Mobility & Remote Enablement

Equipping Field Service Techs with the Tools Their Job Demands & Deserves

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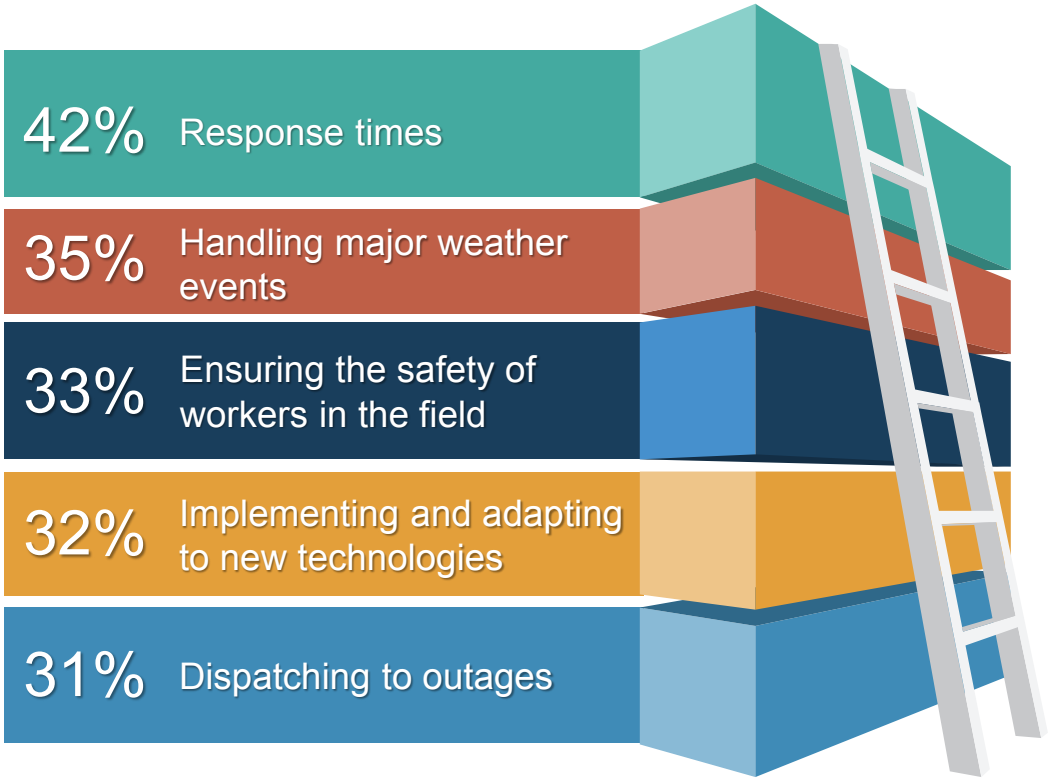
With the Right Device in Hand, Junior Techs Are as Effective as Any

Field service technicians, constantly traveling between an endless variety of asset and customer sites, are some of the most mobile employees that an organization can employ. Their necessary location-hopping comes with inherent risk, including exposure to inclement weather, environmental hazards, and increasingly problematic face-to-face customer interactions given the current COVID-19 situation.

The duties that these frontline workers carry out are critical to keeping communities up-and-running, and require the tools that are deployed to them to be as mobile and agile as their roles are. Their equipment should also provide as much remote enablement as possible for times when the physical aspects of their jobs are simply not safe. Together, next generation mobile solutions and remote enablement technologies give frontline service technicians the remote and real-time visibility and engagement capabilities that they deserve. In turn, this will allow them to provide the levels of service and support on behalf of their organizations that will competitively differentiate themselves and their company from other competitors.

The primary barriers to success for field service operations today are response times, being able to handle major weather events and ensuring the safety of workers in the field (Figure 1). All of these barriers can be overcome with a cohesive set of solutions. There is an increasing awareness of and acceleration toward deploying advanced mobile and remote visibility tools among field service operations. This white paper outlines some of the related key capabilities to consider as your organization plans for the future.

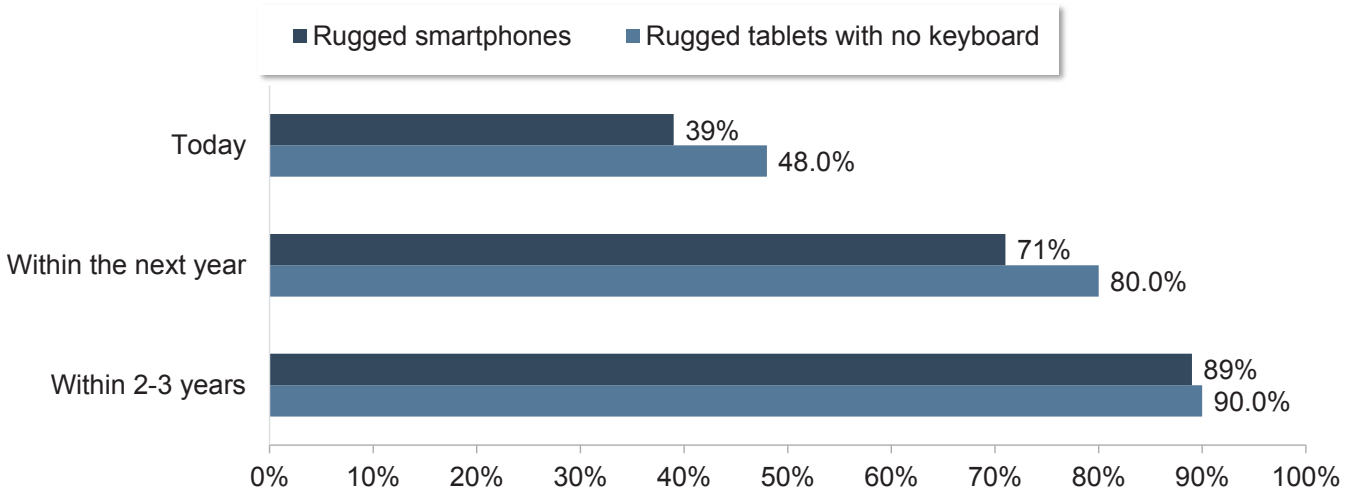
Figure 1: Top Barriers to Success for Field Service Operations



One of the most debilitating field service pain points that mobile solutions remedy is the industry's difficulty in knowledge sharing. The soft skills gap between junior techs – who represent a growing population of the field service workforce – and their most experienced and knowledgeable colleagues is a significant one. The field service landscape has become ever more competitive as long-time technicians continue to age out of the profession and as customers' tolerance for bad experiences grows increasingly thin. These factors have put pressure on organizations to empower their technicians with the right tools to improve productivity and train new techs rapidly. Additionally, about 61% of field service operations currently track customer satisfaction, and this is sure to grow.

The "right tools" to achieve the underlying goals of democratizing experience and improving knowledge share are trending in a positive direction. Both today and looking ahead, rugged tablets and smartphones are the mobile devices of choice (Figure 2) – they can be taken outside in rough weather conditions, survive drops from the significant heights that service techs often find themselves in, and leave a hand free. They can take and upload pictures or interact with the device to access pertinent information for the task at hand, all one-handed, while examining or working on equipment. With a smart mobile device in hand, junior techs can be just as effective as their most senior counterparts.

Figure 2: Current and Planned Implementation of Rugged Devices in Field Service Ops



Beyond traditional rugged devices, field service operations are also expanding their use of wearable devices such as smart glasses, primarily to support remote expert workflows in the name of high-tech knowledge transfer. Although these devices and related use cases are merely budding cross-industry, the field service sector has accounted for a sizeable share of the activity around them. Deployments of this technology grew over the last year, and it will be used more and more in tandem with rugged mobile devices to elevate the services and support delivery of competitive field service organizations.

The Real-Time Benefits of Proving Constant, Real-Time Connectivity

Although mobile devices are a step in the right direction in terms of replacing paper-based methods of operation, the true productivity gains and worker safety benefits of increased mobility come from the applications that run on them. The bulk of service providers will plan their field operation strategies around mobile devices and equip a majority of their field techs with mobile devices in the coming years, but there are market advantages to be had in the capabilities that those units support. The major field service problems that stem from manual, paper-based processes – response times, major weather events and worker safety – will continue with the use of mobile devices if they do not provide real-time agility and remote enablement.

Some of the most important mobile functions for field service operations include email, real-time database access, dispatch management, environmental monitoring and the utilization of geographic information systems. These capabilities are straightforward, but they make a major difference in the flexibility of a technician to plan and carry out his or her day – avoiding asset sites last minute if they become dangerous due to weather or an environmental hazard, figuring out what task to pivot to when such an interruption occurs, engaging with customers remotely when that is the safest way to do so, arriving to their destinations more quickly and resolving issues faster.

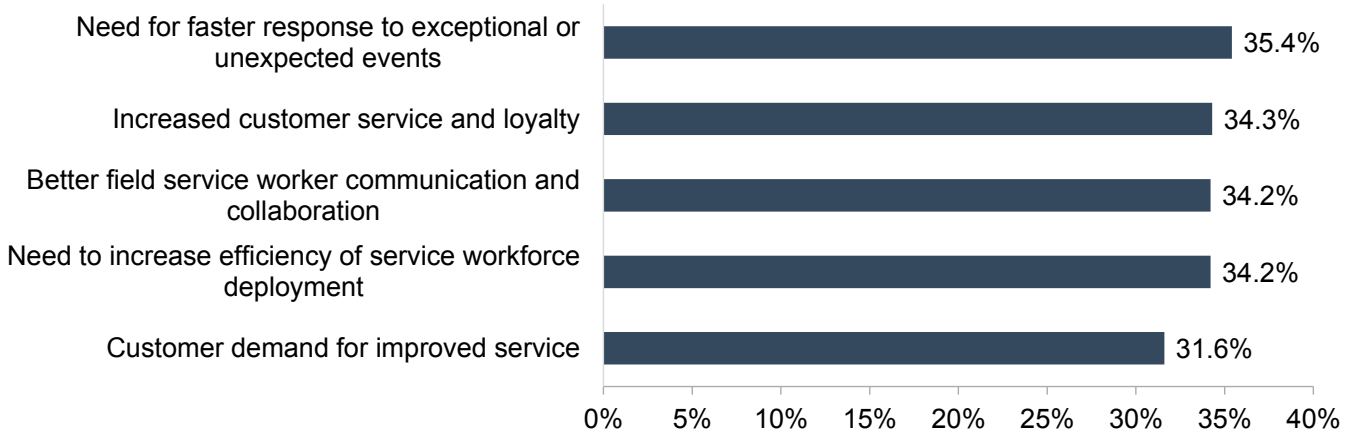
While the nature of some of these vital capabilities seems ordinary enough, the value and advantage in achieving them comes down to timing. Bad, outdated information on a handheld computer is not much better than bad, outdated information on a piece of paper. To really get to the heart of the sector's persistent pain points, newly deployed mobile solutions need to utilize real-time information to optimize planning, scheduling, workflow prioritizing and routing, and that information must be in the frontline workers' hands at all times. A technician's ability to access up-to-date communications or databases at moment's notice needs to be extraordinary given the mobility and hazards involved in their duties.

Mobile, real-time access to real-time data also allows a field service operation to minimize down time for customers through predictive analytics of sensor-based assets and enables field techs to intelligently prioritize service scheduling to minimize customer interruptions and maximize healthy asset life cycles. Accordingly, most field service organizations plan to use technologies such as remote monitoring and reporting, predictive analytics and machine learning to monitor their assets and fuel their technician's mobile applications over the next five years. So, timing is important in two ways here – a field tech's access to real-time info is needed for optimum productivity and safety, and an organization's speed to market with such capabilities over the next five years can make the difference in its competitiveness.

Vendor Spotlight: IFS and Zebra Technologies

With the field service sector setting its sights on advanced mobile capabilities for technicians, it's worthwhile to examine what some of the technology leaders dedicated to that cause are doing. In this case, those leaders are IFS and Zebra Technologies. IFS is an enterprise software developer with renowned field service solutions and Zebra Technologies is a top enterprise mobility hardware manufacturer and solutions provider. The two have formed a partnership to help field service organizations better leverage their current mobile deployments as well as prepare for new technologies. Viewed alongside the market's top mobile solutions investment priorities (Figure 3), their solutions highlight what a modernized field service operation looks like.

Figure 3: Top Priorities Driving Mobile Field Service Solution Investments



A cornerstone of this partnership is its purpose-built head-mounted display collaboration. Zebra Technologies has designed a dedicated pair of smart glasses that tethers to a field technician's existing mobile device to minimize the computing components that have to rest on and discomfort their face throughout a whole workday. To enhance the efficacy of this ergonomic approach to vision-based hardware, IFS has worked closely with Zebra to ensure a tech's necessary mobile applications work with the smart glasses to guide workflows with data-driven vision and hands-free computing needs. This type of solution democratizes a field service organization's knowledge by, for example, allowing a junior tech to visually share his or current task or issue with a more experienced engineer via smart glasses to remotely collaborate on and resolve it. An operation can more rapidly and effectively knock down challenging situations with its existing, and in many cases shrinking, supply of skilled manpower by supplementing it with a modern fleet of mobile tools.

Some of the mobile elements that are enabled by this smart glasses solution – expedited expertise and hand-freeing computing options –also represent the market's growing attraction to smaller devices. Looking ahead, this partnership looks to support the agile computing needs of field service technicians with the reliable and rugged handheld hardware from Zebra in tandem with IFS' field service management software. The former's TC51/56 handheld computers coupled with the work order, dispatching, scheduling, parts and asset management, CRM, contracts management and communications modules from IFS, for instance, gives frontline technicians the constant access to real-time information and tools that their job demands and deserves. At the same time, such deployments also help an organization check the boxes of its top mobile investment priorities: faster responses, more efficient workforces, greater collaboration and improved customer satisfaction.

About The Authors

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Pat Nolan supports a range of syndicated research programs and custom consulting projects within VDC's Enterprise Mobility practice. His previous market research and consulting coverage includes enterprise communications and the MarTech space. Before that, he supported the marketing and communications efforts of a mobile healthcare solutions developer. Pat graduated from Syracuse University with a B.S. in Advertising and a minor in Information Management & Technology.

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