

# How To Choose (Or Not) Rugged Handhelds

## Your decision to go rugged in your mobile device rollout should be based on more than just a drop rate.

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If you've made the decision to go mobile, you've probably put considerable time and thought into making the case for the investment in a mobile solution. Now you have to decide whether to deploy rugged or nonrugged (often referred to as consumer-grade) handheld devices. Rugged devices are typically defined by their ability to withstand harsh environments. Their spec sheets usually list their ability to withstand specific drop distances, submersion depths, and extreme temperatures. But more isn't necessarily always better, or even appropriate. Before you decide between rugged or consumer-grade devices for your mobile workers, you'll want to consider the following four factors.

### **1. COMPARE TCO OF RUGGED VS. NONRUGGED DEVICES**

The first factor in your decision is the cost of the devices. Rugged devices can typically cost \$500 to \$1,500 more than nonrugged devices. However, when you consider prices, you need to look beyond the up-front cost to the TCO (total cost of ownership). According to a 2004 study by Venture Development Corporation (VDC), the five-year TCO of consumer-grade devices is \$12,631, while the TCO for a rugged device is \$8,569.

How is that figured? First, consider the cost of adding accessories to your handheld. In a route delivery or distribution center situation, your mobile workers are probably scanning bar codes. If you're using consumer-grade devices to transmit information to and from those workers, you'll need to purchase separate bar code scanners to do that and then integrate them with the devices. Many rugged devices, such as Intermec's CK30 and Pision Teklogix' 7535 handhelds, can have an optional bar code scanner integrated in the device by the manufacturer. The integrated device may cost a little more, but you're saving on IT labor.

Another key component is downtime. If a device malfunctions or is damaged in the working environment, you have to send the device out to be repaired, and the field employee can't do his work. Simply put, lost time is lost money, as a recent study by Technology Business Research, Inc. (TBR) illustrates. TBR surveyed 197 IT and line-of-business managers and 230 laptop/notebook end users and found that, inclusive of lost-opportunity costs, the average mobile computer damage incident costs an organization more than \$3,400.

Rugged devices, as the name suggests, typically break less often. Depending on the environment in which your field employees will be using their devices, you may be risking downtime with a consumer-grade device, which may need repairs often. Also consider the process for device repair. "The service arms of vendors who sell consumer-grade devices are typically geared for consumer situations. They might not appreciate the urgency of a business need," says Todd Boone, senior product manager at Pision Teklogix. "Rugged device manufacturers' service arms are more concerned with the enterprise and can help minimize the time field personnel are out of commission."

### **2. CONSIDER WHERE MOBILE WORKERS WILL USE HANDHELDS**

Examine how your employees will be using the devices and whether factors that affect downtime will be present. "Dropping, vibration, and extreme temperatures affect device uptime," says Craig Miller, product manager of mobile computers for Intermec. If your users will be subjecting devices to these factors, you will want to implement rugged devices that can continue to function in those environments.

According to George Baraona, national sales director for Casio Business Solutions, "The key to whether a company uses rugged or consumer-grade devices is the environment users work in. In white-collar environments, rugged isn't as necessary, and in blue-collar environments, rugged is important." For instance, in the utility vertical, field workers will be doing their jobs in rain, snow, and heat. They will drop their devices on concrete sidewalks and bump the devices into walls. The initial cost of a rugged device is not as unpalatable when you consider the uptime the devices can bring you. However, if your mobile workers are sales

professionals, they probably don't need the same devices as utility workers. Your sales force will most likely use the mobile device to access CRM (customer relationship management) data and note customer visits, carrying the devices with them into office environments. In these situations, a consumer-grade device will most likely be adequate.

### **3. BEWARE OF OBSOLESCENCE OF TECHNOLOGY**

Another factor to consider is how quickly technology changes. Handheld computers are obviously no different from the PCs and mobile phones you've had to upgrade. Rugged's selling point is that it lasts longer -- the above-mentioned VDC study showed that in two years, 35% of consumer-grade devices and only 2% of rugged devices were replaced. Now, for reliability, that's a great statistic. But, you need to balance the benefit you get from not having to replace your devices against the fact that you might want to replace them.

### **4. RUGGED OR NOT, ENSURE DATA SECURITY**

Another factor you should consider is protecting the information on your mobile workers' devices. Your mobile solution is automating processes in your company, and that means a significant increase of data flowing through your infrastructure. You'll want to make sure you have server and storage systems in place to handle this, whether the device is rugged or not. "Some of the data that companies will be wirelessly transmitting may fall under government regulations [such as HIPAA (Health Insurance Portability and Accountability Act) and Sarbanes-Oxley]," says Baraona. "Handling that data securely is vital, and it can play a role in a company's ROI, since companies can face significant fines for failing to comply with regulations."

On a handheld computer, data may be stored on the device if your workers are doing batch reporting or, in real-time situations, if a wireless signal isn't available. The storage should be able to stand up to any pressures the working environment puts on the device. Memory cards should not shake out or lose data when a device loses power (rugged devices' battery lives are usually around 8 hours, compared with 5 to 6 hours on consumer-grade devices). "There are nonvolatile memory cards in rugged devices that provide persistent storage on the units," says Intermec's Miller. He recalls an anecdote in which a driver ran over a rugged handheld with his truck, and the company's IT staff was able to extract the memory card and use the stored data.

One final thought: If your mobile workers' duties fall in between the white-collar/blue-collar camps (route accounting, hospitality, and public safety, according to Baraona), you may not be stuck picking one or the other appropriate devices. "There are hybrid devices that bridge consumer-grade and rugged features," says Baraona. "These devices combine the smaller, more lightweight consumer-grade characteristics, but have some rugged adaptation, such as three-foot drop rates." These hybrid devices, such as Symbol's MC 50 or Casio's IT-10 come at lower price points than rugged computers and may soon become a trend in the industry as more organizations find themselves in that middle zone.