

Whitepaper

# Enhancing Contact Center Efficiency: Leveraging AI for Knowledge Management



## Abstract

In this modern era, contact centers are leveraging the power of artificial intelligence (AI) in their current environment as it plays a crucial role in the exponential growth of business and enhancing customer experiences. Knowledge management is one of the key focus areas to improve agent and customer experiences. Today, AI-enabled contact center operations are now a top priority for leaders and operations managers.

## Key Takeaways

- Key challenges contact centers face while leveraging the best-in-class technology stack
- How contact centers can leverage AI for knowledge management
- Benefits of implementing GenAI in the existing operational ecosystem





## Introduction

Contact centers are one of the leading pillars of service-based industries. By end of FY27, contact centers will be a multi-billion-dollar business. It's expected to grow at a CAGR of double digits. Contact center operations are crucial for gaining and maintaining customer trust on the services or brand, which they have taken up to fulfill their needs.

During COVID-19, contact centers adopted a work-from-home (WFH) model, leading to the rise of distributed call centers across the globe. This removed the restrictions of being confined to a physical office location and empowered agents to offer 24x7 support across various time zones.

India, with the world's largest affordable English-speaking workforce in contact centers, are rapidly evolving and growing as they hire more agents with MOGA courses (BA, B. Com, BCA, B.Sc., MA PGDCA, and so on) certification and degrees. These are non-technical people and come at lower pay packages than the four-year mainstream program graduates in the market, leading to better margins and quicker ways to scale given their easy availability. This is especially true for India as it ranks first in the English-speaking list of countries.

## Key Challenges

At the outset, there are various challenges that middle management face during contact center operations and agent management on the floor, or at home, while ensuring data and information security needed are not compromised in any way. It is the leadership team's responsibility to enable the operations manager and team leads to take tactical decisions like adopting new-technology implementation, onboarding/recruitment changes, process re-engineering and many more, that ensure smoother operations and lower attrition rate.

Leaders often grapple with the intricacies of implementing innovative technologies within the contact center ecosystem, while anticipating the promised benefits and operational efficiency gains. Some of the key technologies being considered or implemented include:

### AI and Machine Learning (ML):



Utilizing AI and ML algorithms to enhance various aspects of contact center operations, such as predictive analytics for customer behavior, intelligent routing of inquiries, and automated response systems.

### Chatbots and Virtual Assistants:



Implementing chatbots and virtual assistants to handle routine customer queries, providing quick and efficient responses, and freeing up human agents to focus on more complex tasks.

### Speech Analytics:



Leveraging speech analytics tools to analyze customer-agent interactions, extracting valuable insights to improve agent performance, identify trends, and enhance overall customer satisfaction.



### Unified Communication Platforms:



Implementing unified communication solutions that integrate various communication channels, such as voice, chat, and email, to streamline interactions and improve overall customer engagement.

### Customer Relationship Management (CRM) Systems:



Upgrading or implementing advanced CRM systems to centralize customer data, enhance customer profiling, and provide agents with a comprehensive view of customer interactions.

### Workforce Management (WFM) Systems:



Deploying WFM systems to optimize workforce scheduling, monitor agent performance, and ensure efficient allocation of resources based on demand fluctuations.

### Cloud-Based Solutions:



Migrating to cloud-based contact center solutions to improve flexibility, scalability, and accessibility, allowing agents to work seamlessly from different locations.

### Security and Compliance Tools:



Implementing advanced security measures, including encryption and multi-factor authentication, to ensure data security and compliance with industry regulations.

### Data Analytics and Reporting:



Utilizing advanced analytics and reporting tools to track key performance indicators (KPIs), gain insights into customer trends, and make data-driven decisions for continuous improvement.

There are significant benefits to be reaped from the implementation of these technologies including increased operational efficiency, enhanced customer experiences, and a reduction in manual effort, ultimately contributing to the overall success of the contact center.

Contact centers have high turnover rate for agents. The progress of agents is being tracked through multiple SLA metrics, like average handling time (time taken by agent to complete the call), first call resolution rate (customer not reaching out on same problem again in next 7 days), average hold time (time for which customer being put on hold while agent validate data or search a solution for customer query) and many more.

All these metrics play an important role in meeting the SLA defined by service providers. Any non-adherence or not meeting the SLAs on time, leads to a financial penalty that must be bear by contact center running companies while service providers will have to bear with lower NPS scores and more dissatisfied customers.

For example: the first point of interaction for a customer is being welcomed by the interactive voice response (IVR) process, which validates the customer's identity and the products/services subscribed. The IVR will guide them with further troubleshooting steps. If the problems are fixed over IVR, the call moves to a feedback/survey response and concludes. If the problem persists, the IVR is passed on to the call agent for further assistance.

With the call agent, customers can raise queries and concerns that are more technical in nature and requires technical expertise for resolution. Agents take time to address, which impacts customer experiences, resulting in lower NPS. This is where generative AI (GenAI) and conversational AI can come to use and help augment knowledge management (KM).

## GenAI Implementation in Knowledge Management

KM is a repository of documents which have detailed step-by-step resolution for all kinds of technical queries that are frequently occurring in the product/services. These documents are prepared and managed by technical experts. The number of such documents are quite high and requires more time for the agents to identify relevant information that can provide resolution while on the call.



GenAI enhances the agent's assisting capabilities by generating real-time suggested responses and actions. This is summarized from the company's repository of knowledge content that ensures faster, more accurate actions. Chatbots are usually the preferred option in contact center operations today to get a desired output from different knowledge management documents via a query/prompt. Conversational AI is another option where customers can interact via chat or email and the AI generates responses for the resolutions that customers need to follow.

KM is a critical element of daily contact center operations and helps reduce manual effort. With help of conversational AI, contact centers team are reducing workforce involved in chat and email. KM is itself converting into industry solution with a revenue of multi-billion dollars and projected to reach a revised size of trillion dollars in next 5 to 6 years, growing at CAGR of double digits, which is magnificent.



Here are some of the tech stack deployments:



### Limited Automation and AI Integration:

Traditional tech stacks are not fully leveraging automation and artificial intelligence (AI) to automate routine tasks and assist agents in handling complex technical issues. This results in slower response times and decreasing customer satisfaction.



### Inefficient Knowledge Management Systems:

If the knowledge management systems are outdated or not integrated seamlessly into the workflow, agents will struggle to access accurate and up-to-date information quickly, impacting their ability to resolve technical queries efficiently.



### Scalability Issues:

Traditional tech stacks are facing challenges in scaling up to handle a growing volume of technical queries. This is leading to longer wait times for customers and increased frustration.

Addressing these challenges often involves upgrading to more advanced and integrated contact center solutions that leverage AI, automation, and analytics. A GenAI based solution will analyze agent query and provide solution from KM portal to address technical queries raised by customers and help in any kind of troubleshooting over the call itself, reducing the average handling time (AHT) and improving NPS.



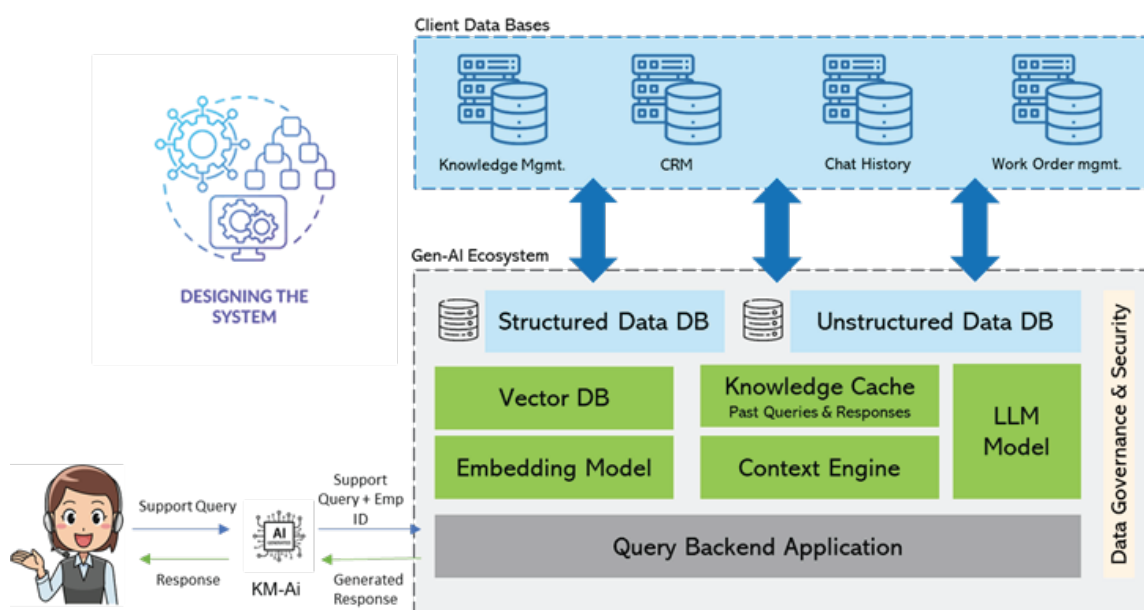


## The Future of Contact Center Operations

Customers need quicker and accurate resolutions to their problems, especially if it can be resolved within the first contact with the service provider. And for service providers to be able to do so, their staff need to be equipped with tools and solutions which bring the solution to the table right away instead of the agents tapping into multiple systems and trying to figure out a solution. This is something which AI driven applications and solutions can help, and business need to focus and understand the right AI technologies that can be deployed to solve this problem.

We have developed and tested our solutions through customer implementations in effectively helping our clients address this business problem. Our solution amasses the existing knowledge, information related to processes, current offers from both structured and unstructured data sources (internal and external) by developing a Vector dB and running through our in-house developed context engine to help get relevant responses (by reducing the hallucination effect in GenAI responses) while leveraging either local LLM and/or open LLM models.

**Figure 1: Shows a high-level architecture view of the solution**



Let's re-create this journey and understand it using below image for better clarification:

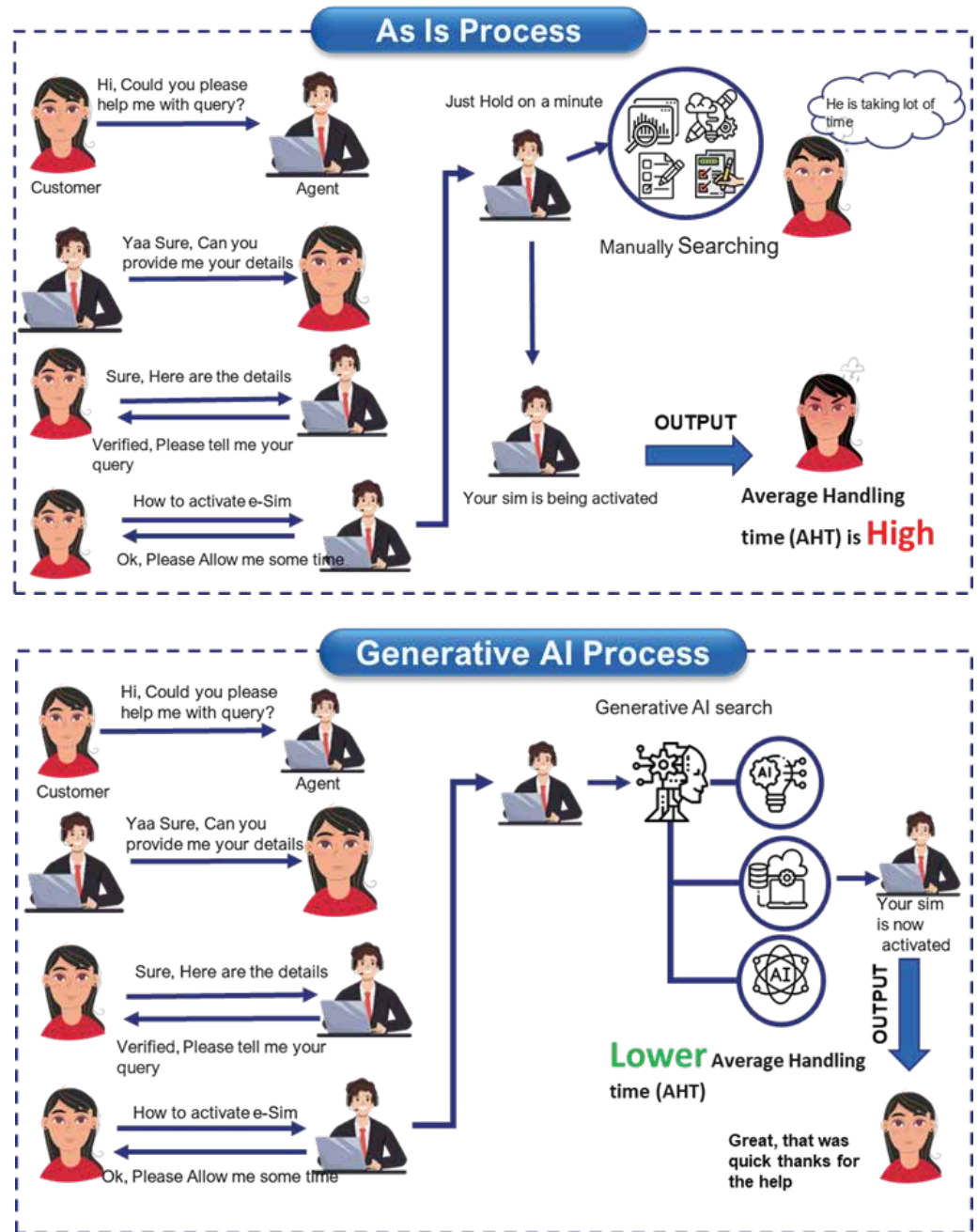


Figure 2: Image Representing Recreation of the Journey

With implementation of this solution, contact centers will see significant improvements in:

- Agent performance
- eNPS scores resulting lower attrition rate
- Hold time / Response time

TechM's Gen-Ai KM solution is getting widely accepted amongst our clients across the globe and we are observing the increasing demand for the same. We strive further to continue innovating and developing further solutions for contact centers operation and bring best of the solutions for our clients and industry.



## Authors



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Anchit is core team member of Yantr.ai platform. He is responsible for managing and designing of core modules of Yantr.ai. He has spent 7 years in the organization managing multiple AI/ML driven initiative delivery including delivering of Yantr.ai in one of the leading Australian Telecom clients. He has been highly appreciated by our customers for delivering and implementing various BI and ML initiatives for them. He has been instrumental in the growth of the Analytics practice within Tech Mahindra Business Process Services. He has a PGDM in Marketing and Operations from Institute of Management Technology, Nagpur and Advance Management Program in Analytics from Indian School of Business, Hyderabad.



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Kishore has over 22+ years of work experience, largely into Data and Analytics. He has been analytics practitioner, developed various analytics platforms / products and worked with global clientele across industries and cultures. He holds a B. Tech degree in Manufacturing Engineering from NIAMT (National Institute of Advanced Manufacturing Technology), Ranchi, and has done his MBA from IIM Calcutta. He enjoys working on innovative projects and have successfully delivered multiple engagements in the AI/ML space. He is passionate about creating learning opportunities and shaping peoples' careers while delivering business results. He is an industry recognized mentor/coach and an esteemed speaker at various analytical/industry forums. At TechM, he heads the BPS Analytics practice.