



ACCELERATE YOUR FIELD SERVICE OUTCOMES WITH MOBILITY



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EXECUTIVE SUMMARY


Field service leaders are constantly challenged with rising customer expectations, intense competition for market share, and rolling out incentives to both retain existing talent and attract new talent. In order to overcome these challenges, they need to deliver differentiated, customer-focused service. Furthermore, to achieve customer-focused service, envisioning a mobile-first strategy and implementing a mobile field service solution are of strategic importance - both can accelerate field service outcomes and help field service organizations to do more with less. Having understood the many benefits of a mobile-first field service solution, service leaders need to find the perfect solution amongst the range of solutions in the market. In order to choose the right solution, you must consider:



**KEY DRIVERS FOR
FIELD SERVICE
MOBILITY**



**HOW TO CHOOSE THE
RIGHT FIELD SERVICE
MOBILE SOLUTION**



**BUSINESS BENEFITS
OF A MOBILE-FIRST
STRATEGY**

INTRODUCTION

As a service leader, you are challenged with envisioning and implementing future-proof strategies that will keep your service organization competitive. Before crafting such strategies, you first need to build a vision based on the latest industry trends, best practices, and business needs and then execute on your strategy to positively impact business outcomes. For service leaders, the top business outcomes typically are profitability, efficiency, and customer experience.

Mobility can help build a future-proof strategy. A mobile-first strategy takes advantage of the interconnectivity and convenience that smartphones offer and can help foster greater engagement among users and customers. Smartphones can leverage critical business data to personalize customer experience, which leads to greater revenue. Thus, leaders can leverage mobility as a disruptive force in industry, primarily because it can accelerate the profitability, efficiency, and customer experience for service organizations.



KEY DRIVERS FOR FIELD SERVICE MOBILITY

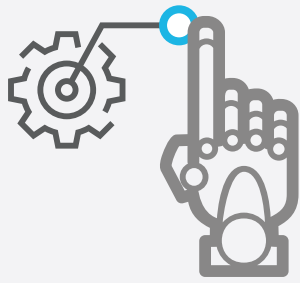
Field service is getting increasingly competitive and service organizations need to enhance their service operations in response. To get ahead of the competition, service leaders should carefully take note of prevalent field service drivers and craft a comprehensive mobile-first strategy in response to strongly position their service organizations for future growth:

Push Towards Digital Transformation

Digital transformation is the use of digital technologies like mobile, cloud, and automation to positively transform key business outcomes like revenue, efficiency, and customer experience. In today's world, if field service organizations don't transform digitally, they risk losing market share, leaving service revenue on the table, and creating inefficient processes. Thus, digital transformation of field service is not an option, but a necessity. Since its inception, mobility has been a disruptive force, and continues to be so due to emerging technologies like Artificial Intelligence (AI) and Augmented Reality (AR). This makes mobility an important cornerstone of digital transformation.

Increased Focus on Customer Experience

With the rising number of field service providers in the market, the competition for market share has also intensified. Superior customer experience is the key to gain higher market share. Happy customers renew contracts and generate higher life time value. Since field mobile solutions deliver rich functionality in a portable form factor, technicians are uniquely positioned to drive a superior customer experience. For example, even before the field technicians arrive at customer sites, they can ensure that they have the right parts, have accurate knowledge of the equipment with the issue, know service history to deliver personalized service, and can quote correct prices for new labor and parts, all of which create a superior customer experience.



51%

INTEGRATING ARTIFICIAL INTELLIGENCE INTO THEIR SERVICE EXECUTION



76%

USED A THIRD-PARTY FOR SERVICE DELIVERY AND TO AUGMENT THEIR REGULAR WORKFORCE



40%

FIELD SERVICE WORK WILL BE DONE BY CONTRACTORS BY 2020

Need for More Efficient Service Operation

Service operation is the heart of field service, but service organizations need to keep pushing the efficiency frontier to ensure optimal levels of profitability. Additionally, the field service workforce is inherently mobile and needs to be productive by connecting with the back office systems on the go. Mobile field service solutions provide faster and more efficient ways for technicians to increase service efficiency. For example, review work orders ahead of time, troubleshoot problems once onsite, lookup inventory, communicate with other technicians, or capture the customer's signature.

The Rise of Artificial Intelligence

If mobility delivers more efficient service operations, AI-powered mobile functionality accelerates efficiency even further. There are several field service applicable scenarios for AI such as predicting parts needed for successful work order completion, intelligent chatbots that will schedule follow-up appointments, and more. As the AI technology matures, more complex field service needs can be addressed elegantly through AI-powered mobile apps. This outlook is well founded. According to a product innovation survey by IDC, 51% of service organizations intend to integrate artificial intelligence into their service execution¹.

Increasing Importance of Third-Party Workforce

The Service Council reported that 76% of service organizations have used a third-party for service delivery and to augment their regular workforce². In addition, Gartner predicts that by 2020, 40% of the field service work will be done by contractors³. Since third-party workers like to use their mobile devices for work, engaging with them necessitates a mobile-first strategy. In other words, field service organizations need to be prepared for a bring-your-own device (BYOD) policy as part of their mobile-first strategy.

Workforce Challenges and Tribal knowledge

An ageing workforce and the inability to attract a new generation of workers is often cited as a growing concern in the industry. The older workforce is shrinking and taking with it decades of specialized knowledge and experience in the field. At the same time, a shrinking workforce puts service operations and customer experience at risk. Mobility can address these challenges by not only enabling service organizations to “do more with less”, but also empowering younger (and recently hired) field service workers to gain specialized skills faster through emerging technologies like AR.

1- IDC Manufacturing Insights' 2017 Product and Service Innovation Survey

2- Third-Party Field Service Teams: A Look at the Workforce of the Future, A TSC Research Summary, 2016

3- Jim Robinson, Gartner, Inc., Eight Components of Successful Outsourced Field Service Management, 4 May 2017



CHOOSING THE RIGHT FIELD SERVICE MOBILE SOLUTION

As a service leader, the decisions you make will change the trajectory of your service organization. Having envisioned a mobile-first strategy and aligned the vision with key stakeholders in the organization, you need to choose the right mobile field service solution. Since the selection process is complex, it is important to have an objective yardstick for evaluating mature solutions in the market. This is where leveraging the following high-level considerations will help you select the best solution for your organizations:

Rich Field Service Capabilities

A mature field service mobile solution will have comprehensive capabilities that enable service organizations to grow profitability, increase efficiency and deliver improved customer experience.

Some essential capabilities include:



EXAMINE THE CUSTOMER'S SERVICE HISTORY



CHECK CUSTOMER'S ENTITLEMENTS



LOCATE REQUIRED PARTS FROM A NEARBY LOCATION



CAPTURE REGULATORY DATA FOR COMPLIANCE



ROUTE TO THE CUSTOMER LOCATION



EXECUTE WORK ORDER DEBRIEF



COLLABORATE REMOTELY WITH SUBJECT MATTER EXPERTS (SMES)



CAPTURE CUSTOMER SIGNATURE FOR THE SERVICE REPORT FOR INVOICING

The mobile solution should integrate well with any Internet of Things (IoT) platform and enable the technicians to deliver proactive service based on equipment alerts. A wider breadth of solution's capabilities would allow for a more thorough mapping to service processes.

Since customer expectations will continue to push the envelope on the standard set of field service mobile capabilities, it is important to choose a provider who is committed to innovation and has a proven history of listening to future needs of the service organizations.

Flexibility for Business Flow Changes

Change is the only constant. As a service leader, you have to adapt your business processes to changing market pressures. The inability to mobilize the new service processes quickly and sustainably can be costly to your business. You will also need customized workflows when your service organization is expanding operations to newer locations that have localized business workflow needs, the consistent execution of which can make or break the success of the operations. In any of the above situations you will need a quick and proven methodology to efficiently roll out unique business workflows to mobile interfaces of your field service solution, without any coding. If you can't do this, you will have internal prioritization challenges, which will impact your go-to-market speed.

A robust field mobile solution will deliver an inbuilt mechanism to allow service organizations to customize business processes and translate them into customized mobile screens and workflows on an accelerated schedule. You want to give your business teams the flexibility to roll out these changes without burdening the IT department.

Extendibility for Future Needs

As a service leader, you want to prepare your organization for any future need. As your business needs and customer expectations evolve, it's possible that the existing mobile solution may not have the capabilities to address them just yet. To address this, the mobile solution should allow for both integration with other apps of choice and a robust partner network that has complementary capabilities (e.g. accepting payments using a card reading app or collaborating via a group communication app). There are clear advantages to this. You can offer superior customer experience or achieve higher service efficiency ahead of the competition.

A mature mobile solution will anticipate such future needs and provide a proven methodology to allow two-way, secure integration with other best-in-class mobile apps for extending the service flow process *at will*. This is an important criterion for choosing the right field service mobile solution for your business.

Engage Third-Party Workforce through BYOD & Partner Mobile Interface

76% of service organizations rely on a third-party workforce for completion of service work⁴. As part of your transformation strategy, you want to take advantage of this third-party workforce to expand regional coverage, increase flexibility to meet demand, and reduce the total cost of service. At the same time, you want to project your brand in a consistent manner and offer a consistent experience to end customers even when they are serviced by a third-party workforce.

The mobile devices market is evolving at a tremendous pace, and people – including third-party workers – make choices for their personal mobile devices, which they like to use for work as well. A mature field service mobile solution will not only cater to a BYOD policy – covering different form factors and operating systems to enable frictionless adoption of the field service mobile solution across the third-party workforce -- but also offer a customizable partner mobile interface to third-party workers. This interface should allow third-party workers to streamline service processes and deliver a consistent customer experience.

Offline Productivity

Lost data connectivity on a mobile field service solution can equate to lost productivity, poor customer experience and a revenue hit, but it doesn't have to. Often, service technicians have to work in remote areas or thick concrete buildings, where the data network or Wi-Fi connections aren't available. Regardless, service technicians need to be fully productive.

4- Third-Party Field Service Teams: A Look at the Workforce of the Future, A TSC Research Summary, 2016

A desirable field service mobile solution will deliver a full scope of functionality (e.g. price labor estimates, complete work order debrief process) to the technician and seamlessly sync the data when the data network is available again. In fact, the most robust mobile solution will have an in-built, fully featured sync engine that would optimize the sync traffic between the mobile app and the server to offer better reliability. Additionally, the sync experience should be consistent across different mobile form factors and operating systems.

Optimal Mobile Performance & Release Cycles

A lot of time can be spent evaluating a field service mobile solution. However, if the provider cannot showcase performance, reliability, and consistent support for the solution, then user adoption will never take off, putting the entire field service digitization strategy at risk.

App performance, stability and user experience are crucial factors for driving adoption of any mobile solution in the field workforce. The app performance is directly impacted by the technology stack used for the development of the mobile solution. The technology stack used can not only limit the overall performance of the app, but can also either require or obviate the need of maintaining multiple code bases for different operating systems. Mobile development frameworks like *ReactNative* allow for native user interface controls per operating system, while enabling a single code base for multiple platforms and form factors. This translates into faster mobile release cycles and, often rate of innovation, from service provider.

As a service leader, you should choose a field service mobile solution that doesn't use an outdated technology stack, and leverages efficient mobile frameworks to optimize the development and maintenance cycles, while delivering the best possible user performance and stability.

Regulatory Compliance & Safety

You are obligated to ensure that the field service mobile solution you choose will protect you from regulatory or safety incidents. The risk of such regulatory or safety incidents is great in highly regulated industries such as oil and gas, power and utilities, and healthcare. In fact, the cost per incident runs in millions, if not billions, of dollars. Regardless of your industry, the safety of your workforce should be paramount to you, especially when the industry is finding it challenging to retain and motivate a specialized workforce.

A mature mobile solution will empower technicians to capture regulatory service data, ensure equipment or technician safety, and also help enforce industry best practices consistently through contextual mobile forms and surveys. Analytics on top of these mobile forms -- targeted at service leaders - would make the solution even more desirable.

Industry Leadership

Choosing a field service solution will significantly impact your future service strategy. Once you choose a solution, its implementation is a major exercise that will significantly transform the internal operations and market standing of your organization, for better or worse. Due to these time and cost investment considerations, it is recommended that you go with a widely endorsed field service solution in the industry.

Leading industry analyst firms like Gartner, Forrester and IDC spend significant resources in gathering industry data to create a robust ranking of field service players per various dimensions such as customer references, market penetration, product depth and vision. *Predix ServiceMax* is such a leading field service solution in Gartner's Magic Quadrant for Field Service Management, and has been for the past several years. As a service leader, you should take a serious note of these industry analyst reports before making the final selection.

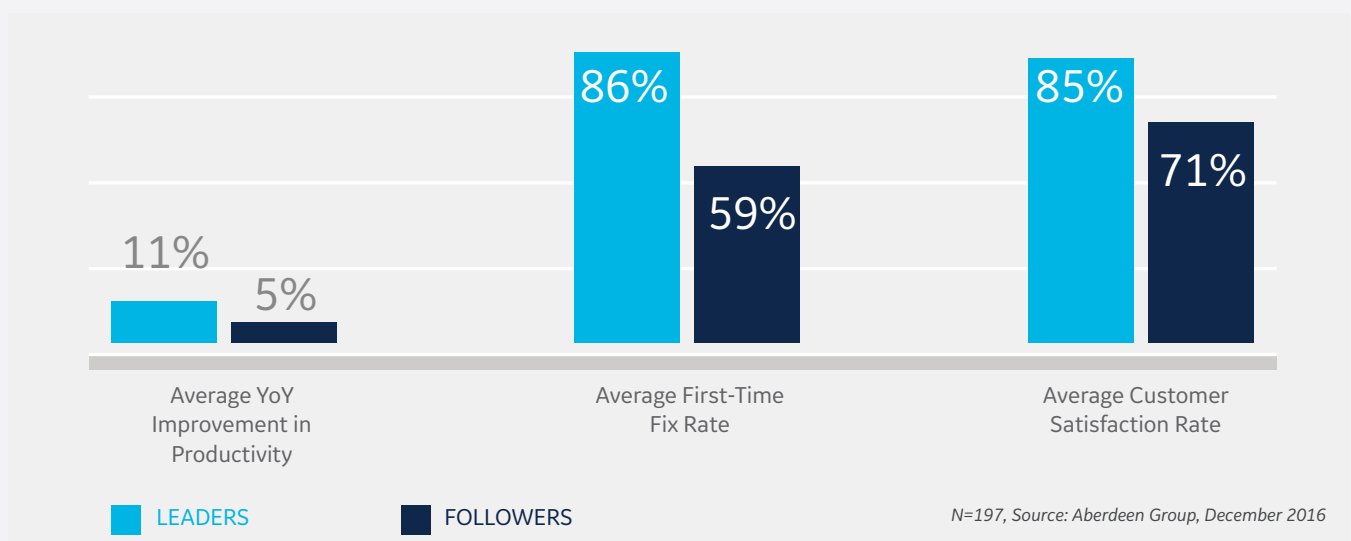


MOBILITY IS A STRATEGIC FORCE

Leaders Vs Followers

Per an Aberdeen report, leaders in mobile field service achieve far better results across key performance indicators, compared to followers⁵. *Note: Aberdeen defines leaders as the top third performers in the survey population and followers as the bottom third performers of the survey population.*

Leaders report 20% greater customer satisfaction rates across their clientele, 46% greater first-time fix rate, and more than twice the annual improvement in technician productivity, when compared to those of followers.



This speaks volumes about how choosing a mobile-led service strategy and focusing on its execution has paid off significant dividends for service organizations. As a service leader, you want to be in the top third pack and ensure that you choose a solution that will facilitate a robust mobile-led execution.

⁵ - Aberdeen: Mobile Field Service: Connectivity Drives Success by Tom Paquin, Jan 2017

Mobile Accelerates Field Service Outcomes

Businesses are always looking to improve their business outcomes. When it comes to field service, service organizations have three priorities that they truly care about – growing profitability, increasing efficiency, and improving customer experience.

A well-rounded field service solution not only empowers service organizations to achieve these outcomes, but also accelerates their pace. While mobility is an enabler, there is no substitute for a solid change management strategy as part of the overall implementation before expecting significant results.

To drive positive change in your leadership role, you need to understand how mobility drives these service outcomes. This will help you to prioritize implementation activities per your preference and drive a robust execution in your organization. In the following section, the high-level service outcomes are mapped to the relevant capabilities of the field service mobile solution.



PROFITABILITY

Service profitability has to be the top business consideration for service organizations. Profitability is also important to ensure that you can invest in your organization, be it employee training or service differentiation. The growth in service profitability is achieved through a combination of growing service revenue and reducing the cost structure.

When a service technician visits a customer, he/she can generate incremental revenue by visually scanning the site for additional equipment that requires service and offering an upsell on them. If the customer site has an expansive layout, the technician can leverage the mobile solution to find additional serviceable equipment by reviewing the install base information and checking the detailed product notes.

Once new equipment has been located, the technician may either capture a service lead for the sales team or generate a service quote using the mobile solution on the spot as an upsell. Additionally, the technician can check all the service, price, and labor entitlements that are contractually available for the customer.

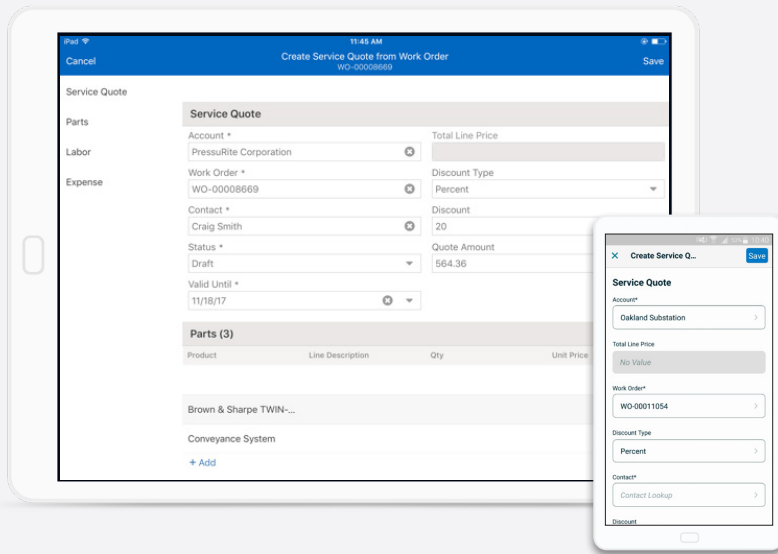


FIGURE 1

ServiceMax Mobile app
Technician creates service quote for upselling additional service



By not giving away service for free, the technician improves profitability. If the technician needs a spare part for the additional service, he can use the mobile solution to check if the part is in the trunk stock, eliminating the need for another truck roll that can cost \$250-\$1000.

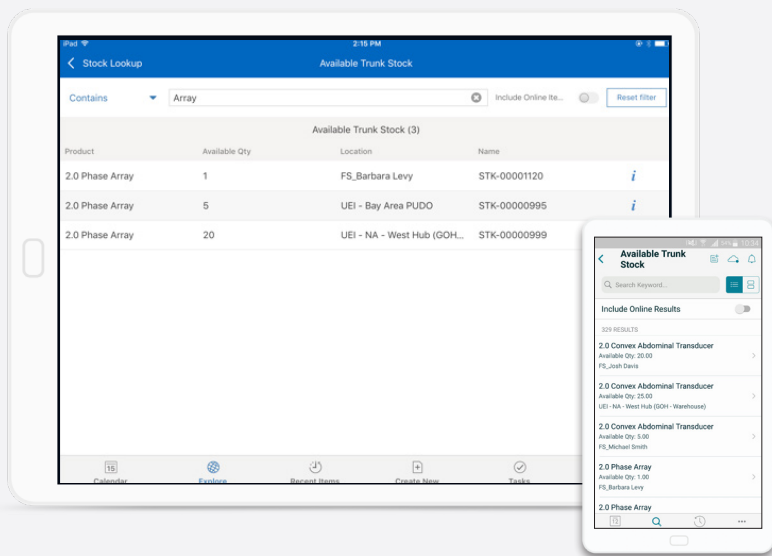


FIGURE 2

ServiceMax Mobile app
Technician looks up the required parts in truck stock to avoid an extra truck roll, increasing profitability

After completing service, a technician can get the latest price for parts and labor, generate a service report and capture the digital signature of the customer on the spot to create a proforma invoice. This proforma invoice not only reduces the Days Sales Outstanding (DSO) for the service organization, but also accelerates the cash flow.

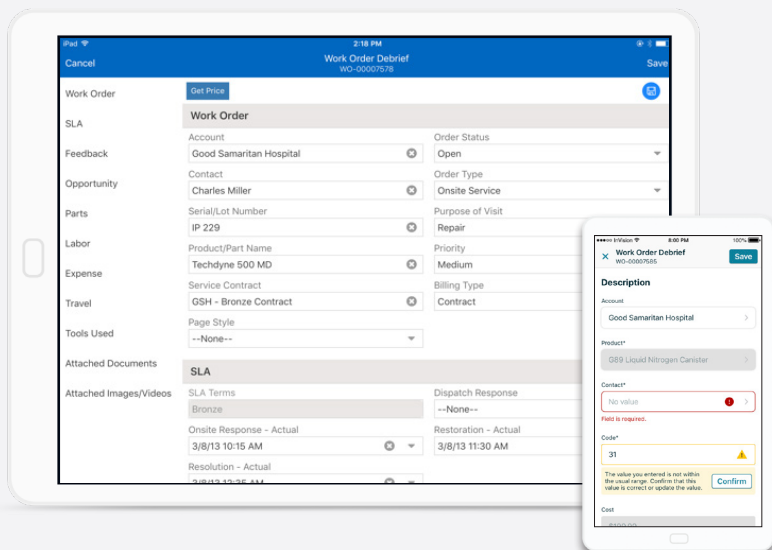


FIGURE 3

ServiceMax Mobile app
Technician gets the latest price for parts and labor per location, customer contact and product to ensure profitability



EFFICIENCY

Service efficiency is the heart of a well-oiled field service operation. Higher service efficiency translates into higher utilization and more jobs per day, which directly translates into more revenue.

With a mobile solution, the technician can review the work calendar ahead of time, drill into each work order and review the problem by researching knowledge base articles or other similar work orders. The technician can then route himself/herself to the customer site using the mobile solution.

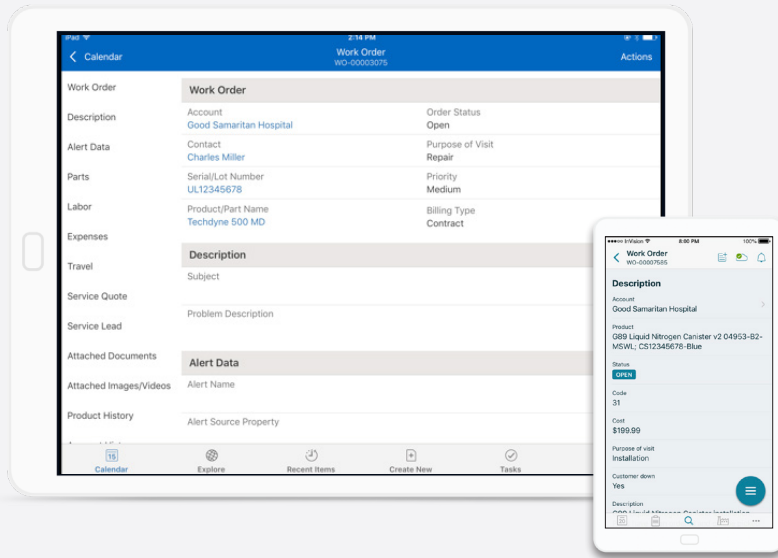


FIGURE 4

ServiceMax Mobile app
Technician reviews work order details to prepare for a customer visit

If the field service solution is integrated with an IoT platform, the technician can view equipment analytics and sensor readings such as temperature, pressure, or rotations directly on the field service mobile app. With better insights, technicians arrive prepared with the right tools and parts for every job.

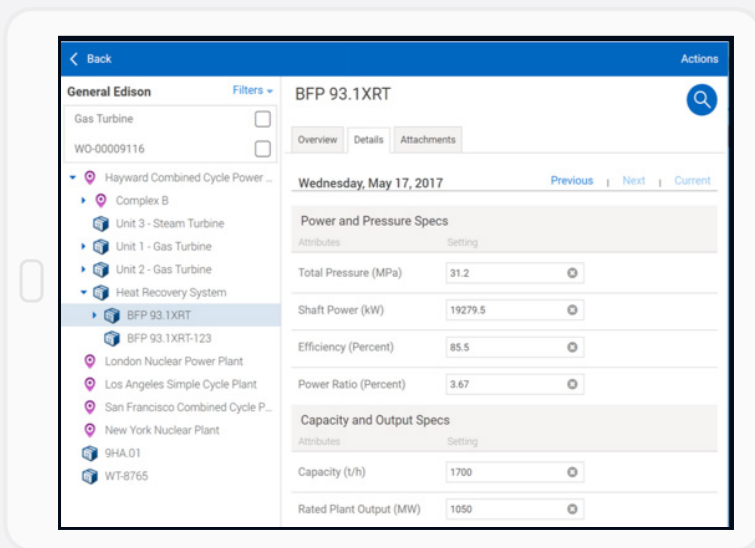


FIGURE 5

ServiceMax Mobile app
Technician reviews equipment's sensor readings directly from the app to be better prepared

During travel, the mobile solution can integrate with his vehicle and capture pertinent driving data like number of hard stops, sudden swerves and idle times at different locations. This can help the service manager to coach the technician for better driving.

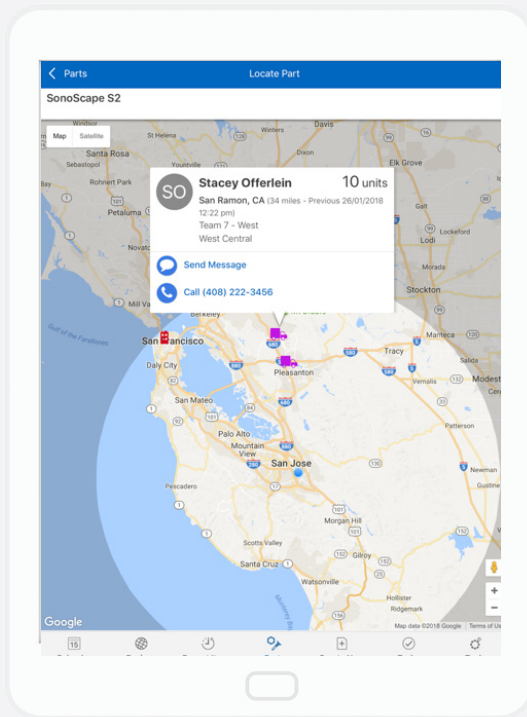


FIGURE 6

ServiceMax Mobile app

Technician does a visual search for the nearest technician with a required part and gets in touch to get it transferred

Once onsite, the technician can take advantage of a variety of mobile capabilities. To begin with, if a crucial spare part is missing, the technician can co-ordinate a parts transfer/pickup with another technician within a certain radius. While servicing equipment, the technician can leverage service level agreement (SLA) clocks to accurately capture time spent on service and adhere to customer SLAs.

If the technician needs help in executing the work order, he/she can collaborate with other subject matter experts through the mobile solution's AR capabilities to resolve the issue at hand.



FIGURE 7

Field service mobile app

uses the AR capabilities to troubleshoot the equipment's problem

If an equipment part needs a depot repair, the technician can execute a return management process for the faulty part, while he/she installs a replacement part.

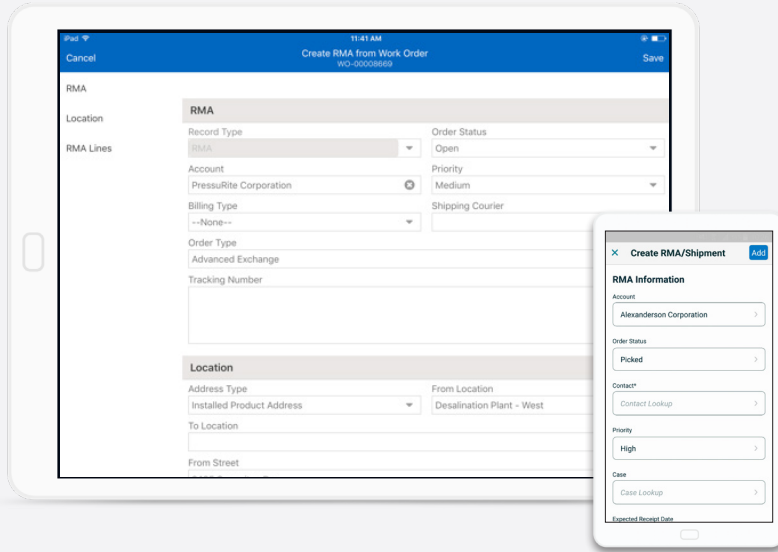


FIGURE 8

ServiceMax Mobile app

Technician fills in a return management authorization order from the work order to start the repair process in depot facility

To meet regulatory compliance and safety requirements, the technician can take advantage of advanced mobile forms or surveys, which can be later analyzed in an aggregate manner by service managers to make informed business decisions.

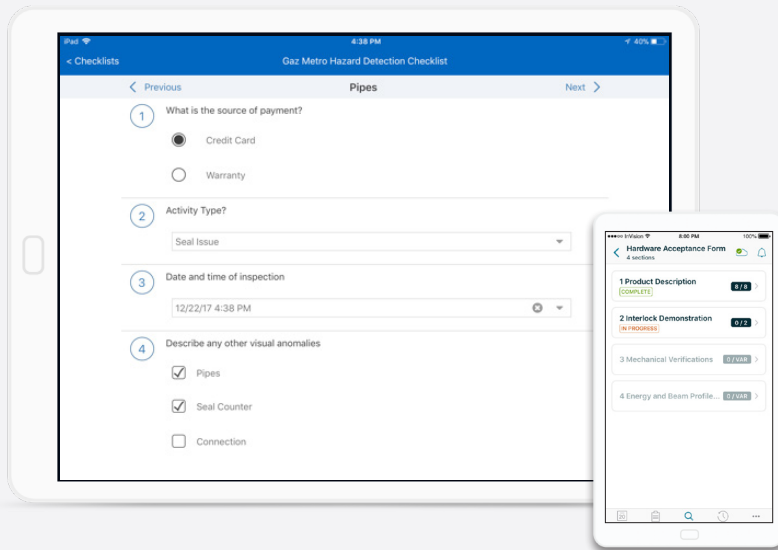


FIGURE 9

ServiceMax Mobile app

Technician fills in a safety and compliance mobile form per industry needs



After executing the service job, the technician can capture the work order resolution and additional details (even if there is no data network connection) in the mobile solution. The work order and inventory details can be fed back into the connected IoT platform to improve equipment maintenance strategies.

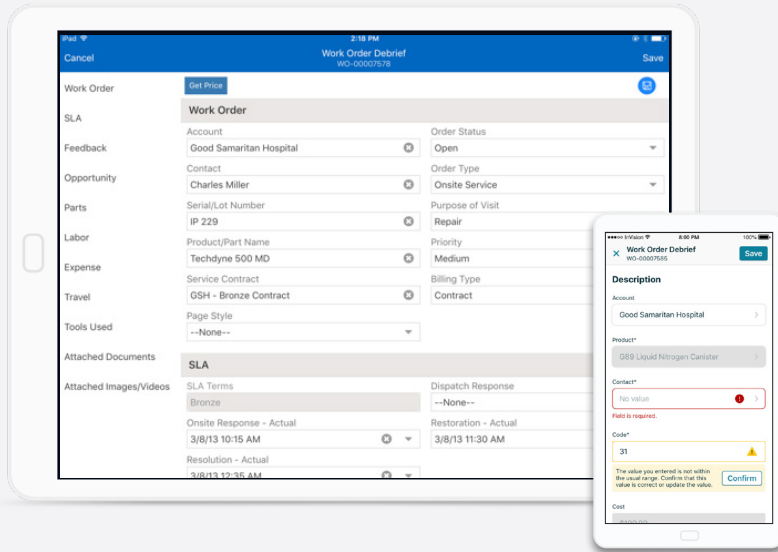


FIGURE 10

ServiceMax Mobile app

Technician records configuration details in the equipment record for future maintenance

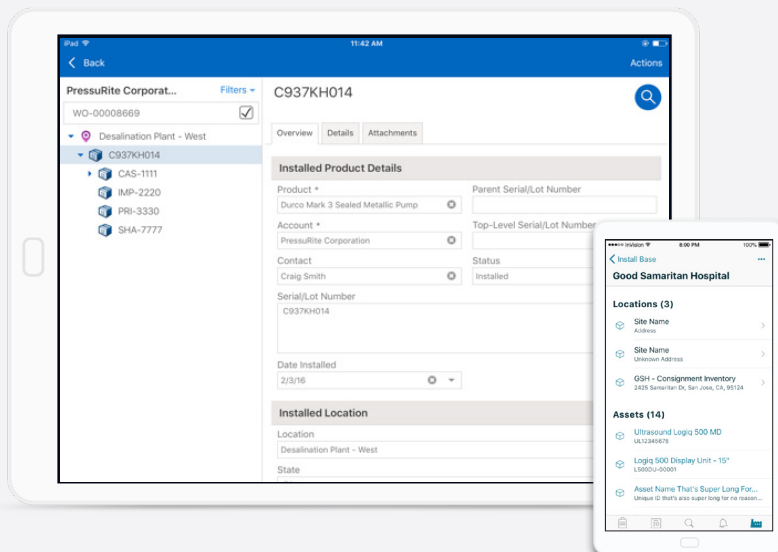


FIGURE 11

ServiceMax Mobile app

Technician records specific configuration details in the equipment record for future maintenance

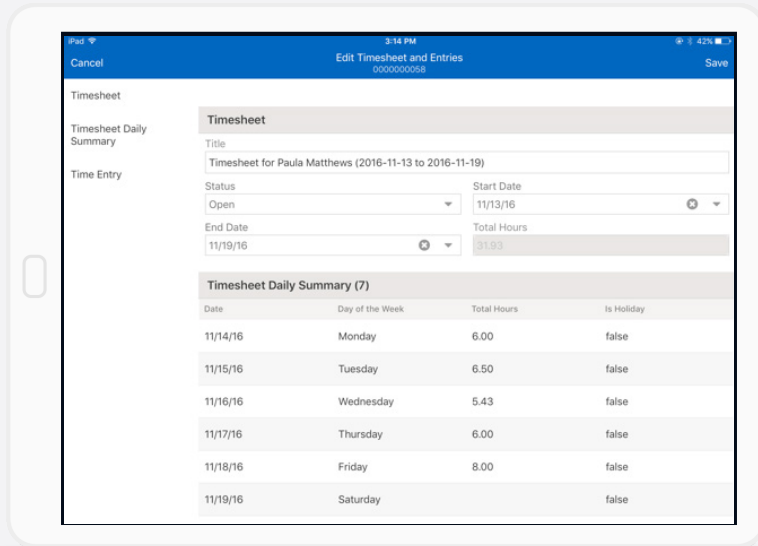


FIGURE 12

ServiceMax Mobile app

Technician's timesheets are automatically generated and sent to service manager for approval

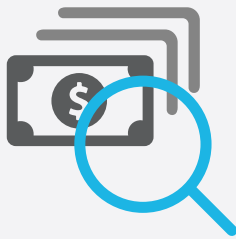
Since the mobile solution captures the timestamps of when the technician arrives on site, when the service was starts and when it ends, the system can automatically generate the timesheets and queue them up for the service manager to review.



CUSTOMER EXPERIENCE

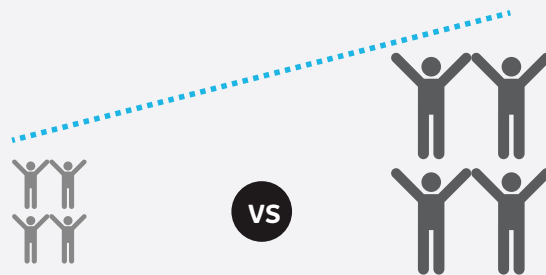
Customers are the lifeline of your business and so it is crucial to continuously improve service to the point that customers view service technicians as trusted advisors. It costs 4-5 times to acquire a customer than retain an existing one. The probability of selling to an existing customer is 60-70%, while the probability of selling to a new prospect is 5-20%⁶. Happy customers renew service contracts and also generate referrals, which is why more and more organizations are focusing on the Net Promoter Score, which indicates the level of customer satisfaction.

While customer experience is directly impacted by service efficiency, there are additional customer-centric capabilities that a field mobile solution can offer for service technicians.



4-5 TIMES

COST TO ACQUIRE A CUSTOMER THAN RETAIN AN EXISTING ONE



5-20%

PROBABILITY OF SELLING TO A NEW PROSPECT

60-70%

PROBABILITY OF SELLING TO AN EXISTING CUSTOMER

6- <https://www.sailthru.com/marketing-blog/written-customer-acquisition-vs-retention-infographic/>

One of the top complaints that customers have is that the technician doesn't have the right part for the job. Using the mobile solution, the technician can review the work order and the service history of the customer, ensure that he has the right part before reaching onsite, and offer a personalized customer experience by weaving in appropriate details from the customer's service history. He can also quickly locate a part and pick it up from a nearby technician or a depot with a mobile solution that shows nearby availability.

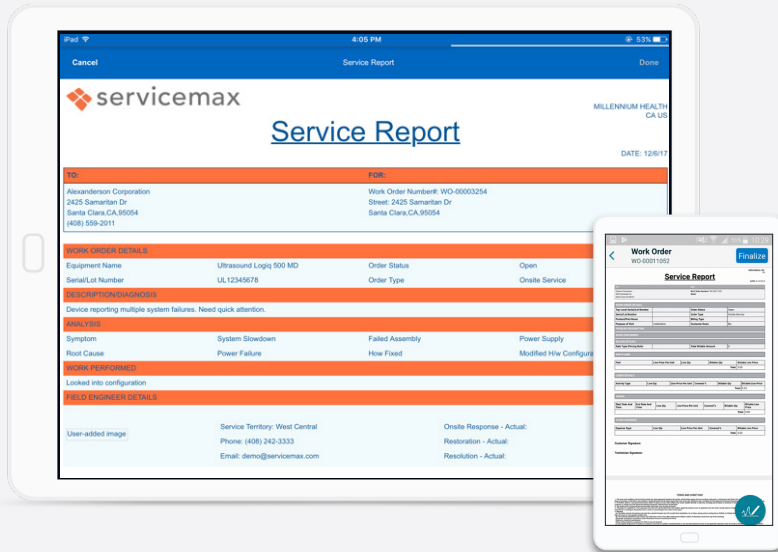


FIGURE 13

ServiceMax Mobile app

Technician generates a service report with breakup of billing for transparency, even if offline

If future service needs to be scheduled, the technician can create follow-up appointments using the mobile solution to ensure that the customer has a good experience. The technician can also capture the customer's feedback rightaway via a mobile survey form after the job has been completed.

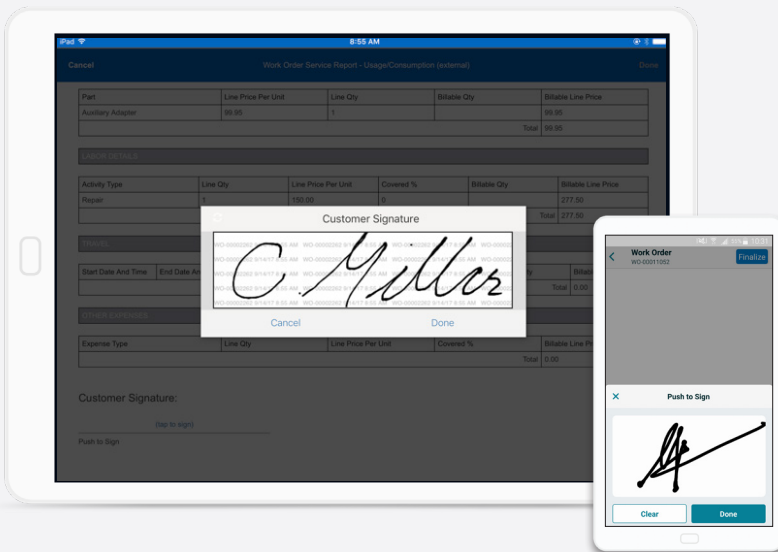


FIGURE 14

ServiceMax Mobile app

Technician captures customer signature in the service report to generate proforma invoice and avoid billing disputes later

Customers do not appreciate surprises in their bills. As mentioned earlier, when the technician generates the service report for the customer and gets his approval by capturing his signature, the customer knows exactly what to expect in the invoice later.

CONCLUSION

Mobility not only helps achieve, but accelerates field service business outcomes for KPIs like service profitability, efficiency gains, and customer experience. Thus, best-in-class service organizations make it a strategic priority to lead with a mobile strategy. Such leaders gain a significant lead in the market compared to followers. Given the span of key considerations and best practices involved for choosing a field service mobile solution, service managers should carefully evaluate the capabilities that each mobile solution would enable.

Choosing an industry leader and keeping the future needs of the customers in mind can ensure a competitive edge in a crowded industry. ServiceMax is such an industry leader per Gartner's Magic Quadrant for Field Service Management.

Visit <http://www.servicemax.com> today to schedule a personalized demo for your business needs.





About ServiceMax

ServiceMax, from GE Digital, leads the global industry of field service management software—an estimated \$25 billion market worldwide. The company creates solutions for the 20 million people globally who install, maintain, and repair machines across dozens of industries as the leading provider of complete end-to-end mobile and cloud-based technology for the sector.

About GE Digital

GE Digital is the leading software company for the Industrial Internet, reimagining industry's infrastructure by connecting software, apps and analytics to industrial businesses to drive a Predix-powered world. GE Digital creates software to design, build, operate and manage the entire asset lifecycle—enabling industrial businesses to operate faster, smarter and more efficiently. For more information, visit www.ge.com/digital.