

WHITEPAPER:

HOW RUGGED MOBILE COMPUTING CAN FREE THE WORKFORCE

FOREWORD

In the workplace, we often find there are too many things on our "To Do list" and not enough time to do them. The pressures can cause mental stress and strain and mean that for much of the time we are burdened with repetitive tasks. At its worst, technology can also often add to that burden with constant connectivity leading to multiple demands and distractions. But what if the right technology, the right mobile device, could help you find the time to do more?

Panasonic has spent more than 20 years designing the right rugged mobile computing devices for different types of worker. We focus on ergonomics, design, functionality and support to provide a device that will operate in harmony with the mobile worker. A device that is intuitive, fast, effective and long-working; saving the workforce time at every possible moment to free them to focus on the things that matter to them. More time to think, more time to innovate, more time to learn, more time to train, more time to create or simply more time to spend time with family and friends.

This whitepaper details the ways that Panasonic TOUGHBOOK devices can help the workforce to do more. We encourage you to question whether your technology is helping your mobile workforce to do more and if the advantages a Panasonic TOUGHBOOK can offer could assist? Together, let's find the time to do more.



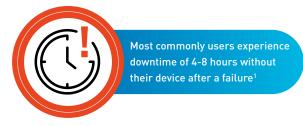


Introduction

For the mobile workforce, one device cannot fit all. There are a myriad of different mobile workers undertaking any number of differing tasks in various challenging environmental conditions. The key to helping mobile workers find the time to do more is to build mobile computing devices that match their needs, with the ergonomic and functional design to help them achieve their goals faster. Here we identify those essential elements and how they could help your workforce find time to do more.

Reliability buys time

Reliability is essential in the quest for time to do more. Device failures waste time and money, creating more stress for the workforce and impacting total cost of ownership for the business. That's why Panasonic builds mobile computing devices with one of the lowest failure rates on the market – 9 times lower compared to notebook industry averages of 18%.







IDC estimates that the average associated cost with repairs is:

Notebook €3070

Tablet €2216

Handheld €2778

Reliability in action

As the devices very seldom get damaged and are extremely reliable, our costs for repairs, replacement devices, the commissioning of reserve devices etc. are significantly lower than before. And our drivers are hardly ever hampered in their work due to broken devices.

Lanso Vezhaparambil

Project Manager National Transport at Planzer

Integrated applications boost productivity

Mobile devices with effectively designed and integrated applications can boost productivity for mobile workforces.

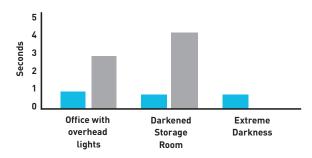
Barcode scanning

Those whose jobs include scanning barcodes—in the field, in warehouses—know that the lighting conditions can be far from ideal. When you need to scan a large number of items quickly, a reliable and speedy scanner can be the difference between executing a job with ease and having productivity break down completely.

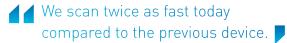
Effective scanners in action

In a comparative test, scanning barcodes with the Panasonic TOUGHBOOK G1 took a fraction of the time it took to perform the same task on a popular leading consumer tablet².

Average time to scan one barcode



Panasonic TOUGHBOOK G1
Consumer Tablet



Lanso Vezhaparambil

Project Manager National Transport at Planzer

Thermal camera

A thermal camera, combined with the powerful rugged Panasonic tablet and its versatile, configurable set-up makes it ideal for a range of business sectors and applications. As well as obvious heat-seeking applications for use by the fire, emergency services and defence sectors, thermal imaging can be used in manufacturing for production line and quality assurance. It also has uses in utilities and field services for maintenance and repairs, and in oil and gas, aviation, automotive and construction for asset management and diagnostics.

Thermal cameras in action

Technicians at UK roadside assistance group, The AA, are trialing the new Panasonic heat sensing technology to help get customers back on the road faster. The latest thermal imaging camera in their rugged Panasonic tablets helps the technicians spot heat-related problems such as brake, cooling and electrical issues by simply pointing the device at the vehicles.

It's like giving our technicians a new superpower. It's much faster and safer than traditional methods.

Keith Miller

The AA National Technical Manager



Daylight viewable screens save time

Being able to quickly and easily read the screen of your mobile device, whether outside in bright sunlight or inside in darkened conditions, is essential for the productivity of the mobile workforce.

Daylight viewable screens in action

25.2% less time

In a bright sunlight reading test[®] every test subject took less time to begin reading the text on the Panasonic TOUGHBOOK screen than on a popular consumer tablet, 25.2% less time on average.

Four out of five test subjects commented that the Panasonic device was easier to read; the fifth test subject had no preference.





Extreme temperatures can slow down productivity

For mobile workers extreme conditions can slow down productivity if devices fail. Not all rugged devices are created equal. There is no standard definition for the term 'rugged PC'. It can mean something very different from vendor to vendor. For example, rugged protection is not just about drop specification and ingress protection.

Panasonic devices are tested to and protected against:

- Altitude
- Humidity
- Vibration
- Freeze/thaw
- Temperature shock
- Extreme high/low temperatures

Extreme temperature protection in action

The TOUGHBOOK 33 is an essential tool for Under The Pole's everyday operations thanks to its rugged build quality...The equipment is seriously put through its paces during exploration work. The divers sometimes have to deal with temperatures below -1°C under the water and -30°C out of the water. The TOUGHBOOK can withstand extreme temperatures, as well as knocks, bumps and humidity. We needed an exceptionally reliable computer for all of our expeditions both in the North Pole and in French Polynesia.

Bastien Brionne

Communications Director

Erwan Marivint

Head of Partnerships Under The Pole expeditions

Ergonomic design makes completing tasks easier and faster

The design of the mobile computing device can have a significant impact on the productivity, and sometimes health, of the mobile workforce.

Panasonic pioneers ergonomic design in rugged devices and was one of the first to include an angled barcode scanner in its rugged handheld devices to improve productivity and reduce the risk of Repetitive Strain Injury.

Ergonomic design in action

In a survey of logistics mobile workers⁴, on average, they said:

Could increase numbers by 13%

Scanner activation buttons on both sides of the device could increase scanning numbers by 13%.

An angled barcode scanner and high precision pen would improve scanning productivity by 12%.

Would improve productivity by 12%

Connectivity makes life easier

Many modern devices often don't have all the necessary business interfaces. Asking your workforce to carry and use different adapters can be inefficient, time consuming and costly. With the introduction of USB Type-C many interfaces are being removed from units, at the same time as adapter cables are being introduced. Panasonic understands that providing a variety of common and legacy business interfaces and ports is important to support seamless business usage and save valuable time.

Modern and old legacy trains use a variety of different connections to run diagnostics and software upgrades and the different ports offered in the Panasonic device

Charles Davies

Siemens Project Manager

were very useful.

Extended battery life removes frustration

Batteries in business devices that cannot be replaced easily or that last less than a work shift impact productivity and slow workforces down. High capacity battery options and replaceable batteries lead to lower Total Cost of Ownership (TCO) and better Return on Investment (ROI).

Panasonic batteries provide long battery life on a single charge. Most Panasonic units have exchangeable batteries so you can run multi-shift duties with the lowest downtime. High capacity battery options are available to support long shifts without downtime or access to power.

Panasonic TOUGHBOOK has a renowned reputation for reliability, ergonomic and rugged design and long battery life, that convinced us this was the mobile device to justify a long-term commitment and investment.

John Vaughan

Technical Services Manager for Severn Trent



Analytics can prevent downtime

Taking advantage of latest analytics to monitor the performance of your workforce's mobile computing devices while they are in the field, can deliver massive business benefits, including:

- Improved workforce efficiency
- Reduced costs
- Minimised disruptions
- Maximised ROI
- Improved customer satisfaction
- Optimised device utilisation

TOUGHBOOK Smart Service captures, analyses, stores and reports on the health and behavior of mobile devices across the organisation. It monitors signal strength, battery life, network performance application usage and disruptive events to enable preventative action to be taken before device issues delay the workforce.

Analytics in action

UK Power Networks is using TOUGHBOOK Smart Services across its range of Panasonic Mobile devices.

The importance of the Panasonic device is now recognised throughout our business, from the field engineer to the chief executive. It is the one device our mobile workers rely on. Now with improved visibility, management and control of the devices, we can make our field engineers even more productive and as a result further enhance our customer service.

Nick Willis-Barrett

Service Manager – End User Computing at UK Power Networks

Repair service

On the rare occasions Panasonic TOUGHBOOK devices fail, workers need a replacement device as soon as possible to minimise downtime. Panasonic's Rapid Replacement Service ensures a new device is in the hands of the worker within 24 hours.

Replacement service in action

To ensure the Innserve workforce always has the right tools for the job, Panasonic maintains a Rapid Replacement stock for the specialists in the supply, installation and maintenance of beer and soft drinks dispense systems.

We require rugged Android devices that are functional, reliable and competitively priced. But it is not just the device, it's the Panasonic service and maintenance that comes with it that is critical to the running of our operation.

Kieran Delaney

IT Director at Innserve

Warranty

Panasonic ProTect warranties are designed to help your mobile workforce work harder and go further in the field.

ProTect cover can be extended for up to 5 years to give complete peace of mind throughout the lifecycle of the device.

The facts speak for themselves:



CUSTOMERS USE PANASONIC TOUGHBOOK TO FIND TIME TO DO MORE...



Katoen Natie is a global player in logistics services. Each day, over 400 trucks are loaded and unloaded at one of their largest terminals in the port of Antwerp.

To ensure these processes run smoothly, Katoen Natie has further developed its existing Warehouse Management System (WMS) on the Panasonic TOUGHBOOK M1.

"Since we've started using the new system, we've been able to substantially reduce the average time for which a truck remains on site. The risk of incorrect loading operations has also greatly reduced thanks to this system."

Kurt Van Roeyen

Operational Manager at Katoen Natie



The Exmar Ship Management onboard inventory process has been converted from a manual to digital system by deploying bar codes and Panasonic tablets equipped with scanners which register all spare parts and upload them to a central server on board each vessel.

Their new system and process will eliminate paperwork, reduce errors, speed- up administration and increase crew productivity.

"We wanted an inventory application which could be user-friendly and which our crew would find easy to work with. Our wish was to make it so easy to use that our crew would be keen to use it. In addition, the hardware needed to be state-of-the-art in order to create an intrinsically safe, all-in-one solution that would be able to deal with the tough conditions onboard"

Ivan Renette

Application Portfolio Manager at EXMAR Ship Management



Raben Group, the international logistics company, has equipped its drivers in 11 countries with rugged Panasonic TOUGHBOOK N1 handheld devices to record and share transport information in real-time.

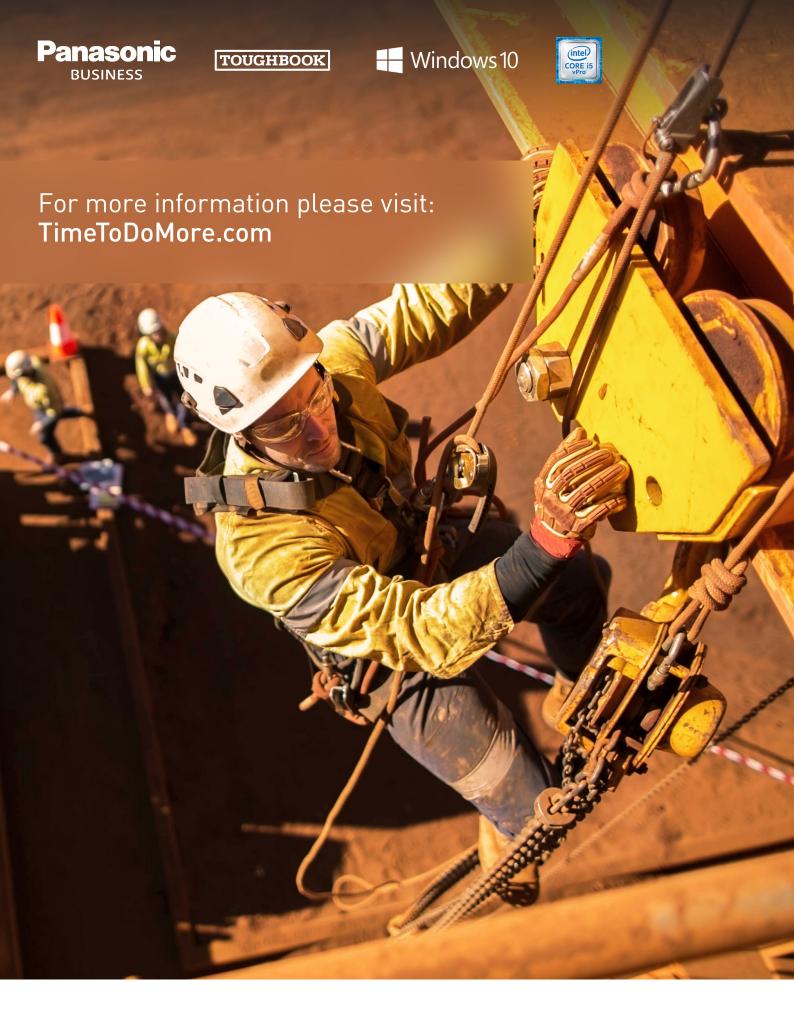
Thanks to data collected by the Panasonic TOUGHBOOK N1, dispatchers can constantly monitor the current position of vehicles, as well as compare it with the planned route and sequence of points on each route. They receive notifications of possible delays in delivery or receipt of goods (Early Warning Mechanism). This allows Raben to better manage the shipping and delivery process and to report these processes in detail. In addition, the handheld provides statistical information, such as application usage, battery condition and number of completed services.

"We are constantly changing and therefore implementing new solutions in response to the expectations of our clients. Our employees have the opportunity to use modern, innovative systems and applications, while our customers, thanks to the possibilities offered by telematics, can optimize their work. All this would not be possible without efficient communication and a competent end-user. It is equally important to choose the right equipment that guarantees the implementation of the developed IT solutions. The Panasonic TOUGHBOOK N1 is such a device. It has everything we needed - high efficiency, compact size, durability, accurate GPS system, clear display and a convenient code scanner"

Bartosz Kolasiński

Project Manager at Raben Group





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