Analyst Insight

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Fixing First-Time Fix: Repairing Field Service Efficiency to Enhance Customer Returns

First-time fix is one of the most vital metrics in gauging field service performance. While workforce utilization, productivity, mean time to repair, and on-time performance have historically received the attention when measuring field service performance, more organizations are beginning to track first-time fix as a true measure of field service efficiency. This is because of the wide scale ramifications of first-time fix not only on field service performance results, but also on key customer-oriented and financial measures which reflect service business health. A poor first-time fix number not only reflects poor field service processes, it is also an early indicator of disgruntled customers, likely customer attrition, and reduced service profitability.

This document will highlight the importance of first-time fix as an overall service performance gauge and the steps taken by Best-in-Class (BIC) field service organizations to improve first-time fix.

The Other 25%

Aberdeen's recent *Field Service 2013: Workforce Management Guide* (February 2013) revealed that only 17% of organizations did not measure or were unaware of their first-time fix performance. This is a significant decrease from 2008, when similar field service research revealed 29% of organizations were of unaware or did not measure their first-time fix performance. The 2013 Field Service research also yielded that the average first-time fix performance across all respondents was at the 75% level, indicating that three out of every four service calls in the field are resolved on a first-visit basis.

What is concerning is the fact that 25% of all service calls require at least one additional visit to solve customer needs. In fact, for those calls not resolved on a first-visit, on average 1.6 additional dispatches are required to ensure complete resolution. This can pose a significant challenge for service organizations looking to improve customer satisfaction and retention while looking to build a healthy service margin. Here's why:

Dispatch-Related Cost

Field service research has revealed the cost of a single truck roll (operating cost) to fall between $200 and $300. This obviously varies by industry and type of work being done, but it can help us establish a raw cost of additional dispatch due to poor first-time fix performance. As seen in Table 1, an

Analyst Insight

Aberdeen's Insights provide the analyst's perspective on the research as drawn from an aggregated view of research surveys, interviews, and data analysis.

Insight — Best-in-Class Organizations

Aberdeen used the following metrics to determine Best-in-Class organizations in the *Field Service 2013: Workforce Management Guide* (February 2013) research:

- √ Success in meeting response times (92% BIC, 72% All Others)
- √ Workforce utilization (79% BIC, 64% All Others)
- √ First-time fix (89% BIC, 71% All Others)
- √ Year-over-Year Increase in workforce productivity (11.4% BIC, 3.7% All Others)

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average service organization with 500 total scheduled tasks or visits can expect to be faced with the added burden of 200 additional truck rolls at a 75% first-time fix performance. This is based on daily performance. To measure an annual burden just tied to additional truck rolls, we can multiply 200 by 252 by 250 (252 is the work days, $250 is the cost per dispatch) to yield $12,600,000 using this basic example. While combining service tasks and other field service processes can reduce this total number, it gives us a good feel of the total burden that an organization can place on itself as a result of average first-time fix performance.

Table 1: Impact of Inefficiency on Dispatch Costs

Total Tasks Scheduled / Day	Additional Truck Rolls		
	First-Time Fix – 56% (Laggards)	First-time Fix – 75% (Overall Average)	First-time Fix – 89% (Best-in-Class)
100	44*1.6 ≈ 70	25*1.6 = 40	11*1.6 ≈ 18
300	132*1.6 ≈ 211	75*1.6 = 120	33*1.6 ≈ 53
500	220*1.6 = 352	125*1.6 = 200	55*1.6 = 88

Source: Aberdeen Group, January 2013

Opportunity Cost — Productivity and Revenue

Leveraging the data in Table 1, it is evident that additional dispatches add a cost burden to the service organization. What also needs to be taken into account is the fact that all these additional dispatches and field visits take field resources away from servicing net new requests. In the Laggard example on Table 1, anywhere from 70 to 352 additional visits aren't being attended to as technicians look to revisit work that could have been completed on a first visit basis.

Less field visits for new work also has an impact on revenue generated by the service team. Revenue growth is the top goal for field service organizations and if field workers aren't visiting new clients, they aren't able to drive new revenue opportunities associated with:

- Time, expense, and parts for break-fix work
- Up-sell or cross-sell of products and services offered by the servicing organization

Those organizations with a greater than 80% first-time fix in Aberdeen's *Field Service 2013* research experienced a 6.2% increase in service revenues over the previous 12 months compared to a 1.6% increase for those organizations with a sub-80% first-time fix performance. For those organizations with a less than 50% first-time fix, service revenue decreased 2.8% over the previous 12 months.

Insight — Top Field Service Goals

Top Goals for Field Service in 2013, n=156

√ Increase revenues: 56%

√ Improve customer satisfaction: 52%

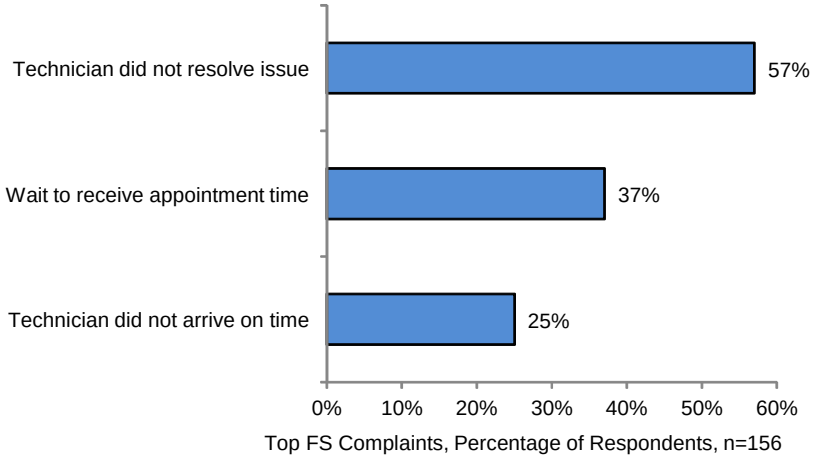
√ Increase productivity: 45%

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Customer Satisfaction

Putting cost and productivity aside, the inability to resolve service issues on a first-visit basis is very likely to cause customer dissatisfaction. Depending on the value of the equipment being serviced and the total downtime, a sub-par first-time fix rate can also have a significant monetary impact on the customer. Not to mention the total impact faced by the customer's customer. A non-functional MRI machine can be devastating to a clinic and its patients, just as a non-functional machine on a factory floor could lead to disruptions in a supply chain. Complaints regarding field service performance are primarily attributed to poor first-time fix performance, as seen in Figure 1.

Figure 1: Customers Want Better First-time Fix



Source: Aberdeen Group, January 2013

Organizations that take the steps to fix their first-time fix performance can yield significant benefits in the form of improved customer satisfaction and retention (Table 2). As a sum total of all of the benefits highlighted in this document, the overall impact of first-time fix is also significantly felt in overall service profitability. The outperformance in margins between the greater than 80% group and the sub-50% group can be extremely significant in determining the sustainability of an overall service business.

Table 2: First-time Fix and the Impact on Customer Satisfaction

Metric	Average Result		
	First-time Fix < 50%	First-time Fix < 80%	First-time Fix > 80%
Customer Satisfaction	46%	64%	87%
Customer Retention	60%	68%	88%
Service Margin	23%	28%	29%

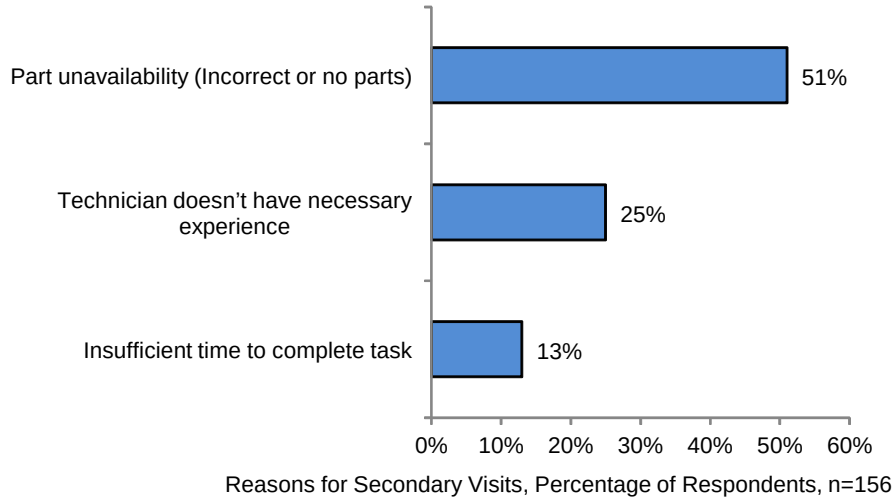
Source: Aberdeen Group, January 2013

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Getting to the Root

Why is this metric, so vital in determining service performance, so difficult to tackle? Part of the reason is that first-time fix performance is heavily dependent on service parts management, an area that isn't necessarily considered a part of traditional field service. As organizations have historically treated various functions (field service, parts, contact center, etc.) of their service organizations as silos, field service improvement initiatives have failed to address the root cause of first-time fix failure (Figure 2). Optimization or improvement of field service in isolation, without considering the impact of parts, will only yield temporary results. As a result it is extremely vital that any improvement plan structured to improve field service performance begin with the integration of people (field service) and parts. With that, an emphasis on training and the provision of information at the point of dispatch and service are extremely valuable in affecting first-time fix.

Figure 2: Reasons for a Second (or Third) Visit



Reasons for Secondary Visits, Percentage of Respondents, n=156

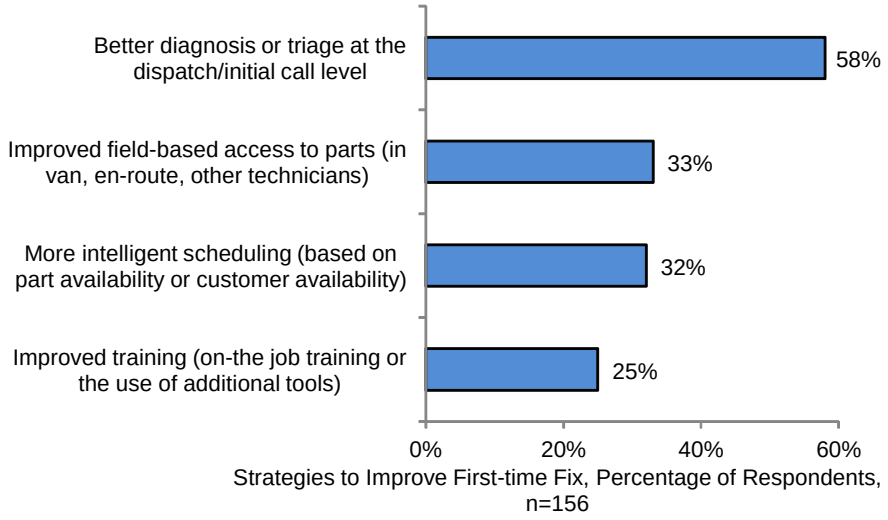
Source: Aberdeen Group, January 2013

The Improvement Plan

The remedy list for first-time fix woes is similar to that of action items to be prioritized for improving field service performance. In essence, improvement requires a comprehensive review of field service workforce management processes around hiring, training, planning, scheduling, dispatch, and point-of-service execution. This needs to be coupled with an organizational integration of individual functional silos as described above.

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Figure 3: First-time Fix Action Plan



Source: Aberdeen Group, January 2013

Improvement in one aspect will not yield sustainable results and this is why Best-in-Class field service organizations consistently focus on the comprehensive review and adjustment of all field service processes. Some of these changes are reflected in Figure 3, the top strategies highlighted by field service organizations to improve first-time fix. These can be categorized in the field service workforce management pillars listed below. Note how we begin at the point-of-service to incorporate tactical changes and end with more strategic workforce selection and training decisions.

Point-of-Service

When a technician is onsite or en route to a customer site, it is vital that he or she have all the pertinent information needed to complete the at task hand. This information can range from:

- **Visibility into parts needed**, preferably prior to arrival on site. As noted, parts are the most essential ingredients in driving first-time fix success. Information that aids the technician in identifying the necessary parts needed for a visit and the availability of the necessary parts (in truck, en route, or with other technicians) is essential. The ability to conduct and record technician-to-technician transfers is a plus.
- **Service history**. Past service history can help technicians identify if similar issues have been resolved on a particular piece of equipment and therefore locate the necessary resolution steps. More so, a history of service repairs can help the technician identify if the equipment or product is in need of replacement or there is a broader quality issue with one of the components.

"One of the best tools that we have relied on to improve first-time fix is the service call checklist. This list is completed regardless of how little time since the last visit. Even if too costly, I could not minimize the effect on customer satisfaction."

~ Director,
Field Service,
Medical Device Organization.

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- **Knowledgebase of resolution steps for similar service issues**. A searchable knowledgebase that provides resolution steps based on inputted diagnostic information can aid technicians in supplementing their own expertise in resolving service issues.
- **Step-by-Step resolution information.** Taking the knowledgebase concept a step further, more detailed replacement and repair instructions represented in a step-by-step and graphical manner can greatly assist service technicians resolve service issues.

These capabilities can quite often be enabled via a mobile solution. The detail of information provided varies depending on the type of solution acquired or developed, but organizations looking to improve field service performance with the aid of mobile solutions should prioritize these capabilities when scoping or selecting a mobile solution. Best-in-Class service organizations are 22% more likely to empower their field agents with a mobile field service solution and quite often prioritize the capabilities highlighted above.

Dispatch and Scheduling

To prevent an instance where an inexperienced technician arrives on the customer site or one where the technician might not have the necessary parts and needs to track them down, the implementation of improved triage and scheduling processes can have a significant impact.

Incoming service calls should go through a basic level of triage to determine if the service request can be resolved via customer self-service, through remote resolution means (if necessary), through direct part shipment (if possible), or through direct technician dispatch. This requires appropriate staffing of skilled dispatch agents who are able to diagnose incoming calls and determine the necessary path of resolution. The knowledge of these agents is vital and so is the information available to them at the point of dispatch. Not only do these dispatch agents determine if a technician is needed, but they also need to identify and allocate the necessary part for successful service completion. Best-in-Class organizations indicate that 61% of incoming calls are routed through a triage phase, compared to only 50% for all other organizations. Triage doesn't guarantee first-time fix, but organizations that route all calls through triage experience an 86% level of first-time fix when compared to 62% for those who have no triage at all (Figure 4).

"There are two primary ways to improve first-time fix:

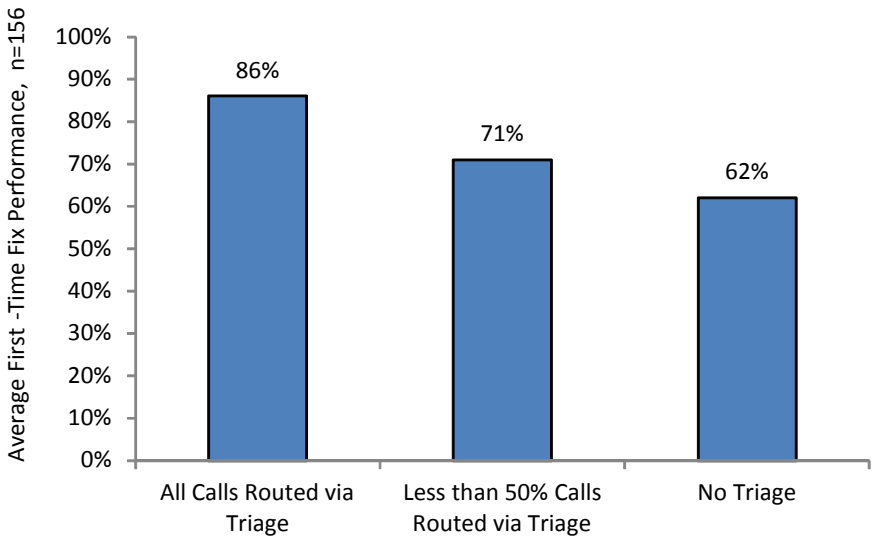
1. Accurately diagnose the problem and solution before going on site.

2. Bring enough parts to solve the most problems on one visit."

~ Andy Huber,
Manager of Systems Strategy,
Xerox Technical Services

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Figure 4: Triage to Stop the Inefficiency



Source: Aberdeen Group, January 2013

When a field agent is needed, intelligent scheduling can also greatly impact first-time fix performance. Intelligent scheduling doesn't necessarily infer the purchase of a dynamic scheduling optimization solution; these solutions can, however, deliver significant value in organizations looking to balance multiple goals and outcomes with available resources and can go a long way in enabling a more intelligent schedule. The value of the output of a dynamic scheduling tool or one that is slightly less sophisticated is based on the inputs and parameters fed into the system. Therefore, if part availability isn't selected as an essential precursor in the selection of the next best technician, then the most sophisticated of tools might not yield the actual best technician for the job. As a result, scheduling processes should include and incorporate part availability as a factor when scheduling technicians. The parts in question do not always have to be in a technician's truck stock; they can be available in transit via a pick up point with another technician. Aberdeen's *Field Service 2013* research shows that more than 50% of all field service visits ultimately require a service part. For those visits that do require a service part, the Best-in-Class report that the necessary parts are available in the technician's truck 58% of the time. For all other organizations, in-truck part availability drops to 45%.

In addition to part availability, technician familiarity with equipment being serviced and technician skills should also be prioritized if the emphasis is on improving first-time fix. In most instances, scheduling tools are often used to speed up response times or reduce travel costs, but as Figure 1 pointed out, the customer is most concerned with the resolution of the service issue.

"In our industry product identification is the key to reduce repeat visits. This is a major factor in our IQA process."

~ Network Manager, European Auto Repair Organization.

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Planning

While scheduling and point-of-service adjustments are much more execution-oriented, vast improvements in first-time fix can be achieved by leveraging service performance information to make strategic adjustments. For instance, information on service activity tied to the type of service delivered, the nature of product or part failure, the incidence of failure in a particular scenario, or the performance of field workers with a particular type of training can be used to modify:

- Scheduling criteria to determine which factors are most important in resolving customer issues
- The diagnostic and resolution information available to triage and field service agents to improve accuracy of information
- Service demand forecasts to build a response strategy
- Resource allocation plans tied to people, parts, and coverage to respond to service needs
- Training plans to emphasize the skill sets needed to improve resolution
- Hiring plans tied to the skill sets and personas of successful field service workers
- Product development plans based on failure rates to improve serviceability or quality
- Supplier relationships via the identification of faulty or at-risk parts

These changes will impact first-time fix, but will also improve overall quality and minimize downtime, metrics that have a significant impact on customer satisfaction. As mentioned earlier, a service executive team is needed to ensure the integration of field service and parts management. This executive team also requires the responsibility of developing and being held accountable for service plans. **Those organizations with an executive team with forecasting and planning responsibility in place experience a near 10% outperformance in first-time fix when compared to those organizations that don't.** Best-in-Class organizations are two times as likely as Laggards (61% vs. 30%) to provide service with leadership responsible for demand forecasts and service resource plans. It is also important to note the additive impact of planning on existing triage and scheduling strategies. For instance, those organizations that do not route any calls through triage and don't have service planning in place experience a 51% first-time fix compared to a 76% result for those organizations that have no triage but do have service planning in place.

Workforce Training and Workforce Selection

A comprehensive review of workforce management requires a close link between service and HR tied to the use of performance data to select, retain, incent, and train field workers. As noted in the section above,

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performance data can be used to understand gaps in the current workforce strategy, which therefore leads to a more intelligent deployment of field resources. Thirty-seven percent (37%) of Best-in-Class service organizations work collaboratively with HR to develop a field service workforce strategy compared to 30% of All Others. On the top of the list of collaborative projects is:

- Candidate screening (89%)
- Performance evaluations (68%)
- Onboarding (68%)
- Interviewing (63%)
- Assessments (63%)

Performance data can also be utilized to measure the efficacy of third-party workforces who represent the service organization. Outperformance or underperformance vis-à-vis other third-parties or organization expectations can impact those organizations that are prioritized as preferred partners.

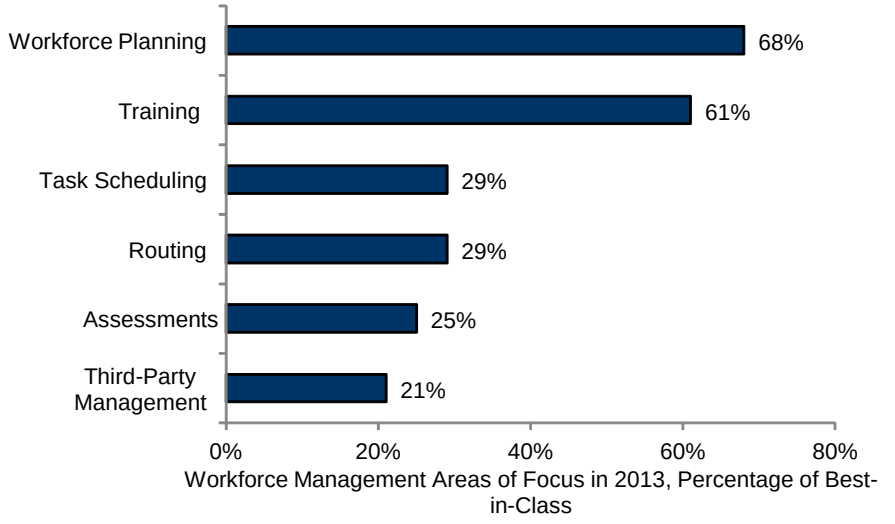
"To improve first-time fix we need to focus on training and in improving diagnosis before the service call so correct parts are available."

~ Vice President, U.S Service, Medical Device Organization.

Summary

A comprehensive review and field service workforce management is necessary to boost field performance, specifically as measured via first-time fix. As seen from Figure 5, the Best-in-Class are actively focused on dedicating resources towards key workforce management areas in 2013.

Figure 5: Areas of Focus for 2013



Source: Aberdeen Group, January 2013

It is vital that organizations pushing for improvement in first-time fix consider their workforce management practices as a starting point for improvement. This, combined with structural changes in service

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organization oversight, will yield significant results in improving first-time fix performance while improving overall profitability and customer satisfaction.

As a note of caution with the first-time fix metric, it is essential that improvement be evaluated in combination with profitability and customer satisfaction performance. A 100% first-time fix might not be the ideal state if that means the adoption of stop-gap measures such as bigger trucks or larger truck stock, leading to ballooning service costs and lower profitability. Depending on the organization, there is a limit where the cost of increasing first-time fix another percentage point is too significant and causes a major loss in profitability. The Best-in-Class consistently operate at a near 90% level of first-time fix while continuing to yield extremely high service margins.

For more information on this or other research topics, please visit www.aberdeen.com

Related Research	
Field Service 2013: Workforce Management Guide; February 2013 *State of Service Management: Outlook for 2013*; January 2013	*Convergence 2012: People and Parts Linked Together to Solve Customer Issues*; November 2012 *Field Service 2012: Mobile Tools for the Right Technician*; July 2012

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