How rugged mobile device users can prepare for life after Windows

Feature

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The long relationship between Windows and enterprise rugged devices may finally coming to an end

As enterprises consider their options post-Windows, taking the time to scope and develop a comprehensive mobility strategy will pay dividends in the long run

As Microsoft winds down support for many of its legacy operating systems, manufacturing plants, warehouses and other rugged environments are mulling where to take their mobility strategy next.

While less than 1% of consumer smartphone devices run on Windows OS, according to Gartner, it's been a mainstay on rugged devices for decades. Since Microsoft announced its decision to stop supporting Windows 10 Mobile by 2018, however, interest in migrating from the various Windows OS versions, including Windows CE and Windows Phone 8.1, has grown in the enterprise. Some hardware manufacturers also no longer support Windows OS on their devices, leaving businesses to grapple with security and functionality issues.

The rise of Android

With Windows no longer a viable option for many enterprises, Android has emerged as the top contender for an operating system compatible with the rugged environment. Google and Android hardware manufacturers, such as Samsung and Zebra, are adding capabilities designed to support Android on rugged devices in the enterprise. These include custom security APIs, hardware integration APIs and more robust mobile device management features.

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Enterprises are responding, with a significant uptick in Android use on rugged devices over the last few years. Android OS share grew from 24% to 37% of all rugged handheld devices from 2015 to 2016, while Windows Embedded Handheld 6.5X/Windows Mobile fell from 49% to 39% during that time, according to a recent VDC Research report.

Rugged devices are well-known for their long shelf life, operating up to three times longer than their consumer counterparts. While many rugged devices still have years left in them, lack of support from Microsoft and the technology ecosystem will make them increasingly difficult and expensive to maintain. Security is a prime issue for devices with older operating systems, which may have expired root certificates and no modern SHA2 support.

When businesses review their options around migrating to new hardware with a new OS, the decision is increasingly complicated by the investments required

for retooling applications, updating mobile device management systems and implementing modern support processes.

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As enterprises continue to weigh the costs of these efforts against the cost of supporting a legacy fleet of mobile devices, however, eventually they will reach a tipping point that will force them to make the transition. If your business is preparing for a migration from Windows to Android (or another operating system), here are three key considerations.

1. Mobility roadmap strategy

How are your current rugged devices used? Which business operations do your mobile devices need to support? How are you currently supporting the end-to-end mobile lifecycle? The answers to these questions will help define your mobility roadmap. Designing a mobile blueprint that meets your organization's unique business requirements is a must when beginning the process.

For example, many rugged devices currently use Telnet screens with legacy back office systems, so updating the operating system and associated applications can impact the user experience. In addition to form factor and screen size, examine security, compliance and the MDM/EMM solutions required to help your devices perform at their peak in the field.

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Another consideration? Budgeting. Investing in mobile hardware and systems can require significant outlays and create capital expenditure spikes. Solutions such as Mobility-as-a-Service allow you to bundle all costs into a flat monthly fee, trade capital expenses for operating dollars and upgrade more easily when you're ready for a refresh.

2. Application migration

Your line-of-business applications are the lifeblood of your mobile devices and your business operations. For businesses that run on apps built for Windows

Mobile, scoping and managing app migration is a critical part of the overall OS migration process.

While investing in app migration can be costly and time-consuming, improved productivity can deliver powerful ROI benefits. For example, if you shave 30 seconds off a scan and load operation that your warehouse employees perform 30,000 times a day, that's 250 hours gained daily. Here's how to get the most value of your migration investment.

• **Research and establish requirements.** How do you use your applications today, and how do you foresee using them over the next several years? Rather than just performing a straight migration of your app functionality, it may make sense to improve the app to take advantage of new technology developments. Begin by talking with your front-line employees who use the applications every day. For example, if your technicians currently have to enter an 8-digit password 60 times a day to access the app, it's probably time for a functionality upgrade.

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• **Ensure your hardware and operating system are compatible.** It's easy to get caught up in the trend toward the latest consumer devices, but environmental and operational requirements must come first. For example, if you're working in extremely cold or harsh conditions, you likely need a rugged device.

• **Choose your application development process.** To build native or web-based? Balancing the app's performance requirements with cost and internal resources can help you determine the best approach, including off the shelf, terminal wrapping, cross-platform or native development. If you're using the app to scan thousands of packages daily or perform other CPU-intensive functions, a native environment is typically best.

• **Pilot, test and iterate.** Rapidly developing an initial prototype with limited functionality and testing it in the field is the best way to identify and resolve potential snags early. Review initial app flows and prototypes with field users as soon as you can, since user testing in a live environment can uncover operational issues or edge cases that didn't come up during the discovery phase.

Once you're confident that the app meets the business' needs, you can proceed to a large-scale rollout.

3. Deployment and support

You've developed a mobility plan; now it's time to put it into motion. With IT teams stretched thin at many enterprises, partnering with a mobility expert can help speed time to market and avoid hassles associated with sourcing, provisioning and deploying your mobile investments. A mobility partner can also help source new accessories like mounts, cables and secure casings, ensuring new devices operate optimally and safely or extending the life of legacy devices.

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Post-deployment, consider who will support the maintenance, repair and replacement of your devices. For businesses migrating to new devices and operating systems, it can be tough to bring internal support staff up to speed quickly on the new solution.

A managed mobility partner can provide skilled around-the-clock support, resolving any issues efficiently and reducing downtime in the field. Look for a partner who can also offer device-level visibility into performance, helping you gauge what's working and make informed decisions about your mobility program.

Life after Windows

As enterprises consider their options post-Windows, taking the time to scope and develop a comprehensive mobility strategy will pay dividends in the long run. Partnering with a trusted mobility resource can help businesses make the right choices for their environments, ultimately improving operational efficiency, team productivity and market competitiveness.

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