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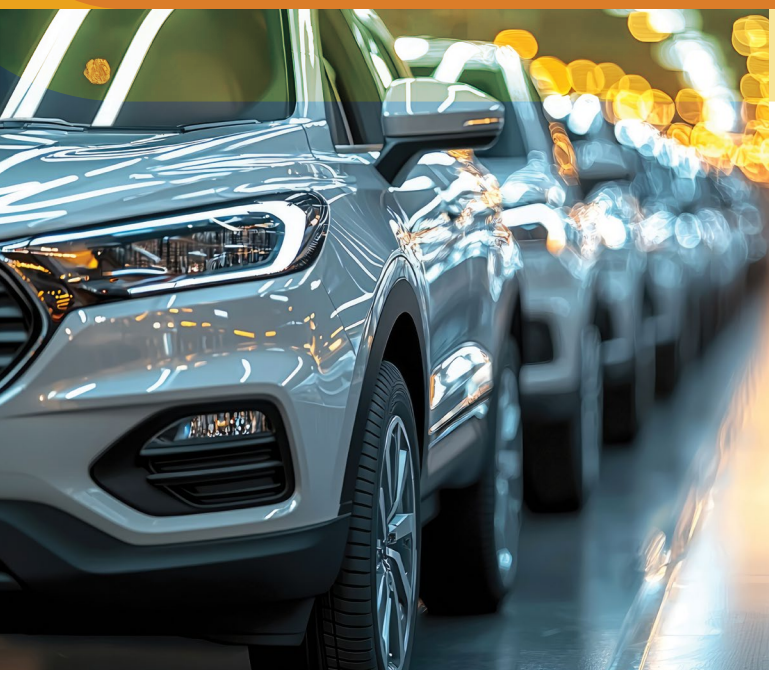
CASE STUDY

Accelerating Quality Ops with Precision Indoor Vehicle Tracking



Overview

At one of Canada's largest automotive manufacturing facilities, precision isn't optional - it's the driving force of producing 1,200 vehicles every single day. With thousands of moving parts, people, and processes, even the smallest inefficiency in vehicle tracking can ripple into millions in costs, delayed throughput, and reduced customer satisfaction. Partnering closely with plant leadership, our team implemented a cutting-edge real-time indoor vehicle tracking solution that completely redefined how vehicles are located and managed across end-of-line (EOL) production, staging, and quality workflows.

The Challenge

Before our deployment, when vehicles were placed under quality hold, locating them was a time-consuming, manual process. Teams relied on outdated printed worksheets, long facility walks, and guesswork, adding an extra 15 minutes per car on average — a drain on productivity that created bottlenecks in a plant designed to run like clockwork. The result: costly delays, mounting inefficiencies, and an unnecessary strain on logistics precision.

KEY CHALLENGES INCLUDED:

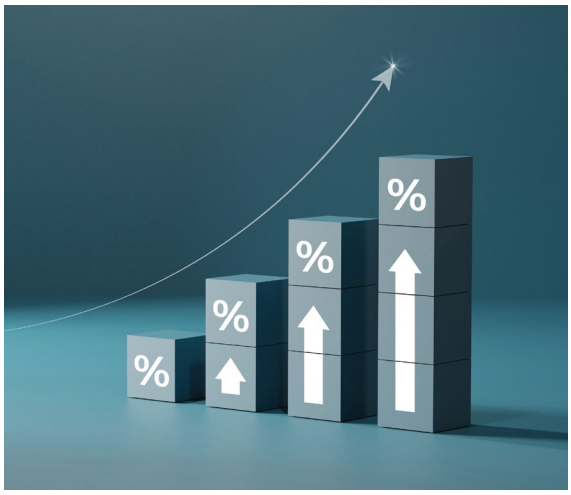
- Time-consuming vehicle location for almost all quality and repair operations (~700 pickups/month per line)
- Costly labor and overtime for vehicle retrieval, staging, and movement
- Inefficient handoff processes between the quality pickers and high-cost repair laborers
- Inability to pinpoint location of vendor-damaged vehicles impacting cost recovery

The Solution

Our advanced indoor location platform was deployed across both production lines, strategically covering high-volume traffic zones and integrating seamlessly into existing plant operations. With vehicle locations now tracked with pinpoint accuracy, the plant can instantly locate and redirect assets, ensuring smooth flow through every stage of the production and quality cycle.

SOLUTION HIGHLIGHTS:

- Precision indoor location with **3–5 meter average accuracy**
- Seamless support for vendor defect tracking and quality control workflows
- Validated technology that scales in real-world OEM environments
- Proven performance in OEM's harsh RF/metal-dense conditions



Results

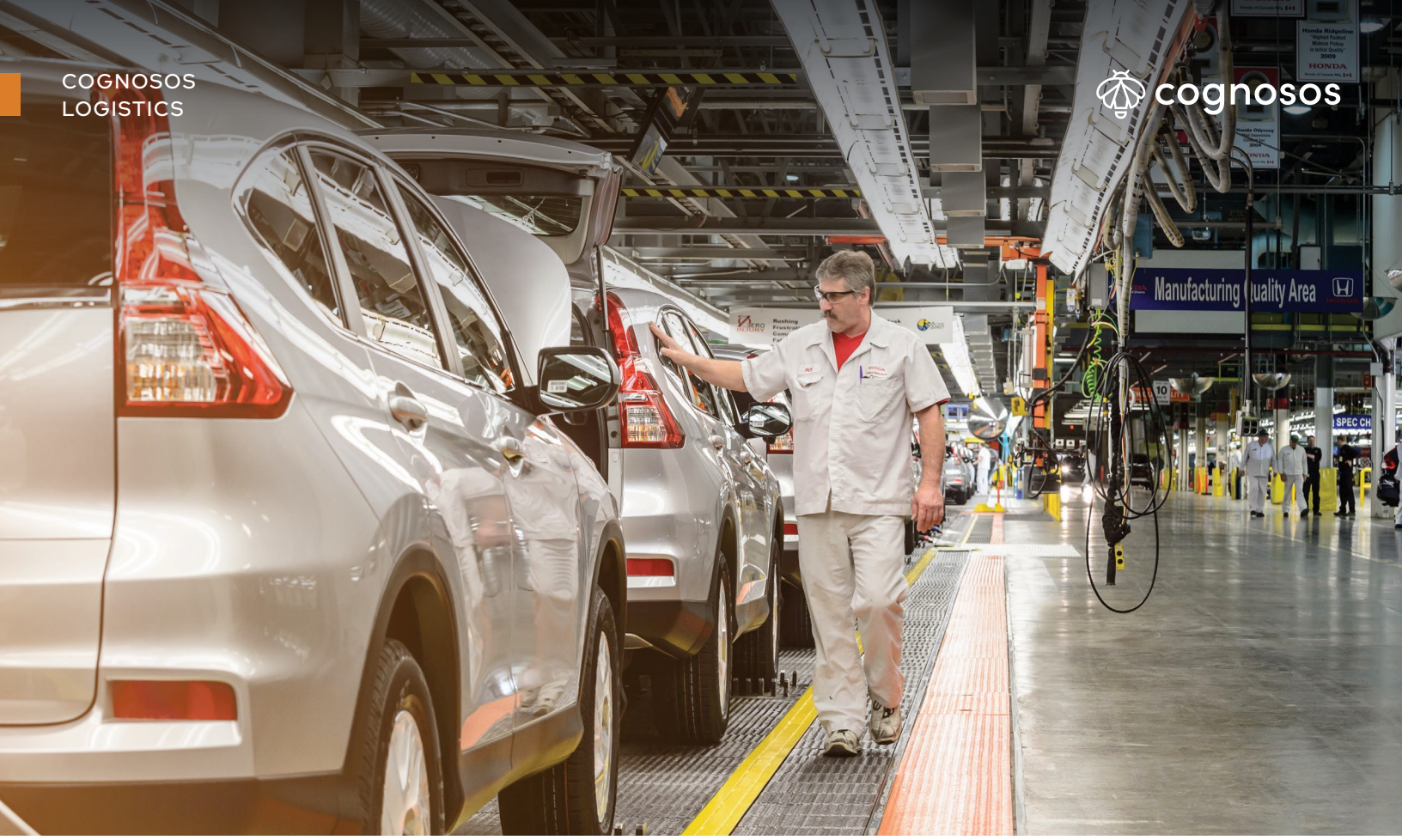
Even with ROI calculated strictly in time savings, the value is undeniable:

Location	Quality Picks/ Month	Time Saved/ Car	Labor Rate	Annual ROI
Line 2	700	15 min	$50/hour	$105,000
Line 1	700 (est.)	15 min	$50/hour	$105,000
Total				**$210,000**

When factoring in **broader operational gains**, plant leadership conservatively estimated a **>$300,000 annual return**.

OTHER KEY, HIGH VALUE BENEFITS:

- Faster throughput and plant velocity
  1200 vehicles/day*~300 days*~$30k vehicle cost
- Decreased dwell time and shipping delays
- Improved vendor accountability and cost recovery for defective parts
- Enhanced transparency for inventory management



The Impact

This isn't a "nice-to-have" technology - it's a necessary game-changer. By eliminating hours of manual searching and replacing guesswork with real-time intelligence, the plant unlocked measurable ROI from day one. The solution not only streamlines daily operations, but also provides the scalability and agility OEMs need to future-proof manufacturing against shifting demands. It's proof that digital transformation delivers real, tangible impact on the factory floor.

What's Next

With the foundation now in place, the facility is expanding the system's reach – exploring deeper analytics, strategies to reduce dwell time, and enhanced operational workflows that will drive even greater speed, accuracy, and profitability across the entire manufacturing ecosystem.

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