CARRIER-SUBSIDIZED RUGGED DEVICES ARE A GAME CHANGER FOR FIELD-FORCE MOBILITY

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Businesses have relied upon field-force mobility devices to increase productivity and on-the-job communication for more than 20 years. In particular, purpose-built ruggedized handheld, tablet, and laptop solutions have allowed information to be entered at the point of data capture, resulting in the ability to communicate on the job, collaborate with colleagues, and document projects. Technology and engineering have advanced, mobile operating systems have evolved, and user interfaces have vastly improved. However, the traditionally steep price of these hardened devices—starting at $1,000 each—has remained the same. Until now.

Historically, these rugged mobile devices have only been offered to businesses and enterprises by specialized manufacturers like Motorola Solutions, Intermec®, and Honeywell. Today, migration of enterprise-grade ruggedization into mass-market, carrier-subsidized mobile devices is changing the game for business managers, allowing them to equip their field-force mobility teams with devices designed to withstand virtually any environment, any job, and nearly any application at a fraction of the cost.

THE MOBILITY EQUATION

These days mobile productivity is no longer a luxury; it is an essential element to support a productive workforce. As employees are increasingly expected to work from anywhere with unconstrained access to information, adoption of mobile devices in the workplace has become ubiquitous. This has increased efficiency and productivity while reducing costs and improving bottom lines. Some estimates predicted almost 500 million mobile devices were in use by enterprise mobile workers in 2015[1], so a business' decision about what type of device to deploy—rugged or consumer-grade—has never been more important or timely.

For industries that rely on teams in the field, such as construction, healthcare, logistics, and manufacturing, there is a need to consider several variables in a purchase decision, including environment, application, and price. Workers in these industries spend their days in demanding, noisy, and often dirty environments where not all mobile devices will be up to the task, and some may have a high risk for jobsite failures that directly impact productivity.

For example, a healthcare worker needs a mobile device that reliably supports business-critical functions like secure messaging, digital forms and signature, and electronic medical and health records—all within the regulatory demands of HIPPA. And companies that focus on managing assets and fleets of all kinds need mobile devices to communicate, guide, and orchestrate while capturing and tracking key data.

Rugged mobile devices—those that can withstand the elements and physical abuse while providing straightforward workability that does not hinder the task at hand—address these needs and demands. However, until recently, specialized enterprise-focused rugged devices have been available only from niche-focused manufacturers at a very steep cost, with many configured to address only one solution or industry and not a breadth of needs.

AVERAGE ANNUAL TOTAL COST OF OWNERSHIP (TCO) BY FORM FACTOR[1]
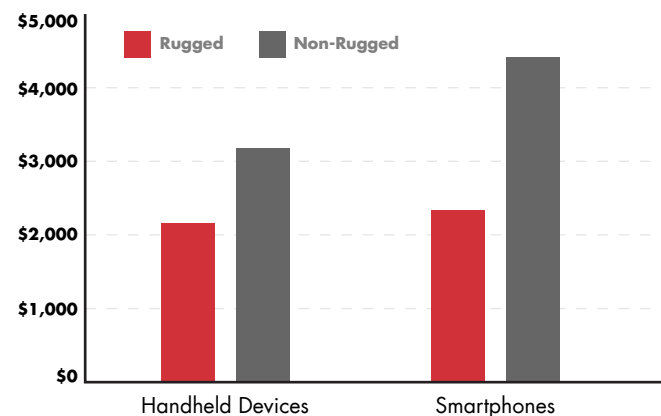
More recently, many businesses have tried to avoid these steep investments by turning to wireless service providers for subsidized consumer-grade mobile devices—also known as

commercial off-the-shelf (COTS)—for critical line-of-business applications. An iPhone costing $750, for example, seems more appealing (even after adding a costly case) than a true rugged smartphone for $2,000. Unfortunately, research is clearly showing that this mindset comes at a steep price when it comes to total cost of ownership (TCO) for mobile solutions despite the upfront cost savings.

Although the consumer devices are not rugged or shock-, drop-, water-, or element-proof, the devices are dramatically cheaper, even when paired with an external rugged case from brands like OtterBox® or LifeProof™. The logic is simple: at less than half the cost of the traditional rugged device, a company could replace the consumer device every year and still come out ahead. Consumer devices also have the draw of being functional and user-interface (UI) friendly as well as being conveniently available at retailers.

Most field workers are already familiar with stock Android™ or iOS user interfaces from personal use, making them attractive options for business devices. Many information technology (IT) decision-makers are drawn to COTS device solutions by the upfront financial gain that carrier-subsidized devices provide.

However, looking beyond the initial purchase, the use of consumer devices in demanding work settings leads to myriad functional issues and quickly erodes the presumed cost savings. Traditional consumer-grade mobile devices (those not designed for enterprise use) introduce unforeseen complexities and hidden costs such as:

- lack of bandwidth to accommodate increasing SKU and inventory management needs

- increased incidence of breakage, leading to downtime and productivity loss along with higher needs for IT support

- more frequent replacement costs

- rapid device and technology obsolescence

According to a study by VDC Research[1], TCO for rugged devices in business settings, which includes not only the initial investment but also subsequent costs associated with failures and breakage, is significantly lower in comparison to non-rugged devices. According to the study, "many [non-rugged] devices are not designed for use in many line-of-business environments, and hardware failure is a major issue. It is not uncommon for enterprises to report failure rates in excess of 50 percent."

According to VDC's data, annual TCO for non-rugged devices (approximately $4,000) is actually almost double that of rugged devices (approximately $2,000). This makes the use of consumer-grade devices a financial liability over time.

CARRIER-SUBSIDIZED PHONES ENABLE LOWER TCO

Especially in demanding work settings, the success of a mobility strategy is contingent upon businesses and enterprises choosing devices that are functional, durable, and powerful with capabilities and features that truly fit their needs. While cost is important, it becomes irrelevant if the devices don't include specialized features like:

- rugged, waterproof designs meeting Ingress Protection (IP) and Military Standard 810G certifications for hazards such as dust, shock, vibration, temperature extremes, blowing rain, high altitude, solar radiation, salt fog, humidity, and full immersion in water

- not just "survivability" but continuous productivity in all environments with Glove and Wet Touchscreen Operation, allowing workers to use the touchscreen while wearing gloves or when the touchscreen is wet

- support for preloaded and over-the-top Push to Talk solutions for one-to-one and one-to-many communications over cellular networks, a technology evolving rapidly and poised to replace many existing Land Mobile Radio (LMR) deployments in many settings

- FIPS 140-2 compliance for secure device encryption, providing data leakage prevention protection

- OSHA certification for hazardous locations—for example a rating of "Nonincendive, Class I, Division 2, Group A-D, T4" is certified safe for use in work environments where concentrations of flammable gases, vapors, or mists are not normally present in explosive concentrations but may exist

- hardened, impact-resistant, and scratch-resistant touchscreen displays made from materials like specially-engineered glass or even pure sapphire

- large batteries with added power-management and power-saving controls

- advanced security and enterprise mobility management (EMM) application support along with highly-configurable Virtual Private Network (VPN) capabilities with extensive authentication protocol and VPNC-compliant solution support to protect corporate data

An example of a device portfolio fitting this bill comes from Kyocera. In 2011, Kyocera leveraged its experience in designing durable, waterproof devices for the consumer market to create a line of fully-ruggedized feature phones and smartphones targeted not only at demanding consumers but, more importantly, at the business and enterprise market. The devices, widely stocked by major wireless service providers in North America, began a shift in enterprise mobility by offering a unique combination of Military Standard 810G and

SMARTPHONE COMPARISONS[2]

	Kyocera Brigadier	Honeywell Dolphin 70e	Motorola MC3190
Lifetime TCO	~1478 USD	~4244 USD	~7578 USD
Device Cost	~399 USD	~765 USD	~1364 USD
Description	Rugged Smartphone	Industrial Smartphone	Rugged Mobile Computer
Scanner Type	Scandit	Dedicated Imager	Dedicated Imager
Internet Capable	●	●	●
Battery Life (talk time)	20 hrs	6 hrs	Unknown
Storage Capacity	16GB (before SD Card)	1GB (before SD Card)	1GB
Durability	IP68 - Fully Rugged	IP54 - Semi-Rugged	IP54 - Semi-Rugged

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IP ratings once found only in niche enterprise devices, off-the-shelf retail availability and consumer-tier pricing.

Because Kyocera partners with major carriers in North America, including AT&T®, Verizon, T-Mobile®, Sprint®, Bell Mobility®, and Telus® (among others), these rugged phones are available off-the-shelf and ready for deployment, typically for subsidized prices (with contracts) of just $49 to $149. By combining the technology and durability demanded by business users with mass-market economies of scale and retail-channel relationships, Kyocera has created a new class of field-force mobility devices that uniquely deliver on both performance and TCO.

REAL ROI WITH RUGGED SMARTPHONES

Businesses can now enjoy the TCO advantages of rugged devices without sacrificing the cost advantages and ROI/value of a sub-$200 smartphone (with carrier subsidy) that performs durably in the field. Scandit, a leading provider of camera-based barcode-scanning software, did its own evaluation of competing solutions, comparing long-term costs of using a Kyocera rugged device, a rugged device from Honeywell, and a Motorola MC3190.

According to Scandit, the five-year TCO for a Motorola MC3190 mobile computer is 512 percent higher than Kyocera Brigadier running Scandit software, while TCO for a Honeywell Dolphin 70e industrial smartphone is 287 percent higher than the Brigadier solution. Additionally, the lifetime TCO of a Kyocera Brigadier is approximately $1,300 lower than the lifetime TCO of an iPhone 6[3].
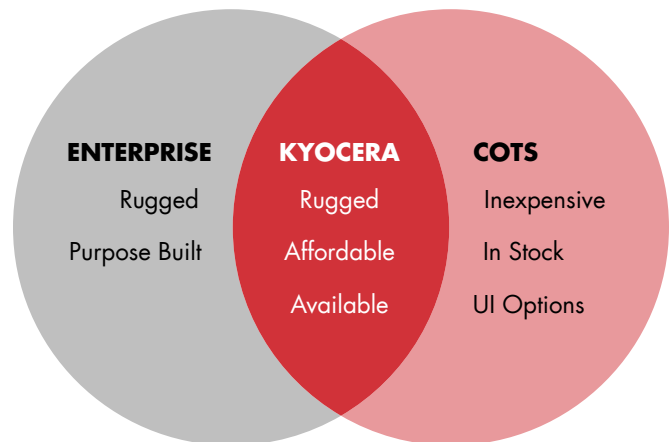
Kyocera's [Brigadier](#), Dura Series, and DuraForce Series phones—including the new [DuraForce PRO](#), which is the first rugged smartphone to include a built-in super wide view HD action camera—are prime examples of lower-cost rugged devices getting the job done. All meet compliance standards

in regulated industries like healthcare, government, and energy, providing security, performance, and connectivity at an affordable price point. And Kyocera supports a robust ecosystem of software/application developers and hardware accessory manufacturers that turn the devices into tailored solutions for specific vertical markets.

DRIVE BUSINESS VALUE WITH RUGGED SMARTPHONES

For many years, businesses wanting to adopt a mobility strategy were forced to choose between the lesser of two evils: niche rugged devices costing thousands of dollars each or more affordable consumer-tier devices simply not built to meet those businesses' durability and technology demands.

Today, with companies like Kyocera blending the best of both worlds into affordable and fully ruggedized mobile devices for business, that paradigm is shifting. For the first time, businesses with field forces have affordable options for equipping their employees with productivity- and efficiency-driving devices that are designed to function in even the most demanding environments, adding value to both the top and bottom lines and changing the game forever.

ENTERPRISE	KYOCERA	COTS
Rugged	Rugged	Inexpensive
Purpose Built	Affordable	In Stock
	Available	UI Options

For more information about Kyocera devices for business, please visit www.kyoceramobile.com/business

1. VDC research, April 2013, Strategic Insights 2012: Enterprise Mobility Solutions, Mobile Device TCO Models for Line of Business Solutions, Volume 1 / Track 7: Enterprise Mobility – Mobile Device TCO, by David Krebs, Vice President

2. "Calculating the Total Cost of Ownership (TCO) of Mobile Barcode Scanning." http://www.scandit.com/2015/09/24/calculating-the-total-cost-of-ownership-tco-of-mobile-barcode-scanning/. Published September 24, 2015. Scandit

3. "Barcode Scanner TCO Comparison." http://www.scandit.com/products/barcode-scanner/barcode-scanner-tco-comparison/. Published September 24, 2015. Scandit.