

**AI SYSTEMS FOR MANAGING CORPORATE KNOWLEDGE
IN LARGE ORGANIZATIONS**

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Traditional keyword search proves ineffective due to synonyms, abbreviations, and the inability to process scanned files. AI knowledge management systems offer a comprehensive solution by integrating documents from multiple sources, applying OCR, and creating semantic embeddings for meaning-based search. An AI assistant further enhances usability by answering employee queries based on internal data. Practical applications include faster document search, automated contract analysis, and improved onboarding processes.

In any large company, documents pile up over time: contracts, reports, instructions, proposals, technical guidelines. These files are stored in different places – on corporate drives, employees' personal computers, and cloud storage. As a result, finding the right document becomes a real problem. According to McKinsey Global Institute, employees spend an average of 1.8 hours per day just searching for information [1]. For a company with 200 employees, this results in significant financial losses for the company each year. The problem gets worse as the company grows, because the number of documents grows faster than the company can manage them.

Traditional keyword search does not handle this well. An employee may phrase a request differently than the document is written, use synonyms or abbreviations – and the system simply will not find the right file. Another problem is scanned documents and contract images, which regular search cannot read at all. Because of this, employees either spend a lot of time searching manually, work with outdated information, or constantly ask colleagues for help.

AI knowledge management systems solve this problem in a complete way. These systems automatically collect documents from all sources into one storage, read text even from scanned files using OCR, sort documents by type, and turn their content into vector representations called embeddings (*Figure 1*) [2, 3]. This makes semantic search possible: the system understands the meaning of a request, not just looks for exact word matches. On top of this works an AI assistant that answers employee questions based on the company's own documents - basically a company version of ChatGPT, trained on internal data. A platform like this was built and deployed in a real business environment by the author of this paper.

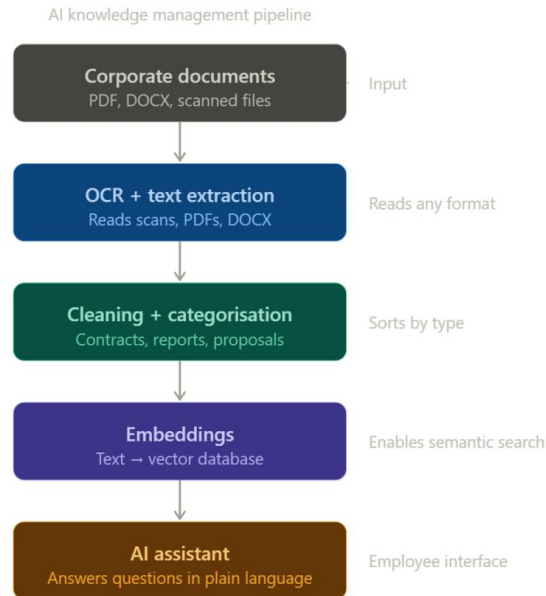


Figure 1 – AI knowledge management pipeline:
from raw documents to employee interface

There are several practical ways to use such systems. The first and most obvious one is document search. An employee simply asks: "Find the contract with client X" or "What are the rules for business trips?" – and gets a clear answer in seconds, without going through folders manually. The second use case is working with contracts. The system automatically pulls out key information from agreements: amount, date, duration, payment terms. This lets employees instantly answer questions like "Which contracts end this quarter?" instead of reading through dozens of documents by hand. The third use case is training and onboarding new employees. Instead of pulling colleagues away with basic questions about company processes, a new employee asks the AI assistant and gets an answer right away based on internal guidelines. According to SHRM, this can reduce onboarding time by 30–40%.

To measure how well this works, an experiment was done using a set of corporate documents including DOCX files, text-based PDFs, and scanned PDFs. Two methods were compared: traditional keyword search and semantic search based on embeddings. The results are shown in the table 1 below.

Semantic search was 3.8 times faster and raised accuracy from 54% to 84%. An important point is that, unlike keyword search, it also works with scanned documents through OCR, which makes much more of the company archive available. These results match McKinsey data: AI knowledge management systems reduce information search time by 35–40% and improve employee productivity by 20–25% [1].

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Table 1 – Comparative analysis

Search method	Average search time	Accuracy
Keyword search	3.2 min	54%
Semantic search	50 sec	84%

From a financial side, implementing an AI knowledge management system requires initial investment, but the savings from reduced wasted work time typically cover these costs within a short period. According to Gartner, companies that adopt such solutions report significant return on investment within the first two years [4]. Onboarding savings add to this: according to Deloitte, companies using AI assistants for staff training cut onboarding costs by 30–40%.

That said, results depend not only on the quality of the algorithms but also on how well the document processing is set up. If source files are poorly scanned or stored in unusual formats, search quality will drop no matter how powerful the AI model is. Another real barrier is employees resisting change. Experience shows that the most effective approach is to start with the most painful tasks where the benefit is clear right away, and then slowly expand the system to other processes.

In conclusion, AI knowledge management systems deliver real value for organizations – they simplify document search, improve work with contracts, and speed up employee onboarding. As AI technology continues to develop, such systems are likely to become a standard part of how large organizations manage their knowledge.

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