



The Intelligent Contact Center

How Conversational AI Enables Enhanced
Call Centers and Customer Service

AMELIA[®]

The IVR Model is Showing its Age

Companies have spent decades implementing Interactive Voice Response (IVR) systems in their call and customer care centers. While the underlying technology has evolved from its genesis in the early 1970s, IVRs' central goal, and their primary interactions in phone-based customer support, remain the same: Collect, virtually queue and ultimately deposit callers into categories depending on their issue, question or required service.

From there, IVRs are programmed to deflect callers to cheaper automated transaction systems, as many and as often as possible, thereby relieving companies of the cost of hiring pricier call center agents to meet demand. IVRs ushered in the collective and enduring cultural experience of people phoning their banks, airlines and hotels, only to be lost in an endless cycle of "Press 1s" and "Press 2s" as callers wait to have their issues resolved, or for someone – anyone – to simply pick up the other end of the line.

Implementing IVRs may have made sense, financially and otherwise, at one point in a company's strategy, and there's inherently nothing erroneous with using this technology to presumably enable quicker categorization and delivery of customer service, and a more scalable user support approach.

Nonetheless, it's clear the IVR model is showing its age.

IVRs are designed to make life easier for the companies that implement them, not customers. In fact, the global pandemic brought IVRs' deficiencies into stark relief, and many companies' customer service postures suffered as a result. With lockdowns and quarantines, people had no choice but to move to all-digital services, jamming call centers with interminable wait times and dissatisfied customers. One [survey](#) found that during the pandemic, more than 80% of respondents stated they experienced higher than normal wait times when put on hold for a customer service issue, and almost half of those respondents refuse to continue to wait for a representative upon receiving messages of "unusually high call volume."



Source: ArenaCX

To augment their IVRs to improve scale and prevent customer satisfaction from nosediving further, companies are implementing Conversational AI solutions, including the market-leading Amelia, in a variety of use cases:

To act as a whisper agent that provides call center employees with all relevant customer data in the background during interactions.

To be the initial first-contact agent in customer calls for faster categorization and when necessary routing to human agents.

To also process various requests and transactions end-to-end.

Some combination of all of these use cases.

In this white paper, we examine the benefits of an enterprise adopting a strategy for what we call the **Intelligent Contact Center**, where companies utilize Conversational AI-powered virtual agents to provide first-line resolution and support for customers, and to augment human employees through AI and back-end automation for more effective agent-customer interactions. The benefits of this hybrid Conversational AI-IVR approach are clear and demonstrate why IVRs, as currently deployed, simply will not cut it in today's hyper-paced digital landscape.

Leading with Conversational AI vs. IVRs for Customer Service

In traditional contact centers, human agents are overwhelmed with consumer questions, inquiries and issues that keep them from doing more valuable work. Call center employees have limited bandwidth, especially during high-volume periods, which was even more pronounced during COVID-19 stay-at-home orders, pushing customers to conduct most business online. The higher the backlog of calls, the more likely a customer is placed on hold. When this happens too often (and for too long), it can directly translate into customer dissatisfaction – and ultimately lost business.

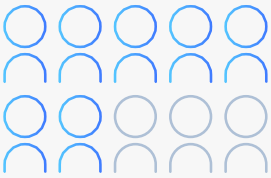
Even in an unlikely best-case scenario – a customer calls a help line and instantly connects to a human representative – what are the odds that the agent will be able to resolve a customer's issue on the first touch? Customers detest hopping back and forth between service calls and agents, and having to repeat the same information each time. This wastes time and it makes customers feel as if the brand isn't listening to their problems or questions, or properly and accurately capturing their information. What's the point of stating your issue every time when you're passed from agent to agent? With such experiences, customers are left asking: Isn't there a better way?

According to one [study](#), by 2022 global businesses will spend more than \$407.1 billion on contact centers to handle customer service issues, up from \$310 billion in 2014. Despite this massive investment in tools designed to help improve customer experiences, customers generally remain frustrated by their call center interactions.

This is not a new trend, and businesses recognize the impact this customer frustration can have on their brands. For example, 7 out of ten consumers say their brand loyalty is influenced by their ability to get [customer service at any time](#), according to Salesforce. To that end, more than 25% of customer service and support operations have integrated Conversational AI across all engagement channels, according to [Gartner](#).

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Businesses that employ Conversational AI and human agents, rather than solely traditional phone-based IVRs, experience improved customer service, improved call times, reduced costs, better compliance and higher agent satisfaction as their agents can take on more fulfilling tasks (as we review with success stories in this white paper). The fundamental difference between the two approaches can be summed up this way: IVRs are all about enterprise efficiency focused on **classification and routing**, whereas Conversational AI is all about customer efficiency focused on **comprehension and resolution**. And while modern IVR technology has improved, overall these improvements have focused on fixing issues with traditional IVRs, and not on changing actual interactions with the customer.

The Problem with Traditional IVRs

We've all experienced scripted and impersonal responses provided by contact center IVRs. These systems are best used for efficiency of the enterprise, not the customer. In other words, they herd customers into buckets by having the customer self-categorize their issue, which places them into a queue waiting for human agents to solve problems, rather than dealing with the problems directly in real-time.

Customers mostly loathe IVRs because they provide an inflexible "listen to all options" approach that ultimately leads to multiple menu levels to drive customers into small buckets. IVRs by themselves offer limited integrations for data collection or back-end execution, and human intervention is always required for complex requests. As of 2018, 66% of contact centers didn't provide any option for customers to move between self-service and an agent, according to a [Call Centre Helper survey](#), which means proactively solving a problem and requesting human support cannot even happen within a single touch.

Modern or upgraded IVRs are good at fixing traditional IVR issues, but that's all. While newer systems are more adept at identifying keywords than older versions, callers are still forced to work within the constraints of decision tree-based process resolution (press 1 for X, 2 for Y, etc.). In most cases, more modern IVRs still must route complex issues to human employees. What good is an automated system that still requires near-constant human intervention and oversight?

Both Customers and Call Center Agents Dislike IVRs

According to [Gallup](#), 86% of call center agents say they do not have the resources or the authority to deal with customers effectively. This problem becomes particularly acute during unforeseen spikes in call volume, as experienced during the pandemic.

In addition, when humans are inundated with active customer requests, there isn't time for them to quickly react to changes in procedures, policies and compliance requirements, or to master information on new products or how to troubleshoot. Hiring new agents isn't easy, either. New agents are often greeted by extensive learning curves, which means contact centers are unable to rapidly adjust to sudden spikes in volume simply by hiring more workers; throwing people at the problem is not the way to address scaling issues.

As a result of these frustrations, attrition among existing call center agents remains among the highest of an information sector job. Employee churn for contact centers is an ongoing challenge – whether for companies that staff their own centers, or for outsourcers/BPO providers hired by companies to deliver customer service. Companies are spending valuable resources finding, hiring and training employees, knowing full well that most will never be around long enough to fully master their systems, policies or products.

Separate from whatever feelings call center agents have about IVRs, customers' IVR perceptions are even worse. IVR inefficiencies force customers to endure longer hold times and queues, slower response times and unnecessary delays from a lack of access to real-time information on inventory, orders, etc. One-quarter of customers give up and then hang up after five minutes, according to [HubSpot](#). More than five years ago, 42% of survey respondents said that they would take their business elsewhere after a frustrating auto-attendant experience through a contact center – and this percentage has undoubtedly gone up during the pandemic. Advanced or upgraded IVRs have not been the solution to this problem. A [Small Business Trends](#) study found that 61% of callers feel that an IVR system has a detrimental effect on the customer experience.



Conversational AI Already Outperforms IVRs

According to a survey conducted by [Fortune Business Insights](#), 83% of companies say that AI is a strategic priority in their path toward better customer experiences and business management. That makes sense, given that Conversational AI is aimed at empowering consumers and putting customer efficiency ahead of company efficiency (and utilizing Conversational AI allows for both, as we'll explain).

Using open conversations with dynamic information extraction, customers are able to work directly with a Conversational AI system to find answers to even the most complex problems. Conversational AI provides flexible disambiguation and clarification, which would immediately flummox IVRs. AI systems can adapt processes to deal with the unpredictable human behaviors, such as unforeseen changes of subject and context.

Unlike IVRs, Conversational AI features extensive data and back-end integrations to enterprise systems. With these integrations, customers can ask questions and receive real-time information, rather than pre-scripted answers from an IVR that relies on live human employees to provide such detail (leading to a call transfer and undoubtedly more time on hold for the customer).

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The entry point into a dialogue with Conversational AI is through what is called a user utterance; that can be delivered via a chat box on a website, a voice call either through a mobile or a home assistant such as Amazon Echo, within a chat app such as Facebook Messenger, or whatever channel preferred by customers. From there, Conversational AI will follow a company's procedures and policies based on customers' inquiries. For example, if a credit card is lost, if an account is being closed, or if a customer wants to open a new account, Conversational AI will have learned and mastered the company's business processes in each of those tasks before ever fielding a customer query.

True Conversational AI uses the latest advancements in Natural Language Processing (NLP) and Deep Neural Networks (DNNs) to [understand and speak in coherent and human-like sentences](#). This allows it to sort through someone's sentence to contextually comprehend the actual meaning and uses that context understanding to prepare its response. If one were to say, "I bought a car yesterday," Conversational AI would sort out that "car" is the noun and "bought" is the verb, but also that in the context of an insurance situation, it is most likely that an existing customer would want to make policy changes (or that a new customer would like a new policy quote).

One key difference between Conversational AI and IVRs is in superior intent recognition capabilities. Conversational AI uses neural network algorithms to detect intent. If a customer says, "I lost my credit card yesterday," Conversational AI will remember its training as a credit card replacement agent. It will know that in the case of a lost credit card, the [customer's intent](#) is typically to deactivate the missing card, get a new card issued and resolve any disputed charges.

For example: If someone calls a [bank](#) and says, "I would like to go paperless, but I lost my credit card yesterday in Boston, and I think there might be fraudulent charges on my account," Conversational AI would not handle those requests in order. It would triage and determine that fraudulent charges are the most important element of the conversation, reissuing a new card is the second-most important element, and going paperless is the least important element. Even the latest IVRs simply cannot take this approach.

There is no limit to the number of tasks Conversational AI can triage. It is able to track and remain aware of context. It can also switch context with a person and be aware of the previous context for later in the conversation. An IVR might be equipped to handle one customer's issue, but not all of them in the most important sequence; more than likely an IVR would need to transfer the multi-part request to a human agent immediately.

Additionally, unlike simple IVRs that are trained to speak off of a script, Conversational AI is able to handle variance in dialogue. For example: If an IVR is

handling a credit card replacement, and in the middle of the conversation the customer realizes he was discussing the wrong credit card, an IVR would need to go back to the beginning of the script to restart the process, or escalate the call to a human worker – an inefficient process that wastes a customer’s time.

Conversational AI can handle these dialogue variances with no issues; it will only need to go back to the point in the conversation at which it confirmed which card was being used, redo that interaction, and continue the process without having lost any of the information it retrieved during the tangent. Whenever the customer goes off script, and asks a question that has nothing to do with business processes, Conversational AI can adapt.

So for example, a Conversational AI agent might ask, “Would you like me to mail you a new credit card?” and a customer may respond, “Is it going to cost me anything?” The virtual agent is able to take into account the context of the interaction, determine that “it” is shipping a new card, know that no cost is associated with that service, inform the customer accordingly and then return to the process step of shipping the credit card.

Building the Intelligent Contact Center

Utilizing a Conversational AI front-end in call centers for customer service interactions can resolve anywhere from 30-60% of the incoming calls immediately compared to how calls are handled by IVRs (according to our clients; see examples near the end of this white paper). Statistics like that show an obvious advantage to adopting Conversational AI into a call center/IVR scenario. However, Conversational AI also can provide further efficiencies for the human call center agents in key ways, as shown in the figure below.

Collaboration between humans and Conversational AI is key to run an Intelligent Contact Center, enhancing current call centers with greater efficiency and continuous improvement.



Provide real-time AI-powered recommendations during escalated calls. When Conversational AI escalates a conversation to human call center agents, it continues to monitor the dialog and can help guide the human agent responses based on best practices and approved multi-turn conversations. This can significantly help new agents become more proficient and effective.



AI-based agent assistance. Conversational AI can work alongside human agents to surface information and complete tasks in enterprise systems, while the human agent simultaneously speaks directly with customers. In this instance, customers never know Conversational AI is in the background helping to resolve the issue. They only know that they’ve worked with an efficient and knowledgeable human agent to quickly and accurately find resolutions.



Improvement analytics. Because Conversational AI digitizes conversations automatically, improvements for both the virtual agent and human agent can be determined using advanced analytics. For the virtual agent, this means improvements around new use cases, reduced abandonment rates and escalations, and overall improvements to existing use cases. For the human agent, analytics can identify additional recommendations, any additional training needs, and data that can drive improvements to dispatch and routing algorithms.

Creating an Intelligent Contact Center Team

There's a critical business reason for building Conversational AI solutions that work alongside, rather than replace, humans: AI is no substitute for human ingenuity. AI can free employees from unfulfilling work so that they can tap their uniquely human qualities – empathy, critical thinking and creative problem solving. By doing so, Conversational AI allows humans to take on more high-value roles within their contact centers.

However, while Conversational AI technology can do amazing things, it does not yet fully build itself. Enterprises that have taken this journey already built new teams and created new roles in order to deal with building use cases, operationalizing them, and improving them over time. Similar to how the creation of social media resulted in new roles for marketing teams, the Intelligent Contact Center will necessitate several new roles that didn't exist in call centers previously.

Building new use cases for Conversational AI in call centers does not actually require AI PhD's, but it does require subject matter experts and some linguistic experience. It also means building a team that understands your customers' journeys and conversational design, with those team members working with business analysts who understand the applications with which the virtual agent will interface.

Once Conversational AI virtual agents are actively assisting customers on a daily basis in an Intelligent Contact Center, there is need for some human agents and supervisors to take responsibility for virtual agent performance. This creates new roles of "Virtual Agent Escalation" manager and supervisor who deeply understand the capabilities and limits of the Conversational AI, and who know how to appropriately handle virtual agent-to-human escalations (and transfers back to virtual agents for resolutions through automation).

Finally, ongoing improvements require either a separate maintenance team, or the original team that developed the use case, to tweak Conversational AI agents and prioritize new use cases. This enables a closed-loop improvement system, where Conversational AI analytics can be leveraged by a small but specialized team to continuously improve efficiencies and customer satisfaction.

How Conversational AI Improves an IVR-Enabled Call Center



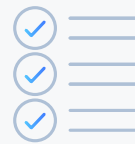
Fewer Call Transfers



Shorter Hold Times



Faster Access for Customers to the Right Agents/Experts



More Intelligent Automated Caller Verification



Reduced Agent Turnover

Examples of Conversational AI at Work in Call Centers

The good news for companies that currently have IVRs is that several companies have already made the transition to an Intelligent Contact Center, enhancing current IVRs/customer service processes (and in some cases completely taking over some processes) with impressive results. Specifically, many premier companies including regional banks and multi-national telecoms have transformed their call center operations by deploying Amelia, ranked by third-party analyst firms such as Forrester, Everest Group and HFS Research as the industry's leading Conversational AI solution. Below are just a few examples (read more [here](#)).

Conversational AI as a Call Center Agent

Based in Pearl River, New York, Sterling National Bank specializes in the delivery of commercial, business, and consumer banking products and services. The bank wanted to heighten customer engagement through its contact centers, reduce high-volume pressures on customer contact agents, and allow bankers to focus on providing unique and personalized services to customers across the business.

Prior to implementing Amelia, Sterling National Bank used a traditional IVR system to direct and respond to customer queries. In order to improve and accelerate customer experiences, Sterling National Bank hired Amelia (renamed "Skye") to provide human-like communication and collaboration with Sterling National Bank contact center agents.

Today, Skye engages 100% of incoming customer calls. She is able to scale and resolve about 50% of incoming calls into Sterling's contact center, including the end-to-end automation of approximately 100,000 calls per month. This has allowed Sterling to provide automated self-service for more than two million customer calls since June 2020.

Bankia and The Conversational AI Contact Center

[Bankia](#), the fourth-largest bank in Spain (which recently merged with CaixaBank), wanted to transform its internal and customer-facing technology. The bank's CEO and CIO both understood that traditional banking was becoming less and less popular in relation to digital and mobile banking, and they needed to transform and reposition the company.

Within an important transformation and digitalization multiyear program, the bank leadership wanted to see whether Conversational AI could help improve both internal and external processes, which would then free employees to focus on more valuable and unique tasks compared to the common FAQs they answered each day and help customers with their more common needs.

Within a year, Conversational AI was conducting almost 50,000 active conversations per month. It averages more than 150,000 conversations per month in its call center, with resolution and intent recognition rates of 90% each. It recently surpassed 1 million total conversations, far surpassing initial expectations.

Conversational AI as a Voice-Based Service

[Telefónica](#) is a Spanish multinational telecommunications company headquartered in Madrid. The company has a presence in 15 countries across Europe and Latin America. In the telco space, it ranks seventh in revenues, sixth in market capitalization and fifth in number of subscribers.


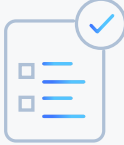
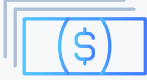



Telefónica implemented Conversational AI as a voice-based customer service agent for its Peruvian contact centers to handle all calls received to hotlines, which handle roughly 72 million calls in total. As a result, the company developed 28 specific skills it wanted Conversational AI to master, including 18 end-to-end automated skills, and 10 skills that would require Conversational AI to route a call to an appropriate human agent. Since the initial roll-out, the team at Telefónica have already expanded the 28 use cases to 75.

After a four-month ramp up, Conversational AI now handles 100% of mobile call volume. It recognizes customer intent correctly on 97% of calls, and customer abandonment rates on Conversational AI-led calls decreased 24% from the initial week of deployment. In addition, customer satisfaction in calls managed by Conversational AI are at the same level as those handled by human representatives.

Make the Intelligent Contact Center a Priority

For the moment, IVRs remain a fixture in customer support, but that doesn't mean enterprises that have made such investments should be satisfied with IVRs' current state.

Given what some businesses have already achieved with this approach, businesses should strategize on which Conversational AI use case will be best suited to address current deficiencies in their customer service strategy, with the goal to achieve one if not several of the following outcomes:

 <p>Increased customer satisfaction/Net Promoter Scores</p>	 <p>Better brand loyalty through positive customer service</p>	 <p>Higher first-touch resolutions at lower costs</p>
 <p>Call center agents more satisfied in their jobs</p>	 <p>Lower call center agent attrition</p>	 <p>Bottom-line growth</p>

In fact, as the number of Intelligent Contact Center use cases grows, the stronger the business case to be made for deploying one. If your company is facing an industry competitor that is already utilizing Conversational AI in its call centers, and is stealing away your customers as a result, ignoring this trend is nearly impossible.

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Amelia

world leader in Enterprise AI and the home of Amelia, the industry's most-human digital AI colleague. Amelia's ability to learn, interact and improve over time makes her the market's only AI that can fully understand user needs and intentions.

Contact us at Amelia.ai/contact

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