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Optimizing Transportation in the Supply Chain: The Role of Mobile Solutions in Logistics

The surge in e-commerce has necessitated a pivot by many logistics and transportation companies. Chief among the consequences has been the need by last-mile delivery fleets to invest in mobile technology, including rugged handheld devices.

Technology and transportation. They are the inseparable elements of the modern supply chain. GPS-powered routing, electronic logging devices (ELDs), telematics solutions — these are just some of the mobile technologies running in the cabs of heavy-duty trucks that enable fleets and their drivers to stay in contact, be accountable, and remain compliant with national highway safety regulations.

While these solutions — supported by mobile handheld and tablet devices — have made trucking operations more efficient and transparent, the recent surge in e-commerce, has put increased demands on over-the-road transport operations.

Mobile technology has become critical in keeping every link of the supply chain connected. For those fleets that have made the transition to a mobile-first technology strategy, the benefits include:

Greater routing efficiency

More productivity

Better delivery tracking

Faster order processing

More satisfied customers

Each of these benefits go right to the bottom line.

Transforming the Supply Chain

Mobile technology is crucial for fleets to stay competitive and for the links in the chain to remain strong. However, according to a survey sponsored by SOTI in partnership with Arlington Research, about 49% of transportation and logistics companies reported that their mobile technology was out of date.[1]

With outdated technology, companies can quickly fall behind their competitors and lose business. The SOTI survey reports that half of logistics executives reported that they believe they will lose or have lost customers directly because of their outdated technology.

In this fast-paced business environment, you need a provider that understands your fleet's specific needs and can help you deploy mobile solutions that keep you connected with other points in the supply chain. Mobile solutions in the hands of your drivers provides them with the apps and data they need to better manage their shipments.

The Looming Challenge: Last-Mile Delivery

One of the most challenging links in the supply chain is the last mile — getting shipments to the customer at the final destination. Last-mile deliveries are the most expensive part of the delivery process, accounting for 53% of the costs associated with the delivery.[2] In addition to costs, last-mile deliveries are the most inefficient part of the delivery process, according to 59% of the respondents to the SOTI survey.[1]

Mobile technology can help. Delivery messaging, route optimization, barcode scanning, NFC and RFID at the warehouse and point of delivery, and delivery confirmation applications that use cameras and other contactless digital signature technology, bring a new level of efficiency and transparency to the last mile of the supply chain.

+ Critical Connectivity

Drivers cover a lot of ground and always-on connectivity is critical for keeping each point in the supply chain connected and updated. Today, drivers rely primarily on wireless broadband (4G LTE and 3G) to verify that goods are on the truck for shipping, accurately track location every step of the way and provide estimated times of arrival (ETAs) for warehouses or end customers.

The growth of 5G technology will bring the bandwidth and speed needed to communicate faster across the supply chain — from supplier to broker to transport company to driver to customer. This will enable all stakeholders to have consistent, real-time visibility into the logistics and delivery process.

Panasonic TOUGHBOOK Rugged Devices for Transportation

TOUGHBOOK® rugged tablets and handhelds are designed with warehouse workers, drivers, and managers in mind to track goods and performance, providing both transparency and accountability. Engineered to provide reliable connectivity and reach, they help workers stay connected at every point in the supply chain.

Panasonic's ProServices team can help deliver field-ready devices and integrate the right mobile devices for the operation with back-end logistics systems. Their services also include custom vehicle installations, deployment services, and remote device monitoring and management.

For more information about how Panasonic can help increase supply chain efficiencies, explore our transportation page.

TOUGHBOOK.com
TOUGHBOOK@us.panasonic.com
1.888.245.6344

> Rugged Solutions to Keep the Supply Chain Connected

These best-in-class rugged tablets include:

TOUGHBOOK A3: A fully rugged 10.1-inch tablet that runs Android is ideal for handling telematics, route optimization, and direct store distribution tasks and features an optional integrated barcode reader and hot swap battery design.

TOUGHBOOK N1: A 4.7-inch fully rugged Android™ handheld that weighs in at only 9.6 ounces and has an ergonomically angled barcode reader, camera, video and speech-to-text features that are ideal for multiple delivery tasks, including proof of delivery.

TOUGHBOOK G2: A flexible 2-in-1 modular design for use as a laptop or tablet, three expansion areas offer 36 customizable combinations. Features a 10.1-inch display, an 18.5-hour (plus optional second) battery, Wi-Fi 6 and Bluetooth 5.1.

TOUGHBOOK T1: A slim and sleek 5-inch handheld that runs Android with a straight-shooting barcode reader and options for a pistol grip with trigger. Includes a powerful Qualcomm® quad-core processor, long-life battery and glove- and rain-touch enabled screen.

REFERENCES

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2. "The Challenges of Last Mile Delivery Logistics and the Tech Solutions Cutting Costs in the Final Mile." Dolan, Shelagh. Businessinsider.com. Jan. 21, 2021. www.businessinsider.com/last-mile-delivery-shipping-explained.