Qualcomm snapdragon compute platforms

Always On, Always Connected: Snapdragon® Compute Platform powered Windows PCs for Business

A case study in simplified management for IT, 3X increase in user satisfaction, and improved productivity for field teams.

> I'm constantly shifting tasks to my phone because my PC battery lasts only two hours."

> Some of our PCs haven't connected to the domain controller in 50 days because the reps are doing all their work on their smartphones."

> Free Wi-Fi isn't always reliable when trying to be productive when moving around."

Those are typical complaints from PC users and the IT administrators who support them.

Wi-Fi is not ideal for users who move around during the workday. Poor battery life and bulky power supplies discourage workers from using their PCs unless they have to. As a result, IT can't update and protect those PCs because its endpoint management tools can't find them on the network.

But what if poor battery life and intermittent connectivity no longer got in the way of workforce productivity?

How much easier would it be for IT to secure and manage endpoints with a persistent connection to prevent ransomware attacks and data breaches? How much smoother would cloud adoption go with a smaller, lighter yet powerful laptop that was always on and always connected, wherever the user is located?

We decided to find out.

This paper describes how one organization boosted productivity for users and improved device management for IT with always connected laptops powered by the Snapdragon compute platform. In a pilot study, the company's employees enjoyed the enhanced mobility and low power consumption of a smartphone combined with an enterprise-grade laptop.

PC users and IT administrators can use quantitative and qualitative data from the pilot study to evaluate Snapdragon powered Always Connected PCs for their own organizations.

Supporting a field team

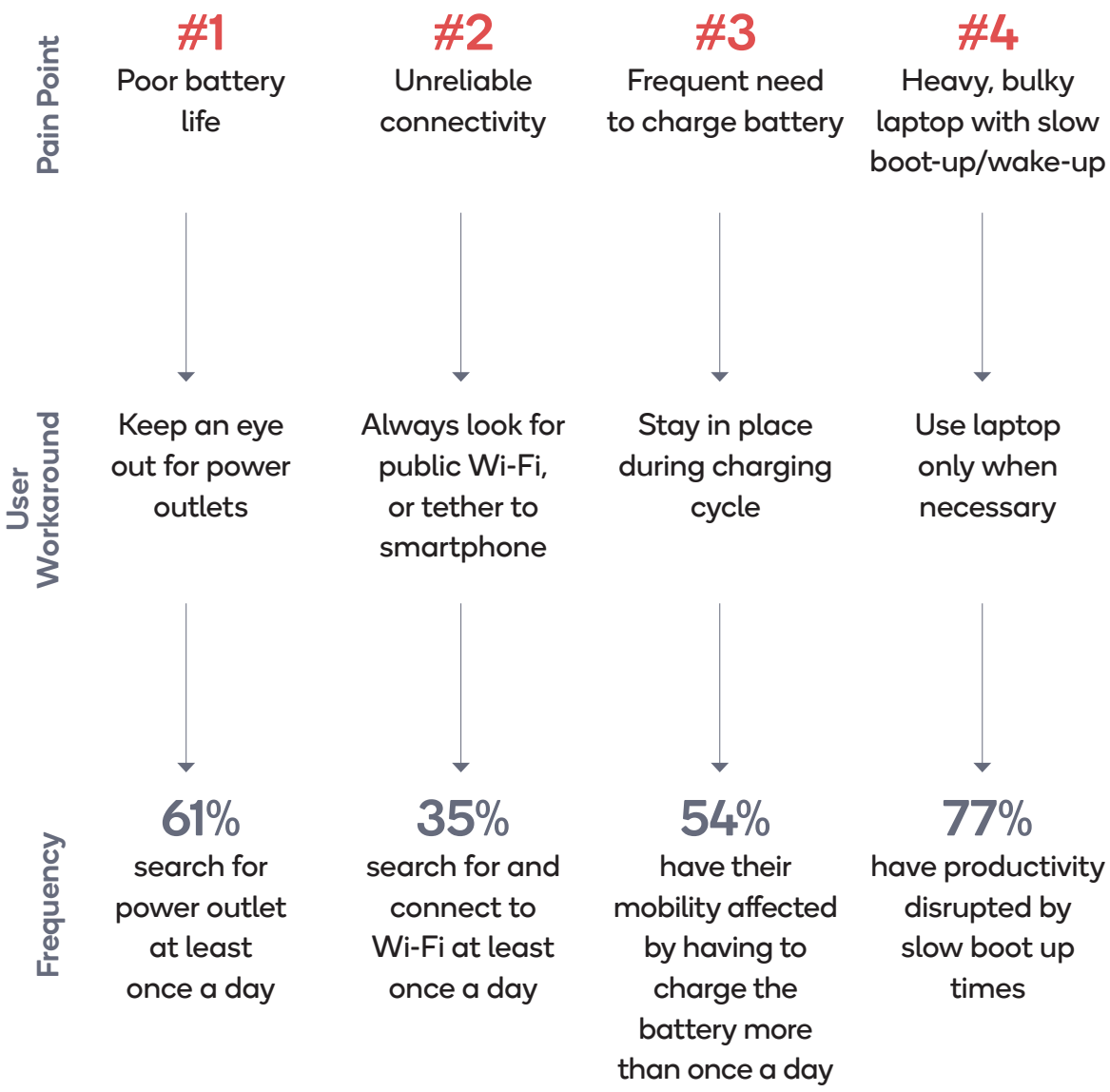
BDS Connected Solutions specializes in managing and training technology products at retail outlets. Their large team of field representatives is constantly moving—managing relationships, making store visits and filling out reports on the go.

The field managers and field reps depend heavily on IT-issued laptops powered by a traditional x86 processor. Their duties include three to five store visits and subsequent reports per day, four to twelve hours of video conferences per week, weekly summaries and online review of submitted reports.

The direction of IT relies heavily on cloud adoption, even for the 80 percent of company users who work in the field. Thus, for the laptops used by field reps and their managers, connectivity and battery life are high priorities. The company leases each x86 laptop for approximately $1800 total over a three-year refresh cycle. It also provides a smartphone to each field rep and manager.

Getting through the workday with x86 laptops

Several limitations inherent to the laptop worked against the company's goal of relying on the cloud.



Despite the pain points, users had no choice but to get their work done.

As a result, nearly half of them reverted to Plan B for staying connected and productive: They relied on alternative devices or worked longer hours.

Not that they were happy about it. Users had several common complaints:

- **Decreased productivity** — "I end up having to complete my reports at home."
- **Limited portability** — "It's so heavy; I rarely bring it with me. Plus, it requires many bulky charging accessories."
- **Increased anxiety** — "I'm constantly managing battery life, worrying about the PC overheating and making sure I have reliable connectivity."

The IT director voiced three main concerns about the company's fleet of x86 PCs:

- **Device visibility** — The company relies on Microsoft Intune for cloud-based mobile device/application management (MDM/MAM). Intune can locate only those PCs that are powered on, charged, connected over Wi-Fi/Ethernet and not in sleep mode.
- **Unsecured hotspots** — Users' reliance on Wi-Fi represented a security risk. IT noted that when field reps traveled more, the number of attempted and failed logins rose. There was the constant risk of a user logging in through a vulnerable hotspot. Tethering to a smartphone for a network connection can be a costly workaround. This led to costly overruns on data plans.
- **Data plan costs** — Tethering to a smartphone for a network connection can be a costly workaround. This led to costly overruns on data plans.

All three concerns were a function of the behavior users engaged in, usually related to how they got their work done.

With discontent among users and in IT, the company had to ask itself, "Is the x86 PC on its way to cloud adoption? Or is it in the way of cloud adoption?"

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The switch to Snapdragon powered Always Connected PCs

In a pilot study of the Always Connected PC in a corporate setting, 26 BDS Connected Solutions employees used a laptop powered by the Snapdragon 8cx compute platform running Windows 10 Pro instead of their usual x86 laptop.

Most of the users in the three-month pilot study (July to October 2020) were field reps (19) and field managers (3). Other participating users included the VP of connected shopper solutions, the operations coordinator, the analytics manager and the IT director. All switched to the Always Connected PC as their primary computing device during the study.

The Snapdragon powered PC is a thin, light, versatile device built with the Snapdragon 8cx, a compute platform with deep roots in mobile. It is designed to make users more productive through greater computing power, continuous connectivity* and lower power consumption. For IT organizations it offers enterprise-grade security and modern device management.

BDS Connected Solutions was attracted by the prospect of less downtime for users, greater security for endpoints and a solid step forward on the path to cloud computing and digital transformation.

Snapdragon 8cx compute platform

The Snapdragon 8cx compute platform combines the best of the smartphone with the power and performance of a premium laptop in ultra-thin, fanless form factors—delivering a superior, always-on, always connected experience.

The platform offers extreme performance, high-end graphics and up to multi-day battery life.** It is designed for 5G, multi-gigabit 4G LTE, immersive entertainment and enterprise readiness.

* Requires network connection and compatible network.
** Battery life varies significantly with settings, usage and other factors.

User perspective: A more productive workforce

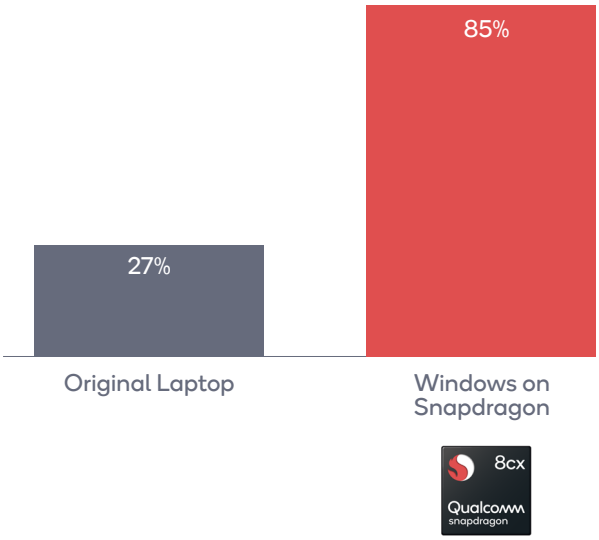
Users adapted quickly to a PC that was convenient — "I just open it up and it's ready to go. I don't need to find a hotspot or worry about battery life." — and ready when they need it — "Being always connected saves time. I can finish my notes and reports in the field instead of waiting until I get home."

User survey data from later in the study showed big jumps in satisfaction, time saved daily, efficiency and battery life (see Table 1).

Table 1: Quantitative results - Survey of 26 users

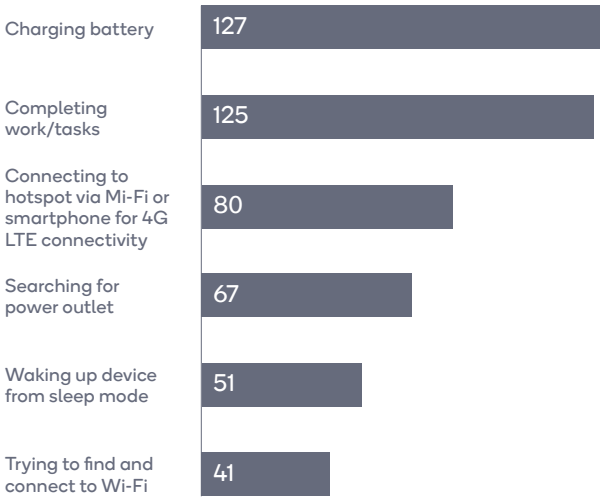
3x
more highly satisfied users

Overall Satisfaction



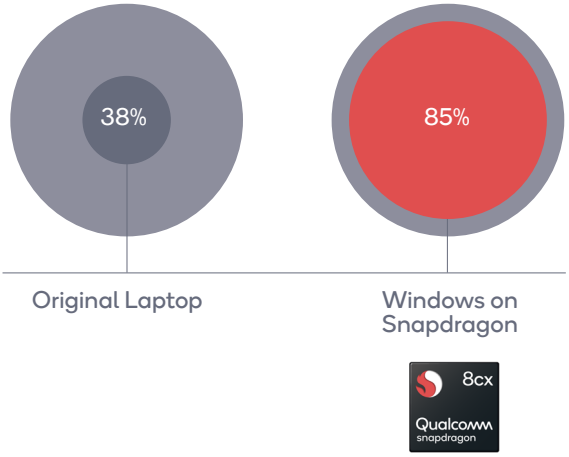
2+
hours saved daily

Time Saved In A Day
Mean (Minutes)



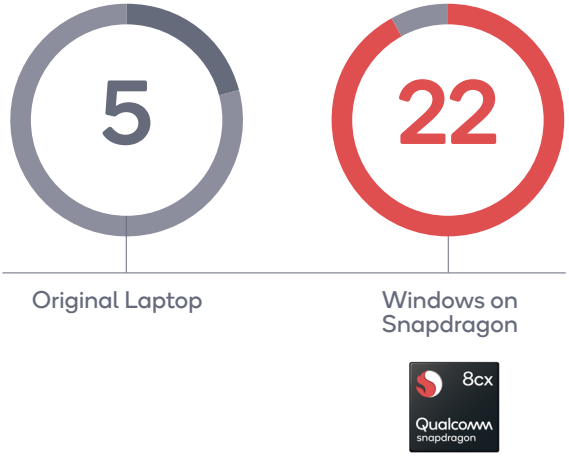
2x
more-efficient users

Device Usage
Frequency (Times Per Day)



4x
battery life

Typical Battery Life
Mean (Hours)



IT perspective: Easier to manage and secure endpoints

The company uses Windows Autopilot, a collection of technologies for setting up and pre-configuring new devices. Autopilot requires Windows 10, which the Snapdragon powered PC supports.

For IT, the biggest impact of switching to Windows on Snapdragon was in **device management.** Qualitative data shows that being always connected was a clear advantage in managing and securing endpoints. The IT director cited a better real-time view of the devices and their location because they are always on the network, even when out of Wi-Fi range.

Like the x86 PC, the Always Connected PC needed to be powered on and charged to be **visible to Intune.** Unlike the x86 PC, however, it could be in sleep mode and Intune could still locate it over the cellular network. That helped boost the proportion of the company's randomly visible laptops from 50 percent to approximately 80 percent.

The Always Connected PC: The view from IT

Easy activation

"Because the SIM was shipped activated, employees could be anywhere. [They] don't need Wi-Fi. They could sit in a park and be configured correctly."

Seamless provisioning

"We just ship the devices to [users], they type in their username and password and are up and running. It's a seamless, no-touch process. Not much different from x86."

Lower TCO

"Windows on Snapdragon is a less-expensive device."

Greater security

"Windows on Snapdragon always has the latest updates because the devices are not sitting off the network for a long time. Knowing the location of each device is a great advantage."

It also contributed to **improved compliance:** Employees used the device more often, so the Always Connected PC stayed up to date with security patches and fixes.

The move to Windows on Snapdragon represented a major step in the company's **digital transformation strategy.** It fit with the effort in IT to store more data in the cloud, run more applications from the cloud and depend less on on-premises computing and storage.

The IT director cited overall cost savings in two important dimensions:

- **Hardware** — A three-year lease of the Always Connected PC would amount to hundreds of dollars less per device than the previous x86 PC and its warranty.
- **Smartphone data plan** — The unlimited data plan on the Always Connected PC proved more cost-effective than incurring frequent overages from tethering to a smartphone or paying for Wi-Fi at hotels or other locations.

Finally, since the main charter of IT is to provide better service for internal customers, the IT director also cited several mobility advantages for users:

- **Portability** — "To be able to send out devices the size and weight of a paper pad that last all day — that's a huge advantage for those in the field."
- **Connectivity** — "[Users] can open it up and use it anywhere. It's so convenient, especially since we are cloud-based."
- **Battery life** — "I've received a lot of compliments from reps around battery life. If tethering with a phone [gives you] maybe an hour of battery, now it lasts all day."

Requirements for enterprise deployment

Several features of the Snapdragon powered Always Connected PC make it suitable for widespread use.

BDS Connected Solutions needs an array of cloud-based solutions to support their teams. This includes Microsoft Office 365 (Word, Excel, Powerpoint, OneNote, Outlook), cloud storage (OneDrive) and collaboration/conference tools like Microsoft Teams and Zoom. The VP of connected shopper solutions, field reps, and field managers productivity

needs were easily met. Beyond that, the analytics manager required support for advanced analytics and visualizations in Tableau, and the operations coordinator wanted better support for extensive spreadsheets.

Users in the study noticed the improved performance of **native applications** (ARM64, ARM32). As the trend toward cloud computing gains momentum, adoption of Windows on Arm-based processors is growing and attracting more software vendors to port their applications natively.

Finally, Snapdragon powered PCs run all versions of Windows, including Pro and Enterprise, which support Windows Autopilot for simplified, enterprise-wide deployments.

Conclusion and next step

Snapdragon powered Always Connected PC helped BDS Connected Solutions move collaboration, content creation and reliable connectivity back to the computer with a touchscreen, touchpad, full keyboard, large display and cellular network access. This resulted in increases in end user satisfaction by 300%, and also boosting employee efficiency by 200%.

The Always On, Always Connected PC based on the Snapdragon compute platform helps companies like BDS Connected Solutions that are on the path to a cloud-serviced future. Give your business the best of the smartphone combined with the power and performance of a laptop in an ultra-thin, fan-less form factor.

Boost the productivity of your users through high performance, 4G/5G connectivity and extraordinary battery life. At the same time, enable a lower TCO with enterprise-grade security and easy integration to corporate networks.

Find out what Windows on Snapdragon and the Always Connected PC can do for your company.

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