

WHY BUSINESSES SHOULD MODERNIZE YARD MANAGEMENT NOW



Long-standing manual yard processes across industries can no longer cope with new safety mandates, staff cutbacks, soaring e-commerce, and demanding clients. Yard management decision-makers should leverage rugged, mobile solutions and customized software to phase in a digital yard transformation.



One of the last bastions of paper-based logistics operations is the yard, the holding area for trucks, trailers, containers awaiting loading or unloading. Despite the digitalization of warehouse operations and transportation management, most yards (and estimates are as high as 90%) rely on a manual status quo that superficially seems “good enough” to maintain a “safe, secure, efficient” yard.

Yard operations managers face an array of persistent, long-standing problems because they still primarily use manual yard management processes: inaccuracies in location, contents, inspection reports and status of arrivals or pick-ups. The time is right for these managers and logistics leaders to extend digital transformation to the yard, with a rugged mobile device solution and specialized software that integrates as needed with other enterprise warehouse and transportation management systems.

Forward-looking logistics and yard management leaders have long known that what clipboards, pens, paper forms, and yellow sticky notes typically maintain are inaccuracies, duplications of effort, miscommunications and delay, delay, delay.

“Another concern is that the carriers who are transporting goods today can afford to be much more selective about the shippers they work with,” says Chad Hall, Strategic Account Manager for Panasonic. “Carriers are telling the companies

that own the yards, ‘You are costing me money! We’re not going to use you anymore.’ Companies are losing carrier business because their yards are inefficient.”

From recurring economic volatility to workforce changes and surging ecommerce—all of which cause disruptions—yard operations decision makers must evolve or risk losing business. Further, yard operations managers face new strains on manual yard processes:

- Furloughs and layoffs, cutting the workforce
- Surging digital e-commerce volumes
- Demand for faster, more efficient yard operations
- New safety protocols for the yard and warehouse

Business leaders in organizations that have invested in digital warehouse and transportation management systems are discovering that paper-and-pen processes in the yard frustrate, limit, and disrupt the full business benefits of digital transformation. Progressive logistics and yard leaders can take four actions now to assess, evaluate, select and deploy a rugged, mobile device-based digital yard management system (YMS) to enable those benefits.

1. DECIDE ON A TOP-DOWN OR BOTTOM-UP YMS DEPLOYMENT APPROACH

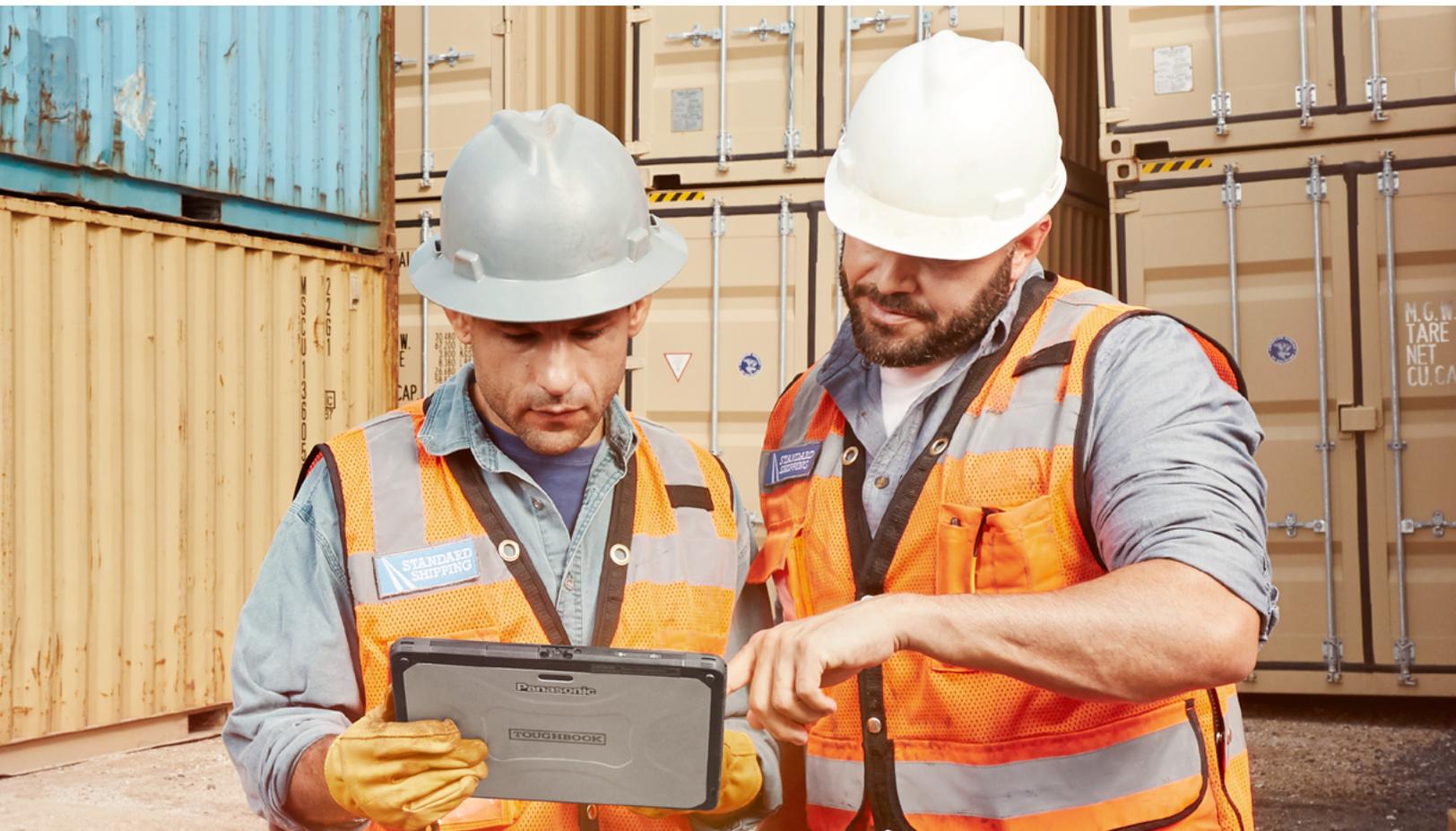


The current state-of-the-art in reliable, rugged mobile solutions gives yard leaders deployment flexibility. There are two primary options, and it is important to identify which best suits the business.

A top-down approach can make sense when an existing warehouse or transportation management vendor is able to extend its offerings with features and capabilities designed for the digital yard. In such cases, logistics and operations leaders should identify their specific yard requirements and evaluate the vendor's yard management capabilities against those requirements.

A potentially more flexible approach is from the bottom up: targeting the specific yard challenges with a best-of-breed software application from an experienced industry application provider. These specialists often can help address a wider array of yard problems and have more experience in developing software interfaces and yard business processes that fit with workers' needs. They also can deploy interfaces to link the yard management system with existing or future warehouse and transportation management packages.

The effectiveness and impact of either option will hinge on the technology solution—hardware and software—put into the hands of yard workers. Whichever approach the yard manager takes, the rugged/networked technology foundation will be essential.



2. CREATE A SUSTAINABLE TECHNOLOGY FOUNDATION FOR YARD MANAGEMENT



Throughout the supply chain, effective logistics systems are most successful when paired with hardware and software products that are designed for frontline yard workers' needs and the demanding conditions of their jobs. This is especially true of the yard.



Cost is vital. Off-the-shelf consumer devices seem to be affordable. But decision makers do not understand the effects of weather conditions, temperature extremes, repeated drops, or the difficulty reading a screen in full sunlight. They end up with skyrocketing support costs.



Chad Hall
Strategic Account Manager, Panasonic

Device selection is critical to the success of yard management systems. The right devices enable:

- Accurate data collection
- Reliable operation
- Complete work-shift coverage
- Continuous connectivity

Devices that seem perfectly suited for business when used in a well-lit, carpeted, air-conditioned office simply cannot perform in bright sunlight, or withstand temperature extremes, repeated drops to metal or concrete, rain, vibration, dust, and unreliable wireless networks. Consumer device vendors strive for long battery life, but they lack features and accessories that support battery optimization and management across multiple

work shifts. They also lack the durability and reliability to perform in yard conditions day after day across multiple shifts.

Rugged devices—laptops, tablets, handhelds, and a growing array of “wearables”—are specially designed for the yard’s demanding environment and for the workers who use them. They incorporate features such as:

- Shock-mounted internal electronics
- Lightweight magnesium frames
- Shatter-resistant touchscreens that work in bright sunlight with gloved or greasy fingers
- Long battery life, rapid charging, and hot-swappable batteries
- Water and dust-resistant
- Optimized antenna design for highly reliable wireless connections (Wi-Fi, cellular, GPS)
- Standard operating systems (Windows® 10, Android™)
- Rapid application development platforms

Rugged design emphasizes durability and reliability, which when backed by long-term warranties translate into a lower cost of ownership over the life of the rugged device compared to a consumer device. An IDC infographic, “[When Tech Breaks, It Breaks the Bank](#),” estimated that the average industry cost of handheld device repair was more than \$3,000. That number includes out-of-pocket expenses, lost end-user productivity, and the time needed by IT to make the repair. The paper also estimated that companies lost 5.8 hours on average per employee due to notebook repairs.

SPECIALIZED DEVICE/PLATFORM OPTIONS

In many cases, the traditional computer mouse/cursor has become obsolete in human-computer interactions. Yard workers can benefit from highly accurate touch technology (including glove-touch) and sophisticated voice interfaces that replace pen-and-paper checklists.

Other options include:

- 3-D cameras for rugged tablets, such as the TOUGH PAD G1 with volume measurement software and a TOUGHBOOK N1 with barcode scanning, or handhelds with barcode scanning combined with “voluming” software to optimize the available space in a yard.
- Seamless integration with IoT or RFID sensors communicating with rugged devices for real-time inventory and tracking data and location.

3. SPECIFY YARD MANAGEMENT REQUIREMENTS



At its simplest, a yard management system automates tracking assets such as trailers and containers in a given location. The software makes it possible to efficiently find, handle, and move these assets. “It also creates greater visibility into activities at the gates, the docks, and the overall yard,” according to Panasonic’s, Chad Hall.

Every company’s yard is the unique intersection between transportation and warehouse operations. Yard operations managers should identify their specific yard requirements, based on key performance indicators and business priorities. These requirements then guide evaluating and selecting the right combination of mobile devices, networking and software.

The modern technology foundation enables higher-level yard management system benefits such as:

- Streamlined driver check-in
- More efficient vehicle movement (shunting)
- Automated processing of bills of lading and other documentation
- Real-time location tracking and inventory of yard assets
- Improved gate security
- Alerts for asset status changes, such as missed check-ins or dock overstays
- Continuous collection of critical yard metrics, linked to KPIs
- Fees/charges management
- Automated yard workflows

Logistics and operations leaders should identify the yard priorities, assess how those might change over the next 12 to 18 months, and then derive the critical requirements for their specific yard operations.

If you already have an existing warehouse or transportation management system (or both), assess the costs and benefits of integrating them with yard management software. Vendors that focus on standards-based interfaces and have a demonstrated familiarity with transport and warehouse packages should be at the top of your list.

EMERGING TECHNOLOGIES FOR YARD MANAGEMENT

An array of emerging technologies are poised to make yard management more effective in the future. But it’s important to assess them realistically to see if they can benefit your yard management operation. Key trends are:

- **Machine learning:** Uses algorithms to adapt to changing conditions and priorities in the yard and to balance competing requirements.
- **Predictive analytics:** Analytics that focus on: “what is likely to happen” over days or hours providing business-relevant insights.
- **Drones:** Drones can—when properly deployed—quickly find and identify assets, speeding a range of yard tasks, and improving worker productivity.
- **Robotic process automation (RPA):** Applications that enable an organization to configure a software robot to mimic or emulate selected tasks like a human worker.

4. REVIEW YOUR YARD OPERATIONS PROCESSES PERIODICALLY



Regular reviews of yard processes, procedures, capabilities and readiness for temporary workload disruptions is a best practice.

Among the most pressing issues are:

- How will tasks and productivity be affected if employee furloughs are extended or made permanent?
- Can staff levels be augmented with temporary vendor employees for yard management process redesign and hardware/software deployment?
- What if activity spikes? How quickly can a facility ramp-up to meet the demand?
- With multiple yard shifts, can yard management hardware, including hot-swappable batteries, be safely disinfected between uses and between shifts?

Solution vendors for yard management must be willing to engage with their customers to ensure employee (and driver) safety and productivity.





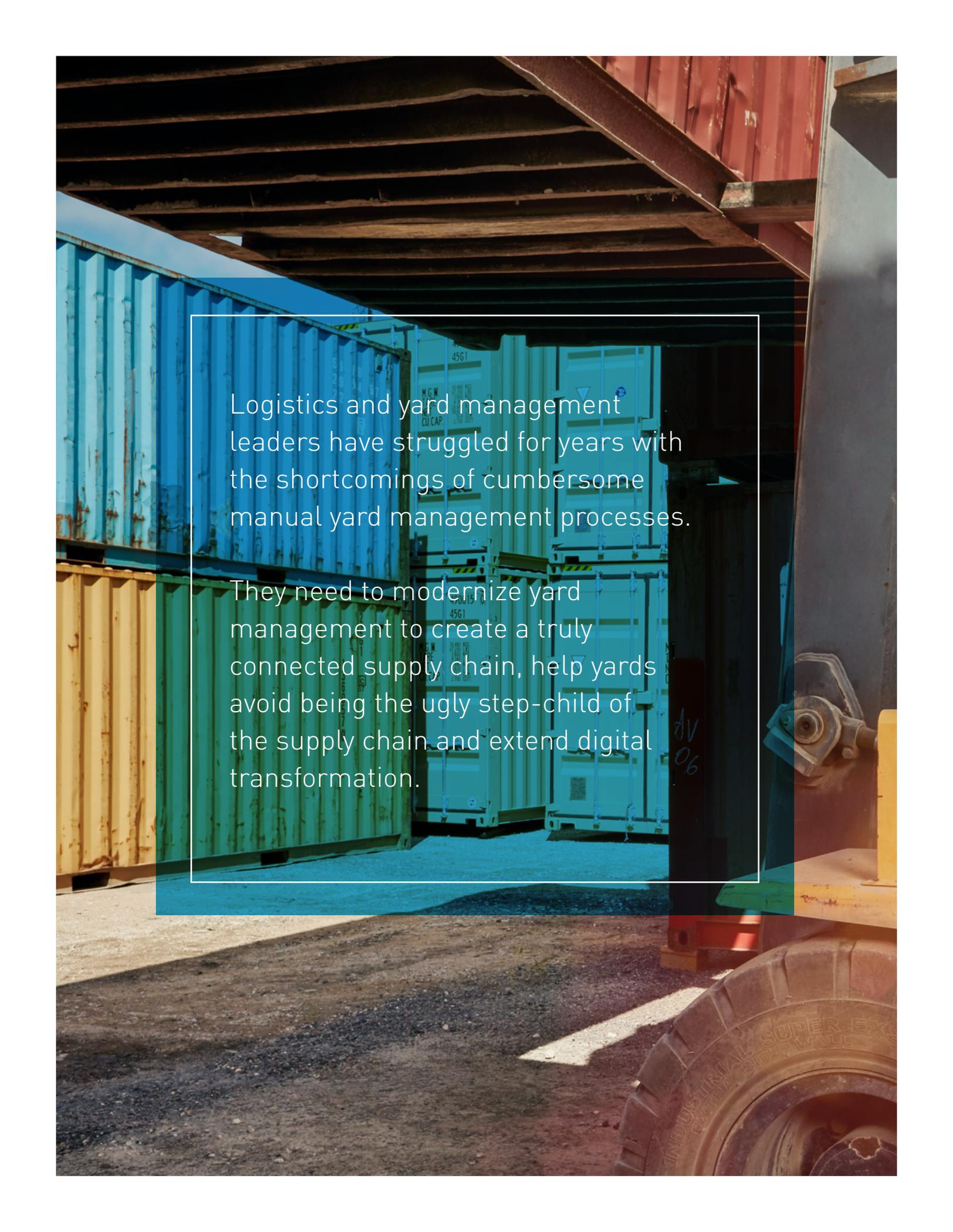
HOW PANASONIC FACILITATES CREATING THE DIGITAL YARD

Panasonic is a global leader in rugged mobile computing, with nearly 25 years of experience in various vertical segments including [transportation and logistics](#). Panasonic works with yard managers and IT to plan and deploy customized solutions for specific challenges in each of the four tasks cited above:

- 1. Top-down or bottom up?** Panasonic has the technical and industry expertise to facilitate mobile solutions that extend an existing warehouse or transportation management system to address yard management challenges (top down) or deploy with best-of-breed yard management partners (bottom up).
- 2. Technology foundation:** The Panasonic TOUGHBOOK platform of rugged laptops, 2-in-1's, tablets, handhelds, along with our professional services and software create a proven technology foundation that can mobilize yard management solution. The company also offers an array of specialized options for specific yard tasks:
 - Rapid Application Development (RAD) platform linking existing or future yard management solutions with TOUGHBOOK devices.
 - Forklift and yard tractor solutions for receiving and storing product in the warehouse and cross-docking that utilize rugged mobile tablets and mounting solutions.
 - Integrated with warehouse management solutions.
 - Seamless integration with IoT or RFID sensors for real-time inventory access and tracking.
- 3. Yard management requirements:** Panasonic has long-standing strategic partnerships with leaders in yard management solutions. A complete YMS solution team will include personnel from the software partner and Panasonic sales, field engineers, and professional services such as deployment, training, and vehicle mounting.
- 4. Yard Review:** Panasonic's ProServices team offers a range of services to help customers plan and deploy yard management mobile solutions, including two new programs specifically developed to address COVID-19 challenges:
 - **Staff augmentation:** Panasonic employees can be placed with the customer's organization to:
 - o Assist in streamlining yard and other business processes.
 - o Augment IT departments with engineering and mobility expertise for planning, design, and deployment.
 - o Assess best practices for implementing new safety protocols.
 - **No-touch TOUGHBOOK staging:** For a given deployment, Panasonic images and outfits the complete set of TOUGHBOOK devices at two US-based national service centers. The devices and associated accessories and software ship as a complete kit to the customer's yard and arrive ready to be "turned on and go" with limited training.

Logistics and yard management leaders have struggled for years with the shortcomings of cumbersome manual yard management processes. They need to modernize yard management to create a truly connected supply chain, help yards avoid being the ugly step-child of the supply chain and extend digital transformation.

For more information about how Panasonic can increase logistics efficiencies, explore our [transportation and logistics solutions page](#) or visit the [Resource Center](#).



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TALK WITH OUR EXPERTS

If you have questions about the best form factor or configuration options for your specific application, talk to our experts. Panasonic has decades of technology experience with all major industries and applications. We can help you configure the TOUGHBOOK® mobile computer that works best for your environment and job needs.

Contact a Panasonic customer representative:

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For more about how our customizable solutions can help your business:

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