



How AI Redefines Self-Service

Customers Take Control With Their Own Words



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How AI Redefines Self-Service

Self-service isn't what it used to be. Since the invention of the interactive voice response (IVR) in the 1970s, enterprises equated the term automation with cost savings, while customers saw automation as a barrier to reaching a live agent. Speech processing and call processing technologies have advanced significantly over the past 50 years, but customers' perception of self-service did not change until the 2020s, when Conversational AI burst upon the scene.

Now, companies are redefining self-service by aligning advancements in speech and call processing to power their self-service capabilities. Businesses can employ machine learning and natural language processing (NLP), along with advanced speech and text analytics, to empower self-service and automation. As a result, companies are fulfilling their long-time promises of being truly customer centric.

Hundreds of millions of dollars have been invested in contact center technologies to arrive at this moment, enabling brands to recognize individual customers as soon as (and often before) they answer a call. Businesses can then instantaneously consult customer data to know how to treat each call and individual. Ideally, all calls are answered within three rings and then routed to agents whose background, skills, and temperament best match the needs of the callers.

During pandemic lockdowns, however, spikes in inbound traffic made it impossible for agents to answer within three rings. With hundreds of thousands of inbound calls in a day, the idea of a perfect match between a customer and live agent turned into a fantasy. The overall concept of customer centricity is further challenged as conversations between companies and their customers often take place over days (or weeks) and span web searches, company website visits, and text-based chats, in addition to traditional voice calls.

In this context, customer centricity is more important than ever, but more difficult to attain. Customers want to reach their selected companies at their time of choice, through their device of choice. Their goal is to get things done by any and all means available. They used to regard reaching a human as a first-order success, but that is no longer the case. The contact center is no longer central to their objectives.

Listening to the True Voice of Each Customer

Achieving customer centricity in the age of asynchronous, omnichannel conversations requires companies to do a better job of listening. Loyal customers want to be immediately recognized and understood. They want quick answers and assistance for rapid resolution. To provide this level of service, companies must capture and analyze every conversation, whether it's through spoken words or chat transcripts on SMS, websites, or social platforms.

Opus Research calls the results of better listening Conversational Intelligence (CI). It provides rich insights that can be used in real time to improve conversations among employees, customers, and prospects. To start with, CI more accurately reflects the voice of the customer than post-contact survey results. In addition, its content can be fed into systems of record or systems of truth, and it accurately conveys both the customer's identity and intents. It can give businesses the ability to understand—and even anticipate—the purpose of each inquiry and provide the answer or action to resolve it.

The New Definition of Self-Service

Self-service was once synonymous with clunky automated handling of inbound calls designed to reduce labor costs in contact centers. Today, better listening and faster responses redefine consumers' experiences with

self-service. Conversational AI and Conversational Intelligence have ushered in a new era of customer-centric self-service. Customers can accomplish tasks in their own words with self-service that understands them. Whether interactions are with bots or customer care agents, by evolving self-service with conversational data, customers can accomplish their desired tasks, and businesses can help customers 24/7.

Conversational AI: Key Enabling Technologies

With the rapid rise of “Conversational AI,” the term has come to mean different things. We at Opus Research define it as a more general AI that includes these key capabilities:

- **Natural Language Processing (NLP):** This is an umbrella capability that understands language as spoken or written to rapidly recognize a conversation’s intent. It includes both Natural Language Understanding (NLU), which understands the meaning of words within a conversation, and Natural Language Generation (NLG), which renders human-like responses to interlocutors based on the original understanding.
- **Machine Learning (ML):** The ability for systems to support constant improvement in answers and actions. ML is also closely related to supervised ML, which enables employees to evaluate and improve upon suggested results.
- **Semantic Search:** The search box offered by popular search engines is a comfortable option for many customers who have grown accustomed to entering queries for immediate results.
- **Speech and Text Analytics:** Finding patterns between past events and conversations to determine and anticipate future needs.

Conversational AI technologies are most often associated with bots and virtual assistants. Yet providing data for a bot is only one of many purposes that Conversational AI serves for customers, contact center agents, and employees. As enterprises migrate their data storage and IT infrastructure to the cloud, integrating Conversational AI into customer and employee workflows to improve customer experience and employee efficiency is now standard operation. It is not just trendy; it yields measurable return on investment through customer loyalty.

Conversational AI Starts with Data

Early efforts to implement bots overpromised and underdelivered. These bots did little more than put a natural language front end on the static FAQ page of the corporate website. A step up were navigation bots, which used NLU to determine the purpose of a call and then provided a link to a support page or a user manual. Then there were modest integrations with back-office systems. Customers entered an order number and learned of the status of their shipment. Authenticated customers routinely found the balance in their checking account or the due date and balance of a bill.

By contrast, today’s bots can quickly and accurately recognize the identity of each customer, the purpose of the conversation, and best responses. It acts more like a personal assistant and can match each query with specific information or actions. This modern CI is the result of capturing and analyzing the content of previous conversations between customers, agents, and bots to define and replicate successful outcomes.



Customer-centric self-service means that customers expect results that are sensitive to their expectations. Bots understand the intent of individual callers and reply with accurate information or route calls to subject matter experts or other knowledgeable resources to answer concisely and accurately. Meanwhile, customers have become more comfortable conversing with bots or typing full sentences into the search bar in a mobile app or webpage. Using free-form queries opens the door for customers to use their own words, but it also requires businesses to design self-service with intelligent information from a wide range of sources.

Customers have grown impatient with referrals to FAQs, lengthy documents with product descriptions, or community pages which seem helpful but never address their specific problems. Instead, they now expect Conversational AI to be intelligent enough to extract specific intents from their narrative and respond with precision, whether that's finding a specific paragraph in a user manual, enrolling an employee in a benefits plan, or confirming a reservation for an appointment.

Customers are finding success in the more transactional aspects of self-service, and now they are trying to do more through automated channels, including chatbots, voicebots, and smart searches. As a result, enterprises are enjoying improvements on specific business objectives, which range from simple capture rates (meaning calls that do not transfer to live agents), to higher task completion rates, lower customer effort, increased customer lifetime value, and, in some cases, lower turnover of customer service agents.

Data is Transformed into Conversational Intelligence

Insights gained from voice and chat conversations inform the design of Natural User Interfaces (NUI) for customers and employees. While Conversational Analytics have long been used to answer customers' queries, over time businesses have recognized they require more robust resources that can log onto remote systems, initiate queries, or trigger programs through an application programming interface (API).

We take for granted some of the earliest examples of APIs which link contact center platforms and customer relationship management (CRM) systems. When a call is answered, an agent's screen can be populated with the caller's identity, purchase history, list of any open trouble tickets, and even a log of recent visits and activity on the company's website. These data points are just the beginning for rapid response to customers' queries.

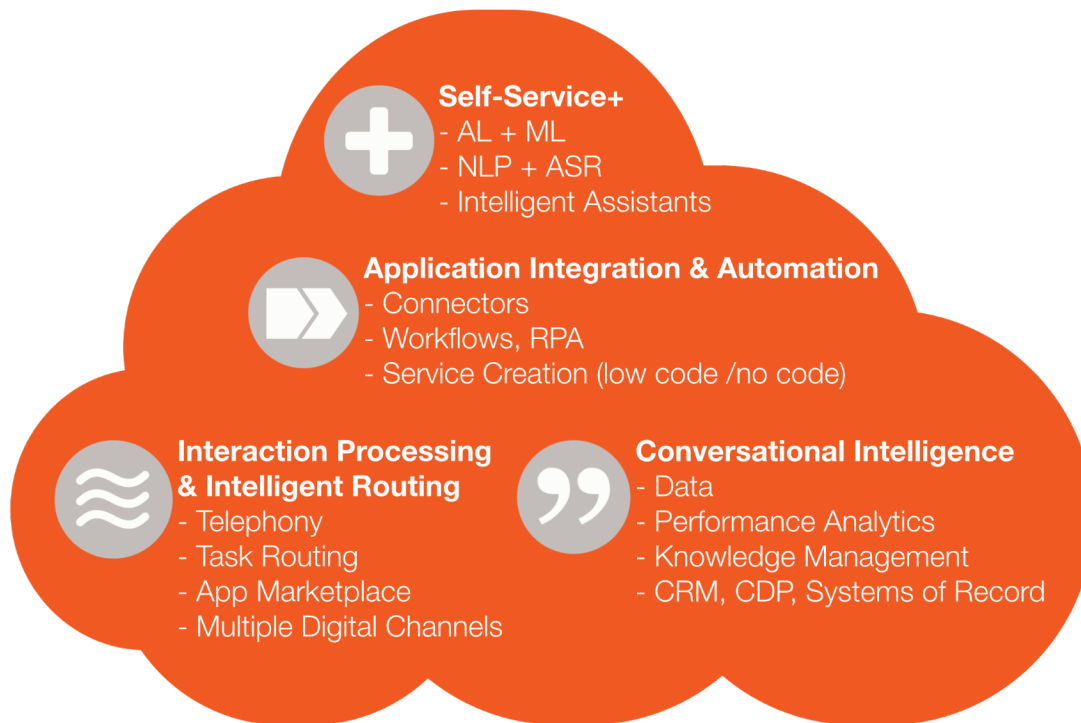
To answer more complex queries and complete transactions, agents need multiple APIs to access systems of record or systems of truth. This Conversational Intelligence is more dynamic than static FAQs or product manuals and is often driven by automated processes. With the right orchestration, Conversational AI and Conversational Intelligence can enable each customer to use their own words to take command of their self-service.

Introducing the Conversational Cloud: A Framework for Robust CX

Opus Research projects businesses around the world plan to spend \$65 billion on cloud-based services that leverage Conversational AI in 2022. The expected spend in Conversational AI is a testament to the value businesses gain from Automated Speech Processing, Natural Language Understanding, and Machine Learning. These technologies permeate the clouds operated by tech giants, communications service providers, system integrators, and business process outsourcers.

Accompanying the ever-growing demands of consumers, businesses have also shifted how they identify the best solutions to improve customer experience. Formerly, discrete market spaces like Contact Center as a Service (CCaaS), Communications Platforms as a Service (CPaaS), and Unified Communications as a Service (UCaaS) dominated the market, but now platforms take a backseat to technological capabilities to facilitate conversational interactions among, and across, customers, live agents, and virtual agents.

Opus Research's Conversational Cloud outlines how enterprises procure technologies on a fit-for-use basis where the combinations of technologies that best serve agents and customers take center stage. In short, executives procure solutions that make their contact centers customer-centric versus platform-centric. The amalgam of key capabilities is depicted below:



Self-Service Focus: The conversation often starts as self-service, which may be an interaction with an intelligent virtual assistant (IVA) on a website, mobile device, or a speech-enabled IVR system operated by the company. In all cases, enabling customers to speak or type in their own words and be understood is of great value. For superior customer experiences, self-service must be smart; it needs the capability to respond with accurate, human-like conversations that help customers on their preferred channel.

Interaction Processing and Intelligent Routing: To continually build on intelligence gained through conversational insights, businesses need to optimize request routing across all channels in real time, including to agents best suited for the situation at hand, and for asynchronous communication. This automated handling of requests automatically triggers back end activities to manage customer engagement.

Conversational Intelligence: Companies generate, aggregate, and otherwise acquire massive amounts of data to inform live and virtual agents. Customer queries require information that resides in contact center recordings, CRM systems, ERP processes, and elsewhere. Enterprises engage solution providers to translate data into sources of truth that can be used to shape dialogs, inform responses, and speed completion times.



Application Integration and Automation: Enterprises require tools to create and orchestrate the dynamic processes that recognize each customer's intent and respond with appropriate information or actions.

How Businesses are Building Smart Self-Service, Fast

Enterprises that carefully implement the Conversational Cloud's core technologies see large improvements in both customer experience and employee productivity. Opus Research attributes the measurable improvements to two overall factors:

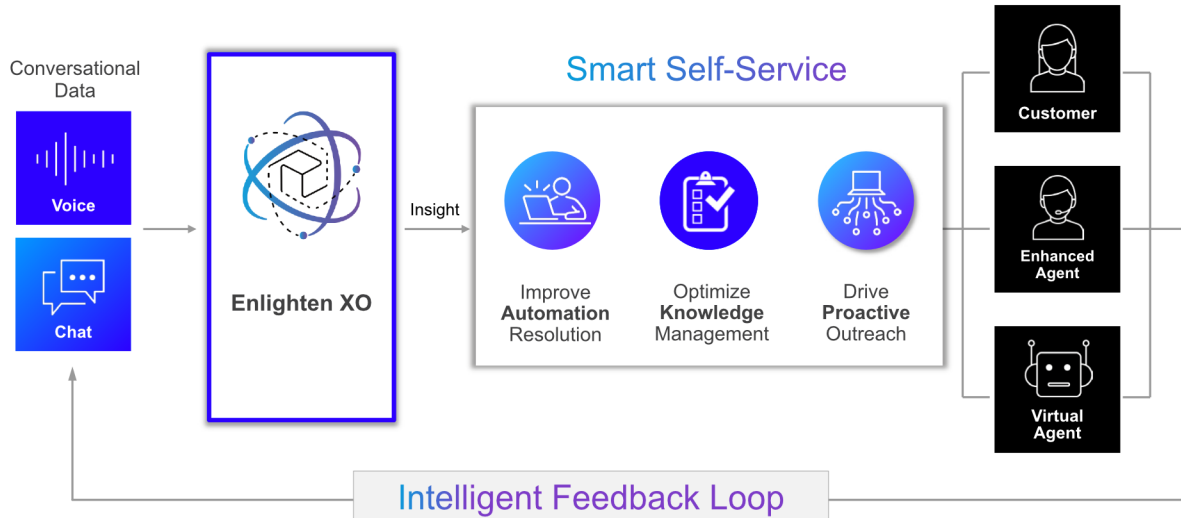
Speedy, accurate responses

- Responses in self-service are based on an aggregated interaction history. The Conversational Cloud makes it possible to gain insights from omnichannel interactions, including voice and chat to build smart self-service.
- Smart responses recognize and understand customer sentiment. Smart responses already consider optimal workflows to route specific customer inquiries, but they also take into account the customer's sentiment to anticipate the best resolution path. Conversational AI also gathers data to understand which intents are best for automation.
- Increase response accuracy with first-party data. Using utterances from both customers and agents, Conversational AI gains first-hand insight into what is most important for customers, how they express their intents, and how top-performing agents resolve them.

Steady improvement over time

- Continuous learning is a key criterion for smart self-service. Businesses and consumers change rapidly over time, and the ability to learn from the latest conversations, and implement updates to align with the latest needs is crucial for effective self-service.
- AI is only as good as its data. When AI learns from years of conversations, focused on improving CX, businesses can focus on key insights to make their Conversational AI smarter.
- The same data should inform both self-service and agent assistance. Gaining insights from AI is the starting point, and seamlessly integrating this data to improve all customer service channels is smart for consistency, and for delivering frictionless customer experiences.

Enlighten XO Makes Every Digital Solution Smarter



Enlighten XO by NICE is unique in the market with its AI-powered approach to smart self-service, which transforms how contact centers approach Conversational AI. Enlighten XO gains unique insights from historical conversational data on voice and chat channels. The solution identifies customer intents and prioritizes top automation opportunities. Its specialized AI for CX is based on decades of expertise and optimizes resolution paths based on customer interactions with top-performing agents.

The solution seamlessly improves automation resolution, optimizes knowledge management, and drives proactive outreach. Furthermore, Autoflow provides a no-code/low-code approach to make Conversational AI, specifically SmartAssist, more effective in driving greater resolution in self-service channels.

Over time, the feedback loop continues to improve processes with insights from live agents, virtual agents, and customers. The accompanying AI is specialized to understand self-service CX needs that differentiates experiences across channels.

Both customers and businesses benefit

The Conversational Cloud makes it possible for companies to support true self-service or, more accurately, automation-supported self-fulfillment. Being customer centric is no longer a fantasy or platitude. Both human and automated agents have the intelligence and capabilities to allow customers to use their own words, on their own time, on their device of choice.

When desired, customers can resolve most of their requests through automated resources, involving agents as needed. The customer's reduced effort and faster resolution leads to measurably better outcomes in customer experience. Plus, it provides live agents with insights in the conversation, improving their ability to help customers.

Many firms have found that this approach reduces the volume of voice calls by helping customers in text-based, self-service channels. It is also conducive to supporting conversations that are carried out over time, including triggers and mechanisms for proactive, outbound outreach.

Businesses and customers alike benefit from this new approach to customer experience, as quantified by traditional customer satisfaction metrics, but also business metrics such as customer loyalty and agent retention.



About Opus Research

Opus Research is a diversified advisory and analysis firm providing critical insight on software and services that support multimodal customer care. Opus Research is focused on “Conversational Commerce,” the merging of intelligent assistant technologies, conversational intelligence, intelligent authentication, enterprise collaboration and digital commerce.

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