



Achieve Unmatched User Experiences with Conversational AI

How leading organizations are using AI to improve customer interactions, enhance efficiencies, reduce costs and increase revenue.

Foreword

Creating greater value with conversational AI

Whether using voice assistants, chatbots, virtual agents, smart speakers or even talking cars and household appliances, bots are becoming integral to our daily lives. They help us manage our homes, place orders, transfer money and pay bills, provide important information and solve problems

We are seeing accelerated change and complexity in the conversational AI market that shows no signs of slowing. The next wave of experience-oriented artificial intelligence (AI) systems are blazing down the track, led by innovations such as augmented and virtual reality, computer vision, autonomous things and edge devices. Embedded into these new user interfaces are the analytics, insights and intelligence to create more individualized, contextual and valuable interactions.

We work with businesses across industries to build exceptional customer-facing solutions by developing and deploying not just bots but also design-led conversational engagements. Whether a client wants to improve its customer intelligence or operations intelligence, conversational AI provides the best possible connection to consumers and business users. These personalized experiences allow people to interact and retrieve valuable information directly, without human agents.

Business leaders today need a plan to scale and operationalize conversational AI while at the same time continuing to build a modernized data foundation to more broadly leverage other forms of AI. With data flowing to and from all these connected end points, businesses can achieve greater functionality, personalization and experience.

The following examples demonstrate the powerful capabilities of conversational AI. They highlight diverse approaches, products and technologies. Collectively, they demonstrate what can be delivered across an array of channels, interfaces and requirements. These engagements can help businesses identify where to begin the conversational AI journey.



Lance Moncrieffe

Conversational AI Practice Leader

“Whether a client wants to improve its customer intelligence or operations intelligence, conversational AI provides the best possible connection to consumers and business users.”

Contents

Click below to select a section.

4 Banking

Chatbot streamlines bank's finance queries, speeds claims

6 Capital Markets

Wealth manager cuts costs, boosts customer satisfaction with conversational AI

8 Communications

Telecom supplier gets fast answers with conversational bot

10 Consumer Goods

Automaker guides customer purchases with conversational agent

12 Energy & Utilities

Utility speeds customer queries with voice-based search

14 Healthcare

Healthcare company makes smarter decisions with voice-based AI

16 Technology

A human-centric approach ensures adoption of revamped service portal

18 Travel & Hospitality

Airline improves customer experience with loyalty program chatbot

20 Get the Most from Conversational AI

Banking

Companies in the banking industry are increasingly turning to **conversational AI** for voice, message and chat capabilities and the convenience it offers. Today's retail banking customers can experience personalized financial management through the power of on-demand conversational banking. They can hear and view transaction histories, set spending and saving goals, transfer funds, set and review bill payments, and send money to family members, friends or vendors with ease.





Chatbot streamlines bank's finance queries, speeds claims

The challenge

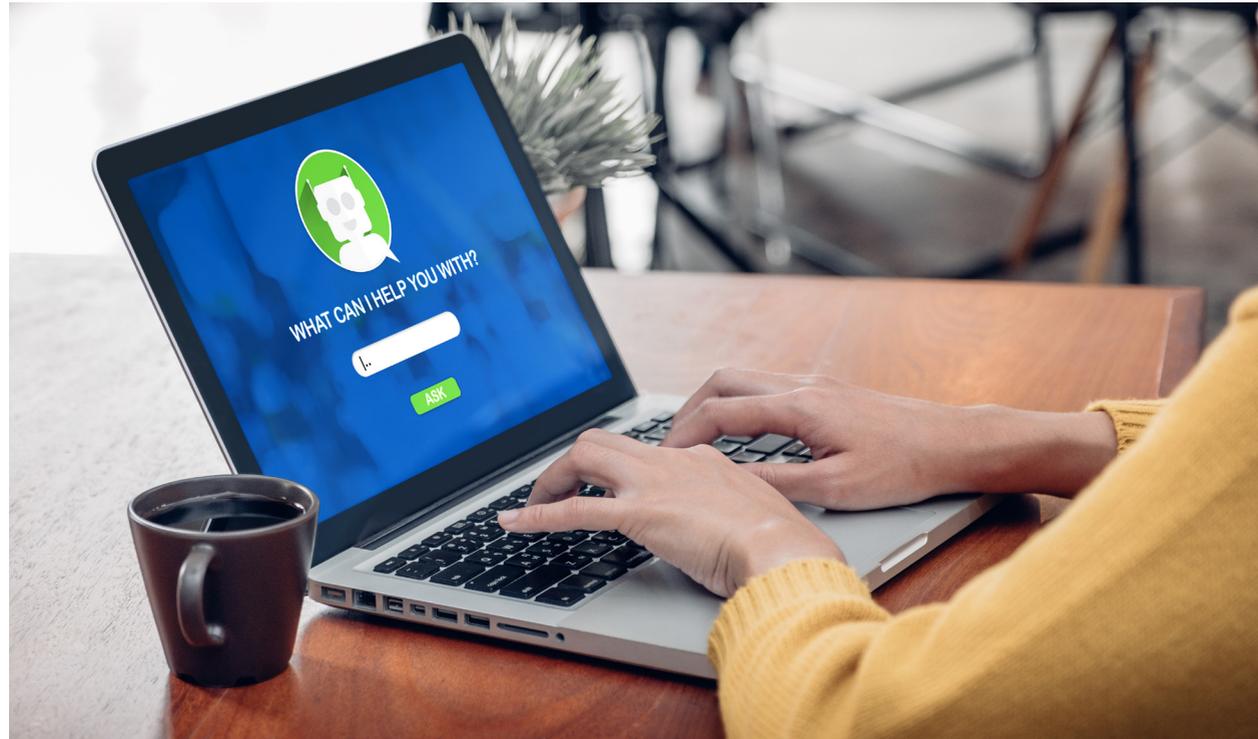
A large banking enterprise was looking for an intelligent solution to reduce the high volume of calls and requests routed to its finance department by internal employees. The company wanted an intelligent virtual assistant capable of responding to queries related to financial claims status, payments and approval workflows.

By assigning repetitive tasks to the chatbot, the organization believed it could free the finance department to focus on areas where people add the most value, such as resolving conflicts, solving problems, defining policies and making strategic decisions.

Our approach

We worked with the bank to implement a virtual assistant for employees' financial inquiries. The company chose us because of our strong Microsoft Azure AI competency for consulting, implementation and employee adaptation. Employees engage with the virtual assistant using both voice and text to resolve common financial claims questions.

Using the enterprise's single sign-on capabilities, the intelligent assistant authenticates users and retrieves relevant details from the related SAP module using prebuilt data connectors. It identifies the queries it cannot answer and escalates them. It then collects all pending issues, uploads them to the finance document



repository and assigns them to a particular user for follow-up and closure.

The Microsoft Azure AI-based solution uses custom speech and cognitive linguistic models to respond appropriately to user inquiries. Conversation transcripts and user feedback are stored and regularly analyzed to recalibrate cognitive models, continuously improving the system's accuracy and performance over time.

RESULTS

Because it's available 24x7 and scales on-demand, the intelligent assistant boosts accessibility, efficiency and employee satisfaction. It has also cut demand on its finance department by 50%.



35% drop in emails and calls to the finance department in the first month of operation.



50% reduction in emails and calls after two months of operation.



43% decrease in ticket resolution time.

Capital Markets

Conversational AI is empowering financial advisors with augmented intelligence for precise, timely and accurate next-best-action decision making for portfolio and wealth management. These emerging conversational digital assistants serve as engaging, personalized virtual advisors and financial coaches for individual investors.



Wealth manager cuts costs, boosts customer satisfaction with conversational AI

The challenge

A large U.S.-based wealth management company was under pressure to cut operational costs at its contact center. Its agents spent much of their time responding to high-frequency, low-complexity requests, which was draining employee productivity and morale.

In addition to cost pressures, financial services customers were also expecting to have their questions answered quickly and efficiently online — avoiding a phone call whenever possible.

Our approach

Recognizing that **conversational AI** provided the best opportunity to both reduce operating expenses and improve customer satisfaction, and because of our extensive background in the technology, the company turned to us for assistance with deploying the new system. We began by analyzing call center data and selecting the high-volume inquiries that represented optimal use cases to be automated via the **chatbot**. Next, we analyzed the various **natural language processing** platforms in the marketplace that would meet all the client's requirements.

We then built and deployed a customer-facing virtual assistant that automates inquiries and transactions related to account balance,



withdrawals, loans and transfers. The system performs live agent transfers through live messaging and includes an interactive voice response system. Next steps are to expand the virtual assistant's reach and functionality by building and deploying an Alexa skill for market updates, tax information and directions to the nearest advisor.

RESULTS

This customer-facing virtual assistant automated over 400 of the organization's most common customer inquiries. It responds to both general questions and user-specific inquiries, with continuous improvement based on AI analytics and customer feedback.



\$6.7 million reduction in operating costs.



166,000 fewer calls.



5% improvement in the customer experience index score.

[SEE THE FULL STORY »](#)

Communications

Intelligent virtual assistants are transforming the telecommunications industry by supporting millions of daily customer requests and transactions. Chatbots and virtual assistants deliver an enhanced customer experience by deflecting simple customer requests, automating and streamlining support calls and intelligently augmenting service representative responses.





Telecom supplier gets fast answers with conversational bot

The challenge

The key source of revenue for this telecom infrastructure provider — selling parts to large telecom providers — requires regular contact with customers to discuss product availability. As part of that contact, the support team needed to handle a large number of repetitive inquiries related to product part numbers and then submit those numbers in a variety of ways, including a company webpage, email and phone calls.

The process required the support team to manually check multiple databases to retrieve the necessary information. This slowed response time and increased customer wait times.

Our approach

Working with the client, we created customer journey maps to identify the pain points in the existing process. Through these sessions, we realized that a conversational bot could replace much of the company’s website functionality and significantly reduce agent call volumes.

The team built a conversational **chatbot** leveraging Microsoft LUIS to enable search capabilities on a cohesive master database of parts and availability information. Using **natural language processing**, the system enables requesters to receive real-time results for product information, parts availability and lead-time information on unavailable parts.



We then built an internal bot for contact center agents, enabling them to automate ticket creation by integrating it with the company’s customer relationship management system. With this streamlined process, employees are now free to handle more difficult customer inquiries.

RESULTS

Our **communication technology team** built and deployed multiple intelligent, automated assistants to speed wait times, check multiple databases for parts availability and relay that information back to the customer. We also developed a virtual agent to automate manual processes such as ticket creation for contact center employees.



16% reduction in call volume.



90% chatbot accuracy rating.



50,000+ parts availability and information accessible via the conversational agent.

[SEE THE FULL STORY »](#)

Consumer Goods

Today's consumers frequently experience hands-free and screenless interfaces across the physical and digital spaces where they live, shop, interact with friends and family, and seek entertainment. Conversational innovations are creating and guiding seamless customer journeys with voice-based grocery shopping, location services, shopping assistants, on-demand delivery and re-order automation.





Automaker guides customer purchases with conversational agent

The challenge

A large automobile manufacturer had big plans to drive digital transformation globally over the next five years. Its goal: provide a seamless, personalized omnichannel experience to increase customer satisfaction and loyalty.

The plan included creating a best-in-class **chatbot** assistant to guide customers throughout their journey, from research to purchase and beyond. To accomplish this, the automaker needed a strong implementation partner with automotive industry expertise and an understanding of customer needs, the digital experience and what it takes to execute a successful rollout.

Our approach

Our **consumer goods team** started by reviewing the company's 2025 digital transformation goals, and then devised a roadmap with details on what it would take to create these capabilities and successfully roll them out to additional countries in multiple languages.

We applied our six-dimensional framework to execute this end-to-end omnichannel solution. This framework includes strategy, opportunity analysis, architecture and technology, people and skills, governance and organizational change management.



Along with the framework, we provided a rollout playbook with an in-depth execution plan based on past experience and our expertise in the digital space. This playbook included timelines and budgets as well as our **conversational AI** capabilities to achieve the automaker's digital transformation goals on-schedule.

RESULTS

We worked with the automaker to make further enhancements and provide additional use cases to the chat experience. After implementing, piloting and testing the capabilities in one country, the refined conversational agent went into live production. Next steps are to roll out the system to 16 additional countries in 13 languages.



13% increase in car configurator users.



5% increase in interaction success.



~3% conversion rate increase in the first few months.

[SEE THE FULL STORY »](#)

Energy & Utilities

Many of today's utility and energy customers engage with existing Internet of Things (IoT)-enabled devices connected to their homes and daily lives. This dynamic has conveniently set the table to support interactive, conversational solutions that elevate adoption and help satisfy evolving customer expectations.



Utility speeds customer queries with voice-based search

The challenge

For a major U.S. power utility, customer satisfaction is paramount. The company wanted to enable its customer-facing personnel to quickly and thoroughly prepare for upcoming client meetings and fully understand customers' industry and energy needs. The objective was to improve interactions between its sales force and customers [using AI](#).

Our approach

Our [utilities industry team](#) examined how subject-matter expertise could be delivered to customers via voice-activated, AI-driven chatbots and then developed use cases and solutions. The chosen chatbot solution enables executives, account managers and field-service technicians to conduct research using voice commands or typed queries. Using voice-activated search technology and an application programming interface (API), the solution gives users organized and detailed responses to their questions.

The machine-learning functionality of the AI-driven chatbot also helped the utility build a knowledge hub that uses AI to answer IT-related questions related to tracking the progress of particular work orders.



RESULTS

The utility's intelligent virtual assistant answers questions about the status of work orders based on proprietary information in its database. The chatbot also helps account executives and account managers conduct customer research more quickly, with less effort. Because it's easy to use and efficient, it was quickly adopted by users, resulting in improved customer interactions and an enhanced customer experience.



Automates the research process for the sales team.



Apprises sales personnel on key factors related to specific industries.

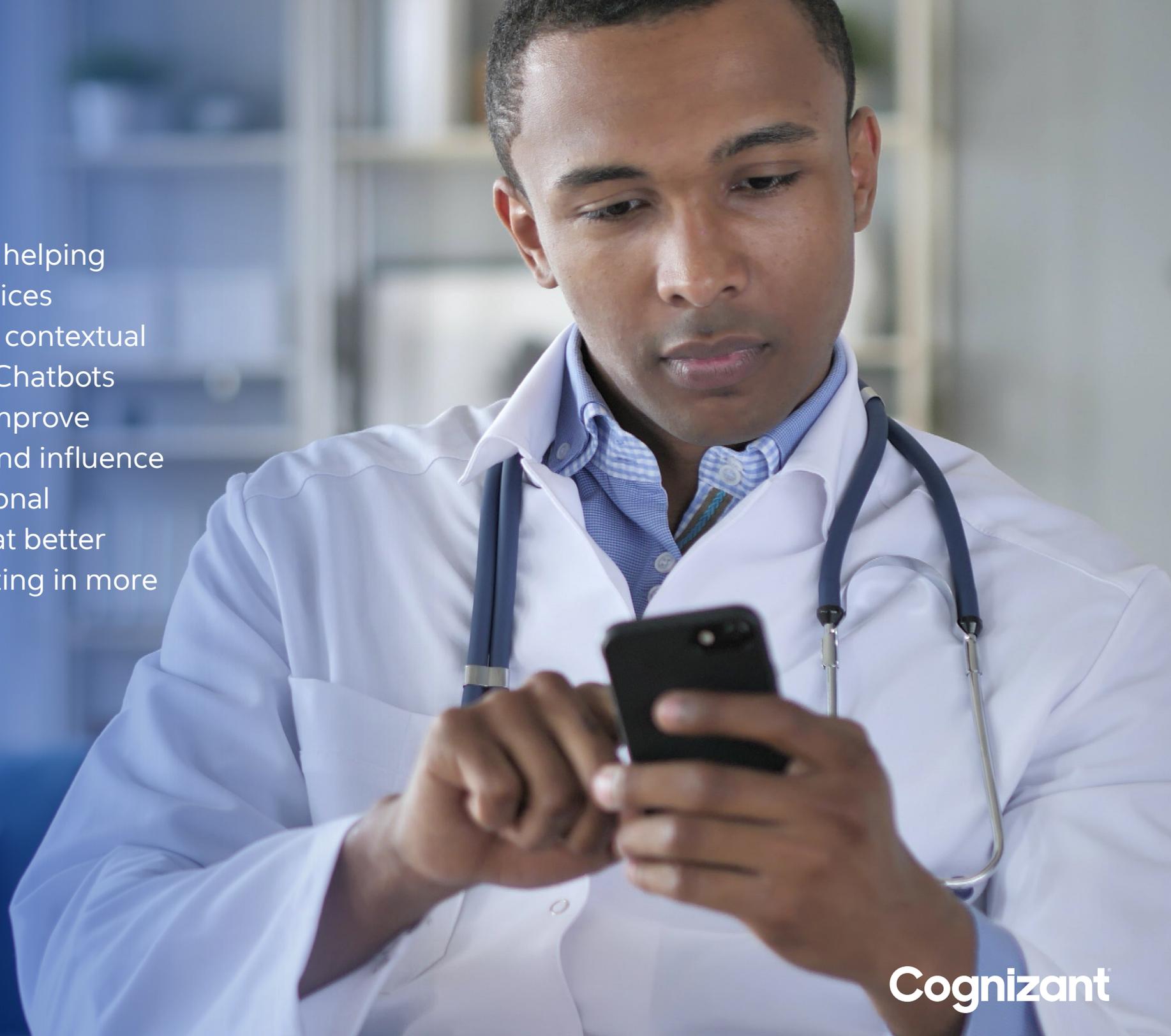


Reduces processing time by providing research materials through a click or voice command.

[SEE THE FULL STORY »](#)

Healthcare

Advances in conversational technologies are helping healthcare providers, payers and clinical services organizations deliver more personalized and contextual interactions throughout the patient journey. Chatbots and voice assistants increase engagement, improve patient trust, encourage patient adherence and influence positive health outcomes. Today's conversational interactions are generating real-time data that better informs healthcare and support teams, resulting in more contextual, personalized care.





Healthcare company makes smarter decisions with voice-based AI



On-demand support for healthcare consumers

Conversational AI is quickly changing the healthcare experience for doctors and patients via chat, messaging and voice. With on-demand and in-the-moment secure access, patients can answer questions and get status updates as well as receive HIPAA-compliant data, records and results. By automating physician record-keeping, healthcare organizations can enable caregivers to spend more meaningful time with patients.

[Learn more here \(video.\)](#)



Voice assistants fill the insurance information gap

Intelligent, interactive voice assistants are filling the information void for healthcare consumers by quickly answering common questions and responding to frequent requests. They are empowering consumers and caregivers by replacing the tedious search process during enrollment and coverage selection, and guiding where to go for treatment — providing clarity in the moment. Given a choice, healthcare consumers are showing they prefer conversational, self-service solutions that simplify engagement and keep them in control.

[Learn more here \(video.\)](#)



The challenge

A U.S.-based healthcare company wanted to better utilize its organizational data and apply intelligent analytics to optimize business processes. The company provides revenue cycle management solutions that engage patients and assist physicians to improve hospital processes and financial results.

Over time, the organization has generated thousands of reports, aggregates and metrics compiled in multiple formats and stored in myriad locations with varied entitlements. It sought an automated approach to discover insights, search relevant reports and visually represent trends so team leaders could take the next-best action. The company also wanted a way to field requests and present details in real time for relevant metrics, measures and dimensions.

Our approach

We developed an intelligent system that “converses” with users and provides not only specific information but also in-the-moment synopses from underlying analytics. Using Microsoft’s Azure AI platform, we built a smart business operational assistant that answers business analytical queries in real time using [natural language processing](#).

With the system, stakeholders gain a better understanding of business processes using the most relevant metrics, generated by the latest insights from on-premise or cloud-based enterprise data, including information from CRM software, precompiled reports and statements. The AI-based system learns and understands acronyms, and it provides natural-language narratives of visual charts. The tool also supports smart integration with multiple communication channels in a variety of languages.

RESULTS

The tool quickly responds to queries on patient responsibility, coding and billing. Using **artificial intelligence**, the system analyzes claim rejections, physician productivity, collection performance, modality analysis, coding profiles and back-office operations, as well as payer and payee transactions.



88% reduction in manual effort.



45% faster decision-making based on real-time insights.



~30% increase in operational processing with sustained information accuracy.

Technology

As technology companies seek to provide solutions for digital transformation, customer intelligence and operational insight, conversational AI is becoming a critical enabling factor. The confluence of conversational capabilities, data analytics, AI and machine learning provides powerful experiences that fuel operational efficiency and enhance customer engagement.



A human-centric approach ensures adoption of revamped service portal

The challenge

A cloud company's service portal lacked a human-centric design, leading to an inconsistent user interface (UI), fractured information architecture and poor navigation features. Although the company's cloud-based service portal was known for its robust, configurable features and workflow, its customers wanted a more consistent, innovative and intuitive user experience across every scheduled six-month product release. The company approached us to reimagine the platform and roll out the revamped portal to its employees globally.

Our approach

After auditing the company's applications and [hosting design-thinking workshops](#), we proposed an employee-centric approach to designing enterprise service management applications, supported by guiding principles and a design theme suitable for all IT applications.

We centralized the platform's information, making it contextual and easy to find, which facilitated early adoption. We also introduced global smart search, personalized dashboards and AI-driven chatbots to the platform, as well as a knowledgebase that provides additional insights, such as "top-rated" and "most-viewed" content.



In addition to developing scalable and responsive designs for mobile and desktop use, we created a living UI toolkit so designers and engineers could reuse component design styles, ensuring a consistent experience across applications.

RESULTS

With enhanced features such as improved search by keywords and a virtual assistant, the revamped portal quickly became the one-stop destination for the service needs of the company's more than 7,000 employees.



81% increase in employee adoption rate.



Improved productivity and time to market through consistent design features.



Increased self-service tickets through an AI-powered virtual assistant.

[SEE THE FULL STORY »](#)

Travel & Hospitality

The travel and hospitality industries are leveraging intelligent virtual assistants to deliver customers hyper-personalized concierge experiences. Voice, message and chat capabilities allow travelers to effortlessly find, book and manage their travel and stay choices. Customer support and brand protection teams augment the contact center and social media teams with intelligent solutions that reduce costs and increase customer satisfaction.





Airline improves customer experience with loyalty program chatbot

The challenge

After witnessing a shift in how consumers engaged with its contact center, a midsize international airline decided to find new ways to connect with customers who called the contact center instead of using its frequently asked questions page. The airline wanted to reduce direct call expenses while also providing 24x7 support.

A particular pain point was the volume of customer loyalty program inquiries. Recognizing the potential for conversational AI to simultaneously reduce call volumes and improve customer satisfaction, the airline sought our [travel & hospitality technology expertise](#) to develop a customer-facing intelligent assistant to automate these inquiries.

Our approach

We began by evaluating many [natural language understanding](#) platforms to determine the appropriate technology stack. Based on the client's business objectives, we recommended Google Dialogflow because of its ability to escalate issues to an employee using the LivePerson chat platform.

We mapped the conversation flows and provided [chatbot](#) training, which grew in complexity over time as the number of user cases grew. To mitigate use-case conflict, the team leveraged



a series of best practices built from previous engagements and performed frequent regression testing to ensure the bot's accuracy rate. The intelligent assistant was then deployed on the airline's website, where it automatically handles both straightforward and complex customer conversations regarding the airline's loyalty program and escalates issues when necessary.

RESULTS

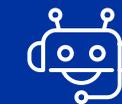
Our **conversational AI** team delivered a virtual agent that answers over 50 of the most common customer inquiries relating to its loyalty program. Learning over time, the intelligent bot effectively contains and leverages relevant "conversations," reducing the load on contact center agents by responding to high-frequency inquiries.



1,200 conversations automated each week by the software agent.



80% containment rate by the virtual assistant.



90% chat program accuracy.

[SEE THE FULL STORY »](#)

Get the most from conversational AI



Learn more about the Cognizant difference

Across all industries, our conversational AI teams help clients build new ways to engage with customers. Our developers have deep knowledge in these technologies and techniques, with approaches to deploy projects quickly and successfully. Through repetition, we've built expertise that separates our projects from those executed by others.

Conversational AI is improving the way businesses engage with their customers. We are helping our clients operationalize and accelerate the adoption of these technologies so they can exceed customer expectations through the use of voice interfaces, chat and messaging. Virtual agents are now emotionally intelligent enough to sense frustration or concern, for example, and alert agents when human assistance is required to resolve an issue.

For more information, please visit www.cognizant.com/conversational-ai.

LEARN MORE

For more information and to find out more about Cognizant Conversational AI, visit www.cognizant.com/conversational-ai.

About Cognizant Artificial Intelligence Practice

As part of Cognizant Digital Business, Cognizant's Artificial Intelligence Practice provides advanced data collection and management expertise, as well as artificial intelligence and analytics capabilities that help clients create highly personalized digital experiences, products and services at every touchpoint of the customer journey. Our AI solutions glean insights from data to inform decision-making, improve operations efficiencies and reduce costs. We apply Evolutionary AI, Conversational AI and decision support solutions built on machine learning, deep learning and advanced analytics techniques to help our clients optimize their business/IT strategy, identify new growth areas and outperform the competition. To learn more, visit us at cognizant.com/ai.

About Cognizant Digital Business

We help clients build digital businesses and innovate products that create new value – by using sensing, insights, software and experience to deliver on what customers demand in the digital age. Through IoT, we connect the digital and physical worlds to make smart, efficient and safe products, operations and enterprises. Leveraging data, analytics and AI, we drive intelligent decisions and anticipate where markets and customers are going next. Then we use those insights, combining design and software to deliver the experiences that consumers expect of their brands. Learn more about how we're engineering the modern enterprise at cognizant.com/digitalbusiness.

About Cognizant

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 193 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at www.cognizant.com or follow us [@Cognizant](https://twitter.com/Cognizant).

Cognizant

World Headquarters

500 Frank W. Burr Blvd.
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277

European Headquarters

1 Kingdom Street
Paddington Central
London W2 6BD England
Phone: +44 (0) 20 7297 7600
Fax: +44 (0) 20 7121 0102

India Operations Headquarters

#5/535 Old Mahabalipuram Road
Okkiyam Pettai, Thorapakkam
Chennai, 600 096 India
Phone: +91 (0) 44 4209 6000
Fax: +91 (0) 44 4209 6060

APAC Headquarters

1 Changi Business Park Crescent,
Plaza 8@CBP # 07-04/05/06,
Tower A, Singapore 486025
Phone: + 65 6812 4051
Fax: + 65 6324 4051