

Uptime as a Service:

Driving Service Excellence, Cost Reduction, and Growth in the New Normal

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Technology trends have made it possible for companies of all sizes to deliver on the promise of connected, proactive service through the concept of an Uptime-as-a-Service software solution.

Executive Summary

In this whitepaper, we explore the trends that have shaped the current state of the field service industry. Referencing survey results from a joint report by Field Service News and FieldAware titled ***Benchmarking the New Normal from Year Zero***, we consider how these trends impact the implementation of best practices by Field Service Organizations (FSOs). Foremost among these trends is adopting selected best practices by FSOs to address the pandemic's realities. For example, remote support, IoT, and uber-like communications.

During the pandemic, FSOs embraced these concepts as a matter of survival. To some extent, these solutions were cobbled together very quickly, partially or in full, to meet the urgent demands of their customer base. Observing the value these solutions bring, FSOs are now challenged to fully adopt and scale these best practices to keep pace with the "new normal" expectation of the market. To that extent, there is an obvious gap between the have's and have nots when it comes to meeting these expectations.

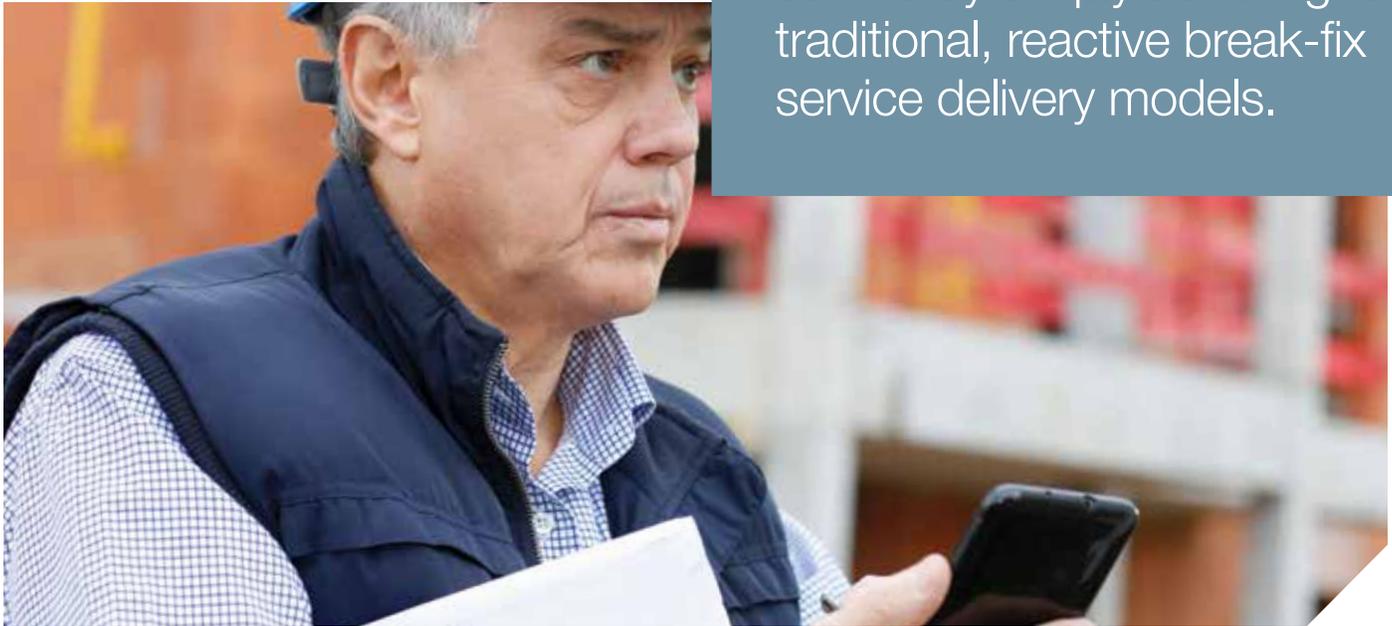
To differentiate themselves and gain a competitive advantage, FSOs are adopting new strategic initiatives focused on cost reduction, growth, and service excellence. FSOs are turning to technology-based solutions to achieve this outcome. The highest priority on this list of initiatives is delivering a connected, proactive service experience. This type of solution provides the infrastructure necessary to continuously meet or exceed customer expectations, resolve calls remotely, eliminate truck rolls, and generate new revenue sources. In other words, it is one of a few types of technology solutions available to FSO that achieve the objectives of service excellence, cost reduction, and growth in terms of both service revenue and scalability.

FSOs must have an optimal service delivery infrastructure in place to meet these objectives. The optimal solution has several components. The first is the ability to deliver a Hybrid-Service-Delivery model consisting of on-site and remote service. The second is the capability for remote monitoring and resolution. The solution must also be highly flexible and configurable, leverage key data sources regardless of location, and include automated workflows and processes for maximum efficiency. Until now, this technology had not been easily accessible by SMB and mid-sized FSOs due to the cost and complexity.

Fortunately, technology trends have now made it possible for these companies to deliver on the promise of connected, proactive service through the concept of an Uptime-as-a-Service solution. This solution offers many benefits, which will be highlighted through a customer case study.



Yesterday's Best Practice is Now the New Normal



Field Service Organizations have realized that they can no longer survive by simply adhering to traditional, reactive break-fix service delivery models.

Recent market research reveals...

26.7 billion

IoT devices reached in 2019¹

300%

increase in just one year¹

31 billion

Estimation on IoT devices by 2020²

127

New IoT devices are connected to the web every second²

The Impetus for Change

Something remarkable has happened to the field service industry with the outbreak of the COVID-19 pandemic. Lockdowns, social distancing, and quarantine have forced Field Service Organizations (FSOs) of all types and sizes to rethink how they deliver services. COVID-19 has limited the ability of FSOs to provide on-site, face-to-face service 100% of the time. As a result, FSOs needed to implement new processes and procedures to ensure their employees' and customers' health and safety. This took the form of increased biosecurity measures, advanced communications and tracking to reduce contact, remote triage and troubleshooting to limit on-site service, and new workforce

management and tracking procedures to assist with contact tracking.

These developments have led to the rapid emergence of a Hybrid-Service-Delivery model. This model, fueled by remote monitoring and IoT technology, enables FSOs to resolve a significant amount of service issues remotely through enhanced triage and troubleshooting capabilities while improving technicians' ability to quickly resolve on-site service issues, if and when an on-site dispatch is needed.

The ability to offer and deliver this type of proactive, connected, and remote service, which had once been the domain of best practice companies, has become the new normal expectation for FSOs of

all sizes. COVID-19 has become the impetus for this transition as customers also demand proactive and priority service from their FSOs. COVID-19 may have been the catalyst for rapid change, but the foundation for these offerings has been building for many years. While FSOs may have had many of the building blocks in place, COVID-19 forced FSOs to quickly adopt and apply those building blocks as a matter of survival in the new COVID-driven operating model. A recent study by Field Service News reveals that 67% of respondent companies surveyed have implemented these solutions because of COVID-19. The challenge among FSO industry participants is to systematize and scale these capabilities and provide access to organizations of all sizes.

Macro Environmental Trends

Although COVID-19 is probably the single most significant factor accelerating the move to new service delivery models, a few other factors have led to the shift. The first is that IoT connectivity has become ubiquitous. As of 2019, the number of IoT devices reached 26.7 billion, up from only 7 billion in 2018, a 300% increase in just one year.¹ In 2020, experts estimated this number would reach 31 billion.² It is also estimated that every second, 127 new IoT devices are connected to the web.³

The second factor driving the move toward connected service is Moore's Law, which states that computer processing capacity

doubles every two years while the cost of this processing price halves at the same pace. Moore's law has resulted in the proliferation of IoT devices, cloud computing, and Wi-Fi networks. These technologies provide a low cost, highly efficient, and simple infrastructure for delivering remote service. Before the availability of these technologies, remote services were a costly and complex proposition.

A third factor influencing the field service industry is the trend towards Servitization. This term

refers to the transformational process that product vendors go through as they generate a greater percentage of their revenue from providing services rather than products. For example, they provide subscription-based, pay-per-use services instead of the outright sales of a piece of equipment. According to Forrester Research, approximately one-third of all product companies will be service businesses in the next five (5) years.

1: <https://securitytoday.com/Articles/2020/01/13/The-IoT-Rundown-for-2020.aspx?Page=2>

2: Forrester Consulting Study, From Grease To Code: What Drives Digital Service Transformation



Service revenue growth requires Field Service Organizations to rethink their offerings and find new and better ways to meet customer requirements.



Implications

These trends have created ripe conditions for the field service industry to evolve rapidly and mature. As digitalization continues and becomes widespread, and several best practices have become the new expected normal, FSOs are searching for new ways to cost-effectively differentiate, deliver value, and gain a competitive advantage. Conversations within organizations are no longer focused only on providing service excellence but on how to thrive and remain relevant to customers.

As part of survival from the pandemic, FSOs recognize that one way they can achieve this result is through cost reduction. Indeed, 78% of respondents surveyed by Field Service News indicate their companies are under pressure to reduce service costs. By reducing costs, particularly if achieved through systemic or process improvements, FSOs become more efficient and can do more with less. This is required as the field service industry is facing a labor shortage. Of course, FSOs

can also pass the savings on to their customers in the form of better pricing or better service. In other words, they can afford to invest their savings in new and improved service offerings.

Forward-thinking FSOs are looking for ways to thrive post-COVID, which leads us to the second initiative -- growth. By focusing on service revenue growth, FSOs can deliver more value and remain relevant to customers. Growth requires FSOs to rethink their service offerings, find new and better ways to meet customer requirements, and monetize that experience. The Servitization trend is also playing a critical role in facilitating growth. However, the new normal realities are pushing FSOs to consider growth objectives as part of their near term and short-term business strategies. The focus of the majority (76%)

A recent study by Field Service News revealed..

78%

of respondents felt their companies are under pressure to reduce service costs

76%

of FSOs are focusing on growth rather than survival over the next 12 months

70%

of FSOs believe the pandemic has not changed the importance of service excellence

76%

believed remote services represent a means of generating new sources of revenue

39%

think there is equal value in a hybrid approach involving both on-site and remote services

of FSOs is on growth rather than the survival over the next 12 months, as evidenced by the research from Field Service News.

Nevertheless, striving for service excellence remains an essential objective for FSOs to achieve. The ability to consistently meet and occasionally even exceed customers' expectations through exceptional service delivery is the most frequently mentioned differentiator by 39% of FSOs surveyed by Field Service News.

The majority (70%) of FSOs surveyed believe the pandemic has not changed the importance of service excellence as a key differentiator for winning and retaining business.

If anything, the pandemic may have emphasized the importance of service excellence. Although service excellence may involve costs, the investment in it can produce huge dividends in increased customer loyalty and repeat business.

These three objectives of cost reduction, revenue growth, and service excellence can be met by leveraging and monetizing service-centric technology investments. It has become abundantly clear during the pandemic that one of the ways that FSOs can meet these objectives is through the provision of remote service. Three-quarters of the respondents surveyed indicate that they currently offer remote service. Two-thirds indicated they implemented these tools because of COVID-19, yet only 17% view remote services as a tool for

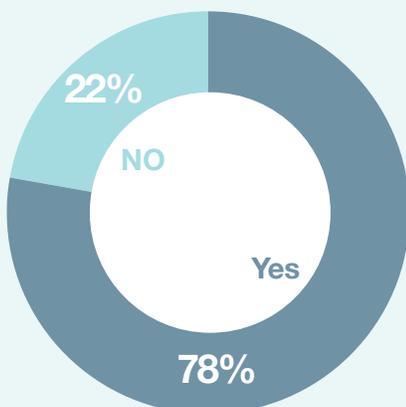
working around the restriction, even though that may have been the impetus for change. The view among most respondents (76%) is that remote services represent a means of generating new sources of revenue. While implemented out of necessity, FSOs are now seeing remote service as a new means for driving additional growth and differentiation.

There are, of course, some trade-offs when it comes to remote service. The most obvious is the loss of human connection. This opinion is supported by almost one-half (48%) of respondents surveyed. Only 13% think there is greater value in remote service, while 39% think there is equal value in a hybrid approach involving both on-site and remote services.

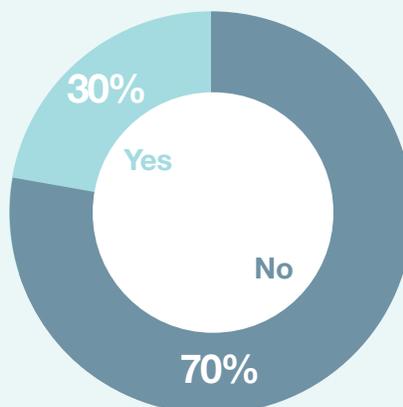
It is this hybrid approach that we believe most FSOs will adopt moving forward.

Perhaps less obvious is the fact, remote service can become time-consuming and reactive if it is not implemented in conjunction with remote monitoring tools. The goal then is to deliver proactive service through a Hybrid-Service-Delivery model. In this model, remote service is the first line of defense to limit on-site visits. Also, lower priority and predictive work can be best managed remotely. In contrast, on-site dispatch is given to higher-priority and labor-intensive work that can only be completed on-site.

Are you under pressure to reduce your service costs or increase the services provided within the same?



Service excellence has historically been a key differentiator for winning and retaining business. Do you think the pandemic has changed this?



Service Solution Requirement:

Uptime-as-a-Service is a business model that FSOs have been striving to deliver for many years.



Proactive Service at the Core of Service Value Creation

Proactive service is another area where FSOs can optimize and maximize their service excellence goals, cost reduction, and revenue growth. It is a service model that FSOs have been striving to reach for many years. Only one-third of respondents were able to deliver a fully proactive service experience before the pandemic. Most offered only reactive or a combination of reactive and proactive. However, 77% are considering offering advanced services, which include proactive offerings (e.g., outcome-as-a-service, pay-per-use, etc.), in the future, and an overwhelming majority (93%) state that these offerings will become more attractive post-COVID-19.

At the core of proactive service is capturing and monitoring data from assets in the field. By collecting, monitoring, and analyzing this data, FSOs can anticipate future service events and reduce face-to-face on-site visits. As a result, they become more effective in planning and managing resources (e.g., spare parts, manpower, schedules, etc.), leading to efficiency and productivity gains. They can also take the appropriate preventive actions to resolve problems, often remotely, before they occur which extends the life of their customer's equipment. Lastly, they can generate new sources of revenue through an Uptime-as-a-Service (UtaaS) offering.

To provide UtaaS, FSOs must have a few basic building blocks in place including, but not limited to:

- Capability to read data from assets in the field
- Ability to read data in real-time
- Ability to utilize the data as part of a triage process for identifying faults and guiding the best route for issue resolution
- Automation of the workflows and processes to activate service
- Accessibility to organizations of all sizes

These building blocks present a challenge for a significant segment of the field service industry. Although three-quarters (76%) of respondents can read data from assets in the field, only two-thirds can view it in real-time. This means that only 51% of respondents have this combined capability. While 72% can utilize the data as part of the triage process, slightly more than one-third (36%) possess all three capabilities. In other words, there is a large gap in capabilities between FSOs who have fully enabled UtaaS solutions in place and those who don't. Only a small segment of the market has all the building blocks and can deliver a complete Hybrid-Service-Delivery experience.

The capability to utilize real-time equipment data in the triage process is only part of the equation for delivering UtaaS. FSOs also need to be able to monitor the data in real-time using IoT connectivity. FSOs must create standard workflows based on the data. For example, alerts or notifications trigger a work order, dispatch, or parts shipment when an issue is detected. Ideally, they'll want to implement some degree of automation to their IoT workflows. It's these capabilities that define UtaaS.

Research suggests that IoT and remote monitoring capabilities, a component of UtaaS, are highest among enterprise-sized companies. A majority (79%) of respondents

from these companies indicate they have implemented this capability within their fleet. Penetration rates are somewhat lower among SMB and mid-sized companies, with 42% and 50% reporting this capability, respectively.

The trend of FSOs is to ensure their entire install base is IoT enabled and capable of providing data. At present, 63% of respondents indicate that 51% or more of their install base meets this standard. Just because the install base has IoT connectivity doesn't mean they are using the data effectively. Only 21% of respondents indicate they are using data effectively. Most (43%) indicate they are using data effectively, but it requires improvement. Approximately one-third (34%) admit they are not using asset data effectively. The implication is that FSOs who have deployed IoT effectively are in the minority. However, those who have not will continue to mature in their adoption to meet industry norms and expectations.



A recent study by Field Service News revealed..

77% are considering advanced services, including proactive offerings in the future

93% feel these offerings will become more attractive post-COVID-19

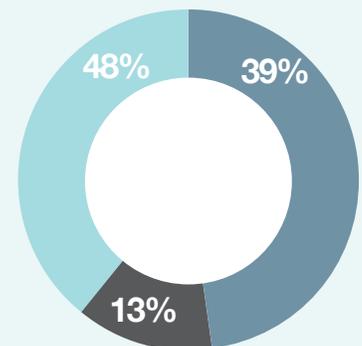
76% can read data from assets in the field, only two-thirds can view it in real-time

51% of respondents have this combined capability

72% can utilize the data as part of the triage process

36% possess all three capabilities

Do you think that customers will still perceive a greater value in a face to face service engineer call than remote services after recovery?



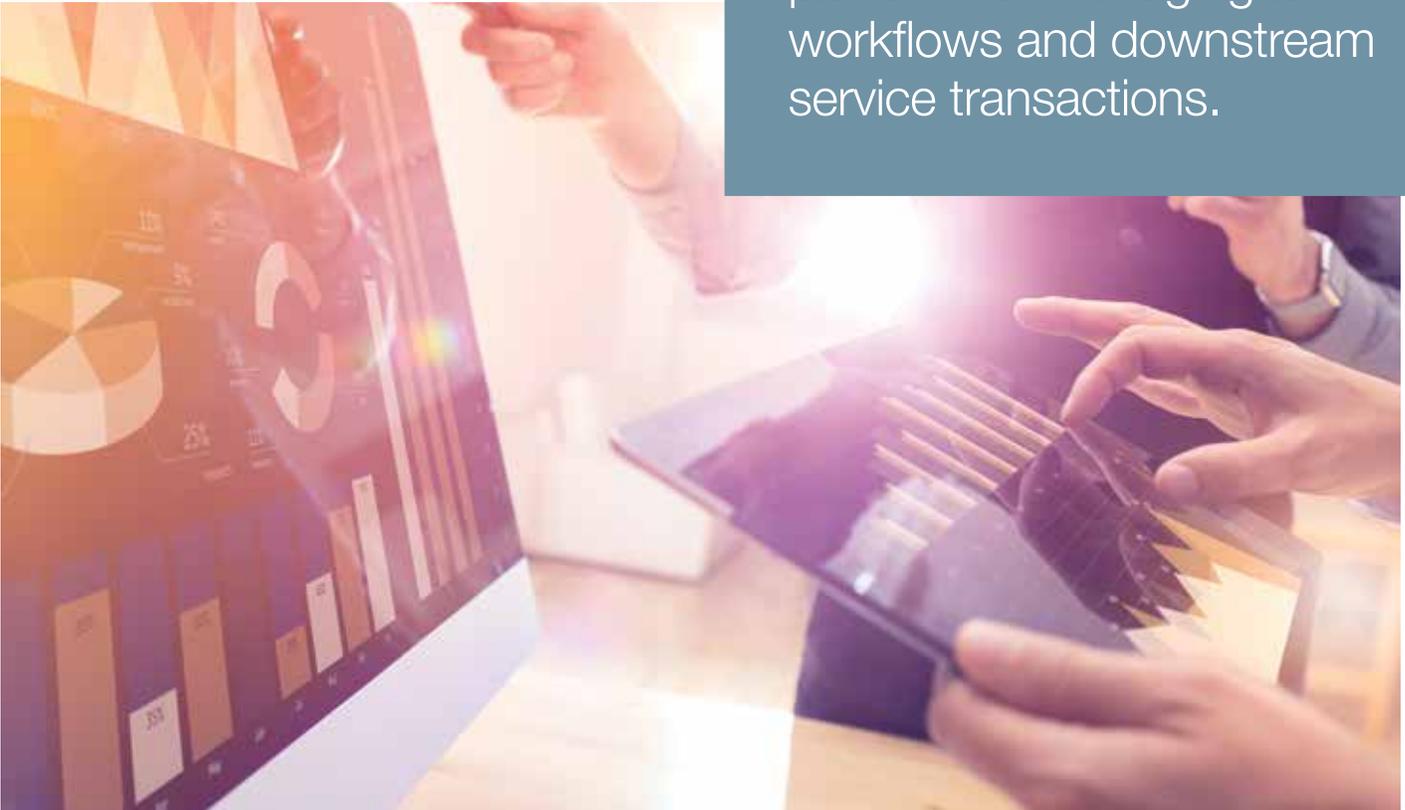
Greater value in face to face engagement: 48%

Greater value in remote services: 13%

Equal value in both: 39%

Technology Solution Requirements

At the core of an Uptime-as-a-Service solution is a software platform for managing IoT workflows and downstream service transactions.



An Optimal Infrastructure is Necessary

Until recently, only enterprise-sized companies have been able to build UtaaS powered infrastructures. The technology was expensive, and plenty of professional services were required to design, implement, and configure these solutions. Integration with other back-office systems was often required. As a result, IoT enabled solutions were beyond the reach of SMBs and mid-sized companies. The fact that system integrators, consultants, and software vendors optimized their sales efforts and

offerings toward the higher end of the market didn't help either.

Fortunately, Moore's Law combined, with cloud computing and advancements in telemetry, have made it possible for SMB and mid-sized companies to implement many of the foundational components for UtaaS solutions in recent years. The technology has become more affordable, easier, and efficient to deploy. It also helps that software vendors have made a strategic decision to target these mid-market participants.

FieldAware, a developer of Field Service Management software, and ThingTech, a supplier of IoT-based asset management solutions, are two such vendors who have teamed up to leverage the investments many FSOs have made in remote monitoring infrastructure to deliver UtaaS solutions to organizations of all sizes. Their combined solution provides a perspective of what to look for in a best-in-breed, UtaaS solution.

Field Service Hub

At the core of any UtaaS solution is a software platform for managing IoT workflows and downstream service transactions (e.g., dispatch, work orders, etc.). FieldAware's purpose-built, SaaS-based, field service automaton hub serves as this platform. The hub-based system architecture offers several unique features including, but limited to:

- A highly configurable solution to quickly adapt to workflows
- Pre-built connectors to 3rd party applications that provide seamless integration
- Deep integration to extend technology already in use
- Simple, intuitive mobile apps that lead to quicker adoption
- Enterprise-level features and capabilities that efficiently scale (e.g., digital forms, schedule optimization, work order management, etc.).

Unlike other FSM solutions built on top of existing CRM or ERP platforms, which limit the ability to incorporate new processes that were not originally designed into the application, FieldAware's purpose-built platform can support the evolving workflows and functional requirements involved in the digital transformation necessary for delivering the proactive, connected, service experience at the heart of UtaaS.

IoT Connectivity

Critical to the UtaaS platform is the capability for IoT connectivity and integration with FSM software. That's where ThingTech plays a role. The company provides an intelligent, scalable, end-to-end solution that provides all the components (i.e., data, connectivity, and processes) needed to monitor and manage assets in real-time. ThingTech's feature functionality includes capabilities for:



- **Instant data capture:** Monitors install base (IB) conditions (e.g., temperature) and send alerts when anomalies are detected, enabling FSOs to adjust and fix issues remotely.



- **Maintenance management:** Provide up-to-the-minute business intelligence on machine utilization, performance, and diagnostic data.



- **Visualization & mapping:** Map the location of each asset and obtain geographic context instantly.



- **Theft & loss protection:** GPS technology, bread crumb tracking, and instant alerts help locate and recover high- and low-value assets.



- **Remediation & documentation:** Provides an audit trail of assets and provides a full lifecycle view of what's gone on with every asset under management.

The combined UtaaS solution from FieldAware and ThingTech enables companies to gather data from any asset type in the field. The data is processed in real-time and produces alerts, reports, and notifications based on user-configured rules and workflows. Based on these rules and workflows, automation within the FieldAware service hub triggers the appropriate action. For example, submit a work order, dispatch a technician, or schedule a preventative maintenance visit. Once the service event is completed, the technician can document his actions and update the system through the native FieldAware app on his mobile device.



A Customer Success story

By leveraging technology, M.E.S.O. is able to provide its customers with a predictive and proactive solution that increases uptime, reduces maintenance and repair expenditures, and extends the equipment lifecycle.

Uptime-as-a-Service in Action

Since its founding in 2014, M.E.S.O. Inc. saw the need to provide its customers with a proactive, connected service solution. They viewed this capability as core to their business and have made it part of their value proposition. By way of background, M.E.S.O. provides fleet maintenance services on a broad array of capital intensive, mobile equipment found within the Construction, Oil & Gas, Industrial Facility, Trucking, and Utilities industries.

M.E.S.O. deals with a customer base that maintains a very location-fluid fleet of equipment. With the equipment moving so frequently, it is difficult to remain efficient when scheduling work orders. While service visits can be scheduled in advance, there is no guaranty that the asset will be available when the technician arrives. It may have moved to a different location resulting in the need to either reschedule the visit or reroute the technician.

Besides dealing with lost productivity, M.E.S.O. faced the time-consuming task of capturing an enormous amount of data on their customers' equipment. Factors like environmental conditions, current health status, frequency of use,

and length of use all impact equipment lifespan, failure rates, and maintenance requirements. It was a daunting task for M.E.S.O. to maintain this data manually.

M.E.S.O. needed a solution that could provide a line-of-sight to the assets in the field, facilitate high levels of technician efficiency and productivity, and streamline back-office operations. M.E.S.O. achieved these outcomes through the service hub and IoT solution supplied by FieldAware and ThingTech. By leveraging this technology, M.E.S.O. can provide its customers with a predictive and proactive solution that increases uptime, reduces maintenance and repair expenditures, and extends the equipment lifecycle. This solution also saves M.E.S.O. an enormous amount of time. Backoffice productivity has improved by a factor of five.

The decision to provide Uptime-as-a-Service and invest in the technology from FieldAware and ThingTech has had positive results for M.E.S.O. The management team views it as a huge competitive advantage, and it plays a central role in the company's sales & marketing message.

“M.E.S.O. is anticipating substantial growth in 2021. This would not have been possible without FieldAware and ThingTech”, notes Chris Britt, M.E.S.O.'s CEO.



Uptime-as-a-Service provides FSO with the ability to improve efficiency and generate new sources of revenue which help differentiate themselves and gain a competitive advantage.



Summary & Key Take Away

To keep pace with “new normal” expectations that have emerged from COVID-19, field service organizations have begun to adopt several best practices. One of these best practices is the concept of a Hybrid-Service-Delivery model where the decision to deliver remote service or on-site service is determined based on pre-defined business rules. Restrictions imposed by COVID-19 concerning when and how on-site service could be delivered forced FSOs to implement these types of solutions out of sheer necessity.

While a few leading FSOs had hybrid models in place before the pandemic, many had to quickly cobble these solutions together to meet customer’s urgent requirements for service. The challenge for FSOs, as we emerge from COVID-19, is to adopt and scale these solutions fully.

As more and more FSOs progress in their maturity level with implementing Hybrid-Service-Delivery models, they will need to find new ways of differentiating themselves. Until now, the pursuit of service

excellence has been a primary objective pursued by most FSOs. However, this outcome has become a new normal expectation. To differentiate themselves and gain a competitive advantage in the new normal, FSOs will increasingly look for ways to achieve cost reduction and growth. This can be achieved through technology that can, on the one hand, streamline and improve service delivery processes, and on the other, be monetized to produce profitable, recurring revenue streams.

One such example is a proactive, connected service that supports the Hybrid-Service-Delivery model.

Servitization, Moore's Law, and COVID-19 have created the conditions for proactive, connected service, a capability that FSOs have been attempting to deliver for many years. This type of solution wasn't accessible to SMB and mid-sized companies until recently due to the cost and complexity. However, these factors have improved significantly in favor of this segment of the market due to advancements in cloud computing and the adoption of IoT technology.

FieldAware and ThingTech have jointly developed an Uptime-as-a-Service (UtaaS) solution that provides FSOs of all sizes with an innovative, modern platform. The solution connects assets in the field, captures and monitors real-time data, processes IoT workflows, and manages downstream service transactions, all of which are standard requirements for delivering proactive, connected service.

By implementing this solution, M.E.S.O., a customer of FieldAware and ThingTech, realized significant improvements in operating efficiency and workforce productivity. More importantly, it has allowed M.E.S.O. to deliver a proactive, connected service, which serves as the foundation of their business model and value proposition. For M.E.S.O., UtaaS defines the core offering of their business, and it will form the basis of future growth for the company.

About the Author

Michael Blumberg is President of Blumberg Advisory Group, Inc., a research and consulting firm to the Field Service Industry. Michael's firm provides clients with strategic guidance and tactical assistance for improving the overall profitability and quality of field service operations. Mr. Blumberg is a prolific writer and frequent speaker at industry events and conferences on this subject. He may be reached via email at michaelblumberg@blumbergadvisor.com. Michael's blog is accessible at <https://blumbergadvisor.com/blog>. Follow him on Twitter via [@blumberg1](https://twitter.com/blumberg1).



About Blumberg Advisory Group



Blumberg Advisory Group, Inc. is a leading research and consulting firm to the Field Service Industry and a pioneer in helping companies manage service as a strategic profit center. Through their relationships and experience, Blumberg is uniquely qualified to position its clients strategically to meet current challenges and new growth opportunities. Blumberg works to improve company profits through strategic service, assisting in the development and implementation of profitable business strategies based on the principle that service is best managed as a separate, strategic, and profitable business. Visit <http://www.BlumbergAdvisor.com>

About ThingTech:



ThingTech is an Atlanta-based software company that provides a Platform-as-a-Service (PaaS) solution that combines Enterprise Asset Management, Field Service, Fleet Management, and Internet of Things (IoT) solutions into a single, cloud-based, connected platform for both commercial and government organizations. ThingTech customers rely on its platform to track and optimize the performance of their mission-critical mobile and static assets and workforce to increase business performance and improve their customers' experience. Visit <http://www.ThingTech.com>.

About FieldAware

FieldAware is a cutting-edge, cloud-based, mobile field service management hub, empowering companies to transform their field service with automated processes and streamlined operations. FieldAware is advancing field service with comprehensive solutions including optimized scheduling, dynamic and intelligent forms capture, robust reporting and analytics, AR, and IoT. FieldAware's flexible platform streamlines technician enablement and digitizes business processes while automating the collection and dissemination of field and back-office information. Combining our award-winning, easy to use/easy to adopt software with the industry's best implementation and support services, FieldAware provides rapid ROI, accelerating improvements in productivity, safety, compliance, customer satisfaction, and revenue growth. Visit <http://www.FieldAware.com>.

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