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Relaxed: "eCare" Voice Bot Helps Toyota Drivers When the Red Warning Lights Come On

The company:
Toyota Motor Corporation

The Japanese Toyota Motor Corporation is a multinational company that produces at 51 locations in 26 countries worldwide, in addition to the twelve Japanese plants. In 2020, Toyota produced about 9.53 million vehicles, making it the world's largest car manufacturer in terms of production figures, ahead of Volkswagen AG. According to the Forbes Global 2000 list, Toyota is the tenth largest listed company in the world, and it employs a total of more than 370,000 people (as of 2022).

The company, founded in 1937, is investing heavily in e-mobility and customer eCare and is one of the digital pioneers in the industry.

The challenge

Optimize customer service and experience in the event of error messages

Many drivers are unaware of the meaning of the warning lights on the dashboard and are unsure of how they should behave when one of the warning lights comes on. In addition, drivers can easily overlook warnings and error messages if they are distracted by traffic. However, improper behavior in the event of critical or severe error messages can cause damage to the vehicle, which can result in expensive repair measures or, in the worst case, also personal injury, which could have been avoided if instructions are provided when they are needed.

Solutions and results in detail

valantic, in collaboration with Toyota, has developed a Conversational Artificial Intelligence (CAI) solution that will contact the vehicle owner by phone within a few seconds in the event of a critical Priority 1 or a severe Priority 2 error message. The driver receives specific recommendations for action in accordance with the error or warning message. The CAI solution then sends additional helpful information to the driver via email and notifies the relevant Toyota dealer of the incident. The dealer can therefore begin the repair work immediately after the vehicle arrives.

The key components and benefits of the solution include:

- Development of a digital assistant based on Cognigy.AI and AudioCodes

- Microsoft Azure Text-to-Speech

- Critical and severe errors will be repaired more quickly

- Damage to the vehicle is avoided

- Higher safety standards and better customer service for Toyota customers

- Increase sales and reduce costs at Toyota dealers

Six benefits at a glance:

- Increase customer confidence and make customers more loyal

- Save time for dealers: 20 minutes/case

- Rapid payback

- Unburdening of staff, no wait times for customers

- Increase in sales at Toyota dealers

- Damage to the vehicle is avoided

Project history

„We are committed to proactive communication with our customers and to developing digital services using conversational AI." (Toyota)

The starter battery is and remains the #1 cause of breakdowns.

43.2% of the failures investigated by the ADAC in 2022 were due to battery malfunctions. Engine and engine management (23.3%) are the #2 cause of breakdowns, and the generator, starter, lighting, and wiring (10.4%) are #3.

However, the driver often does not understand the meaning of the warnings that suddenly light up bright red on the dashboard. Frequently drivers are uncertain, and often they panic. Will they be able to keep driving, and might there be damage to the vehicle that can cause expensive repairs?

Should such emergencies arise, Toyota will not let its customers down. Together with valantic, the world's largest car manufacturer has developed a personal digital assistant based on conversational artificial intelligence (CAI). The Cognogy.AI platform, AudioCodes, and Azure are used, among others.

These are services that convert text to spoken language. The CAI assistant automatically contacts the driver via smartphone a few seconds after an emergency occurs and helps with specific recommendations for action.

The driver avoids major damage to the vehicle or, in the case of a minor warning, can safely and confidently continue on his or her way. At the same time, the customer's Toyota dealer is informed so that it can initiate repair measures.

A new era of mobilityt

„We want customer-friendly mobility for all, and we do not regard ourselves exclusively as an automobile manufacturer. Toyota eCare is the beginning of a new quality in customer service, which we have successfully introduced in cooperation with valantic," explains Achim Koch, Manager Product Quality CX at Toyota Germany. A Toyota has sensors that can read over 150 errors from the vehicle. When purchasing a new vehicle, buyers can activate the MyT service and thereby also give consent that in case of an emergency, data such as error codes and customer information may be transmitted to a central Toyota service.
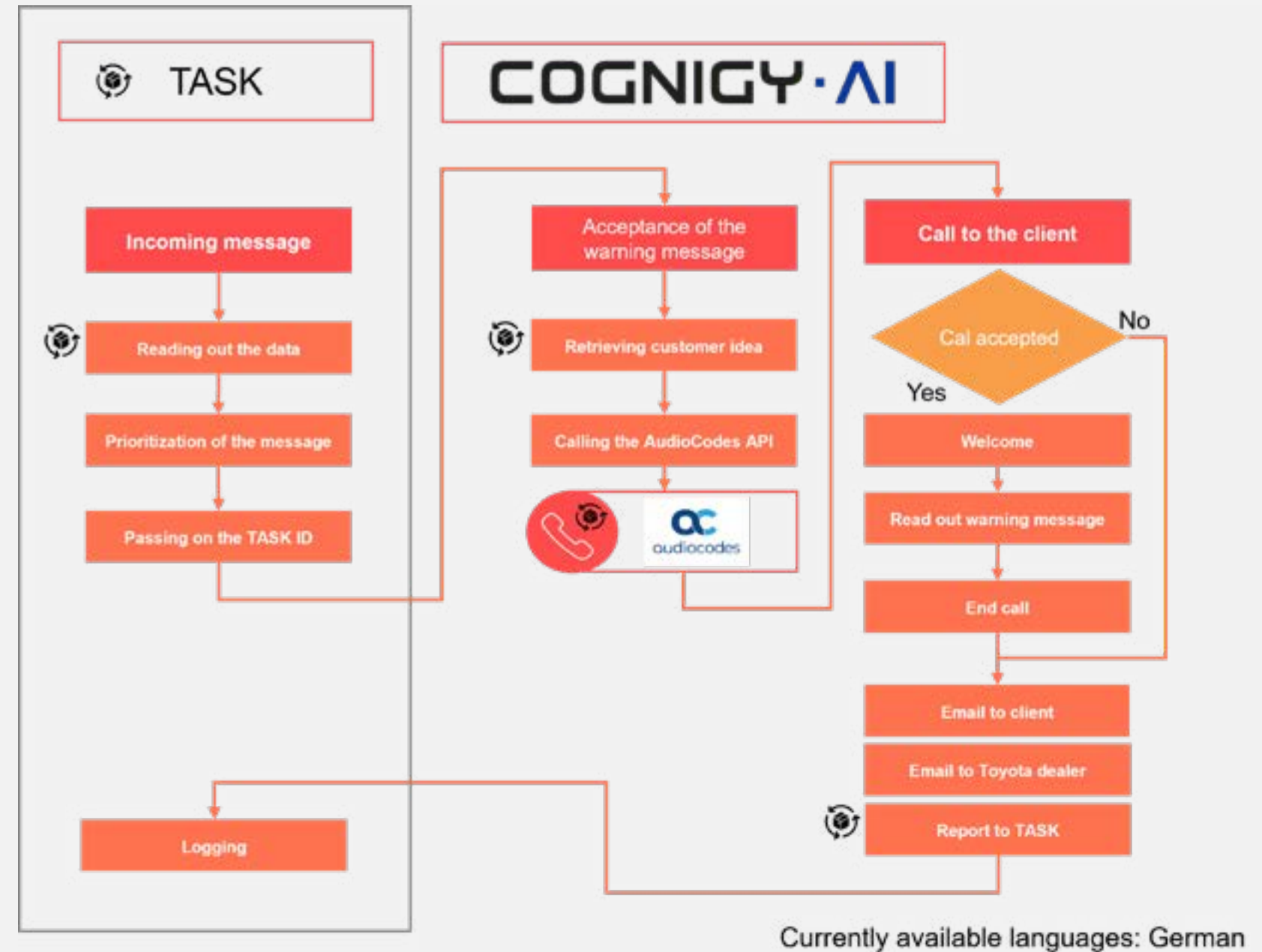
The workflow at a glance: For example, customer service eCare handles incoming emergency messages based on Cognigy.AI and text-to-speech service and contacts the affected driver and the relevant Toyota dealer in a timely manner (source: valantic).

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If an error report reaches the Toyota server, the customer contact data is identified via the Cognigy.AI platform and the CAI customer assistant is activated. The digital assistant draws on extensive technical documentation, calls the customer, and explains in clear language what needs to be done. Toyota is the pioneer among car manufacturers, offering a customer-friendly, digital eCare service.

„**We distinguish between critical warning messages, for example, relating to the engine or the braking system, and maintenance messages that are not time-critical, such as an upcoming oil change or a low tire pressure**", explains Daniel Völker, Lead Consultant Data Science & AI at valantic. „**Toyota eCare has been around since the end of last year and it has been very popular with customers; many customers react positively to the CAI solution's messages. The service strengthens the trust between customers, vehicles, and dealers in the long term**", confirms Daniel Völker.

Toyota carefully prepares its dealers for the introduction of digital eCare customer service and reaps many advantages from it. For example, it makes customers more loyal and increases their confidence in Toyota. The time saving is an average of 20 processing minutes per case.

The dealer will not incur any additional costs. The digital assistant not only gives customers a sense of security and trust; from Toyota's perspective, but it also pays for itself quickly.

The eCare Assistant is currently available in German, but other languages will be easy to implement: „The project has a high scaling potential," explains Daniel Völker. So far, Toyota has been a digital pioneer and one of the few car manufacturers that support customers with a system such as eCare. Toyota is currently planning a digital assistant together with valantic and Cognigy, one that will provide comprehensive advice to vehicle owners on general questions about their vehicle.

Achim Koch
Manager Product Quality CX at
Toyota Germany

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Do you want to learn more?

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