# HERE Technologies helps Descartes optimize last mile logistics

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The e-commerce revolution is impacting all elements of global supply chains, but it's in the last mile where e-commerce disruption manifests most acutely, both in the B2B and B2C space. In the retail world, virtually every business is working to develop strategies for getting goods into the hands of customers quickly and accurately. They're creating their version of the Amazon model, one that guarantees delivery when and where their customers want it, as economically as possible, whether the product was purchased online or in the store.

Descartes Systems Group stands with its customers at the last mile. That's the nexus of location-based services and logistics technology, where sensor data, electronic logging devices and connected handheld devices, as well as all the stakeholders involved in shipping product – buyer, seller, carrier, consignee and freight broker – link together.

"Expectations are changing around visibility into a particular shipment's present status, plans for getting that shipment to the customer and whether or not the current disposition of the shipment aligns with the plan. That's the primary arena of change and transformation for us," says Ken Wood, Vice President of Product Management for Descartes. "We've all become accustomed to Uber's ability to show us where they are to the second as they make their way to us, and Amazon's ability to promise same-day or next-day delivery with visibility along the way."

And, even though retail has been out on the bleeding edge of this disruption, expectations for real-time visibility and final mile delivery have taken root in B2B transportation. In wholesale distribution and commodity transportation scenarios, people still want to know where their shipment is now and the ETA.

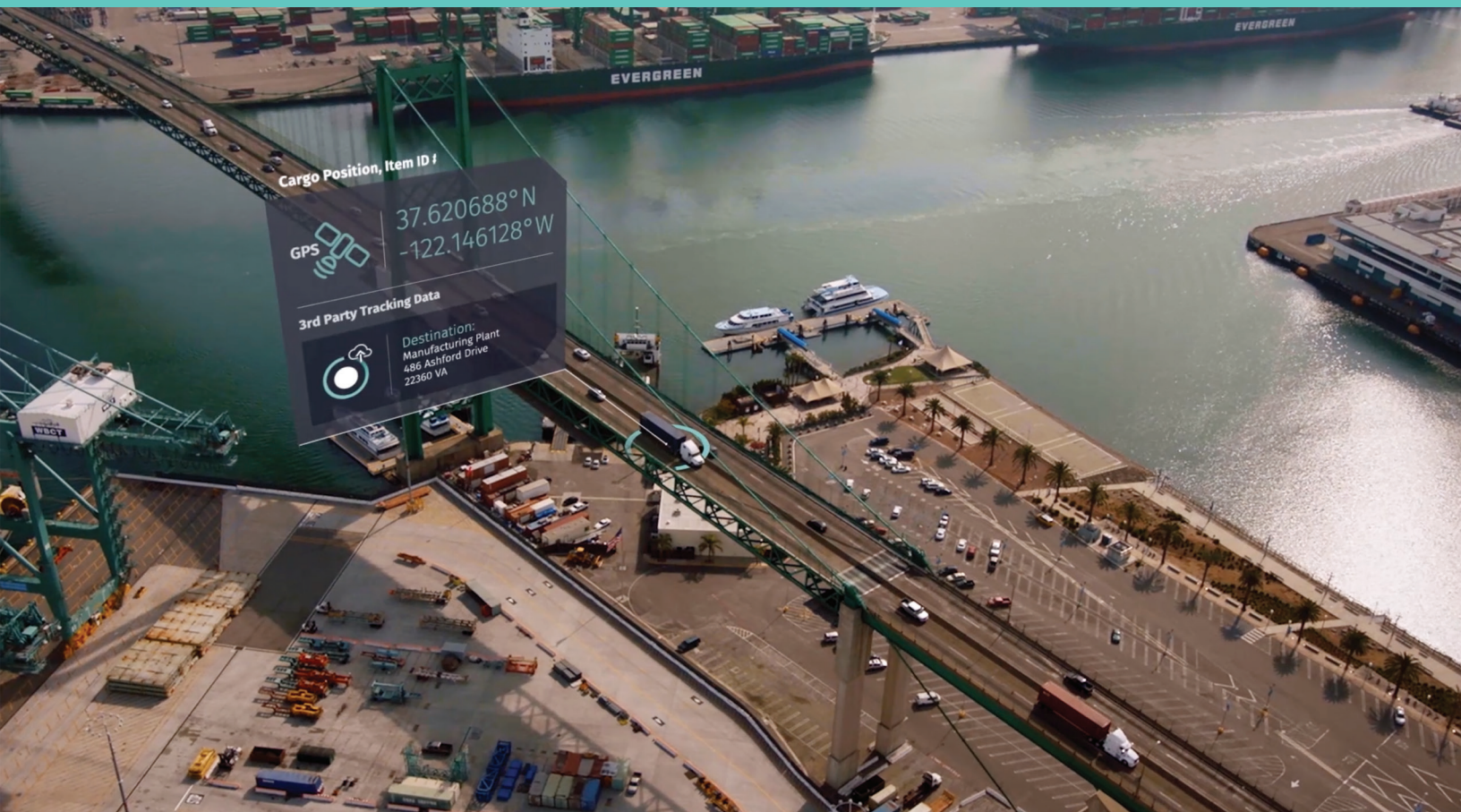# HERE location data at the forefront of the e-commerce transformation

For forward-thinking organizations, supply chain and logistics have moved from a back-office function to the strategic forefront of sales, customer engagement and competitive differentiation. No longer is it the sole purview of a planner sitting in a logistics office using a route optimization tool.

"When a consumer is on a website, trying to decide when he or she wants delivery of an appliance or some other thing to the home, it becomes a different dynamic," Chris Jones, Descartes' Senior Director of Customer Solutions at Descartes Systems Group, says. "Companies are looking at how they can leverage their logistics capabilities and decision support capabilities to improve customer retention and the customer service experience. That's a different type of relationship and discussion compared to years past."
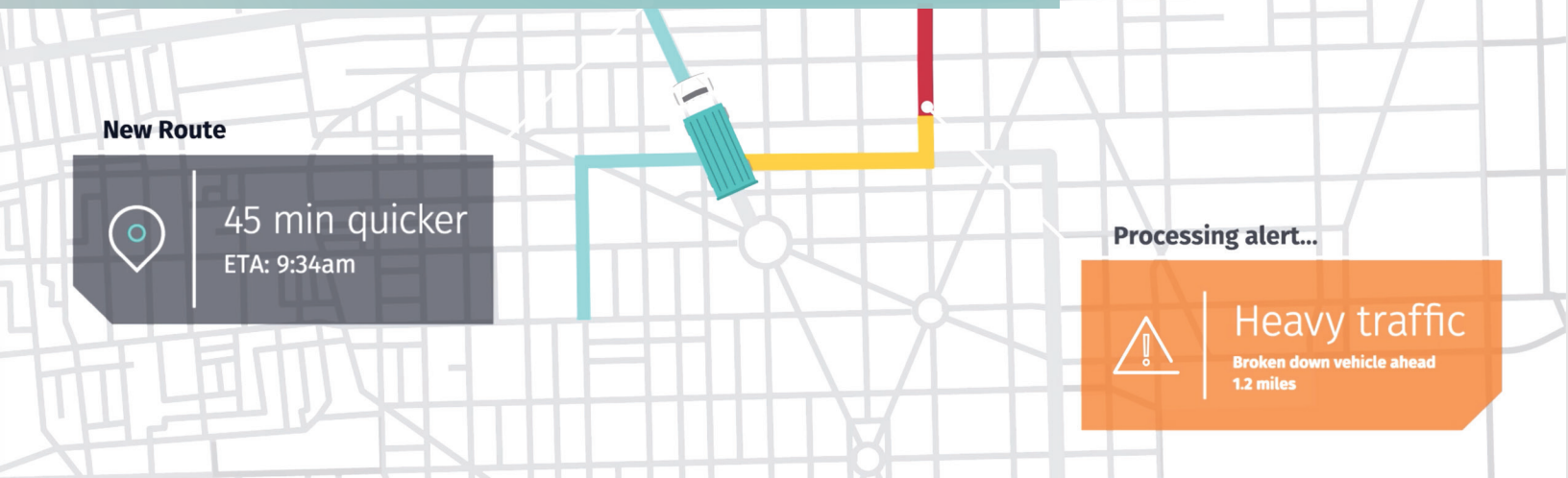
Descartes is a global company with customers for its final-mile solutions around the globe. Location data, location-based services and GIS mapping are more critical than ever, and HERE Technologies lies at the core of Descartes ability to provide organizations services for route optimization, delivery planning, last-mile and ETA capabilities and more.

The company starts with HERE's vector data for the road networks worldwide. "None of our services are possible without being able to understand the road network. We have to be able to intersect where a logistics-related activity takes place within the road network the vehicle is traveling on. Then we can optimize and re-plan and reschedule those activities if necessary," Wood says.

Descartes uses HERE geocoding data for ETA-planning. It's a capability Wood admits Descartes takes a bit for granted now, because of its partnership with HERE. "But trying to figure out where a particular address is on the planet wasn't always as easy or accurate, but it's always been vital. We have to know where 'there' is, right? So, we use that data, in some cases, right at point of sale to translate the address into a location on the map with a high degree of accuracy and create a plan to get from point-A to point-B using the HERE data. And then we also take advantage of some of the HERE API services for geocoding and tiling and map rendering out of the cloud."

# Merging HERE location expertise with Descartes

**New Route**

45 min quicker
ETA: 9:34am

**Processing alert...**

⚠ Heavy traffic
Broken down vehicle ahead
1.2 miles

Wood views HERE as a knowledge partner, leveraging the data HERE delivers as baseline information, which Descartes then tunes to the particulars of a specific customer scenario, using machine-learning algorithms and decision-support engines developed by its engineers. "We can build these route planning and optimization models very quickly and achieve results for customers using that geometry data. We also use things like real-time traffic conditions, predictive traffic, historical traffic patterns, posted speeds and some of the other premium location-based attributes HERE provides."

When building routes, Descartes also considers everything from labor standards and driving behaviors to the physical attributes of the goods being handled – weight, dimensions, for example - which vary from customer to customer, industry to industry, asset to asset and shipment to shipment. That's Descartes area of expertise, and that's where Descartes merges its know-how with HERE content.

"We can get a really good ETA out of the algorithms we employ and the data we use from HERE, the vector data for the road networks, traffic patterns and time/distance calculation," Wood says. "But where machine learning comes into play in refining the results is understanding more around how your particular workers, how your particular assets, how a particular market, cities, traffic patterns look like over time and refining the results of those ETA calculations to the particular customer."

"HERE location technology improves accuracy when we're determining how long it's going to take to get from point-A to point-B on a particular day at a particular time. All that is important in our solutions, at the planning stage and the real-time execution stage, when a driver on the road wants to know, dynamically, where they are against their schedule and how traffic and real-world conditions are impacting that."

He emphasizes that a solution dependent on location-based data requires intelligent, dynamic maps and vector data, especially for companies, like Descartes, focused on final-mile route optimization. "We can't just present a static picture. It has to be a map that has a lot of real-time, high-fidelity data associated with the road network and geocodes. And, one of the things we value particularly from HERE is high-quality data with a lot of coverage. As we've watched how map data has unfolded over the years, we've gone from having great data in the US to great data in parts of Europe to now we're to the point where we have great data available for much of the world. That's not being driven because of logistics solutions; it's being driven through the things HERE is doing to enable in-car navigation. We're the beneficiaries of all of this data that HERE's building to create a digital version of the world's road networks. And because we have customers virtually everywhere, having a partner that provides global map data is extremely important to us."