

Customer Care Analytics:

Analyzing Data to Improve Customer Relationships and Identify New Business Opportunities



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Much has been written about the explosive growth of data in today's world. Every two days, we create as much new information as we did from the dawn of civilization through 2003. The question is, how are you using this information?

Customer care centers, by their very nature are data collectors. Caller questions and concerns provide invaluable information on issues, misconceptions and communications needs. By applying analytics to customer care, providers can improve the customer experience, generate more revenue from more effective cross-sell and up sell efforts, and provide real-time feedback to client companies.

Analytics can also help improve agent performance as well. By identifying call characteristics, and through text analytics, analyzing the call transcripts, managers can determine the strengths and weaknesses of specific agents and use this information to both aid their development and use their skills in the most effective way.

ACS, A Xerox Company, has invested heavily in advanced technology solutions and applies processes that enable us to better serve the needs of our customer care center clients. Now, working with Xerox research, we are taking our offering to the cutting edge -- looking at ways analytics can speed response times, increase personalization and better serve today's mobile, highly connected customers.

Understanding the Trends

The voice of the customer is important to every company, in every type of industry. Although contact centers have always been connected with what the customer is thinking and saying, this information was only collected and communicated back to the client anecdotally, after the fact. Although the feedback was valuable, it was subject to the individual agent's interpretation. It was not a scientific, systematic or standardized process.

Today, more companies are turning to their contact center partners for more sophisticated data mining, so they can both spot trends and respond to issues more quickly. By leveraging innovation in text analytics to extract call content and review the transcripts, companies can identify emerging issues or concerns, as well as how many calls came in regarding that same problem. This process enables more rapid resolution, and better customer service. New information can be pushed out to call center agents as soon as it's available, so they can inform callers about what's being done to resolve the issue. Ultimately this process will be automated through real time speech analytics, for even faster response.

Social media has equally become a critical channel for customer care. By monitoring the chatter, companies can proactively identify problems, and publish and send out customer information on what it's doing to fix the problem long before the phone lines light up.

Analytics and predictive models are enabling customer care agents to increase cross-sell acceptance. Instead of offering a general menu of services or products, the insight derived from analytics enable agents to offer the right product to the right person at the right time, based on his or her characteristics or what individuals with similar characteristics purchased.

ACS, A Xerox Company is a long-time leader in customer care, with mature knowledge-transfer technologies that put the most up-to-date information in front of our agents and use the latest CRM methodologies to measure performance and provide continual feedback to our staff. Xerox research brings expertise in data analytics, natural language processing and ethnography. It all works together to bring a superior customer care experience that not only delights the caller but uses collected data to bring benefits to our clients.

Over many years, we have applied analytics to solve some specific customer care challenges, finding ways to



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improve service levels, respond to a changing customer landscape and deliver efficiencies for our clients. This paper highlights many of these applications, as well as exploring the innovations to come.

Using speech analytics to automatically extract call content

If there's a problem, if there's a concern or if there's an instruction missing, call center personnel are typically the first to know. The question becomes: how can that information be communicated more quickly to the client company?

ACS customer care agents are trained to recognize nuances within conversations that help them quickly identify and respond to customer needs. At the same time, we incorporate speech analytics to improve the quality of service by recognizing new issues or caller concerns, and passing this information along to clients for resolution.

Call center recordings are digitized and run through a system that automatically analyzes content to extract useful information. Based on key words, the individual calls are divided into specific, business-defined categories, and identified as ""positive" or "negative" calls.

Xerox R&D is working to take this process one step further, using natural language processing or text analytics to automatically learn the exact topics discussed in these calls to provide swifter feedback to the client. For example, if the center begins receiving multiple calls from customers who don't understand a new billing design, that information can be quickly dispersed to the client, who can add verbiage to their website to better explain how to read the bill, send an email or take other steps to mitigate the issue. At the same time, information can be quickly pushed out to the agents so they are better prepared to effectively respond to these calls. Proactively addressing the issue stops the confusion and reduces the number of future calls coming into the center on that same subject.

Analysis of call transcripts also can be used to determine the strengths and weaknesses of each member of the call center staff. This information can be used to create training programs to fill in career development gaps, and can also be fed to individual agents for performance self-monitoring. Eventually, real-time speech analysis could be used to route specific types of calls to certain customer care representatives, pairing the type of call with the individual who has the best skills to handle it.

This all works together to create a structure in which the most basic types of calls can be handled via the website or through chat, saving the more complex inquiries and interactions for the call center agents. The data mined from those calls is used to populate the website or user portal, so it more accurately reflects the information or answers most often requested.

Automate social media monitoring for proactive issue resolution

Now, what if customer care centers could take this one step further and actually resolve some issues even before customer calls start coming in?

Today's smartphone proliferation has fueled expanded use of social media, with users tweeting, blogging and posting at lightning speed. If there's an issue with a product or a problem that needs to be resolved, you can bet that someone is probably tweeting about it before or while they're dialing in to the customer care center.

ACS is proactively monitoring the blogosphere for some of our customer care clients to more quickly identify issues or concerns. When one of our representatives finds a mention, the team engages with the client, then uses social media and the customer care web site to communicate what the issue is and what is being done to resolve it.

Using analytics, Xerox researchers are working on automating this currently manual process of social media monitoring, so the needed information is extracted more quickly for more rapid response. Ultimately, this process will increase customer satisfaction, because issues will be communicated and resolved faster, and reduces the number of inbound calls, which drives down costs. This approach can also potentially resolve issues that customers would never have called about, but would have resulted in customer dissatisfaction, or possibly, attrition.



Speech analytics improve the quality of service.

Personalizing technology for greater efficiency and performance

Some forms of customer care are “as needed,” like technical help desks or consumer inquiries. But, portals and call centers supporting employee benefits or similar programs are often visited by the same users over and over again.

By using predictive analysis on data collected from human resources portals, companies can identify common patterns among employees. Using this information, analytic software can create more personalized services that are tailored to the employee, based for example on his or her use history.

Instead of going through a standard menu or decision tree, when an employee logs in or calls in, that user is now presented with options that are most likely to be what he or she needs. Those predictions are based on the user’s prior actions in combination with the actions of other users who share similar behaviors.

It’s much like going online, ordering a book and being presented with four other book options, based on what “people who bought this book also bought that”. Business analytics can help drive this type of personal experience in everything from employee benefits portals to call centers to any other type of customer interaction.

The confluence of mobile technology and cloud computing has furthered this trend toward personalization. Individuals in all parts of the globe have ready access to phones that act like small computers. This fact, in combination with the seemingly unrestricted data storage and processing power within the cloud enables more people to share more information more quickly than any time in the history of the world. Therefore, it follows that the use of analytics and the trend toward individualized, personalized interactions will continue to grow. For example, going to a mobile technical support portal and being presented with information as it relates to the specific handset or accessories you own, instead of having to go through the process of choosing model numbers from a drop-down menu. Or, going to a mobile version of an insurance provider and being presented with your specific plan.

Targeting the cross-sell message

In many cases, customer care agents not only respond to customer inquiries, but also generate income for the client by cross-selling additional products or services, or offering service upgrades. Originally, an agent had a list of menu items and offered the same choices to every caller. Today, agents can refer to an analytics tool on their desktops to personalize or identify the best cross-sell option, based on what is known about that caller, the products he or she already uses and what people with shared behaviors bought.

By offering the right product to the right customer at the right time, ACS has been able to significantly increase positive response and increase revenue for our clients.

Rewarding and encouraging improved agent performance

Attrition has always been an issue in customer care centers, due to the pay scale and transient nature of hourly jobs. ACS, A Xerox Company, has developed Achievement Based Compensation (ABC), our own pioneering, compensation plan that rewards customer care personnel who perform at high levels, with the flexibility to adjust, based on individual customer contracts. ABC provides strong performers the financial opportunities they wouldn’t have with other types of employment. It also drives down costs for ACS clients through measurable efficiency gains.

Insight garnered from in-depth work practice research studies of call centers and analysis of call data is being used to both refine ABC policy and design an agent feedback widget, that will help staff improve their performance and customer satisfaction.

Creating a sense of community to improve satisfaction

In recent times the demands placed on call center personnel have escalated – including increased overtime, more demanding service level agreements and a lack of interaction with other agents. Instead of getting the



Using predictive analysis on data collected from portals to personalize services.



Work practice research is helping staff improve their performance and customer satisfaction.

best out of customer care agents, this over-optimized environment often has a negative effect. Factor in the growing trend toward work-at-home agents, and the isolation – and pressure – substantially increase.

So, how can you create a sense of community without hindering productivity? Insights from the Xerox work practice studies have led to the creation of a desktop environment, which incorporates social networking tools, to keep customer care agents engaged, motivated and feeling like they are part of a team.

For example, the staff will be able to view team productivity, as well as real-time data on their own performance and the progress on team goals. Information can include more socially oriented information, like special dates or which team members need help with specific tasks.

Researchers are also looking at using game technology to build leadership skills, teamwork and productivity. The use of three-dimensional environments such as virtual reality and avatars have been proven to engage participants on all levels, to help them interact with new people and solve problems more efficiently. Customer care agents have the opportunity to earn points through these games, which can be used toward break times and other small rewards. Direct rewards motivate employees to continue positive behaviors, and the data can be used to understand more about each individual's strengths, motivations and traits.

The Final Analysis

Analytics are clearly changing the face of customer care; providing more streamlined, personalized response, delivering real-time information to client companies for faster decision making, and harnessing the power of social media for proactive issue resolution. With the rise in available data, the continued proliferation of mobile and wireless technology, and the “new norm” of immediate response, this trend shows no sign of slowing down.

World-class research and technology, a unique set of expertise and wealth of experience make Xerox and ACS catalysts for a new era of customer care – transforming data into actionable insight and giving our clients a competitive advantage.

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