



Business challenge

Vodafone GmbH sought to accelerate and improve customer service by establishing an innovative messaging service across multiple digital platforms.

Transformation

As the second-largest telecommunications company in Germany, Vodafone prides itself on providing high-quality customer service, but the company wanted to improve how it handled high contact volumes. Using IBM® Watson® AI and IBM Watson Assistant technology, Vodafone launched its personalized chatbot assistant, TOBi, to engage with customers across four digital messaging channels.

Results

Handles 100% of all messaging conversations and 30% of all conversations with a first contact resolution rate of 70%

Understands more than 100 intents and can receive photos and process voice input

Accelerates customer service across multiple platforms in all markets

Vodafone GmbH

Meet TOBi: an intuitive chatbot that is revolutionizing customer service

Vodafone is one of the leading telecoms and technology service providers in Germany. As a gigabit company, it's a key contributor to the development of Germany's infrastructure. Its German cable footprint extends to almost 24 million households and it provides a gigabit service to over 11 million of those. It reaches 78 million people and the Vodafone NB-IoT network for the industrial and business sectors is delivering IoT connectivity on 85% of Germany's total area. Vodafone has been operating Germany's first 5G network since mid-2019. Its 5G services will be available to around 10 million people by 2020 and to 20 million people by 2021.

"I wanted to establish messaging as a service channel for customers to quickly get in touch with Vodafone and say, 'Hey, I have a problem and need information fast.'"

—Jörg Knoop, Technology Digital Incubator, Vodafone GmbH

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Taking customer service into the digital age

Customers are becoming all too familiar with the experience of calling into a company's service line and going endlessly around and around with its interactive voice response (IVR) system. Regardless of how clearly they convey the reason for the call, more often than not, seemingly, the callers are transferred to the wrong human operators—wasting everyone's time and leaving customers feeling frustrated.

The large German telecommunications company, Vodafone, was well aware of such customer service challenges. The company decided to brainstorm ways it could bring customer service into the digital age and transform the future of Vodafone Germany. Jörg Knoop, Vodafone's Technology Digital Incubator, proposed the idea of having the company shift from voice-based customer service to digital.

“Call centers use IVR, which makes it hard to solve the problem and are often seen as a barrier between the customer and agent—and we all know those nightmares of waiting 15 minutes with still no resolution,” Knoop explains. “From that thinking, I knew the perfect answer would be messaging.”

Knoop believes messaging is a form of customer service that consumers

have long preferred, adding, “We use messaging every day, whether with our family, friends, support groups, whomever, but we aren't there yet to a big extent with large brands or companies.”

With a concept on the table, Vodafone set out to assess different chatbot vendors. And after engaging with a Watson team, a partnership and a plan unfolded. Together, the two companies sought to bring to life an AI-powered digital service.

Blending the digital with human

The first version of Vodafone's German TOBi, which is intelligent bot (ibot) spelled backwards, launched on April 25, 2018, for SMS. The Watson-powered digital service assistant was built using the latest, leading AI technology from IBM. TOBi deals with customer concerns and either solves the problems directly or seamlessly routes the messages to the right human agent team. The live chatbot understands more than 100 intents, covering both tech and care across all Vodafone markets and customer groups. TOBi continuously expands its knowledge with every conversation.

By automating its customer service, Vodafone didn't intend to eliminate its human agents from the front lines. The company created TOBi to work alongside agents as an additional asset, giving human agents the opportunity to move into specialist

and case management roles. At first, skepticism arose about the chatbot's abilities, but the atmosphere quickly changed after TOBi resolved 16 percent of all conversations right out of the gate. The bot's ability to act as a concierge and deliver the right customer conversations to specific agents further added to its credibility.

“Though front-line agents were involved in bringing TOBi to life from the beginning, the major breakthrough was when 15 of those agents stepped in as bot trainers,” Knoop says. “Everyone saw that these front-line agents were voluntarily teaching TOBi about customer needs, and that right there became the driver for acceptance.”

Not only does TOBi offer a remarkably authentic conversational experience, but by providing the ability to accept images through WhatsApp messages, the bot also delivers a way to simplify and accelerate the assessment and resolution processes.

Peter Droste, TOBi's Product Owner at Vodafone, explains: “A customer can send in a photo or a screenshot, like a bill or a red blinking router, and TOBi will recognize it. This component was completely new for us but very impressive. TOBi can also recognize spoken messages from customers, which adds to the fun.”

There's no denying that TOBi has a likable bubbly identity, featuring a smiling face and bright red helmet

that most find charming. Droste says, “It's exciting to see how customers accept TOBi, with its intelligent dialogue and cool features.”

“Right after launch, TOBi resolved 16 percent of all conversations from the start. Within a year, we've increased this KPI [key performance indicator] to 28 percent”

—Jörg Knoop, Technology Digital Incubator, Vodafone GmbH

It's time to hang up the phone

TOBi has more than delivered: the bot has successfully transformed Vodafone's customer service by reducing wait times and providing consistent, high-quality service. Now handling 100 percent of all messaging conversations, the chatbot has a substantial 28 percent automation rate—which is projected to hit 40 percent in the near future—significantly contributing to the reduction of end-to-end process costs.

Thanks to positive user acceptance, strong business results and continuous enhancements, Vodafone was able to rapidly roll out TOBi to other messaging: Facebook, Apple Business Chat and—as first Telco provider in worldwide—to WhatsApp.

The share of Vodafone users opting for messaging over dialing in to the call center has almost doubled.

“We have a special metric to measure if a customer needs to call back within seven days after speaking with TOBi. Out of the 28 percent of conversations that TOBi resolves, two-thirds of those customers don’t reach back out. If they do, they are likely calling back for another topic,” says Knoop.

Currently, 15 percent of Vodafone’s contact volume comes from its digital messaging channels. The company expects to increase the amount to 30 percent within the year as the team continues working toward making TOBi its central business intelligence center. Knoop explains that Vodafone’s hotline calls will never go away, but soon TOBi will be at the center of the IVR and, eventually, integrated into the website and the My Vodafone App as a search tool option.

While there were some stumbling blocks throughout the journey, Knoop insists that having a shared vision with the Watson team and working in an agile manner made all the difference. “Together we knew

what we wanted to achieve and that it was going to take small steps,” he says. “There were some hard weeks and weekends, but in the end, they always delivered.”

Knoop adds that the team will continue to explore the idea of giving the bot a larger-than-life persona with just the right touch of humor, saying, “building TOBi a consistent persona across all channels is something brand new, but we are going to examine it further.”

“We have a great German IBM team working with Vodafone. The speed and quality of how they deliver the stuff is incredible. I’ve never seen such progress in a short period. It’s exciting, and we are just getting started.”

—Jörg Knoop, Technology Digital Incubator, Vodafone GmbH

Solution components

- IBM® Cloud™
- IBM iX®
- IBM Watson®
- IBM Watson Assistant

Take the next step

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