e-book

Autonomous Digital Enterprise

DATA-DRIVEN BUSINESS
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Introduction

The term “Data-Driven Business” can apply to almost every company today as the acquisition, dissemination, and monetization of data are increasingly a resource and key determinant for everyday decision-making. In fact, IDC estimates that more than 59 zettabytes (ZB) of data will be created, captured, copied, and consumed globally in 2020, and more data will be generated over the next three years than in the last 30.¹

The Autonomous Digital Enterprise shown in Figure 1 is a vision of the future state of business, enabled by the five tenets, one of which is the Data-Driven Business. This tenet focuses on how data is amassed from both traditional sources like records and new sources like Internet of Things (IoT) devices, social media, and customer engagement systems that use artificial intelligence (AI) and analytics to extract valuable data and monetize it. Businesses can make better decisions, leverage information assets to create value, and create a systematic, automated approach by optimizing and investing in a data and analytics architecture, operating model, and culture.

¹ "IDC’s Global DataSphere Forecast Shows Continued Steady Growth in the Creation and Consumption of Data,” IDC, May 2020.
Enabling Technologies

The technology behind the Data-Driven Business includes AI and machine learning (ML) that integrates with automation tools, converts raw data into insights and actions, and validates, deploys, trains, and monitors models from the data pipeline. Monetizing data—yielding substantive value to win new customers and business—can be done through data and insights bartering, data brokering, and business intelligence. To adhere to data privacy regulations and protect customer information, data quality practices can be used to clean, normalize, and prepare data while cataloging and governance tools provide access and control.

In this e-book, we will look at four use cases that demonstrate how the Data-Driven Business can elevate and evolve processes, as well as the BMC solutions that can enable those strategies for success.
Use Cases

**Big Data/ETL/Database Automation**

Data-driven projects rely on multiple teams, tools, processes, and sources of upstream and downstream data, which can make it hard to identify issues in the data pipeline and understand their root cause. Additionally, they can have high failure risks, scale unsuccessfully, are difficult to audit and govern, and cost too much due to inefficient monitoring and controlling capabilities. By creating, integrating, and automating data pipelines across on-premises and cloud technologies, data can be more easily ingested and processed from different sources.

Using workload automation across all data streams helps companies gain visibility and control of the entire data pipeline, ensure reliable application workflow orchestration, and seamlessly integrate with enterprise applications, databases, and cloud services. Leveraging predictive analytics and automated alerts that detect problems early and provide quick resolution makes it easier to monitor and manage workflows. These modern tools also reduce risks, costs, manual processes, and rework, increase scalability and staff efficiency, and improve on-time service delivery and service level agreement (SLA) adherence.

Over 59 ZB of data will be created, captured, copied, and consumed globally in 2020.¹
Predictive Analytics

In a traditional environment, system maintenance is fixed and routine, and if a component or system fails outside of scheduled maintenance, then it causes a loss of time, money, and productivity. Being able to remotely predict mechanical, electrical, and digital interruptions beforehand would head all of that off before it happens.

Predictive analytics is done through intelligent automation and the ingestion, storage, processing, collection, and analysis of data. It’s a combination of the old and new, gathering data from traditional sources like enterprise resource planning (ERP), customer relationship management (CRM), financial systems, and other systems of record, as well as social platforms and devices. That data is then used to deliver insights that include predictions about the viability of resources and proactive planning to address and prevent problems before they occur and impact business.
**Database Performance, Management, and Recovery**

Many businesses are drowning in the very data they need to survive, stuck between two competing demands: managing constant data streams and serving it up fast enough to meet customers' performance expectations. Changing an application or index structure won't solve the issue, and adding more hardware to handle downtime and outages is a temporary, expensive fix. Skipping required steps due to time constraints or creating unsustainable, one-off workarounds isn't ideal, either. It's a perfect storm of resources and budgets that don’t align with the growth and speed of data and customer expectations. To get ahead of both, businesses need a new approach to managing existing resources.

Database performance, management, and recovery solutions keep mainframe-based applications running at peak speeds with 24x7 availability, without neglecting maintenance schedules. Database solutions can optimize performance, increase savings, simplify database administration, and protect against risk. That in turn helps businesses meet SLAs and provide a competitive edge along with best-in-class service to both internal business users and external customers.
Mainframe Cost Optimization and Capacity Management

As businesses put their influx of data to work for analytics, they’ll also depend on the mainframe for real-time insights. Mainframe teams have to ensure optimal performance and availability for existing services while maintaining agility and scalability to keep pace with innovation and shifting market dynamics. With costs and demand both rising—and budgets often lagging behind—cost control is becoming both more important and more challenging than ever.

It’s no wonder, then, that cognitive technology has emerged as a critical requirement for sustainable mainframe operations. The more demands your business places on your mainframe, the harder it becomes to maintain speed, efficiency, performance, and cost control. Data-Driven Businesses can utilize their mainframe to provide analytics, insight, and control over cost drivers and predict future trends. With mainframe cost optimization and capacity management, you can help your business operate at the peak of agility, innovation, and quality while continuing to optimize costs—both today and into the future.
BMC Solutions

BMC offers a range of solutions designed to help you become a Data-Driven Business and address the use cases presented above.

**BMC Solution**

**Use Cases**

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BMC AMI Cost

Optimize your mainframe cost and capacity with data-driven intelligence, automation, and out-of-the-box guided workflows with BMC AMI Cost. The solution can help you:

- Visualize cost drivers and their impact to maximize workloads at the lowest cost
- Forecast and predict future capacity requirements to right-size your environment
- Empower staff through intelligent automation and minimize the loss of institutional knowledge from retiring experts
- Diagnose potential capacity issues and bottlenecks before they impact the business
- Predict and provide “what-if” analysis of future costs and workloads

To learn more, please visit [bmc.com/ami](http://bmc.com/ami)
BMC AMI Data

Transform the management of your mainframe databases and improve performance, administration, and recovery with BMC AMI Data solutions for IBM® Db2® and IMS® on z/OS®. Use the solution to optimize your data and master a data recovery strategy:

- Eliminate downtime and increase availability of business services
- Ensure the integrity of structured and unstructured data
- Take control with intelligent automation and policy-driven rules

To learn more, please visit bmc.com/ami
Control-M

Control-M simplifies application workflow orchestration. Streamlining workflows makes them easier to define, schedule, manage, and monitor in mixed environments so you can deliver better applications faster, ensure visibility and reliability, and improve SLAs. You can also:

- Embed workflow orchestration into your continuous improvement/continuous deployment (CI/CD) pipeline
- Extend Dev and Ops collaboration with a Jobs-as-Code approach
- Natively integrate with Amazon Web Services (AWS) and Microsoft Azure
- Deliver data-driven outcomes faster and manage big data workflows in a scalable way
- Take control of file transfer operations with intelligent file movement

To learn more, please visit [bmc.com/control-m](http://bmc.com/control-m)
Conclusion

Data is the lifeblood of today’s enterprises. As it grows in volume and complexity, companies that strive to become a Data-Driven Business as part of their evolution to an Autonomous Digital Enterprise will not only survive but thrive in the years ahead.

To learn more about how your business can evolve to an Autonomous Digital Enterprise, please visit bmc.com/ADE.
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.

BMC—Run and Reinvent

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