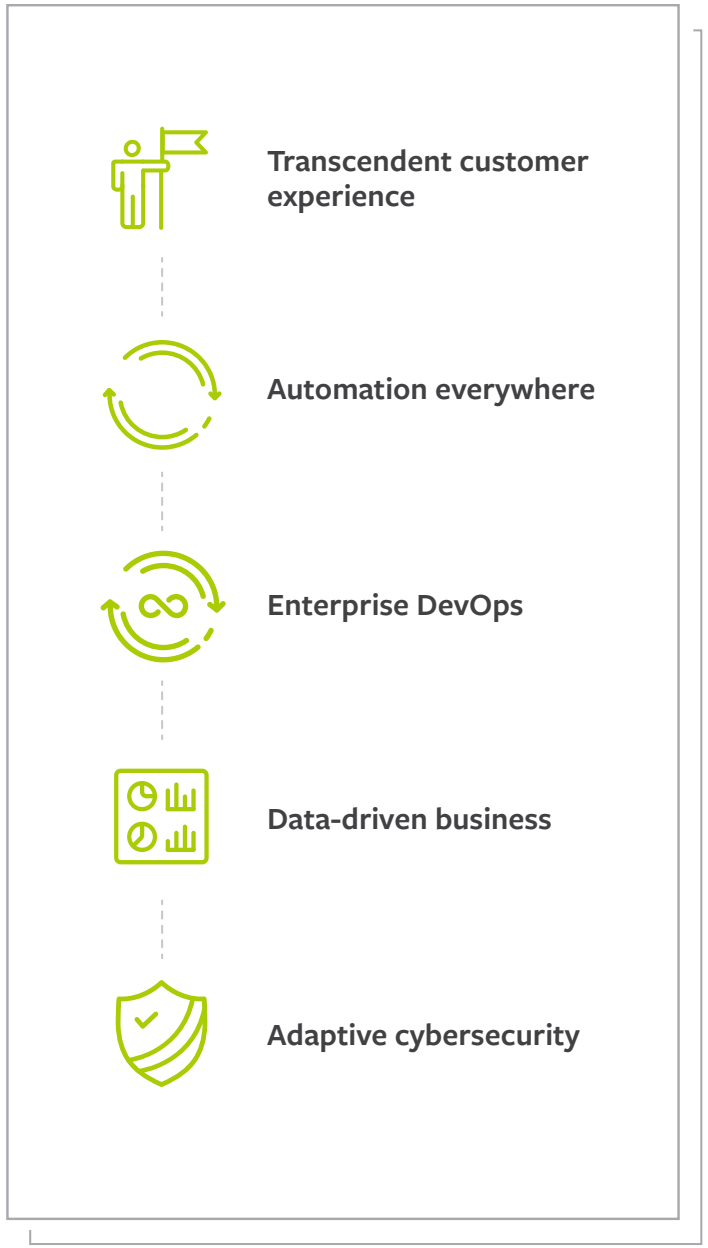
The **transcendent customer experience** comes to life with BMC Helix and BMC Automated Mainframe Intelligence (BMC AMI). BMC solutions help ensure that organizations can leverage their differentiated business data with key insights across their technology, tools, and employees to deliver a customized experience. With increased automation that enables the delivery of predictive insights at the right time through technology integrations that leverage even more contextual data, BMC will be a critical asset as your ADE strives to provide the ultimate customer experience.

The second tenet, **automation everywhere**, starts with BMC AMI, Control-M, and TrueSight to bring IT and business automation even closer. AI is at the foundation of BMC products that enable enterprise automation today, with a vision of bringing observability and actionability even closer together in the ADE.

With **enterprise DevOps** still on the horizon for many organizations, BMC Helix, Control-M, and BMC AMI can help extend the business and development processes across the organization for greater speed and flexibility and a frictionless environment that focuses on growth today. Looking ahead, the ability to apply automation principles—and increase the applicability of BMC Helix across DevOps and business requirements—while ensuring AI-driven automation for applications in both distributed and mainframe systems (with Control-M and BMC AMI) will speed every organization's transformation.

A **data-driven** business centers on Control-M and BMC AMI to bring together more data sources from across the organization for the specific insights that uncover opportunities and new revenue streams. As organizations continue to increase the amount of data leveraged to make decisions for their business, Control-M and BMC AMI become critical AI/ML enablers across internal, ecosystem-owned, and third-party applications to leverage the data that drives every ADE.

The ability to successfully implement **adaptive cybersecurity** starts with ensuring the integrity of business-critical data and that it is collected, stored, and used with a zero-trust framework. Mainframes are a vital piece of the business, processing millions of transactions and storing some of an organization's most sensitive data. BMC AMI mainframe security solutions offer reassurance with the intelligent software, services, and skills that organizations need to automatically sense, detect, and react—with a vision to incorporate DevSecOps across all infrastructure for every ADE.



Start or accelerate your journey with:

BMC Helix	The end-to-end, intelligent service and operations software-as-a-service (SaaS) platform that offers choice and flexibility.	Supports: **1.** Transcendent customer experience **2.** Automation everywhere **3.** Enterprise DevOps
TrueSight	Intelligent IT and cloud operations for a more agile enterprise that delivers fast, secure, and cost-effective services.	Supports: **1.** Automation everywhere **2.** Enterprise DevOps
Control-M	Application workflow orchestration and automation to transform your business and accelerate IT modernization.	Supports: **1.** Automation everywhere **2.** Enterprise DevOps **3.** Data-driven business
BMC Automated Mainframe Intelligence (BMC AMI)	AI, ML, and predictive analytics to make the most of your business data. Automatically monitor and secure your mainframe data with confidence, connect to the security information and event management (SIEM) solution of your choice, and more easily satisfy compliance requirements.	Supports: **1.** Transcendent customer experience **2.** Automation everywhere **3.** Enterprise DevOps **4.** Data-driven business **5.** Adaptive cybersecurity

The BMC portfolio supports every company's efforts to run and reinvent with AI/ML capabilities across hybrid IT and multi-cloud to support enterprise-wide DevOps and automation by:

- Accelerating application development and deployment for strategic mandates and business transformations.
- Providing actionable insights with BMC AMI and BMC Helix to preemptively correct potential problems.
- Deploying a flexible infrastructure that is optimized for speed, cost, and risk.

As a partner in the ongoing process of enterprise transformation, BMC brings the technology-enabled tenets of the ADE to life with a full suite of offerings and professional services and a global ecosystem at every stage.

Summary

The technology tsunami will continue to transform every aspect of work and life. The convergence of people, technologies, data, devices, and ever-expanding networks will create immense opportunities for the organizations that can be agile and customer-centric, and use actionable insights across the business.

Organizations that will succeed and win over the next five to ten years are already well on their way to transforming to Autonomous Digital Enterprises. They have employed the operating models that capitalize on the ADE's technology-enabled tenets to stay ahead of the disruptions that threaten others.

About BMC

From core to cloud to edge, BMC delivers the software and services that enable over 10,000 global customers, including 84% of the Forbes Global 100, to thrive in their ongoing evolution to an Autonomous Digital Enterprise.

Run and Reinvent

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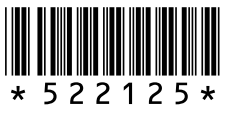
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