

# Maximizing TCO in Electronic (or Tablet-Based) Field Inspections

*Though there are hurdles to overcome, enterprise-grade devices—including Windows-based tablets—enable agencies to capitalize on the full benefits of mobility.*

**F**rom inspecting perishable goods as they enter the country, to performing housing inspections in disaster areas, to conducting groundwater studies on a coastal plain, field inspections and collection is labor-intensive work. While many federal agencies have sanctioned the use of mobile devices in the field to improve processes, only recently has the technology become mature and cost-effective enough to deliver real value. With the right technology and applications, field workers throughout government can now be more productive and more accurate—and data more secure—while out in the field.

A survey of 300 federal managers by AOL Government found that mobility greatly improves productivity, and recent research from Aberdeen Group found that 82 percent of field service organizations consider mobility as a strategic initiative for their operations.

Sometimes the shift to mobile technology in the field is a response to actions higher up in the organization. In the case of the Environmental Protection Agency, the impetus for moving away from paper systems for field collection was the agency's decision to require digital reporting from field officers. In other cases, it's simply a realization that going digital in the field is faster and more secure while it reduces errors and enforces compliance.

While the benefits of full mobility are clear, there are still hurdles to overcome in the area of total cost of ownership (TCO). One of the best

ways to decrease TCO on mobile initiatives is to bypass consumer-grade tablets in favor of enterprise-grade devices. In addition, agencies should strongly consider Windows-based tablets with the fourth-generation Intel®Core™ i5 vPro™ processor to maximize productivity and enable agencies to integrate mobility into the infrastructure more completely. Finally, agencies should move toward enterprise-wide mobility, with a goal of one device per person for all functions, from the office to the field. With these three actions, federal agencies will not only gain the full benefit of mobility, but significantly lower TCO.

lower productivity. And because they must be replaced more often, the cost benefit quickly declines. VDC found that each percentage point in tablet failure can result in a five percent increase in cost of ownership.

In the security arena, consumer-grade tablets typically come with consumer-grade security that doesn't satisfy strict federal security requirements. Federal employees may need to access or transmit sensitive information, and mobile devices must comply with all specifications of NIST's Risk Management Framework. In addition, tablets may soon have to be able to accept and process digital credentials

**TABLET FAILURE CAN SIGNIFICANTLY DISRUPT WORKFLOWS AND LOWER PRODUCTIVITY.**

## ENTERPRISE-GRADE TABLETS ENABLE LOWER TCO

While consumer-grade tablets may seem like a logical choice from a cost standpoint, they just aren't designed to function as a job tool. Consumer-grade tablets are designed to consume media a few hours a day at most. As a job tool, consumer-grade batteries and touch screens are 12-14 month proposition. In addition, they often can't meet the rigorous security, durability, configurability and reliability demands of federal agencies. A report from VDC Research found that annual failure rates of consumer tablets supporting field mobile applications is as high as 19 percent. Tablet failure can significantly disrupt workflows and

from personal identity verification (PIV) and common access cards (CAC) for remote authentication.

Durability and reliability are also areas where enterprise-grade tablets make more sense. While protective cases can help keep consumer-grade tablets safer, they don't protect tablets from extreme conditions or vibrations. Whether used in areas where natural disasters have occurred, dense forests, deserts or construction areas, tablets can be exposed to extreme conditions, from direct sunlight and water to extreme temperatures. Most consumer tablets can operate safely between 32 and 95 degrees Fahrenheit, for example, but operating outside of that range will cause them to shut down or damage them.

Battery performance is another area where enterprise-grade tablets are a better choice. For mission-critical applications, there is no tolerance for downtime of any type. In general, batteries should last 8-to-10 hours, but batteries often don't last the full shift. With consumer-grade devices, batteries must be plugged in to recharge, which takes time away from the mission, and reduces productivity. Enterprise-grade tablets have hot-swappable batteries, which means that when a battery starts to lose charge, it can be replaced immediately.

The missions of federal agencies vary significantly, but there is a place for rugged tablets in most agencies. Field personnel may need GPS for location-based activities or microwave radar technology to find people. Field inspectors working with containers, produce or medical may need barcode scanning. Some field workers may need the ability to capture and transfer video files. Field personnel need integrated VPN, WAN and Wi-Fi radio management, and many also require store-and-forward capabilities. All of these capabilities either come with enterprise-grade tablets or can be added to them, while consumer-grade tablets come with a set of non-configurable, standard features.

Tablets that cannot support specific agency functions for specialized workflows with accessories for mobile printing, enterprise data capture, asset management applications and other specialized requirements aren't suitable for federal applications. Similarly, tablets that can't be configured with devices like GPS, barcode scanners, vehicle mounts, port replicators, removable hard drives and serial port interfaces won't give field workers the functions and value they need.

### AN ENTERPRISE APPROACH TO MOBILITY IS A PATH TO LOWER TCO

Typically, agencies buy mobile devices for specific projects or missions. While this approach provides some econo-

mies of scale, it doesn't allow an entire department to realize lower TCO. Taking an enterprise approach to mobility at the highest organizational level possible provides many benefits, including greater control over security, cleaner data, a significant reduction in human error, consistency across functions, more efficient IT support, streamlined management, and the ability to apply policies and tools across the enterprise.

An enterprise-wide approach to mobile deployment and management can significantly streamline lifecycle management. Most importantly, it allows tablets to be treated more like desktops and notebook computers, with similar upgrade and support cycles.

Once deployed, managing devices deployed enterprise-wide is much easier. In addition to the ability to apply security policies across all devices in the enterprise, including tablets, it is faster and easier to apply department-wide images that include the right applications and content before device delivery.

Finally, the enterprise approach to mobility makes it possible to issue one device to each employee that will serve all needs, from the office to the field. By consolidating down to one device per employee, agencies can save substantially on the purchase, deployment and management of additional devices. For example, a container inspector could use a tablet outfitted with GPS and video technology both in the field and in an office environment.

### CONSIDER AN ENTERPRISE-GRADE WINDOWS TABLET

While many federal agencies have chosen tablets based on other operating systems, Windows-based tablets have become a viable choice. The latest enterprise-ready Windows-based tablets provide features agencies can value, from a rugged, environmentally hardened chassis and glove-sensitive touch

screen to a hot-swappable battery and integrated RFID. Because they run the Windows operating system using Intel chipsets and processors such as the 5th-generation Intel Core i5 vPro processor used in Panasonic's rugged tablets, they can integrate securely and seamlessly with existing agency infrastructures, which largely already runs on Microsoft technology. They are also easier to integrate with existing agency IT functions such as identity management and messaging.

Windows-based tablets are also easier to secure, because they can use an agency's existing policies for the enterprise Windows platform. That avoids the challenges that arise by having to have a separate security system for mobile devices running other operating systems.

Application development is another area where agencies can experience economies of scale with Windows-based tablets. There is a large bank of applications already developed for Windows-based laptops, and it is much easier to port them over to a Windows-based tablet than a tablet using a different operating system. It's also easier to develop apps that can be used across an entire agency.

The cost of developing line-of-business apps for the Windows environment also takes less time, which translates into a significant cost savings. According to the VDC survey, developers indicate that it takes about 20 percent less time to develop a Windows app than it does to develop an app on other platforms.

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