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Field service lightning: Redefining workforce management

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Abstract
FSM (Field Service Management) refers to the practice of orchestrating and streamlining mobile workers' tasks so that they provide comprehensive services on-site for businesses that rely on field operations, like technicians, home healthcare providers or delivery staff. Field service management plays an essential role in increasing customer satisfaction while increasing operational efficiency and ultimately driving business success. This guide presents key concepts of Field Service Lightning, helping improve efficiency and enhance customer satisfaction by automating time-consuming manual and complex processes so mobile workers can focus on developing relationships instead.

Keywords: Salesforce, field service lightning, mobile workers, scheduling, service appointments, dispatcher, agent

Introduction
Field Service Management (FSM) brings numerous advantages to both internal teams and external stakeholders. Internally, FSM optimizes scheduling and dispatch processes, increasing efficiency while driving down operational costs. Furthermore, FSM facilitates seamless communication and collaboration among mobile workers, dispatchers, management, management personnel as well as management; ultimately leading to alignment among all involved. Furthermore, accessing real-time performance data allows informed decision-making as well as ongoing improvements.

Effective field service management brings multiple advantages to external stakeholders. Customers enjoy faster response times, improved appointment scheduling, and clearer communications throughout their experience with service - leading to improved customer satisfaction (CSAT) scores. Contractors and partners can seamlessly integrate themselves into operations by accessing precise job details anywhere with mobile phones and submitting updates from any location - streamlining collaboration.

Suppliers and vendors gain critical insights into asset management and demand patterns, which allows them to efficiently support field operations with timely and accurate deliveries. Regulators bodies and industry organizations also benefit from real-time FSM insights that ensure compliance, improve safety standards, and propel advancement within the industry.

Field Service Management (FSM) is a versatile solution that can be tailored to meet the needs of various industries, optimizing service delivery and operational efficiency. Below are several examples of how FSM is applied across different sectors:

- **Insurance**
  FSM plays a key role in claims evaluation and property inspection, expediting timely damage assessments after incidents such as natural disasters or accidents. By streamlining the process of assigning adjusters and ensuring quick responses, FSM helps insurance companies provide faster claims resolutions and improve customer satisfaction.
- **Manufacturing**
  In the manufacturing industry, FSM oversees the installation, maintenance, and repair of industrial machinery to minimize downtime and maximize productivity. By ensuring that machinery is operating efficiently and addressing issues before they result in costly breakdowns, FSM helps manufacturing operations run smoothly and maintain high production levels.
- **Telecommunications**
  FSM is crucial in the telecommunications industry, where it simplifies the processes of installation, repair, and maintenance for both equipment and networks. Scheduling technicians and tracking service requests are central to telecom operations, and FSM tools enable streamlined workflows, faster service delivery, and enhanced customer satisfaction.
- **Plumbing and Electrical Services**
  For plumbing and electrical services, FSM coordinates system installations, repairs, and maintenance to ensure that services

are delivered promptly. By managing scheduling, dispatching, and tracking of service requests, FSM ensures that technicians are available when needed and that service interruptions are minimized.

- **Utilities**
  FSM is integral to the utilities sector, overseeing maintenance and repairs to critical infrastructure such as power lines, water systems, and gas pipelines. Emphasizing prompt incident response and real-time tracking of service requests, FSM helps utilities maintain reliable service delivery, especially during emergencies or unplanned outages.
- **Healthcare**
  In the healthcare sector, FSM helps coordinate home healthcare visits and manage medical equipment efficiently. It also plays a role in dispatching emergency medical services, ensuring that technicians and healthcare providers can quickly respond to patient needs. This reduces delays in care and improves the overall healthcare experience.
- **HVAC**
  FSM is widely used in the HVAC industry to coordinate the installation, servicing, and repair of heating, ventilation, and air conditioning systems. It also helps track service histories to ensure that systems are maintained properly and that technicians can quickly access relevant data, improving both service quality and response times.
- **Construction**
  In construction, FSM oversees on-site tasks such as equipment maintenance, facility repairs, inspections, and crew coordination. By managing these activities, FSM ensures that projects stay on schedule and that all resources are utilized efficiently, helping to avoid delays and reduce project costs.
- **Delivery Services**
  For delivery services, FSM is used to oversee scheduling, routing, and tracking of deliveries to ensure that goods are distributed in a timely and effective manner. By optimizing delivery routes and ensuring that drivers are well-coordinated, FSM helps improve efficiency and customer satisfaction in the logistics sector.
- **Facility Management**
  FSM in facility management handles maintenance and repair issues for both commercial and residential buildings. It ensures that technicians are scheduled promptly for repairs, and it also provides a system to monitor service requests, allowing facility managers to address issues quickly and maintain operational efficiency.

Benefits and Advantages of Field Service Management:
Field service management (FSM) brings numerous advantages that can transform business operations and boost success:

- **Enhanced Customer Experience**
  FSM enhances customer satisfaction by ensuring timely and effective service delivery. Real-time updates, along with transparent communication tools like Appointment Assistant, keep customers informed and engaged. This level of transparency fosters trust and loyalty, as customers feel confident in the service provider's commitment to meeting their needs and expectations.
- **Increased Employee Satisfaction**
  By providing field workers with the tools and information needed to perform their jobs effectively, FSM increases job satisfaction and employee retention. Empowered employees are more likely to stay engaged and motivated, leading to higher productivity levels and a more positive workplace environment. This, in turn, contributes to better overall performance.
- **Increased Efficiency**
  FSM digitizes key processes such as scheduling, dispatching, and routing, significantly improving operational efficiency. By automating manual tasks, FSM reduces errors and minimizes the time spent on administrative work. This leads to improved time management, optimized resource allocation, and heightened technician productivity, allowing businesses to operate more smoothly and efficiently.
- **Seamless Scalability**
  As businesses grow, FSM solutions like Salesforce Field Service can scale effortlessly to meet increased demands and complexity. These solutions are designed to handle larger workloads without compromising operational efficiency, ensuring that companies can continue to deliver high-quality service as they expand.
- **Cost Reduction**
  FSM helps businesses reduce operational costs by efficiently managing resources such as personnel, assets, and inventory. By optimizing these resources and reducing wasteful spending, FSM contributes to more sustainable business practices. This cost efficiency supports profitability while promoting environmentally conscious operations.
- **Data-Driven Decision Making**
  With FSM, businesses gain access to real-time insights and analytics that enable data-driven decision-making. These insights help identify trends, refine processes, predict future needs, and facilitate continuous improvement. By using data to inform strategic decisions, companies can stay agile and competitive in a fast-changing market.
- **Improved Compliance and Safety**
  FSM ensures that businesses comply with regulatory requirements and safety standards, which is critical in industries with strict safety regulations. By streamlining compliance processes and mitigating risks, FSM contributes to safer and more reliable field operations. This proactive approach not only protects employees but also reduces liability and ensures that operations are aligned with industry standards.

Field service management is an indispensable asset for organizations looking to expand their operations, improve customer relations and achieve sustainable growth.

Implement Field Service Management
Implementing Field Service Management (FSM) involves a structured approach to ensure the successful deployment and ongoing success of the system. Below is a guide to help you get started with FSM implementation:

- **Assess Your Needs and Objectives**
  The first step in implementing FSM is to clearly define the objectives you wish to achieve, such as enhancing operational efficiency, reducing costs, or improving

customer satisfaction. Additionally, assess your current workflows to identify areas that are inefficient or could benefit from improvement. This analysis helps you understand the specific needs that your FSM system must address.

- **Select an FSM Software**
  Choosing the right FSM software is crucial to meeting your organization's specific needs. Evaluate features such as scheduling, dispatching, inventory management, and reporting. Take the time to read reviews from platforms like G2 and explore options like Salesforce Field Service. Many providers offer demos or trial periods, which allow you to assess the software's performance in real-world scenarios before making a commitment.
- **Create an Implementation Plan**
  Successful FSM implementation requires a well-thought-out plan. Assemble a cross-functional team composed of IT professionals, operations staff, and field workers who can oversee the process. Define a clear timeline with milestones for each phase of implementation and ensure that regular communication is maintained among all stakeholders to keep the project on track.
- **Integrate Data**
  Before migrating data to the new system, gather important customer profiles, service histories, and asset records. It is essential to ensure that all data is accurate, complete, and properly formatted for transfer. This step helps ensure that your new FSM system functions smoothly and with up-to-date information once it goes live.
- **Tailor Your System**
  To maximize the effectiveness of your FSM software, customize it to align with your organization's operational requirements. This includes modifying workflows, defining user roles, and setting up appropriate notifications. Additionally, integrating the FSM system with existing tools such as CRM, ERP, or accounting software ensures seamless functionality across platforms.
- **Train Your Team**
  Comprehensive training is critical to the success of the FSM system. Ensure that all team members are comfortable with the new system by providing resources such as user guides, training videos, and workshops. Consider utilizing platforms like Salesforce Trailhead for in-depth training. Engaging with communities such as Service blazer Slack groups can also provide opportunities to learn best practices and share insights with others.
- **Conduct Pilot Testing**
  Before full-scale implementation, conduct pilot testing with a small group of technicians and dispatchers. Have them test the system under real-world conditions and gather feedback on any issues they encounter. This allows you to address any potential problems and fine-tune the system to ensure smooth operation during the full rollout.
- **Roll Out the System Organization-Wide**
  Following successful pilot testing, initiate the full deployment of the FSM system across the organization. Monitor the system's performance closely during the initial phase of implementation and be prepared to address any challenges that arise quickly. Swift responses to issues will help maintain the system's success and ensure minimal disruption.
- **Prioritize Continuous Improvement**
  Once the FSM system is fully implemented, it is essential to prioritize continuous improvement. Regularly evaluate the system's effectiveness and make adjustments as business needs evolve. This ongoing refinement ensures that the system remains aligned with your organization's goals and continues to meet the needs of both employees and customers.
- **Engage Customers**
  Lastly, ensure that customers are informed about the new system and its benefits for enhancing their service experience. Create a feedback loop to collect customer input and continuously refine the system based on their suggestions. Engaging customers in this way fosters better relationships and ensures that their expectations are met effectively.

Follow these steps to create an FSM solution that maximizes efficiency, increases customer satisfaction, and fosters the long-term growth of your business.

Salesforce Field Service distinguishes itself through three key components that work seamlessly together to provide a comprehensive field service management solution.

First, the core features, including the Service Console and Dispatcher Console, form the foundation of the platform. The Service Console allows service agents to manage and track customer service cases efficiently, providing a unified interface for handling inquiries, scheduling, and updates. The Dispatcher Console, on the other hand, helps dispatchers assign tasks to the right field technicians based on factors like availability and proximity to the service location. These consoles are integral in streamlining day-to-day operations and ensuring that service delivery is both efficient and effective.

Second, advanced scheduling and optimization are powered by a managed package that enhances the overall functionality of the system. This component provides intelligent scheduling features that automatically assign tasks based on technician skills, availability, and proximity. It optimizes workflows by reducing travel time and ensuring that the right technician is assigned to the right job at the right time, improving efficiency and customer satisfaction.

Finally, an exclusive mobile app designed specifically for field teams ensures that field technicians have all the tools and information they need while on the go. The app enables field teams to access work orders, update statuses, and communicate with dispatchers in real time. It is designed to be intuitive and offline-capable, ensuring that technicians can continue their work even in areas with limited connectivity, which is crucial for maintaining uninterrupted service delivery.

Feature	Description
Related to workers	
Service Resources	Mobile employees who can perform field service work
Service Crews	Teams of service resources that are assigned to service appointments as a unit.
Service Territories	Regions where field service work is performed
Skills	Skills required to perform field service tasks
Related to time	
Operating Hours	Times when field service work can be performed for service territories, service resources, and customer accounts. Operating hours are made up of time slots: a time period within a day when field service work can be completed.
Time Sheets	Tools to track the time your field service employees are spending on tasks
Shifts	Times that service resources can work. Shifts can extend operating hours so that you can create service availability outside of normal hours.

Fig 1: Features and Descriptions [1]

Related to work	
Maintenance Plans	Plans that help you track preventive maintenance work using auto-generated work orders
Product Items	Parts for services that can be requested, required, transferred, and consumed in field service work
Product Requests	Requests for a part or parts
Product Transfers	Transfers of inventory between locations.
Return Orders	Records of inventory returns or repairs.
Service Appointments	Appointments for field service work
Service Report Templates	Templates for customer-facing reports summarizing the status of service appointment and work orders
Work Orders	Requests for field service work
Work Types	Templates for common field service work, such as cable installations or furnace repairs

Fig 2: Key Concepts [2]

Different personas use Salesforce Field Service in a different way

- Dispatchers play a pivotal role in managing customer work orders, which include service call requests. Their primary responsibility is to assign the right technician to a task, taking into account factors like the technician's skill set, their availability, and the proximity to the service location. To make informed decisions efficiently, dispatchers rely on multiple data points at once, with the Dispatcher Console being their main tool for coordinating and dispatching tasks.
- Field Technicians, on the other hand, are the specialists who provide on-site services, such as installations, repairs, and maintenance. To stay connected while on the move, they use the Field Service Mobile app, which is designed to function even in areas with limited

connectivity. This mobile application ensures that technicians can continue their work without disruption, even when working in offline environments.

- Service Agents are the primary points of contact for customers when a service request is initiated. They assess the situation and determine whether a technician's visit is necessary or if alternative solutions can be offered. Typically, service agents use the Case feature within Salesforce to explore potential resolutions. If a site visit is deemed necessary, they create a Work Order, which is then passed on to a dispatcher for further handling. The Lightning Service Console is commonly used by service agents to manage and streamline customer interactions and service requests.
- Finally, Service Managers are responsible for overseeing the overall performance of service operations. Their duties include monitoring metrics such as call-out volumes, time spent on-site or in transit, and customer satisfaction. They leverage various Salesforce tools like reports, list views, and platform analytics to track performance, identify inefficiencies, and make data-driven decisions to improve the service process.

Field Service activation also activates geocoding, or location-based data collection, which can be utilized with managed packages to track real-time locations of mobile employees.

The table below outlines who can use each part of Field Service:

Core Field Service	Field Service Managed Package	Field Service Mobile App
When you enable Field Service in your organization, admins and agents can: • Set up availability, skill sets, and standard appointment requirements unique to your organization • Enable the Salesforce app to provide mobile access to your mobile workforce • Track inventory and van stock so your mobile workforce has what they need when they're at a customer site • Report and analyze field service data • Plan, perform, and track all your field service work, from installations to repairs and maintenance	When the managed package is installed, dispatchers can: • Optimize the schedule according to your organization's scheduling policies • Get a bird's-eye view of appointment lists, scheduling actions, a resource availability chart, and an interactive map in the dispatcher console • Integrate and maintain scheduling policies, global actions, sharing tools, and optimization rules with the administration app	The Field Service mobile app is available for free on the App Store and Google Play. Mobile workers using the app can: • View their appointment schedule • Use Salesforce data to check on work orders, reach contacts, and verify addresses • Create and edit records to log work and create follow-up appointments • Use Chatter to collaborate with other mobile workers, managers, and dispatchers • Track updates with push notifications • View Knowledge articles to complete tricky tasks • Track van stock and inventory consumed to complete jobs

Fig 3: Field Service Mobile App [3]

Field Service Scheduling:

- Onsite service excellence requires unifying team, products and customers under one platform - Field Service unifies these elements into an engaging customer experience on-site.
- The managed package amplifies field service operations with additional powerful features - the dispatcher console provides dispatchers with centralized views of appointment lists, scheduling tasks, mobile worker availability chart and interactive maps; while an administrator-oriented guided setup tool assists in setting up scheduling policies as well as global actions, sharing settings and optimization rules.
- Dispatchers are an essential element of field service teams. They take care in providing customers with solar equipment installed or serviced as well as monitoring mobile workers performing these tasks, making an essential role for field service organizations. On an average day, dispatchers typically have much on their plate!
- Monitor service appointments within your assigned service area. When necessary, reschedule or cancel appointments when needed and assign service appointments to nearby mobile workers when the situation changes. Utilizing worker skills, location availability and job prioritization to optimize the schedule.
- Keep mobile workers busy by overseeing their schedules. Coordinate resources, back-office services and warehouse services; dispatch service appointments to third-party contractors/crews as quickly as possible and monitor until completion.
- Much of this work is performed by a scheduling engine; however, dispatchers oversee its implementation to make sure it goes as planned.
- Appointments can enter a Dispatcher's Gantt view via various means - manual entry, part-automated or fully automated scheduling systems.

Book Appointment Action

The "Book Appointment" action allows customers to receive an estimated arrival "window" rather than a specific delivery time. This approach benefits both the customer and the company by providing a time frame for the expected arrival of the service agent. It also offers internal flexibility, enabling operational adjustments to time slots based on schedules, resource availability, and other factors, making it easier to accommodate changing conditions.

"GetCandidates" Action

While the "Get Candidates" action appears similar to the "Book Appointment" action, it offers two key differences. First, the service agent evaluates the availability of candidates based on their individual schedules and slot ratings, applying background rules to select the most suitable person for the job. Second, instead of presenting an alphabetized list of available slots, "Get Candidates" provides a set of intervals based on resource availability, offering a more dynamic view for scheduling.

Auto-Create Appointments (Using Work Type)

In Field Service Setup, the "Auto-Create Service Appointment" feature can be enabled when configuring Work Types. This functionality automatically generates service appointments when work orders or line items are created from a given work type. Alternatively, the "Auto-

schedule" button can be used directly within a Service Appointment to automatically assign a time slot based on predefined scheduling policies, further streamlining the process.

Auto-Create Appointments with Maintenance Plans

Maintenance Plans can automate the scheduling process by generating Work Orders on a regular basis. For example, planned maintenance visits can be scheduled monthly, with the system handling the entire process. The first instance of human interaction occurs when the appointment is pushed to the mobile app, where a field technician receives the necessary details for the task.

Custom Appointment Booking

Beyond the standard functionalities, custom appointment booking interfaces can be created to address specific needs. For example, exposing scheduling capabilities to in-store staff can extend the appointment booking process beyond the limitations of the default Field Service package. This flexibility allows organizations to tailor their scheduling system to unique use cases, improving efficiency and user experience.

Mobile workers often prefer working within their local area, which makes service territories an essential element of Field Service management. Service territories help optimize field operations by defining the geographic areas in which mobile workers operate. Operating hours and the assignment of mobile workers to these territories ensure that field operations are managed efficiently, reducing travel time and enhancing service delivery.

Manage Service Territories

Service territories refer to geographic areas in which your field service team operates; you could also divide these into functional categories like field sales vs field service. With increasingly remote work-from-anywhere environments, virtual service territories could also be created for work completed remotely or from mobile locations.

Field Service Preventive Maintenance

Track the installation, replacement and regular maintenance of customers' assets.

An asset in Salesforce represents any product purchased or installed. If, for instance, you sell engines, then creating an Engine product in Salesforce would enable you to track each customer engine individually in their own asset record that links back to it.

A maintenance plan allows you to outline a schedule for one or more assets and create multiple work orders for future maintenance visits.

Work orders provide a means of tracking work to be performed for customers. They contain all the information needed for completion - such as account, contact, asset and job priority details - in one convenient document. Depending on a maintenance schedule, work orders may also be generated to service assets.

Field Service Core Data Model

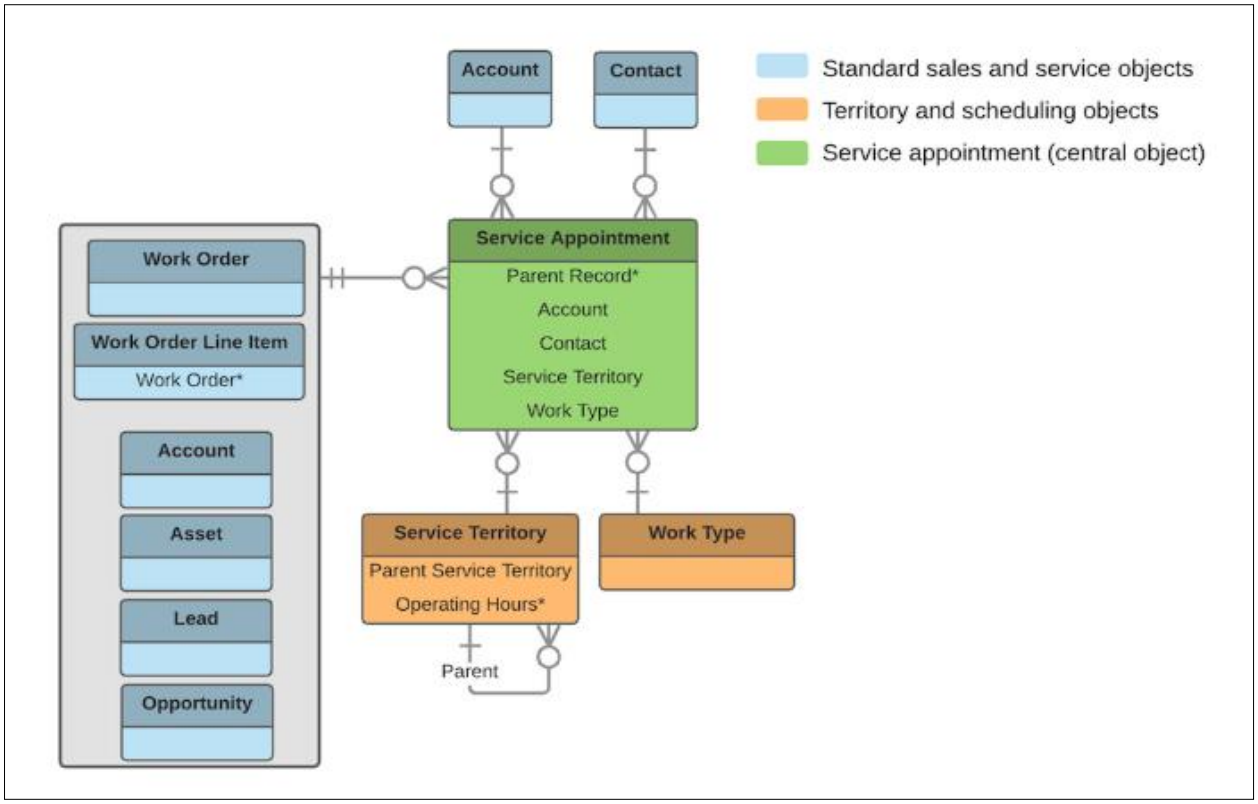

Fig 4: Field Service Core Data Model [4]

Conclusion

Field Service Lightning is a user-friendly solution designed to streamline work order management, optimize scheduling, and enhance the efficiency of your mobile workforce. It enables you to monitor team locations, skills, and availability, ensuring effective coordination. The platform also simplifies

managing service areas, tracking inventory, and scheduling tasks to cover all critical details. In essence, it offers an efficient way to maintain seamless field operations.

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