

customer care solutions

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case study ::

T-Mobile Germany's Award-Winning Call Centre Application Leverages Nuance Speech Technology to Deliver New Levels of Customer Satisfaction

THE COMPANY

T-Mobile International (T-Mobile), a world leader in mobile communications and one of Deutsche Telekom's three strategic business units, started out in 1993 as T-Mobile Germany GmbH, an independent trading company. T-Mobile International was established in 1999, and since that time, the company has grown to become one of the largest international mobile communications carriers and one of the most successful mobile phone operators in Europe.

A wholly owned subsidiary of T-Mobile International AG, T-Mobile Germany currently employs over 7,050 people, and as the market leader in Germany, serves more than 31.4 million customers.

the challenge

In 1998, T-Mobile became aware that its existing call centre phone application—which used DTMF and single-word recognition—did not reach the level of service that its customers expected and deserved. Because the touch-tone system was cumbersome to navigate, many callers grew frustrated, preferring to wait in queues for a call centre agent rather than use the self-service option. Seeking to differentiate its brand and gain competitive advantage through superior service, T-Mobile Germany decided to provide a self-service call centre application that effectively balanced usability with automation in order to increase business efficiency while ensuring a rewarding customer experience.

the solution

T-Mobile replaced its touch-tone system with a new customer care speech application based on Nuance's Foundation Speech and Dialog Technologies, which have helped hundreds of businesses achieve their customer service and financial objectives. The result was T-Mobile's Speech-Enabled Customer Care Portal, an innovative speech self-service application focused on transaction success.

In 2004, T-Mobile launched its new self-service call centre application, which now fully automates over 400 business processes by allowing callers to interact with the system using natural, conversational language. To complete a transaction or resolve a problem, callers can navigate the system quickly and easily by simply speaking their request. The system offers various options for commonly requested services and information, including:

- Tariff and Option Change
- Card Cancellation
- Contract Information
- Product Information
- News
- Direct Link to other applications, e.g., i.e. SMS-News, Mobilbox, or Account-Service
- Contact to Agent

In addition, callers may opt to take a “Guided Tour”, which provides a step-by-step introduction to the self-service application through pre-recorded dialogue examples and opportunities to try out its speech recognition capabilities. This interactive introduction helps first-time callers feel more comfortable with the system so they are more inclined to use the self-service option for future interactions.

“Because the customer is the pivot point of all our activities, we recognize that providing exceptional customer service will continue to be the key to our business success,” said Klaus Dieter Liedtke, head of the Mobilbox Department at T-Mobile Deutschland GmbH. “We are committed to thinking and acting with a strong orientation toward service and segments, offering our customers state-of-the-art products and services. By using Nuance's innovative speech technologies to create a call centre application that is fast, accurate and reliable, we are experiencing an increased self-service success rate.”

the customer benefits

With T-Mobile's new call centre application, customers benefit from 24x7 access to a user-friendly automated speech system via a single four-digit telephone number. Callers gain self-service access to a wide range of options using natural language commands. In other words, the system allows callers to tell the system what they need in their own words rather than being prompted with a long list of choices. As a result, the system delivers better performance results—higher automation rates, reduced call length, and fewer hang-ups/opt-outs—and a more satisfying interaction experience for callers.

Leveraging Nuance's groundbreaking speech technology, T-Mobile's call centre application encourages more efficient customer interactions by reacting to multiple pieces of information in a caller's unconstrained request. The result is faster handling of caller requests by reducing the back-and-forth between the system and the customer for additional information. If the event that the caller wants to speak to a live agent, the system automatically transfers the call and provides the agent with all necessary customer data, information and details about the request via a pop-up box on his or her computer screen.

In the near future the T-Mobile speech application will provide a number of other breakthrough innovations, including:

- **Gender Recognition**—presents appropriate entry prompts recorded by either male or female voice talent.
- **Emotion Recognition**—de-escalation feature detects when callers are becoming angry during the dialogue and provides the option to transfer to a live agent.
- **Native Tongue Recognition**—presents greeting and “Easy Entry” advice in caller's native language.
- **Age Recognition**—automatically adjusts the speech tempo of prompts and gears voice user-interface prompting toward single- word recognition for elders.
- **Speech2Text**—gives callers the chance to speak their concerns, which will be captured as text for further action, such as call-back preferences, so that no customer concern is lost.

Are customers truly realizing the intended benefits of T-Mobile's new call centre speech application? If the results of the Fraunhofer survey, “Acceptance of Speech Applications in Germany in 2006” are any indication, the answer is yes. Survey participants were asked to indicate their level of satisfaction with the speech applications they use on a regular basis. T-Mobile's speech application received the highest satisfaction rating of all the speech applications specified in the survey responses.

the business benefits

Since T-Mobile implemented its new call centre speech application, the company has realized a number of significant business benefits. During peak call times the application handles the workload of up to 1,600 live agents simultaneously, allowing call centre personnel to focus on more complex and specialized service issues.

€10 million savings per year

Other compelling business benefits resulting from the automated speech system include:

- €10 million savings per year
- 75+% increase in automation
- Successful automation of more than 36 million calls per year (100,000 calls per day)



Results of a Vocatus Study conducted in July 2006 indicated high levels of customer satisfaction with the contact and menu navigation capabilities of T-Mobile's call centre speech application.

High levels of customer satisfaction

an award-winning service

In addition to high marks for customer satisfaction, T-Mobile's call centre speech application won the "Best Practice Voice Award" in the German-speaking market from The Voice Business Initiative.

"The jury voted for this leading Speech Application with its extensive array of services as the main winner because it is groundbreaking and exemplary for the entire industry," said Prof. Dr. W. Wahlster, Chair of the Artificial Intelligence Group at Saarland University, in his Voice Award Laudation. "It gained extremely high scores in the practical test, demonstrating maturity and high performance throughout the dimensions evaluated."

The Voice Business Initiative jury gave the T-Mobile speech application high scores for its:

- High degree of freedom for user input, which allowed for the use of natural language commands within the application context
- Incremental batch processing of comprehensive dialogue tasks
- Omnipresent possibility to use barge-in or to jump into different menus effortlessly
- Exceptional degree of user adaptation and individual profile adjustment

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