

# FIELD MOBILITY

Understand How Your Peers Are Leveraging Today's Technologies





2015





# **Embracing What Field Mobility Can Do For You**

ome of you are probably familiar with our annual Field Mobility report by now—this is the fifth installment! For anyone who's reading for the first time, welcome. The goal of this report is to provide a comprehensive look at how our readers are using—and planning to use—a variety of today's technolo-

gies, to optimize their mobile workers, service, and assets.

The report consists of statistical data we've compiled after conducting a survey of more than 450 of our readers, as well as anecdotal insight from some of your peers sharing their firsthand experiences. We've also thrown in some great analytic insight from Aly Pinder Jr. of Aberdeen Group and David Krebs of VDC Research.



Sarah Nicastro publisher/editor in chief, Field Technologies fieldtechnologiesonline.com

## Common Mobile Workforce Challenges

But before you dig in to the

rest of the report, let's take a moment to consider why the readers we surveyed are using some of the technologies that they are. When asked to rank the top three biggest challenges they're facing related to their mobile workforce, respondents of our survey listed:

 Ensuring mobile workers are at optimal efficiency/productivity

- 2. Ensuring accurate data capture in the field and real-time information
- 3. Improving first-time fix rates

## The Top 3 Drivers For Field Mobility Investments

In working to alleviate these challenges, here's what they ranked as their top three objectives for investing in and deploying the solutions they have:

- 1. Maximizing productivity/performance
- 2. Improving their customers' experience and satisfaction
- 3. Reducing costs

But as you probably know from experience, technology evaluation, selection, and deployment aren't always easy feats. In fact, sometimes the process is an uphill battle. Our survey respondents listed justification of expenditure, difficulty building a solid business case, and limited resources for evaluation, deployment, and support as the biggest barriers to technology investment within their organizations.

Let me tell you this: While the barriers can be difficult to overcome, it's worth it. It's been an exciting year for field mobility, and 2015 holds even more promise. The technologies covered here can drive real value for your organization — the companies we surveyed and interviewed for this report would agree. So soak up the information here and determine how to put it to work for your organization!



## 4 Tips For How To Leverage Mobility For Field Service Excellence

o some, the mobile revolution may seem like old news. "Cooler" topics like wearables and the Internet of Things have taken over much of the field service discussion in the last 12+ months. This is not to say those topics aren't important and potentially the next great innovation for service, but the importance of mobility in regard to field service strategy cannot be discounted.

Recent Aberdeen report *Service Mobility: The Right Technology for the Tech* (July 2014) highlighted that eight out of 10 organizations (82 percent of respondents, n = 213) surveyed still view mobility as strategic to service in the coming 12 months. This should come as no surprise, as even in our daily lives we find ourselves more and more attached to our smartphones and tablets. Even more telling is that the generation growing up now ONLY knows of a world where they have constant Wi-Fi connectivity in the pockets of their trendy skinny jeans. And as the workforce continues to age, this next generation will expect mobility to be the norm.

For this reason, mobile is still important for the service technician. My recent mobility research highlighted a few trends which show how top performing organizations maximize the value of mobility in this era of the customer. Follow these four tips, and get ready to reap the rewards from those small devices attached to the hips of your technicians:

## #1: Ensure Field Data Is Integrated With The Back Office

What good is data if it can only be accessed and leveraged by one tech or the field team? Technicians are on the front lines every day, interacting with customers, equipment, and parts. And this insight must not be put in a vault to be viewed by a minority of people within the service team. Top performing organizations excel by making this valuable data available to other teams within the organization to improve products and services which otherwise would be operating blindly to changing customer needs.

## **#2: Make Sure Mobility Is A Companywide Initiative**

In order for field insight to be used by the entire organization, there must be a strategy to create a structure around the devices and the data. When teams act independently and create a hodgepodge of solutions which only address their siloed needs, an integrated view of the data is nearly impossible to gain. Surprisingly, some organizations still view technology implementations in a vacuum, not exploring the broader value to the entire business both now and in the future.

#### #3: Measure Mobility Success Against The Right Metrics

Too often a mobile deployment is only judged based on reduction in paperwork or improvement in worker productivity (important metrics, but not the only ones). The impact of equipping field technicians with real-time data at their fingertips goes well beyond those metrics. Top performers understand that mobility can have an impact on customer satisfaction, contract renewals,



Aly Pinder Jr. sr. research analyst for service management, Aberdeen Group www.aberdeen.com

employee satisfaction, first-time fix, and even cross-sell and up-sell opportunities. Tracking these metrics in conjunction with a mobile deployment will help shed light on both opportunities for improvement and the true impact of this initiative.

#### **#4: Pilot Your Way To Success**

"Gut feel" has a place in service. But the best firms take a measured approach to a large investment such as mobility. These organizations include front-line technicians and a collaborative team in the identification, selection, and deployment of a mobile solution. This cross-functional buy-in helps improve adoption of the technology, while also ensuring that ROI can be achieved much faster. What's the point of investing in mobility if none of your technicians are on board to maximize its capabilities? The smart companies iron out hiccups in advance of a full blown rollout, and you should, too.

This topic will not be going away in its importance to service. So I hope you continue to challenge your leaders if you haven't seen the types of benefits that have defined Best-in-Class performance. To learn more about the best practices displayed by top performers, feel free to visit Aberdeen's site for the full report. The mobile evolution is not done yet; there is still opportunity if you look for the right value.

## **Field Service Modernization**

ith Fortune 500 manufacturing companies proclaiming a shift from product-centric to customer- or service-centric strategies, the importance of mobile solutions, especially among field workers, is only increasing. Mobile field workers support a variety of tasks and workflows including mechanical main-



**David Krebs**VP of mobile and wireless,
VDC Research
www.vdcresearch.com

tenance, physical construction, condition assessments, site inspections, and many others. Many organizations have mobilized these workflows to some degree with varying levels of success. The successes have manifested themselves in a more productive workforce and improvements in overall quality of service delivery.

However, many of these first generation solutions are showing their age in terms of overall functionality and cost of support. Organizations using these first-generation

solutions are keen on taking advantage of many of the significant recent developments in mobile field service automation solutions. In addition, there are still a number of organizations that are at this point relying on manual or paper-based workflow. These organizations are looking to take advantage of the lower adoption barriers that exist with today's mobility solutions.

Fundamentally, the investment drivers behind field mobility solutions span the following:

- Increase productive time a tech works in a day.
- Decrease time to complete an order.
- Optimize resources.
- Improve the customer experience.

In addition, field service organizations are shifting their investment focus from everyday tasks such as scheduling and dispatch into more advanced capabilities such as demand forecasting and workforce management. Organizations are realizing the importance of service level agreements (SLAs) and the benefits they can get by complying with them. As field service organizations experience customers that are cutting back on costs, these attributes are becoming even more important in attracting and retaining a loyal customer base.

Organizations are also realizing the scope of what mobility solutions can really do for their business. In addition to the all-time goal of improving productivity, field service organizations are putting a greater emphasis on improving customer satisfaction. The increases in workforce utilization and first-time fix are helping the companies to achieve their goals as the efficiency gains through these metrics can help tremendously in customer-facing roles.

#### Better Preparedness, More Efficient Decision Making, And Improved Collaboration Lead Mobile Investments

Advances to mobile computing and communications solutions are enabling organizations to exceed benchmarks in productivity, customer service, and overall collaboration and decision making. Organizations are realizing strong returns tied to overall productivity and operating cost metrics. In addition, ability to collaborate better and make



are only "somewhat satisfied" or even "dissatisfied" with their mobility ROI

decisions faster — especially in times of emergency — are areas where organizations greatly benefit from mobile solutions.

However, not all mobile solutions are created equal. In a recent study we conducted, 45 percent of respondents were only "somewhat satisfied" or even "dissatisfied" with the ROI they were realizing from their mobility investments. While the challenges experienced are broad, including interoper-

"Advances to mobile computing and communications solutions are enabling organizations to exceed benchmarks in productivity, customer service, and overall collaboration and decision making."

David Krebs, VDC Research

ability with existing systems and mobile security concerns, many had to do with the overall functionality and capabilities of the mobile solution and — more specifically — the mobile device.

For many organizations, field services continue to represent a weak link in the sense that these operations are still often siloed from the overall organization's operations. This is in part a factor of the highly decentralized approach organizations have taken in running their service operations.

In addition, in most major markets, we are witnessing an increase in field service workload and the costs associated with field service activities. This is due to the introduction of sophisticated new technologies and the growing demand from customers for both a wider range and a greater reliability in services. As a consequence of these new developments, we are beginning to witness a growing skills gap within the field service and route accounting workforces. There is also a big demographic transition at play as we see a large share of the field-based workers in place today set to retire soon, in many instances without a strong pool of skilled candidates to backfill those positions. Therefore, the investment tenets of next-generation field service solutions are directly addressing the limitations of legacy solutions. Companies simply need more today of their mobility solutions than they ever have in the past.

## What To Seek In Your Field Mobility Investment

So what are the companies deploying field mobility today looking for? Organizations with field workers are looking for mobile applications that operate on smart devices that are comfortable, familiar, and versatile. In addition, the end users are looking for next-generation mobility solutions that have substantially lower implementation and maintenance

costs as they migrate away from custom-coded legacy solutions.

Next-generation mobility solutions are migrating beyond just task optimization and integrating more advanced capabilities that provide an organization with the ability to drive new revenue and to evolve the service operation from a cost center to a profit center. Specific benefits include improved cash flow and improved upsell opportunities for additional work and service contracts by providing a lead in a structured and manageable capacity so action is expeditious. In addition, real-time wireless connectivity has become a critical consideration for today's field service solutions. There have been advancements in wireless connectivity and improvements to offline capabilities that allow field workers to communicate and collaborate more effectively with headquarters, back end systems, and other field workers.

#### The Transformational Impact Of Mobility

It's not just about productivity gains anymore. Manufacturing and logistics organizations are shifting focus towards product and service delivery innovation and are looking for differentiated approaches to engage and interact with customers. In addition, closer integration between service and functions that leverage services to drive product design and development enhancements are examples of next-generation manufacturing initiatives. The industry is working toward moving field service out of a silo and integrating it into the rest of the business. Consistent themes supporting these developments are the need for more accurate and real-time data and a more collaborative workforce to drive highly scalable and distributed decision making. Put another way, mobile workers and the wireless technologies supporting them are central to many of these strategic initiatives. 🌣

## **Mobile Computing Usage & Trends**

e've seen a lot of evolution in the mobile computing space over the past year. End users are now benefitting from lighter, faster, more user-friendly devices and have a wide variety of form factors, levels of ruggedness, and price points to choose from.

Of this year's survey respondents, 41 percent are using handhelds or smartphones; 37 percent are using laptops, notebooks, or convertibles; and 22 percent are using tablets. Below we take a look at what types of each device are being used, what criteria were most important in device selection, and what form factor the respondents plan to consider at their next refresh.

When asked what operating system is currently used, 38 percent reported Windows, 16 percent iOS, 14 percent Android, 2 percent other, and 38 percent of respondents are using a combination of oper-

ating systems.
Finally, in terms of deployment model, 58 percent of respondents are using a cor-

of repondents currently use EMM or MMS services

porately provided and provisioned strategy, 11 percent are using BYOD, 10 percent are using COPE (corporately owned, personally enabled), and 21 percent are using a combination of deployment strategies.

## **Handhelds & Smartphones**

What type of handheld does your mobile workforce use?



- semirugged handheld/smartphone
- consumer-grade handheld/smartphone
- rugged handheld/smartphone



Which device form factors do you plan to consider at your next refresh?

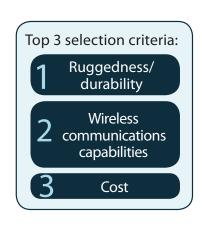


## **Laptops, Notebooks & Convertibles**

What type of laptop does your mobile workforce use?



rugged or semirugged



Which device form factors do you plan to consider at your next refresh?



## **Tablets**

What type of tablet does your mobile workforce use?



- 10" rugged or semirugged
- 7" rugged or semirugged
- 7" consumer-grade
- 10" consumer-grade
- Other



Which device form factors do you plan to consider at your next refresh?

94%	stick with tablets
2%	consumer-grade laptops
7%	rugged or semirugged handhelds/smartphones
5%	consumer-grade handhelds/smartphones

## **Mobile Printing**

**22**%

currently use mobile printers

plan to deploy mobile printers soon

## Leveraging Video In Field Service

We recently invested in an enterprise-grade camera and live video system. The primary reason for our investment was to benefit from the edge the solution has provided us over our competition. We have the ability to have engineers view what's happening in the field in real time to provide guidance or ensure productivity. We can also provide a bird's-eye view of the work we're doing for our customers."

Kenneth Piposar, VP, Abseilon



## Putting The iPad To Work

We're using iPads with mobile hotspots. The iPads help us to utilize the full functionality of our field service software solution. Coupled with the mobile hotspot, field service engineers have real-time visibility into all the needs of the customer while providing real-time feedback to all departments that are invested in the customer's success."

Steve Nava, director of field service, Americas, Luminex



## Rugged Laptops Replace Consumer

We recently deployed rugged laptops. We were using a consumer-grade device previously, but it had poor outdoor viewability. We need to be able to use the laptop in direct sunlight, so we needed to invest in an enterprise-grade solution that would allow us to do so. We also are in the process of deploying field service software."

Adam Ferrell, North America services leader, Trane



# Mobile Workforce Management Software Usage & Trends

he uses for automation software solutions in field service and related industries are vast. And the benefits we see companies experiencing as a result of leveraging these solutions are impressive.

Automation software is really at the heart of field mobility. Want to get the best tech to the job on time? Scheduling and dispatch solutions help you accomplish this. Want to make sure that tech has the right parts with them to get the job done? Parts and inventory management helps ensure they will. Are you realizing how inefficient paper-based work orders and job notes really are? Work order management streamlines that work and enables real-time information-sharing that will trans-

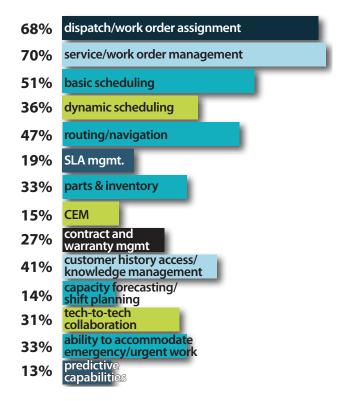
form your service operation. Whatever goal it is you're trying to accomplish for your service organization, there's a software solution on the market that can help you do it. And with many of today's solutions cloud-based, they're more affordable and attainable for companies of any size than ever before.

It's also interesting to think about how automation software will tie in with some other up-and-coming trends. How will software be used with wearables to further equip field workers? What are all the ways a company can tie in IoT data with these software solutions to truly streamline service operations and enable predictive analytics? The opportunities are literally endless.



# Top 3 selection criteria: 1 Ability to integrate with current back office systems 2 Ability to work untethered/without connectivity 3 Ul/ability to map to workflow

## What functionality does your company's current software provide?



plan to deploy a software solution soon

Top 3 capabilities sought:

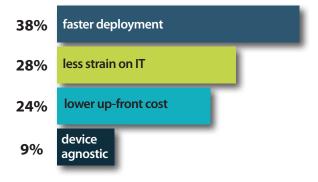
1 Service/work order management

2 Optimized scheduling

Automated dispatch

currently use a cloud-based solution

What was your primary reason for selecting a cloud-based solution?



## **Workforce Management Solution Replaces Paper**

The last significant technology investment we made was in a workforce management software solution and coinciding handhelds for our field service organization. Previously, our field service team was required to fill out paperwork for each service request and site visit and then have a manager type that information into our back office systems. We required our solution to be flexible, to reduce the time required for both the field employees and managers to enter service visit specifics and to tie into our existing systems like Oracle ERP."

Jason Cocco, VP of business and product development, Restaurant Technologies, Inc.



## Next Up: Service Life Cycle Management

We recently invested in a mobile sales and customer management software solution. From an IT perspective, we sought a solution that was cloud-based and would pretty much work right out of the box, but that was still highly configurable. Next up we're looking to invest in a service life cycle management solution to make it easier for our field technicians to get their jobs done. I'm also interested in learning more about the Internet of Things, because I think it's a technology that will change the field service game forever."

Jeremy Jones, VP of IT, Comfort Systems, USA

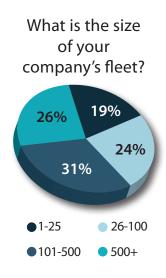


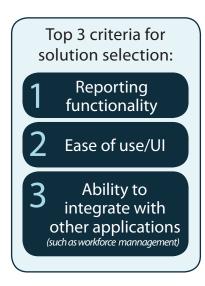
## Fleet Management Usage & Trends

fleet management solutions this year, looking for ways to further automate operations, increase productivity, reduce costs, and improve driver safety. And it's no surprise companies are turning to fleet management — the great thing about today's solutions is that a company of any size can afford to deploy a solution

and can reap the benefits of doing so.

According to this year's survey, 43 percent of respondents are currently using a fleet management solution. You'll see below the criteria those companies used for selecting the solution they did, as well as their top goals for deploying fleet management. Of those survey respondents not currently leveraging a fleet management solution, 24 percent plan to deploy soon.







### **GPS Eliminates Paper Forms And Manual Logging**

The last technology investment for our mobile workforce was a GPS software solution on the existing mobile devices we use. The primary objective was to enable the company and workers to use electronic logs for hours of service, use a digital vehicle inspection report, and automate fuel tax reporting. Our number-one criteria for the solution, since it is handheld-based, is that it had to be compatible with the Windows environment we use."

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Gary Weiner, president, Russell Reid

## **M2M And IoT Usage & Trends**

nternet of Things is arguably the hottest technology buzzword of 2014. And rightly so — the impact M2M and IoT can have when it comes to mobile workers and assets is really astounding. IoT isn't a trend that's going to fade away — it's the next wave of field automation, and it's time for you to get on board.

Take a look at a few industry statistics, besides what you see below. Gartner reports that by 2020, there

will be 26 billion connected devices in the world. And in a report WBR Field Service released recently, 42 percent of the field service respondents that participated identified remote diagnostics as the number-one area of spend over the next six to 12 months.

Those statistics align with what you see below — 37 percent of our survey respondents are already using M2M/IoT, and another 40 percent that aren't right now plan to deploy an M2M or IoT solution soon.

370 currently use an M2M or loT solution

plan to deploy an M2M or loT solution soon

Top 3 criteria for solution selection:

1 Simple to deploy

2 Ability to integrate with other applications

Organization/ presentation of data collected

What is your M2M/IoT application?

42% remote monitoring of our own equipment
37% remote monitoring of equipment we service at customer sites
9% smart meters
2% telematics
10% other

#### **IoT Transforms Service Delivery**

We recently deployed an IoT-based solution that we call the ATEK Service Platform. The solution enables us to provide asset intelligence to our customers that we weren't able to before. When selecting our solution, we wanted a solution that would deliver the information in an easy-to-use portal so we could assist our customers with minimal extra resources on our end. We also sought a solution with minimal up-front investment and with a partner that could help us through the creation and deployment process."

Sherri McDaniel, president, ATEK Access Technologies



# Wireless Connectivity Usage & Trends

hat's the common denominator among all of the solutions we've discussed so far? Real-time, cellular connectivity. It's an aspect of field mobility that companies sometimes take for granted — we just expect it to work. Whether it's mobile computing, fleet management, or M2M applications, cellular connectivity is the necessary conduit for those solutions to work effectively.

And with more and more mobile applications, there's a toll on today's cellular networks. While carriers are making advancements all the time for faster networks and more bandwidth, sometimes it just isn't enough, and issues occur. Plus, with the increase in M2M and IoT applications in addition to the more traditional field mobility applications,

the networks are only going to face more pressure. As you'll see in the statistics below, cellular connectivity issues are very common and can be very painful when they occur. So what can you do about it? There are a few options.

## Potential Solutions For Cellular Connectivity Challenges

If you're dealing with a software solution, you can look for one that provides offline capabilities so that even if the person using the solution does lose connectivity, the work will not be lost. We've also seen companies that have had success with mobile VPN solutions. Finally, you can look into whether or not cellular signal boosters might be able to help in your specific situation to make signals stronger and prevent dropped connections.

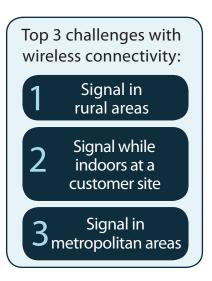


How crucial is realtime connectivity to your mobile workers' productivity?



- it's not; they can do their work without it
- crucial; they can't get the job done without it
- important, but not critical





## **Experienced Field Mobility Peers Share Their Words Of Wisdom**

hen I ask readers like you what type of content is most valuable to them, I almost always hear that insight from your peers takes the cake. You want to hear from people like you who have been there and what they've learned along the way. Regardless of which solutions we've discussed in this report that you may be evaluating, researching, or deploying, here are some words of wisdom from peers of yours who have been in your shoes recently.

## Clearly Define The Problem You're Trying To Solve

The end users I spoke with for this report agreed that one tip for field mobility success is to set a clear goal and then work to find the solution(s) that solve the specific problem(s) you have. "Create a very defined plan for a solution to only one or two business challenges," says Sherri

McDaniel, president, ATEK Access Technologies. "Then, be incredibly diligent about not allowing scope creep in any way. I have spoken with many companies that have become almost paralyzed by taking on too much at once and then not knowing how to wrap their hands around so much at once."

Once you've set your objectives, a solid business case is helpful. "Be sure you are diligent about creating a business case as you embark on this journey, and continually test it along the way to ensure you are getting the expected value out of the mobile solution you select," says Jason Cocco, VP of business and product development at Restaurant Technologies, Inc.

## **Involve The Appropriate Stakeholders; Set Realistic Expectations**

As you begin your field mobility journey, it's important to include the right set of stakeholders in the process. "Put a cross-functional team together, move slowly, and don't expect too much too quickly. Do your research. Understand there is no one-size-fits-all solution. Prioritize and choose carefully. And know it's not going to be cheap — make sure you understand the ROI," says Gary Weiner, president, Russell Reid.

Part of that cross-functional team needs to be your mobile workers — they're the ones on the front lines. "It's important to spend time with your field resources so that you truly understand their needs and can develop a solution that

truly meets those needs," says Adam Ferrell, North America services leader at Trane. Not only does involving your field workers help you in finding a solution that meets their needs, but it can also help with buy-in. "You must listen to your techs and what they need," explains Jeremy Jones, VP of IT at Comfort Systems, USA. "Doing so helps you create employee buy-in, which will be beneficial in the deployment phase of your project."

It's also important to know that the way you think about — and use — your solution will evolve over time. As McDaniel mentioned earlier, it's best to focus narrowly in the beginning. But as you master the initial aspects of your project, you're able to look for further uses and benefits of your solution. "Realize that when you find a new solution that fits your business, you'll constantly keep coming up with new ways to use it," says Kenneth Piposar, VP of Abseilon.

"I have spoken with many companies that have become almost paralyzed by taking on too much at once and then not knowing how to wrap their hands around so much at once."

Sherri McDaniel, ATEK Access Technologies

#### **4 Steps To Summarize Field Mobility Success**

Steve Nava, director of field service, Americas, at Luminex, nicely summarizes four steps you can take toward field mobility success:

- Take the time on the front end to document business requirements in detail.
- 2. Be open to ideas that may change your business
- 3. Don't assume you're currently doing it right.
- 4. Get input from, and trust, your frontline customer-facing teams.





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## What Technology Will You Invest In Next?



"Our next two investments will be to upgrade our existing delivery drivers with new handheld technology and to outfit our sales team with tablets." — Jason Cocco, Restaurant Technologies, Inc.



"Our next investment will likely be telematics. Tying a telematics provider into our workforce management application will enhance our routing and provide opportunities to further improve productivity and save on fuel." — Adam Ferrell, Trane



"Our next investment will be in a service life cycle management solution. We want to make our technicians' jobs easier and make it easier for our customers to do business with us." — Jeremy Jones, Comfort Systems USA



"Our next investment will be in M2M. Predictive service is the holy grail of the service industry at best, and at worst, it will enable our service operation to be forward-leaning and proactive." — Steve Nava, Luminex



"Our next area of investment will be new mobile devices. We envision the use of rugged tablets that allow for more benefits to the mobile workforce." — Gary Weiner, Russell Reid

