

Lifting Warehouse Productivity with Voice-enabled Stock Picking



Profile: A Convenience retail chain operating in North America, Europe, and worldwide

Location: Quebec, Canada

Industry: Manufacturing

Website: couche-tard.com

Solutions:

- Ivanti® Speakeasy
- Ivanti® Terminal Emulation

Benefits:

- 22% uplift achieved in speed and productivity in the picking process
- 99.82% pick accuracy rate achieved, ensuring high quality of service for the business
- Integrated seamlessly with existing warehouse technology
- Rapid, enthusiastic adoption by users

Couche-Tard operates a network of more than 2,000 convenience stores in Canada, from the Maritimes to Western Canada, primarily under the Couche-Tard® and Mac’s® brands. The company also operates thousands of stores under the Circle K® brand in the US, Europe, and other parts of the world.

Taking stock of the situation

Couche-Tard’s 650 stores in Quebec are served by a single distribution center located in Laval. The distribution center houses more than 3,000 SKUs across a wide range of perishable and non-perishable products and is responsible for providing three scheduled deliveries to each store every two weeks.

The director of the distribution center, Luc Frappier, comments: “Our whole business in Quebec depends on our distribution center operating efficiently and effectively. We pride ourselves on the speed and accuracy of our logistics, and the ability to pick the right SKUs from the warehouse to ship to each store is at the heart of everything we do. We are always looking to find innovative ways to shave even a few seconds off each pick, because even tiny improvements add up to significant benefits for the company as a whole.”

As part of this drive for innovation, Couche-Tard decided to replace its clipboard-and-label-gun-based warehouse processes with a solution based on wearable mobile computers from Zebra. The devices connect to the company’s existing warehouse management system via Ivanti Terminal Emulation, powered by Wavelink.

“The savings on paper alone were significant,” says Benjamin Carmel, Operations and Transport Manager at Couche-Tard. “Just by getting rid of the labels we used before we saved \$36,000 per year, and we’ve reduced our impact on the environment, too. The success of the move to wearable technology gave us an even greater appetite for innovations.”

Seizing the opportunity with both hands

Introducing wearable technology was a significant step forward for Couche-Tard, not only because it introduced efficiencies that allowed the company to reduce costs, but also because it freed pickers from carrying clipboards and label-guns around the warehouse as they worked.

Frappier comments: “To pick items quickly and effectively, it definitely helps if you can use both hands. The less paraphernalia our employees must carry with them, the faster and more accurate they can be.”

However, although the Zebra devices can be mounted on users’ wrists, they didn’t allow for completely hands-free operation. Pickers still had to view the screen and push buttons on the devices to receive instructions and confirm their picks.

Carmel says: “We knew at the time that a voice-activated solution would be ideal, but all the options we looked at were very expensive and difficult to integrate with our existing systems. We didn’t want to have to install a separate picking module and voice server, or replace any of our existing infrastructure or devices. We’re very happy with the rest of our warehouse management systems—we just wanted a voice-enablement layer that we could integrate seamlessly on top.”

Stock picking at the user’s command

When EXA Systems, Couche-Tard’s long-term technology partner, introduced the distribution center team to Ivanti Speakeasy, it soon became clear that this was the solution that Couche-Tard had been looking for.

Francis Joannette, Supply Chain & Data Collection Manager at EXA Systems, comments: “Here at EXA Systems, we have been delivering successful voice-automation projects for clients for more than 15 years, and

we are familiar with all the major vendors and technologies on the market. We had a good understanding of Couche-Tard’s challenges and knew they were keen to further optimize their environment—but only if we could offer a solution that would fit their budget and their desire to leave existing systems in place. With Ivanti Speakeasy, powered by Wavelink, deploying a voice-picking solution is no longer complicated or costly. That made it a perfect fit for Couche-Tard’s picking operations.”

“Ivanti Speakeasy simply sits on top of our existing platform and runs entirely on our wearable devices, with no need to install a separate voice server or make changes to our warehouse management system,” says Frappier. “Effectively it converts the text from our existing interface into speech, so the user doesn’t need to look at their screen to get the next instruction. It also allows them to speak into a headset instead of tapping commands into the device, so they can now do most aspects of their work completely hands-free.”

“Ivanti Speakeasy makes it so easy to develop and roll out voice solutions that the possibilities seem almost endless.”

— Luc Frappier, Director of Distribution Center

Couche-Tard knew that the solution would only be a success if it provided a good user experience, so the project team was careful to involve the picking team during the design phase. One of the company’s best pickers volunteered to act as a super-user during the pilot phase, and within two weeks, the project team had proven that the solution would deliver positive results.

Carmel says: “Our super-user was already a very good picker—he averaged 135 picks per hour, against company-wide average of around 110. But Speakeasy helped him take his performance to the next level—up to 160 picks per hour. And when we rolled out the solution more widely, we saw an even greater uplift in user performance: the average has risen from 110 to 135, which is a 22% increase in productivity.”

The effectiveness of the solution has also helped to boost Couche-Tard's already high level of accuracy in its picking processes. The company is seeing a 99.82% accuracy rate, which means that the increase in picking speed has not had any negative impact on quality of service.



Picking up the pace of user adoption

Frappier adds: "One of the key things about the solution is that it doesn't force pickers to use it. We have members of our team who are hearing-impaired, for example, and they can still use the text interface on their wearable devices. People can mix and match, using whichever interface suits them best in a particular situation. That multi-modal approach really helped to encourage adoption."

The enthusiasm of the super-user also helped to convince other pickers to try the new solution, as Carmel explains: "He was very pleased with the solution, and with the level of engagement with the project team, so he became a strong advocate. Soon the other users actively wanted to join him. This proved to be a very successful way to manage the rollout."

In the future, Couche-Tard is considering expanding the use of Ivanti Speakeasy, so that other teams within its distribution center can benefit from it.

Frappier concludes: "There are many other aspects of our warehouse operations, such as our receiving and put-away processes, that could be optimized with voice-enablement. Ivanti Speakeasy makes it so easy to develop and roll out voice solutions that the possibilities seem almost endless."

Learn More

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