



Total Cost of Ownership Models

For Mobile Computing and Communication Platforms, Third Edition

*Track II, Volume 3: Industrial/Warehouse
An Executive Brief*

Mobile & Wireless Practice

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VDC
research

Insight. Innovation. Results.

About the Study

- **This Executive Brief Presents Some Top-level Findings From:**
 - The Total Cost of Ownership – Industrial/Warehouse Report, part of our Total Cost of Ownership Models For Mobile Computing and Communication Platforms Market Intelligence Service.
- **For the Senior Executive Working in This Market, the Full Report Provides:**
 - Validated TCO models for the acquisition, maintenance and support for mobile computing platforms, mobile printers and mobile device management software (MDM);
 - TCO analyses calculated over a 3- and 5-year net present value forecast;
 - Comparative analyses between (1) rugged and commercial-grade mobile platforms within specific deployment/installation environments (2) rugged and commercial-grade mobile printers within specific deployment/installation environments (3) impact of MDM solutions on mobile computing deployments; and
 - Detailed solution requirements analysis (including product evaluation criteria and decision-making processes for mobile solutions purchases) and how these requirements align with TCO inputs.

Executive Summary

Ruggedized mobile computers have a TCO advantage in many industrial applications

- **Ruggedized Devices – both large and small form factor – achieve a distinct TCO advantage in the core markets and applications under study.** The average annual TCO of a ruggedized small form factor device (*HH/PDA*) is \$1,978. This is 44% lower than the average annual TCO of a non-rugged small form factor device.
- The average annual TCO of a ruggedized large form factor device (*notebook/tablet*) is \$2,935. This is 22% lower than the average annual TCO of a non-rugged large form factor device.
- **The leading sources of failure included hard drives (*for large form factors*), displays and keyboards. In addition, faulty software and unauthorized changes (*by end-users*) to device settings were frequently cited as sources of failure.** Average failure rates for rugged small form factor devices was 7.9% and 12.9% for non-rugged small form factor devices. Average failure rates for rugged large form factor devices was 6.9% and 15.2% for non-rugged large form factor devices.
- Failure rates of non-rugged devices have trended downward over the past couple of years as device vendors focused increasingly on device durability. However, the recent economic recession drove organizations to extend the life cycles of their mobile devices and also drove adoption of lower end devices (*such as netbooks*). Both factors contributed significantly to an upswing in average failure rates of mobile devices.
- **Lost Productivity – as a result of mobile device failure – was a leading contributor to TCO.** On average mobile workers lost 52-80 minutes of productivity when their mobile device failed. Productivity loss represented as much as 37% of a mobile device's TCO.

Executive Summary

Ruggedized mobile computers have a TCO advantage in many industrial applications

- **Ruggedized mobile printers achieve a distinct TCO advantage in the core industrial markets and applications under study.** The average annual TCO of a ruggedized mobile printer is \$1,774.37 This is 45% lower than the average annual TCO of a non-rugged mobile printer for like applications.
- **The leading sources of failure included the paper feeder, batteries, print heads and cables.** Average annual failure rates for rugged mobile printers was 5.2% and 16.0% for non-rugged mobile printers.
- **Lost productivity – as a result of mobile printer failure – was a leading contributor to TCO.** On average mobile workers lost 35-40 minutes of productivity when their mobile printer failed. Productivity loss represented as much as 40% of a mobile printer's TCO.

Executive Summary

Strong performance improvement and cost savings associated with MDM solutions

- **Mobile device management solutions are increasingly considered critical elements of any enterprise or government mobility solution.**
 - Enterprise and government mobility end-users cite “minimizing device downtime” as their number one mobility investment concern.
 - While deployments traditionally have been concentrated among Tier I organizations for large deployments more recently Tier II and even Tier III organizations are beginning to realize the benefits of these solutions.
 - Target user segments map to traditional enterprise and government mobility markets, including retail, transportation, manufacturing and field service.
- **The scope of device management solutions continues to expand. Key capabilities include not only remote maintenance and troubleshooting, but also include software provisioning and increasingly security management.**
- **VDC’s research indicates that the use of an MDM solution can save an organization over \$230 per device per year in support costs. For a 1,000 unit deployment this translates into savings of over \$1.1 million over a five year period.**

VDC Research Methodologies

TCO Model Defined

Hard Costs

Hardware

- Mobile Platforms
- Peripherals

Software

- Upfront Fees
- License Fees
- Development Costs

System Design and Integration

- Application Design and Development
- System Integration
- Staging

Soft Costs

Training

- Initial User Training
- On-going User Training

Operational

- System Maintenance
- 3rd Party Technical Support
- Internal Technical Support
- Upgrades
- Application Management

Downtime

- Lost Manpower/Wages
- Lost Revenues
- HW Replacement

About VDC Research Group

VDC Research Group (VDC) is a technology market research and strategy consulting firm that advises clients in a number of technology markets including: Automatic Identification and Data Collection, Embedded Hardware and Systems, Embedded Software and Tools, Industrial Automation and Control and Mobile and Wireless. Using rigorous primary research and analysis techniques, the firm helps its clients identify, plan for and capitalize on current and emerging market opportunities. We strive to deliver exceptional value to our clients by leveraging the considerable technical, operational, educational and professional experience of our research and consulting staff. During our nearly four decades of ongoing operation, we have had the pleasure of serving most of the world's leading technology companies, many high-profile start-ups and numerous blue-chip early and later stage investors. Our products and services consist of research reports, annual research programs, and custom research and consulting services. Founded in 1971, the firm is located in the Boston area.

Please visit our Web site at www.vdcresearch.com to learn more, or call: 508.653.9000

Contact Us

For further information about the Total Cost of Ownership – Industrial/Warehouse Report, or the Total Cost of Ownership Models for Mobile Computing and Communication Platforms Market Intelligence Service, contact:

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