

# A Modern Framework for AI-Driven Business

Drawn to the possibilities and potential of AI-driven business, organizations are ripe to exploit the power of big data, machine learning, and analytics. Yet most are lacking a modern data foundation that can navigate the journey at scale.

As part of next-generation digital transformation efforts, organizations expect AI to serve as a lever for growth and innovation, enabling them not just to survive but also to thrive in today's increasingly competitive markets. Companies are looking to AI-driven programs to jump-start new growth initiatives and fuel new business models, foster product innovation, deliver better customer experiences, and garner efficiencies throughout all corners of an organization.

According to an [MIT Sloan Management Review and Boston Consulting Group global study on AI](#), 85% of the respondents to the study's survey believe that AI will deliver and sustain a competitive advantage and 66% of the participating companies expect cloud workloads to be AI-driven. An [Accenture study](#) confirmed the imperative of the new AI era: Three-quarters of the global executive respondents to that study's survey said they risk going out of business in five years if they don't rise to the challenge and scale AI effectively across the business.

Companies may have clarity on their AI ambitions, but they are less confident about what it takes to pull them off. The MIT Sloan/BCG survey found that only one in five companies has incorporated AI in some offerings or processes and only one in 20 has successfully completed an extensive AI effort. Less than 39% of companies have an AI strategy in place, and the picture doesn't change much even for the largest companies, with at least 100,000 employees, the survey found.

With the scope of data and analytics in a constant state of flux, organizations need a fully integrated data and AI architecture that can work across any cloud or on-premises environment. They also need a platform that is flexible enough to address all of their shifting business needs while delivering cost efficiencies and improving ROI.



Only one in five companies has incorporated AI in some offerings or processes



## ROI Analysis of Cloud Pak for Data on AWS

By deploying this fully integrated data and AI architecture, organizations can expect potential business impacts such as:

- + Lowering of ETL requests by 25% to 64%
- + Reduction of infrastructure management effort between 65% to 85%
- + Savings benefits of \$1.2 million to \$3.4 million due to data science, machine learning, and AI
- + Total economic impact of \$6.8 million to \$12.4 million three-year net present value
- + Projected return on investment of 86% to 158% over three years

It's clear that data and AI hold the keys to the future, yet too many companies remain hamstrung by legacy infrastructure and outdated data management approaches. A fully integrated enterprise information architecture can eliminate those challenges and accelerate the journey to AI-powered business transformation.

Source: *The Projected Total Economic Impact of IBM Cloud Pak for Data*, a Forrester Study commissioned by IBM  
<https://www.ibm.com/account/reg/us-en/signup?formid=urx-43258>

## Legacy Infrastructure Isn't Tuned for AI

Building a fully integrated data and AI architecture isn't possible with legacy infrastructure, which is ill equipped to handle the demands of AI services and processes. As such, there remains a gap between what companies expect to accomplish with AI and the reality of where they actually are in the AI and analytics journey.

Beyond the limitations of technology, there are other issues hindering AI efforts. For some, it's a matter of their data management approach, whereas for others it comes down to a lack of AI talent or leadership support. In the MIT Sloan/BCG study, 62% of the responding organizations don't have a clear approach or set of processes for AI and 80% are stymied because data is still locked away in silos or not in business-ready shape. Among the survey respondents, 82% said concerns about data connectivity to the cloud was a barrier to successful AI implementations.

As businesses collect data from more-diverse sources to analyze and run their operations, the complexity, cost, time, and risk of error in collecting, governing, storing, processing, and analyzing that data increase exponentially. What's needed to unlock the full potential of data and AI is an advanced information architecture that modernizes the data pipeline and AI services with a unified data and AI platform, built-in security and governance, and support for an open ecosystem.

"To accelerate time-to-value of data, businesses need to be able to eliminate data silos across all data sources and IT environments," says Hemanth Manda, product management director, IBM. "They need one platform where they can work with all data and scale data workloads for AI."

## IBM and AWS Collaborate for a Seamless Analytics Journey

IBM Cloud Pak for Data on AWS delivers a fully integrated enterprise information architecture that modernizes all steps on the data and analytics cloud-based journey, based on Red Hat OpenShift, giving organizations a much-needed boost to meet their objectives for AI-powered business transformation. The solution helps enterprises:

- + **Connect to myriad data sources.** Using IBM Cloud Pak for Data on Red Hat OpenShift, organizations can virtually connect, manage, and query data across on-premises environments and the AWS Cloud, eliminating data silos, fostering collaboration, and reducing redundant work, as once a service is built, it can be deployed anywhere.
- + **Organize high-quality data and create a business-ready analytics foundation.** By leveraging the system's built-in and extensive automated data discovery, governance, and data cleansing capabilities, organizations can easily catalog and govern all enterprise data models, rules, and insights through a common experience. Companies can document and enact policies and rules and track data lineage across their data assets, maintaining consistency through governance and compliance.
- + **Analyze data and build and scale AI with trust and transparency.** Deep integration is possible between all the layers of the AWS analytics stack, and any of the 45-plus plug-and-play data, analytics, and AI apps ensure that organizations have a breadth of choices for quickly analyzing data, using their preferred approach. For the first time, organizations can manage their favorite open source capabilities alongside IBM's own market-leading Watson AI microservices.
- + **Operationalize AI models.** Leverage prebuilt application services to accelerate AI adoption and transform business processes and experiences to be more intelligent and adaptable. "The partners bring the function of data analysis as close to the enterprise catalog as possible," says IBM's Manda. "There is a sliding scale of data science capabilities that cater to all skill levels so users can quickly grab data from the catalog and instantly start working towards generating their insights in a common workflow."

## Diving into IBM Cloud Pak for Data on AWS

The combination of IBM's enterprise-grade capabilities and AWS's on-demand infrastructure and autoscaling enables businesses to dial up or pull back initiatives based on business need. Microservices and a container strategy are critical to the partners' approach. Specifically, support for the Red Hat OpenShift container platform delivers out-of-box access to IBM Watson AI technology along with DataOps, governance, and business analytics functionality—capabilities that were previously available only in the IBM cloud.

Among the many capabilities in the IBM Watson portfolio now available through Cloud Pak for Data on AWS are Watson Studio, for preparing data and building models across any cloud; Watson Machine Learning, for running and deploying models anywhere; and Watson Assistant, for building conversational interfaces into apps and devices. There is also access to an intelligent data catalog and AI-driven analytics, among other Watson AI services.

Beyond providing access to IBM Watson, the Red Hat OpenShift container platform is a critical piece of the joint IBM/AWS solution. Because Cloud Pak for Data embeds and runs on top of Red Hat OpenShift, it inherits several cloud-native benefits, including autoprovisioning and autoscaling; seamless upgrades; built-in high availability; and common logging, metering, and monitoring.

“OpenShift helps realize these benefits anywhere through containerized services, container management, and orchestration, which can lower IT infrastructure and development costs by up to 38% per application,” says Jim McConnell, manager, partner solution architect at AWS. “By reducing infrastructure management efforts 65% to 85%, Cloud Pak for Data helps customers free up infrastructure and administration resources to focus on more-complex problems.”

In addition, Cloud Pak for Data can be easily extended through AWS's open ecosystem of cloud-native microservices, enabling organizations to augment their AI platform and data pipeline with whatever capabilities are best suited to their use case. OpenShift's container security capabilities, coupled with integration with IBM Guardium, deliver built-in governance and security.

## Customer Profile: A Large North American Telecommunications

### Challenge:

The telecom company wanted to implement data governance enterprise-wide to be compliant with the California Consumer Privacy Act. It needed to build a catalog of its key data in an automated fashion to categorize the data based on its sensitivity.

### Solution:

Starting on the journey to automating its data governance, the telecom company is implementing IBM Watson Knowledge Catalog in Cloud Pak for Data for data scientists and other data users for self-service. IBM partnered with the telecom's vendor management organization, which is now looking to consolidate its large footprint of IBM and other standalone analytics tools into IBM Cloud Pak for Data to provide integrated access to trusted data in a containerized multicloud platform.

### Outcome:

Ensure proper data governance while leveraging data from across the company. Consolidate stacks into a single user experience platform, thereby increasing collaboration, streamlining application management, and optimizing licensing and IT cost drivers.

[Sign up](#) to try Cloud Pak for Data for free on AWS for 60 days, and [follow the instructions](#) in the deployment guide.







## The Bottom Line

The IBM and AWS collaboration overcomes a major impediment to successful execution of an AI road map: the complexity of deploying end-to-end AI capabilities quickly and at scale. IBM Cloud Pak for Data on AWS is available with an AWS Quick Start deployment, which ensures that a secure, comprehensive analytics and AI platform is spun up within four hours. All that is required to be operational is to follow the step-by-step guidelines for a multistep deployment process, and IBM Cloud Pak for Data is set up as a highly available architecture with the option of multiple availability zones.

To get a tutorial on the platform or to test-drive some of its features prior to a Quick Start deployment, organizations can tap Cloud Pak Experiences, which helps build foundational knowledge of the product and requires no installation or deployment to get started.

To learn more, visit: <https://ibm.biz/cpd-aws-quickstart>