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Industry Best Practices in Service Contact Centers and Support Desks

Proactive Call Center Support Assures Customer Satisfaction

March 2007



Executive Summary

As manufacturers in a variety of industries vie for competitive edge, they are placing increasing importance on service and support. The front line of service and support for most organizations is a call center that provides technical support to end users. Support is often provided by phone, but organizations are increasingly using technology solutions, including web based capabilities, to automate the first line of support. This report examines the strategies and approaches OEMs in multiple industries are taking to successfully diagnose and resolve issues in the call center. As such, these leading firms are improving customer retention, increasing first-call resolution rates, speeding problem resolution, and bolstering the top and bottom line. This study offers industry best practices for companies in each of the following vertical sectors:

- Consumer goods,
- High tech manufacturing,
- Industrial equipment manufacturing,
- Telecom/utilities, and
- Medical device manufacturing.

Industry Maturity Assessment

- **Telecom** and **utilities** firms beat out all other industry sectors with nearly 60% of problems resolved in the call center. In turn, they have the lowest total product service costs at 13% of revenue.
- **Medical device manufacturers** lead their vertical counterparts — and best-in-class — in prioritizing call center problem resolution — with 100% of respondents classifying this issue as “very” or “extremely” important to their company’s financial health.
- **High-tech** firms were the only group to outperform best-in-class in time to problem resolution, reporting support issues resolved in just 8 hours, on average.

Industry Best Practices

- More than any other industry, **telecom and utilities** firms utilize knowledge management tools for problem resolution with 54% of firms currently leveraging this technology.
- **Medical device manufacturers** report the highest cost for dispatching a technician at \$349 on average. However, 56% of firms in this industry systematically measure and track call center performance – a best-in-class strategy for success.
- Fully 66% of polled **high tech** firms have call centers that are tightly integrated with the product service organization and report up to a senior executive in charge of product service.

Recommendations for Action

1. **Invest in technology** to facilitate your call centers’ problem resolution capabilities.
2. **Evaluate and implement** a knowledge management or scripted trouble shooting solution.



3. **Establish a 2nd, 3rd**, or higher level technical support organization.
4. **Dedicate your support desk** to providing service, and not other activities.
5. **Staff and train** call center agents with the appropriate skills to support products.
6. **Formalize post-service survey efforts**, get feedback from your customers.

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Chapter One: Industry Maturity Assessment

Key Takeaways

- Telecom and utilities firms beat out all other industry sectors with nearly 60% of problems resolved in the call center. In turn, they have the lowest total product service costs at 13% of revenue.
- Medical device manufacturers lead their vertical counterparts — and best-in-class — in prioritizing call center problem resolution — with 100% of respondents classifying this issue as “very” or “extremely” important to their company’s financial health.
- High-tech firms were the only group to outperform best-in-class in time to problem resolution, reporting support issues resolved in just 8 hours, on average.

Aberdeen Group’s September 2006 benchmark report “[*Shoring Up the Front Lines of Product Service*](#)” analyzed how best-in-class organizations are boosting their call center support capabilities by improving processes, focusing management oversight, analyzing and measuring performance, and using technology solutions to speed problem resolution. This follow-on report probes how major industry sectors compare to both “best-in-class” organizations and to each other. Industry sectors examined in this study include:

- Consumer goods,
- High-tech manufacturing,
- Industrial manufacturing,
- Medical device manufacturing, and
- Telecommunications and utilities.

Industries Agree, Early Problem Resolution Is Crucial

Fully **85%** of polled companies report that being able to resolve problems in the call center or via an interaction over the web is “very” or “extremely” important to their company’s financial performance. Yet, despite this acknowledged importance, only **14%** are satisfied with their firm’s ability to achieve this goal. While best-in-class organizations report the highest satisfaction levels of polled companies with a 23% satisfaction rate, this discrepancy between importance and satisfaction shows a significant opportunity for improvement. (Table 1).

Table 1: Early Problem Resolution Importance and Satisfaction Out Of Sync

Industry Sector	Very to Extremely Important	Very to Extremely Satisfied
<i>Best-In-Class</i>	<i>87%</i>	<i>23%</i>



Consumer Goods	86%	5%
High Tech	86%	20%
Industrial Manufacturing	60%	7%
Medical Device Manufacturing	100%	16%
Telecommunications and Utilities	94%	18%

Source: AberdeenGroup, March 2007

With Few Exceptions, Industries Still Lag Best-In-Class

In our initial study on this topic, we measured specific key performance criteria to distinguish best-in-class companies from average and laggard companies. These key performance indicators (KPIs) represent *financial measures* – total product service costs as a percent of revenue; *operational measures* – percent of calls completely resolved in the call center and average problem resolution time; and *customer-facing measures* – SLA compliance rates. Given the disparity between expectation and satisfaction rates revealed in Table 1, it is not surprising that the industry sectors we studied lag behind best-in-class organizations in nearly all KPI measurement averages. (Table 2)

Table 2: Industries Lag Best-In-Class Performers in Most Instances

Industry Sector	% of Calls Resolved in the Call Center	Total Service Costs as a % of Revenue	SLA Compliance Rate	Avg. Time to Problem Resolution (in hours)
<i>Best-in-Class</i>	<i>63%</i>	<i>14%</i>	<i>89%</i>	<i>9.5</i>
Consumer Goods	49%	21%	85%	12.8
High-Tech	51%	23%	77%	8.4
Industrial Mfg.	50%	23%	86%	15.3
Medical Device Mfg.	48%	24%	84%	18.0
Telcos/Utilities	59%	13%	85%	13.5

Source: AberdeenGroup, March 2007

Best Practices: Focus and Technology Can Make the Difference

Though the industries we studied did not fare well on average against their best-in-class counterparts, we did discover companies in these industries who are taking aggressive steps to improve their problem resolution capabilities.



One such example is **A.O. Smith Water Products Company** – the largest manufacturer of residential and commercial water heating equipment in North America.

The company's technical support call center provides telephone support to contractors, plumbers, and consumers. Skilled technicians provide support for both residential and larger, more complex, commercial water heating systems.

A. O. Smith uses knowledge base management software to enable technicians to quickly identify the probable cause of reported failures. Contractors and customers can also access the knowledge base on the A. O. Smith customer support web pages for self service. This system automatically tracks and reports on how many inquiries are received and which answers are used to resolve problems.

A.O. Smith further utilizes its knowledge base to suggest possible resolutions to problems via an automated email response system. Customers sending an email inquiry get a rapid email response to their query which suggests the most likely answers to the problem or question they have reported.

A large well known national retail chain sells consumer goods, including consumer electronics, from both brick & mortar store sites as well as over the internet. The company provides its customers with call center and web self service support for a variety of inquiries, from the status of a pending order to a problem with a purchased product. This specific support group is staffed with approximately 75 agents, who field 2,500 incoming calls per day. The agents also handle tens of thousands of email inquiries each month.

The retailer has deployed a variety of technology solutions to help maximize the efficiency and productivity of its support staff. Automatic call distribution technology correctly routes incoming calls to the appropriate agents, interactive voice response (IVR) capabilities help determine the nature of the inquiry and the best agent to whom the call should be routed, and an automatic email response system allows customers to submit their problem requests and questions through the internet. The company has also developed a sophisticated "intranet" specifically designed for the customer support agents. This agent only intranet provides call center agents with quick access to the wide variety of information and knowledge they need to quickly and correctly resolve customer problems or questions.

The company also uses a commercially available automatic email response system to boost its support capabilities. This solution is one of the most helpful tools used by agents and customers alike. Customers send email inquiries to the support center; agents can search the company's knowledge base for answers or problem resolution steps and provide a quick response back to the customer. The email response management solution can also "auto-suggest" one or more answers to agents based on the content of the query. The company is enhancing this capability so that many of these email queries are answered through email auto-response, leveraging the knowledgebase. This will further relieve agent workload, enabling them to provide even faster responses to its customers, while focusing on more complex queries for assisted resolution. Furthermore, the knowledge base itself will soon be made available over the web, so customers can easily find answers to many of their issues or problems on their own, without having to contact the support center at all.



The company reports significant benefits from its use of these support desk technologies. Chief among them is the ability to handle more and more inquiries without a corresponding increase in staff. In fact, the company reported that its volume of support inquiries over the web has grown by as much as 120% per year during the last three years, but the number of call center agents has remained static. As the company provides customer access to the knowledge base via the web and enables automatic email response, it anticipates the number of incoming emails will drop by 50%, and that the average time to respond to the remaining email inquiries will drop from two minutes each to a maximum of 10 seconds per email.



Chapter Two: Industry Best Practices

Key Takeaways

- Fully 54% of, **telecom and utilities** firms utilize knowledge management tools for problem resolution.
- **Medical device manufacturers** report the highest cost for dispatching a technician at \$349 on average. However, 56% of firms in this industry systematically measure and track call center performance – a best-in-class strategy for success.
- Fully 66% of polled **high tech** firms have call centers that are tightly integrated with the product service organization and report up to a senior executive in charge of product service

Problems resolved in the call center or via web self-service have a dramatic impact on the costs of service delivery. The average cost of dispatching a service technician across all industries is \$230, however, when segmented by industry these costs vary greatly (Table 3).

It’s no wonder then that the industries cited this factor as the second most important factor driving them to boost their call centers’ problem resolution capabilities. If a modest sized service organization with 100 technicians who average only two service calls per day can resolve just 10% of these problems in the call center, they will reduce their service dispatch costs by more than \$1.1M per year.

This chapter benchmarks the strategies and business processes successful companies in each industry have employed to improve their call center diagnosis and resolution capabilities and provides best practices for firms in similar industries to consider.

Table 3: Industry Average Costs for Dispatching a Service Technician

Industry Sector	Average Cost of Dispatching a Service Technician
Consumer Goods	\$125
High-Tech	\$231
Industrial Mfg.	\$213
Medical Device Mfg.	\$349
Telecoms/Utilities	\$208

Source: [AberdeenGroup](#), March 2007

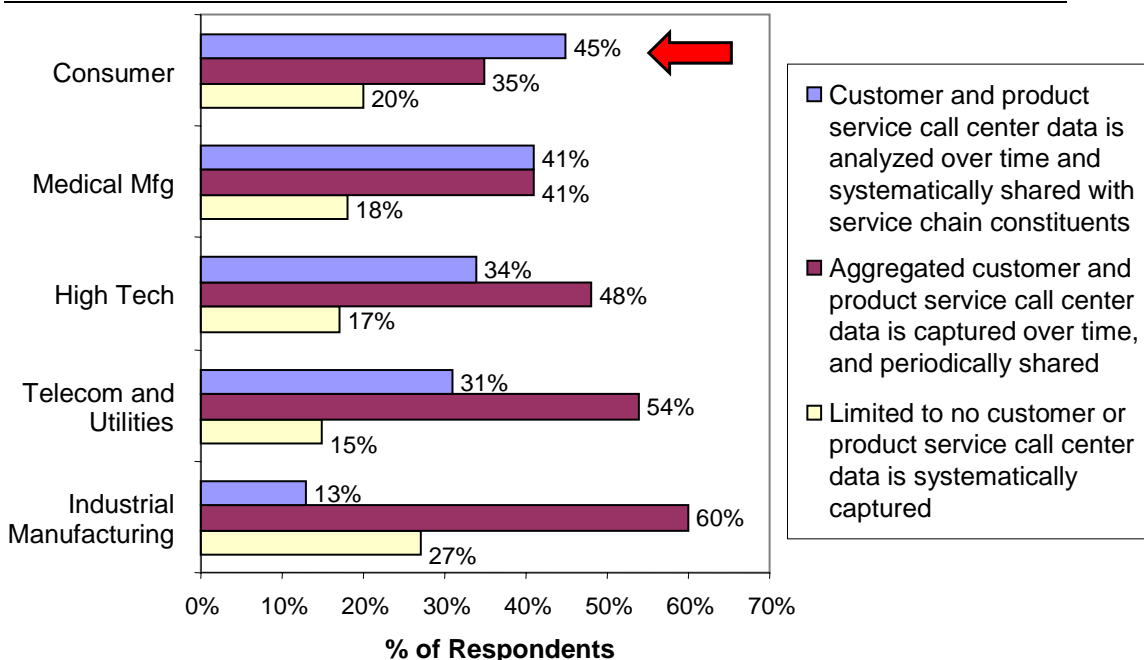
Consumer Goods Companies

Support issues that arise with consumer goods can vary greatly, making resolving these problems in the call center a challenge if service and support data is not documented and



managed effectively. Consumer goods companies lead all other industries in data management with 45% of firms reporting that they capture and analyze customer and product service call center data on a regular basis and systematically share this information with value chain counterparts (Figure 1).

Figure 1: Consumer Goods Firms Lead Others in Call Center Data Management



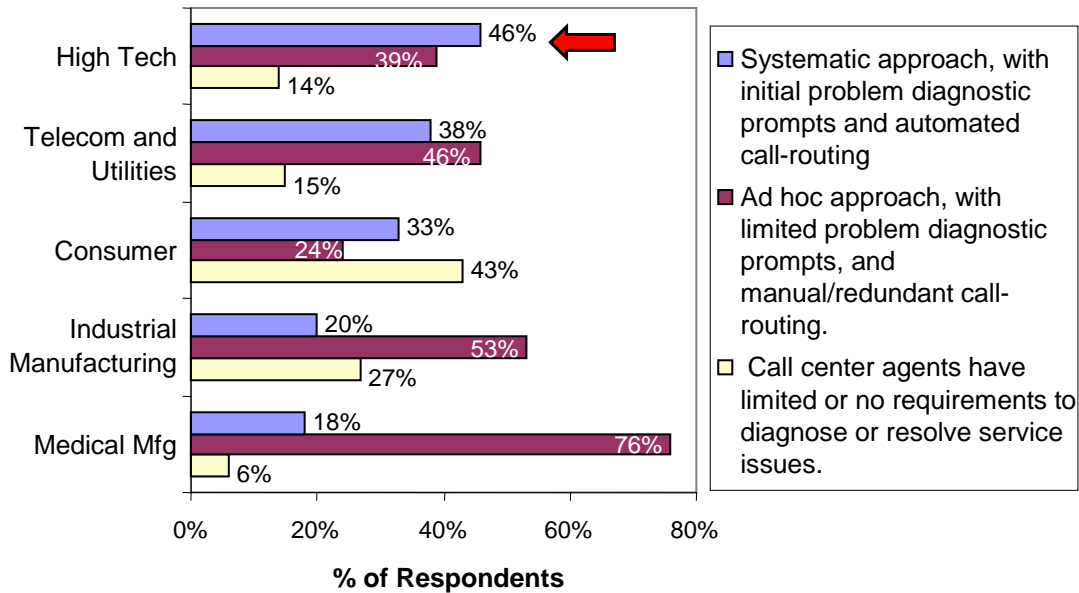
Source: Aberdeen Group, March 2007

High Tech Firms

High tech manufacturers emerged as one of the most advanced industry sectors in both process and organization within their call centers. Fully 46% of high tech firms reported having systematic processes for initial problem diagnosis with automated call routing in the call center. As seen from recent research in [Shoring Up the Front Lines of Product Service](#), a systematic approach of diverting calls to appropriate call center agents leads to immediate dividends. Fully 65% of best-in-class companies indicate having a systematic approach to call routing and diagnostics and as a result see a greater number of calls diagnosed and completely resolved in the call center than their peers (Figure 2).



Figure 2: High Tech Firms Leverage Systematic Processes



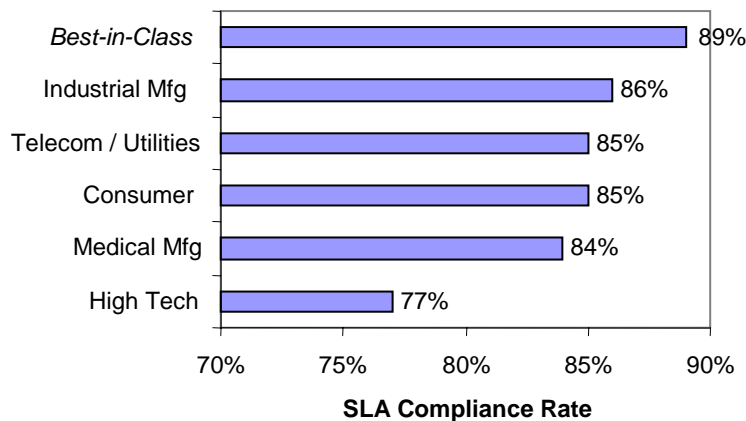
Source: Aberdeen Group, March 2007

In addition nearly two-thirds of polled high tech firms have call centers that are dedicated to — and tightly integrated with — the product service organization and report up to a senior executive in charge of product service.

Industrial Manufacturers

Industrial equipment manufacturers lead all other industry counterparts in service level agreement (SLA) compliance with an 86% compliance rate. However like polled firms in all other industries, industrial manufacturers still fell below the best-in-class mark of 89% SLA compliance (Figure 3).

Figure 3: Industrial Mfg. Lead Other Industries in SLA Compliance



Source: Aberdeen Group, March 2007

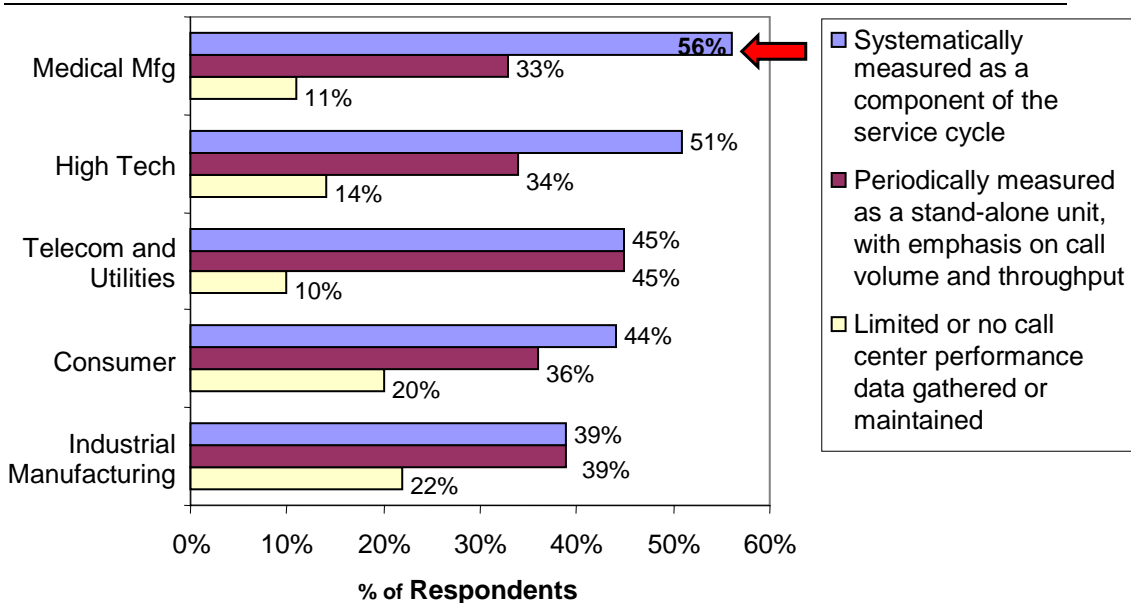


Medical Device Manufacturers

As seen in Table 3, medical device manufacturers report the highest costs for dispatching a field service technician with this costs topping the charts at \$349 – a full 33% percent higher than any other industry. As such medical device manufacturers have much to gain from diagnosing and resolving issues in the call center and reducing the amount of times a technician needs to be dispatched for customer service issues.

As such, it follows that medical device manufacturers would want to pay close attention to measuring and tracking the performance of their call centers and the effectiveness of the processes put in place to streamline and automate problem resolution. It is not surprising then, that medical device manufacturers lead all other industries in measuring call center performance with 56% of firms reporting systematic process in place for call center performance measurement (Figure 4).

Figure 4: Medical Device Mfgs Focus on Systematic Performance Mgmt



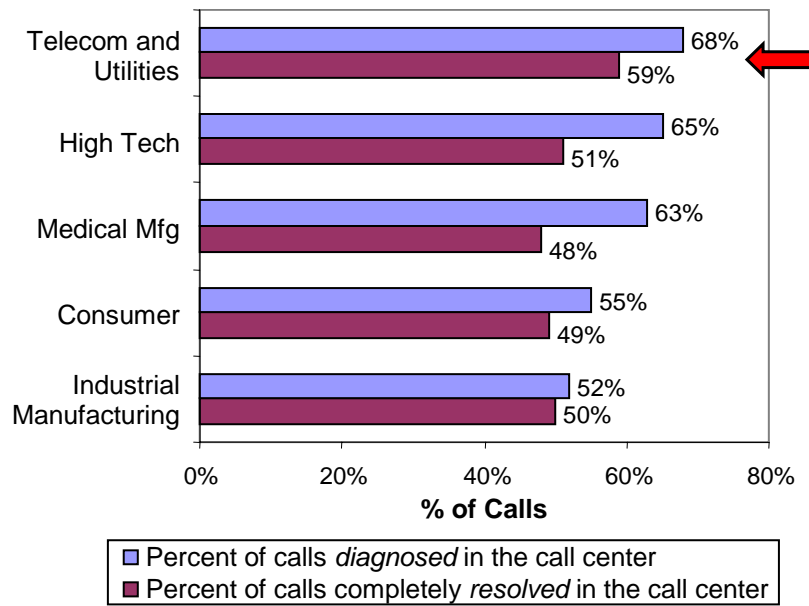
Source: Aberdeen Group, March 2007

Telecom/Utilities

As seen in Table 2, telecom and utilities firms outperformed best-in-class in total service costs as a percent of revenues with 13% of revenues spent on service — a full percentage point less than best-in-class. Given the high costs associated with dispatching service technicians, it comes as no surprise then that this sector would also boast the greatest percentage of service calls diagnosed and completely resolved in the call center as compared to their industry peers. Polled telecom and utilities firms boasted an average of 68% of calls diagnosed in the call center and nearly 60% of calls completely resolved by call center technicians (Figure 5).



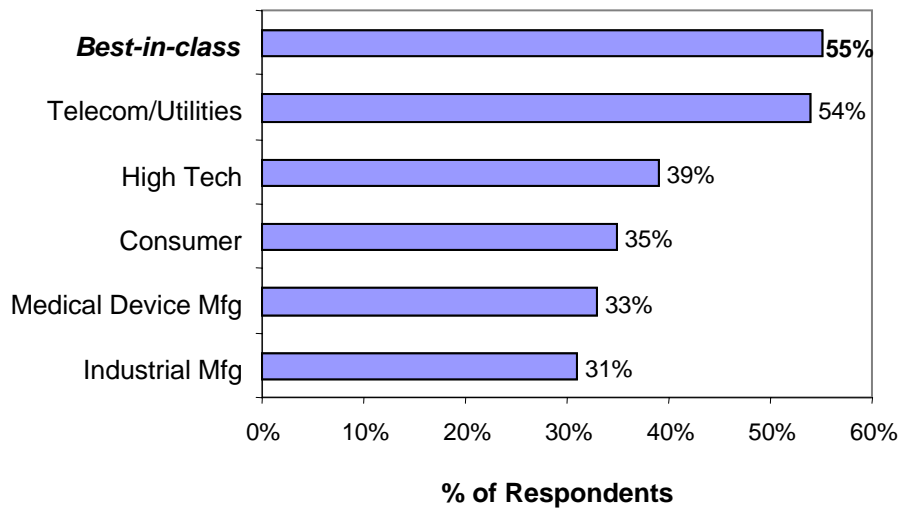
Figure 5: Telecom/Utilities Firms Diagnose /Resolve More Issues in Call Center



Source: Aberdeen Group, March 2007

How do telecom and utilities firms achieve this level of performance? Fully 54% of telecom/utilities firms reported leveraging knowledge management solutions to help speed problem resolution. It is apparent from the figure below that best-in-class firms also make use of this capability. Yet, only telecom/utilities firms come close to the best-in-class levels of deployment, with more than half of firms currently utilizing this technology. (Figure 6).

Figure 6: Use of Knowledge Management Tools for Problem Resolution



Source: Aberdeen Group, March 2007



More Best Practice Case Studies

Tracking customer satisfaction with customer support is key. **Symantec** knows the importance of customer satisfaction. The company has built a culture around the recognition of the significant impact satisfaction levels can have on customer loyalty, and that customer loyalty in turn ultimately either negatively or positively impacts corporate revenue.

Dan Pratt, Director of Global Business Operations of Global Enterprise Technical Support at Symantec, told Aberdeen in an interview how Symantec surveys its customers to determine how happy – or unhappy – they are with the support they receive from Symantec. Symantec uses a commercially available customer satisfaction survey tool to develop both “transactional” and broader-scope “relationship” customer satisfaction reports. Dan further explained that follow-up on these customer satisfaction surveys and reports are systematic, with strictly adhered to procedures and schedules.

When a customer survey report with less than desired results shows up on a manager’s desk, the manager is charged with calling the customer directly to determine the precise cause of the customer’s dissatisfaction. That manager is then further responsible for creating corrective actions and for following up to make sure the corrective actions are implemented. Finally, the manager is responsible for “closing the loop” on the action to insure that the cause of the dissatisfaction will not repeat.

Regular customer satisfaction reports and metrics go to the support team for constant monitoring of trends and development of action plans. Also, an intense quarterly customer satisfaction analysis is presented to executive management. The management staff conducts a minimum half-day workshop around these reports every quarter. Each workshop results in an improvement plan with typically one to five specific corrective actions, which the management team is then tasked with executing. Each of these actions is rigorously managed by the executive team and driven to closure with closed-loop feedback. The organization provides satisfaction reporting and analysis to the executive management team and to the board of directors and is held accountable for results.

Feedback from all the surveys drives systemic changes across the organization – in Support as well as with engineering, consulting, education, and sales. Symantec confirms this proactive approach to identifying and resolving customer satisfaction issues has not only helped build customer loyalty, it’s also helped improve support operations as well. For example, in one case in response to customer feedback, the company isolated process issues which were driving up problem resolution times and developed processes and tools to correct them; as a result, the backlog of working support cases has been reduced by an average of 29% and as much as 55%, which will result in faster resolution times.

Another example. **ExtendMedia’s** OpenCASE software platform allows content providers and distributors to securely launch digital media businesses, enabling multiple commercial models including advertising, rental, subscription and download to own, via both licensed and hosted offerings. ExtendMedia’s solutions power digital media commerce for retailers, network operators, networks/studios and content aggregators, including Showtime, ClickStar and Cablevision.

As the demand for downloading media has increased, ExtendMedia’s customer base has grown – and so has its customer support requirements.



ExtendMedia needed a support enabling technology that would take the bulk of the customer service work off of telephone support and engineering staff. About a year ago the company deployed a software solution that enabled a web self-service “gateway” for its customers. In an interview with Aberdeen, Matthew Pisarek, customer support manager at ExtendMedia, said they found and implemented a solution that provides a “front-end” which customers use for self-service, and the same solution is used by the “back-end” call center and technical support staff. Two key features of the solution available to both customers and ExtendMedia support agents are its extensive knowledge management base and robust search engine. Customers and internal staff alike can enter keywords or phrases describing a problem or question; the system then searches and retrieves all available material relevant to that key word inquiry. This capability significantly accelerates the problem resolution process. Pisarek further explained they had also easily integrated this new support solution with their legacy quality assurance bug tracking system; these two solutions now automatically exchange the latest information on the progress being made in resolving quality issues.

How has ExtendMedia benefited? Substantially. Examples the company provided include: lower support costs, more efficient handling of trouble tickets, fewer customer support reps are needed going forward, etc. The company specifically cited an approximate 50% reduction in problem resolution time and an estimated 80% reduction in incoming phone calls because customers now handle most problems themselves through the new web self-service portal.



Chapter Three: Recommendations for Action

Key Takeaways

- Invest in technology enablers to facilitate the call centers' diagnostic and problem resolution capabilities, including knowledge management tools, live web chat, etc.
- Provide web front end self-service capabilities, giving end-users the ability to identify and resolve their own problems
- Establish a 2nd, 3rd, or higher level technical support organization to increase your capacity to diagnose and resolve product service issues.

The financial and operational benefits to be gained through improved call center or web front end problem resolution capabilities are substantial. The survey data Aberdeen has gathered and the in-depth interviews we have conducted strongly suggest that call center and service executives take the following steps in order to realize the full potential of these benefits:

1. **Invest in technology enablers** to facilitate the call centers' diagnostic and problem resolution capabilities. Evaluate and implement, web front end and web "chat" tools, IVR and speech enablement technologies, automatic call distribution, work flow software, and other enabling technologies.
2. **Knowledge Management / Knowledge Base tools are key.** Survey results and interviews confirm that use of knowledge management solutions, or trouble shooting scripts, are key to faster problem resolution. Evaluate and implement a commercially available knowledge management system, or at a minimum, deploy trouble shooting scripts for call center agents. Give end users web access to this knowledge base so they can try to resolve their own problems over the web.
3. **Provide back-up.** Establish a 2nd, 3rd, or higher level technical support organization to increase your capacity to diagnose and resolve product service issues without dispatching a field technician.
4. **Focus on Service.** Dedicate your service and support desks, or service call center, to providing support to end users. Additional call center responsibilities such as outbound sales and/or marketing activities detract from and dilute the problem resolution focus.
5. **Know your installed base.** Staff and train call center agents with the appropriate skills to support both legacy and new products. Agents with inadequate skills or training will result in dissatisfaction in the customer base and high agent turnover and training costs.
6. **Formalize post-service survey efforts.** Measure how your customers and end users view the service you provide. Actively survey them for feedback and implement process changes as necessary to stave off customer satisfaction issues.

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Michael Israel is a senior analyst and research director focusing on Service Chain Management research. Through primary market research, Michael analyzes how service and maintenance executives are utilizing field service management, mobile field service, service parts planning and execution, service force optimization, machine-to-machine (M2M), enterprise asset management (EAM), remote product service (RPS), call center, help desk, and other service and support solutions to automate, streamline, and improve service and maintenance processes.

Israel has worked in the service chain field for more than 30 years. He has significant service operational experience, having spent 15 years managing both field service and service parts operations. And he has more than 20 years experience in selling and marketing service management software solutions to manufacturers and service providers in a wide variety of industries.



Appendix A: Research Methodology

In August and September of 2006, and again in February and March of 2007 Aberdeen Group captured more than 170 qualified respondents to a quantitative survey on the role of call centers and support desks in product service.

Responding call center and service management executives completed an online survey that included questions designed to determine the following:

- The importance of their call centers' and support desks' abilities to diagnose and resolve problems within the call center itself
- Whether or not that capability will grow or decrease in importance going forward
- Current and planned use of software solutions and technologies to aid these activities
- The benefits, if known, that have been derived from enabling the call center to proactively diagnose and repair equipment problems reported by customers and end users.

Aberdeen supplemented this survey effort with telephone interviews with select survey respondents, gathering additional information on call center management strategies, experiences, and results.

Respondents can be characterized as follows:

- **Job title/function:** The research sample included respondents with the following job titles: manager, director, vice president, executive and senior vice president, and C-level (CEO, CFO, COO). 12% are C-level, 7% senior vice presidents, 8% vice presidents, 23% directors, 32% managers, 5% staff, 13% other.
- **Industry:** Responses were received from 32 different industry sub-segments. The largest concentration of responses came from high tech – 20%, industrial and construction equipment – 11%, health and medical devices – 10%, telecommunications – 8%, and consumer durables and electronics – 7%.
- **Geography:** Responses were received from all geographic areas of the world – 65% from North America, 21% from EMEA, 11% from Central/South America, 4% from APAC.
- **Company size:** 24% from large enterprises (> US\$1 billion); 32% from midsize enterprises (revenues between \$100 million and \$1 billion); and 44% of respondents were from small businesses (annual revenues of \$50 million or less).



Appendix B: Related Aberdeen Research & Tools

Related Aberdeen research that forms a companion or reference to this report include:

- [*Managing Risk and Reward in the Performance Driven Service Chain*](#) (February 2007)
- [*Profit Minded Service Organizations Focus on Service and Maintenance Contracts*](#) (February 2007)
- [*Industry Best Practices in Reverse Logistics*](#) (January 2007)
- [*Collaborative Asset Maintenance Strategies*](#) (December 2006)
- [*The Mobile Field Service Benchmark, 2007 and Beyond*](#) (December 2006)
- [*Remote Product Service Update*](#) (November 2006)
- [*Location. Location. Location. Does it Matter in Mobile Field Service?*](#) (October 2006)
- [*The Service Parts Management Update Benchmark*](#) (October 2006)
- [*Shoring Up the Front Lines of Product Service: The Call Center*](#) (September 2006)

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