



# *A guide to field mobility*

*Empowering your field workforce today for a more successful and profitable enterprise tomorrow*





Enterprises all over the world have discovered the value of field mobility. With a mobile computer in hand that provides a real-time voice and data connection to the business, field sales and field service workers are more efficient and effective, enabling enterprises to maximize the value/utilization of the field workforce. In this informative guide, we will take a look at:

- Why mobility has become a best practice out in the field
- How the lack of mobility will impact the health of your business — and your ability to compete
- Case studies that showcase the power of mobility in action



*Without a real-time connection to the field workforce, management lacks the information needed to maximize the utilization of two of your most expensive assets — your workforce and your vehicle fleet.*

## The challenge:

### The high price of a disconnected field workforce

Your field workers are responsible for the single-most important interface in your enterprise — the daily interaction with your customers. Whether your workers are involved in sales, service, inspections or asset tracking, the efficiency and effectiveness of this workforce can have a tremendous impact on the health of your business. The level of service that these workers deliver will drive your sales and customer retention levels up — or down. And the productivity levels of these workers will drive your costs up — or down.

Regardless of your industry, when workers in the field lack access to the voice and data networks in the office, the effect can be crippling. Without a real-time connection to back end business applications, workers must utilize paper forms to collect information for a wide variety of transactions — and then later enter the information on those forms into the computer upon return to the office. As a result, time is inserted into your business processes — lag times that reduce service levels, employee productivity, cash flow and overall profitability. The need to touch the data twice increases the opportunity for costly errors that again impact business efficiency. In addition, field workers are forced to phone the office for simple information requests — such as pricing, inventory and invoice information, directions and more — again adding time and cost into your business processes. And if cell phones are utilized to provide a voice connection out in the field, field workers have two phone numbers and two voicemail boxes to manage — and the enterprise must purchase and manage more mobile devices.

And finally, without real-time visibility, managing this remote workforce is a challenge. In order to ensure efficient routing to increase worker productivity and minimize vehicle costs, you need to know where your workers are and what they are doing at any point in time. Without a real-time connection to the field workforce, management lacks the information needed to maximize the utilization of two of your most expensive assets — your workforce and your vehicle fleet.





## The solution:

### The real-time field workforce

To address these issues, you need to eliminate the gap between the voice and data networks in the office and your workers out in the field. Imagine if you could empower your field workforce with a single easy-to-use rugged handheld tool that would provide all the functionality available in the office. Imagine the productivity gains if your field workforce could completely eliminate the paper trail from present-day business processes. Imagine the improvement in service levels if all the information in your business systems as well as co-workers, supervisors, customers and more were accessible with just the press of a few keys, anytime and anywhere. Imagine the increase in revenues if your field workforce could process orders and payments at the press of a button. Imagine how a real-time window into actual sales could reduce carrying costs for raw materials and finished goods.

You have just imagined the power of field mobility.

In today's economy, every second of wasted time translates into slower service and higher costs...which translate into reduced customer satisfaction and profitability. Mobility addresses all of these issues by stripping time and errors out of your business processes, providing a competitive advantage by enabling new levels of customer service — and overall cost-efficiency.

And since chances are your competitors have already or are in the process of deploying a field mobility solution today, can you afford the high cost of a disconnected field workforce?

### Top 3 reasons to 'go mobile'

With competition at an all-time high, it is mobility that is consistently helping companies to address three of the top initiatives in virtually every business:

#### Increase revenue

Regardless of whether your field workers are involved in sales, service or inspections, mobility can help you increase revenue. Your sales force will have

the tools required to close the sale right on the spot — including the ability to instantly reserve inventory to fulfill the order and provide the delivery date for the customer. Mobility transforms the field service workforce — typically a cost center — into a profit center by ensuring the accurate capture of all billable time and materials on site, as well as providing service technicians with an appropriate list of items to cross-sell. And the ability to auto-populate forms and provide drop down and check boxes improves efficiency and eliminates errors for a wide variety of inspections — from rental cars and construction to restaurants and foster homes — as well as the citation process.

#### Reduce costs

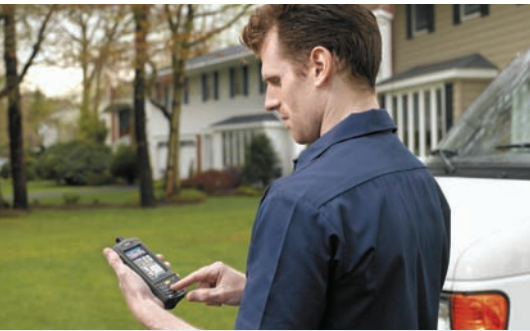
Mobility reduces costs that are directly associated with your field workforce — and throughout your operations. Efficiency improvements enable the same workforce to visit more prospective and existing customers per day, reducing staffing and vehicle requirements — and the associated capital and operational costs. Real-time visibility into sales orders enables just-in-time manufacturing and inventory management as well as a reduction in stocking inventory levels — and warehouse space requirements. Real-time visibility into upcoming service calls ensures that the right parts and tools are loaded onto the truck, eliminating the need for costly return trips to the office to complete a job. And real-time visibility into delivery and service routes via integrated GPS enables more efficient vehicle utilization, reducing mileage, fuel costs and vehicle wear and tear.

#### Enable cost-effective compliance

No matter what type of assets you need to track, and whether you need to comply with government regulations or business directives, mobility can heavily automate data collection in the 'last mile' of the supply chain, substantially reducing the cost of compliance. Bar code scanning enables rapid and accurate inventorying of assets to ensure proper depreciation, preventing under and over-payment of taxes. Pharmaceutical sales representatives can scan prescription medication samples to instantly, accurately and automatically capture required data — instead of painstakingly writing down medication name, packaging type and serial number.

And with just a few seconds of effort, drivers can scan product as it is delivered, enabling:

- Consumer packaged goods (CPG) and food and beverage (F&B) industries to comply with traceability requirements for consumable items
- Pharmaceutical manufacturers to identify and prevent the delivery of counterfeit product, protecting consumer safety
- Manufacturers of a wide variety of retail-facing products to spot and remove imitation product — protecting brand equity and profitability



## The impact of mobility in field service

### With a real-time voice and data connection, field service workers can:

- Dynamically receive, accept and close out electronic work orders — instead of paper
- Access complete customer repair history for faster and better issue resolution
- Access detailed equipment information, step-by-step maintenance routines and repair procedures, eliminating the need to carry product manuals and user guides and ensuring service is performed properly
- Access warranty and service level agreements to ensure the accurate capture of billable hours and parts
- Capture and transmit electronic signatures to validate proof of service and expedite billing
- Process credit and debit cards for on-the-spot payment of services to reduce days-sales-outstanding (DSO)
- Scan bar codes on parts and tools in the truck for real-time inventory visibility
- Snap a high-resolution color photo for proof of condition or proof of service, complete with a geostamp for proof of location
- Automatically capture on-the-job start and stop times for accurate labor costing and payroll
- Scan parts as they are utilized to ensure the capture of all appropriate charges

- Call customers to confirm appointments, site access and the arrival of pre-shipped parts
- Access cross-selling and up-selling information, helping transform a non-sales function into a revenue generating division
- Access up-to-the-minute real-time directions via GPS to ensure prompt arrival at the next stop — in spite of a traffic jam
- Enable one-number reach by extending the deskphone and all functionality to the handheld mobile device
- Provide an on-the-spot invoice or receipt, either sent electronically via email or physically printed with the addition of a mobile printer

### With a real-time voice and data connection, field service dispatch can:

- Better plan daily routes to minimize mileage, fuel costs and wear-and-tear on trucks
- Enable highly efficient dynamic routing of new urgent work orders through the automatic identification of the closest technician with the right skillset, tools and parts (via GPS)
- Correct adverse driving behavior that could endanger others, increase fuel costs and vehicle wear and tear (via Telematics)
- Monitor engine codes to ensure timely maintenance to prevent the high cost of vehicle downtime (via Telematics)

### Field benefits:

- Increase workforce utilization — the same number of workers can now make more customer visits per day
- Improve customer service, satisfaction and loyalty levels
- Improve data accuracy
- Increase revenue through the accurate capture of labor and parts as well as cross- and up-selling
- Improve vehicle utilization
- Better plan daily routes and reduce truck rolls — minimizing mileage, fuel costs and wear-and-tear on vehicles

### Enterprise benefits:

- Reduce the order-to-cash cycle time, substantially improving cash flow
- Reduce parts and tools inventory requirements
- Reduce capital and operational costs by replacing multiple devices with a single easy to carry and easy to manage device
- Improve workforce management with visibility into the dispatch queue, performance metrics for the department and individual workers, real-time proof of service and customer-facing issues
- Reduce accounting and administrative staffing requirements — the elimination of paper in the field substantially reduces the associated data entry and administrative requirements



## Top 3 reasons you can't afford not to 'go mobile'

Just as there are three top reasons companies are embracing mobility, there are also three major reasons you can't afford to bypass the deployment of mobility. Manual paper-laden processes out in the field will impact your ability to:

### Maintain a competitive edge

Competition has never been tighter in today's business world — due to market globalization, customers can literally choose from a world of vendors. Mobility can protect your existing customer base as well as ensure continual growth of that base by enabling the delivery of consistent and differentiating customer service — regardless of whether your workers are involved in sales or repair of equipment. In addition, with the advantages of mobility in field operations well recognized, mobility is rapidly becoming a competitive baseline — chances are your competition may already be in the process of 'mobilizing' their field workforce, making mobility a requirement simply to remain competitive in the near future.

### Maximize productivity

Without mobility, manual paper-based processes will strip productivity right out of your workforce. By automating the many aspects of your field business processes, mobility effectively becomes a field force multiplier — despite additional data collection requirements due to new government regulations. Now, the same sales force can close more sales in less time, the same number of technicians can service more customers per day and the same number of inspectors can complete more tasks in a given day. And the resulting increase in productivity provides the time required to help meet or exceed customer expectations.

## Protect profitability

Without mobility, information moves more slowly throughout your supply chain, impacting staffing costs, inventory carrying costs, warehousing costs, the order-to-cash cycle times and more — further reducing ever-shrinking margins. Field mobility allows information to flow in real-time throughout and between your many divisions, increasing the velocity of your entire supply chain — and delivering benefits that reach beyond your field operations into the enterprise. The utilization of two of your most expensive assets is improved — your

field employees and your vehicle fleet. Instant visibility into the sales funnel reduces inventory carrying and warehousing costs, while increasing inventory turns. The ability to process payments on the spot and provide real-time proof of service reduces billing cycles — decreasing days sales outstanding. And with rugged business-class devices that can be easily integrated into your existing technology architecture and remotely managed, you enjoy a field mobility solution with a substantially low total cost of ownership (TCO). The result is an effective net reduction in the cost of doing business, improving margins — and overall profitability.



## The impact of mobility in field sales

### With a real-time voice and data connection, field sales workers can:

- Receive electronic sales leads in real-time
- Access inventory and pricing systems to enable the creation of real-time bids
- Place and process orders in real time, complete with solid delivery dates
- Capture signatures for real-time authorization of sales orders
- Process credit and debit cards to enable on-the-spot payment
- Access comprehensive customer intelligence — including past and open orders, past and open service records, email address and phone number, birthday, buying preferences and more — strengthening the 1-to-1 relationship as well as uncovering cross-selling and up-selling opportunities
- Scan product as it is delivered to automate track and trace in the last mile for consumable items and pharmaceutical samples
- Provide an on-the-spot invoice or receipt, either electronically via email or physically printed with the addition of a mobile printer

- Enable one-number reach by extending the deskphone and all functionality to the handheld mobile device
- Access up-to-the-minute real-time directions via GPS to ensure prompt arrival at the next stop — in spite of a traffic jam

### With a real-time voice and data connection, field sales/DSD dispatch can:

- Better plan daily routes to minimize mileage, fuel costs and wear-and-tear on trucks
- Correct adverse driving behavior that could endanger others, increase fuel costs and vehicle wear and tear
- Monitor engine codes to ensure timely maintenance to prevent the high cost of vehicle downtime

### Field benefits:

- Improve customer response times — and service levels
- Increase sales
- Improve productivity — the same sales force can make more sales calls per day

- Improve lead generation management with up-to-the-minute accurate information
- Improve data integrity
- Strengthen customer relationships

### Enterprise benefits:

- Improve sales forecasting accuracy
- Reduce order-to-cash cycle times, improving cash flow
- Improve inventory management
- Improve production management
- Improve workforce management with visibility into performance metrics for the department and individual workers as well as real-time visibility into the sales forecast
- Reduce capital and operational costs by replacing multiple devices with a single easy to carry and easy to manage device
- Cost-effective 'last mile' traceability reduces the cost of regulatory compliance and protects your brand

## Mobility: a best practice for field workers...and the enterprise

Mobility has rapidly become a best practice in the field workforce — many of the world's largest (and even smallest) companies have already deployed field mobility solutions and are enjoying substantial and quantifiable benefits felt not only in field operations, but also throughout the entire business. The field workforce is more productive and informed — helping control staffing costs while improving customer service levels. And other

business functions that are tangential to your field service operations are also improved — from sales forecasting and inventory management to production and accounting.

In addition to a rapid return on investment, field mobility solutions also offer a low total cost of ownership. The ability to provide a single device for voice and data instead of providing workers with a cell phone, notebook computer and more substantially reduces capital and operational costs — there are simply fewer devices to purchase and manage. Designed for all day use outside the



## The impact of mobility in inspections and asset tracking

### With a real-time voice and data connection, field workers can:

- Receive, accept and close out electronic work orders — instead of paper
- Capture the bar code, Direct Part Mark (DPM) or RFID tag information to heavily automate asset tracking
- Snap a high-resolution color photo for proof of asset condition
- Utilize mobile forms with drop down menus and check boxes to ensure proper and complete execution of every step in an inspection — and reduce training time
- Capture a signature for proof of receipt of inspection reports, code warnings or citations
- Add a geostamp to a photo to include proof of location
- Schedule required asset maintenance in real time
- Enable highly efficient dynamic routing of new urgent work orders through the automatic identification of the inspector that is nearest the asset (via GPS)

- Print on-the-spot warnings and citations for code violations
- Process on-the-spot payment for code violation citations
- Enable employee tracking through real-time locationing systems (RTLS)
- Access up-to-the-minute real-time directions via GPS to ensure prompt arrival at the next stop — in spite of a traffic jam

### Field benefits:

- Improve productivity — the same number of workers can execute more inspections per day
- Enable cost-effective and granular asset lifecycle tracking — from servers to utility poles, streets, pipelines, leased vehicles, guest room door locks in a hotel and more
- Improve customer service by reducing wait times for construction inspections, vehicle inspections and more
- Better plan daily routes to minimize mileage, fuel costs and wear-and-tear on vehicles

- Enable highly efficient dynamic routing of new urgent work orders through the automatic identification of the closest inspector
- Improve data integrity

### Enterprise benefits:

- Enable more cost-effective Sarbanes-Oxley compliance
- Improve visibility into inspection status for more proactive and predictive scheduling of maintenance to improve asset uptime, condition and lifecycle
- Improve employee safety with real-time location visibility — for example in expansive oil refineries
- Increase financial return on assets with real-time visibility into location and status

enterprise walls, Motorola's rugged integrated voice and data mobile computers deliver a total cost of ownership that is nearly 50 percent lower than consumer-grade equivalents.<sup>1</sup> And industry standard platforms and centralized management tools enable easy and cost-effective integration into your technology environment — and day-to-day management.

And finally, field mobility solutions help enterprises to become more 'green' — a global environmental initiative — by practically eliminating the use of paper throughout field operations.

*For more information on how you can put the power of Motorola enterprise mobility solutions to work in your field operations, contact your local Motorola salesperson or visit [www.motorola.com/business/enterprise](http://www.motorola.com/business/enterprise)*



The benefits of field mobility reach throughout your operations, improving the productivity of your field workforce as well as many other operational functions — from sales forecasting and inventory management to production and accounting.

## Case Studies:

### Field mobility solutions in action

The following six real customer case studies demonstrate the value of mobility in field service and field sales organizations:

- **Nestle Malaysia**  
Food & Beverage/Field sales
- **Danka Business Systems**  
Equipment repair/Field service
- **Blue Bell Creameries**  
Food & Beverage/DSD
- **Schumate Mechanical**  
Equipment installation and repair/  
Field service
- **Sodicome**  
Waste management/Field service
- **Swisscom**  
Telecom provider/Field service

## Nestle Malaysia

Manufacturer



Headquartered in Vevey, Switzerland, Nestle is the world's largest food company, employing over 250,000 workers in over 500 factories and offices in 80 countries around the world.

“At the end of the day, it's all about the bottom line. Driving efficiency up and costs down, while enabling faster decision making are key priorities for the business. By tightly integrating Motorola's mobility solution and services with our chosen sales force automation software and back office operations, we now have an end to end solution that has a direct impact on our success as a company.”

Patrick Goh, Sales Project Manager,  
Nestlé (Malaysia)

### The business problem:

Nestle's Malaysia sales teams are responsible for a wide variety of activities during daily visits to customers — from market surveys and asset tracking to merchandiser audits and gathering customer and market intelligence. The heavy use of pen and paper for these tasks created a number of issues. The time consuming error-prone processes resulted in low productivity and data errors. And due to the inability to access information during a sales visit, sales representatives were unable to answer even basic customer questions — from available stock to product information, order status and current product pricing.

### The solution:

A field mobility solution built on Motorola's PPT8800 and MC50 Enterprise Digital Assistants was initially rolled out to over 71 distributors and 600 field force workers in Nestle Malaysia and Singapore. Initially, over 90,000 outlets were covered. The customizable easy-to-manage field mobility solution provided sales representative, sales supervisors, distributors and merchandisers with real-time access to people and business essential applications out in the field:

- Sales transactions are now posted in real time
- Bar code scanning enables the easy and accurate capture of a wide variety of data, from customer information to product details
- The sales force now has true anywhere-anytime access to real-time inventory, sales history, order status and product pricing
- Mobile printing allows on-the-spot printing of sales receipts

### The benefits:

- Increased efficiency and productivity in the sales force
- Reduced costs
- Improved customer service
- Improved data accuracy
- Better decision making

## Danka Business Systems

Service Provider



A leading provider of document information services, Danka provides a loyal customer base with the benefits of today's digital imaging technology. With over 100,000 print and copy machines out in the field, Danka provides the routine and emergency maintenance required to keep these mission critical machines up and running.

Having a distributed workforce makes communications a challenge. Technicians will not adopt something that is counter-intuitive and does not meet their day-to-day requirements. With the MC70, they started right away taking service calls, doing all their parts operations and within a week, it became second nature – and a part of their day. The MC70 from Motorola has really changed the way Danka does business.

Michael Calcinari, Vice President,  
Service Planning & Support,  
Danka Office Imaging

### The business problem:

Heavily paper-based business processes reduced technician productivity. The company sought to provide technicians with faster access to more information to free service technicians to spend more time taking care of customers and servicing equipment — and less time pushing paper.

### The solution:

A field mobility solution based on Motorola's MC70 Enterprise Digital Assistant was rolled out to 1,000 technicians in just three months. Danka's technicians now have everything they need to do the best job, right at their fingertips. The new paperless system allows technicians to:

- Receive electronic work orders
- Access real-time parts inventory on the truck — and back in the central warehouse
- Locate and order a part needed from the central warehouse in real-time for delivery to an upcoming stop that same day — with just the press of a few buttons
- Access service history, improving on-the-job knowledge and troubleshooting
- Capture signature for 'proof of service' and invoicing authorization
- Automatically capture of arrival and departure times
- Call customers to confirm estimated arrival times
- Work offline — no disruptions when a customer is located out of range, or building construction creates connectivity issues

### The benefits:

- Increased technician productivity — time for a minimum of one additional service call per day
- Improved customer service
- Improved data accuracy
- Reduced calls from the field for assistance with more complex transactions by 60 percent — technicians can now access most of the information with the Motorola MC70

## Blue Bell Creameries

Manufacturer



Started in 1907, Blue Bell Creameries started out delivering ice cream by horse and wagon. Now, over a hundred years later, Blue Bell Creameries is one of the top three best selling ice creams in the country, delivering over 50 flavors to 17 states.

The Motorola system has increased efficiencies across operations, from its receipt of raw materials and its production processes to its delivery of the final product to the customer. “Now, within minutes you can go into our computer system and trace it backward and forward.”

Jim Kruse, CPA and Controller  
Blue Bell Creameries

### The business problem:

Like most manufacturers in the food and beverage business, Blue Bell Creameries is dependent upon their direct store delivery function to deliver product to customers. But the outdated solution translated into the slow movement of information to and from drivers, which impacted route efficiency, inventory visibility and

the velocity of the invoicing process. To address these issues, Blue Bell was looking for a way to improve the overall efficiency of the delivery process as well as enable real-time end-to-end traceability — from raw materials to delivery.

### The solution:

Blue Bell deployed Motorola mobile computers in the warehouse and in the delivery trucks to enable the real-time capture and transmission of the wealth of business data required to streamline and provide real-time visibility into the entire supply chain — from Blue Bell’s receiving dock to the customer . In the warehouse, Motorola’s MC9090 mobile computers connect to a Motorola wireless LAN (Motorola’s WS5100 wireless switches and AP300 access points), enabling warehouse workers to enter incoming shipments of raw materials into the inventory system as they are processed at the receiving dock. Out in the trucks, Motorola’s MC70 Enterprise Digital Assistant enables real time capture in the company’s Direct Store Delivery function. Drivers are armed with a palm-sized full fledge integrated voice and data computer with a real time connection to key business applications as well as telephone, text messaging and bar code scanning capabilities. With the MC70 in hand, drivers can now:

- Instantly see inventory in the truck in real time
- Scan shipments at each stop for accurate and rapid recording of deliveries
- Present customers with an accurate electronic invoice on the spot
- Capture customer signatures to verify proof of delivery and invoice accuracy
- Instantly transmit invoices in real time to the business system

### The benefits:

- Increased productivity
- Improved customer service
- Real-time inventory visibility and end-to-end real-time track and trace
- Improved cash flow

## Shumate Mechanical

Service Provider



Shumate Mechanical provides heating, ventilating and air conditioning (HVAC) services to residential, commercial and industrial customers in the greater Atlanta, Georgia, USA region. The company employs 500 employees, and has 200 vehicles out on the road servicing customers every day.

### The business problem:

Service technicians in the field utilized paper forms to capture information and perform transactions out in the field. But the paper-and-pen based processes could not keep pace with this rapidly growing business — the flow of information was too slow and inconsistent, affecting dispatch efficiency. The company was looking for a paperless solution to improve productivity and accuracy throughout field operations.

### The solution:

The company provided service technicians with a Motorola MC70 Enterprise Digital Assistant and a mobile printer, providing technicians out on the road with the equivalent of a 'pocketable office' — and a host of new capabilities:

- Automated location-based dispatch — work orders are sent electronically to the handhelds
- Rapid completion of forms via speech-to-text as well as keypad input

- Access to the full range of information required to get the job done as efficiently and effectively as possible — including service history, inventory access, contracts, wiring diagrams and more
- Ability to complete, email or print invoices out in the field
- Ability to process credit and debit cards out in the field for real-time payment processing
- On-board navigation for real-time directions, ensuring prompt arrival at the next service location

### The benefits:

With mobility in 40 vehicles returning a wealth of benefits, a rollout to all remaining vehicles is now underway. Benefits include:

- Substantial 12 percent reduction (based on saving one hour per technician per day) in labor save \$208,000/year
- Increased customer satisfaction and retention
- Improved competitive advantage — ability to book next day service appointments
- Improved productivity for accounting staff – re-purposed 2 full time data entry operators
- Inventory variance reduced from \$4,000/month to zero
- Real-time GPS eliminated the \$10,000 budget previously spent on maps
- Substantial fuel savings anticipated from more efficient routing
- Improved service consistency through the ability to present a comprehensive checklist for installation and maintenance routines
- Expedited cash flow
- Improved workforce management — better visibility into a variety of metrics enabled the development of Key Performance Indicators to manage the field service workforce

## Sodicome

Service provider



Sodicome specializes in the collection and treatment of medical, electronic and electrical waste for over 12,000 customers in 70 counties, with 13 drivers making a total of 8,000 monthly collections.

### The business problem:

Numerous government regulations required Sodicome to maintain a specific set of information to document the handling and disposal of medical, electronic and electrical waste. A quadruplicate paper form was utilized to capture the required data to document the end-to-end waste processing: one copy was provided to the originator upon collection of the

We have identified three main advantages for our customers. Firstly, our customers no longer need to archive paper documents. Secondly, it saves time for the customer. And thirdly, it guarantees waste traceability.

Philippe Roulle, Managing Director – ISD  
Sodicome

waste; one copy was kept by the driver; one part was for the waste disposal company; and the last form was returned to the customer to provide proof of disposal of the waste. The inefficient process increased paperwork, reducing productivity and increasing the risk of errors. In addition, the paper records — 140,000 sheets of paper per year — had to be maintained for three years, and then destroyed.

### The solution:

A Motorola MC70 Enterprise Digital Assistant in combination with Zebra mobile printers replaced the paper-based process. Now, electronic orders are sent directly to the driver's MC70, and instead of processing a quadruplicate paper form, drivers now:

- Scan all packages at pickup to automatically and accurately populate an electronic version of the paper form with required information
- Print a collection receipt right on the spot, providing real-time proof of pickup
- Print proof of delivery receipt for customers
- Automatically upload all information at the end of the workday — no additional end-of-day processing required

### The benefits:

- Guarantees traceability of all waste, providing customers with increased security and reliability
- Improves driver productivity — elimination of paperwork during and after rounds enables the same staff to handle more jobs per day, reducing the rate of uncollected pickups from 4.5% to 1%
- Reduces errors — data entry errors were completely eliminated
- Enables more efficient route planning
- Provides customers with a real-time window into pickup schedules
- Eliminates the high cost of archiving and destroying the massive amount of paperwork

## Swisscom

Service Provider



Employing approximately 20,000 people, Swisscom is the largest telecommunications provider in Switzerland, serving homes and businesses across the country.

“The new enterprise digital assistants have really helped us to update our scheduling and dispatch procedure,” continued Basler. “The engineers found the mobile computers very easy to use, and the device can handle the knocks and bumps of a day on the road with our engineers. We also now have much more information about where our engineers are, which job they are working on, and can provide them with much more information about the job in question, improving efficiency and productivity and, as a net result, our customer relations.”

Urs Basler,  
Senior Project Manager  
Swisscom

### The business problem:

Over 900 service engineers in four different business sections received work schedules for the day and reported work order status via different types of technologies. For example, the fulfillment section utilized paper, receiving work orders via fax. Alternatively, the assurance section utilized company laptops to retrieve electronic work schedules. The disparate systems hindered dispatcher ability to easily schedule and coordinate across the work teams. And dispatch could not send updated work schedules to field engineers who utilized paper-based systems, hindering the company’s ability to respond to urgent requests.

### The solution:

With the new field mobility solution based on Motorola’s MC70 Enterprise Digital Assistant:

- Field engineers receive real-time work orders
- Dispatchers can update work orders as needed to address priorities
- Any known information about the problem is also transmitted to the engineer, eliminating the need for engineers to repeat tests that were already conducted by the in-house technical customer support center
- Engineers now stamp each electronic work order with the start and finish times for each job, which is then transmitted back to dispatch upon completion of the service

### The benefits:

- 10% improvement in engineer productivity by eliminating paper
- 20% improvement in dispatch productivity via automated route planning
- Better field force management — real-time visibility into engineer work schedules and job status enables dynamic re-allocation and/or reprioritization of work orders as needed throughout the day

# The anatomy of a field mobility solution

When it comes to enterprise mobility, look to Motorola for the unmatched portfolio of award-winning market-leading products and services you need to deploy highly successful field mobility solutions that integrate easily into your existing technology architecture — and your existing business procedures:



## Integrated voice and data handheld mobile computers

Motorola's family of integrated voice and data handheld mobile computers offers essential features to fully maximize your workforce and the rugged design required to achieve a low total cost of ownership (TCO). Comprehensive wireless WAN options include your choice of cellular carrier — as well as robust 3G network connectivity. Wireless LAN connectivity enables cost effective communications in the office and in hot spots. Integrated GPS enables real-time location-based applications. Bar code scanning, RFID, signature capture and more combine with a broad variety of accessories and third party peripherals — from mobile payment card readers to mobile printers — to enable the automatic capture of virtually any type of data and the completion of nearly any transaction out in the field.



## Vehicle-mounted computers

Motorola's VC6096 In-Vehicle/Fixed-Mount Mobile Computer packs all the features you need to maximize operational efficiency out on the road into a single easy to use rugged device truly built for life in the field. This all-in-one in-cab solution provides your drivers with mobile voice and data as well as integrated GPS and telematics, providing a comprehensive fleet management platform that enables the collection of a wealth of real-time data — including mileage, location, driver performance, vehicle metrics, hours of service and arrival and departure times.



## Two-way radios

Motorola's two-way portable and mobile radio families provide reliable and instant voice communications for your mobile work force — improving the efficiency, productivity and safety of your workers. This diverse portfolio offers: a variety of frequency ranges for operation anywhere in the world; rugged models with enhanced features; compact and lightweight devices to meet the needs of a wide variety of workers; and portable two-way radios that are certified to intrinsic safety standards for use in hazardous classified environments.



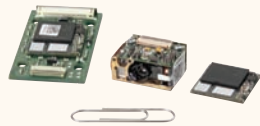
## Bar code scanners

Motorola provides the industry's most robust and innovative line-up of Symbol scanner products — a portfolio that is unparalleled in breadth, reliability, features and functionality. Choose from corded and cordless, handheld and hands-free, and general purpose and rugged models that offer a wide variety of scanning capabilities — from laser scanners that offer high performance scanning for 1D bar codes to imagers that enable the capture of 1D, 2D and direct part marks as well as documents and signatures.



#### Payment systems and Micro Kiosks™

Interactive payment systems help build customer loyalty and maximize revenues while reducing payment and transaction-related costs. The advanced hardware and software architecture delivers the speed and performance required for rapid data transmission, with a wide variety of display and interactive capabilities.



#### OEM scan engines

With millions installed worldwide, Symbol scan engines from Motorola are unmatched for reliability, performance, durability and size. These compact ready-to-scan devices are ideal for deployment in space constrained areas such as conveyors or checkout stands, or for integration into a wide variety of devices, from kiosks and medical instruments to ATM and vending machines and more.



#### Wireless infrastructure

Motorola's comprehensive portfolio of wireless LAN and wireless broadband infrastructure delivers world-class performance, security and resilience, regardless of whether you need connectivity inside or outside the four walls of your facility.



#### RFID infrastructure

A leader in the world of RFID technology, Motorola offers thirty years of innovative excellence in the Automated Identification Data Collection (AIDC) industry. A member of EPCglobal, Motorola has also been a key contributor in the development of RFID standards, helping to provide the interoperability required to simplify deployment and integration of RFID technology in the enterprise. Our complete portfolio of products includes fixed, handheld and mobile RFID readers, antennas, inlays and tags, allowing you to extend the reach of RFID to every corner of your business.



Motorola Mobility Suite

#### Comprehensive mobility management solutions

The Motorola Mobility Suite delivers a true value-add for enterprise mobility solutions. This unique family of software solutions empowers companies to maximize the benefits and value of mobility by providing granular control over every aspect of your mobility solution — including the ability to remotely stage, provision, monitor and troubleshoot all your Motorola mobile devices from a single centralized location.



#### End-to-end lifecycle services

Our lifecycle services are available to help you get and keep your Motorola mobility solution up and running at peak performance. When it comes to planning, designing, implementing your solution, our Advanced Services offer 'from the manufacturer' product expertise and a wealth of vertical experience gained from deploying millions of devices across industries around the world. And once your solution has been deployed, our Customer Services provide the day-to-day technical support you need to maximize uptime.





1. Total Cost of Ownership Models for Mobile Computing and Communications Platforms, Second Edition, Venture Development Corporation, June 2007 (Exhibit Vb-2: TCO Comparison (Five Year and Annual) for PDA/Handheld Computers: Field Service Environments)



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