

What's in an ETA?

Transportation companies of all kinds look for ways to gain the upper hand in e-commerce

BY AARON HUFF

Pitt Ohio has one group of customers who want to know what time their shipments will arrive on delivery day. Others are content knowing their shipments will be there by the close of business.

The Pittsburgh-based full-service transportation and logistics provider operates one of the largest less-than-truckload fleets that offers next-day service in the Atlantic and Midwest regions.

The number of customers in the first group is growing, especially if they ship to residential locations, says Geoff Muessig, chief marketing officer. That's because people are carrying their expectations in the business-to-consumer world of e-commerce over to the business-to-business environment.

When ordering online, many websites give a date and even a time window when parcels will arrive in their mailbox or at their doorstep. Today, that same visibility is becoming more expected when consumers and businesses order palletized freight for delivery in a straight truck or tractor-trailer to their driveway or receiving dock.

Last year, e-commerce accounted for 10 percent of all retail sales and 60 percent of retail sales growth. As more sales move through online channels, motor carriers and logistics providers are playing a critical role in the timely delivery of both products and information.

More shippers are asking for added visibility of their shipments at every

stage, from the point of sale to the "final mile" of delivery. This visibility extends further up the supply chain for LTL and truckload shipments from manufacturing facilities to distribution centers and warehouses – and eventually to the consumers at home.

Point-of-sale visibility

Some routing software systems used by private and commercial fleets can provide an estimated time of arrival when an item is sold. These systems continuously optimize routes as new orders arrive and use historical data to predict future orders and arrival times.

Retailers and private fleets use TMW Systems' final-mile routing product, Appian DR Track, to provide their customers with a delivery ETA at the

point of sale. Once the delivery date is confirmed, the Appian system continuously updates the ETA as new orders arrive, and later as a truck is loaded and departs for delivery.

The real-time ETA status can be sent to e-commerce websites using Appian DR Track's standard application programming interface for real-time shipment visibility. "With our open API, anybody can design any type of system pretty easily to pull data in and out quickly," says Brian Larwig, vice president of optimization for TMW Systems.

Paragon Software Systems has an end-to-end order fulfillment system, Paragon HDX, designed to allow fleets to provide customers with shipment visibility at the point of sale and throughout the delivery process, says



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Will Salter, the company's president and chief executive officer.

Fleets use a module in the system to provide their customers with a self-service online portal. Once their customers place an online order, the module can send the customer a link to the self-service portal in a text or email message.

The customer can use the portal to select a delivery date and time for their shipment from a list of options Paragon HDX has determined are feasible for a final-mile routing plan.

Going residential

To meet customer expectations for real-time information, Pitt Ohio has developed a software program that pulls data from different systems to predict a delivery time window that is 99 percent accurate for every shipment. A notification is sent electronically to customers the moment that a loaded truck leaves a terminal.

Sometimes the time window for delivery is four hours, while other times it is two hours, depending on the characteristics of the route and the sequences of stops, Muessig says.

"We don't want to disappoint with a prediction," he says. "People don't want to be home all day."

The notifications are sent to customers through electronic data interchange and a web service API to integrate the

information into their own IT systems and customer-facing websites. Those who use EDI get a "by when" status, such as "by 4 p.m." Those using the API get a more specific window such as "after 12 p.m. and before 4 p.m."

Muessig says that in addition to giving Pitt Ohio customers greater peace of mind knowing their shipments are on the way, the technology also reduces incoming phone calls.

For Southeastern Freight Lines, residential LTL deliveries are maintained strategically at between 3 and 4 percent of total freight volumes. The Lexington, S.C.-based company uses advanced technology to maximize the usage of its equipment and nearly 3,000 drivers where residential deliveries make the most sense in its freight network.

"It's a matter of whether or not you can do it profitably and if it fits within your strategies," says Woody Lovelace, senior vice president of corporate planning and development.

SEFL uses a proprietary routing optimization, dispatch and mobile computing system called Laser that can provide a highly accurate ETA shipment status on the day of delivery to within one hour, which helps reduce the number of missed deliveries. "We can be tighter if we want to," Lovelace says.

Laser's routing component activates when shipments are inbound to

SEFL's service centers in 14 states. The company contacts the consignees to set delivery appointments to ensure that someone will be at home to receive their shipments.

About 25 percent of daily shipments in the company's network have appointments. SEFL wants to automate this process, but doing so would require more customers to include e-mails and cell phone numbers of residential consignees in their bills of lading, Lovelace says.

On the morning of delivery, SEFL's routes are optimized and trucks are loaded. Laser calculates ETAs for every shipment before trucks leave their terminals, and delivery notifications are sent to customers via EDI or web service APIs, which helps reduce the number of incoming calls regarding shipment arrival times, Lovelace says.

A service advantage

Integrated routing software and tracking platforms also are being used by fleets in service trades such as construction and landscaping to meet e-commerce requirements.

People have become used to ordering services on demand. A homeowner may want to order snow removal or an electrical and plumbing repair from a mobile app in the same way they book inner-city transit with Uber. The transportation provider's app instantly calculates a price and gives a real-time ETA for the pickup.

"The technology demand from consumers is stronger and stronger," says Andy Hopkins, president of Twin Pines, a Southborough, Mass.-based company that provides lawn care, maintenance and repair services to homeowners and businesses.

With his background as an IT consultant, Hopkins has a vision for Twin Pines to be a high-tech, on-demand service company.

Twin Pines got its start in landscaping,



Poolsure, a Houston-based provider of chlorine and other water treatment chemicals, uses Telogis' RouteCloud to plan and schedule deliveries.

but it recently has acquired a number of small businesses in the construction, electrical, plumbing and painting trades. It now offers a full menu of home services to residents in wealthy suburbs west of Boston.

The company is building on the technology infrastructure that eventually will lead to a mobile app that customers can use to request a service 24/7. Hopkins wants to provide the customer with a live ETA and a picture of the worker assigned to the job.

Poolsure also is transforming its business with technology. Customers for the Houston-based company do not need to pick up the telephone to order a delivery; in fact, they don't need to do anything at all.

Poolsure delivers chlorine and other water treatment chemicals and services to hotels, waterparks and wastewater treatment plants. The company installs water-testing devices in its customers' pools, and the devices are connected to the Internet through Wi-Fi, Ethernet or cellular networks.

The devices send alerts when problems are detected with water levels, pumps, flow rates and water chemistry. The alerts are communicated wirelessly to Telogis' RouteCloud platform, which automatically locates and schedules the optimal truck to make a delivery.

Out of 6,500 delivery sites, about 400 have the monitoring devices, and

Poolsure delivers to another 4,000 sites on a fixed delivery schedule. Alan Falik, the company's president, wants to increase the number of sites with monitoring devices to reduce costs by scheduling deliveries based on actual need.

Poolsure also is working with a team of data scientists to create algorithms that use the data gathered from its sensors, and additional data such as demand spikes and weather patterns, to schedule deliveries in advance.

"By next summer, we hope to have a robust algorithm to predict our frequency needs," Falik says. "We can predict (deliveries) weeks in advance."

Bringing in telematics

Twin Pines uses the Wex Fleet Services gas card and recently added Wex Telematics to its vehicles. The company uses information from the telematics system to improve the physical security of its assets and to verify time and locations of vehicles and workers to resolve billing disputes.

Twin Pines now has an "almost 100 percent success rate" for resolving billing disputes, Hopkins says. Before using Wex Telematics, the company was writing off \$10,000 to \$20,000 a year in receivables.

For repeat customers of snowplowing and lawn mowing services, Twin Pines

uses the system to design more efficient routes to get workers to jobsites faster, making it possible to add another lawn or two to each route to increase revenue.

Twin Pines also uses Wex Telematics to confirm that workers reached every location on their assigned routes and to track how long they spent at each house. This data helps to determine if workers are getting more efficient and when to squeeze in more customers onto routes.

Twin Pines also can provide customers with an accurate ETA, such as when they call during a snowstorm. "If I get calls for help, I can determine the approximate time a driver will be there to within half an hour," Hopkins says. "Our customers love knowing that."

Bernie Kavanagh, vice president of North America Fleet for Wex, says fleets are using the system in other ways to improve routing efficiency and be more responsive to customer needs.

"Managers have the ability to reroute drivers if a low-cost fuel provider is nearby, if hazardous weather conditions arise, or if an appointment changes at the last minute," Kavanagh says.

Larger shipments

Whether shipments are bound for a distribution center or a driveway, the need for visibility is constant.



Twin Pines, a provider of lawn care, maintenance and repair services, is developing an Uber-like mobile app that customers will be able to use to request a service 24/7.

TECHNOLOGY: ROUTING OPTIMIZATION

Bolt, which provides its namesake web-based fleet management software system, is seeing more demand for final-mile routing solutions from truckload and LTL fleets, particularly those that deliver to grocery and retail stores.

Jerry Robertson, chief technology officer for Bolt, says that providing the consignee with an ETA improves efficiency by making sure that someone is available to receive and unload the freight upon arrival.

The Bolt system can receive optimized routing plans from third-party products such as Appian DR Track and Telogis RouteCloud, as well as tracking data from third-party telematics systems.

With the route plans and tracking data, including drivers' electronic log data, the Bolt system can provide ETA visibility from pickup to delivery. As routes progress, Bolt can send ETA notifications for either distance or time,

such as when a truck is 30 miles or 30 minutes from arrival.

For third-party logistics companies that manage entire supply chains, visibility requires bringing together information from multiple parties and systems.

Penske Logistics customers want direct access to real-time ETA information – or at least the assurance that the company's operations teams have easy access, says Tom McKenna, senior vice president of engineering and technology.

Penske's ClearChain technology suite captures and provides customers with key information, including the

linking of real-time ETAs to detailed order and inventory information at the part/SKU level.

The company also is able to connect to the mobile phone of a Penske or non-Penske truck driver, with that driver's permission, to obtain real-time GPS shipment location updates.

E-commerce continues to place more demands on carriers and logistics providers of all types. Those that are leading the market are able to give their customers more accurate and timely status of deliveries through all stages of the load lifecycle.

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Penske Logistics' ClearChain technology suite captures and provides customers with key information, including real-time ETAs.

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