



LEADERSHIP BRIEF

# Unlocking generative AI's potential with data

## The reality

**63%**

of global chief data officers report they don't have the right data foundation to pivot to generative AI<sup>1</sup>

## The opportunity

Generative AI could add \$2.6 to

**\$4.4 trillion**

to the global economy annually<sup>2</sup>



Learn how to fuel innovation with data and generative AI.

## Are you ready to capitalize on generative AI?

The beneficial relationship among data, generative artificial intelligence (AI), and humans—all working together to unleash new possibilities in efficiency and creativity—presents an unprecedented opportunity for leaders to transform their organizations. According to [McKinsey Digital](#), generative AI could add the equivalent of \$2.6 trillion to \$4.4 trillion annually across areas including customer operations, software engineering, and research and development (R&D). Just like with machine learning (ML), data is an essential piece of generative AI, placing pressure on business leaders to build the right data strategy. In fact, according to a [2024 Chief Data Officers report](#), 93 percent of chief data officers (CDOs) agree that a data strategy is crucial to getting value out of generative AI.

**“If you don’t have a strong data foundation, you are really going to struggle to be able to do anything beyond clever parlor tricks with generative AI.”**

**Tom Godden, AWS Enterprise Strategist<sup>3</sup>**

## What is generative AI?

Generative AI is a type of AI that can create new content and ideas, including conversations, stories, images, videos, and music. Like most AI, generative AI is powered by ML models—very large models that are pre-trained on vast amounts of data and commonly referred to as foundation models (FMs). Generative AI has multiple public sector use cases, from personalizing customer experience to boosting productivity on routine tasks to improving day-to-day operations.

## Make data your differentiator

The key to unlocking the potential of generative AI is your organization’s own data. Your data is your differentiator. While general large language models (LLMs) can be

used without modification for some use cases, when you want to build generative AI applications that are unique to your needs, your organization’s data is your strategic asset. Data is the difference between a generic generative AI application and one that truly knows your organization and your customer in order to deliver a better, more differentiated experience.

Success with generative AI requires relevant, high-quality data, which means that an integral part of your data strategy should include investing in a strong data foundation in the cloud. According to [McKinsey Digital](#), “...organizations that have not yet found ways to effectively harmonize and provide ready access to their data will be unable to fine-tune generative AI to unlock more of its potentially transformative uses.”<sup>4</sup>

A strong data foundation for generative AI includes a comprehensive range of services to store and query data at scale, break down data silos, and ensure data is secured and governed. With Amazon Web Services (AWS), you have access to:

- The industry’s most comprehensive portfolio of data, ML, and AI services, with the ability to build and scale generative AI applications with FMs using your organization’s data
- Data integration capabilities so you can easily connect and apply data from across your business to your generative AI applications
- End-to-end governance capabilities to help your teams become more productive and innovate responsibly faster

Navigating the complexities of generative AI becomes simpler when leaders start with a use case aligned with organizational goals. Think big about the opportunities, but start small with problems that cause day-to-day irritations for your employees or customers. Identify the data that you need to solve that one use case and grow from there. Here are some of the top generative AI use cases:

- **Improve the customer experience** with chatbots, virtual assistants, and conversational analytics to analyze customer feedback and improve personalization

- **Boost employee productivity** by creating employee assistants to quickly and easily find accurate information, accelerate application development with code suggestions, and automate report generation
- **Enhance creativity and content creation for communications and messaging** to generate personalized emails, informational scripts, or educational content based on certain inputs and constraints
- **Accelerate process optimization and improve business operations** with automated document processing, data augmentation, and supply chain optimization

## AWS at work

- [INRIX](#), a global provider of transportation data and analytics, is building a new solution—centered on Amazon Bedrock—that will deliver up-to-date, real-time information to help traffic and safety engineers understand where, when, and why something is happening on our streets—and what to do about it.
- [RTVE](#), the public broadcaster in Spain, used generative AI tools including Amazon SageMaker to create 30,000 pieces of customized content in two hours during the 2023 Spanish general election.
- The town of [Swindon](#) in the UK used [Amazon Translate](#) to create a document translation service that saved 99.96% on translation expenses. Now, [Swindon is piloting Amazon Bedrock](#) to provide residents easier to read information, complimented with imagery for comprehension.

## Put data at the center of your generative AI approach

There has never been a more exciting time in modern technology. Innovation is accelerating everywhere, and the future is rife with possibility. But if you want to see success with generative AI, it's all about high-quality data and investing in the right data foundation that turns your data into a differentiator. With AWS, you can build a data foundation that gives you a competitive advantage when it comes to generative AI.

## Next steps

To learn how you can unlock the potential of your data and build for the future with AWS data services:

- 1 Be sure to read and share our [The generative AI advantage, A leader's guide to using data as a differentiator](#).
- 2 Learn more about [fueling innovation with data and AI](#).

AWS works with more than  
**2 million customers**  
 to solve some of the most complex  
 data problems in the world



1 "CDO Agenda 2024: Navigating Data and Generative AI Frontiers," AWS for Data, 2023  
 2 "The economic potential of generative AI: The next productivity frontier," McKinsey Digital, June 14, 2023  
 3 "Generative AI is the Answer: What Was the Question?," AWS Executive Insights  
 4 "What every CEO should know about generative AI," McKinsey Digital, May 12, 2023  
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