Analytic Strategies for the Customer-Centric Utility


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Employing data integration strategies that enable analytics and optimization can fundamentally transform how utilities view customers and provide opportunities to boost returns in the smart grid/smart meter era. But achieving a customer-centric orientation requires utilities to:

- Find profitable growth opportunities.
- Optimize marketing communications.
- Maximize cross-business impact.

This paper can help utilities understand how to approach this fundamental strategic change to their business. The paper is based on a SAS-sponsored webinar with Electric Light & Power entitled The Customer-Centric Utility: Employing Analytic Strategies for Improving Outreach and Operations.

### Transforming the Customer Relationship

Utility companies have made large new investments in smart grid technologies, but unless they employ new technologies and processes to create new services and enhance relationships, there may be a lag before returns are achieved.

As the smart grid era prompts a change in focus, utilities are rightly making a transition in how they view their business objectives. Rather than simply providing commodities to consumers, utilities must begin offering commodity services to their customers. This transition will allow customers to make more informed decisions about their energy consumption, so they can adjust both the timing and the quantity of their electricity use.

Many utilities now recognize that customers must play a larger role in reducing overall energy demand. Conservative estimates of the global trajectory of energy consumption show that demand could quickly outstrip available supply, leading to reductions in quality and reliability. Utilities and consumers will need to work together to ensure every possible bit of efficiency is produced using the current infrastructure.

Indeed, transforming utilities so that consumers become customers is no longer a goal with a leisurely timetable; it has become a strategic necessity.
The Three Core Obstacles to Change

Achieving the shift from a consumer- to a customer-centric mindset requires that utilities pay attention to the following challenges:

- **Corporate culture.** Companies in other industries are now attuned to the quick operational (and product) changes that are needed as a response to customer needs and wants. Utilities must adopt a similar sensitivity to customer demands.

- **Processes.** Siloed utility operations for generation, transmission, distribution, and commercial and retail customer consumption seldom connect to provide a single, coherent approach to managing demand effectively. Operational and data systems need to be integrated.

- **Gaps in technology.** Focused as they were on transactional consumers, utilities do not have the type of IT systems that are designed to produce intelligence about customers. Utilities must upgrade and change their technology systems to foster a customer-centric orientation that relies on forecasting and analytics capabilities.

The Role of Corporate Culture in Achieving the Customer-Centric Utility

The people who operate utility companies have a predisposition to view their users as consumers, or rate-payers, and not customers. Consumers take whatever they are offered. They may question price or service on occasion, but they must accept the commodity as offered or go without it.

Utilities also tend to be risk-averse, somewhat encouraged by the certainty of strict, but mostly benign, regulatory oversight. At the same time, some people within the utility prefer the routines of business as usual and the relative comfort of their job security. Why would the aging utility worker population want to change the way things are done just before they retire? Some utilities even prefer to take a wait-and-see approach before implementing larger cultural change initiatives, watching and learning from other utilities that struggle through the new business dynamics.

Regardless, there will come a day when utilities will need to accept the view that customers are more than just a meter number on the side of a home or office building. Smart meters are driving that change, and utilities are, in turn, changing their culture to become more attuned to their customers’ needs. In fact, many utilities are bringing in executive leadership from non-energy companies to help guide them through this process, or sending their own executives to other industries’ conferences that center on business transformation.

Technology systems empowered with data integration, analytics and optimization capabilities support quick, confident changes in the right direction.
The Impediments of Siloed Processes to Customer-Centric Orientations

Most utilities operate as separate business silos for the generation, transmission, distribution or management of commercial or retail customer relations. Each silo has its own business process systems, optimized for its particular operation. For the most part, these systems are incapable of working together in an integrated manner to add value.

Aside from operational dysfunction, silos also prevent utilities from gaining an accurate and comprehensive view of their customers. Obtaining this type of customer view would be a significant undertaking, because there’s no single business-unit owner to ensure the quality of data for different records and fields.

Consider the additional confusion caused by data from contracted vendors, or even credit agencies. Every effort to correct the siloed data creates even more problems. What is the “official” record for a customer? Is it the one in the geographic information system (GIS), the customer information system (CIS) or the order management system (OMS)? Which one should be used to create the best singular record?

All too often, decision makers don’t consider which data is informing their processes. What is the reliability of the data at hand? If not corrected, this data sourcing issue may unintentionally lead, for example, to suboptimal pricing or programs that have a negative effect on their business unit, or even a different part of the business.

Thankfully, the smart grid and smart meters are doing their part to give utilities what they need to break down silos and create more unified views of customers’ information. As this occurs, the transformation to a customer-centric utility will gain traction and feasibility.

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Outdated Technology Limits Customer Intelligence

The outdated technology of many customer information systems limits utilities’ ability to undertake the broad initiatives needed to increase customer intelligence.

Existing customer information systems are transactional rather than predictive. They cannot be made to be predictive. They certainly still serve a role in running the utility, particularly for transactional billing systems, but they aren’t very effective in creating models that predict how certain customers are likely to behave when given the opportunity to participate in demand-response or other pricing programs.

In addition, connecting customer information across multiple systems requires using unique identifiers or removing duplications, correcting misspellings or uncovering erroneous entries. Integration and cleansing must be a significant part of any customer intelligence initiative, but the personnel needed to perform these functions on a consistent basis often aren’t there when needed. The more experienced and technically capable people tend to move about within the organization as they gain proficiency and as other needs are revealed.

Adding to the difficulty of converting to a customer-centric viewpoint is the confusion caused by inaccurate financial assessments of customers. Most utilities are unable to effectively integrate internal and external customer data to optimize billing or bill-collecting operations. And if the utility can assemble the right data, their systems may not have the analytical capabilities needed to build behavioral models that can predict customers’ reactions to demand-response marketing messages.

To complicate matters more, mergers and acquisitions have created a patchwork of legacy systems that run their own processes and create additional silos. This technology landscape, already complex and disjointed, is now needed to integrate the rollout of smart meter and smart grid devices, many of which have rapid innovation cycles. The technology hodge-podge creates even more pitfalls for utilities transforming to a customer-centric view.
The Business Case for Customer-Centric Intelligence

Given the breadth and depth of the challenges they face, utilities are quickly realizing that there is a good business reason to improve the quality of customer data – it is a foundational point for more comprehensive change.

Improving the quality of customer data can help to maximize the relationships between data sets – delivering benefit for the utility in terms of improved operations, coordination and customer value – by optimizing each interaction between them and the utility.

There is tremendous business value to be gained from optimizing interactions between the customer and utility. These benefits include:

- Customizable electricity programs designed for comfort, cost or efficiency, with the ultimate result of improved reliability.
- Increased responsiveness to outages, including utility notification to customers.
- The delivery of regulator-friendly, renewable power programs designed with environmental sustainability in mind.

All of these benefits can be achieved when utilities adopt new processes and technologies that improve customer intelligence. By being able to predict customer behavior and tendencies, and by engaging with customers more meaningfully, utilities will find they can:

- Create new products and services targeted to those most likely to enroll.
- Optimize collections by predicting who is likely to pay given various treatment strategies.
- Enroll customers in prepaid services.
- Find ways to increase the adoption of time-of-use pricing by segmenting customers who are likely to adopt those programs.
- Search for patterns of customer behavior that match delinquent accounts, or look at other applications that can reduce fraud.
- Implement direct load control, where customers are compensated for allowing the utility to dial back their air conditioning or other energy-intensive assets during peak hours.
The Core Connection: Revenue

The best way to prove the value of transforming consumers to customers is to connect it to opportunities to create revenue. Taking this approach to achieve a customer-centric orientation requires:

- Finding profitable growth opportunities.
- Optimizing marketing communications.
- Maximizing cross-business impact.

Finding Profitable Growth Opportunities

Transforming to a customer-centric view requires utilities to collect and connect all market and customer data as a way to create a 360-degree view of all customers, including their interactions with the utility, behaviors, likes and dislikes.

As opposed to using anecdotes and instinct, this new information can be analyzed with rigorous testing so that the utility can connect dots that otherwise would not be evident. Some utilities have used this exercise to define a “customer lifetime value,” which seeks to understand how much people have spent, project their spending into the future, and identify the cross-sell and up-sell potential of other products and services that customers may need, both short- and long-term.

For instance, what information in a customer profile might indicate the proclivity to buy an electric vehicle? When might they buy their second one? What time-of-use pricing mechanics might be acceptable to those buyers? How can the utility actually use that information to generate revenue opportunities?

Utilities aren’t necessarily familiar with the principles needed to develop such profiles. The science of analytics introduces the consistency and rigor needed to create usable, meaningful models that are profitable for the customer-centric utility.

Figure 1: An analytic approach to customer intelligence optimizes marketing efforts.
Optimizing Marketing Communications

Identifying strategies for using high-confidence data is the first task of a customer-centric utility. Reconfiguring business and marketing operations to offer profitable opportunities and create great relationships with the right customers is next.

Utilities must be empowered with the right information to understand which offer to provide to each customer and then structure that communication to occur at the right time and through the most effective channel. Analytics are needed to optimize marketing efforts in order to achieve the highest possible response.

Optimized marketing equates to making the right offer to the right segment at the right time. But the customer-centric utility doesn’t stop there.

If the marketing communication doesn’t work, or doesn’t work as well as expected, the customer-centric utility needs to learn to adapt to the signals it is receiving from customers. Analytically driven marketing systems should be able to recognize trends in customer actions and surface insights that alert utility personnel to make appropriate adjustments to a marketing campaign.

Maximizing Cross-Business Impact

Building this adaptive framework helps the utility create a consistent customer experience across the organization, no matter what channel or business function is involved. This requires putting customer data at the center of all your business decisions with real-time access to comprehensive customer profiles. In addition, utilities must improve the ability to track, measure and share results from customer campaigns across all channels and business units.

These best practices are important for utilities that offer multiple energy services and want to present a unified and coordinated face to the public. For example, a customer who enrolls in an energy efficiency program should get positive reinforcement that the utility knows about his/her program participation when they make the next phone call to a customer service representative. Such intimate customer care can only occur after silos are dismantled and data is unified.

To create a positive, consistent customer experience, utilities need to unify data and dismantle silos throughout the organization.
Closing Thoughts

Regulators increasingly call upon utilities to improve their relationships with customers so that they may add a wide range of efficiency measures to the existing infrastructure. Such efficiency will become imperative when electric vehicles become popular and add new load to the grid, and when the intermittency factors of renewable power sources are configured. Regulators will see customer intelligence as an enabler of a wide range of programs that can and should be implemented, especially as more advanced utilities prove that these systems and programs can work.

The utility that has a customer-centric view focused on gaining and using customer intelligence will likely be received more favorably by public utilities commissions, especially when rate cases arise, or when the utility seeks allowable expenses. From many perspectives – ranging from efficiency improvements to infrastructure optimization and regulatory relations – moving from a consumer- to a customer-centric orientation makes perfect sense. The transformation will be particularly worthwhile for utilities that use the right blend of technology systems to optimize existing services, integrate data and power analytics.
For More Information

To view this webinar and other on-demand SAS webcasts, visit http://www.sas.com/utilities. Select “Webcasts” from the list of resources in the right navigation and then choose The Customer-Centric Utility: Employing Analytic Strategies for Improving Outreach and Operations.

For related SAS white papers:
How Do You Put ‘Smart’ into the Smart Grid?
How Does Forecasting Enhance Smart Grid Benefits?
Improving Utilities Collections Through Predictive Analytics
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About the Presenters

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David Neeley has more than 10 years of experience in I/S and analysis roles, the last six with Valero. He transitioned from I/S to establish the internal analysis function for risk management and business development for an in-house credit card portfolio. He has experience developing and implementing predictive models, including scaled credit scorecards, for use in predicting credit default, customer attrition, profitability, delinquent account collections and optimal credit limit assignments for fuel credit card customers.

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Alyssa Farrell leads global industry marketing for SAS’ business within the energy sector, including utilities, oil and gas. She also has responsibility for SAS’ sustainability solutions and works with customers around the world to understand best practices and solutions for managing their business with environmental responsibility in mind. Farrell participates in the Corporate Consultative Group of the World Resources Institute and the Green Tech Council of the North Carolina Technology Association. She also supports the SAS Executive Sustainability Council, the leadership team that governs SAS’ sustainable business practices.

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A visionary and thought leader in the field of performance management, Hornby currently leads a team of marketers focused on message and global direction for business analytics, customer intelligence, performance management and supply chain. He is the author of Radical Action for Radical Times: Expert Advice for Creating Business Opportunity in Good or Bad Economic Times. He also writes two blogs for SAS – Beyond Business, and Inspiring the Future with Business Analytics.