

# Better fleet management for utilities field vehicles:

How mobile technology can help



SECTION 1

SECTION 2

**MANAGING FLEET VEHICLES FOR  
UTILITIES WORKERS IN THE FIELD**

# A BETTER WAY TO MANAGE FLEETS



## SECTION 1

### Keep crews working efficiently

**For all utility companies, there is no such thing as acceptable downtime in the field. When electrical grids fail or water mains break, every moment counts.**

Customers need basic services restored as quickly as possible; for consumers, this can be a life-threatening situation. Even when technicians are making non-emergency house calls and inspecting and monitoring equipment in the field, any disruption to their workflows can cause problems, from losing revenue by slowing down operations to upsetting customers who expect fast, efficient service.

In this white paper, we'll explore some of the challenges of maintaining and managing fleet vehicles for utilities workers in the field—and demonstrate how mobile technology and Panasonic Connect can help fleet managers keep crews working productively and efficiently and significantly reduce unexpected downtime.

### Mobile technology is opening up exciting possibilities for utilities fleet management

Utility companies cover large geographical areas. Field workers depend on a fleet of vehicles to get them to the job site where they install equipment, inspect and maintain assets, troubleshoot problems, and make repairs.

For some time now, fleet managers have recognized the benefits that mobile solutions such as laptops, tablets and vehicle-mounted devices can deliver. These devices and accompanying applications allow fleet managers to stay connected to and in communication with field teams who maintain or repair assets across large geographic areas. They allow field workers to download building specifications, for example, and upload reports and other documentation from wherever they are.

As mobile technologies continue to evolve and mature, fleet managers are taking advantage of more sophisticated mobile solutions that enable them to keep vehicles up and running, manage assets cost-effectively and provide detailed visibility into every field technician's activity and whereabouts. Today more than ever, fleet managers can achieve greater insight into fleet vehicles and workers through ever faster and more reliable connectivity, advanced telematics, data analytics, and artificial intelligence (AI) and machine learning (ML).

Data is becoming increasingly critical to fleet manager and field worker success. With devices, sensors and applications, utilities companies can gather and analyze massive volumes of information. This data can help fleet managers "right size" fleet vehicle counts, gain a better understanding of how to optimize assets, see where the company is over- or underspending in the field, see where bottlenecks are slowing down field work, schedule maintenance before small issues cause downtime, and so on.

### Competition is fierce in today's utilities industry

It's more vital than ever that utilities companies find new and innovative ways to serve customers and make operations more efficient and cost-effective. A recent study by EY found that more than 80 energy providers have gone out of business in competitive markets since 2021.<sup>1</sup>

1: Four Forces Shaping U.S. Utilities in 2023. Powermag.com (December 8, 2022) ►

# CRITICAL DATA = WORKER SUCCESS



## Actionable data is key

That same EY study noted that power and utility company leaders clearly see the value in data as an asset. They recognize that it can support innovation such as predicting failure of key critical components and just-in-time repairs and stocking of commonly replaced components. Data can also "help identify both short- and long-term trends they can use to plan for alternate scenarios—vital in resiliency planning."<sup>1</sup>

## Four technologies that are transforming utilities fleet management today

Utilities fleet managers have a lot of choices today when it comes to solutions that make their jobs easier, but all the best solutions use different combinations of four primary technologies: high-speed connectivity, telematics, data analytics, and AI and ML. Let's take a closer look at each of these technologies and how they're making a difference in utilities today.

### High-speed connectivity

Connectivity forms the foundation of all digital fleet management systems because fleet managers can't monitor and manage fleets or workers if they're not connected to a network. Utilities technicians often work in very remote locations, from a gas pipeline in the arctic tundra to underwater power cables to water processing plants far outside any city limit.

Field workers and their vehicles require diverse types of sensors, monitors, devices and more to gather data from where they are and transmit it to a platform or to the cloud so a fleet manager can have it analyzed and put to use. Fleet managers also need connectivity to transmit data and other communications to workers at remote sites.

### Telematics

A simple telematics system is typically made up of a tracking device that is installed in a vehicle. The tracking device can gather, store, send and receive telemetry data. Telematics systems can collect dozens of types of data, including vehicle location, engine diagnostics and driver behavior (such as hard braking or driving over a certain speed). The data is typically transmitted back to a central location where a fleet manager can monitor and analyze the data coming in from each vehicle and get alerts to issues that need immediate attention.

It's not exaggerating to say that fleet management wouldn't be possible without telematics. With the right software, fleet managers rely on telematics data (and reliable connectivity) to see what's happening in the field and get a granular view into the productivity and profitability of the entire fleet.

# BENEFICIAL TECHNOLOGIES



## Data analytics

All the data being collected through telematics systems can deliver obvious insights into fleet vehicles, such as an engine malfunction—but there's additional valuable insight in that data that might not be so obvious. That's where data analytics comes in. Data analytics applications can aggregate and analyze data from a wide variety of sources, such as vehicle sensors, mechanical equipment systems, driver behaviors, billing records, customer service notes and inventory databases. These applications can detect hidden patterns and correlations in your data that a human might not notice. They can deliver insights into how vehicle maintenance schedules affect customer satisfaction, for example, or how technicians' routes may be causing over expenditure in fuel costs.

Data analytics allow fleet managers to get valuable information and feedback from the company's data so they can find better ways to drive productivity, keep costs down and satisfy customers.

## AI and ML

AI and ML are becoming more common in fleet management systems. The technologies are beneficial in this space because, like data analytics, using AI and ML can result in insights that aren't detectable by humans. For instance, AI in telematics systems can alert fleet managers to the most optimal driver routes while taking into account current road conditions.

One important use of AI in fleet management is for predictive maintenance. Using AI and ML and data analytics, a fleet manager can keep an eye on the state of vehicles and receive alerts when a truck part is becoming corroded, for instance, and will cause a vehicle failure if not addressed soon. Predictive maintenance is swiftly becoming an extremely valuable benefit for vehicle fleets because it can head off unexpected downtime.



## SECTION 2

# Buyer's checklist:

## What to look for in a fleet management solution



Finding the right fleet management solution isn't always easy for utilities companies. There are a lot of choices. Panasonic Connect can make that choice easier with customized solutions that combine industry-leading fleet management applications with rugged mobile devices, value-added professional services and exceptional support. Keep the following considerations in mind while you're looking for the right fleet management solutions—considerations that go way beyond price. **EXPLORE** ▶

# APPLICATION INSIGHT



## Applications

Applications are the tools that allow you to get all that valuable insight from the data you're collecting.

When looking for a fleet management solution, be sure to determine exactly what functionality you need and if a specific software has the features that are most important to you. Ask yourself:

- ✓ What insights and information will help you manage your fleet better?
- ✓ How intuitive is the user interface and features?
- ✓ How easily can you access and view the information you want?
- ✓ What kind of reports are available and are they customizable?
- ✓ Does the software allow you to set up alerts and alarms?
- ✓ Does the solution integrate with your existing systems?

Panasonic Connect works with industry-leading partners to provide complete solutions with software and accessory solutions that help utilities get the most out of their rugged devices. We also offer reliable and proven accessories from leading partners designed to work specifically with Panasonic TOUGHBOOK® mobile devices and to help make using your device easier and more convenient (see sidebar). Accessories include vehicle mounts, docks, adaptors, chargers, styluses, antennas, routers, mobile printers, and hand and shoulder straps.

## Don't let breakdowns lead to excessive downtime

A big part of managing a utilities vehicle fleet is dealing with unexpected breakdowns in the field and ensuring that technicians stay productive. Together with our partner Triad Diagnostic Solutions, a distributor of diagnostic and repair solutions for commercial vehicles, off-highway equipment, material handling and automotive equipment, Panasonic Connect can help get vehicles and equipment operating again more quickly. Rugged devices such as the TOUGHBOOK 40 laptop or the TOUGHBOOK 55 semi-rugged laptop are paired with a smart application like the Jaltest Diagnostic Tool for Commercial and Off-Highway Vehicles for a single-source solution that is easy to use and can ensure more uptime for vehicles and equipment.

The software provides dealer-level diagnostics for more than 250 different brands, including engine platforms, transmissions, hydraulic systems, body and chassis controllers, and even peripherals like navigation systems. It can diagnose root causes in just a few minutes, then serve up the integrated repair information such as troubleshooting trees, removal and replacement instructions, and technical data such as torque specs, parameter ranges, belt routing, bolt patterns, interactive circuit diagrams and much more.

Nowhere else can you find this level of comprehensive information in a single application, with a single path and nomenclature, all available at your fingertips.



# THE RIGHT DEVICE



It also has a reporting function that fleet managers can use to track malfunctions and repairs or provide to a dealer when the issue can't be repaired on the road. Jaltest software from Triad Diagnostic Solutions even includes a cloud-based storage system for these reports for global access by technicians and fleet managers.

For utilities field technicians, breaking down in a remote location can mean hours of waiting and potentially a lost day. With the Jaltest Diagnostic Tool, now they can try to diagnose and even repair their vehicle and get it back on the road.

## Hardware

Look for devices that are simple to use, carry and maintain. Make sure they will work reliably in the types of environments your field technicians typically experience. These environments can include extreme weather and temperatures, dust and dirt. You want to ensure devices can stand up to these conditions and handle accidental drops as well, so they won't fail at the worst moment. Ask yourself:

- ✓ What are the physical environments these devices will be used in?
- ✓ How will technicians hold on to or carry these devices along with their other gear?
- ✓ What type of device would work best—laptop, tablet or 2-in-1 device?
- ✓ Is the hardware durable and effective enough for your needs?
- ✓ Is the device easy to use and navigate?
- ✓ Will technicians have a hard time seeing information on the screen in direct sunlight, wind or rain?
- ✓ Can technicians input data while wearing gloves?

Panasonic TOUGHBOOK devices include laptops, 2-in-1 devices and tablets that provide:

- **Rugged durability**—that meets military standards (MIL-SPEC) and ingress protection (IP) standards for withstanding bumps, dust, dirt, moisture, vibration, extreme temperatures and weather, spills, and drops in a physically active environment.
- **Industry leading reliability**—based on a comparison of device failure rates that shows TOUGHBOOK rugged devices are 72% more reliable than other rugged devices.<sup>2</sup> TOUGHBOOK boasts the lowest failure rate in the industry for laptops at 3%.<sup>2</sup>
- **Ease of use**—with common forms and features users are already familiar with and functionality geared specifically toward utility crew needs, such as touchscreens that users can operate while wearing heavy gloves, large programmable buttons for common applications and display options that enable users to read the screen in sunlight or darkness.

2: Compares Panasonic actual data for TOUGHBOOK computers to data gathered by IDC on consumer and rugged laptops, tablets, and handheld devices and reported in The Case for Deploying Rugged Devices in Your Organization. IDC (November 2021) ►

# ESSENTIAL SERVICES AND SUPPORT



## IT services

When choosing a fleet management solution, keep in mind additional services you may typically need. IT services can help ensure a successful deployment and free your in-house IT team up to focus on more business-critical issues. Ask yourself:

- ✓ Do you need assistance in planning, testing and preparing for your solution?
- ✓ How do you plan to deploy it?
- ✓ Can your IT department configure the solution across multiple devices, including software?
- ✓ How will devices be maintained and managed, and by whom?

Panasonic Connect has a range of robust service options to specifically help fleet managers plan for, select, deploy and manage their solutions with ease and confidence, including:

- **Development and integration services**—for solutions running in a Windows® environment, including developer tools, consultation, design and implementation to migrate existing fleet management software to upgraded mobile devices.
- **Kitting and deployment services**—that can get your TOUGHBOOK mobile devices into the field quickly, packaged and configured to work right out of the box and with third-party accessories such as network adaptors, barcode scanners, straps/holsters and expansion modules. Panasonic kitting services also align with green strategies because they reduce the number of packing boxes and overall waste.
- **Device health and battery monitoring**—with TOUGHBOOK Smart Essentials Service Suite, a cloud-based tool that gives you real-time information to help you understand how your devices are operating. Smart Essentials identifies underutilized devices or those not operating well and why and monitors battery health, so you are never caught without power. In some cases, TOUGHBOOK devices are “self-healing.” For example, a TOUGHBOOK 40 or 55 knows when to order its own battery.
- **Security applications**—that defend your TOUGHBOOK devices against risk of cyberattacks with secure, third-party software for device and data protection.

## Support

One of the biggest considerations when selecting a fleet management solution should be the quality and range of a vendor's technical support and customer service. In fact, it's one of the top criteria for selecting a mobile device, following hardware performance and functionality. Make sure you understand the specifics of how the vendor provides support and ongoing service. Ask yourself:

- ✓ How does the vendor's customer service compare with your expectations?
- ✓ Is service and support available 24/7?
- ✓ Is the level of service you need included in the price of the solution or is it priced separately?
- ✓ What are other customers saying about the vendor's level of support and service?



# THE RIGHT PEOPLE



Panasonic Connect offers industry-leading support and is rated measurably higher than other rugged vendors for device performance and functionality as well as customer service and technical support.<sup>4</sup> That combination of hardware performance and innovation plus customer service and engineering support sets Panasonic Connect apart from its peers.

Strong warranties and add-on services from Panasonic Connect include a robust basic warranty, as well as extended warranty services and augmented services, such as accidental damage coverage, 24-hour “hot swap” or exchange service, or even on-site service.

## Industry expertise

Success in deploying and maintaining your fleet management solution requires a vendor who understands the utilities industry and today's utility IT infrastructure environments. Ask yourself:

- ✔ Does the company understand your job requirements within the context of utilities and fleet management?
- ✔ Are you sure that the vendor understands the industry enough to assist you in choosing the right devices and applications for your specific needs?
- ✔ Will that vendor be able to offer you guidance and assistance in deployment and management of the solution?

Panasonic Connect has years of experience providing mobile solutions to utility companies. We've been making Panasonic TOUGHBOOK rugged devices for more than 25 years—purpose-built to overcome tough challenges and to perform flawlessly in every moment that matters. Our devices have kept pace with the needs of utility companies and field workers and continue to set the standard for durable, reliable, purpose-built hardware. Plus, our deep bench of business and technology expertise means we can offer a robust set of services in the industry.

## Customer relationship

No matter how incredible the solution, a poor customer relationship can kill a deal or become a headache over time. Having a good relationship with your vendor is vital to the success of your deployment. Ask yourself:

- ✔ How does the company prefer to work with customers?
- ✔ What kind of working relationship can you expect?
- ✔ Will the company provide references or other customers you can talk to?

Panasonic Connect has a solid reputation for strong customer relationships. Teams work closely with customers throughout the sales process to understand what they need and to make sure the solution they choose results in a successful deployment. Our goal is to become your trusted advisor, so we stick around after the sale and continue to support your company's digital transformation

4: Customer Service and Client Engagement: How Strong Vendor Relationships Drive Customer Satisfaction. VDC Research (2020) ▶



## TOUGHBOOK FOR UTILITIES FLEET MANAGERS

Panasonic Connect mobile technology can give deep insight to utilities fleet managers so they can keep their fleet and field technicians productive and efficient.

**TO LEARN MORE, VISIT TOUGHBOOK  
MOBILE SOLUTIONS FOR UTILITIES ▶**

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SECTION 1

SECTION 2