

Usinatech: The art of implementing cobots on a busy production floor

1. *Decide to act*

Located in Melbourne, Quebec, Usinatech has been making critical drivetrain and transmission components, like gears and shafts, since 1986. They employ 300 people in Canada, and 50 more in Mexico.

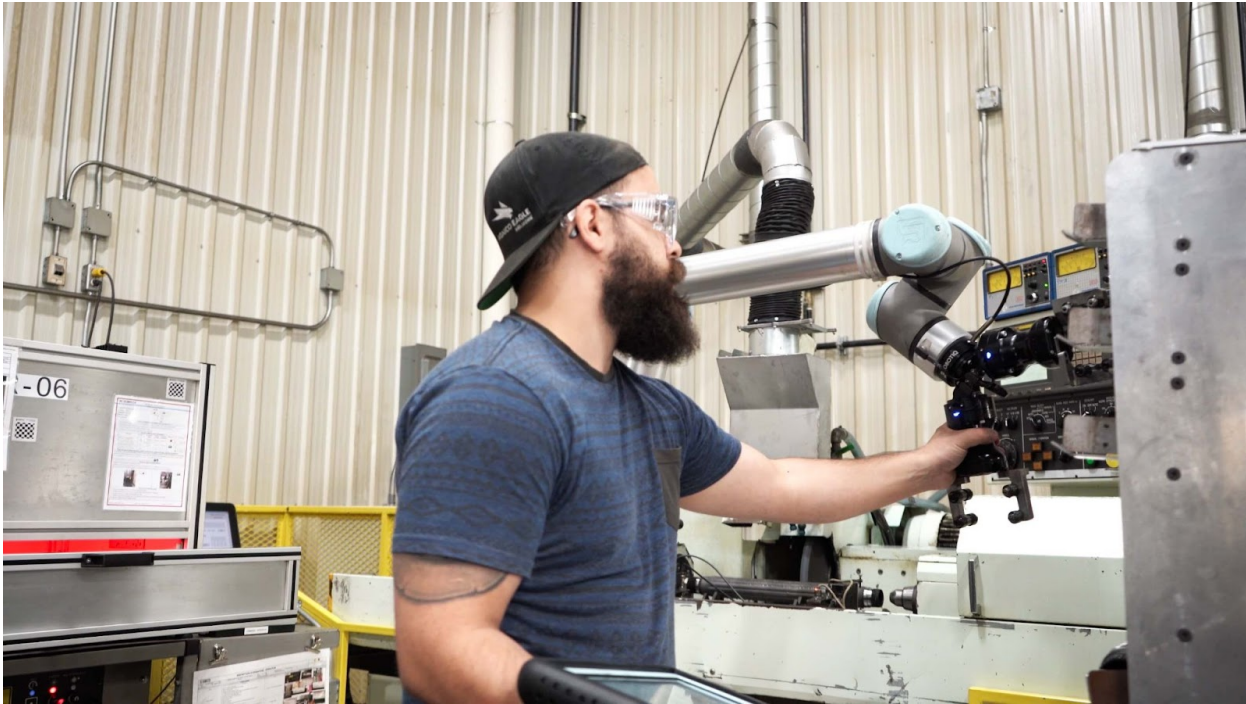
Patrick Coté, VP of Engineering and Program Management, explains that Usinatech has been automating its production cells for many years. However, the growing labor shortage and the need to become even more competitive in the market have forced Usinatech to accelerate its shift to automation.



START PRODUCTION FASTER

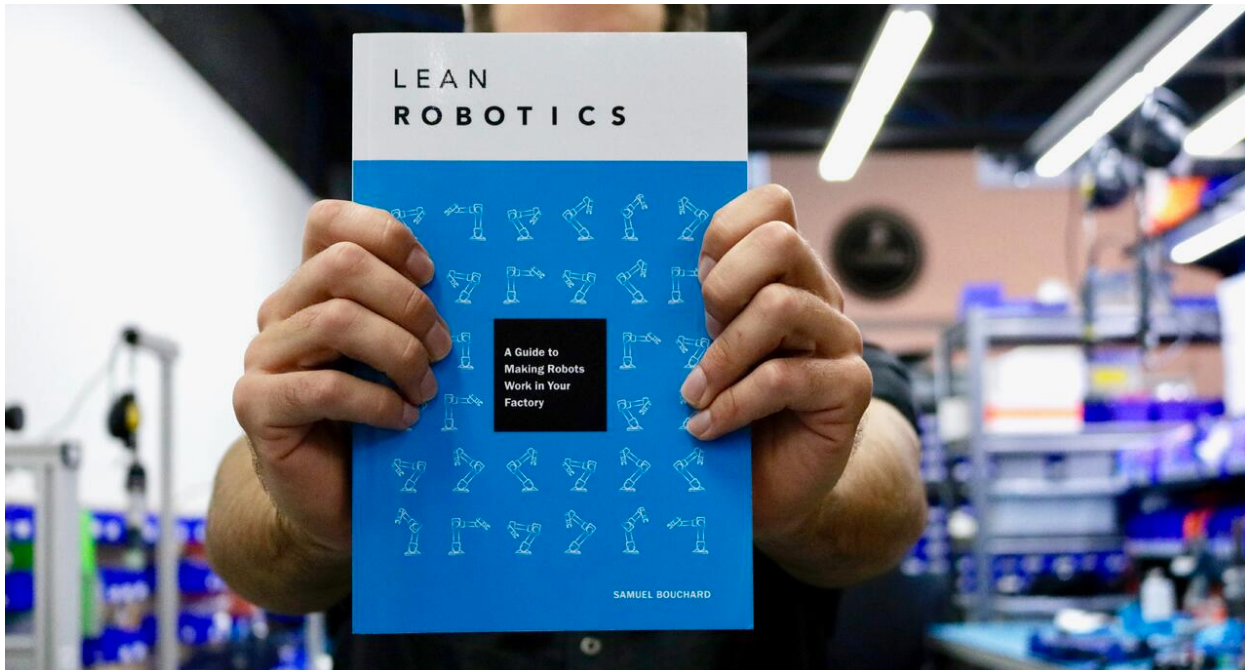
2. Choose the right products, and the right process

According to Vincent Roussy, Manufacturing Engineering Manager, Robotiq products have helped them make the shift to automation on many levels. “What Robotiq’s grippers have to offer is a step beyond any of the competitors,” he said.



But to succeed, you need more than good products; you also need a good implementation methodology. That’s why Roussy developed a standardized implementation method based on the lean robotics methodology.

Usinatech’s decision to automate cells using both Robotiq’s collaborative robots and insights from lean robotics has led to a faster ROI: As Roussy explained, the total project cost for implementing a cobot at Usinatech is at least 50% lower than for an industrial robot.



Roussy fine-tuned his process while doing the first three cobot implementations himself. Once tested and standardized, the process became so simple and efficient that cobot implementations are now an internship project for college students.

This has many advantages for both the company and the students. The interns gain experience in managing an automation project from start to finish, and they get to see the results of their work. Meanwhile, Usinatech gets to add cobots at a much lower implementation cost, which contributes to an excellent ROI for these cobot projects. Roussy said that all this is made possible by the simplicity of the cobots themselves plus a well-planned workflow, as recommended by lean robotics.

3. *Smooth the transition for operators*

As Roussy pointed out, even if cobots are more simple and flexible to integrate than industrial robots, there are still several challenges along the way. For technical challenges, he said, it's important to work on a solid implementing process, and always perform a risk analysis—even if safety management is easier with cobots than industrial robots.

Another aspect to consider is how employees will react to their new cobot coworkers. In this area, it's important to involve operators from the beginning. Make sure they have all the information they need to understand what's going to change in their day-to-day activities, and how the cobot will help them with their tasks. Their engagement helps reduce fears of working with a robot or being replaced by one.

Hugo Santos, who has been a specialized operator at Usinatech for 10 years, opened up about how he felt. His cell was the first to be automated. He was really impressed with the cobot, but he feared being replaced by a robotic arm. Ultimately, that's not what happened at all, he said. Cobots are not replacing him; they're just helping him be faster and more efficient.



Regarding the learning curve, Santos said that although it takes a bit of training at first, he was able to manage the cobots himself soon enough. Santos grew so fond of the first robot that he even nicknamed it “Huguette,” and sees it as his hard-working alter ego. He is now working with three different cobots in his cell, which he thinks of as helpful robotic colleagues.

4. Succeed at the challenge of automation

With their many industrial robots, their six-CNC machine-tending kit, and their eight active cobots (with more to come), it's clear that Usinatech has risen to the challenge of automation. Patrick Coté and Vincent Roussy are glad to report that this shift has resulted in significant productivity gains, lower operating costs, and a lower employee turnover rate, which in turn has stabilized all aspects of production and distribution.

