SAMSUNG

Rugged goes mainstream

Why every business needs rugged devices to get the job done

Introduction

Easy to use, hard to break. That is what people who work on the front line want from their devices, but all too often they are given tablets and phones that struggle to survive in tough working conditions. Or they "make do" with their own devices, leading to frustration, security risks and breakages.

At the same time, businesses are becoming more reliant on mobile workers. Before Covid-19 struck, there was a slow but steady shift towards home working: in 2015, 4.3% of UK employees worked from home, and that had crept up to 5.1% by 2019[3]. During the early lockdown period, that figure leapt to 60%[4].

65%

of office workers live with damage to their phone's case or screen[1]. Meanwhile, 27% of workers suffer the daily annoyance of a smashed display[2].

We don't yet know what long-term impact Covid-19 will have on our working arrangements, but we do know that successful businesses will need to adapt — and adapt quickly. Not only will managers have seen that remote working can work well, even improving productivity, but so will employees.

The future certainly isn't going to be less mobile.

Against this backdrop, we are seeing the emergence of a new generation of rugged phones and tablets. Cast away the image of thick, rubberised devices held by workmen in high-vis jackets. While there is still a place for such tools, recent developments to screens and manufacturing mean that phones and tablets can be both rugged and sleek.

There is an obvious corollary to this: while rugged devices have previously been the preserve of a handful of industries, they should now be actively considered by every business in Britain.

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What is rugged anyway?

The word “rugged” is often applied to phone cases that add some extra protection to the corners of a screen, perhaps with some impressive-looking rubber for good measure. However, when an equipment manufacturer such as Samsung calls a product “rugged” it means something quite different.

It means that the device in question has been subjected to a barrage of tests to ensure it will survive in extremes of heat, cold, altitude and environment. These tests go far beyond the norm you might see on a consumer device, where at best you can hope for protection against water and dust ingress. A rugged device is built to last.

In particular, a rugged device will have survived tough testing under the US military’s MIL-STD-810G certification. It will have survived drops from waist height onto concrete. It will have been tested in salt fog, settling and blowing dust, and icy conditions. It will have been immersed in water, blowing rain and dripping rain. It will have coped with vibrations, ballistic shocks and transit drops. It will have persevered in temperatures as cold as -40°C and as hot as 80°C, along with extreme humidity.

No matter how good the “rugged” case you buy, it is no substitute for the real thing.

The changing face of rugged

"Most ruggedised smartphones are heavy and look blocky because of thick protective rubber casings," wrote *PC Magazine*'s Gadjo Sevilla on the launch of the Samsung Galaxy XCover Pro in January 2020[5]. "The Samsung Galaxy XCover Pro is different. While it is encased in rugged and durable materials, it is relatively thin and light and not much different in dimensions to Samsung's consumer-focused mid-range and flagship devices."

As Sevilla alludes to, buying a rugged device used to mean compromises such as thick bezels, extra weight, last year's components and a girth that made them unwieldy. In many cases, it also meant a compromise in functionality. That's no longer the case, with the new generation of rugged devices offering the same sleek designs employees will be used to from consumer devices — and the slick software to match.

At the same time, these devices do not compromise on the rugged essentials. Replaceable batteries are one obvious example. These devices are going to be your employees' constant companions, and that means they need to use them for the whole working day. Rather than connecting it to a charger, literally tethering

a worker to their desk, users can instantly swap out the battery and carry on working.

When they need to be recharged, a modern rugged device will include charging systems such as POGO: this is a drop-in system designed to work in demanding environments such as factories and building sites.

Rugged devices also need to adapt to their surroundings, whether that's fog, rain or a gale. In those situations, it may not be convenient for the operative to remove their gloves, meaning you need a rugged device that will respond to someone wearing gloves, or prodding the screen with a wet finger.

> "The Samsung Galaxy XCover Pro is different. While it is encased in rugged and durable materials, it is relatively thin and light and not much different in dimensions to Samsung's consumer-focused devices."
>
> **Gadjo Sevilla**
> PCMag

Over time, all of these benefits could repay the initial costs of rugged smartphones and tablets many times over.

How rugged devices can boost productivity

When you look at businesses that embrace rugged devices, a theme soon becomes clear: they use rugged devices to solve business problems. And in doing so, they simultaneously improve the productivity of their employees and satisfaction of their customers.

Consider one of Britain's leading courier firms, Hermes UK, which has invested in 12,000 rugged Samsung devices. Its warehouse workers use their devices to scan multiple boxes at the same time so that drivers can hit the road as quickly as possible. If a delivery address changes after a label has been printed, there is an easy solution: built-in augmented reality tools from Scandit mean that it can show the driver the new address directly on their screen.

There are additional advantages too. Real-time updates for collections and deliveries mean that Hermes knows exactly where each parcel is at any time, while an integrated scanner and more efficient management tools have helped to drive down the total cost of ownership compared to Hermes UK's previous solution.

"We realise that to stay competitive we need to constantly innovate," says Marcus Hunter, head of IT services at Hermes UK[6]. One example of such innovation: its My Place service. This allows a customer to send a photo of a "safe

place" to drop off a parcel in real time. And because the courier is using a lightweight tablet, they can send a photo of the dropped-off parcel straight back to the customer as confirmation.

Andrew Barker from Dalcour Maclaren, a British company that provides land property services to the utilities sector, tells a similar story. "A fundamental part of our day job is collecting vast amounts of data in the field and so we need the tools to be able to do that and to manage it," he says[7]. That means build quality to survive all weathers and battery life that lasts all day. The company bought rugged Samsung devices, and created its own bespoke app to solve one particular problem.

"It wasn't that long ago when we were collecting data on paper out in the field and then coming back to the office and inputting that data manually, if you could read the handwriting," says Barker. "Now we are collecting that data and it's streaming back to the office live."

For our third real-world example, we turn to Kevin Stevens, the founder and chairman of logistics and supply chain management firm Woodland Group. "When we started out we were intent on bringing a new attitude to logistics," he says[8]. That meant using technology that gave the company flexibility far beyond its rivals.

> "Our drivers use their Samsung devices to communicate with customers if there are any delays and then take photos of delivery showing the goods are delivered in full and intact"
>
> **Kevin Stevens**
> Chairman, Woodland Group

As you might expect, its drivers are equipped with rugged tablets to communicate with customers, take photos of delivered goods and capture signatures. Perhaps more surprising is that they are also an integral part of the team's workflow back in the office. "At HQ, we use tablets to book meeting rooms and avoid clashes," says Stevens. "We also use our devices on the go to track global currency prices, which can have a massive impact on our cash flow."

This gives the management team actionable insights. "Having a clear view of operations and having good visibility of all our data also gives us more control over our finances. We can closely monitor cash flow, collect various tax information, and collect timesheets to keep everything moving," says Stevens.

The new breed of rugged devices also brings new tools to help businesses. Samsung worked in partnership with Microsoft to bring Microsoft Teams' Push-To-Talk capability to its Samsung Galaxy XCover Pro devices, prompting Satya Nadella, CEO of Microsoft, to explain that the new product "will provide frontline workers everywhere with the technology they need to be more collaborative, productive and secure"[9].

The XCover Pro also features two "hot keys" that can be tied to custom actions. That could be activating the scanner, turning on a flashlight or launching a CRM app — whatever is most convenient for the end user holding the device. It's all about saving time and hassle, as it means no more swiping through apps or scrolling through menus. The user does not even need to look at the screen.

One device, multiple uses

There is one more way to enhance productivity, and that's to turn a phone or tablet into a fully fledged barcode scanner, mPOS device, walkie-talkie or thermal imaging camera. This is no magic trick: choose the right device and it's a simple matter of connecting one of many specialist third-party accessories or downloading apps and software.

These rugged devices are amazing on their own, and unstoppable when working in tandem with the plethora of options that make up the rugged ecosystem. Take the Galaxy XCover Pro. Connecting this phone to Koamtac's barcode scanning tool SmartSled — with a pistol grip module — provides an ergonomic and rugged solution that's tailor-made for heavy-duty warehouse and logistics environments.

OtterBox cases add yet more protection to the device, whilst seamlessly clipping into custom modules on hi-vis jackets to prevent wasting time fumbling with pockets and zips. Additionally, industrial leather goods manufacturer Peter Jones provides a range of belts, harnesses and lanyards to ensure devices are always within easy reach. For first responders, hands-free portability is a top priority.

With a glove-friendly, dedicated Push-To-Talk button, frontline workers can quickly utilise the XCover Pro as a walkie-talkie, powered by partner software, with integration into Microsoft Teams[10].

There are many other uses for this new breed of rugged devices, which empower the workforce to improve productivity, while reducing IT spend by minimising the need for expensive, single-use devices.

Built-in security

When it comes to security, businesses are being caught in a pincer movement. On one side, cybercriminals, with every week bringing a new story about data breaches. On the other side, the threat of government fines for poor data protection under the EU's General Data Protection Regulation (GDPR).

The key for businesses is to put security at the heart of everything they do, and that includes rollouts of mobile devices. You need hard-baked tools to protect against everything from accidental loss — such as the age-old problem of leaving devices behind in a taxi — to criminals specifically targeting poorly protected data through ransomware. Half of the UK's businesses were hit with a ransomware attack in 2019, and 78% of those attacks were successful. The average cost to that business? £685,000[11].

You also need a way to manage your devices. Consider Abellio, which runs railway franchises in England and Scotland. Its franchisees had previously provided employees with mobile devices to make them more connected and productive, but the IT teams in charge hit two big problems: they fought a constant battle to configure and enrol devices, as each role required a different configuration, and then found that some users didn't update their devices — while others would download a new operating system prematurely and break access to apps.

"We gave out about 5,000 mobile devices four years ago," says Kerry Scott, manager of mobile at Abellio ScotRail[12]. "We had to set them all up, put email accounts on and ScotRail wallpaper. We had to

download all the apps onto the phones or the tablets and then we had to distribute them with such a small team. It was myself and one other person."

Once rolled out, ScotRail discovered further annoyances. "It's always been a frustration of mine that we couldn't control what was happening on our own phones," says Alan Manclark, head of IT at Abellio ScotRail[13]. "For example, we do a timetable change twice a year. And the last thing you want, if you're doing a timetable change, is for somebody to roll out a big operating system."

In Abellio's case, these frustrations were multiplied across three of its British railway franchises. It decided to solve all its headaches at once by partnering with Samsung's managed services team and rolling out the company's rugged devices. Samsung handled everything from the design to the build, from user training to ongoing support of the devices.

It was a task made all the smoother thanks to Samsung's Knox platform. This includes Knox Configure, which means the Samsung team can easily configure devices for multiple profiles — in Abellio's case, that includes train drivers who need a specific map application, on-train staff who require a smartcard reader and engineers who need schematics.

> "We understand that security is very important to Samsung and this is essential for us because security is high on our agenda — back at HQ we have systems in place to combat cyberattacks and malware."
>
> **Andrew Barker**
> Director, Dalcour Maclaren

This is, quite literally, just the beginning of what Samsung Knox managed solutions cover. A suite of tools, Knox is designed to provide support at every step of a device's life: it's there to configure, enrol, manage, secure and maintain. For example, if the user does manage to break their device, Samsung's services team has them back to work with a replacement device in their hands the next working day[14].

Sitting at the heart of Knox is security. Knox is built into the chipset of Samsung rugged devices, helping to keep them secure from the moment you unpack them and turn them on. It's trusted by security experts and governments around the world, with Gartner giving the platform more "Strong" ratings than any of its rivals in its 2019 comparison of mobile operating systems and device security[15].

For example, Knox works in tandem with the fingerprint readers and face recognition built into most Samsung rugged devices, while also using a combination of firmware and software to actively protect against malware and other security threats.

If the worst does happen, and someone loses their device or has it stolen, Samsung Knox allows the IT team to remotely wipe the device from a central management console. Or follow the example of Hermes UK, which stores all the data in the cloud, so that even if a device is lost or stolen the company knows that none of its customers' data is at risk.

Built-in support

In stark contrast to a consumer device, which is likely to be replaced within two years, a rugged device will need to keep on working for three or four years — and in far tougher conditions. It is also a fact of life that your employees are likely to take less care of a company-supplied phone or tablet than one they buy themselves.

A truly rugged design helps to counter some of these challenges, but no matter how well looked-after, one vital component may need to be replaced at some point during the device's life: the battery. If you're buying a rugged device, which is likely to be used throughout a day, a replaceable battery is vital.

You also need to be confident that your chosen rugged device will stay protected from threats throughout its lifetime. The story of Abellio's rollout highlights the importance of a stable operating system with strict, central control of security updates and maintenance patches. In addition, this must be easy for an IT team to coordinate.

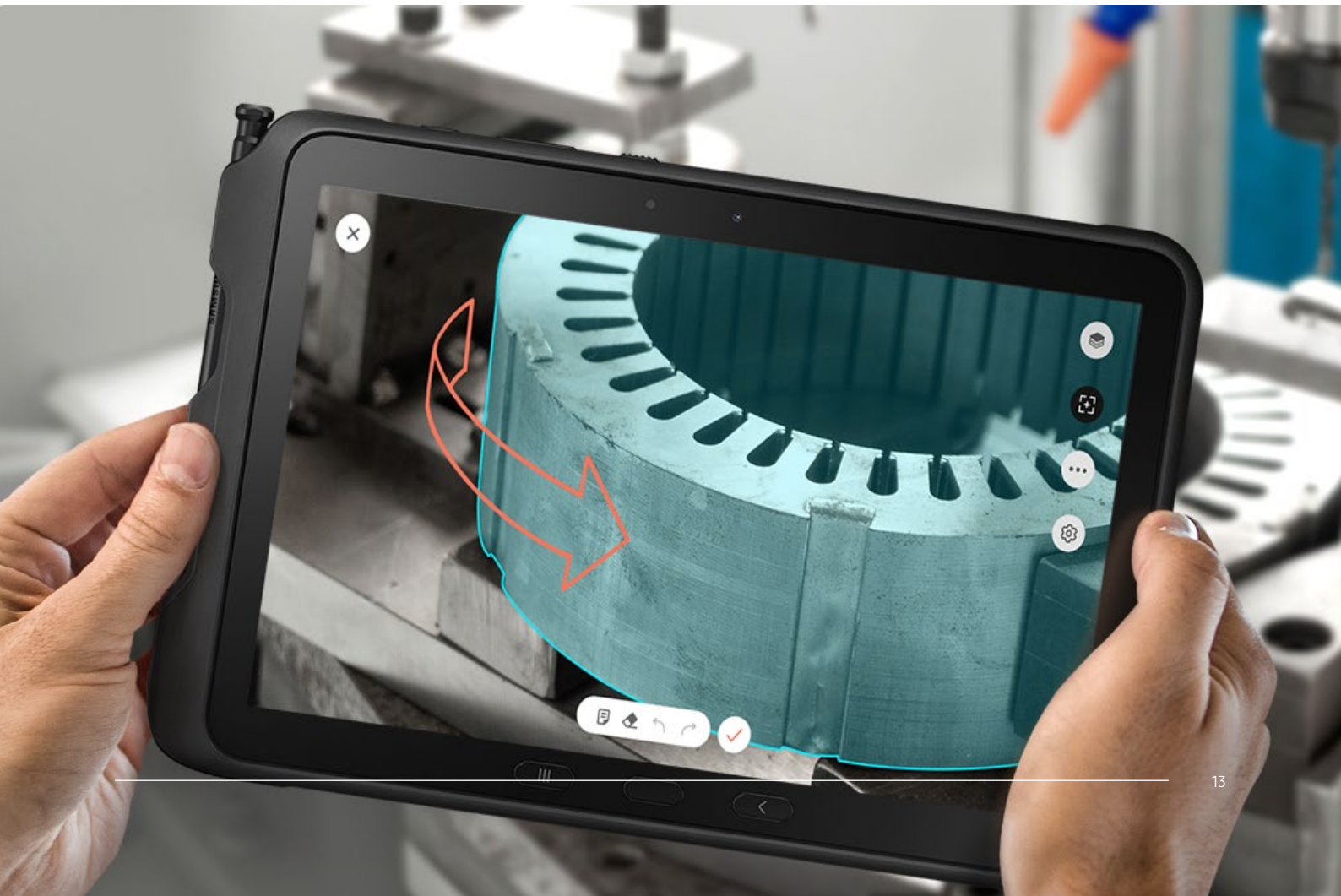
Samsung customers benefit from the guarantees offered by the company's Galaxy Enterprise Edition [16]. Top of the list are firmware updates, covering a full four years of the product's life [17]. IT teams also benefit from an extended product lifecycle [18], so they can be confident of rolling out additional handsets at a time that suits the business.

Galaxy Enterprise Edition also provides three years of enhanced service support to ensure all devices continue to perform at the high level end users expect.

Samsung's customers also benefit from a dedicated UK-based business services centre to provide technical support when needed. This shouldn't be understated: it means that hardware and software specialists sit under one UK roof, ready and able to help customers with specific queries. Nor are these queries restricted to Samsung's own software, with the service technicians able to tackle interoperability with third-party enterprise mobility management systems too.

Finally, let's not forget that this is all backed up by a next-business-day replacement service[19].

> "One of the main reasons that companies struggle when deploying technology is the amount of user intervention that has to happen on a device. A big part of Samsung's strength with our Knox portfolio and our hardware is that the moment the user powers it on, it's ready to go."
>
> **Stephen Lee**
> General manager, Business Services, Samsung UK



Final thoughts

Every business faces different challenges, but they all share the same aim of boosting employee productivity, keeping their customers satisfied and turning business problems into opportunities. All the better if those opportunities give them an edge over rivals.

If there is one lesson from Abellio, Hermes UK, Dalcour Maclaren and Woodland Group, it is that putting the right tools into the right hands — combined with the right infrastructure back at the base — can achieve all three of these aims.

Samsung is in a unique position, as it brings together the design skills of the world's biggest smartphone manufacturer with defence-grade security and management. Couple this with a managed services team that works closely with businesses to provide the right solution for their needs and you have a potent combination.

> "What we were looking for from the outset was a business partnership... I think we found that in Samsung."
>
> **Himesh Patel**
> Head of IT at Abellio Greater Anglia

"What we were looking for from the outset was a business partnership, somebody that could be flexible but also can adapt to our changes," says Himesh Patel, head of IT at Abellio Greater Anglia [20]. "I think we found that in Samsung."

Once you have found the right partner, it's a matter of finding the right tool for the job. Once again, Samsung is in a prime position, with four rugged devices to choose from. Turn the page to find the right one for you.

Samsung Galaxy XCover Pro

Combining rugged capabilities and premium style, the new Galaxy XCover Pro comes with a 6.3" display for improved visibility and usability. It is IP68 dust and water-resistant[21] as well as anti-shock resistant[22] to handle the knocks of frontline tasks. Inside the slim design sit MIL-STD-810G[23] certification components and a long-lasting 4,050mAH battery.

Unlike many rugged devices, the Galaxy XCover Pro is ultra slim, light and agile making it easier to use and more adaptable to heavy-duty working — even while wearing gloves. Programmable keys allow quick access to frequently used apps, functions and accessories and you can set up Push-To-Talk walkie-talkie capability[24].

Plus, wherever work takes you, you're protected by Samsung Knox defence-grade security, which means your data is protected from malware and malicious threats. With additional protection through biometric facial recognition and fingerprint sensor authentication, you can be confident that neither your device nor your data can be accessed by thieves.

Samsung Galaxy Tab Active Pro

With a vivid 10.1" screen, the Samsung Galaxy Tab Active Pro pairs rugged durability with portable productivity — finally, fieldworkers can gain access to innovative technology that will transform the way they work, even in the harshest conditions.

Not only is it IP68 dust and water-resistant[25], but its MIL-STD-810G[26] certification means it is built to withstand the shock from a 1.2m drop with the cover attached — so it won't break if accidents happen in the loading bay or in the field.

For the first time in a rugged tablet, Samsung DeX connects the Galaxy Tab Active Pro to a monitor with a single cable[27] for a PC-like experience. No cable? No problem. Switch to DeX mode and use your tablet like a desktop computer while out and about.

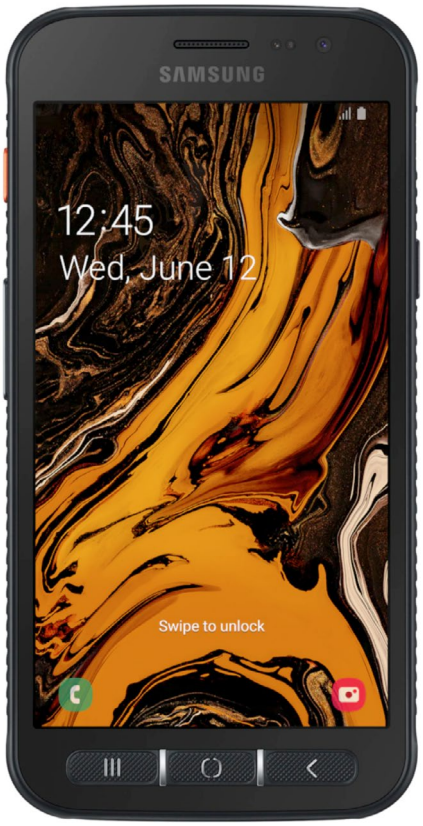
The Galaxy Tab Active Pro is ready for industry with business essentials such as mPOS for on-the-spot payments[28] and an S Pen with IP68 for notes on the go.

Finally, add a new dimension to your work with Google ARCore-enabled augmented reality apps[29].

Samsung Galaxy Tab Active2

The compact Galaxy Tab Active2 may have an 8" screen, but it is small enough to fit in your pocket when in the field or on your dashboard when making deliveries. It is also tough enough to deal with the knocks and bumps of even the most active workday, with IP68 water and dust-resistance[30]. It even comes with an IP68-certified S Pen, enabling you to jot down notes, sketch out ideas, access apps and capture customer signatures with minimal fuss — no matter how demanding the conditions.

With built-in NFC, plus an 8MP rear and 5MP front camera, you can easily transfer data between devices and capture and scan barcodes to speed up everyday tasks. And this tablet is protected by biometric security to give an extra layer of protection if the device gets lost or stolen.



Samsung Galaxy XCover 4s

Work confidently with a business phone that is both aesthetically pleasing and equipped to perform in harsh, demanding environments, whether you are out in the field, subjected to the elements or even back in the office. At just 9.7mm thick, it's a streamlined smartphone that's easy to grip and built to keep up with even the toughest workday.

Its 5" high-resolution display delivers an optimal viewing experience for maps or photos. In environments where gloves are essential workwear, its increased screen sensitivity allows field engineers, factory workers and construction crews to keep projects running smoothly.

The Samsung Galaxy XCover 4s also includes a powerful 16MP rear camera and LED flash, enabling you to capture photos even in poor light.

Sources & disclaimers

[1] Neil Robinson, "25% of Apple's iPhone screens are smashed — 5% totally unusable", September 2019

[2] Ibid

[3] Kerry Fawcett, "The Remote Working Report", BusinessComparison.com, March 2020

[4] Chris Lilly, "Working from home statistics", Finder.com, April 2020

[5] Gadjo Sevilla, "Rugged Samsung Galaxy XCover Pro Is Built for Extreme Conditions", PCMag, January 2020

[6] Marcus Hunter, head of IT at Hermes UK, May 2020

[7] Andrew Barker, director at Dalcour Maclaren, "Improving Efficiencies and Transforming Operations", August 2019

[8] Kevin Stevens, chairman, CEO and founder of Woodland Group, "Improving Communication and Fuelling Productivity"

[9] "Samsung Introduces Galaxy XCover Pro: A Sleek, Durable and Enterprise-ready Smartphone Built for Business," January 2020

[10] Microsoft Teams application and licence are required

[11] Sophos, The State of Ransomware 2020, May 2020. Note that the £685,000 figure is based on a US-dollar-to-UK-pound conversion rate in May 2020; the figure in dollars is $839,796.42

[12] Kerry Scott, "Knox: Controlling a vast mobile estate with Samsung end-to-end solution", February 2020

[13] Alan Manclark, "Knox: Controlling a vast mobile estate with Samsung end-to-end solution", February 2020

[14] Doorstep exchange with Samsung gold stock

[15] Patrick Hevesi, "Mobile OSs and Device Security: A Comparison of Platforms", Gartner Research

[16] Only available on Samsung XCover Pro, XCover 4s and Tab Active Pro rugged devices

[17] Four years from first global market launch. Samsung XCover Pro, XCover 4s and Tab Active Pro updates are available monthly for the first three years, then quarterly for the final year

[18] Devices will remain on sale for a defined period of time after first global market release. The defined period will differ according to each specific device. Subject to change without notice

[19] Doorstep exchange with Samsung gold stock

[20] Himesh Patel, "Knox: Controlling a vast mobile estate with Samsung end-to-end solution", February 2020

[21] Resistant to dust and up to 1.5m of fresh water for up to 30 minutes (IP68)

[22] When tested on a flat surface, without its protective casing, it can withstand a drop of up to 1m. Drop test results meet MIL-STD-810G standard

[23] The Samsung Galaxy XCover Pro, Galaxy XCover 4s, Galaxy Tab Active Pro and Tab Active2 each withstood 21 of the MIL-STD-810G tests

[24] Via downloadable application

[25] See 16

[26] See 23

[27] USB-C to HDMI cable and accessories sold separately

[28] Additional software required to take payments directly on a device

[29] Installation of Google ARCore application required

[30] See 21