SAMSUNG

Why tougher doesn't need to mean harder

Bridging the rugged and consumer device divide

In collaboration with

Ai
Acquisition Inc.

Why tougher doesn't need to mean harder:

Bridging the rugged and consumer device divide

Rugged devices have been a business staple in many industries for decades, allowing frontline workers to operate even in the harshest of conditions.

But in that time, they've rarely attempted to break out of their niche. They've developed a reputation of being specific tools for specific needs, with durability and security coming at the expense of limited functionality, bulky design – and often an eye-watering price tag.

Meanwhile, some businesses have relied on consumer devices, choosing their superior performance, vaster range of features and faster evolution, at the expense of regular damage and failure.

But why does there need to be this divide between rugged and consumer devices? Why can't there just be a better choice for businesses?

Whether you're accustomed to rugged devices or have so far steered clear, it's time to experience a new age of business mobility. In this paper, we'll look at how a new generation of rugged devices are merging the functionality, power and price you've come to expect from consumer devices with the durability and security you need from rugged handsets. You'll see how this combination is more than just the sum of its parts—it's ushering in a frontline revolution as workers become empowered to achieve more than ever before.

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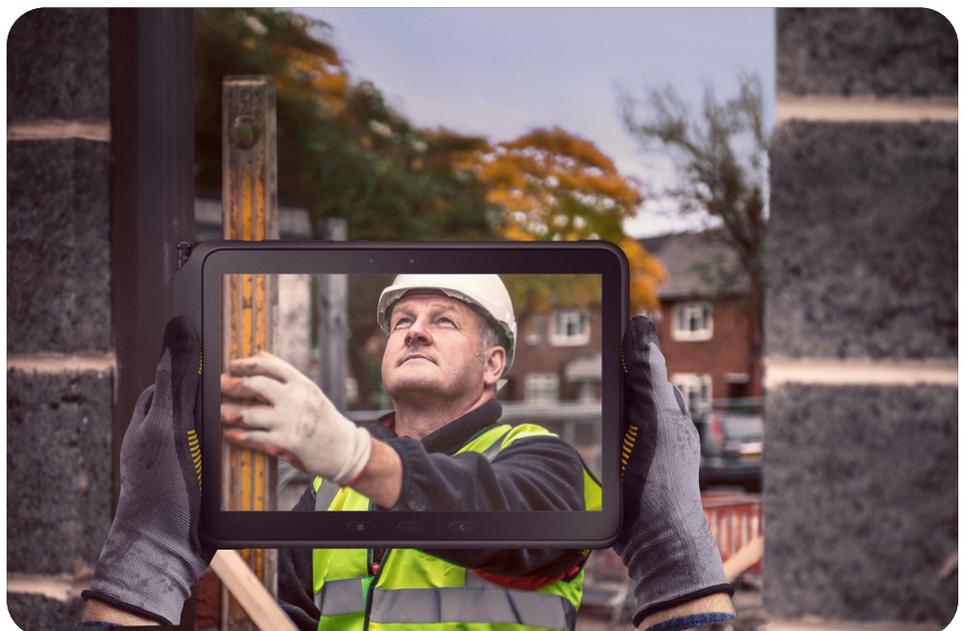
Why frontline mobility matters

Employees that use smartphones to get work done say they gain nearly an hour (58 minutes) of work time each day on average, and see an estimated productivity increase of 34%.[4]

Frontline workers are estimated to make up 80% of the global workforce,[1] and yet the vast majority of digital transformation initiatives have so far left these workers behind. This is despite the emergence of a host of new technologies that are revolutionising how these workers operate. Organisations that are failing to empower this essential segment of their workforce are missing out on far more than they realise. Study after study has shown that organisations that have equipped these workers with the right technology and unlocked their dormant potential have seen real transformation.

Life on the frontlines may be remote, but staff no longer expect it to be disconnected. Frontline workers largely report that they don't feel connected with the business or have adequate access to the information they need. In fact, 85% of frontline workers say they don't receive enough communication while on the job,[2] while 73% claim they need to pause or stop work on a regular basis to retrieve information that they don't have at their fingertips.[3]

Fortunately, tools that can remedy this situation are now readily available, and businesses that move fast and properly equip their workforces are witnessing the benefits and returns on multiple fronts.

Productivity can skyrocket thanks to the efficiency savings these devices can provide, whether that means granting employees direct access to the information they need, speeding up decision making through better communication or minimising the number of manual tasks they need to perform. In fact, employees that use smartphones to get work done say they gain nearly an hour (58 minutes) of work time each day on average, and see an estimated productivity increase of 34%.[4]

But it's not just productivity that'll improve. Employee satisfaction also rises with new digital tools. 41% of frontline workers agree their job includes many paper-based tasks that would be easier to execute on a computer or mobile device.[5] By giving them the tools they sorely need, you're going to improve their experience in the workplace. In fact, 82% of companies that have made the move report higher levels of job satisfaction, while 64% have seen lower employee turnover.[6]

Ultimately, you will have staff members who can complete their job faster, with fewer mistakes and greater satisfaction. The result? A better bottom line. Organisations with the highest degree of digital connectivity and empowerment – involving more than 75% of their frontline workers – are far more likely to see more than 20% growth year on year. [7]

But the effects don't end there. These new tools can foster a culture of innovation, empowering employees to uncover new processes and concepts, and giving them a voice to share these ideas with the wider business. In fact, businesses that connect their people enjoy 32% more production innovation.[8]

However, it's not always quite as simple as providing your frontline workforce with new technology. They need to be equipped with tools that are suitable for their environment. When frontline workers were asked if they were actively looking to switch jobs, those who experienced device operating failure were twice as likely to agree.[9] These workers' needs differ greatly from those of their office counterparts and choosing the right devices. Here, the right applications and security will determine whether your efforts are successful.

1 Emergence (2018)
The Rise of the Deskless Workforce

2 Staffbase
Bridging the Digital Communication Gap for Non-Desk, Frontline, and Offline Employees

3 Forrester (2019)
Empower Frontline Workers With Cloud Experiences

4 Frost & Sullivan (2016)
The Smartphone Productivity Effect

5 Forrester (2019)
Empower Frontline Workers With Cloud Experiences

6 Forbes Insight (2017)
Empowering the Firstline Workforce

7 ibid

8 Raconteur, (2019)
Connecting the Unconnected Workforce

9 Forrester (2019)
Empower Frontline Workers With Cloud Experiences
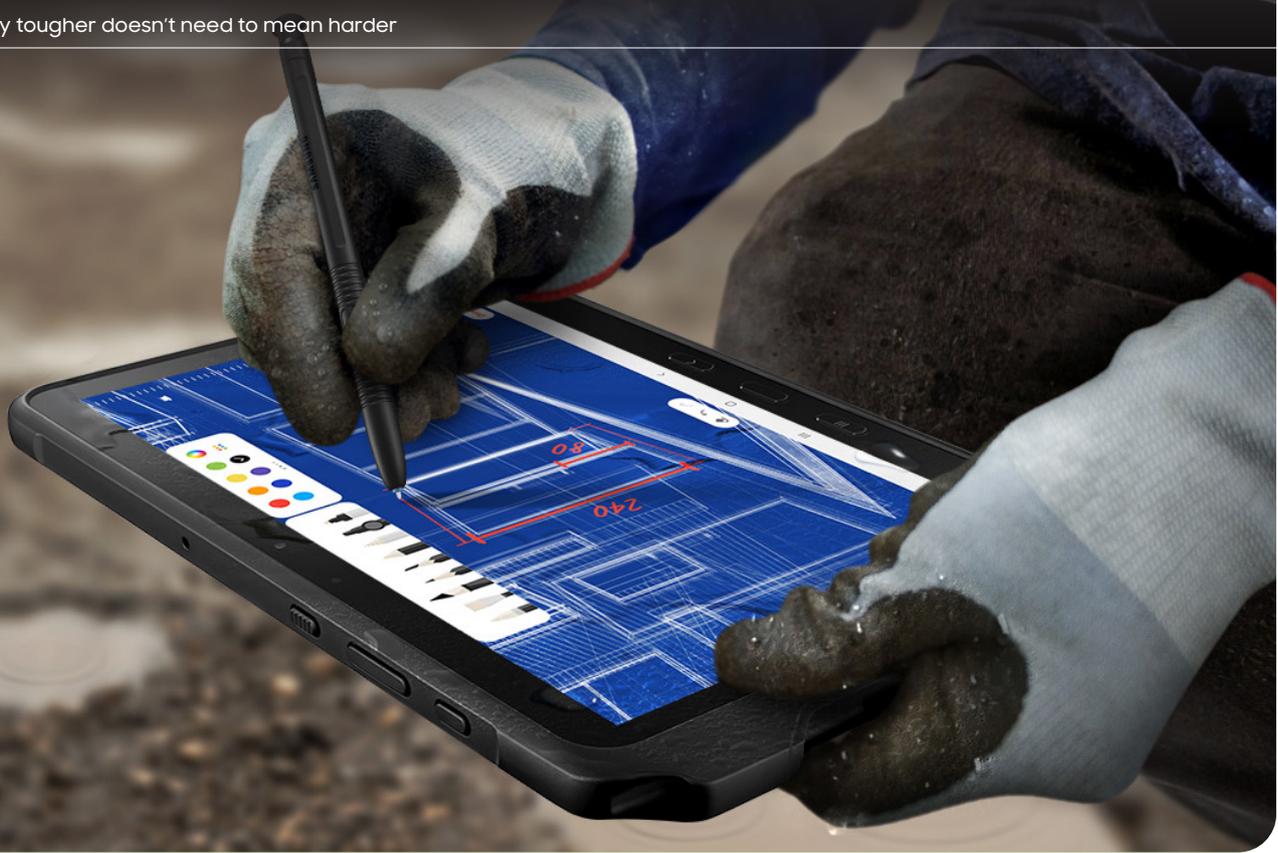
Going rugged

Whether your employees operate on a construction site or the shop floor, there's one thing businesses need regardless of their environment: reliability. Standard devices aren't designed to handle the rigours of these settings and are likely to break quickly due to anything from drops and spills, to dust and dirt.

Meanwhile, rugged devices are specifically built to ensure your employees won't be let down by their tools when it matters most. And no matter how rugged devices evolve, that core principle will always drive their design.

So, what kind of credentials do rugged devices offer and why should you opt for one over a consumer alternative?

Consumer

Rugged

Durability

Consumer: Consumer devices simply aren't built for the frontline. They're susceptible to any number of risks that are present in these environments. Screens, cameras and processors can break easily from shock or drops, while dust, dirt and water can damage internal components.

Rugged: Rugged devices are built to an international standard rating of IP68[10] and the highest military standard for survivability and endurance, MIL-STD-810G.[11] That means they can withstand anything you throw at them, from drops and shocks to dust and dirt, and even submersion up to 1.5m for up to 30 minutes.

Design

Consumer: Traditionally, design and style have been consumer devices' forte. These slimmer machines fit snugly in your hand or pocket and offer unparalleled ease-of-use.

Rugged: Historically rugged devices have been known for being bulky and awkward. However, the newest generation of devices have broken away from this stereotype. Devices like the Samsung Galaxy XCover Pro offer the sleekness and ease-of-use that you've come to expect from their consumer alternatives, without sacrificing their standards. And they can be supported with a complete ecosystem of rugged accessories [12] including cases, docks, mounts, chargers and keyboards.

10 Resistant to dust and up to 1.5 metres of fresh water for up to 30 minutes

11 When tested on a flat surface, without its protective casing can withstand a drop of up to 1 metre. Drop test results meet MIL STD 810G standard.

12 Accessories sold separately.

Consumer

Rugged

Battery

Consumer: While consumer devices have improved in multiple areas, battery life continues to be a struggle. Battery failure can hinder work, especially on sites where power points aren't readily available. Meanwhile, charging itself often takes too long, and charging pins and cables can be easily damaged.

Rugged: Rugged devices are constructed with longevity in mind. Their superior battery life and interchangeable batteries mean workers can continue uninterrupted in the field. Plus, POGO charging docks [13] ensure you avoid broken connections and can enjoy 15% faster charging.

Sensitivity

Consumer: Traditional touch screens can often be unpredictable in extreme environments. Water can make them unresponsive to the touch and difficult to view, while gloved workers have to remove their safety equipment to engage with their devices.

Rugged: You won't experience the same difficulties with rugged devices. Designed to respond to both gloved and wet touch, your workers can keep going without interruption. Meanwhile, high resolution screens ensure all information is clear and users can enjoy an optimal viewing experience regardless of the situation.

Value

Consumer: Many businesses have opted for consumer devices on the frontline because of their lower price tag, but it's a risky move. If those devices fail on a regular basis and need replacing, you can quickly find costs beginning to escalate.

Rugged: While rugged devices were once far more expensive, the price gap between them and consumer devices is closing quickly. However, thanks to their longer life and replaceable batteries,[14] rugged devices prove to be considerably more cost effective in the long run.

13 POGO Charging Dock sold separately.

14 Additional batteries sold separately.

Rugged in Healthcare

The NHS has long relied on large quantities of paper. But as part of its Long Term Plan, providers are expected to advance to a core level of digitisation by 2024.[15]

New technology on the frontline will allow medical practitioners to operate far more effectively to save more lives. They'll be easier to contact in an emergency, able to access patient records at the click of a button and saved from having to re-enter data at a workstation.

However, in fast-paced medical environments, equipment can face considerable wear and tear, and practitioners can't afford for their devices to fail them at critical moments.

Rugged devices can withstand the punishment they are likely to receive. They're protected from drops and water damage, while their long-lasting batteries won't fail workers during lengthy shifts. They're also sensitive enough to be used whilst wearing gloves, so you can guarantee safety protocols are followed.

Finally, it's more important than ever that medical organisations take security seriously. 15% of all breaches in 2019 involved healthcare organisations,[16] so your devices must be capable of protecting sensitive medical records. Choosing devices with built in defence-grade security will ensure both medical staff and patients can be confident that their data is safe.

15 NHS (2019)
Long Term Plan

16 Verizon (2019)
2019 Data Breach Investigations
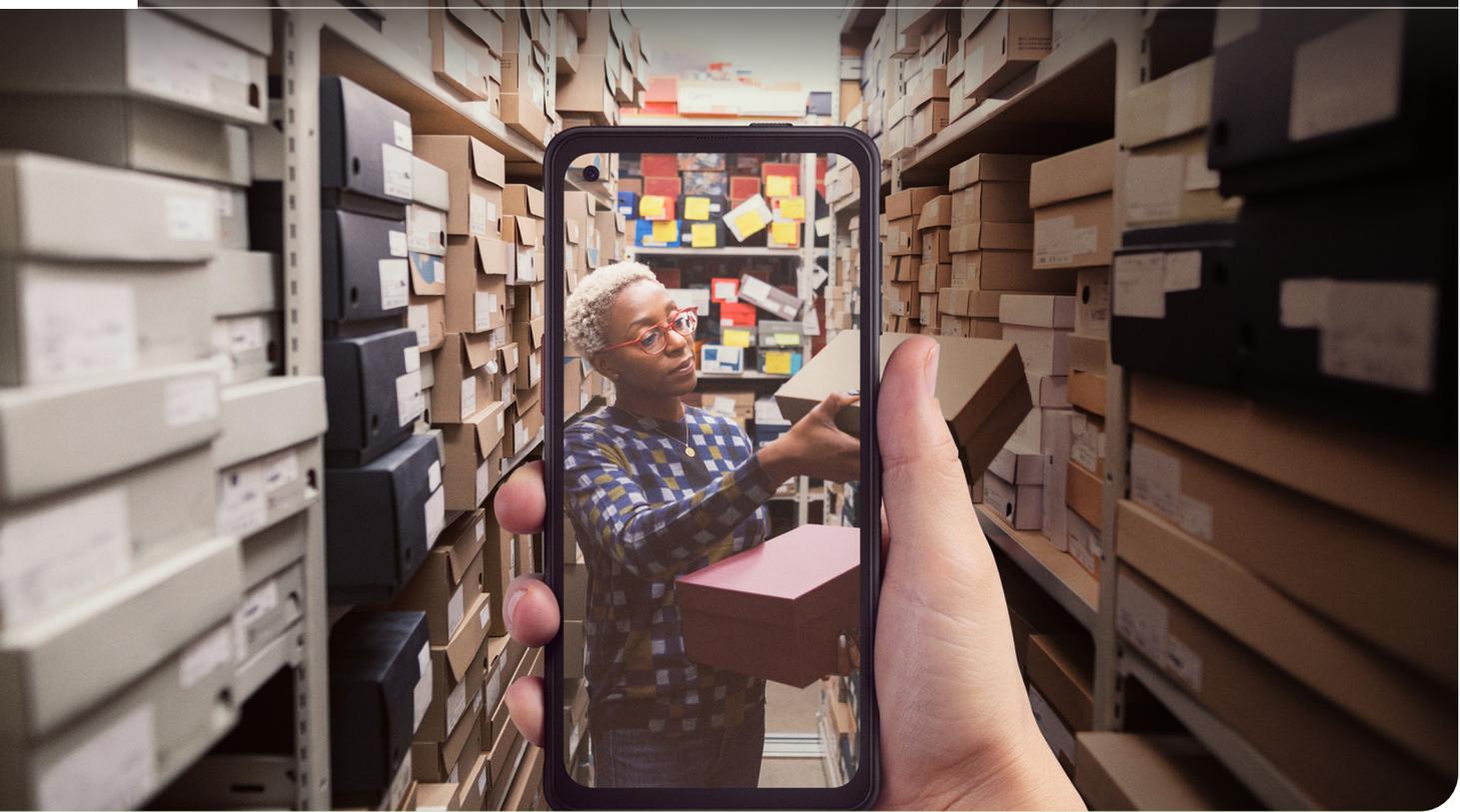
One device for all

If you want to unlock productivity gains, you need to ensure that your tools can deliver everything your employees need.

The place for rugged devices on the frontline is unlikely to be questioned, but for too long these tools have had limited application. Users have adopted them to achieve specific goals, but have had to either switch to consumer devices for wider functionality or foregone such capabilities altogether.

As a result, businesses have faced three equally unappealing options:

- **Rely on limited rugged tech**
- **Risk using consumer devices in extreme environments**
- **Pay for both devices for each employee**

Fortunately, you no longer need to put up with this state of affairs. The newest generation of business devices combine the durability of rugged devices with the full functionality of their consumer counterparts, as well as a range of industry-specific features. Now, you can equip your employees with a single device that meets their every need.

Faster training

A large chunk of the rugged market has traditionally run their devices on Windows Mobile operating systems. However, these operating systems are largely non-existent in the consumer market, accounting for 0.1% of the market share.[17]   As a result, employees have had to get to grips with an entirely new system when transitioning to these machines.

New Android-powered devices can alleviate these issues, allowing employees to use the system that the vast majority (72.3%) are familiar with in their personal lives.[18] More importantly they provide new employees with a vast array of tools for learning on the job, including augmented reality (AR) solutions. Certain devices, like the Galaxy Tab Active Pro, can use the built-in camera to display the workspace in a whole new augmented way, providing new employees with an engaging on-site learning experience.[19]

17 statcounter (March 2020)
Mobile Operating System
Market Share Worldwide

18 Ibid

19 Installation of Google
ARCore Application required.

Improved connectivity

With one device for all their needs, workers can remain connected to the information they require at all times. Construction workers can pull up plans on site, retail employees can check stock without leaving a customer's side, and healthcare professionals can access patient files at the click of a button. Data collected in the field can even be streamed directly to the cloud, rather than having to be manually input back at the office. And with access to collaboration and communication tools, frontline workers can keep in constant touch with their co-workers and managers, ensuring there's no delay in decision making. Devices like the Samsung XCover Pro even enable Push to Talk communication, so workers can instantly chat with colleagues or send them messages over Microsoft teams[20] by holding down the hotkey.

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Unlimited functionality

Say goodbye to limited software choices and restricted employees. With Android-powered devices, your workforce can utilise the full spectrum of applications on offer. Users won't have to return to the office to manage their emails, access company databases or engage with HR systems. Meanwhile, built in barcode scanners, mPos functionality[21] and styluses provide workers with the key functionality they previously turned to specialist devices for, so they'll always have the tools they need – and business doesn't need to stop for anything.

Minimal expense

Of course, all of this means your employees can perform their role from a single, long-lasting device. Combined with cloud solutions, your employees can access vital information and perform essential functions any time and any place. Software solutions, like Samsung DeX,[22] are even allowing employees to extend their mobile devices to a larger screen, whether they're in the office or working remotely. So, they can benefit from the efficiency of a workstation without having to transition to a completely different device, and your business can save on expensive and underutilised desktop computers.

20 Microsoft Teams application and license required.

21 Additional software required to take payments directly on a device.

22 Only available on Tab Active Pro.

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Rugged in Construction

The construction industry has traditionally veered away from investments in frontline technology. Its harsh environments have made consumer tech unviable, while expensive and limited rugged devices haven't offered the benefits to justify investment. As a result, construction has lagged behind as the least digitised industry in Europe. [23]

However, with supply chain friction increasing, staffing levels wavering and economic uncertainty looming, many are realising its time for change. One survey found that 81% of respondents across the UK construction industry will be taking greater leaps to improve their business digitally in the next 12 months.[24] Fortunately, there's now an abundance of tools to help them do that.

Today's tools are comfortably able to take on the demands of construction sites, with features such as anti-shock design and IP68 water and dust resistance. But it's their functionality that can truly transform your workforce's capabilities.

Traditionally, trades have operated in silos on a job site, which has led to problems in terms of poor communication and collaboration. These tools mean that when crews working on the 26th floor run into problems, they can instantly address the issue by either referring to the latest plans on their rugged tablets, like the Samsung Galaxy Tab Active Pro with its 10.1 inch high-resolution screen. Alternatively, they can video call site supervisors, engineers and vendors to find quick and workable solutions.

Ultimately, your investment will pay off as rugged devices deliver a lower total cost of ownership. Their durability and replaceable batteries mean you'll get longer service from each device while productivity soars.

23 McKinsey Global Institute (2017) Reinventing Construction Through a Productivity Revolution

24 pbctoday (2019) UK Construction Industry to Ramp Up Digitisation in 2020

Container
Management Framework
SE for Android
Runtime Protection and Encryption
TIMA
Hardware Root of Trust

Next-level security

While protecting your vital business data is never easy, it's especially difficult for frontline employees who face the risks of loss, theft and unauthorised access on a daily basis. Introducing more devices with greater access to data can, of course, enhance these risks. With around a third of UK businesses suffering a breach or attack in the last year, organisations need to do more to protect their data.[25] That's why when selecting mobile devices for your frontline staff, security must be front of mind.

Minimal expense

A new generation of devices have security built in to the hardware. Many come with security platforms, but leading the pack is Samsung Knox. It offers multi-layered, military grade defence. All data is securely encrypted by default using a government-certified encryption module, and personal data can be completely isolated within a device. It's even designed to block any attempts at tampering, from boot-up, runtime, and when powered off.

Considering instances of mobile ransomware increased by 33% last year,[26] it's vital that organisations extend their security measures to their mobile devices. That's why police, military and security services across the world rely on Samsung Knox.

Simple management

Mobile device management solutions can help to ensure consistency and control across your entire mobile fleet. You can guarantee that all software, from the operating system to applications, are kept up to date, without any user involvement. With 60% of breaches in 2019 due to unpatched known vulnerabilities,[27] this will drastically reduce the risks your business faces.

You can also ensure that security settings remain consistent and untampered across your fleet, while monitoring and, if necessary, limiting user access and behaviour, for instance by blacklisting apps or websites. With 1 in 35 mobile devices having a high-risk app installed,[28] it's essential that you put some limitations on what your employees can access.

Samsung Knox's Configure and Manage modules provide you with these abilities and more. You'll gain simple yet comprehensive control of your fleet, so you can track, adjust and update your security policies on the fly.

25 Department for Digital, Culture, Media and Sport (2019)
Cyber Security Breaches Survey 2019

26 Symantec (2019)
Internet Security Threat Report

27 Servicenow & Ponemon Institute (2019)
Costs and Consequences of Gaps in Vulnerability Response

28 Symantec (2019)
Internet Security Threat Report

Guaranteed authentication

Even with the best employee security training in the world, you'll always face the risk that workers fail to take passwords seriously. Whether they choose a weak password or record theirs in an insecure location, traditional authentication can all-too-easily be overcome – and cybercriminals know this. According to Verizon, 29% of breaches in 2019 involved the use of stolen credentials.[29]

Today's devices can augment your password security with biometric authentication, such as face and fingerprint recognition. So even if a password falls into the wrong hands, you can be sure your data won't.

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Consistent backup

Traditionally a lost or stolen device could mean hours of lost work but today's devices automatically backup to the cloud, ensuring data remains on hand. As soon as you realise a device is missing, you can remotely lock access and wipe its hard drive.

However, it's easy to accidentally misplace a device when you're out in the field or on the shop floor. But with today's tracking services, you can locate lost devices in a matter of minutes, and avoid replacing devices that are right under your nose.

29 Verizon (2019)
2019 Data Breach Investigations

Rugged in Government

The Government Transformation Strategy, which has aimed to digitally transform government services over the last three years, set out a clear aim to deliver "joined-up services that run seamlessly across government."[30]

Part of that transformation will involve connecting emergency services on the frontlines, so they have better access to information and are more flexible and responsive. However, for workers like law enforcement officers, not any device will do. They need devices that can withstand the knocks and bumps of high-speed car chases, as well as perform reliably in natural disasters and during the aftermath of terrorist attacks. The newest generation of rugged devices offer the durability you'd expect, while being lighter and thinner than standard rugged devices, so officers can comfortably carry them throughout a whole shift.

These rugged devices also boast great processing power to ensure officers get all the support they need. For example, when officers arrive at the scene of an accident or crime, rugged devices – like the Samsung Galaxy XCover Pro with its 25MP and 8MP dual camera – can be quickly deployed to photograph or record the incident, take statements from witnesses who can electronically sign documents, or help them scan databases to identifying missing persons. Meanwhile, push-to-talk and emergency request functionality can be programmed to send location data or alerts, eliminating the need for radio dispatch.

Given the sensitivity of the data that police officers handle every day, it's important the devices they use are safe and secure when they're on the move. Samsung rugged devices are all protected by Knox, which provides defence-grade security that encrypts the data on the phone so that it's secure and can't be accessed by hackers when officers are out and about. This is one of the key reasons why 42 out of 43 police forces across the UK use Samsung devices.

30 Government Digital Service (2017)
The Government Transformation
Strategy 2017 to 2020

Conclusion

Businesses have an unprecedented opportunity to empower and motivate their frontline workers with an investment in the right mobile technology. However, as we've seen, traditional rugged and consumer devices only offer piecemeal solutions. Fortunately, businesses no longer need to make the choice between reliability and functionality. By investing in a new generation of devices that combine the benefits of both worlds, you can unshackle your frontline employees and open a new world of possibilities.

To find out how Samsung can help your business transform it's mobile technology, explore the Rugged range at:

samsung.com/uk/rugged-range

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