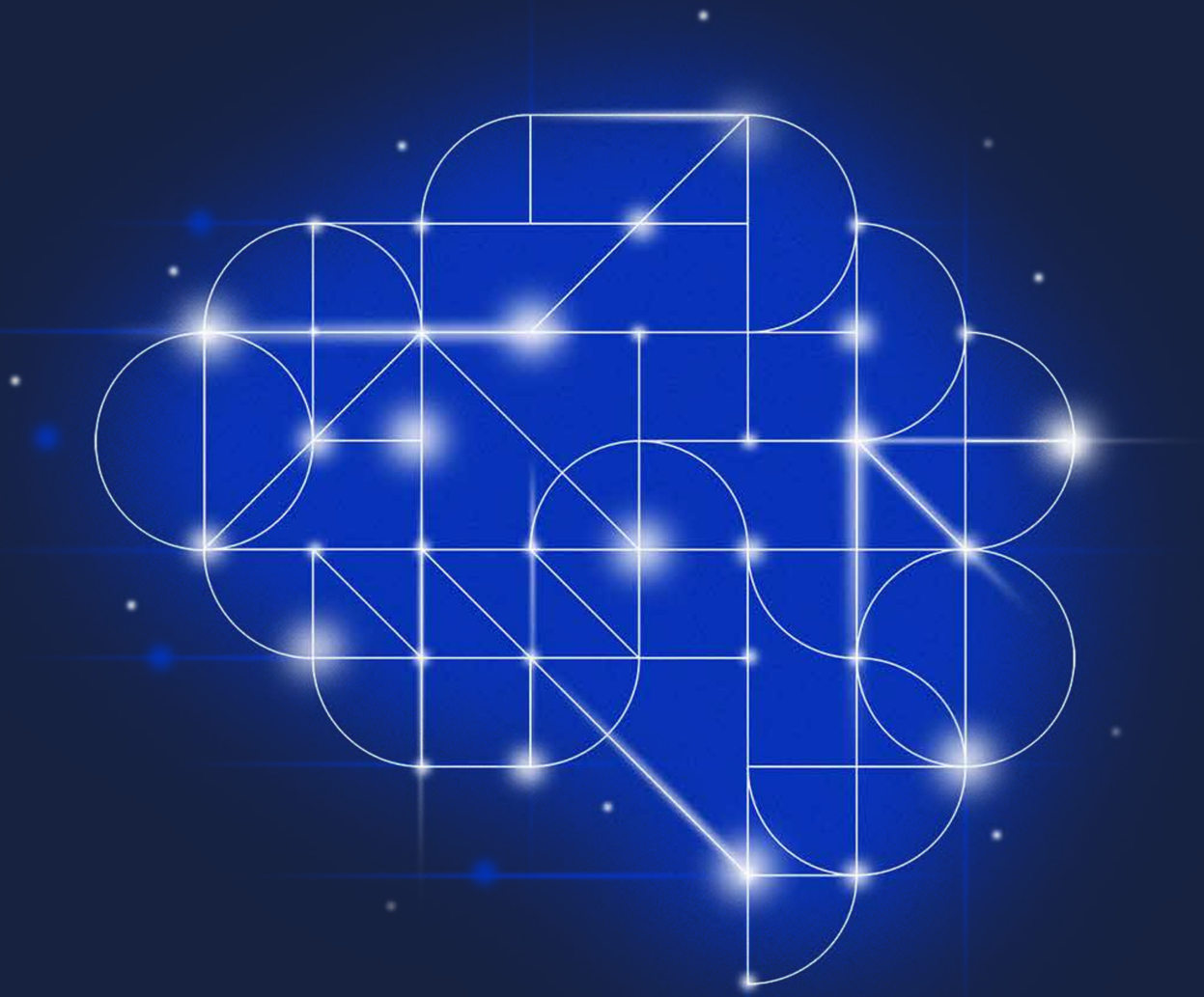
TALKDESK EBOOK

What Is AI and How to Transform the Contact Center in 3 Steps



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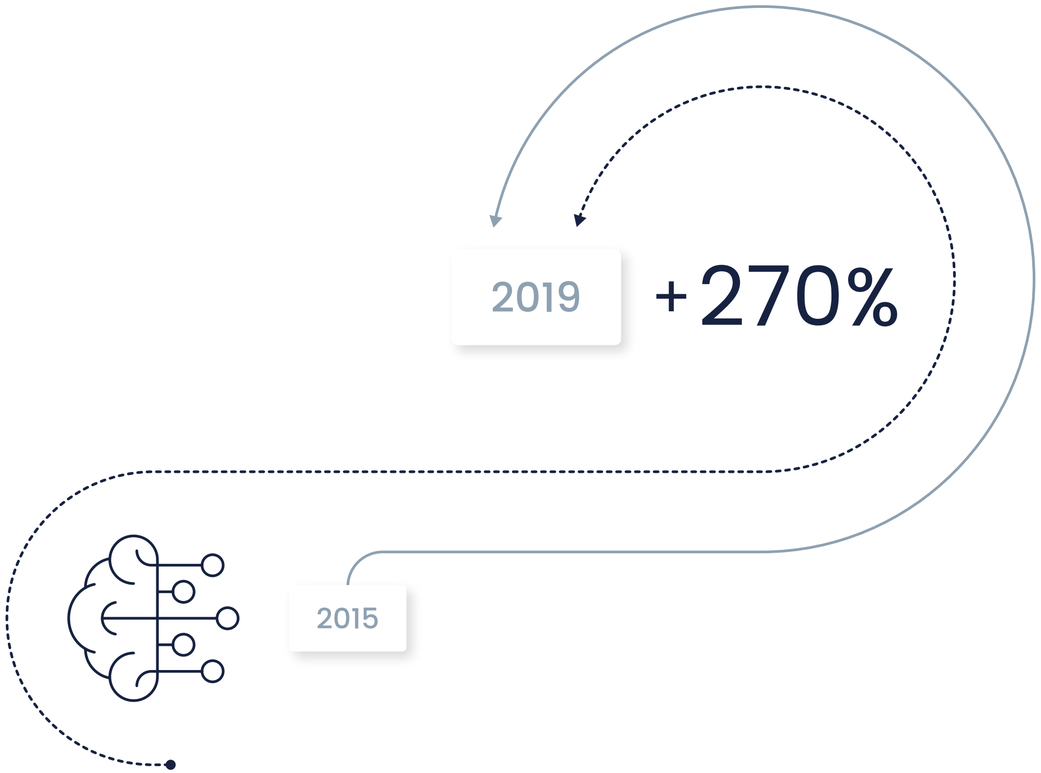
Introduction

According to Gartner, the implementation of artificial intelligence (AI) has grown by 270% in enterprises over the past four years. Despite this growth, there is still considerable confusion about what AI actually is, particularly in relation to Machine Learning, Quantum Computing and even Legacy Automation Technology. AI washing — a ploy by vendors to attach themselves to AI when they do not have a viable AI solution — has become the rage, much like cloud washing was five years ago.

Gartner defines AI as "applying advanced analysis and logic-based techniques, including Machine Learning, to interpret events, support and automate decisions, and take action." AI is the technology that emulates human performance, typically by learning from it.

With so many companies claiming to have AI functionality, what must be included for a technology to really be AI?

This ebook will explore what AI is, its importance for the contact center and how to infuse and harness its power in three steps.



I. What Is (Real) Artificial Intelligence?

What really qualifies a product, service or solution as AI?

The definition of AI has evolved over the past decades. In the 1950s, when AI and data science were still in their infancy, AI experts were looking to solve general problems. Today, AI is more focused on specific problem-solving in specific domains and there is still a very long way for AI to go. AI needs to move from pattern matching and finding the right solution from past experience to solving unseen difficult and challenging cases that need creativity. However, with this evolution has come truths regarding what AI is - and is not - to data scientists:

The ability to make novel discoveries

An AI engine might identify a cluster in high dimensional data that is not easy to be seen or discovered. Medical image processing and retail data processing are good examples of this; finding hidden clusters in high dimensional data.

The need to create generalizable rules for the future

If a system learns from the past with high accuracy, but is not able to generalize to the future; it is not AI. Trend detection is a good example of work that does not fit in an AI world. While trend detection creates value for users, an AI system should be proficiently analyzing millions of what-if scenarios to answer and react in the future.

The capability to transform data

AI systems should be able to transform data, learn, analyze and infer.
For instance, a true AI system might transfer unstructured data (e.g. text, voice, etc.) to structured data (e.g. categories, words, numbers, etc.).

The ability to learn and adapt

AI systems need to learn from past behaviors. For example, we expect an intelligent word processing system to start learning our mistakes, typos, acronyms, the general sentence structure we use, our own personal style and our preferred words. In addition, we expect a smart engine to start suggesting more sophisticated words if we are writing an article while suggesting more technical words when we write a product overview document. Additionally, we expect the same AI engine to identify who is using a laptop after the first 30 seconds of user activities.

The ability to make decisions in unfamiliar situations

Applying lessons learned from the past to the future is only the first step for AI. Intelligent systems should be able to infer from old data to not only predict an upcoming event, but suggest an answer for a new situation that has not yet been encountered. Imagine an autonomous car that has learned to drive in good weather and heavy traffic, that must now learn how to react on an early rainy morning when there is light traffic. Does it drive fast? Slow? What happens if a child crosses the road chasing a ball? A true AI system is able to adjust to the unfamiliar and avoid not only the child, but to expect a child to be behind the next rolling ball.

The ability to work with big data

In an age when data is king, AI is only as good as the data at its core. Bad data drives bad results. As humans, we process millions of data points in a single day from an early age. AI should move toward processing unlimited amounts of data and be able to learn from every piece of it.

The ability to remember and forget

One of the key factors of AI systems is the ability to forget knowledge that is not useful. Knowledge that does not have a purpose should be purged. The entertainment industry learned over time that recommendation systems have to consider and learn that people's interest will shift over time and that you cannot recommend a movie over and over for five years. Such a simple factor shows the value of time in every AI processing module.

The capability to interpret, describe and prescribe

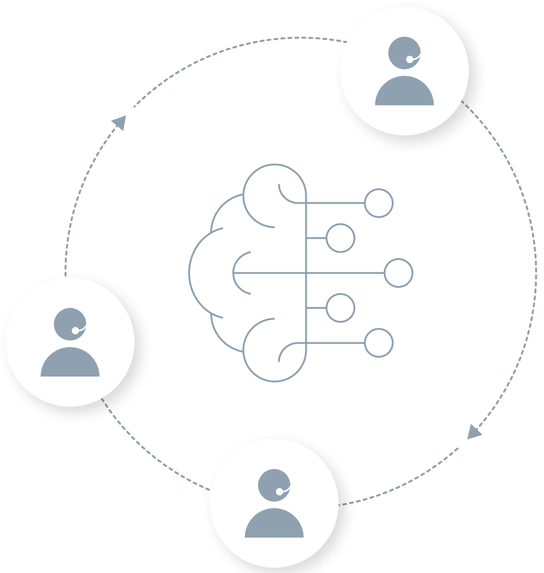
As much as people are interested in AI magic, they are eager to explain the outcome. AI systems with the ability to interpret and explain can take human-computer interaction to the next level. Imagine an AI system which can suggest everyone turn off their AC when they are not home to save energy. Based on available data, it learns that if the AC should shut off at certain times of the day, turn on at others, shut off when it is a certain temperature outside, or blast cold air when the summer heatwave hits.

AI needs to move from pattern matching and finding the right solution from past experience to solving unseen difficult and challenging cases that need creativity.

While the term AI has become more and more common for organizations promising to leverage the capability, real and purposeful AI remains a unique capability and differentiator beyond just enhanced marketing.

II. How Artificial Intelligence Is Transforming the Contact Center

How Artificial Intelligence is transforming the contact center



Customer experience and contact centers, in particular, are great starting points to implement AI solutions since they are a large source of customer information, generating enormous quantities of data that is impossible to process manually.

Additionally, giant leaps in speech processing technology and Natural Language Processing (NLP) are opening big opportunities to enhance contact center accuracy while promoting cost efficiency.

Natural Language Processing, a heralded branch of AI, deals with the interaction between computers and humans. NLP makes sense of the human language in a manner that is valuable and contextual. If a customer says “I am free on Friday at 9:30 a.m.”, NLP understands that the customer is available to talk to an agent during that time slot and not “free of charge”.

Artificial intelligence has been a scientific research area for decades and the latest advances in computing capacity, data collection and transmission and NLP have generated much speculation on how this technology will evolve and what can be achieved in the next few years. However, this trend is not new. AI has lived through hyped periods, sometimes living up to expectations and sometimes not.

AI Promises

With the “AI winter” long gone, promises of a bright future lay ahead for AI technology and its applications across almost every industry and sector, including retail and e-commerce, financial services, healthcare, travel and hospitality, and more. Cloud contact center AI is no stranger to this brave new world, full of opportunities that come in many forms:

Automation: Follows pre-programmed rules to handle simple and often repetitive tasks in an expedited manner. You can automate the most repetitive tasks and let agents focus on delighting customers.

Discovery: Some of the hidden rules in business, like data patterns in large contact center bases, went under the radar due to sampling analysis. Relying on AI to cultivate data from billions of interactions leads to actionable discoveries and customer insights that drive predictive recommendations and optimize agent and contact center efficiency.

Prediction models improvement: Many contact centers have prediction models in place already, but the new frontiers in AI can make them even better and more accurate.

Prescription: AI should recognize new patterns and suggest the next best steps based on that recognition. Today, you can empower agents with intelligent guidance, recommending next best actions to quickly resolve complex customer issues.

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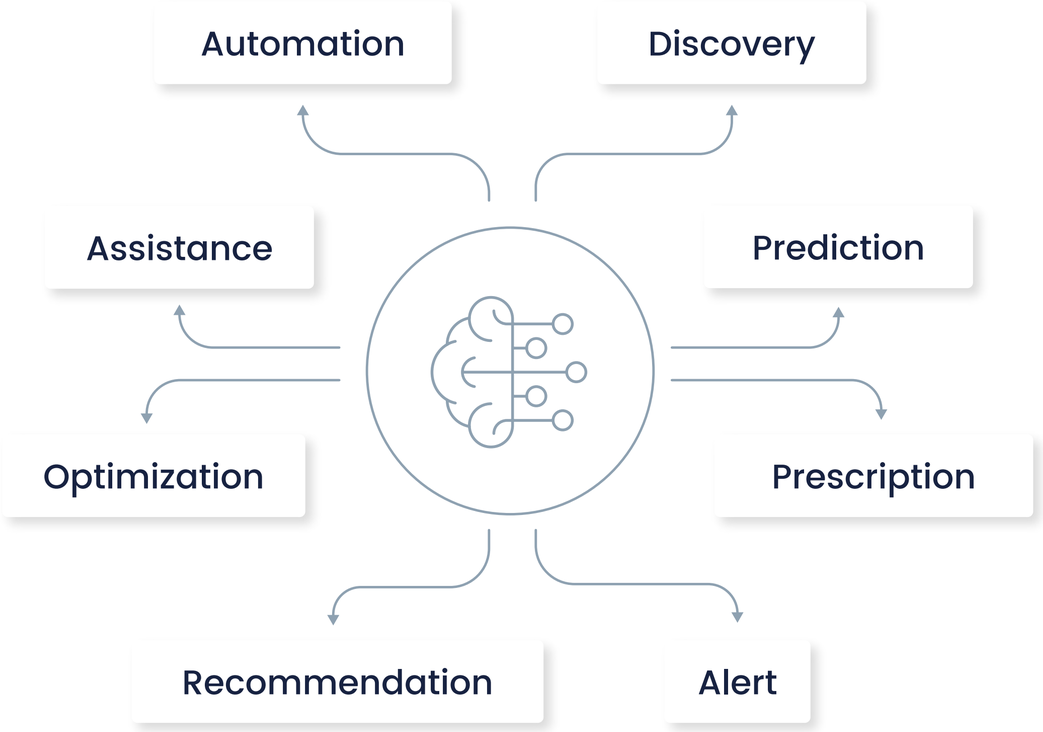
Alert: A contact center is constantly accumulating, processing and producing mountains of data. If something goes wrong, the AI brain should send an alert about specific data points. For instance, you can reduce short and long term training efforts through real-time error identification.

Recommendation: The AI engine should recommend the next steps, or the next best action, proactively delivering information in one simple interface, thus preventing agents from being scattered between several data sources.

Optimization: Recommendations from AI lead to optimization of the main metrics that define the performance of your contact center's day-to-day operation. For example, you can improve Customer Satisfaction (CSAT) and Net Promoter Score (NPS) to reduce agent stress by eliminating search and browsing tasks to simplify agent effort.

Assistance: Directly or indirectly, every persona in the contact center can benefit from AI practical assistance. Contact centers should reduce manual supervision, leveraging automated assistance to trim down agent-supervisor ad-hoc interactions, giving supervisors more time to focus on workforce engagement activities and agents more quality time with customers.



AI software and where can it help

Despite the increase in AI adoption, the complexity of the technology, the implementation uncertainties and disruption potential are still blocking some organizations from full AI implementation. AI must be implemented across people, operations and technology in four different intelligence layers of a contact center in order to leverage its full potential.

Where to implement AI software in the contact center

1. People and operations: You can enhance the end customer experience by infusing AI software to help all key personas within the contact center — provide AI-powered customer information and assistance to agents and feed supervisors with the main KPIs on agent performance. Automation, optimization, outlier detection, routing, marketing automation and virtual agents are all stages of the business operation where AI can help.

2. Technology: You need a powerful contact center AI technology platform if you want to capture quality data. Without one, you can not properly utilize and apply AI. There is no point in adding a virtual agent or chatbot if you simply do not have the right contact center AI technology in place to capture and process that data. AI works on top of a good data platform and for that you need an intelligent infrastructure architecture.

Intelligence layers of AI for contact centers

1. Customer intelligence: It is important to know as much about your customer as you can, even before they call. When you have a lot of information stored in your CRM it allows you to know more about your customer. You must be able to analyze it to understand what they need and their preferences, their demographics, sociographics and even psychographics.

2. Conversational intelligence: It happens at the moment the customer calls and means the extraction of every information taken from the interaction. It can be voice, voice transferred to text and standard text messaging. You should be able to handle all these items, since there is a lot of information from voice that cannot be transcribed into text, such as agony, compassion, pain or being sarcastic. This takes place within the voice channel and not in the text channel.

3. Interaction intelligence: Comprehensive analysis of the customer experience from the moment the customer dials your number. Do you know what the estimated wait time for the call was? Sometimes simple numbers can shed light upon an entire conversation by knowing the complete customer experience. If the estimated wait time was only two minutes, but the actual waiting time was 10 minutes, the customer was likely unhappy when the conversation with the agent began. These data points should not be ignored since they can improve your CX.

4. Contact Center intelligence: Analyze every customer interaction, conversation, email thread and text. Hover above this data and from a panoramic view ask: What is going on in my contact center? How can I improve its entire performance?

AI promises are transforming the contact center, pushing the boundaries for excellence in customer experience. The implementation of AI software in all its different layers can bring sound improvements to contact center personas, operations and technology systems.

III. 3 Steps to Infusing AI in the Contact Center: Crawl-Walk-Run

1. Crawl: How can we enhance IVR performance?

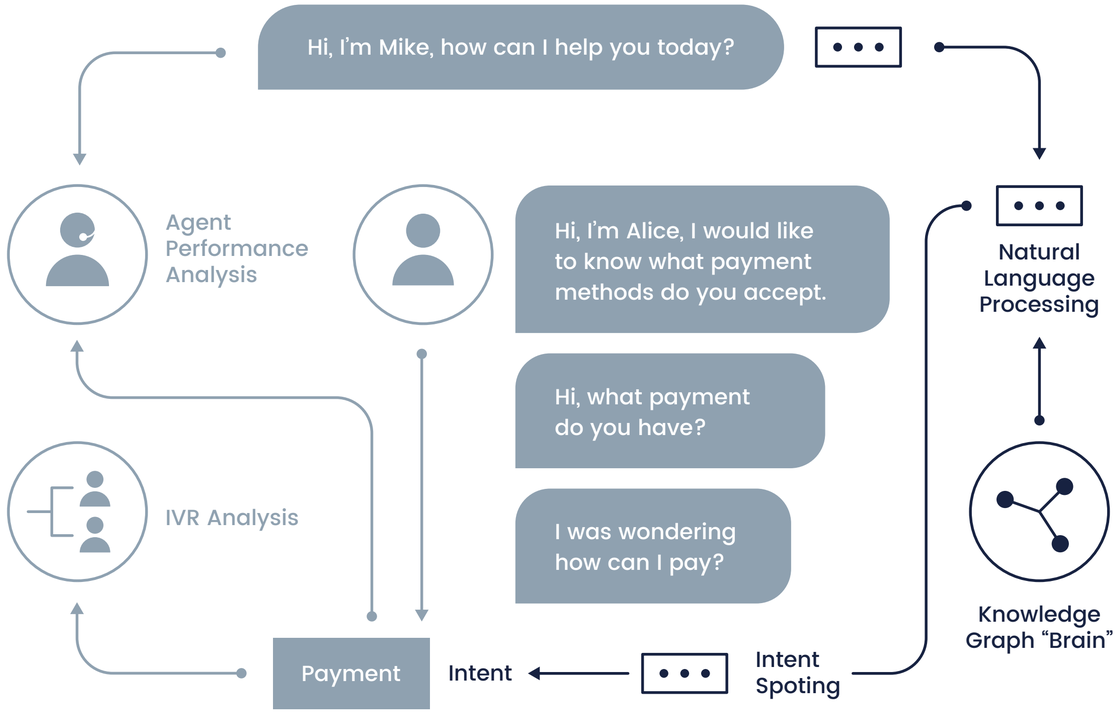
To enhance the IVR performance of your contact center, Natural Language Processing analyzes hundreds of millions of calls to determine why people are calling and how all the sentences coming from the customer-agent interactions can go into one meaning category.

As the example shows, there are many ways to ask the same thing. A robust, comprehensive and sophisticated NLP program, powered by AI, is key to understanding why a customer is calling and route them accordingly.

An IVR without Natural Language Processing will struggle to identify why your customers are calling. Enhanced IVR performance can help you and your contact center by:

Discovering customer intent: Know why people are calling you to improve your entire operation and to have more and better informed contact center agents.

Identifying the best IVR setup (e.g. new IVR exits): Sometimes just adding a new exit or reshuffling position two and three is all it takes. Those couple of seconds in every call can bring a significant improvement at the end of the year.



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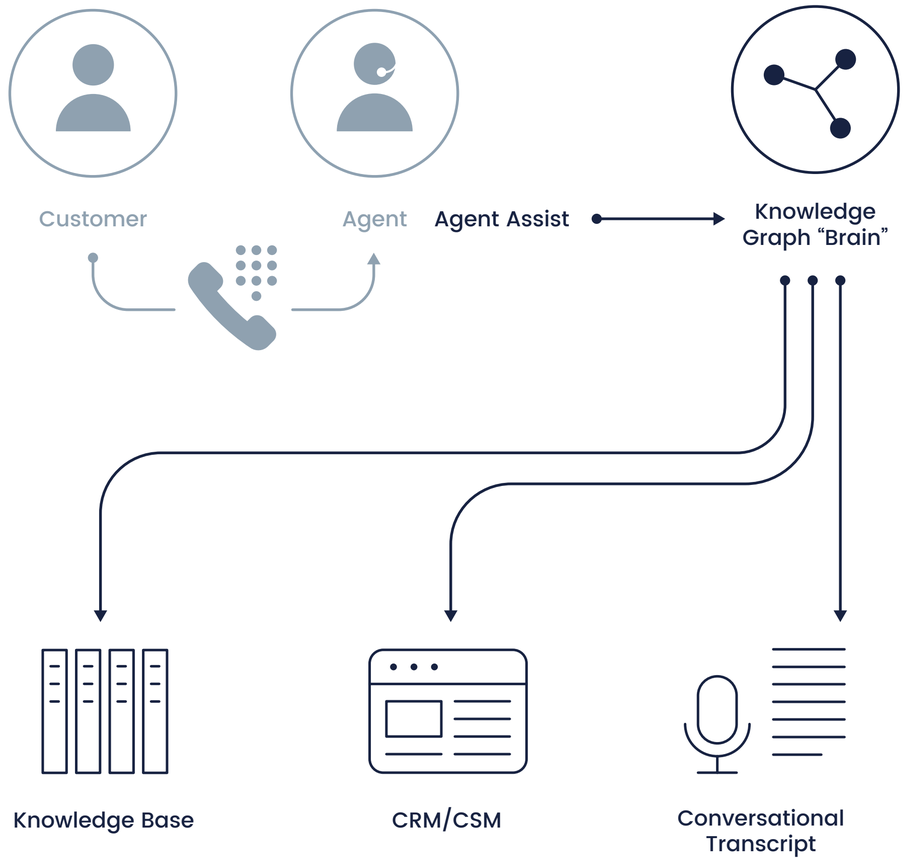
Finding agents in need of coaching: Identify which agent performs better for each topic. A three-month analysis of a contact center can reveal that some agents have better performance on certain topics. This comprehensive data allows you to map those agents to certain topics and look at KPIs such as Average Handle Time (AHT) and estimate the Customer Satisfaction (CSAT) performance, offering routing optimization suggestions that can improve the entire interaction.

Providing training recommendation: An AI-powered IVR can offer training recommendations by identifying which agents are in need of additional coaching.

2. Walk: Enhancing the agent's power with an agent assist

Artificial intelligence can help you enhance agent intelligence and overall responsiveness. Before every call, AI can look at the entire knowledge base, the CRM and every conversation transcript. AI assistance analyses these information sources and, when a person calls in real-time, the voice is transcribed into text. Agent Assist can then browse the knowledge base, the whole conversation and all the available data to fetch the most relevant document on the topic and present it to the agent.



Agents come and go. They do not stay for long. That is the reality of the business and agent training is a hassle. Can AI streamline the agent training process? Can we bring knowledge under the agent's fingertips in a snap? Though the agent might not have any clue about the customer's questions, what if AI can deliver the right information that could help the agent solve the issue in 10 seconds after the conversation begins? An agent assist can help you with:

Real-time actions and quick shortcuts: Reduce the need to leave the customer on hold or having to transfer the call to a different agent or to a supervisor.

Smart notes: Summarize the entire conversation and show the transcript for the agent to accept it or modify it.

Automatic data entry: When someone calls, an agent assist can make the right application pop-up with the name and address of the customer so the agent is not delayed by having to type in any data.

Escalation assistance: It is very painful for the customer when their call is transferred and they have to describe the entire situation all over again. With a powerful agent assist, the complete customer record is summarized, extracted and delivered in just a couple of bullet points to the next agent or supervisor.

Real-time analytics and error detection: the agent assist can monitor the call to make sure the agent goes through the standard protocol and follows the established script. The information extracted from this monitoring can later be used to offer training recommendations that can happen in real-time or after the call.

Crawling through an NLP-assisted IVR is how you know why your customers are calling. The sooner you know this and start improving the way your contact center carries business, the sooner you will get on your feet with AI.

Then comes the first baby steps with an agent assist, where you will experience the empowerment that such a strong AI tool can give to your agents.

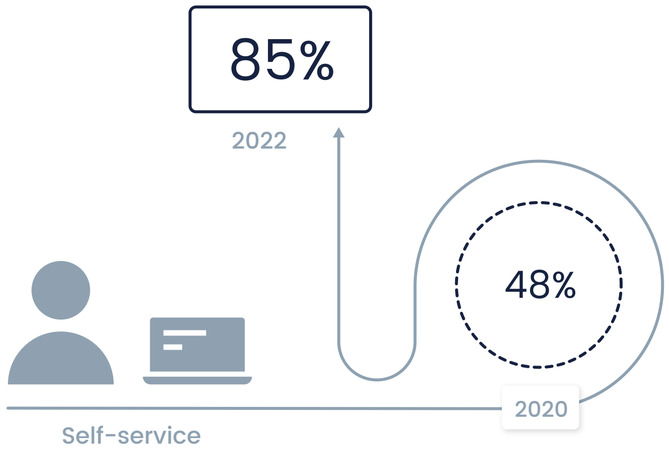
Now you are ready to run with AI.

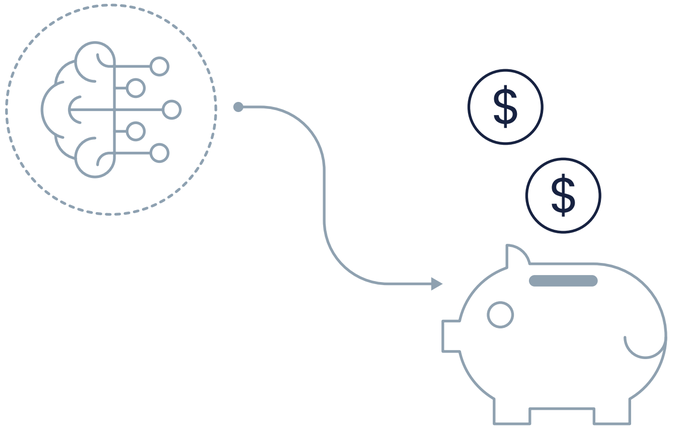
3. Run: Improving customer experience with a virtual agent

“81% of all customers across industries attempt to take care of matters themselves before reaching out to a live representative.” Gartner.

Who is answering calls when your contact center is closed? Who is helping your customers when they have questions and problems outside of business hours? According to Gartner’s 2018 Four Best Practices for Implementing Extreme Customer Self-Service report, by 2022, 85% of customer service interactions will start with self-service, up from 48% today.

From a recent study in Harvard Business Review, “The cost of a do-it-yourself transaction is measured in pennies, while the average cost of a live service interaction (phone, e-mail, or webchat) is more than $7 for a B2C company and more than $13 for a B2B company.” AI-powered conversational assistants, or “virtual agents”, can quickly deliver the answers and outcomes over voice-enabled channels. They provide contact centers with a cost-effective and scalable self-service solution to meet the ever-changing customer needs and provide human-like service, even outside of business hours, to ensure consistent quality in customer experience (CX).





A virtual agent is ideal for solving common issues and automating routine tasks when agents are not available after hours, or to free agents during peak traffic periods, allowing them to focus on more complex issues.

When you already have a deep knowledge base, a strong CRM engine and the conversational transcript, it is time to build a virtual agent that can turn any time into your prime time for great CX.

Your virtual agent is a Robotic Process Automation (RPA), a form of business process automation technology based on metaphorical software robots (bots and chatbots) or AI-powered workers. RPA systems develop the action list by previously watching and learning from the agent performing that task in the application's Graphical User Interface (GUI) to later perform the automation themselves by repeating those tasks directly in the GUI.

Your virtual agent must learn from interactions and suggest improvements to create better customer journeys and smoothly handoff complex customer issues to live agents, leveraging state of the art text-to-speech technology to deliver a natural, human-like service.

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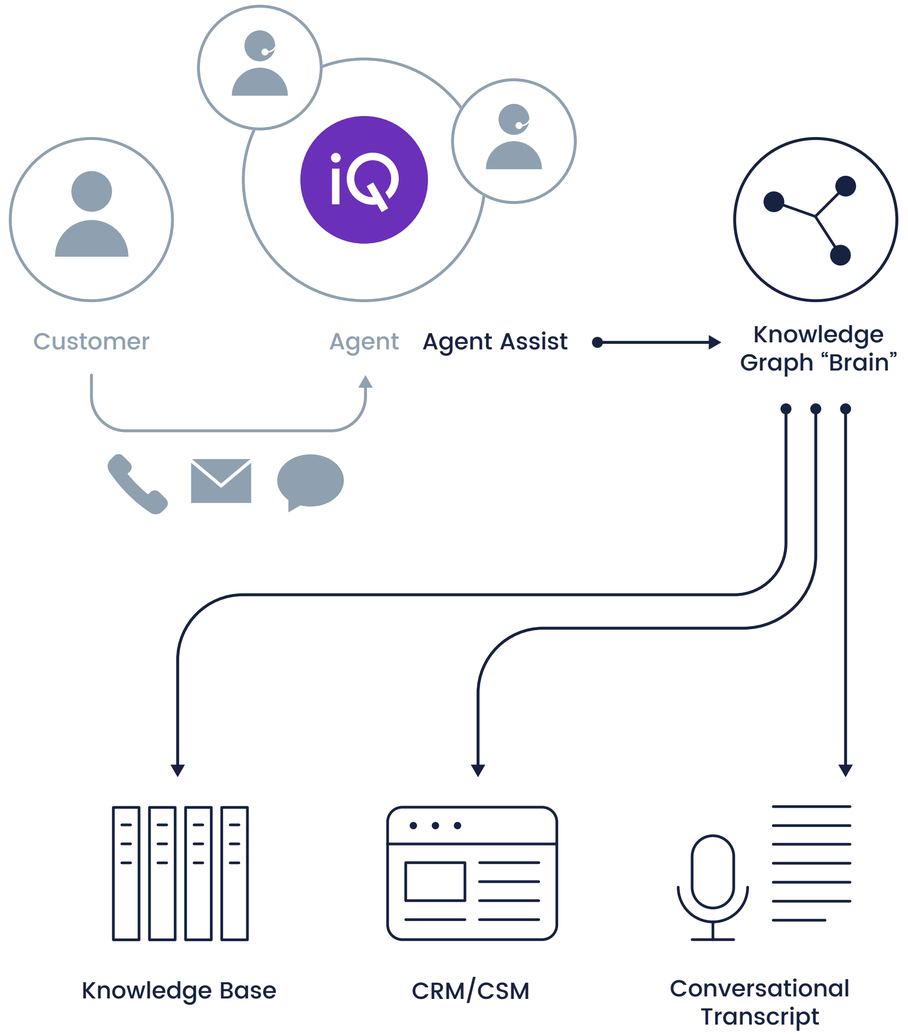
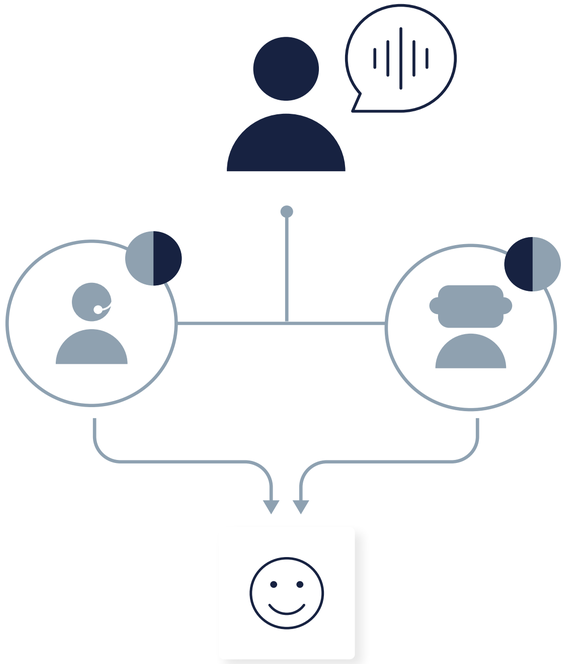


The main benefits of implementing a virtual agent in your contact center:

True 24/7 support: Enable customers to solve routine and basic service issues any time of day, automatically scheduling follow up calls during after-hours interactions. Reduce customer frustration and improve satisfaction by leveraging intelligent voice with around-the-clock conversational support. Create a future where routine tasks are automated and agents are free to solve more complex issues.



Operational efficiency through conversational routing: Analyze customer intent and route to the correct virtual agent capability, thus improving contact center operational efficiency by solving issues effortlessly and with minimum or without any live agent interaction.

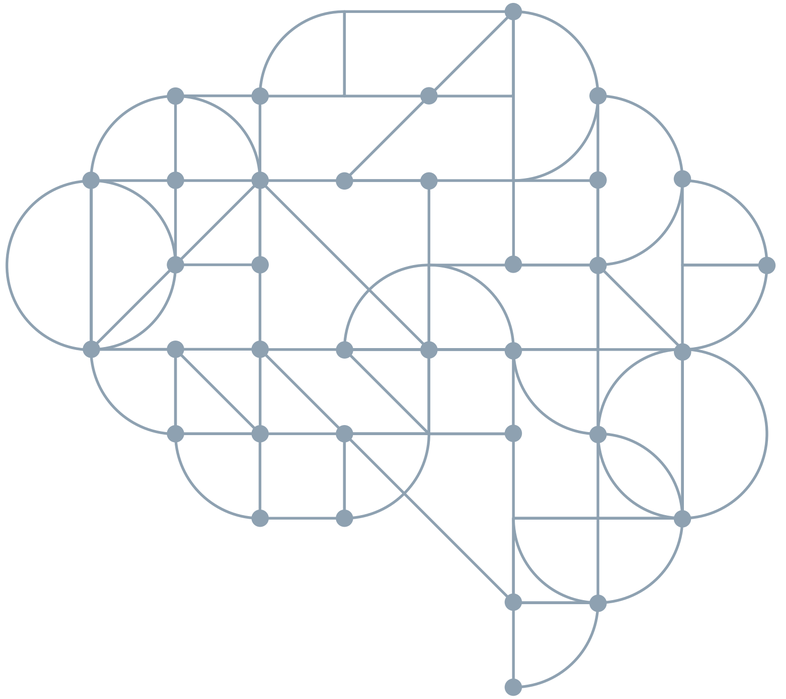
Improve self-service KPIs: Shorten the amount of time required for customers to get answers and resolve issues. Correctly and consistently answer questions to improve key metrics in your contact center such as First Call Resolution (FCR), Average Handle Time (AHT), Average Speed of Answer (ASA) and Customer Satisfaction (CSAT).

Talking to a live agent should always be a fallback option for your customers along their entire contact center journey. The beauty of a virtual agent is to have a 24/7 AI-powered assistant to address the most frequent issues at any time of the day or night. If a customer wants to ask a question, there is always an answer to it.

Conclusion

This AI wave of fast-changing circumstances is the perfect opportunity for CX leaders to be early adopters of cutting edge technology that takes the contact center to the forefront of an AI-powered revolution.

A virtual agent eases the adoption of AI for customer self-service applications, augmenting existing voice channels with predefined skills that can evolve to entirely conversational interactions. Make sure your virtual agent is the right AI-spokesperson to your contact center and delivers self-service that is conversational, intelligent and continuous.



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