

White Paper

Field Service Management

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Introduction

Field service is a fast-paced environment where the goal posts shift quickly.

Field staff and dispatchers need to manage and respond to a range of competing priorities including emergencies, the requirements of Service Level Agreements and their customers' expectations.

When deciding who to send where, they must also consider a range of internal dependencies applicable to their organisation.

Thankfully, advances in technology have allowed the creation of systems that automate many steps in the process which starts at logging a service call and soon moves to dispatching it out into the field.

With the convergence of many technologies, field service companies can deploy much more integrated systems. These are capable of capturing information, suggesting or even automating the scheduling of field staff, dispatching work to the field and processing the information that is received from the technician at the end of each job.

When the power of this technology is realised, staff in the office will almost never have to wait on status updates from the field. Invoices will often be processed before the technician has even arrived at their next job.

When it's all boiled down, the work of field service companies is to manage field resources in the form of technicians and teams, sub contractors, plant and equipment, and materials.

When materials have a fixed cost, and particularly when businesses are working to an agreed schedule of rates, efficiently managing staff in the field becomes the difference between a profitable job and a loss.

This is why it is essential to have a robust, reliable and integrated Field Service Management Solution. That solution will enable an organisation to optimise scheduling, dispatch, routing and reporting and will create an integrated and synchronised workflow.

It will also give staff access to accurate, up-to-date information so they can make informed decisions throughout the day and improve the bottom line on every job.

Complexity of service and scheduling

According to a recent survey by Master Electrician, approximately 60% of field service companies have seen their labour costs increase by more than 10% over the past year, while 10% report a staggering 50% increase.

Three-quarters of respondents reported that the overhead costs to manage that labour had also gone up by at least 10%. While these results were taken from just one industry, our experience shows that they reflect the situation for a large majority of service companies in the market place. As a result, the average price of a service call has increased to just over \$1000.

As we face skills shortages and rising costs, the challenge for service companies to become more efficient increases proportionally. Smart operators are turning to modern tools to make the most of their existing resources so they stay competitive and profitable.

Typically service companies do three specific types of work:

Reactive service work

Reactive service involves a quick turn around to fix a specific problem. These unplanned events need to be slotted into the appropriate field technician's work schedule and they often involve shuffling other work that has already been scheduled, either to other times or to other technicians. In these situations, an integrated enterprise system can suggest which technician to send based on proximity, skills, time availability, available parts and other factors. This makes sure the right resource is allocated and dispatched to the job quickly. Automating this process or fine tuning the selections available cuts down on mistakes and on the cost to deliver the job, which in turn improves customer service and business profitability.

Planned preventative maintenance

Planned maintenance work normally runs on set frequencies. Throughout a period, a high volume of jobs will need to be done, each at different service levels and each requiring specific skill sets and tests. It is a major challenge for service companies to determine which technicians they should send and in what order while also considering job specific issues such as site access restrictions and reactive service work interruptions. Automated route optimisation, scheduling and dispatch can result in much higher resource utilisation which reduces field and overhead costs while also reducing response times and improving customer service.

Quoted and project work

This is planned work which is often done to a fixed-price quote or estimate. In these situations, project managers look to find ways to deliver the result the customer is expecting while at the same time finding ways of managing and reducing costs, Work in Progress, materials and people. It requires being able to plan out in advance the team that will be doing the job, scheduling and automating the process of informing the customer and co-ordinating the job.

The ability to automate scheduling and dispatch used to be a "nice to have" for service companies but increasingly it is a "must have". As the considerations for dispatchers become more complex it becomes more difficult to select the right technician. This means the tools required to improve efficiencies and transparency need to be up to the task for the particular organisation.

The criteria that need to be considered before you can choose the right technician to send can be quite complex which makes it easy to send the wrong technician as well as costly for the business. Consistently sending the wrong field resources can mean the service division of the company becomes a cost to the organisation as a whole rather than a profit center.

Depending on the industry and weightings, consideration needs to be given to the following requirements of the job and site before selecting a technician to send:

- Skills required and complexity of the job
- Available parts
- SLAs
- Preferred technicians

- Inductions
- Distance, traffic and other geographic considerations
- History and site specific requirements
- Emergency and priority situations
- Cost of the resource

Integrated job management and scheduling systems take a lot of the guess work out dispatching the right technician by providing suggestions, narrowing down appropriate options and automating the scheduling process.

To further streamline the whole service workflow, organisations can automatically dispatch the work orders to the field applications on smart phones and tablets. When in range, these applications can then report back to the office at the completion of the job with all the relevant costings and job information ready for invoicing and reporting.

Based on the customer defaults and the information reported back from the job, the invoicing process can also be automated creating a complete end-to-end automated solution from job logging through to invoicing. Of course, manual interventions can be introduced throughout the process to satisfy business requirements.

Ultimately, implementing automated solutions converts a traditionally chaotic environment into one that ensures the right resource is scheduled for the job, information is transparent allowing for better decisions, and the entire workflow is streamlined both in the field and the office. Some of the benefits for field service companies include improvements in customer service, reductions in the need for call backs and rework, savings on travel costs, greater visibility into the operation and an improved bottom line.

Helping the mobile workforce

Managing the jobs in the office is only half of the picture. Streamlining that office to create more field capabilities with existing resources is great but we still need a way to get the service calls out to the field, route the technician to site and then capture information on the work the technician did at the site.

Most businesses start this process by getting the technicians to fill in paperwork in the field then either fax, scan and email, or physically bring it in with them on their next visit. This creates no visibility about the site for the technician so we better hope he's going to be able to work it out.

Enter a mobility solution for service technicians. Different technology options exist and as the solutions have matured the specific stream that is proving to be the most beneficial is called "casually-connected options". These mobile options allow technicians to connect throughout the day to retrieve new work and to update information on service calls they have been dispatched to.

This means that they can continue to work even when they are not connected to the main system and when a connection is available the relevant information is then sent up to the server. Depending on the industry and region, a service company will typically require a service application to capture a number of key data points and provide assistance on a service call. Information or services required include:

- Parts used on a job
- Time spent on the job for that technician and any other team members with them

- What was actually done on the service call
- Information and history of the site and the equipment they have been sent to service
- Site contact information and site specific requirements
- Files, records and new attachments related to the service call
- Safety audit information
- Technician and customer sign off for the job
- Test readings on equipment requiring service
- Invoicing and even processing payments in the field
- Routing the technician to site
- Creation of new service calls (especially useful in an after hours environment)
- Creation of rectification or new quotes from the field

By empowering its field workers with all of the company's knowledge about a particular site and task, an organisation can greatly reduce the frequency of multiple site visits.

It also gives them a conduit to instantly report their activity at the site back to the office, creating greater visibility in a timely manner for the customer.