



# Real-Time Field Service Management

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# Why Modernize Your Field Service Management Solution?

First ask: Is my field service team responding in real-time to the actual status in the field?

With VANTIQ, the answer can be: Yes!

Many Field Service Management (FSM) solutions in use today were built on older technology platforms, with the simple goal of keeping track of all components in a company's field operations, and to integrate field activity with existing mid and back office systems of record. One of the primary goals of these older systems is to enhance the efficiency of the field service workforce. However, advances in technology (cloud deployment, standardized APIs for integration and the proliferation of mobile devices) now provide the ability to more effectively address the challenges of providing excellent customer service in a connected and impatient world.

Modernizing your FSM solution with real-time technology will also help you align your organization with your company's strategic goals. Whether your contribution is measured by cost savings, revenue generation, customer satisfaction, or a combination of these metrics – it is critical that your modernization efforts also allow your team to engage with your customers in valuable and innovative ways.

For example, as you evaluate your options for reducing costs – will a modernized solution allow you to better schedule your technicians, track assets, resources, and process work requests – and communicate their status to customers on demand and in real-time? Can you utilize accumulated knowledge to more efficiently handle onsite support requests or use this information to reduce the number of work requests that require onsite technicians? If a key goal is to increase customer upsell or renewal rates, can a modernized solution put more power in the hands of your customers, or process critical business events to drive collaboration and streamline the entire process from problem reporting to invoice payment?

Enhancing your traditional FSM applications with modern technology will help you deliver more than just efficiency – it will help you have a more responsive, transparent, and effective field service organization that drives customer satisfaction and loyalty for your company.

# The Need for Humans and Systems Working Together

Customers have grown frustrated with attempts to drive efficiency with automation – especially when they have service issues that require immediate resolution. Consider the last time you called a company looking for support only to get lost for many minutes in the automated response systems instead of being put in touch with the correct person immediately. With recent technology advances, there is a massive opportunity to leverage automation but not at the expense of interaction with individuals whose experience and expertise can be coupled with systems automation to provide the best possible experience.

For example, will your modernized real-time FSM application simply email a customer when a technician has been assigned and dispatched? Or will it offer a face, name, current GPS location on a map, ETA, and star rating of the technician who is on the way to address your customer's issue with your product or service? Why not alert all parties of the status of new hardware en-route from the OEM, including delays and updates to scheduling so that everyone can be on the same page with the same expectations.

Can you ensure the technician with the right skillset is dispatched, will that technician arrive with the context of your customer's environment in real time, contract/warranty status, and support history – as well as the right parts and tools to efficiently and effectively resolve the issue? Will they be able to collaborate in real time with your systems of record and support personnel to drive timely resolution?

Savvy service organizations will leverage the latest technology to create greater human value, trust, and impact among customers. Just because new devices, methods for monitoring equipment, and technology exist today – doesn't mean we can or should cut human interactions out of the process. The service providers who are able to preserve the element of human experience and wisdom as they deploy the latest technology will win the hearts and minds of their customers, and be in the best position to gain market share.

## The Benefits of Modernization

Modernizing your FSM application for real-time has many benefits for your company and your customers. Some of the most important benefits include:

**Understand Live Situations** - Based on real-time data from technicians, customers, CRM, ERP, mobile devices and IoT sensors on the devices being managed themselves we can respond to new situations as they emerge. This can be anything from preventative maintenance, responding to outages, to alerts to warranties or logistics updates on shipment tracking. Suppose your field technician gets sick or gets stuck in traffic, what if you could update the customer in real-time to these situations, how would this impact how they perceive the value of your service?

**Job Scheduling** – Improved job scheduling is a key feature of real-time FSM application. Manual “call allocation” models place all responsibility on the human operator to make scheduling decisions. Often times this puts all the knowledge into the heads of just a few people. If these individuals are out sick, backlogged or decide to leave the company it will cause major disruptions with managing onsite service assignments.

The “dynamic allocation” model requires a huge number of complicated rules and programming logic to address every permutation and scenario which is far too costly to develop and maintain using legacy technologies.

A modernized system in real-time can employ “assisted scheduling”, which allows for the system to determine a range of options based on rules and logic – but also allows for a collaboration between the system and the human operator to take advantage of that operator’s unique knowledge, including all aspects known outside of the system about the current real-time scheduling situation. This means the primary technicians can be identified, yet those individuals responsible for assignments have oversight in the form of real-time alerts and dashboards. All parties can make changes with real-time updates and alerts so if your technician gets sidetracked an alternative technician can be identified right away avoiding potential delays in the work order schedule.

**Real-Time Stock Visibility** – A real-time FSM application will provide levels of stock visibility across an entire mobile workforce, which would be impossible with a manual system, or from an older technology platform. This capability enables real-time visibility into the breakdown of assets that each mobile technician is carrying. It also makes it possible to identify which items are moving slow or fast – helping to minimize inventory carrying costs.

When new hardware must be ordered the mobile platform will enable the technician to do this in a fast and reliable way. Once again, all parties are alerted in real-time to this transaction so that the OEM purchase request and the shipping of new hardware can be tracked by the support organization’s purchasing department, the technician and the customer so that all matters associated with this type of transaction such as warranty management, OEM return handling, OEM purchasing, shipping alerts and updates, and delivery to the field can all be put to use as part of a richly integrated process.

**Timely Invoicing** – The time periods between the technician’s visit and the generation of an invoice can vary greatly, depending on the reliance and coordination of manual processes. Modern, fully integrated real-time FSM applications offer the ability to invoice as the service is completed, often when the technician is still onsite.

**Managing Costing** – Managing costs is vital to all companies, but it can be surprisingly difficult to determine exactly what these costs are for a field service organization. It’s not just the cost of the technician’s time, it’s also knowledge of a contract’s financial details and projected margins. Workload does not always align directly with profitability, so real-time visibility of running costs is crucial to managing an operation as a P&L.

By tracking the performance of assets and technicians it will be possible to use this data to create smarter resource management. Now you can identify a number of new data points that can be critical to managing costs such as:

- How long does it take to service certain assets;
- How long does it take to service certain types of problems;
- Which technicians take the longest to service assets by type, conversely which are fastest;
- Which types of assets generate the most problems
- Where in our service area do we see the most work order requests, the longest remediation times, the shortest.

A number of valuable insights can be culled from these data points and utilized in real time, including:

- When and where technicians are needed the most and least?
- What type of assets do our customers have and how much will it cost us to service them?
- Can we find ways to extend our technicians into other areas to better utilize their schedules, reduce furloughs and maximize profitability through smarter resource utilization?

**Customer Relationship Management and Warranty Management** – Knowing and understanding your customers is the most effective way to conduct business. A real-time FSM application works in conjunction with your CRM system to combine all its benefits with the unique information relating to each FSM interaction for every customer. Providing this information to your field technicians ensures consistent and well-informed interactions with your customers. Also, having knowledge of each customer's sales and support history best positions them to maximize and grow the relationship with the customer.

This can be especially useful when it comes to warranty management. As new customers and new assets are on-boarded, the warranty information is updated into the CRM system automatically. Marketing campaigns can be run against this information to renew and extend warranties and to provide technicians and customers alerts of warranty status when a problem with an asset is discovered.

Now, let's take a look at how VANTIQ's revolutionary platform helps you take action based on situations with real-time data flows from IoT sensors and respond to the actual status of the systems or machines being serviced.

## The VANTIQ FSM Solution

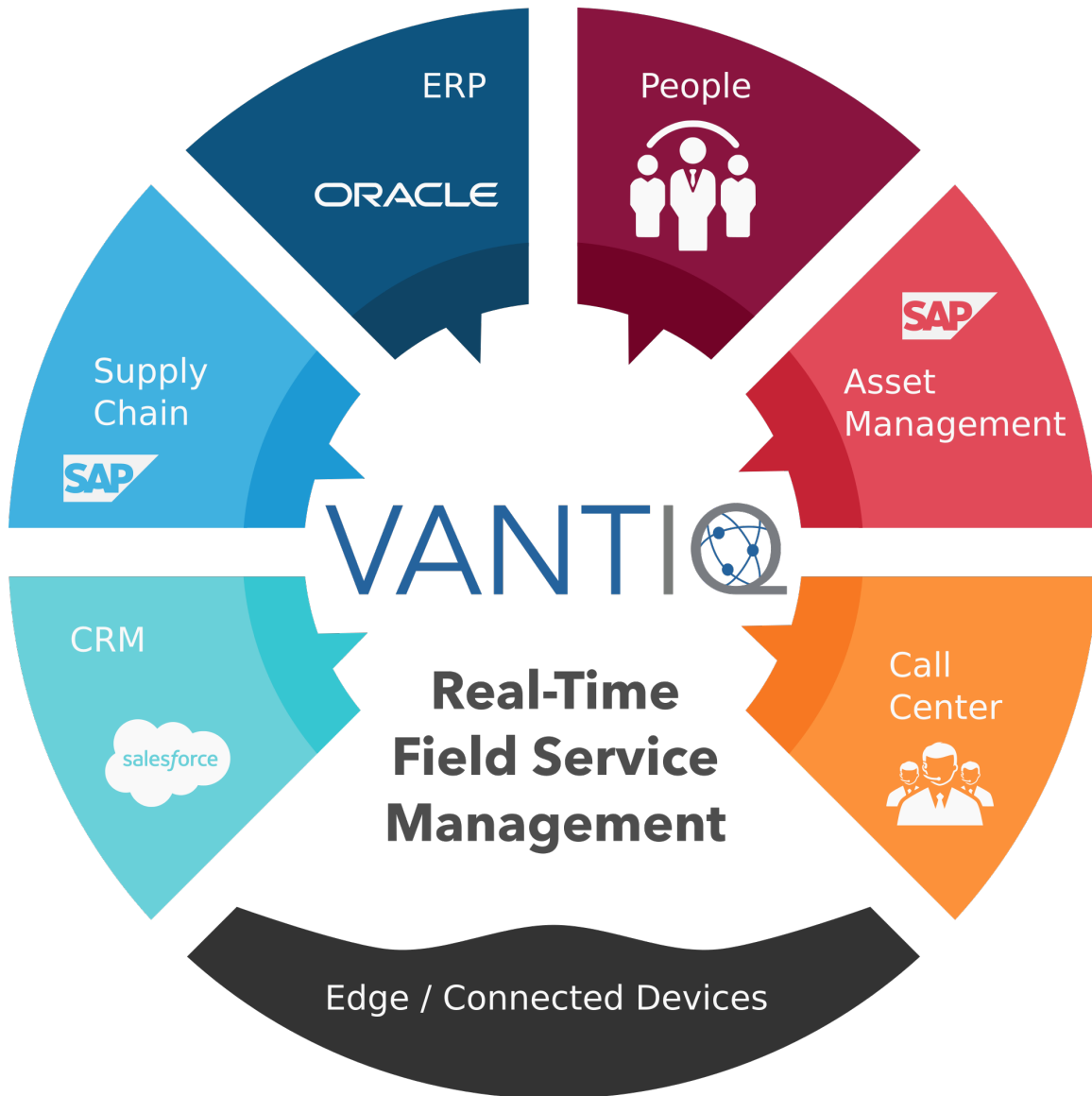
VANTIQ enables a complete application running in the cloud or on premise that supports real-time field service management, dispatch and tracking, plus, aspects of warranty management, shipping/logistics. The primary goal is communication between field technicians, customers, stakeholders and meeting SLA requirements. VANTIQ's FSM application enables:

- Management of field technicians, registration, identification of skillset, determine availability, and real-time location to create full or partially automated scheduling systems.
- Multi-layered recommendation workflow to locate and book the right field techs based on skillset and other criteria, identifying the primary, secondary, etc., technicians who match the skillset - using supervisors to manual resolve conflicts or problems in real time when those situations occur.
- Alert and notify the field tech, require them to accept an assignment, have the ability to cancel or change their status so if a tech becomes unavailable so an alternative technician can stand in without impacting the work schedule.

- Monitor the SLA status of an open ticket and provide notifications as the time ticks down.
- Monitor and track the performance of the technician and the assets they are supporting, providing trend reports to identify which technicians are underperforming and any correlations (i.e., Ms. Smith does well with most devices but seems to struggle with this model router) and also identify the most problematic assets. This information can be used to incentivize field technicians as well (Ms. Smith had the best response time of any of our networking hardware technicians and was given a bonus as a result).
- Communicate with customers the current status of the onsite support ticket, when a technician is scheduled to arrive, when they actually arrive, when the ticket closes.
- Dynamically execute a series of business rules to identify prioritization, escalations, when and who to contact when rules are triggered. Types of rules would include no-response to assignment requests, not meeting SLAs, or warranties expired, just to name a few.
- Communicate information to the technician about the work order, the asset, the customer location, the SLA requirements and any supplemental info (manuals, KBs about the problem and asset). Utilize this knowledge with the call center to reduce the number of onsite dispatches required.
- Use self-reporting, self-diagnostic data from the devices to alert customers/call center of problems before they escalate. Use this information for preventative maintenance to service hardware before critical failures occur.
- Provide warranty management and status updates from time of purchase throughout lifecycle of the asset. This will have multiple uses, to inform the customer of expiring warranties and extended warranty options, to alert the tech and call center of the current status of the warranty and to help facilitate pay-as-you-go transactions when assets are out of warranty.
- Manage order, shipping, receipt and return of assets. As broken items under warranty are replaced, help the field technician order the new part, track the order and the shipment, and assist the technician in sending the old hardware back to the OEM providing tracking and alerts of the asset for documentation purposes.
- Integrations to ERP, CRM, and online warranty applications provide useful insights, automation, and access to critical data in real time - and a richly integrated field service process emerges as a result.



Potential VANTIQ FSM application, connecting together various enterprise systems and devices in real time:



A combination of web and mobile applications are provided to offer this complete solution.

## Expanding – on the VANTIQ Platform

The VANTIQ FSM system is readily expandable with our “low-code” software development platform and is built on a fully modern architecture that supports innovative event-driven, distribution and collaboration technologies. This enables companies to digitally transform their FSM operations by incorporating modern technologies such as the IoT, mobile, and web services.

Applications built with VANTIQ are designed to be mission-critical. Anything can be dynamically changed with zero downtime. Software services can be specified as backup to be automatically deployed if a failure or slowdown occurs. For advanced levels of security, VANTIQ applications are multi-tenant on all nodes.

To enable responsiveness and massive scalability, VANTIQ is built upon a modern Reactive architecture. This facilitates the exponential growth of asynchronous field service ‘events’ and streaming data—which must be ingested in real-time. This is required as real-time applications become a company’s nervous system. With VANTIQ, Reactive programming is made easy by hiding its inherent complexities.

VANTIQ applications are built independently of the physical deployment environment. Business logic is created without regard to where it will run. After an application is developed, VANTIQ partitions the application, or separates it into components which are then automatically moved to the appropriate nodes. This is done for two or ten thousand nodes. The developers of an application do not have to deal with low-level middleware since VANTIQ automatically incorporates it.

**Contact VANTIQ for a Field Service Maintenance demo today and see how we quickly developed a real-time FSM application using VANTIQ’s rapid development platform!**