Logistics and Transportation Need Rugged Tablet PCs

White paper

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Rugged Tablet PCs Serving Transportation and Logistics

From passenger services to commodities transport, transportation and logistics organizations require devices that confront all-weather conditions, perform in airspace or on back roads, provide GPS location and sustain long-term battery power. Adopted by thousands of companies across the U.S. and around the globe, rugged tablet PCs have become essential to the rail transport, port, trucking and airline sectors.

With high-performance rugged handheld PCs, transportation and logistics tasks can be accomplished efficiently, quickly and securely. xTablets from MobileDemand withstand harsh travel environments while managing communication, deliveries, departures and arrivals without complication.

Transportation & Logistics Markets Rail: From tracking rolling stock to streamlining the delivery of people and freight, rugged PCs and ruggedized devices help transit authorities and railway operators manage their workforces and keep pace with the constant change of daily operations.

Intermodal: Overcoming hostile port and transportation environments, high-performance rugged tablets deliver cost-effective functionality in any intermodal environment, from offices and rail yards to loading docks and trains.

Planes & Airports: As one of the most regulated and complex transport industries, air transport requires seamless management of cargo, passengers, baggage and schedules.

"Adopted by thousands of companies across the U.S. and around the globe, rugged tablet PCs have become essential to the rail transport, port, trucking and airline sectors."

Rugged tablet PCs are priceless tools for meeting safety and delivery requirements while helping agencies adhere to ever-changing guidelines.

Shipping & Ports: Ideal for withstanding the harsh atmosphere of ports, warehouses, cold storage and dock transfer, high-performance rugged devices are versatile tools for supply chain management, vessel tracking and ship maintenance.

Trucking: Managing compliance regulations, rising fuel costs and thin profit margins, rugged, ultra-mobile PCs improve the efficiency and productivity of global trucking operations.

Benefits MobileDemand enables include:

- Secure wireless LAN allows for rapid, real-time access to location, delivery and warehousing data

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- Track freight movement anywhere in the supply chain using barcode and RFID scanning
- Use integrated GPS and bar coding to locate vehicles and equipment en route
- Collect vehicle diagnostics and manage maintenance records, from fuel consumption and oil temperatures to engine hours and odometer changes
- Manage fuel costs and optimize delivery routes
- Enjoy instant accessibility to customer payment information and invoicing status
- Expedite secure passenger and baggage check-in
- Maintain a real-time record of inventory and supplies

Enabling Product Features:

- Standard, full-screen software applications that run on Windows OS
- Military specifications for drop, shock, water resistance, dust and temperature exposure
- Handheld, stationary or vehicle-mounted handling options
- Numeric keypad for data entry
- Integrated, tethered or wireless barcode scanning
- RFID reading through optional devices
- Secure wireless LAN

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"A rugged computer with WWAN connectivity provides instant access to databases and information that can be updated remotely to account for any changes in the status of the shipment."

Benefits of Rugged Computing for Shipping & Receiving

Rugged computers and ruggedized devices are tailor-made for shipping and receiving functions of any business. Before the advent of the rugged tablet PC, efficient shipping relied on careful tallies and handwritten invoices. Nothing could be changed once the trucks left their home base, and if someone made a mistake, it could be days or weeks before clients received their products. The same held true on the other end of the equation. A business waiting for a mission-critical delivery had to depend on their provider to ensure that it was on time. If the driver encountered delays along the way, he had no means of updating his status – or correcting errors on the road – without making calls and consulting the business's central office.

Rugged tablet PCs changed all of that. A rugged computer with WWAN connectivity provides instant access to databases and information that can be updated remotely to account for any changes in the status of the shipment. Additional accessories such as bar code scanners allow supervisors to double-check shipments en route, and correct potential oversights before they reach the customer. Updates can be sent remotely to a ruggedized tablet PC to alter the specifics of a given shipment; no longer are businesses forced to wait until the shipment arrives at its destination to make corrections. And the use of ruggedized tablets creates virtual records that eliminate the need for paper: cutting costs, increasing clarity and improving efficiency.

Perhaps most importantly, rugged computers are built tough. Their outer shell protects them from unforeseen accidents, and the internal components can withstand heat, cold and other harsh conditions. Drivers and supervisors can take them into virtually any environment with the expectation that they will function at the highest level. Ruggedized tablets from MobileDemand meet military-grade standards, and serve as an invaluable resource for shipping and receiving services throughout the country.

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The Burning Question for Fleet Operators

As more fleet operators deploy Global Positioning System (GPS) fleet tracking solutions in their vehicles, you may have found yourself asking if it is right for your business operations—if not, perhaps you should be. Those using GPS tracking are doing so because they know that whether a company has 5 or 5,000 delivery trucks doing such things as servicing appliances or HVAC components, making deliveries, towing vehicles or maintaining utilities, GPS fleet tracking can help increase productivity and customer satisfaction, complete more on-time customer appointments and improve safety with regular vehicle maintenance.

Now that we've determined that GPS fleet tracking is at least worth looking into, consider the following to help determine if you can leverage fleet tracking in your operations:

Estimate how much functionality is required.

The following is a list of some of the possibilities:

1. Two-way messaging between the dispatcher and driver
2. In-cab navigation for driver directions
3. Work order status tracking
4. GPS integration with other applications or products
5. The ability to export data
6. Interface with vehicle's on-board diagnostic computer
7. Determine the most efficient route
8. Mobile version of the GPS fleet tracking application

Estimate potential savings: Use an ROI calculator with your company's actual data and industry benchmarks to estimate the potential value of implementing a GPS fleet tracking system.

Intangible costs: Direct costs such as driver wages, fuel costs, vehicle maintenance and insurance are apparent. However, watch out for costs that can occur from driver behavior, archaic paper-based processes and business operations. Tools that come with GPS fleet tracking not only allow you to measure these intangible costs but find the difference between what you're currently doing and what you can be doing.

However, at the end of the evaluation process, what is the burning question you really need to ask yourself?

What should I track—the driver or the vehicle?

The answer is – yes! Drivers and vehicles should be monitored to achieve the greatest cost savings and productivity gains as well as to ensure DOT compliance. Wirelessly enabled tablet

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Drivers and vehicles should be monitored to achieve the greatest cost savings and productivity gains as well as to ensure DOT compliance.

PC solutions can do both. They can be securely mounted in the cab to automatically monitor the vehicle without manual entry of any data.

Vehicles can be tracked with a wired in-cab solution. Both have advantages. Often times, mobile devices can leverage existing wireless contracts so it's less expensive to deploy than vehicle-mounted solutions.

On the other hand, the vehicle mount solution automatically collects data such as starts, stops and idles. The driver is not required to manually enter any of this data. The risk of misplacing a mobile device or not being turned on is eliminated. In addition, the vehicle-mounted computers provide data with vehicle maintenance monitoring, off-hours usage notifications and reports of unsafe driving activities. Therefore, for optimal usability and accuracy of data, the vehicle-mounted solution has more advantages than the mobile computer option.

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With high operating expenses, compliance regulations, fluctuating fuel costs, and super thin margins, trucking companies live or die based on the efficiency of their operations and productivity of their drivers.

Case Study: Tablet PC Plays Important Roles in Transportation Industry

Trucking. It's a tough business. With high operating expenses, compliance regulations, fluctuating fuel costs, and super thin margins, trucking companies live or die based on the efficiency of their operations and productivity of their drivers.

Perhaps no one knows this better than PeopleNet, a leading provider of onboard computing and mobile communication solutions to the transportation industry, primarily in the trucking sector. Since 1994, when the Minnesota-based company was founded, PeopleNet has been helping its customers improve efficiency and get the most out of their technology investments. Today, more than 1500 trucking companies throughout North America rely on PeopleNet systems to increase safety and compliance, reduce operating costs, boost productivity and improve customer service.

The Customer Challenge

For its latest offering, PeopleNet searched for a technology partner that could provide an ideal rugged tablet PC for its onboard computing platform; one that could be used in the cab and also as a portable computer for pick-up and delivery.

"We've always been a customer-centric company. With each new product offering PeopleNet has been able to provide our existing customers with new functionality to help them cut costs and improve the efficiency of their operation. For our newest system, we looked for a partner that could provide a rugged tablet computer that would allow our fleets to take advantage of all the functionality our system provides in the cab and also allow them to take the device out of the cab to perform signature capture, do bar coding, take a picture, and capture additional work increasing the ROI," says PeopleNet CEO Ron Konezny.

Click here to continue reading the PeopleNet Case Study. The case study goes in-depth about the MobileDemand solution as well as the results that PeopleNet has been seeing.

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An Alternate Route: Using Rail to Control Transportation Costs

Talk of rising fuel costs is hotter than ever around the water cooler as consumers feel the pinch at the pump. Likewise, executives are having similar conversations behind closed doors as fuel costs begin to impact many organizations' bottom lines. Moving product from point A to point B is becoming even more costly than it was just months ago. If you haven't taken a serious look at rail as a means of transporting your freight, now is the time.

The Federal Railroad Administration reported that the US could save one billion gallons of fuel each year by switching 10% of its long-haul freight from truck to rail. The cost savings are most substantial when shipping large, heavy freight for companies located near a railhead at both pickup and delivery points.

Research shows that a train transports a ton of freight an average of 480 miles on a single gallon of fuel, making it almost four times more fuel-efficient than trucks. In addition, a single intermodal train could take 280 emission-producing trucks off our nation's roadways.

Intermodal transportation involves the movement of freight from a single origin to a single destination using combinations of transport modes including rail, ship and/or truck. When combined with intermodal transportation, containerization enables carriers to avoid the handling of freight itself when transferring from one mode to another. Not only is cargo handling reduced with intermodal, it also improves security, reduces damages and losses, and allows faster delivery.

Today's intermodal carriers are utilizing the latest technology to offer customers the ability to track the location of their shipments. This information is available because rail and other transportation companies are using mobile

wireless technology to track their moving assets and cargo. In addition, wireless applications are enabling these companies to better control inventory, purchasing, preventative maintenance, warranty and repair.

Keeping track of customer shipments and moving assets is key to boosting productivity, counter rising fuel costs, and gain a competitive advantage. MobileDemand's line of rugged tablet PCs enables this type of tracking. They help rail and other transportation companies improve efficiency and productivity and cut fuel and other operating costs.

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Tablet PCs with GPS Can Increase Business Profits and Productivity

In a global marketplace, business is where you find it. Employees travel far and wide: selling, collecting and delivering products as the need dictates. GPS's, or global positioning systems, play a vital role in 21st century commerce. GPS satellites issue signals that can be received anywhere on the planet and sent back. This technology allows companies to keep close track of shipments, products and personnel, as well as facilitating unprecedented communication between "home base" and people in the field. A GPS ensures that shipments start on time, notes delays through breakdowns or employee difficulty, and presents real-time data on the location and status of each shipment. Considering the amount of money saved on lost time and reduced efficiency, a GPS system becomes absolutely necessary for companies looking to thrive.

Ruggedized devices and rugged tablet PCs further increase the efficiency of GPS equipment. Rugged tablet computers have been tested to withstand the bumps and shocks of fieldwork—while keeping the GPS running at all times. Rugged tablet PCs contain larger screens for easier viewing of key data, and numeric keyboards to add data quickly and efficiently.

GPS monitoring combines with larger functionality to keep track of countless items instantly, and to make changes on the go without slowing a given shipment down. Downtime is reduced to an absolute minimum with a rugged tablet computer and you can track your transported goods as they move across the country… even if they're scattered across dozens of different transporters.

MobileDemand understands the needs of a rapidly moving world, and the vital importance of GPS in conducting business smoothly and efficiently. Our ruggedized devices contain the latest software updates, with GPS integrated into numerous other systems for maximum applicability. Knowledge is power in the 21st century, and businesses live or die by knowing where their products and personnel are at all times. Let MobileDemand's rugged tablet PCs track your shipments and inventory, no matter where they are, and keep your products flowing regardless of unforeseen conditions.

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How Does In-Transit Visibility Benefit Your Business?

In-Transit Visibility (ITV) is a concept invented by the US Department of Defense and adopted by private industry. ITV allows the company to track the location and status of their product and drivers at all times. ITV allows the company to keep tabs on product from the time the shipment leaves the supplier, to the time it is accepted by the signer at the final destination.

ITV saves driver time – With paper logs, a single driver must pull over to enter information into their log. This wastes time that could be spent on moving the product. ITV electronic logs can be entered while on the move using voice dictation. The navigation features of ITV software keeps drivers from getting lost, and can help them identify and avoid heavy traffic areas.

ITV saves maintenance crew time - ITV allows a shipping company to track the location of their vehicles, whether they are on the road or in the yard. If a truck is in need of repairs, the maintenance crew can find the location of the vehicle immediately, without having to waste time figuring out which of the vehicles is the one in need of repair.

ITV reduces expenses – When a driver is lost or stuck in traffic, it wastes fuel as well as time. With the price of fuel on the rise again, it's even more important to plan routes and consolidate shipments. ITV allows companies to increase the amount of shipments per load by giving them a better understanding of their capacity and available fleet.

ITV improves customer satisfaction – If a customer wants to know exactly where their package is, ITV provides the answer. The shipping company can provide accurate, up to the minute details instead of telling the customer when the shipment left the depot.

ITV reduces liability – Without ITV, there's no conclusive proof the item was actually delivered. If the truck gets to the destination, and the customer's package isn't on it, where did it go? There's no telling whether the package was actually on the truck. If the shipment is lost, it can turn into a "he said, she said" situation between the supplier and the customer, with the shipper caught in the middle.

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Enhance Outsourcing Strategy with Rugged Tablet PC

One of the most noticeable changes in the business operations environment in recent years has been the increasing use of outsourcing across many industries and company functions.

Outsourcing can offer distinct benefits to better integrate and streamline supply chain operations and technologies, allowing you to maximize overall performance. Partnering with a Logistic Service Provider (LSP) can strengthen and support your company's warehousing, transportation and other specific supply chain activities.

Incorporating use of innovative mobile technologies such as a Rugged Tablet PC can enhance supply chain efficiencies even more, moving you closer to Best-in-Class status.

Defining Best-in-Class.

Studies show that top-performing companies are able to:

- Reduce baseline freight costs.
- Reduce storage costs as compared to shipped value.
- Deliver at least 97% of outbound orders on time and complete.
- Capture at least 90% of returns on time and complete.

These companies succeed by outsourcing to LSPs, to close gaps that previously restricted their ability to perform most effectively. Most choose an LSP that serves all of their locations and use the LSP for:

- International freight forwarding and Customs brokerage to assure compliance.
- Consolidation and de-consolidation of services.

- Warehousing and/or cross-docking services.
- Total transportation management.

For company executives and supply chain professionals, managing change is critical. An LSP can serve as a strategic partner that's virtually an extension of your internal operations, yet capable of managing your entire fulfillment process around the world. This allows you to:

- Increase staff productivity, by re-assigning personnel to more critical activities.
- Eliminate the need for costly system development and ongoing maintenance.
- Expand your operational capabilities and geographical reach.
- Provide the highest quality customer service while focusing internally on strengthening core competencies.
- Becoming Best-in-Class requires the right productivity equipment.

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Web-based collaborative technology is essential. While most companies have adopted warehouse management solutions (WSM), many still aren't using the latest tools. Mobile devices, especially go-anywhere Rugged Tablet PC systems, offer tremendous advantages, including:

- On-the-spot general computing capability.
- Real-time data capture.
- Information sharing, including inventory visibility, across your entire supply chain -- any time, from any location.

In fact, Rugged Tablet PCs can help you streamline work flow and integrate best practices throughout all your business processes, not just the logistics supply chain.

Make a plan to become Best-in-Class.

Ask yourself how supply chain implementation relates to your overall business, and if you have the resources to successfully incorporate new strategies on your own.

Consider key geographic, customer and logistics factors as they relate to your long-term goals. Identify the costs as well as functional and service benefits outsourcing could provide to help manage your logistics more effectively.

You're working in an ever-more-complex and technical environment, so be sure to study ways in which you can save time and money by introducing smart-tech tools such as Rugged Tablet PCs.

You may decide that outsourcing can provide your most cost-effective long-term solution. In that case, you can build a profitable working relationship with your LSP by clearly identifying:

Which things you do best internally and which your outsourced partner can do best for you.

Mutual expectations.

Performance metrics that measure results against expectations.

Continued business success and profitability depend on controlling costs while providing top-notch customer service. Combining automation with collaboration can generate the greatest operational efficiencies and help move your company toward becoming Best-in-Class.

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Improve Overall Perfect Order Percentage with Rugged Tablet PC

In today's world, consumers and business partners expect businesses to meet high levels of customer service and performance. Customers demand high performance and companies who consistently deliver high quality goods and services get rewarded. A company's perfect order metrics contributes greatly to overall business quality. Today, we'll talk about the basic components of the perfect order and how to use a rugged tablet PC and other technology solutions to improve your overall perfect order percentage.

The Perfect Order

Perfect order metrics are a set of systems and standards to identify how well you get your product or service to the client. Does the process flow smoothly from order to delivery with the end result of your customers receiving what they expected? When they do, that is a perfect order. The better your perfect order percentage, the better your profits and return on assets. How you measure your perfect orders becomes your perfect order metric.

The Standards

The Warehouse Education and Research Council (WERC) define the four components of a perfect order as:

- Complete;
- Delivered on time;
- Delivered damage free;
- And delivered with correct documentation and pricing/invoicing.

These should become your set of standards and the goals you set as a company to improve your perfect order rates.

Improvement

Few companies can achieve a 100 percent perfect order rate. There are simply too many variables to make that a reality. You can't foresee and prevent circumstances such as extreme weather, picky or fickle customers and delivery obstacles. But, you can seek to improve your rates in each of the four components of the perfect order metric and shoot for better than 99 percent in each category, and technology can help.

Complete Orders

An incomplete order makes you look bad and makes your client upset. A key solution to improving this metric is advanced bar code scanners and mobile printers, both items can be used in conjunction with a rugged tablet PC in a warehouse. Scanning items both as they enter your warehouse and as they go into an order can help with inventory control and order tracking. Printing and applying bar codes and labels to items as they arrive from a mobile printer run with a rugged tablet PC also reduces labeling errors. These two solutions —

inventory tracking and labeling — can help improve your complete orders metric.

On Time

Increasing the timeliness of deliveries starts at the shipping dock. Upgrading shipping operations to wireless rugged tablet PCs speeds up the process and allows drivers to quickly solve issues that can cause shipping delays. They can easily review their manifest and check for errors, correcting them before they leave the warehouse. Mounts inside delivery vehicles allow the driver to take the rugged tablet on the delivery route for up-to-date route information and GPS.

Damage Free

A rugged tablet can't ensure items arrive damage free. But, technologies on the tablet can track where damage occurs. Photos with time stamps and proof of delivery with confirmation the items are damage free can at least help pinpoint whether damage occurred before or after delivery.

Documentation

Bar code scanning in the warehouse, labeling and mobile technology in the hands of drivers will all improve your documentation and invoicing. You can further improve documentation by having drivers review invoices with customers on their mobile tablet PC, record errors and discrepancies, and capture the customer's signature. A mobile printer puts instant documentation into your customer's hand and wireless connections feed data back to the warehouse.

The 21st century has changed every aspect of business and customers have responded by demanding higher performance from companies they work with. By embracing rugged tablet technology, you can break down the barriers of old business models and improve your perfect order percentage.

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How to Cost Justify Your Transportation Management System

More than ever, a transportation management system (TMS) can be operated with software to generate significant cost savings. The appeal of this solution has been significantly boosted by the advent of hosted software licensing and innovative hardware such as ruggedized tablet PCs.

TMS software can suggest the best route, the best mode of shipment, and the least-expensive provider—for both inbound and outbound freight. The software can also execute and support load tendering, tracking, auditing, and payment.

TMS software has traditionally been available as a purchased license. But hosted software now allows for "pay-as-you-go" access through cloud computing and software-as-a-service (SaaS) technology. Hosted software (sometimes in conjunction with purchased software) can make cost justifications work for a TMS.

So can the latest hardware. For example, rugged tablet PCs save money by:

- Eliminating the need for multiple devices. (e.g., desktop PCs, laptops, barcode scanners, paper logs). This lowers expense for procurement, training, and maintenance.
- Reducing frequency of broken hardware. Unlike consumer electronics, ruggedized tablet PCs are built to withstand banging, dropping, excessive vibrations, moisture, and extreme temperatures. This saves on repair and replacement costs.
- Making integration of transportation functions easier. A ruggedized tablet PC can perform all the necessary tasks (e.g. barcode reading, credit card or smart card processing, radio frequency identification, inspection verification, receipt verification). This saves by eliminating the cost of integrating those functions across multiple devices.

MEASURING IMPACT ON THE BOTTOM LINE

When you consider whether to implement a software TMS—or whether to alter your existing system—you should carefully justify cost, always with a firm eye on return on investment. You can follow these steps to arrive at a solid ROI calculation:

Determine current transportation costs. Select a historical period (e.g., the past year) and determine freight payments, third-party costs, and private-fleet expenses, if any.

For inbound freight, you may have to use estimates from the purchasing department since transportation costs are often submerged in purchase orders. But it's crucial not to underestimate or ignore this cost because vendors often do not minimize transportation costs. Nor do

they usually work with companies to take advantage of coordination with outbound shipping. Transportation costs buried in purchase orders are a prime target for cost reduction using TMS software.

Appropriate administrative costs (e.g., shipment tracking, communication with carriers, accounting) also should be allocated.

Estimate cost savings. Be specific and detailed in determining cost savings for each area of your company's transportation model. It's important to be realistic—overly optimistic projections can lead to unrealizable expectations. Conversely, being too conservative can lead to the erroneous conclusion that things are better left as they are. Considering a range of possible savings can help in your decision making.

Identify additional advantages. A transportation management system isn't only about reducing expense. It also can provide benefits such as increased customer satisfaction, marketing exposure, and improved employee morale. These benefits are hard to quantify, but they should be considered in any cost-benefit analysis.

Determine implementation cost. Investigate the market to determine which licensing option and which provider to select. Providers vary in how they charge and what they offer so your selection process needs to be thorough. It's also important not to overlook the internal costs of implementation.

Determine ROI. Two methods you can use are: 1) to calculate how long it will take to "pay back" the implementation cost, and 2) to figure out the net present value of the cost savings and compare that figure to the implementation cost. In an increasing number of cases, the estimated ROI will justify the cost of using TMS software.

"TMS software can suggest the best route, the best mode of shipment, and the least-expensive provider—for both inbound and outbound freight."

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Trucking: Are You Ready for the Cell Phone Ban?

U.S. Transportation Secretary Ray LaHood has announced a final rule that specifically prohibits interstate truck drivers from using hand-held cell phones while operating their motor vehicles. This move by the government is in an effort to end distracted driving. The law goes in to effect on January 3rd, 2012 and drivers are to face stiff federal penalties if caught using their cell phones while their truck is in motion.

Cell phones are currently widely used in the transportation industry as a way for fleet managers to stay in constant contact with their drivers. Whether it's calling drivers to give them a traffic or weather update or to check on their location and status of the delivery among other things, it's vital for a trucking company to stay in contact with drivers to ensure a safe, efficient and successful delivery.

For a safer and more comprehensive alternative to cell phones, many private fleet, LTL and long-haul, and 3rd-party logistics companies are deploying rugged tablet PC solutions in the cab. Rugged Tablets allow companies to communicate with your drivers at all times. The products are 100 percent compliant and feature a locking mount to ensure drivers obey the hands-free law. Features such as GPS, wireless connectivity, bar code scanning, color camera, mag-stripe reader and much more, and the functionality of the full Windows tablet PCs allow drivers to be more productive and efficient on a daily basis.

A Rugged Tablet PC system is ideal as an onboard computing platform as well as a portable computer for pick-up and delivery. As an onboard computer the Tablet PC can be used to collect electronic log and engine data, provide geo-fencing and allow drivers to stay connected with the home office.
The Rugged Tablet PC can also be undocked from the cab and used to perform vehicle and trailer inspections to ensure driver safety and compliance. In addition, the Tablet PC can be used to expedite pick-up and delivery. When a driver arrives at a customer location, they simply take the tablet in with them. They can scan bar codes on documents, cases and pallets; use the color camera to record any damage, access customer historical data, change orders and capture signatures for proof of delivery right at the point of interaction.

Click here to view our case study on how PeopleNet has successfully deployed thousands of tablet computers to transportation companies across the country.

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Safety via Tablet PC - The Trucking Industry's Renewed Frontier

Technology is the driving force behind safety in the trucking industry. Between 1975 and 2007, there was a 148-percent reduction in fatal, truck-related crashes per 100 million miles driven. This reduction is largely the result of technological improvements: better roads, better trucks and better fleet management systems.

Unfortunately, trucks are still involved in 12 percent of all fatal automotive accidents each year (with Class 7 and Class 8 trucks accounting for 90 percent of the trucks involved in such accidents). In addition to being devastating for friends, family and loved ones, such accidents are incredibly expensive. In 2008, the average cost of a crash that involved a truck was just over $100,000.

A leading strategy for improving truck safety -- and mitigating both loss of life and loss of money -- is to implement rugged mobile computing technology. By outfitting the trucks in your fleet with ruggedized tablet PCs, you can take advantage of the numerous systems that are designed to automate truck safety. Such systems can initiate actions, without operator intervention, and warn drivers about dangerous conditions to directly prevent accidents.

Underlying these trucking safety systems is a technology that has been a topic of debate since the mid-1990s: electronic onboard recorder (EOBR). An EOBR generates data about a driver's behavior and can then serve as an early-warning system for behaviors that could potentially lead to accidents. Specifically, EOBRs activate recordings during sudden decelerations, sudden accelerations or specific speed triggers.

While initially seen as intrusive, many drivers are now embracing EOBR technology because it improves safety and saves them time on

paperwork. Instead of manually entering data each day, drivers can use electronic log systems, which are powered by EOBR, to record hours of service. As a result, drivers can save between 20 and 40 minutes each day -- and 50 hours each year -- on pre-trip preparation, calculating load assignments, crossing borders, preparing for roadside inspections and changing duty statuses. From a safety perspective, having a ruggedized tablet PC onboard that is equipped with an electronic log system can limit driver fatigue and drowsiness, which are common causes of accidents.

Other truck safety systems that can be implemented through rugged mobile computing technology include the following:

Lane Departure Warning (LDW) Systems: In 2006, 58 percent of automotive-related fatalities were the result of lane departures and according to the American Association of State Highway and Transportation Officials (AASHTO), a lane departure occurs once every 21 minutes on U.S. roads. By outfitting the ruggedized tablet PCs in your fleet's trucks with LDWs, you can help prevent run-off-road and sideswipe accidents that result from inadvertent lane changes. Recently, five

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fleets reported an average decrease of 77 percent in lane change-related accidents following a combined 712 million miles with LDW systems.

Speed Monitoring Systems: More than 40 percent of all traffic accidents involving trucks occur when trucks are operating at speeds at or above 55 miles per hour. In addition, excessive speed contributes to 30 percent of all fatal accidents involving trucks. On-board speed monitoring systems allow your fleet managers to identify, monitor and rate drivers who are engaging in dangerous driving behavior, thereby reducing the potential for accidents.

Truck Safety Training Programs: In addition to monitoring drivers, ruggedized tablet PCs can serve as interactive safety tools. By completing truck safety training programs using the tablet PCs, drivers can learn about -- and adopt -- safe driving behaviors. The programs rely on EOBR technology, so they only function when a truck is at rest. When a truck's motor begins to run, the program automatically shuts off. Your fleet managers can use mobile computing technology to observe the safety training progress of drivers.

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Request More Information from Mobile Demand

Would you like more information about Mobile Demand products? Do you have a question, comment, or suggestion you would like to pass along to Mobile Demand? We welcome your requests and feedback.

Please contact us at the information provided below or CLICK HERE.

You can expect a timely response.

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