

WHAT YOU'LL LEARN

- ✓ The technologies behind new capabilities
- ✓ What research says about benefits
- ✓ Tips for simplifying deployment

Why you need to embrace conversational AI for customer care

by Joseph Williams

Data show the benefits to using AI in sales and customer success programs include better customer outcomes and improved customer satisfaction while realizing significant cost-savings. Companies that provide highly effective and customized customer experiences are going to have an important competitive advantage, particularly as younger generation populations move more and more of their commercial activities online and through social media.

The trend towards AI-powered customer service

Ask your CMO or your CRO whether customer success is key to thriving in this digital era. Then ask them how artificial intelligence is going to redefine how customers can achieve success.

Gartner has already done these surveys, and its findings are that artificial intelligence (AI) technologies are poised to dramatically raise the table stakes for customer engagement.¹ Eighty-four percent of respondent companies indicated

they were investing in customer experience technologies in 2018. A quarter expect to have virtual chatbot technologies deployed by 2020. Overall, thirty percent expect by the same year to be using AI technologies to augment at least one of their primary sales processes.

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satisfaction while realizing significant cost-savings. Companies that provide highly effective and customized customer experiences are going have an important competitive advantage, particularly as younger generation populations move more and more of their commercial activities online and through social media.

Back in 2011 Gartner predicted that by 2020 85% of customer interactions would be via some kind of chatbot or virtual assistant technology.² The world likely won't hit that level of adoption because, as it turns out, AI projects are difficult and it is challenging to find capably skilled technologists and properly defined projects.³ That said, AI-driven customer experiences are achieving such dramatic results (e.g., a 99% reduction in customer service times, 10 point improvement in customer satisfaction) that enterprises are highly motivated to move these projects forward.

The challenge for most enterprises is figuring out how to get in the game in a way that de-risks the investment and quickly produces tangible results. More about that in a moment. First, a quick and simple description of the technologies enabling AI.

Conversational AI defined

Artificial intelligence as a field has been around for many decades. It has arrived, so to speak, because processing and storage have gotten dramatically less expensive, while useful data has become more widely and deeply available. Machine learning (ML) is the subset of AI that has woken up in this decade to enable data-rich customer experiences. In a nutshell, ML scientists build a mathematical model for predicting outcomes, then feed data to that model so that it improves overall predictive accuracy. This activity is more colloquially known as "training the model" for machine learning. Because the science and compute power have improved dramatically, ML has gotten very good in the last few years.

Major League Baseball is all over machine learning, using it and the copious data that is tracked from every pitch in every at-bat, to fundamentally change the way the game is managed, from defensive positioning to pitch selection to lineup selection.⁴ Similarly, the real estate company Zillow uses ML and its vast database of user interactions to predict what houses a specific shopper might want to see, adjusting as that shopper clicks through each offering.⁵ Companies are also using ML to train autonomous vehicles, improve manufacturing productivity, and to improve fraud detection in financial transactions.

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Natural Language Processing (NLP) is the field of artificial intelligence that allows computers to interact with human dialogue, whether spoken or written. In other words, NLP allows people to talk or write to devices and for devices to understand what that person has said. NLP has also gotten very good in the last few years, to the point where 97% accuracy is not uncommon, close to call center benchmarks.⁶ The specific subset of NLP that deals with the spoken voice is called speech recognition, which itself is approaching 95% accuracy.

In customer scenarios, NLP, speech recognition, and ML hybridize together to provide services via automated call centers and digital assistants such as smart speakers and phones. The speech recognition module processes and rationalizes the spoken word and the ML module figures out how to handle and respond to the verbal input. These technologies are constantly learning and improving because their algorithms get better as they are fed more data.

The advent of cloud computing and the growth of powerful API libraries have provided enterprises an agile and efficient way to build or integrate AI into their sales processes. It is also the cloud that enables multiple technology platforms and service providers to support a variety of economic models (i.e., build vs. buy vs. subscribe).

The cloud, NLP, speech recognition, and ML are the key technologies behind Gartner's prediction that AI has arrived and by 2020 will change the game for customer engagement. They have arrived. And everything is changing.

What's driving adoption?

Forbes commented on a recent study suggesting that \$62 billion annually was lost due to poor customer engagement, calling these results "scary."⁷ Scary is right, as data suggest a third of American consumers will dump a company, if they can, after just one unsatisfactory customer service experience.⁸ Forbes also reported that in another test 41% of companies failed to respond at all to a simple customer email query, and 99% of companies failed to follow-up with the customer. For what was really a routine pair of questions ("where is your price list and what number do I call") the average response time was 15 hours. As noted in the article, a five minute response time is a competitive game-changer when everyone else is taking 15 hours. Cutting response times leads to improved customer satisfaction and competitively better sales results.

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NLP Accuracy Compared to Call Center Benchmarks



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A very large number of customer contacts involve the transmission of routine information that it little more than a listen-search-retrieve activity (e.g., where is your location, what are your hours, where is my order, is this in stock). For these activities, speed and accuracy are paramount. Contextual information, such as proactively identifying the customer, the customer's location, or open orders, usually adds to the quality and time-to-resolution of the overall engagement.

Competently automating these routine tasks for call centers, chatbots, and email using AI would improve customer outcomes. It would also create a real-time environment of rich data for analyzing trends and identifying emerging opportunities and problems while better recording and understanding customer interactions.

From IVR to intelligent virtual agent

This new technology is so much better than the traditional IVR, where a customer can feel trapped in a press-key or voice-response matrix. Conversational AI, whether through voice or chatbot, allows the customer to ask her question or present his problem immediately and directly in a natural interaction with the system. Where the AI cannot resolve the query, the matter is escalated.

Already almost half of US households own a smart speaker,⁹ which is helping drive acceptance of Conversational AI interactions. Nearly all smartphone users now accept driving directions from GPS-controlled navigation bots. It has already been observed that Millennials will abandon a brand rather than make a telephone call because they loathe the time and effort it takes to navigate an IVR or even deal with a front-line person.¹⁰ They have already mastered the art of online ordering and are looking to continue the relationship online if possible.

The latest research shows that 67% of respondents in the US, UK, France and Germany have already used AI or social media to engage for customer service.¹¹ Eighty-nine percent of consumers say that a quick response was a competitive differentiator when making a buying decision. Less than half will wait an hour for a response, and 10% will wait less than five minutes before moving on. Contrary to conventional wisdom, ninety-eight percent would prefer not to have to interact directly with a person.

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In this context, the advantages of having Conversational AI as Tier 1 support are many:

- Multi-modal, supporting SMS, speech-to-text, chatbots and voice interactions —allowing customers to engage however they prefer
- Speed and scalability
- Information accuracy and consistency
- 100% call acceptance with consistently polite and correctly informed interaction
- In-call sentiment analysis, with automatic escalation where appropriate
- Real-time social media monitoring of trends/news
- More robust metrics and reporting
- More informed escalations, with intelligent routing to best Tier 2 person
- Lower CSR turnover as routine interactions are now automated
- 7x24 operation in a data center rack instead of an office
- Automatic language detection and conversation in customer's native tongue
- Automatic customer follow-up
- ADA and/or HIPAA compliance
- Better lead generation

In addition to the above, quick and always-on Tier 1 support will lower customer abandonment rates and interaction complaints. Moreover, every single customer interaction adds to the predictive power of the supporting models and automatically highlights new and recurring problems.

Even in Tier 1 centers manned by people, background Conversational AI that “listens in” to the call or similar activity and can offer the customer service representative (CSR) options and/or solutions they may have missed, do not know, or are trending unbeknownst in other CSR pods. Background Conversational AI can also automatically evaluate CSR performance (including call sentiment) and suggest alternative service solutions. These services would also apply to Tier 2 and Tier 3 scenarios.

As far-fetched as Conversational AI might seem, in fact that technology is already here. IBM Watson and Google’s Contact Center AI both provide robust solution sets for customer self-service and automatic interactions. Numerous cloud providers offer pre-configured templates for TensorFlow, MXNet, Caffe, CNTK, and Torch machine learning environments.

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Solving the big problems

But pulling this all together is difficult, can be expensive to develop and requires specialized talent for model building, data handling, machine learning, and predictive analytics. Maintaining all the moving parts—plus getting them to integrate with existing legacy or cloud apps—is complicated and also expensive. In order to streamline these costs and simplify development, IT teams often commit to a structured framework that is neither agile nor adaptable. And usually not as quick nor as easy to deploy as they anticipated, which is why Gartner has noted that 85% of these projects are failing.¹²

So, the situation in 2019 is that companies seeking a competitive advantage in customer engagement want to bring AI to bear but doing so is expensive, complicated, and risky. What to do?

Masergy and Inference Solutions provide a platform alternative for companies looking to quickly deploy Conversational AI that provides most of the benefits and avoids the pitfalls described above. The approach is compellingly interesting—they maintain a library of apps and functions that can be dragged and dropped to develop robust virtual agents that can handle routine transactions themselves or assist human agents during their customer interactions. These can be used in a call center or chatbot environment.

The platform provides a robust set of connectors to independent AI services such as NLP, speech recognition, and sentiment analysis. As these services (from IBM Watson, Google AI, etc....) improve and change, Masergy and Inference take care of updating the apps and functions that comprise the Intelligent Virtual Agent, resulting in a dramatic drop in management and maintenance costs.

This platform approach does not require specialized AI personnel and the platform enables rapid deployment. Masergy and Inference also offer a series of services templates that simplify the architecture and design phase of deploying Conversational AI solutions, making these solutions accessible for SMB enterprises looking to differentiate the quality of their customer engagement. For larger enterprises wanting more customization, the platform enables that as well, either in the platform itself or via the services that are integrated through the platform.

Because the platform is a cloud-based solution, it is highly scalable and provides robustness, reliability, and security that is only available from hyperscale cloud providers.

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Most enterprises think about the cost savings of using a \$4,800 virtual agent versus a \$28,000 human agent. There is that—but another way to think about the cost savings would be to compare the cost of a pre-packed class of virtual agents delivered through the carrier network, with the development expense that would be required to build and operate a home-grown solution from the ground up. Additionally, as the costs of AI and DevOps staff soar and the competitive market leads to increased employee churn, standardizing on the platform supports process coherency through its event-driven architecture and its API- enabled interfaces.

While the cost savings are significant for enterprise grade customers, small and medium size businesses also benefit. Most SMBs struggle with the costs and churn of their customer service agents; creating and paying for the DevOps team is often beyond their means. But the platform enables an SMB to get into the virtual agent game at a very low financial and technical cost.

Bottom line: Conversational AI is the future of customer engagement. That future is now. Homegrown solutions are difficult, expensive, and prone to fail. A platform approach de-risks the project, vastly simplifies the deployment, and is dramatically less expensive.

\$23,000

potential savings of using a virtual agent over a human agent



Masergy & Inference Solutions

AI-powered Intelligent Virtual Agents from Inference Solutions automate routine customer interactions to optimize agent resources and deliver a superior customer experience. Partners since 2010, Inference and Masergy offer cloud contact center solutions combining the best-of-breed network and applications along with conversational AI technologies.



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Joseph Williams is an analyst with BC Strategies. A seasoned telecommunications veteran, at Microsoft Dr. Williams ran the telco partner engineering team for the 2010 launch of its Lync product. Joseph subsequently ran the Lync hosting channel program for Microsoft and then its entire \$500+ million Office hosting channel program. Prior to his Lync years, Dr. Williams was the CTO of Microsoft's \$24 billion enterprise sales division. Dr. Williams has also had a long academic career where he specialized in telecommunications and networks. His ongoing research in the fields of decision analytics and artificial intelligence in enterprise UC stretches back to 2012; his work on AI/UC has been presented at a number of UC summits and in BC Strategies blogs. Joseph is currently the technology policy advisor to Washington Governor Jay Inslee.