

A Day in the Life:

How Automation Is Changing Field Service



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If you polled a dozen field service leaders on their biggest concern over the next five years, you might get a dozen answers.

Some might mention the challenge of replacing an aging workforce. Others might say the need to do more with all the data being collected.

One issue that would almost certainly make the list? Eliminating unplanned downtime.

Field service organizations are obsessed with downtime, and for good reason. It cuts into profits, eats up valuable technician time on breakdown repairs, and creates negative customer experiences.

For business leaders, reducing downtime is an operational goal that every other effort — from increasing first-time fix rates to getting more visibility into the field — flows into.

82% of companies with field assets have experienced unplanned downtime in the past three years, with the average outage lasting 4 hours and costing \$2 million.



Smarter maintenance = less downtime

If unplanned downtime is the inevitable result of overworked teams, the solution is smarter asset management.

In a perfect world, each asset would be put on a maintenance schedule tailored to its individual needs.

Breakdowns would be few and far between, the result of extraordinary circumstances.

Unfortunately, most field service organizations today lack the bandwidth or visibility needed to deliver this kind of maintenance — or even regularly scheduled maintenance.

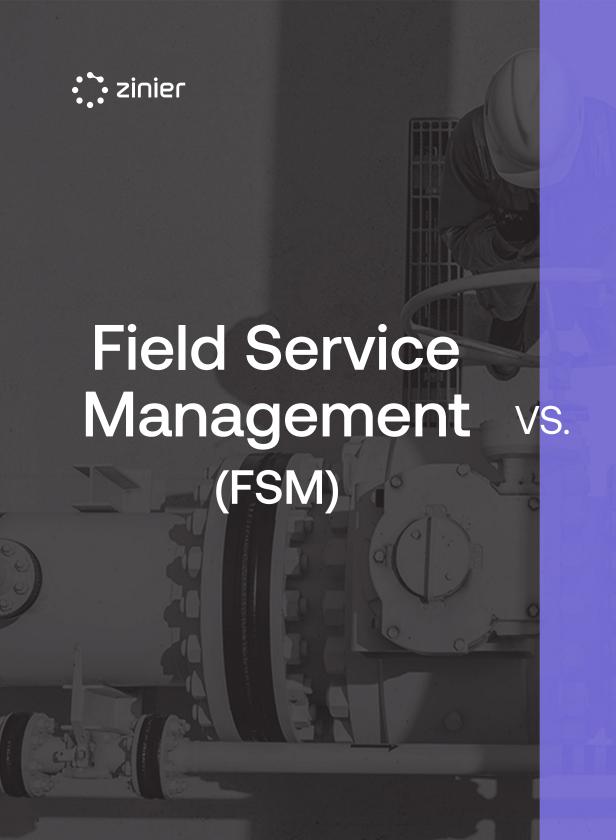
When budgets (and technicians) are stretched thin, annualized maintenance tends to be one of the first casualties.

Even among sites, there is a pecking order. Locations that are in rural or hard-to-reach areas are serviced less frequently, due to the complexity of reaching the site and/or coordinating local sub-contractors.

Still, field service organizations do their best to keep assets on as routine a maintenance schedule as possible. But as you'll see in the scenario below, even this is difficult when everything is driven by people and manual processes.

Let's take a common task — a scheduled maintenance workflow on an antenna tower — and see how field teams typically approach it. Then, we'll look at how Al-driven automation can help streamline this process.

For this scenario, we'll look through the eyes of a technician assigned to the task.



Field Service Automation (FSA)



Starting your day

06:00 AM



06:00 AM

It's just past dawn on a cold, damp morning in

November. You arrive at HQ and receive your schedule for the day. First up: a routine site check on a tower 40 miles outside of town. It was supposed to be serviced last month, but a large installation project in the area is tying up your team's bandwidth.

06:15 AM



06:15 AM

Before heading out, you check in with the back office for more details about the job. One of the coordinators tells you that record rainfall in the area triggered an alert to check for corrosion, based on historical data for similar towers.

You arrive at HQ and receive your schedule for

but this time there aren't any surprises on your

schedule. First up: a preventive maintenance

task for a tower 40 miles outside of town. It

was added to your schedule last week after

assets flagged it as a potential issue.

the system your organization uses to monitor

the day. It's still early, and the air is still cold,

Before heading out, you stop by the back office for more details about the job. It was added to your sheet by a coordinator who saw an opening on your schedule. Unfortunately, they failed to account for your next job — back in town, with a heavy SLA penalty attached to any delay.



Arriving on site

06:30 AM



You grab a cup of coffee and hurry to your truck. It's been loaded with your standard trunk stock. Hopefully there aren't any surprises when you arrive on site. If you're missing a part, you won't be able to wait around for a replacement — you need to get to the next location.

07:30 AM



An hour later, you arrive at the site and run through the standard maintenance package for this asset. You check for signs of damage to the tower, components, and surrounding area — anything from cracked concrete to loose or missing cable fasteners.



06:30 AM

Because the job will likely involve replacing multiple components, the rest of your morning is blocked off. You stop by the office for a cup of coffee, then head to your truck. It's been loaded with all the replacement parts you might need for this task — from bolts and bonding straps to cable fasteners.

07:30 AM

An hour later, you arrive at the site and open the mobile workflow for this task. Based on historical data, you need to check for signs of damage to the tower, components, and surrounding area.



Getting to work

07:45 AM



07:45 AM

Most of the structure is in good shape, but

a few of the bonding straps and bolts need to be replaced. This isn't unusual in areas with heavy rainfall, but you don't have the right parts on hand. Your trunk stock was based on the manufacturer's recommendation, which didn't account for regional differences in weather.

08:45 AM



08:15 AM

You wrap up the repair and submit your close-out package for approval. Thanks to the mobile app, the process is as simple as pressing a button — no more transcribing notes or manually uploading photos.

As expected, a number of bonding straps

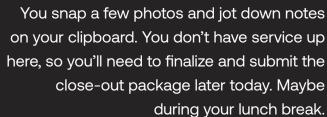
and bolts need to be replaced. You open the mobile workflow for this task and get started,

snapping photos to document your progress.

Each time you take a photo, it is automatically

added to the close-out package for this task,

saving you time on the back end.





Closing out the task

09:00 AM



08:30 AM

It's raining harder now, so you retreat to

your truck before calling HQ. They'll need to schedule another technician to come out with the right parts, but that's a different problem for another time. You need to get back on the road.

Before you can put your truck in gear, you get

a call from the back office. Another technician

is sick and needs their schedule covered.

It's raining harder now, so you head back to your truck and check your calendar. When you do, an alert flashes across your screen a new task was just added to your schedule. On your way back to town, you need to drop off a replacement part at another site.

09:00 AM





08:30 AM

At first glance, this might seem like a simple addition to your schedule. But it's actually the result of Al-driven automation.

The coordinator on the phone has spent most of their day checking schedules and playing technician tetris. The only way to get everything done on time is to have you swap your schedule.

Because you finished early, your scheduling system saw a gap in your calendar, looked at your parts on-hand, reviewed your route for the day, and determined you could drop off the part without impacting your next task.



Comparing approaches

Limitations of traditional field service (FSM)

Data becomes a bottleneck, forcing organizations to spend time analyzing it before they can take action.

Coordinators are forced to juggle technician schedules, inventory, SLA penalties, and more.

With manual reporting and scheduling, delays at one site tend to cascade across an organization.

Manually driven processes lead to lower first-time fix rates and less productivity.

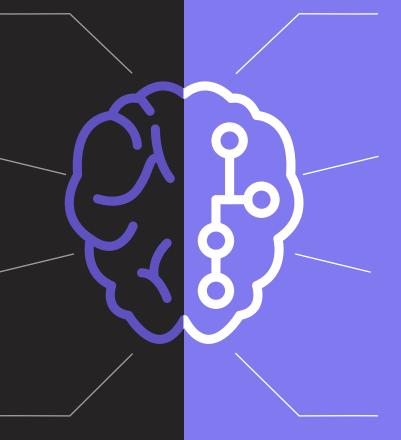
Benefits of automated field service (FSA)

Leveraging historical data enables organizations to increase asset performance and avoid unplanned downtime.

Just-in-time scheduling helps organizations increase technician utilization rates and assign the right people and parts to each task.

With Al, organizations can get ahead of potential issues or delays by tracking the performance of all assets and technicians in real time.

Automating routine tasks helps technicians complete more tasks per day.





Field service, evolved

Our world runs on field service. From the wireless networks that keep us connected to the power plants that deliver electricity to every corner of the globe, we rely on steady, uninterrupted service.

For field service organizations, that means two things. First, they need to know what's happening across their organization in real time. Second, they need the flexibility and tools to react to sudden changes in the field.

Maintaining this delicate tower of infrastructure is a mammoth undertaking that people alone cannot manage. For the last decade, field service organizations have tried to solve this problem by moving to digital solutions, but the burden on the back office continues to rise.

As our technology has grown in scale and complexity, field service leaders have begun exploring Al and automation as a way to streamline their operations and drive productivity. Of course, automation cannot replace everything. There will always by the need for people to handle the last mile of service delivery. But the who, what, when, and where of field service can and should be automated.

44% of field service organizations say that Al and predictive maintenance would help prevent major failures.



An end-to-end solution for field service automation

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