



WHITEPAPER

How to navigate field service operations through a crisis



Throughout history, economies have dealt with and recovered from numerous crises. Luckily, the field services industry in general has always adapted, evolved, and recovered throughout different down periods. However, given the current crisis, most field service operations have already seen a reduction in demand and volume. The important takeaway during these turbulent times is that companies must turn to new technologies and practices that support increased utilization, optimized planning, and automation in order to survive on-going economical challenges and sustain healthy competition.

Likewise, it is more important than ever to understand how services are perceived from a client's perspective and how priorities change. Even during challenging times, organizations must be well equipped to provide excellent support, no matter what the circumstances are. Field service vendors should prioritize slimmer processes and create workflows to support their clients faster and offer more transparency.

Due to the increased practices of remote work, many companies are re-thinking their approach and policies to home offices as well. For a field service organization this won't necessarily have an impact on employees in administrative positions as many tasks can be performed remotely without affecting performance. But many field service organizations are facing phases of restructuring the existing working model for staff that is dispatched, like engineers or in house staff that manages a seamless workflow for the field staff.

While the implementation of new tools or adapted processes are always options to better navigate unforeseen situations, accommodating the customers' need is a top priority when external forces disrupt the usual way of working.



Introduction to Crisis Management in the Field Service Industry

The field services industry looks promising, as it is predicted to grow more than \$3.5 billion by 2021.¹ Currently, the scope of field services is broad and versatile. Field services are no longer focused on one industry, such as telecommunications; rather, it is wide-ranged and extensive with many industries including, but not limited to: IT, Delivery, Retail, Clean Energy. Each of these industries share a commonality. They all rely on internal or external technicians or engineers to deploy installations, conduct consultations, dispatch repairs and maintenance checks, and many other services and tasks.

Unfortunately, setbacks can happen. Economic downturns, pandemics, trade disputes, and natural disasters can always pose a threat. Crises like these have a severe impact on the service industry and the global economy as a whole. It can be catastrophic if measures are not taken seriously and quickly before and during the event of a crisis. When a crisis

escalates, operations can be compromised or stopped entirely.

Therefore, field service companies have to **prepare before a crisis happens**. Ramping up a crisis management plan is crucial to mitigate economic impact, maintain customer satisfaction, and uphold high standards of delivery and dispatching.

In this short overview, we'll investigate how field service companies can address a crisis by keeping their workforce and customers safe, establishing a governance and crisis committee, optimizing delivery resource management, and delegating what should be prioritized during a crisis. Additionally, there are several technologies that service companies could implement in order to not only minimize the economic effects, but possibly even thrive through difficult times.



¹ Field Service Management Market by Component - Global Forecast to 2024. MarketsandMarkets.
Retrieved April 20, 2020. <https://www.marketsandmarkets.com/PressReleases/field-service-management.asp>



01 How Do I Keep My Workforce Safe During a Crisis?

Companies can encounter a number of problems that would affect the well-being and safety of employees. For example, a large e-commerce and delivery provider has already placed new measures to protect employees from a recent public health crisis. Some new measures include: eliminating stand-up meetings during shifts in favor of signboards and text messages, adjusting break room tables and microwaves to allow for more space in between colleagues, reducing line congestion with clocking in and out, testing employees on-site, conducting trainings through social distancing, and conducting many activities online or remotely.²

02 How Do I Keep My Customers Safe?

Conversely, many customers have expressed concerns when dealing with deliveries and on-site technicians. Due to the current public health crisis, customers have canceled orders or stopped operations temporarily. In some cases, technicians have to sign a waiver, preventing them from working in certain locations. However, technicians who can work remotely on the job could address certain issues.

For example, Gary York, CEO of Help Lightning quotes that “one of his customers had a maintenance issue with a piece of equipment in Milan, Italy. Fortunately, they were able to use a virtual expertise tool to resolve the problem remotely, without sending a technician on site. Another customer, based in the US, still operates with his field service crew; however, they’ve re-engineered their field service support. Now, 70% of interventions don’t require a part to resolve a problem.”³

03 What Should a Crisis Committee Entail?

Every company should establish a crisis committee, especially in the field service industry. This committee would be responsible for making decisions, creating processes, and directing emergency operations. The benefits of a crisis committee is twofold. First, the decision-making body would hone the responsibility and accountability when a crisis happens. Second, the body would instill measures on how to handle different crises, which in return, raises the comfort level and trust of employees and customers.

A few examples could include installation tasks, repairing breakages, or inspections and preventive maintenance. Technicians should get access to training in a smart servicing tool that would show the worse case scenario or best case scenario. Ideally, the tool should show a workflow environment that instructs the implementation, easily guiding engineers through each intervention, even when done remotely.

² How We’re Taking Care of Amazon Employees During COVID-19. Amazon. (2020, March). Retrieved April 15. <https://blog.aboutamazon.com/company-news/how-amazon-prioritizes-health-and-safety-while-fulfilling-customer-orders>

³ Nicastro, Sarah. (Producer). (2020, March). Managing COVID-19’s Impact [Audio podcast] <https://www.futureoffieldservice.com/2020/04/15/panel-discussion-managing-covid-19s-impact/>.

04 What Kind of Resources Are Important Now?

In a crisis, it's equally important for companies to decide how to optimize their resources. Making sure that there are enough technicians available, and at the appropriate capacity, is essential as well as inventory in the warehouses, vehicles, and equipment needed. However, it's often easier said than done.

Investing in a smart field service solution that has machine learning capabilities, can help streamline operations more efficiently and accurately, possibly even minimizing face to face contact (think a better grouping of appointments to limit exposure).

05 What Deliveries and Services Should I Prioritize?

Last but not least, it's necessary for companies to decide what the real priorities are during a crisis. Depending on the type of crisis, customers who have an emergency come first. Essential items and emergency repairs for hospitals, medical device support, food production or energy providers are just a few examples of high-priority customers.

Let's find out how different field services industries are embracing new technologies in detail. If companies implement these technologies now, they'll be better prepared for the future.



What the Future of Field Services Looks Like

The future of field services looks bright thanks to new technologies and practices. But each company's future depends on how fast they are willing to adopt new technologies and practices. The companies that lag behind will suffer the most severe economic and environmental consequences when a crisis erupts. Here are a few technologies and practices worth mentioning.

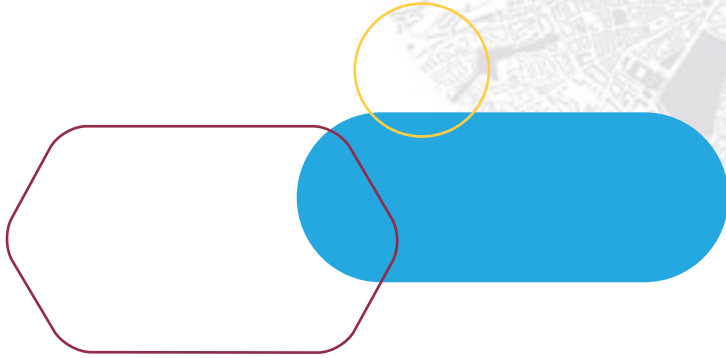
01 Zero Touch Services

Zero-touch services are not so far reaching and futuristic as pop culture portrays them to be. It's already happening today and sometimes we don't even notice it. Some examples of zero-touch services include fast food restaurants offering touch screen ordering, retailers offering pick-up lockers, grocery stores offering self-checkout kiosks and mobile ordering, and IT companies offering Internet of Things (IoT) repairs for routers and cable boxes.

On the contrary, according to Gartner, "In 2017, zero-touch service was only utilized in about 1 percent of organizations. In 2019, only 15 percent of service firms have indicated that they are utilizing zero-touch in some capacity."⁴ There has been a slight increase in zero-touch services in 2020, although given the new circumstances, zero touch services can be expected to grow during the next month and years.

Zero-touch services also vary by industry. For example, this is an IT scenario: a customer initiates a repair call. The service company receives the order through a ticket and identifies the problem using AI or other algorithms. Rather than dispatching a technician to the customer's site, a software could give instructions about the repair through augmented reality tools or self-servicing IoT to an end user.





02 Artificial Intelligence (AI), Machine Learning and Highly Automated Features

As each year passes, AI, machine learning and automated features have become more sophisticated and can be applied to increase efficiency in numerous situations. In the field service industry, scheduling and changing routes is an essential part of the job. Sophisticated automated processes can sort through route planning based on real-time data. When a crisis occurs, it's especially important to have an agile system that can adjust to unexpected setbacks, like travel restrictions, lost engineers on the field, and so forth.

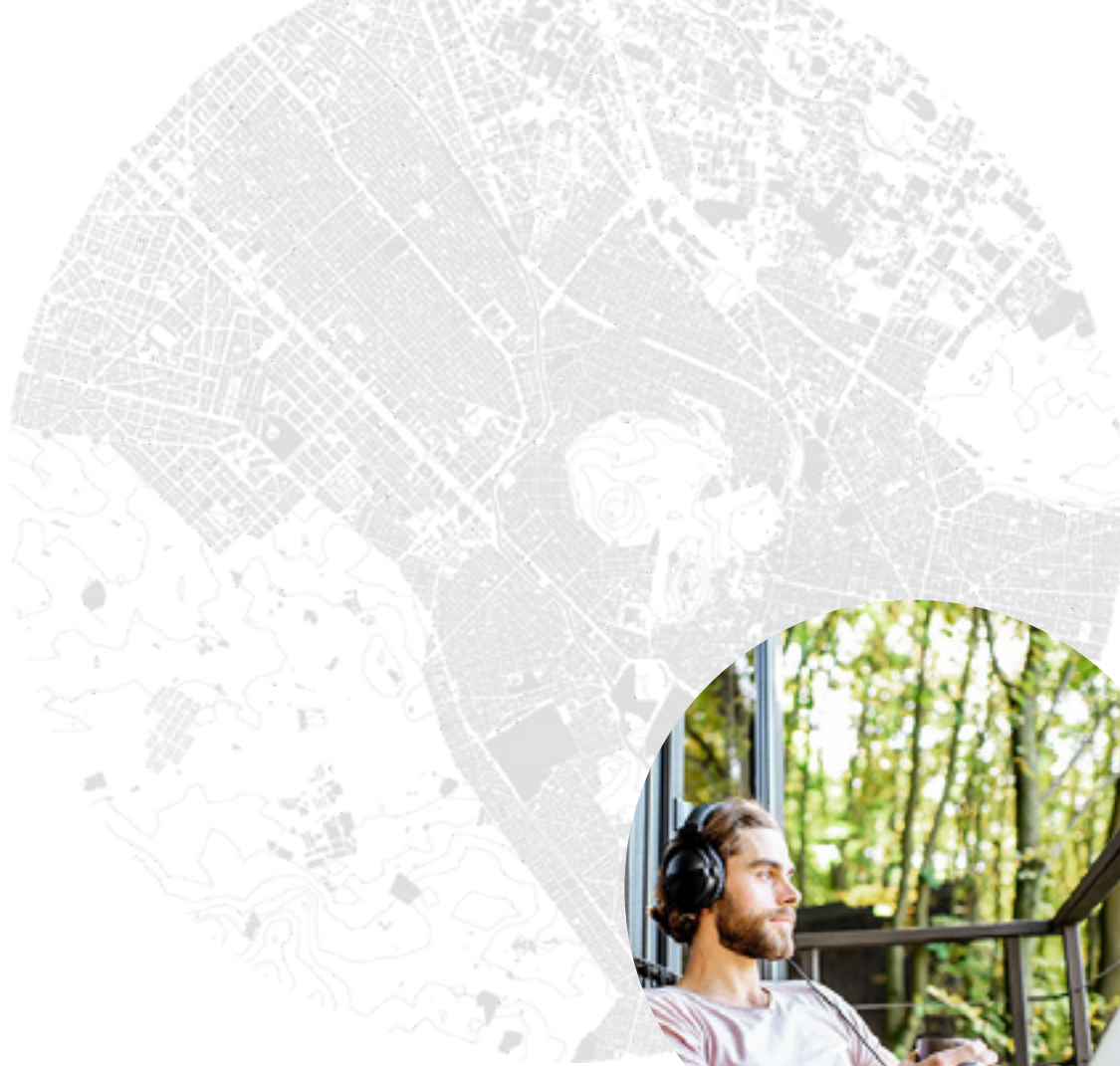
The more optimized and agile a system is, the better you can manage parts, locations, expertise, and customer accounts. Machine learning tools can help prevent human errors from happening by detecting possible causes for accidents in advance through satellite GPS, saving gas along route guidance, and ticket re-routing in case of cancellations. Machine learning tools can also automate inspection activities such as detecting damaged collateral, missing barcode labels, or incoming stock.

AI has also been used in visual computing and surveying for oddly shaped parts in assembly lines.

Overall, the use cases of AI in field services are extensive. Reduced manual work enables human administrators to focus on predictive analysis and more important data driven strategic decisions. However, the amount of companies that actually apply AI is still very low. According to Gartner research, in 2022, only 30% of field service providers will be ready to deploy AI in their field service management platforms.⁵




⁵ Magic Quadrant for Field Service Management. (2019, April). Gartner. Retrieved April 20, 2020. <https://www.gartner.com/doc/reprints?id=1-6CAOI2N&ct=190308&st=sb>



03 Remote Work and Virtual Assistance

Like zero touch services, remote work or virtual assistance are similar. The only difference is that a human is always involved and readily available through a virtual environment or remotely online. In a classic IT example, a customer could call their internet provider about a problem with the connection in their internet installation. Rather than sending a technician to the house, the technician access the computer remotely, and assist the customer using the phone.

Martin Gilday, Senior Consultant at Noventum suggests to, “identify 2-3 field experts, make them remote temporarily [during a crisis], divert customers calls to them, and have the engineers address problems on the phone. [Engineers can] prepare a customer checklist for the company’s employees. Perhaps the employee can diagnose the fault, and already have a technician in house to work and assist in solving the issue.”⁶

A photograph of two men in a grassy field. The man on the left is wearing a white t-shirt and a khaki cap with 'RHINO FORCE' on it. The man on the right is wearing a white t-shirt with 'fieldcoe' on it. They are both looking down at a small tree sapling that is being planted in a hole. The sapling is in a black plastic bag. The background shows trees and a clear sky.

It would be an understatement to say climate change is a crisis. Field service technicians require a lot of on-site maintenance, repairs and installations. Driving takes a toll on our environment through the expense of CO₂ emissions. Transforming the way in which field service affects our environment will become more and more relevant for many companies. While there are different options to support a cleaner environment through field service, like automated route planning to save on emissions, there are also other options available like additional compensation for each event that takes place. The future will clearly become a playground for companies to compete in various ways to reduce and eliminate CO₂ emissions cause by field service events.

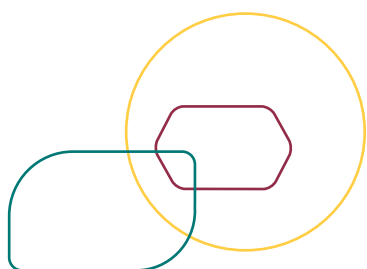


Technologies That Different Field Service Industries Can Adopt In Times Of Crisis

Information Technology (IT) and Augmented Reality (AR)

Augmented reality (AR) is a fascinating technological trend that will strongly influence and change the IT landscape. AR could be used in a wide range of scenarios, especially regarding emergencies, in case a technician isn't available to go on-site.

For example, a customer calls for a repair and the customer agent opens an event. The technician then is assigned and picks up the part that needs to be replaced based on a combination of IoT data and visual inspection. Rather than the technician going on site, the customer could take over the technician task himself following the repair instructions via the augmented reality array. It could be done live, from the technician, or it could be prerecorded and validated using the AR screen.⁸



Delivery & Last Mile Services

Delivery services have drastically changed in the last five years. Gina Chung, Vice President Innovation Americas at DHL has mentioned that DHL has already implemented robotics for a variety of tasks.⁹ They've been deployed in variety of different applications and warehousing environments. Some of the robots are programmed to understand the layout of the warehouse and what obstacles might interrupt the routes. Also, autonomous robots have assisted with picking in warehouses and they even have been able to compensate employees' work given a crisis.

Additionally, the Internet of Things (IoT) has been a major game changer in delivery services. Smart servicing technologies with IoT can track shipping in real time, monitor temperature of goods in transit, localize assets that are difficult to find or connect shipments with sensors or networks. In recent years, the costs have dropped for connectivity and sensors. Some service companies are also giving technicians mobile and wearable devices for GPS tracking, telematics, equipment work history, service collaboration, and customer communication.

Last-mile delivery has also seen a radical shift in engaging customer-first practices and expectations. Delivery services are offering kiosks, lockers, same-day delivery, drones, and so much more¹⁰. Sustainable supply chains have shifted also in response to climate changes. Alternative, eco-friendly packaging practices that replace plastic, electric battery-operated vehicles, and route optimization to reduce the carbon footprint are some of the many initiatives that delivery companies are utilizing.

⁸ Paquin, Tom. (2019, May). Managing the March Towards Zero Touch Service. IFS. Retrieved April 11, 2020. <https://blog.ifs.com/2019/05/managing-the-march-towards-zero-touch-service/>

⁹ Nicastro, Sarah. (Producer). (2020, March). DHL's Approach to Innovation [Audio podcast] <https://www.futureoffieldservice.com/2020/04/01/dhls-approach-to-innovation/>.



Conclusion

We have researched a multitude of different practices, resources, and technologies that can help businesses sustain operations during and after a crisis. With the right tools, field service companies can deliver excellent customer experiences, increase productivity, improve efficiency, manage workloads, and work through tough times by being better prepared for the future.

¹⁰ Paquin, Tom. (2020, April) The Three Phases of Zero Touch Services Today, Tomorrow, and Years from Now. Future of Field Service. Retrieved April 15, 2020. <https://www.futureoffieldservice.com/2020/04/06/the-three-phases-of-zero-touch-service-today-tomorrow-and-years-from-now/>