Field Technologies
Optimize Field Workers, Service & Assets

FIELD MOBILITY 2014

How The Latest Technologies And Trends Are Transforming The Mobile Workforce

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My Take On Field Mobility In 2014

For this annual report, we conducted a survey of our audience to see what technologies are currently in use, what are on the roadmap for the near future, which features/functionality you feel are most important in some of the main field mobility categories, and what your take is on the current field mobility trends. This year, we had more than 700 of you take our survey (Big thanks to those who participated!) and here we share the results. We’ve also incorporated some real-world anecdotes and advice from your peers from companies that are currently using these various technologies and reaping the benefits. (Look for their insight in the boxes at the bottom of each page — many of these companies have been featured in Field Technologies, so if you want to read their full story you can search them by company name at www.FieldTechnologiesOnline.com.)

Before we dive into all of this great information, though, let me give you my take on the landscape for field mobility in 2014 based on the conversations I’m having with folks like you.

Mobile Mania Ensues

Believe it or not, not all companies are leveraging the tools we’re talking about in this report — particularly mobility. Some have a level of automation (such as optimized scheduling) but just haven’t added a mobile component yet. Others are still straight-up pen and paper. Here’s the good news for those of you not yet using mobile — it’s more sophisticated and affordable than ever before. And 2014 is the year many of you are planning to make that leap. Great timing — here’s why. From the hardware side, you have a wide variety of options — no matter your price point. From a software perspective, there is a multitude of applications on the market. Whether you need a simple, checkbox based application for real-time visibility and updates or an advanced work order management system, it exists. And if IT resources are slim, or you just don’t want to take on the management of such a solution, cloud-based options are available and more popular than ever before.

Automation Goes A Step Further

Turning a paper-based process electronic is one thing, and it can be a great step if you haven’t taken it already. But many companies have — and for those companies, the opportunity is ripe to further automate and optimize field workers, assets, and service. A company can, for instance, look to tie GPS data into its mobile solution so that instead of a field technician needing to check a box that says “I’ve arrived on-site,” the updates will be done automatically. Or, what about incorporating a tech-to-tech social collaboration component? Instead of a tech leaving a job without completing the work because he was stuck with an issue he wasn’t sure how to fix, he can quickly and easily communicate with a network of expertise to get help in real-time. Those are just a couple of examples, but the point is, if you’ve already automated, today’s technologies provide the ability to automate much more.

The Benefits Of Field Technologies Expand

Leading companies are using the field technologies they’ve deployed, perhaps originally to gain efficiency, to gain far more advantages. For example, how can you tie your service processes in with sales to capitalize on — and even create — revenue opportunities? Or, how can you shift your organization from a reactive service model to a predictive one? In 2014, companies will continue to look for ways to wring more value from the technologies they’re using, and you can do the same. Need some ideas? Take a look at the stories and data shared in this report — hopefully they spark some fruitful initiatives.
Field Mobility: The Mobile Workforce Productivity, Customer Service Multiplier

With today's mobile workforce exceeding one billion, the need for mobile solutions that enable real-time decision making and access to critical enterprise applications and databases is as acute as ever. Forward-looking organizations are turning this into a competitive advantage by leveraging advances in mobile technologies to drive operational efficiencies and achieve more intimate and engaging customer interactions. From field service and sales to delivery and distribution, these business-critical processes are often tied to the ability to access and act on real-time data using mobile solutions by remote mobile workers. Selecting the most appropriate mobile solution is challenging amid the rapid pace of change and innovation. And with the performance of these line-of-business workflows closely tied to the reliability and robustness of the mobile solutions supporting them, ensuring stability and sustainability is of utmost importance.

Today’s customer is demanding. When it comes to service, their expectations are uncompromising with heightened levels of responsiveness and customer intimacy required. Beyond equipping field workers with more sophisticated mobile solutions, manufacturers from GE to GM are embedding an array of remote-sensing solutions within their products to enable even greater understanding of asset performance, while providing remote monitoring and support capabilities that do not require on-site visits from technicians. One trend among field service operations is clear: Field service organizations are putting a greater emphasis on improving customer satisfaction. The increases in workforce utilization and first-time fix that mobility provides are helping companies achieve these goals.

Field Mobile Device Requirements: Know Your Field Workers’ Environment

For field workers especially, the need for stable and reliable solutions that are designed with their needs in mind is critical. Assuming their requirements are equal to those of other mobile workers and can be satisfied with a “standardized” solution is a critical misconception that leads to the misapplication of technology. Therefore, one of the most important aspects when considering field mobility is the environment in which the mobile devices will be used. At the same time, mobile application design and performance are increasingly being driven by experiences with personal consumer mobile devices.

According to a recent survey we conducted among organizations supporting field line-of-business solutions, the environmental considerations you must evaluate span extreme temperature exposure, use of device with gloved hands or in wet conditions, and use of device in direct sunlight. Consider the following:

**Temperature exposure.** Most consumer mobile devices have an operating temperature range of 32º to 95ºF (and a nonoperating range of -4ºF to 113ºF). Exceeding these temperature ranges will cause a device to shut down or cause substantial damage. For workers in hot climates, the temperature in a parked vehicle can quickly exceed those ranges, effectively making these devices inoperable and creating significant disruption to workflows.

**Direct sunlight exposure.** This is one of the most common issues for field workers. Many field workers need to use their mobile devices in direct sunlight or ambient light conditions. Most consumer devices are ill-equipped to support this, as their capacitive touch displays are easily washed out. Although consumer devices are operable in these conditions, the user experience is substantially compromised.

**Use of device in wet conditions and with gloved hands.** Using touch display with gloved hands or in wet or humid conditions is uneven at best with many consumer devices. According to our research, these factors impact approximately one in three organizations supporting field mobile applications.

The success of many field workers is closely tied to operational metrics such as “number of jobs completed” and “workforce utilization” and, increasingly, more customer-centric metrics such as “SLA compliance” or “customer satisfaction and retention.” Disruption of field processes can and does have significant consequences, with poorly performing field workers frequently described as an organization’s weakest link.

With growing expectations and demands for field workers’ performance to achieve their “full potential,” mobile technologies are increasingly integrated into workflows.
VDC’s research shows workforce productivity benefits in excess of 40 percent and customer satisfaction improvements averaging 30 percent as a result of the adoption of well-designed mobile solutions.

However, failure of mobile devices in the field can have the opposite effect. According to VDC, the consequence of a mobile device’s failure can result in an average loss of productivity of 128 minutes. This translates into not only a significant increase of solution cost of ownership but can also erode customer satisfaction and loyalty.

**Mobile Device Requirements:**

**Balancing Consumer Look/Feel, Enterprise Support**

The recent mobile technology advances we have witnessed are staggering, and many were innovations first made on consumer devices. As a result, the desire to leverage sophisticated consumer devices in the enterprise is very real. Moreover, trends like BYOD have radically changed how mobile devices enter the enterprise and how they are supported. However, there is a distinct difference between BYOD-driven mobility initiatives and those aligned with business-critical workflows, such as field service. Our research confirms that BYOD policies are increasingly pervasive — 35 percent of organizations currently support a formal BYOD program; another 35 percent are planning to introduce a BYOD program over the next two years. However, BYOD is typically viewed as a means to enhance employee collaboration and communication, with most organizations not looking to deploy sophisticated line-of-business or operational applications on employee-owned mobile devices.

Rather, in scenarios where the mobile device is central to supporting the enterprise workflow and the applications are tightly integrated with backend systems — such as among field service workers in manufacturing or delivery personnel in wholesale distribution and logistics — there’s a critical need for a more centralization approach to mobile technology deployment that addresses both the needs of the ultimate end user and the IT support organization. While line-of-business decision makers lead many of these initiatives, IT organizations must approve and manage the mobile solutions.

Nevertheless, consumer mobile devices are leading the discussion when it comes to performance and user experience expectations. Conversely, for field workers, the de facto mobile device standard has long been a ruggedized device (handheld, tablet, notebook) running some flavor of Windows. The options available today have changed substantially with Android- and iOS-powered smartphones and tablets. Fundamentally, organizations want the best of both worlds: the ease of use and look and feel of a consumer device, coupled with the robustness and stability of an enterprise solution. Here are some critical considerations for mobile device selection:

**Protective cases help but do not address the full spectrum of device durability issues.** While protective cases do decrease failure caused by dropping, the device remains vulnerable to other issues such as exposure to extreme temperatures, dust, and vibration. In addition, the display is still vulnerable when dropped directly onto the corner of a hard surface.

**Application ease-of-use is essential.** Too many enterprise mobility solutions have failed as a result of poorly designed applications. Application scope creep is a challenge, especially with smaller devices that have limited displays. Application design requires input from actual end users to be most effective.

**Battery performance and management is a concern.** Greater than full-shift battery performance is a critical requirement for enterprise use cases. According to VDC’s research, more than seven in ten smartphone users frequently or occasionally experience batteries not lasting an entire shift. For devices that do not provide access to the battery, this often translates into the need to purchase additional backup devices.

**Lifecycle management and sustainable application development are key enterprise needs.** While enterprises want to take advantage of the rapid pace of mobile and wireless innovation and do not want to get “locked” into a mobile platform, the rapid upgrade cycle of consumer technology cannot be realistically supported for more sophisticated enterprise mobility solutions. A regular cadence to upgrades and the assurance of longer support scenarios are a critical enterprise requirement and a key limitation of consumer devices.

**Evaluate your need for enterprise-grade data capture.** For many field mobile applications and workflows, the ability to capture data efficiently and seamlessly is important. This often translates into the need for a solution with an enterprise-grade image capture/bar code reader. While third-party accessories that support industrial data capture and can be coupled with consumer devices exist, enterprises prefer...
an integrated solution. Avoiding the accessory cost and management complexities is considered a key benefit.

Consider the mobile OS mix, and remember the potential for fragmentation is more acute with consumer devices. Windows OS has been the dominant platform for ruggedized devices. Conversely, on consumer devices, OSs with modern and intuitive interfaces are pervasive. The clear trend in the market is towards a multi-OS environment. However, enterprises are risk averse and are looking to mitigate OS platform risk wherever possible. This means sustainability and lifecycle support when it comes to application development and design, seamless back-office integration capabilities, and the use of nonproprietary open tools in a highly scalable and reliable framework.

Support of unique enterprise functionality for specialized workflows. From DEX requirements in DSD applications to serial port interfaces in asset management applications, I/O configurations for many enterprise applications can be far from common. One of the strong benefits of specialized enterprise mobile devices is their design flexibility to support unique interface requirements.

Mobile Development: Creating Sustainable Applications For Field Workers

In addition to the challenges of selecting the appropriate device for field applications, mobile application development challenges are equally extensive. From development economics and platform fragmentation to access to capable mobile software developers, enterprises are keen for solutions that enable efficient and agile development. Among the most prominent challenges are:

Fragmentation of mobile development strategy and technology. This spans both mobile application development and mobile OS platform fragmentation. Enterprises are building multiple mobile apps with partial strategies at best. Furthermore, constant mobile platform change adds further friction. There is no silver bullet when it comes to mobile application development. The options available — native, hybrid, or HTML5 — are all viable in given scenarios. Mobile developers want flexibility and openness in choices and see value in approaches that optimize time to value.

Management of large datasets and integration with multiple backend datasets. Almost nine in ten developers said that their mobile enterprise applications occasionally or frequently support large datasets, making this a critical capability. Another requirement and potential development challenge lies in the integration with multiple backend datasets or applications. Complexities and challenges scale rapidly with the number of backend databases with which the application interfaces. According to our research, almost eight in ten developers indicated that their applications are tied to two or more backend datasets.

Offline support. According to our research, 89 percent of developers identified offline support as a critical requirement. A synchronization strategy that incorporates incremental synchronization absolutely needs to be part of any enterprise mobile development initiative, especially for line-of-business mobile applications. Developers identified “supporting offline capabilities” as the third most critical backend development challenge. You must plan for robustness against limited connectivity and low bandwidth scenarios.

Mobilizing existing business systems and processes. Many mobile enterprise applications being developed lack any real connection to existing business processes and, thus, have limited value. Most enterprise applications are not mobile-enabled, and very few provide reliable APIs (application program interfaces) or services to build new mobile user interfaces.

Code reuse. To address time to market and cost of development pressures, developers are looking to reuse existing code whenever possible. However, enterprise mobile applications tend to have stricter demands than consumer apps. Opportunities exist to reuse code for common tasks; however, customization is still required to meet specific application needs. Another challenge preventing code reuse is the accelerating pace of change among mobile platforms.

Field Mobility Investment Considerations

Although the value of well-designed field mobility solutions is well-documented, it represents a substantial investment. Especially in today’s budget-constrained environment, the focus on cost containment is heightened. Clearly understanding and evaluating all factors that influence the success of a deployment, from environmental and technical factors to ease of use, intuitiveness, and sustainability of application design, will lead to a more successful investment and contribute to a higher ROI.

Field Mobile Solution Benefits

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<th>Benefit</th>
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<tr>
<td>Higher asset performance</td>
<td>89%</td>
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<tr>
<td>Fast response to schedule changes</td>
<td>87%</td>
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<tr>
<td>Improved employee satisfaction</td>
<td>86%</td>
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<tr>
<td>Improved safety and compliance</td>
<td>84%</td>
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<tr>
<td>Increased customer service and loyalty</td>
<td>83%</td>
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<td>Increased profitability</td>
<td>82%</td>
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<tr>
<td>Faster decision making</td>
<td>81%</td>
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<td>Better worker communication &amp; collaboration</td>
<td>80%</td>
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<tr>
<td>Reduced operational costs</td>
<td>79%</td>
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<tr>
<td>Improved worker productivity</td>
<td>78%</td>
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According to our research, 89 percent of developers indicated the mobile solution benefits they value most are:

- Higher asset performance
- Fast response to schedule changes
- Improved employee satisfaction
- Improved safety and compliance
- Increased customer service and loyalty
- Increased profitability
- Faster decision making
- Better worker communication & collaboration
- Reduced operational costs
- Improved worker productivity
Handhelds/Smartphones

According to our survey respondents, the #1 benefit of the handheld/smartphone form factor is its portability. The form factor is truly mobile — it can be carried by field workers wherever they go. We’ve seen companies with basic needs have success mobilizing their field force with smartphones, while companies with more involved line-of-business applications in the field often require the characteristics of a handheld. You’ll see examples below of each scenario.

The overarching message our survey delivered on this category is that handhelds and smartphones remain a very popular device choice. Forty-nine percent of the respondents are currently using the form factor, and at their next refresh 75 percent of survey participants said they will consider sticking with a handheld or smartphone. Forty percent plan to consider the tablet form factor, while only 12 percent will look into laptops (companies can select multiple device types).

What type of mobile device is your workforce’s primary form of communication in the field?

- Handhelds/smartphones: 49%

Trend To Watch: BYOD

While BYOD strategies are a buzz-worthy topic, the majority of our audience isn’t interested — at least for now. Only 34 percent of our audience has implemented a BYOD strategy, and 65 percent say they won’t even consider it. Why? The top two concerns are security (63 percent) and strain on IT (45 percent).

Need For Durability, Bar Coding Leads To Handheld

We chose a handheld because we needed a device that was small enough for the employee to carry on his belt but large enough to perform all the functions we require. The #1 criterion in our handheld selection was ruggedness. Our employees are out in all types of weather — Fargo, ND in the winter to Arizona in the summer — and are getting in and out of trucks equipped with diamond-plated floors. We sought a device that is sealed to keep the moisture out and rugged enough to take a few falls. Also, everything we do requires barcode scans. We average about 18 – 22 scans per stop, with 60 – 70 stops per day. A device that has the battery life to handle that use was crucial, as well as a hot swap battery so if needed it can be refreshed.

Donna Becraft, CIO, Dunbar Armored

Field Techs Wanted Smartphones; We Delivered

We conducted voice of the customer sessions for our latest refresh, and the overwhelming feedback from our technicians was that they wanted smartphones. We’ve learned from past mistakes, so we engaged our frontline workforce early and kept them involved in the design, building, and testing of the project. As a result, acceptance and adoption are much higher than we’ve experienced with previous deployments.

When our techs told us they wanted the iPhone, we weren’t without concerns about breakage. From an enterprise standpoint, we had budgeted a 15 percent breakage rate for our business users and a 25 percent breakage rate for our technicians. We’ve been pleased to find our breakage rate — with the use of rugged cases — is running less than 7 percent across the enterprise.

Buddy Saucier, VP of truck-based operations, Johnson Controls
Tablets continue to be a popular topic — and device to deploy. While only 15 percent of respondents are currently using tablets, 83 percent plan to stick with tablets at their next refresh. Companies currently using another form factor show a strong interest in tablets at their next refresh, too — 40 percent of companies currently using handhelds or smartphones plan to consider tablets at their next refresh, as will 55 percent of the companies currently using laptops.

In fact, 53 percent of our survey respondents say they think that eventually the tablet form factor will replace laptops in field mobility use cases. While that’s a bit drastic, the popularity of tablets doesn’t seem to be diminishing. Companies using tablets said they picked them based on the portability and versatility of the form factor, as well as their popularity among field technicians.

What type of mobile device is your workforce’s primary form of communication in the field?

15% tablets

Trend To Watch: The OS Debate

There’s a lot of volatility in the OS landscape. Here’s what our survey tells us companies are using now: Windows — 4%, Android — 21%, iOS — 25%, BlackBerry — 5%, Other — 5%. Here’s what they’re considering for future use: Windows — 55%, Android — 45%, iOS — 39%, BlackBerry — 5%, Other — 7%.

#1 impetus for OS change? Flexibility.
#1 concern with OS change? Software migration.

Rugged Tablets Deemed Necessary By 80% Failure Rate

During our tablet selection, meshing durability with cost effectiveness appeared at first to be the biggest challenge. Then we learned a valuable lesson — we deployed consumer-grade tablets because we felt they were affordable and quickly began experiencing an 80 percent failure rate. Rugged tablets seemed expensive until we realized how much we were losing in down-time, replacement equipment costs, office staff overtime to get orders in manually, and IT staff to expedite repairs and troubleshoot issues. Selecting the perfect tablet quickly became a matter of what was going to hold up in the field rather than how we could make the less expensive options work. Take a good, hard look at your use and invest in what you really need — do not waste your time, money, or resources on what might appear at first to be the cheap way out.

Stacy Morin, manager of information systems, Great State Beverage

Windows-Based Tablets Extend The Back Office

The tablet was the only way to go. The ability to take pictures on the tablet’s rear camera vs. a standard laptop allowed our field workers not to need an additional camera, which saved us money. The laptop has to be placed on a flat surface to be used in a safe manner, while tablets have a harness designed for ergonomic use. Smartphones didn’t allow us to interact with blueprints in a functional manner. Evaluating cost versus value was the most challenging aspect of our tablet selection. Consumer-based tablets are in the $300-650 price range, and rugged tablets are well above this amount. However, we had to look at devices we thought wouldn’t break easily in the field and really extend the back office to the field. We selected rugged, Windows-based tablets and have improved productivity 35 percent since deploying.

Cory McFarlane, chief visionary, Pinnacle/CSG
Laptops/Notebooks

While the number of laptop deployments has certainly taken a dip as tablet popularity has skyrocketed (Just with this annual survey, 4 percent fewer respondents are using laptops this year.), laptops are still the form factor of choice for many mobile deployments. In fact, 33 percent of our survey respondents are currently using laptops in the field, with the top two factors in laptop selection being that it’s a familiar form factor, and that they’re being deployed for applications where a high volume of data entry is required (therefore a keyboard deemed necessary).

While laptops certainly have their place in field mobility, it seems that the companies currently using them are unsure of their future device path. Seventy-eight percent will consider laptops again at their next refresh, but 55 percent will also consider tablets and 31 percent handhelds.

What type of mobile device is your workforce’s primary form of communication in the field?

36% laptops/notebooks

Trend To Watch: Rugged Vs. Consumer Devices

Rugged versus non is a big debate and, frankly, we’re seeing companies on either side with successful deployments. Here’s what our survey tells us: 79 percent of respondents say some level of ruggedness is necessary. Why? Top 3 reasons are: can’t afford downtime, devices are often mishandled, and techs are operating in harsh conditions.

Larry Brown, senior systems engineer, Amica Insurance

Can’t Beat Laptop Usability (At Least Not Yet)

Our decision to use laptops is driven primarily by the software needed to write estimates in the field. We’ve tried Windows tablets, but Windows on tablets isn’t user-friendly. Laptops provide full PC-equivalent functionality.

We previously deployed vehicle-mounted, consumer-grade laptops. Our failure rate was more than 20%. So the key factor in our most recent device selection was reducing downtime. Having devices fail on the road means needing to have a replacement unit shipped, hot swapped, and configured, which translates to a cost of approximately $1,200 per day. Add the customer irritant of having appointments broken/rescheduled, and maximizing uptime becomes critical. I checked today, and the last rugged laptop that we sent in for service was over two years ago.

Laptops Provide A Self-Contained Work Platform

We needed a device with all necessary hardware built into it (dedicated keyboard, GPS antenna, Broadband card, etc.) — a self-contained work platform. We’ve looked at tablets, whose benefits lie in a more compact model, but the lack of a dedicated keyboard has proved to be a stumbling block more often than not. Reliability, without a doubt, was our #1 consideration. It is a vital component of the utility business. Our customers expect reliable service, and the best way to deliver that is through reliable technology. We knew that these laptops would be used in 100°F+F heat and below-freezing temperatures, that they would be subjected to water (both rain and spills), drops, bumps, and general rough handling by the crews. We needed a laptop that we could rely on to perform in those conditions.

David Timmermann, network administrator, Southern Maryland Electric Cooperative

Larry Brown, senior systems engineer, Amica Insurance
Mobile Printing

While the use of mobile printers isn’t necessary in each and every field operation, those that leave any kind of paper behind, such as proof of delivery or service, invoice, ticket, etc., can experience great efficiency gains from replacing manually created items. Companies can even leverage the technology to speed billing cycles or increase revenue. For instance, the Sand Springs Police Department in Oklahoma — quoted below — increased revenue from citations by 65 percent with the adoption of an e-ticketing system enabled by handheld computers and mobile printers.

While only 18 percent of our survey respondents are currently using mobile printers in the field to experience such benefits, another 21 percent of the 82 percent not currently using them plan to deploy a mobile printing solution in the coming year.

Do your mobile workers currently use mobile printers in the field?

- 18% Yes
- 82% No

What do your mobile workers use the mobile printers for?

- 30% receipt printing
- 40% invoice printing
- 32% proof of delivery/service
- 55% printing forms
- 19% other

Trend To Watch: Future-Proofing

With the mobile landscape as rapidly changing as it is today, it’s important to think about your device strategy and make sure you select a printer that will accommodate future needs.

Recommendations Key To Mobile Printer Selection

We’re not experts in mobile technologies, so we sought assistance. We worked closely with the providers of our e-ticketing solution for recommendations on mobile printers, and we did independent research by contacting other end users of the products to seek information not only from their administrative offices but also from the field personnel actually using the devices.

A tricky aspect for us was finding the best vehicle-mounting option for our mobile solution. My best advice is to plan your project from the beginning based on operational considerations first and budgetary second. You can always look to bring the project to fruition in stages to accommodate budgetary constraints, but it can be very costly to recover from a poor operational choice.

Mike Carter, deputy chief of police, Sand Springs Police Department
Service Management Software

Forty-five percent of our survey respondents are currently using some sort of field service software — up 5 percent from our survey last year — and another 20 percent of those not currently using an automation software in the field plan to in 2014. The applications available are vast and varied — point being, there’s undoubtedly a tool that could be helping you improve your business.

According to Berg Insight, one category of service software that’s growing rapidly is the use of smartphone-based mobile workforce management. The firm expects the number of users in Europe and North America to reach nearly 2.5 million by 2018 (up from .8 million in 2012).

The Best-Of-Breed Approach

Faced with the inefficiencies of 800 disparate solutions across our branch network, we sought an end-to-end solution to standardize and automate order fulfillment. We realized that no one vendor could provide the capability we needed, so we took a best-of-breed approach.

Best-of-breed involves substantial risk. Taking ownership of the integration points is critical and requires a talented team. We were initially disappointed that a single-provider solution didn’t exist but then realized that by building a best-of-breed solution we would achieve greater market differentiation, take our customer service to the next level, and make it very difficult for our competitors to follow. A tip — if you take this approach, write the RFP with a consortium of vendors approach. I made it clear from the start that we were going to work as one virtual team, and the vendors needed to be open and cooperative toward creating the best solution for United Rentals vs. what was best or easiest for given vendor.

Kevin Neville,
dir. of technology and enterprise architect, United Rentals

Field Mobility 2014
Service Management Software

Is your mobile workforce armed with automation software?

<table>
<thead>
<tr>
<th>Yes</th>
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<tbody>
<tr>
<td>45%</td>
<td>55%</td>
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What functionality does that software provide?

- service/work order management
- basic scheduling
- routing/navigation
- knowledge management
- parts & inventory management
- dispatch/work order assignment

0% 100%

Modular Service Management

We turned to service management for additional tracking of our field techs and to raise our service levels with our customers. Since deployment, we’ve improved customer service levels and have increased the number of calls technicians complete each day by nearly 70 percent.

We selected a software solution that provided a modular approach — one that we could deploy function by function if we chose and could expand the functionality of over time. In selecting our provider, we looked for a company that continues to invest in its own product so that we know support will be available and the solution will evolve with the market demands.

Software deployments are always challenging — my best advice is to first clearly outline your project goals and requirements. Then, appoint an experienced project manager who you feel can aggressively drive the project through completion.

David D. Douglas,
sr. dir., service management,
Scientific Games
We rolled out smartphone-based workforce management to better predict customer demand with field resources, to ultimately enhance the customer experience. We wanted to dynamically schedule resources to reduce downtime and reinvest that labor to serve more customers, support future company growth, and provide visibility to field management.

Our #1 criterion for software selection was forecasting ability — it had to be able to forecast our business (which schedules work in four-hour windows) reliably. If two applications provided similar forecasting capability, we looked at the ability to provide access to key functions on a smartphone for our workforce.

We brought in a partner to help us determine which providers were truly able to deliver our requirements, and I’d suggest that. If you don’t want to engage a partner, it’s important to check references with vendor finalists and ask them questions that can help validate that the tool will work as they say it will. Lastly, ask them to use your data in the area you are most interested in. When we had a clear tie between our two finalists, we provided Safelite data to each vendor and put them in a head-to-head challenge in forecasting.

Renee Cacchillo, VP of service delivery, Safelite AutoGlass
Fleet Management

The adoption of fleet management solutions is happening at a rapid pace. Thirty percent of our audience is currently using fleet management — up 4 percent from last year’s survey — and another 14 percent plan to deploy a solution in 2014. A recent report from Berg Insight illustrates the growth of fleet management usage, too — the firm states that the number of fleet management systems deployed in commercial vehicle fleets in North America is expected to reach 6.8 million by 2017 (up from 3.3 million in Q4 2012). Survey respondents leveraging fleet management say they deployed the solution to 1) improve driver safety/reduce liability, 2) increase driver productivity, and 3) reduce overall operating expenses. Their #1 feature sought in a solution? Ease of use, followed closely by the ability to customize and the ability to integrate with other applications.

Does your company currently use a fleet management solution?

30% Yes

70% No

Trend To Watch: SaaS

According to ABI Research, the total number of SaaS-based subscriber fleet telematics units will reach 16.8 million by 2018 (from 1.06 million at the end of 2012). The SaaS model enables companies to experience the benefits of fleet management without a large up-front investment or significant internal IT support.

Tips For Fleet Management Success

With fleet management, we’ve been able to save $2 million per year. But we encountered some challenges in getting there. Here’s my advice for companies evaluating fleet management solutions:

• Do your homework on the systems that make your “final cut”
• Talk with other companies that have been through this process
• Get all departments that will have contact with the system “on board” from the start
• Ensure that the solutions provider lives up to all of its commitments
  • Use internal or external professional services to deploy your solution if possible

Mark Leuenberger, assistant VP of supply chain and fleet, Cox Enterprises

Web-Based Fleet Management Good Fit For Small Company

We determined we needed fleet management when we received information that our delivery trucks were not always where they were supposed to be. We wanted to increase efficiency, reduce fuel costs, and prolong the useful life of each vehicle.

We were able to decrease the wear and tear on our vehicles, increase the productivity to the tune of one hour per driver per day, improve driver safety, and increase the capacity of each truck for additional deliveries, producing additional topline revenue without additional cost. We’re a small company, so we chose a Web-based solution. I felt it was a prudent business expenditure, and we have certainly experienced a return on investment.

James Clancy, president, Avita Coffee & Provision
Wireless Connectivity

To experience the full benefits of field mobility, it’s crucial to have your field workers communicating in real time. Seventy-two percent of our survey respondents are doing just that — but 72 percent of those communicating in real-time are experiencing issues with cellular connectivity. This is particularly problematic for the 29 percent of survey respondents who say their field crews’ ability to communicate in real-time is crucial to their getting the job done. Another 66 percent say that the communication isn’t crucial but very important — connectivity issues really slow down the field workers and impact productivity. Luckily, wireless networks continue to improve, and there are solutions available to help with issues in the meantime.

Do your mobile workers communicate with the back office in real-time?

- 72% Yes
- 28% No

Do you have trouble with wireless connectivity?

- 72% Yes
- 28% No

Trend To Watch: Signal Boosters

In February of this year, the FCC approved the use of signal boosters to extend the range of wireless signals. Beginning March 2014, signal boosters sold in the U.S. must comply with FCC specs. All U.S. carriers have agreed to approve boosters for use that meet the FCC specs. This could be good news for the 72 percent of you having connectivity challenges.

Overcoming Wireless Connectivity Challenges

When we first deployed our automated dispatch solution, we experienced a lot of challenges due to poor cellular coverage in the rural areas where our company’s trucks operate — we only had about 35 percent coverage. We were unable to accurately keep track of our trucks and drivers, and getting important information to a driver was hit-or-miss. Electronic tickets would sometimes come through missing something, or the ticket info would not come through at all.

We deployed cellular signal boosters, which have improved the signal two- or threefold. We now have 80 percent coverage or better. We’ve since augmented the systems with roof-mounted antennas. Even in areas where there was no signal before, we have a data connection for those drivers.

Milo Mell, technical support manager, LT Enterprises
After years delivering forms-based solutions globally, Avoka saw a need for a user-friendly, online forms solution and built a multi-channel ebusiness platform. Our customers successfully transform high-stakes paper and PDF form-based transactions into effective and engaging multi-channel experiences. Using Avoka Transact and the Avoka Transact Mobile App, field workers complete tasks quickly, no matter the device or location. We transform your mobile workforce’s productivity and help you manage project costs with on-site data collection even when offline. Avoka couples innovative technology with exemplary customer service to dramatically improve business results for our customers worldwide. avoka.com

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Motorola Solutions is a leading provider of mission-critical communication infrastructure, devices, software and services. Our communications-focused solutions and services help government and enterprise customers improve their operations through increased effectiveness and efficiency of their mobile workforces. Our Government segment includes sales of public safety mission-critical communications systems, commercial two-way radio systems and devices, software and services. Our Enterprise segment includes sales of rugged and enterprise-grade mobile computers and tablets, laser/Imaging/RFID-based data capture products, software and services. motorolasolutions.com

TOA Technologies provides field service and mobile workforce management software to organizations of all sizes — from telecoms, cable, utilities, retail and home services. A leader in the Gartner Magic Quadrant for Field Service Management, TOA helps businesses worldwide better manage field teams to increase efficiencies, reduce operational costs and enhance the customer experience. ETAdirect, TOA’s cloud-based application suite, holistically manages the entire service delivery process from appointment or service request, through planning, routing and scheduling, to real-time customer communications. TOA’s solutions are quickly deployed, highly configurable and integrate easily with existing ERP, CRM and other systems. toatech.com

Kronos is the global leader in delivering workforce management solutions in the cloud. Tens of thousands of organizations in more than 100 countries — including more than half of the Fortune 100® — use Kronos to control labor costs, minimize compliance risk and optimize employee performance and engagement across the enterprise to deliver better customer service. Learn more about Kronos industry-specific solutions for onsite and mobile employees including time and attendance, scheduling, absence management, HR and payroll, hiring, and labor analytics applications at kronos.com. Kronos: Workforce Innovation That Works™. kronos.com/industry/business-services/field-services.aspx

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Wilson Electronics, LLC, a leader in the wireless communications industry for more than 40 years, designs and manufactures the industry’s broadest product portfolio of cellular signal boosters, antennas and related components that significantly improve fixed and mobile cellular communication for use in consumer, enterprise and industrial applications worldwide. All Wilson products are designed, manufactured and tested at the company’s U.S. headquarters. Wilson signal booster product solutions fully comply with FCC regulations and are FCC type accepted and Industry Canada (IC) certificated. wilsonelectronics.com
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MIX Telematics is a global provider of fleet management, driver safety and vehicle tracking solutions. Using the Software as a Service (SaaS) delivery model, the company helps customers around the world to effectively manage their mobile assets — an offering strengthened by services like stolen vehicle recovery, consulting services and driver training. MIX Telematics specializes in fleet and consumer telematics, with solutions available in 112 countries. The company has offices in South Africa, Uganda, the United Kingdom, the United States, Australia and the United Arab Emirates. Commercial customers include Parmalat, Schlumberger, Chevron, Greyhound, Go-Ahead Group, Spar, De Lijn, Vectalia-Subus, and Scania. mixtelematics.net

FleetLocate: Spireon’s FleetLocate GPS Fleet Management telematics solution is designed for small and medium businesses operating locally concentrated fleets in the construction, service, delivery, and government industries. If you want a top-notch GPS fleet management service with best-in-class support, then look no further. FleetLocate is more than a GPS fleet management tracking system. It delivers business intelligence in an easy-to-use mobile interface, giving you real-time visibility into your daily operations. FleetLocate’s telematics system is bundled for convenience and includes the hardware, software, service and installation for one monthly fee. FleetLocate.com/Local

Motion Computing® empowers businesses worldwide with technology solutions designed to optimize the performance of mobile workers. Building on a foundation of award-winning technical expertise and decades of industry experience, the Motion® team makes it their business to understand your business. Through industry-leading rugged tablet PCs, tailored accessories and services — Motion delivers mobile technology solutions customized to business workflows. Purposely built for vertical markets including field service, healthcare, utilities, construction, retail, public safety and first responders — Motion’s suite of mobile technology solutions improves worker productivity, data accuracy and security, while enabling real-time decision making at the point-of-service. motioncomputing.com/adbanners/field/index.asp

Sprint is a global leader in machine-to-machine (M2M) technology and offers the power of a flexible 2G, 3G, and 4G LTE network solution for your business. Sprint has been recognized for overall customer satisfaction and for high performance in machine-to-machine (M2M) technology US Long Haul Carrier Excellence Award 3 years in a row (Atlantic ACM — 2013); one of the CW 100 most important and influential providers of M2M services for the ninth consecutive year (Connected World — 2013); first telecom company to deliver an “A+” Corporate Responsibility Report (Global Reporting Initiative — Nov. 2012); the #1 M2M scorecard ranking among North American based communication service providers — ranked #2 globally (Analysys Mason – 2011). Engage with us @sprintm2m, sprint.com/m2m, facebook.com/sprint.

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What’s Your #1 Tip For Companies Deploying Field Mobility?

“Demand a live demo. Once they prove they meet your #1 criteria, continue with the meeting.”

“Ask for input from your frontline technicians. We suffered many pain points as a result of not soliciting adequate feedback.”

“Plan your project based on operational considerations first and budgetary second.”

“When selecting a vendor, don’t just look at the technology, but also the people who will be providing the support necessary to maximize your ROI.”

“Learn to multitask. While you’re piloting, start preparing to scale for enterprise rollout — you can’t afford to work only on one goal at a time.”

“Consider and plan for the solution life cycle — the effort doesn’t end with deployment.”

“Check references and ask vendor finalists questions that will validate the tool or application will work like they say it will.”

“Have a very experienced and aggressive project manager driving the process.”