



CASE STUDY

CATERPILLAR REPLACES PREVIOUS VOICE SOLUTION WITH EPG'S LYDIA VOICE

Lydia Voice from EPG provides native interface to SAP ERP and WMS and solution for Android devices.

The world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives, Caterpillar's cutting-edge technology delivers exceptional value. Key to that mission is a commitment to leveraging cutting-edge technologies within the company's own facilities — including warehousing and distribution centers (DCs).

Across Caterpillar's North American DCs, which handle parts and components for manufacturing and service, the company had long experienced the benefits of voice-directed picking, including

improved accuracy and greater efficiency. At its facilities, associates used a combination of a voice hardware and hand-held mobile computers running the Microsoft Windows mobile operating system.

In 2017, however, the operations team recognized that the Windows operating system's end of life was fast approaching. Further, the group had planned an upgrade to the company's SAP enterprise resource planning (ERP) and warehouse management system (WMS) at roughly the same time. The operations team saw an opportunity for a technology refresh, and began to explore their options.



CHALLENGE

- Existing voice hardware and hand-held mobile computers approaching operating system end-of-life
- Needed to upgrade SAP's ERP and WMS simultaneously
- Wanted a more streamlined technology solution



SOLUTION

- Implement single, standardized Zebra TC70 touchscreen mobile computer on Android operating system
- Switch to Lydia Voice for easy integration with SAP and Android
- Lydia Voice's deep neural network technology automatically recognizes more than 50 languages



RESULTS

- 32% increase in picking productivity and throughput
- Multi-lingual workforce able to work in their native tongue
- 15% improvement in quality and accuracy
- Able to install upgrades in-house after first deployment

“Our previous voice system had become outdated, along with the devices we were using. Operators were using multiple devices, and we wanted a more streamlined solution.”

Operations Manager at Caterpillar

ABOUT THE SOLUTION

After months of research, Caterpillar’s operations team decided to replace their mobile computers, scanners, and voice devices with a single, standardized unit to be used across all their facilities. Caterpillar chose to deploy the Zebra TC70 mobile computer, powered by an Android operating system. Switching to a single device simplified operations overall.

“By converting to one mobile computer, our IT department no longer had to maintain and upgrade a collection of different devices,” said the operations manager. “It also made it much easier for our associates to only need to understand how to use, and carry, a single unit.”

Simultaneously, the decision was made to switch voice-directed picking service providers due to limitations with the previous system’s ability to interface with SAP and Android. Instead, Caterpillar opted to adopt the Lydia Voice solution from EPG, which addressed both of those issues.

Lydia Voice is device independent which allowed the system to easily interface with various Android handheld devices. In addition, Lydia Voice is SAP certified and provides a native interface with SAP via a remote function call (RFC). Caterpillar was able to save considerable time and expense as no middleware was required.

That made deployment of the new voice solution across multiple locations much easier. So easy, in fact, that after working with EPG in the first facility, Caterpillar’s operations team felt confident enough to complete the rest of the integrations across the other five sites with only minimal, remote support.

UNIQUE LYDIA VOICE BENEFITS

Caterpillar noted several other Lydia Voice features that their previous voice solution lacked. Chief among them is Lydia Voice’s deep neural network voice recognition technology. This allows the system to automatically

recognize more than 50 different languages and a multitude of unique dialects. For a global company like Caterpillar, with locations around the world, this feature is a significant bonus.

Further, once associates began using the Lydia Voice system, they discovered that they could get up and running much faster without first completing verbal confirmation checks, or voice-template training. By eliminating voice-template training, Lydia Voice removed the need for time-consuming training required by other voice solutions when onboarding new employees. Additionally, Lydia Voice is optimized for noisy warehouses, eliminating poor voice recognition challenges.

“With Lydia Voice, our associates no longer spend time signing into the system — something that they used to find really frustrating. It’s virtually instantaneous now,” continued the operations manager. “It’s also incredibly easy for new employees to learn our picking processes and procedures, thanks to the Lydia Voice prompts. We’re seeing big efficiency improvements.”

THE RESULTS

Since implementing Lydia Voice, Caterpillar’s distribution centers are averaging a nearly 32% increase in picking productivity and throughput, while accuracy has risen too.

“It has been a pleasure working with the Lydia Voice team,” concluded the operations manager. “EPG’s technical support and hands on approach enabled us to learn and install/implement very quickly. We have exceeded our clients’ expectations in world class performance for accuracy and our own goals for quality with 15% improvement. Finally, we have a multiple language workforce so our employees are quite comfortable and enjoying using Lydia Voice in their native tongue.”

ABOUT CATERPILLAR

- World’s leading manufacturer of construction and mining equipment
- Also makes diesel and natural gas engines, turbines, and locomotives
- 2019 sales and revenues of \$53.8 billion
- Global footprint of 5 distribution centers



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