USU

Why You Still Need a Knowledge Base, Even with AI

Avoid AI errors and deliver accurate answers with the USU Knowledge Management.

The Illusion of Perfect AI

Imagine asking a question and receiving the perfect answer from AI within seconds. Sounds tempting, right?

With AI experiencing a major surge in popularity, many believe it will soon solve all our problems. Companies are increasingly relying on AI to automate processes and boost efficiency. Visionaries like Mark Zuckerberg paint a picture of a future where AI eliminates misinformation, solves complex issues, and frees us from everyday challenges.

But reality often tells a different story. Many have experienced the frustration of AI-based chatbots failing in customer service. What begins as a simple interaction often leads to confusion, misunderstandings, and unsatisfactory responses.

There are striking examples of just how error-prone these systems can be. The **Handelsblatt** reported on a chatbot that unexpectedly started criticizing its own service provider, shaking customer trust. In another case, a chatbot mistakenly sold a car for a fraction of its value – leaving the buyer thrilled and the seller shocked.

These incidents highlight how unreliable AI can be without the right foundation. According to a recent **Capterra** study, 43% of companies using AI in customer service fear it might erode customer trust. Why does AI fail in such spectacular ways? The answer is simple: AI is only as good as the data it's built on.

That's where a knowledge base comes in – ensuring reliable answers and turning AI from a potential risk into a real asset for customer service.

Why RAG Models Often Fail in Customer Service

After seeing how error-prone AI systems can be in customer service, a key question arises: Why does this happen? Why do technologies meant to help often deliver disappointing results?

The issue lies with the models behind these systems, especially Retrieval-Augmented Generation (RAG) models.

RAG models are seen as an advanced solution for generating answers, especially in complex scenarios like customer service. They combine the ability to retrieve relevant information from large data sets with the flexibility to generate a response. In theory, this sounds ideal, particularly in customer service where diverse and specific questions need addressing. However, in practice, RAG models often show weaknesses that can severely impact the quality of customer service.

To understand why RAG models aren't always reliable, we need to take a closer look at how they function.

How Does a RAG Model Work?

Think of the RAG model as a two-step process. First, a search function filters relevant information from a vast database. This information then forms the basis for the AI – generated answer in the second step. The system isn't reliant on static knowledge; instead, it dynamically pulls from various data sources. This allows the AI to respond to a wide range of questions with tailored answers.

However, the system's weakness lies here: both the search and the answer generation are not deterministic. This means that results can vary, even for identical queries – a challenge in customer service where consistency and accuracy are crucial. Customers expect precise and consistent information, something the RAG model doesn't always deliver.
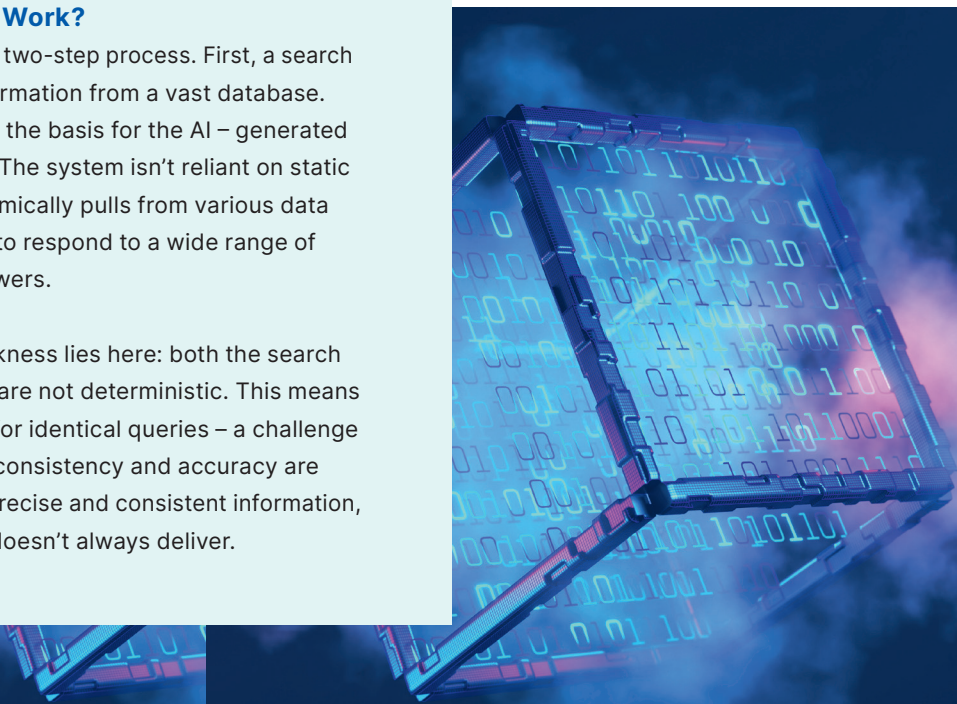
Why Do RAG Models Fail in Practice?

In reality, RAG models often fall short, especially when the underlying data is incomplete, contradictory, ambiguous, or flawed. Imagine a customer asks about the return policy for a product purchased during a special promotion. The RAG model searches the knowledge base and finds the general return policy: "Our return policy allows for a 14-day return period."

At first glance, this answer seems correct. However, it doesn't account for the specific conditions of the promotion, which may have a longer or shorter return window. Why is this crucial detail missing? Perhaps it wasn't adequately documented in the knowledge base or was overlooked in the search process.

The result: the customer receives incomplete or incorrect information. While the AI technically provided an answer, it falls short of meeting the customer's expectations, and trust in the service diminishes.

This example highlights a key point: **AI is only as good as the data it relies on.**

> **" RAG-model-based responses can often generate incorrect, insufficient, or unhelpful answers. An AI is only as good as its data, and only as smart as the questions asked.**

Harald Huber
Managing Director
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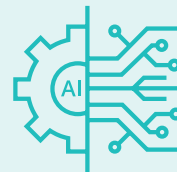
Why a Knowledge Base is Essential

In customer service, every interaction matters – incorrect or inaccurate answers can quickly erode customer trust. A common misconception is that AI can automatically process and deliver all of an organization's knowledge flawlessly. However, this supposed "omniscience" is often overestimated, especially when one critical component is missing: the knowledge base.

The Problem of Missing Context

As mentioned earlier, consider the example of a customer asking about the return policy for a product purchased during a special promotion. Without a well-structured knowledge base, the AI searches only general information and delivers a standard answer: "Our return policy allows for a 14–day return period." Yet, in this specific case, other conditions apply because the purchase was part of a promotion. These crucial details are missing because the specific information wasn't properly documented or linked in the knowledge base. Without the right context and information, the AI provides an unsuitable answer, leaving the customer frustrated.

This is where a precise, contextualized knowledge base becomes indispensable. **Without a high–quality knowledge base, AI lacks the foundation to capture the details and nuances of a request.** The result? Inaccurate or even wrong answers that weaken customer confidence in the service.

How the USU Knowledge Base Makes the Difference

With the USU Knowledge Base, this scenario would have played out very differently. The promotion's special conditions would have been clearly documented, and KAI, the AI assistant in USU Knowledge Management, would have instantly retrieved and incorporated that information into the response. Instead of a generic reply, the customer would have received an accurate, contextualized answer: "Since your product was purchased during our special promotion, you have an extended return period of 30 days."

This type of response builds customer trust and demonstrates that the knowledge base is the key to AI's success in customer service. It ensures the AI accesses the right, up-to-date information, under-stands the context of each request, and delivers precise answers. Only then can AI realize its full potential and secure long-term customer trust.
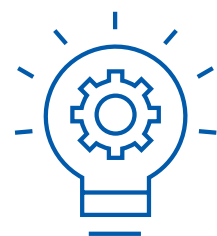
The USU Quality Guarantee

Our recent update to KAI, the virtual assistant in USU Knowledge Management, sets new standards for AI-driven customer service. But what makes KAI stand out? And how does it tackle the challenges that traditional AI systems struggle with?

Accuracy and Completeness: More than Just an Answer

KAI is trained to provide not only precise but also comprehensive answers. He goes beyond the initial question, offering customers additional relevant information. For example, if a customer asks for a store's opening hours, a typical AI might only provide the regular schedule. KAI, however, takes it further by also highlighting special holiday hours – details that are often overlooked but critical for the customer. This level of accuracy builds trust and reduces unnecessary follow-up questions.

Clarity and Usability: Answers that Truly Help

In customer service, it's not just about providing an answer, but how that answer is delivered. KAI ensures his responses are clear, concise, and logically structured, making it easy for customers to understand and act upon. For instance, if a customer asks how to return a product, KAI doesn't just list the return policies. He guides the customer step by step through the entire process – from the return request to the refund. This active guidance boosts customer satisfaction by not only informing them but also helping them complete the task.

Consistency: Building Trust through Reliability

Consistency is key to success in customer service. Customers expect the same reliable information when they make repeat inquiries. KAI ensures just that. If a customer repeatedly asks about the terms for switching contracts, they will receive the same clear and consistent information each time. This prevents confusion, reduces misunderstandings, and strengthens customer trust. In a world where consistency can be hard to find, KAI stands out with his reliability.

Ensuring the Right Context with Promptflows

To maintain the highest standards in answer quality and context, USU uses "Promptflows." This approach ensures that KAI not only understands every inquiry but also responds with precision in the correct context. The goal: to provide answers that are both accurate and relevant, leaving no room for misinterpretation.

How Exactly Does It Work?

Promptflows are much more than simple testing mechanisms. They ensure that KAI can reliably handle even complex and differently worded inquiries. Specifically, each question – or "prompt" – is phrased in 100 different variations and posed to KAI. These variations cover different wording and nuances, ensuring KAI not only understands the core question but also correctly interprets subtle differences in expression.

The key is in the follow-up testing: If KAI provides inconsistent or incorrect information during these diverse tests, we intervene and retrain the AI. This fine-tuning process ensures that KAI continuously improves and delivers consistent, reliable answers, even for unusual or complex inquiries.

Through this systematic review of promptflows, we guarantee that KAI not only provides general answers but also tailors them to the specific customer situation. Traditional AI systems often struggle to grasp the context of inquiries, leading to misinterpretations and inappropriate responses. KAI, supported by prompt-flows, delivers customized answers that are perfectly aligned with customer needs. This not only strengthens trust in the service but also ensures consistently high customer satisfaction.

What Makes Our Solution Stand Out?

With USU Knowledge Management, we take things further. Our solution doesn't just focus on generating answers – it's designed to continually improve them. This is achieved through a close connection to a solid knowledge base, which forms the foundation for all AI-generated responses. KAI is directly trained with these quality-assured data, and the results are regularly reviewed. Our goal is to ensure that every use case is handled with the required accuracy – delivering answers that are complete, correct, useful, and repeatable. This sets new standards in knowledge management and provides a customer service that truly impresses.

How Do We Ensure KAI Accesses the Right Content?

The quality of KAI's answers depends largely on the quality of the underlying data. To ensure KAI always accesses the correct information, we've developed clear mechanisms that regulate access to the knowledge base. KAI primarily relies on the data stored in the knowledge base, which is regularly maintained and reviewed. This guarantees that only quality-assured information is used.

Additionally, we offer the option to limit KAI's application scope. You can configure KAI to access only the internal knowledge base, excluding any external web data. This control prevents KAI from using unverified or misleading information from external sources, ensuring that the answer quality remains high and meets the specific needs of customer service.

With this approach, we deliver an AI-powered solution that not only provides precise and reliable answers but also builds customer trust – an essential factor for long-term success in customer service.
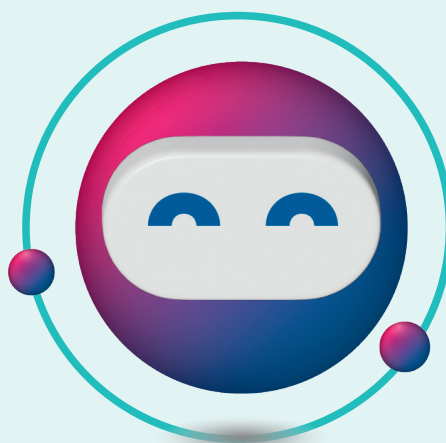
Quality-Assured Answers for Top-Level Customer Service

When chatbots give incorrect answers or cause unexpected errors, it becomes clear that AI alone is not enough. These issues often stem from unreliable data sources and models like Retrieval-Augmented Generation (RAG), which can produce inconsistent results. That's why a well-structured and maintained knowledge base (KB) is essential. It ensures that AI delivers precise, relevant answers by considering the context and specific details of each inquiry. Without a solid knowledge base, AI falls short, leading to mistakes and customer frustration.

By combining a quality-assured knowledge base with targeted AI training and independent result validation, USU Knowledge Management guarantees that your customer service can generate accurate, complete, useful, and consistent answers. Our solution sets new standards in knowledge industrialization and ensures the required level of accuracy for every use case.

A robust knowledge base forms the indispensable foundation for successful and reliable AI applications in customer service.

Next, we will integrate CRM data with the knowledge base to further improve answer quality and enhance personalization. This will enable KAI to provide even more tailored and relevant responses, better meeting the needs of our customers.

USU Knowledge Management: Knowledge management with a quality guarantee.

Learn More About Knowledge Management
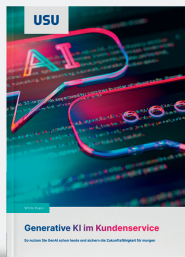
White Paper: Gen AI in Customer Service
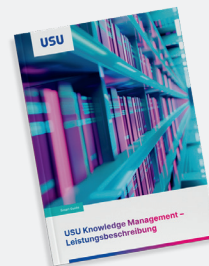
How to use GenAI today for sustained relevance tomorrow

Download now

Webinar: How to Implement GenAI in Customer Service

A Practical Guide for Beginners

Watch now

USU Knowledge Management – Performance Description

Discover the essential features of USU Knowledge Management

Download now

Would you like further information, a live demo, or do you have any questions?
Most questions can best be clarified in direct contact. I look forward to answering your questions and requests. **Schedule an appointment now.**

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