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Service Lifecycle Management for HVAC and Controls

Competition Heats Up for Service Contracts

Executive Overview

The battle continues for service contracts in the HVAC and Controls markets. The rules of competition have changed for companies servicing heating, ventilation, and air-conditioning (HVAC) and related control systems over the last several years. The clean separation between installing and maintaining the mechanical components of the equipment—such as air handlers and chillers—and the control systems has dissolved. The customer now has more options for service. Mechanical contractors are competing with controls providers, controls technicians are competing with mechanical contractors, and increasingly everyone is competing with manufacturers who are beginning to capitalize on their product lines to offer service for their own equipment—and for equipment from others.

The rules of competition have changed for companies servicing heating, ventilation, and air-conditioning (HVAC) and related control systems

Increased competition is good for service customers, particularly for industrial customers and large chains. These larger customers can now benefit by consolidating their service spending to a smaller number of suppliers. By working with fewer suppliers, they can gain economies of scale and contract negotiating leverage. Beyond cost advantages, the customer can now expect to gain a more consolidated view of their operations and service needs by looking at service trends, spending and performance across multiple sites and types of equipment.

These market changes can also be good for service organizations that are prepared to capitalize on the change. These companies can achieve greater revenue from each customer by servicing a broader range of equipment and leveraging technician visits to perform work on multiple types of hardware. To keep up with the changes—or better yet to profit from them—means adapting to a more complex, more competitive service environment. Service organizations—whether historically focused on mechanical service or controls—need to compete with equipment manufacturers by better sharing equipment knowledge and leveraging their independent status to service multi-vendor environments. Manufacturers need to continue to improve service organizations and processes as they transition service from an overhead operation to a profit center. All service companies need to address increased competition and complexity of the new service landscape by simultaneously providing higher levels of customer service while decreasing service costs. Service Lifecycle Management (SLM), coined by industry analyst firm AMR Research, is an approach that allows service organizations to better manage their service-related processes—resulting in both better service and reduced costs that are critical to profitable service in the changing HVAC and Controls industry.

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When Service Markets Collide

The service market for HVAC and Controls has structurally changed in recent times, leading to a new and more complex competitive landscape. Bob Henderson, field operations manager for Carrier Commercial Service explains: *"Lines have begun to blur between equipment and controls,"* Mr. Henderson described, *"Standardization of protocols makes it easier to mix and match controllers with equipment. Industry has demanded less proprietary systems to keep costs down—and it has opened the door to competition."* That competition may be good for consumers, but it can be a challenge for service organizations as they struggle to react to the changing circumstances. Equipment manufacturers faced with a flat growth market and a struggling U.S. economy began to look at service revenue as a way to sustain revenues. *"There were a lot of people jumping on the bandwagon for service during the down economy,"* said Jennifer Koch, service operations manager for full service mechanical contractor McKinstry, *"Competitors had to grow their services business."* Controls service is attractive because although the individual controllers and other parts are often inexpensive they are numerous and dispersed. *"Controls installation and service revenue can be significantly greater than what HVAC service alone offers,"* Mr. Henderson stated, *"That revenue allows the manufacturer to grow."*

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Services revenue for manufacturers is no longer viewed as just the aftermarket, but as a strategic profit center. Controls vendors have responded by servicing HVAC equipment, and many mechanical contractors will install and service all related systems. The result of this market collision is that service contracts may be larger—but the competition for each service contract has grown more intense. This drives a need for better customer service "There are a lot of competitors knocking on your customers' doors today" Ms. Koch stated.

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- Jennifer Koch, service operations manager McKinstry

Servicing the Facility

Today, the view of service can't be limited to individual systems. The goal is to service the entire site. By obtaining service contracts for an entire facility—or better yet a chain of facilities—service organizations can leverage having a technician onsite to work on multiple systems. This is also beneficial because it is often difficult for customers to determine whether a problem is with the equipment or the controls without some help from a technician. If an HVAC technician finds a problem with the controls and doesn't have a service agreement to fix them, they have wasted their time and the customer is still without service while the controls service organization is brought in.

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- Bob Henderson, field operations manager Carrier

Perhaps just as importantly, however, servicing the facility is becoming a competitive priority. Customers are eager to consolidate their service contracts onto a smaller number of providers in order to simplify support and increase their negotiating power. Many service companies are more than willing to help by picking up the additional business. *"Other manufacturers and controls vendors are bidding the work,"* Carrier's Henderson commented, *"Now there is no safe haven, and you have to bid other people's stuff as they will do to you."* Mr. Henderson went on to explain that Carrier has seen large chain stores consolidating service contracts because they want consistency in service. *"Beyond service consistency, they also want information,"* he explained, *"Without standardizing on a service company that has good software systems there is not way to look up service information for all of the stores."* Servicing multiple types of equipment for a single facility can be a challenge, but servicing multiples types of equipment for a chain of facilities increases complexity dramatically.

Service Complexity

HVAC basics are relatively mature, as the underlying technology has not seen a dramatic shift in recent years. The exception to this is that the HVAC equipment now has the capability for variable speeds and is getting *"smarter"*, sometimes even having a microprocessor onboard. HVAC is more complex today, however, because the systems are being implemented with much more complex control systems. These systems include distributed logic and networked equipment that manage entire facilities on a holistic basis to provide better temperature management and efficiency. In this environment, a single control may be causing a problem, but it can involve a lot of physical effort to find the cause.

The increased complexity of the equipment is a part of the increased difficulty in service, but it is only a part of the story. The increase in the number and type of systems being serviced has dramatically increased the complexity of the job. *"Our business is getting more difficult, we may now service 100 different items,"* says McKinstry's Koch, *"Each one can have different materials, different protocols and different task lists."* She went on to explain that each of McKinstry's customers may have different requirements, and that the customers are more demanding on what tasking they want done.

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Regulatory and licensing requirements also add complexity. Using a refrigerant like R22 requires service companies to track what they buy, who uses it, what goes in to a piece of equipment, what comes out, who used it and how it was disposed—to be able to report where every pound goes. Service companies also need to provide customers with the associated documentation in case they are audited. Licensing requirements have increased as well. A plumber or HVAC technician may have to carry five or more licenses for different jurisdictions and types of equipment, including a gas license, electrical license, medical equipment license, and licenses for each state they service. Recently, more cities are requiring individual licenses to increase revenue. *"It's a big challenge following all of the guidelines and rules, including following union guidelines, it starts to get crazy,"* lamented Ms. Koch, *"Fortunately our service software—Astea Service Alliance—can track licenses and certifications through their employees module, making them easy to find during dispatch."*

It's not just the technical aspects of service that have gotten more difficult, the business aspects of service have become more challenging as well

It's not just the technical aspects of service that have gotten more difficult, though, the business aspects of service have become more challenging as well. Increased equipment reliability and decreased equipment cost have also made selling the value of service contracts more difficult. Service companies now have to sell added value as opposed to simple break/fix contracts, because the end user sees no value in break/fix when the equipment is less likely to break, or the replacement cost makes it easy to toss it out and get a new one—possibly a more efficient one—to replace it. *"What drives value is the uptime, the amount of calls that we don't get,"* describes Carrier's Henderson, *"If we are doing a good job, nobody notices."* The job of servicing more complex HVAC and controls equipment has clearly become more difficult, even before considering increased competition for service contracts.

Competition Demands Better Service

When competition is fierce, companies have to focus even more intently on providing world class service. Months or years worth of great support can be compromised by one unfortunate experience. While one poor service experience is usually not a critical event for a particular customer, it can open the door to allow a competitor in to try to unseat you. Avoiding potential service level problems requires that service levels are monitored carefully and proactively in order to meet or exceed customer requirements. But competition often requires more than just offering superior service—it requires proving superior service. Service practices must not only enable customer satisfaction, but actually defend why the service contract needs to be renewed. *"The other reason for having a system with a web-portal like Astea Service Alliance is that you can start showing value to your customers regardless of whether something is broken,"* Carrier's Henderson explained, *"We can show them what we are doing, for example that we fixed something before it broke. If you aren't telling them you are doing it, they don't appreciate it."*

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Better customer service comes from better knowledge of the customer and their specific needs. Companies value the experience and knowledge that their trusted technician has about their business because they know that it will allow them to fix the problem more effectively. As companies grow and competition expands, companies can't afford to have all of that knowledge in the technician's head. *"The bottom line is that if you have the knowledge in the system, even if the same guy can't come out than you have the information to do the job,"* says McKinstry's Ms. Koch. That knowledge is critical to maintaining long-term customer satisfaction. The information need goes beyond understanding the equipment. *"Customers expect us to know their business; to know what's there,"* Ms. Koch commented, *"We need to know about roof access, parking, requested mechanics, specific customer procedures and other non-technical information."* With increased competition, this knowledge makes the service company much harder to replace.

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Better Service – Without Losing Sight of Cost

There is a *"catch-22"* here, where combating competition requires increased service levels and managing complexity drives up costs, but the competitive market dictates that prices must go down instead of up. Without the right technology this is a contradiction. What it means to the service provider is that sub-optimal processes that worked in the past will not stand up to the test as the HVAC Services Market continues to consolidate.

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When margins are tight, costs must be actively managed. The challenge is that managing costs requires attention and focus at a very detailed level. The difference between profit and loss can be as simple as missing a manufacturer's warranty for a replaced component or dispatching an overqualified person for a particular job. Being smart about service is the difference between profit and loss. Service Lifecycle Management can help by providing a template for best business practices. SLM provides an approach that highlights getting the basics right and focusing on the right details to improve service and manage profitability.

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In May of 2003, Tech-Clarity published a white paper titled *"The Service Lifecycle Management Approach - Strong Customer Relationships Result In Profits in the Service Industry."* That paper highlighted some practical ways in which companies could adopt SLM concepts into their business and improve profitability in the product aftermarket. The following overview highlights these approaches and how the apply to servicing HVAC and Controls:

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Never Ignore a Call for Help

Every call from a customer is an opportunity to increase customer satisfaction and possibly get an order. Many companies can gain value simply by providing their employees with visibility to all of the contacts from a customer—regardless of the source—so they can get a full picture of the customer's needs. By automating the capture and response to requests through tools such as remote access, workflow, automated escalation and integrated e-mail, companies are ensuring that customer calls are captured and acted on in a timely manner. Even better, by proactively predicting a problem or supply need, customers see value from service contracts through prevention of a problem as opposed to firefighting, and the service company can decrease the need for expensive and disruptive emergency service calls.

Reduce Waste in the Call Center and Office

In order to improve call efficiency, companies are providing shared knowledge of problems, resolutions, occurrence rates and causes to their representatives. By providing information that can be quickly searched for relevant answers, the time spent with customers is more productive and provides more value. If a customer can find the answer to their problem or question through self-service, customer satisfaction can come at a significantly reduced cost. Automated web response, if done properly, can also save significant resources and maintain high customer satisfaction levels.

"You have to tie the chain from getting the call, doing the work, closing it out, and billing it out faster," says Carrier's Henderson, *"You can't afford to process time tickets at the end of the week for job folders and payroll."* McKinstry's Koch also highlighted the need for efficiency, stating, *"We now enter data once, from the quote or call center call to field service. Our information flows easily through the system, and it is easy to get information out."*

Avoid the Service Call (or at Least Reduce the Urgency)

By providing customers and customer service representatives with broad access to product and service-related knowledge, many service calls can be avoided. If the problem can be fixed without dispatching a technician, the cost of the technician and related overhead expenses can be saved. By preventing emergency calls with planned maintenance or repair, customer satisfaction can be increased with less need for urgent response. Also, through better scheduling, some service calls can be avoided by taking advantage of the existing service schedule for routine maintenance and meter-reading calls, or combining them with other calls. By providing the technician with the right information about the customer and upcoming service, technicians can often *"kill two birds with one stone"* and save on the total number of calls required.

Make the Right Calls First

Service calls should be prioritized based on customer need, but also on the value of the customer and the service level that the customer has paid for. Nobody wants to leave a customer in need, but knowledge of the contracted service agreement can allow company representatives to properly prioritize limited resources to the appropriate customer. Customers that continually request urgent responses outside of their service levels can be targeted for an upgrade to their service plan and provide more income for the company. Any service calls that are trending towards an SLA violation or customer service failure can be reported in advance and the appropriate person notified while there is still time to address the problem.

Close the Call the First Time

By closing the call the first time, the number of service calls can be reduced and customer satisfaction can be increased. Fixing the problem the first time requires the right technician, with the right knowledge, the right parts, the right tools, the right customer data and the right product information in hand. By having predefined response lists for problems that outline the appropriate actions, tools and materials required to make the correction, service technicians can show up prepared to get the job done right. Through visibility to the equipment installed, the service history and the call history, the technician can more accurately diagnose and resolve the issue. And closing the call means that the customer signs off that the problem is corrected—as soon as the problem is corrected.

Keep Technicians Productive, not Just Busy

The service technician is critical to resolving customer problems, but also to maintaining service history and providing information for billing. Reducing the amount of time that the technician spends on paper work through automation allows the technician to take more calls, reducing employee expenses from overtime and hiring additional technicians. Mobile technology and self-service capabilities can significantly reduce both the load on the call center from technicians and the amount of time the technician must spend on the phone and away from helping customers. Schedule optimization is also key. Keeping technicians updated—in real-time—of schedule changes is another way that they can be kept productive.

Turn the Service Call into an Opportunity

Companies with field service personnel trained to spot sales opportunities can add a significant new source of revenue, provided that it is easy for them to communicate those opportunities back so the order is captured or turned over to Sales. Service technicians that have visibility to contract expirations, upgrade availability and complementary products can increase customer satisfaction as well as sales revenue. A service technician with a piece of equipment to fix will probably not look in another system to identify a sales opportunity, but if they are proactively notified of the opportunity in the course of their work they can uncover new orders for the company. The most expensive part of service may be sending a technician, so any additional work is pretty much pure profit.

Turn Service into Cash – Rapidly

Perhaps one of the best ways to increase the profitability of services work is to enable the service technician to create an invoice on the spot, starting the payment cycle immediately. In addition to being paid earlier, the service technician can get approval at the time of the service. Part numbers, time and expenses are much more accurate when captured quickly so nothing is lost. To generate an accurate invoice in the field requires easy access to understandable information on contracts, warranties, service history, call history and customer information. With the right information to generate the invoice accurately and get it approved, the company will have less disputes and credits, and increase cash flow positively. Creating an inaccurate invoice, however, may be worse than delaying the invoice, so attention to the details is required here.

Stop Revenue Leaks

Revenue leaks occur when customers are not billed for services they should pay for. The goal is to give the customer everything they are entitled to—but nothing more—or the service company is leaving money on the table. Without easy access to the proper information it is often unclear if expenses are billable or not, so they are typically not billed. Revenue leakage is difficult to identify after the fact, because it occurs in small but frequent occurrences, and requires access to detailed history and account knowledge. Similarly, supplier warranty information must be readily accessible and easy to understand in order to track returnable or refundable items. A systematic approach can provide significant benefit by recouping out of pocket expense and lost revenues by providing visibility and eliminating guess work.

Enhance the Customer Relationship

Customer satisfaction is extremely important to building long term relationships, and it is good business because it leads to greater profitability through customer retention and repeat business. Moving from a break/fix relationship to one of trusted advisor and value-added service provider results from handling problems proactively, ideally fixing the problem before the customer realizes there is one. To move from *"break/fix,"* a company does more in the way of preventive maintenance, remote equipment monitoring, failure analysis for retrofit and future design improvements. In this way, the customer is receiving something that they value more than a fast repair call: continuous availability.

Grow Revenue by Restarting the Service Lifecycle

The first step in selling additional products is identifying the opportunities. By mining the information already captured about customers and their equipment, effective marketing campaigns can be developed to target customers for additional products based on accurate, detailed information. Because the campaign is targeted based on real customer knowledge, it can be very focused on real, specific needs of the customer. McKinstry, for example, works with customers to do energy audits. They also track the age of customers' equipment, and if it's broken they can discuss the relative value of doing a repair versus a replacement.

Turn to Proactive Management

Through increased visibility in the service business, companies can gain better control, find bottlenecks and make better management decisions. With better information and tools, they can switch to proactive management through alerts and real-time information, as opposed to reactive management from reports that show history after the fact. Better management results in higher revenue and reduced costs, improving profitability from both income and expense directions.

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"With Astea Service Alliance, we have been able to implement benchmarks in dispatch so we can track what was committed and how we responded," says McKinstry's Koch, *"We report this to sales on a daily basis so everyone is up to speed."* Carrier's Henderson also highlighted the value of better management: *"We are doing things we know how to do, but today we get them done faster, with more accuracy, with fewer people, and with more information to make better decisions,"* Mr. Henderson stated. Through better visibility to information, customer satisfaction, cost and revenue can be better managed. *"We believe that if you can measure it, then it will improve,"* summarized Ms. Koch.

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Recommendations

- Get the basics of SLM right. Provide an environment where employees understand the value of better service management and the benefits it offers to customers and the service company.
- Be passionate about servicing your customers – or someone else will. The competitive nature of the service environment today demands customer satisfaction.
- Focus on cost at a very detailed level. Profit and loss is in the details, and with tight margins the difference between profit and loss can come from minor details that can be overlooked without automated processes.
- Optimize technician time. Technician productivity can make or break profit margins; make sure that technicians are kept busy on the right service calls.
- Don't forget to focus on the top line. Grow revenue by increasing value-added services and looking for add-on sales opportunities.
- Gather, mine and leverage service data. By analyzing good service data, service companies can find internal improvement opportunities as well as sales opportunities. But the value begins with gathering the right service oriented information in the right way.

Summary

Service competition is heating up, with increased competition coming from all angles. Increased competition, coupled with increased complexity, are placing greater burdens on HVAC and controls service companies. To survive and thrive in this changing landscape, companies will need to simultaneously provide better service while maintaining or improving cost structures. Service Lifecycle Management processes and software applications provide an opportunity to improve service and reduce cost, perhaps the perfect combination to stay cool as competition heats up.

About the Author

Jim Brown has over 15 years of experience in management consulting and application software focused on the manufacturing and service industries. Jim is a recognized expert in software solutions for manufacturing and service and has broad experience in applying enterprise applications such as Product Lifecycle Management, Supply Chain Management, ERP, and CRM to improve business performance. Jim began his professional experience at General Electric before joining Andersen Consulting (Accenture), and subsequently serving as an executive for software companies specializing manufacturing and service solutions. Jim is the president of Tech-Clarity, a research and consulting firm dedicated to making the value of technology clear to business.

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