



Why your business needs ML-powered search



INTRODUCTION: THE TRADITIONAL ENTERPRISE SEARCH PROBLEM

Your organization is only as productive as its knowledge base and insights

The key departments across your enterprise—engineering, research and development, IT, customer service, sales and marketing, finance, and HR—require specific information to perform their roles. Knowledge is integral to developing those business insights. However, there are hard costs associated with the time employees spend searching for information or acting on inaccurate information.

A survey conducted by The Economist Intelligence Unit found that employees spend 25 percent of their time searching and gathering the information they need to do their jobs.¹ These types of distractions frustrate employees and take time away from the higher-value work.

Why is traditional enterprise search failing?

Across the modern digital workplace, hidden sets of knowledge are amassed in data silos that range from being useful to essential to crucial. These volumes of valuable data comprise structured data, expressed in rows and columns, or unstructured data, including text documents, webpages, images, and audio and video files. These unstructured datasets are spread throughout many organizations' data silos, making it more difficult to search and analyze information for actionable insights that lead to better business decisions.



SOLUTION: INTELLIGENT SEARCH

The challenge of searching unstructured data

Finding critical information and accurate answers that reside in unstructured data requires organizations to adopt intelligent search. Traditional enterprise search relies on keyword matching and other rule-based methodologies. Intelligent search utilizes machine learning (ML) technologies, such as natural language understanding (NLU), to comprehend search query intent and content meaning across structured and unstructured data.

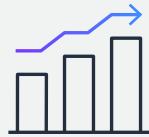
Deploying intelligent search helps companies operate more efficiently while reducing their costs. For example, a Fortune 500 global bank could quickly detect and interpret regulatory rules with intelligent search capabilities. This, in turn, expands the bank's compliance coverage and achieves a greater degree of transparency in its regulatory process.

What is the process for extracting hidden insights?

To successfully overcome insight extraction challenges, organizations can deploy artificial intelligence (AI) and ML technologies, such as NLU and deep learning.

Amazon Kendra delivers powerful natural language search capabilities by enabling end users to easily pinpoint the exact information they need. ML-powered intelligent search technologies deliver actionable insights to the enterprise across four important benefits.

Key benefits driving the wide adoption of intelligent search



1. Unify knowledge bases and increase productivity



3. Accelerate research and development



2. Improve customer interactions



4. Minimize regulatory and compliance risks

1. Unify knowledge bases and increase productivity

To avoid the tedious, time-consuming process of seeking out information from disparate content repositories, organizations can unify and index all of this content. Intelligent search enables teams to ask questions and get answers quickly by analyzing content from a variety of sources and accessing the most relevant information.

Thanks to its natural language capabilities, intelligent search can also accurately understand the end-user query, such as keywords or natural language questions, for more precise answers. **Amazon Kendra** uses incremental learning to optimize search results based on end-user search patterns and feedback, providing secure user-based results filtered through enterprise and repository access controls.



Gilead Sciences, Inc. is a research-based biopharmaceutical company focused on the discovery, development, and commercialization of innovative medicines. Since launching its (Amazon Kendra) intelligent search tool, its users have been able to substantially reduce manual data management tasks and the amount of search time required by approximately 50 percent—fueling research, experimentation, and pharmaceutical breakthroughs.

“Amazon Kendra is a turnkey AI solution that, when configured correctly, is capable of spanning every single domain in the organization while being straightforward to implement.”

Jeremy Zhang, Head of Advanced Analytics, Gilead Sciences, Inc.

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2. Improve customer interactions

Today, customers demand anytime, anywhere support through Q&A chatbots and customer web searches. Relevance tuning is one of many factors that impact search results for your users. With Amazon Kendra, customers can fine-tune search relevance based on key business priority signals like document freshness, specific authors or line of business, or authoritative data sources.

Additionally, customer contact centers can run more efficiently while reducing costs by employing smarter, more intuitive self-service bots, frictionless document access, and other agent-assist solutions that enable customer agents to resolve service requests faster and provide better customer experiences.

Adapting to an intelligent search-based user experience, agents are able to quickly find tips, solutions, and insights to inform their troubleshooting. This results in fewer support calls from customers, creating an overall increase in the satisfaction index and increased retention.



Magellan Health is a next-generation full-service pharmacy benefit manager (PBM) that moves beyond basic services to help customers and members solve complex pharmacy challenges.

“We chose Amazon Kendra to build a secure and scalable agent assist solution. This helped call center agents and the customers they serve quickly uncover the information they need. Since implementing Contact Center Intelligence (CCI) and Amazon Kendra, early results show an average reduction in call times of about 9-15 seconds, which saves over 4k hours on over 2.2 million calls per calendar year.”

Brian Lichle, Senior Director of Software Engineering, Magellan Rx

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3. Accelerate research and development

ML-powered intelligent search can be utilized to access prior work that's buried within corporate data sources. Amazon Kendra searches through data, pinpoints the exact information needed, and helps fast-track the process of delivering actionable insights. By leveraging the speed and accuracy of intelligent search, scientists, subject matter experts, and developers can accelerate research and development and spend less time searching and more time innovating.



3M is a Minnesota-based multinational corporation that produces adhesives, medical products, and much more.

“At 3M, science is at the heart of everything we do. For us, R&D is the heartbeat of 3M; we invest deeply into the science that makes 3M strong. That investment is the key that enables us to introduce over 1200 new products every year. When our material scientists lead new research, they need access to information from prior relevant research—information that’s buried in the many patents we hold in our huge knowledge base. Finding the right information is often exhausting (but not exhaustive) and time-consuming. To address this problem, we decided to use Amazon Kendra, a powerful new AWS offering. Kendra lets our scientists find the information they need by handling natural language queries quickly and accurately. With Kendra, we expect our engineers and researchers will find information much faster than they did before we used Amazon Kendra.”

David Frazee, Technical Director, 3M Corporate Research Systems Lab

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4. Minimize regulatory and compliance risks

Highly regulated industries spend millions of dollars and many hours maintaining corporate compliance and avoiding hefty regulatory fines for themselves and their customers. To accelerate and improve policy enforcement processes, compliance officers can use intelligent search to find the right policy rules published across hundreds of diverse regulatory websites with pinpoint accuracy. This enables enterprises to act intelligently and proactively and maintain corporate credibility.

Success story: **Global financial services leader**

For example, a global financial services leader operating across 50 countries was able to reduce required cash reserves by half and free up large working capital by applying intelligent search to its process of regulatory monitoring and policy compliance.





MIGRATION TO INTELLIGENT SEARCH

The intelligent search differentiator: Engineered cloud-first, powered by machine learning

ML-powered intelligent search as a service can be implemented quickly to bypass adoption barriers. Since no special customization or tuning is required, there is no need for a heavy capital expenditure before implementation or continuous manual reviews and calibration. The technology can be applied out of the box to a wide range of use cases across any domain—all while delivering actionable insights extracted from any knowledge repository in the enterprise. Amazon Kendra delivers on-demand intelligent search with an answer-oriented experience powered by ML.

ML-powered search with Amazon Kendra enables higher relevance and higher quality results with seamless implementation:

- Delivers relevant answers and documents to users without needing content curation, query customization, or other forms of upfront tuning
- Utilizes 100+ native and partner-developed connectors to simplify content indexing
- Extracts more relevant answers from keyword and natural language queries
- Optimizes search results continually with incremental learning based on user search behavior
- Builds fully functional and secure search applications in a few clicks with Amazon Kendra Experience Builder, no ML or coding experience required

GET STARTED WITH INTELLIGENT SEARCH

Questions to consider when evaluating intelligent search

- How should we evaluate a new search technology like Amazon Kendra and compare it with what we use or know?
- How do we determine our readiness in migrating to or implementing intelligent search?
- How should we establish the total cost of ownership (TCO), the business value, and the cost-benefit analysis around intelligent search implementation of our identified use cases?

We encourage all stakeholders and champions of innovation at knowledge-driven organizations to access [An Essential Primer on Enterprise Search Evaluation](#) for help getting started.

Learn more about intelligent search here ›