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New Era of Customer Service Management

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1. Presentation Summaries

1.1. Overview: The New Era of Customer Service Management, Dr. Jonathan Byrnes, MIT CTL

What "Customer Service" Means Today

Dr. Byrnes began the day by asking participants to define “customer service.” The group began with statements like “meeting customer expectations” and “giving customers what they want when they want it” but then quickly moved beyond these to describe aspects of partnering with customers. Statements like:

- “building a relationship with the customer”
- “being proactive, anticipating customer needs” and
- “understanding the customer better than they understand themselves”

characterized the view of the group. These expanded definitions form the basis of the new era in customer service today.

The participants all agreed that their companies are narrowing their supplier base by 40% or more, and that to grow customer market share a company must create new forms of customer service.

This new view of customer service requires commitment and requires understanding the customer well enough to dramatically increase the customer’s profitability. Importantly, well-designed customer service innovations often reduce vendor operating costs at the same time. Such a deep relationship with the customer implies a new definition of customer service – mutual change management – in which the goal is to drive innovation over time at both companies.

Nalco Chemical Example

As Dr. Byrnes summarized, simply meeting customer expectations and delivering the right products on time is the “price of admission” – it is what every company must do to stay in business these days. The way to differentiate your company, however, is through service innovation. This enables a company to expand the boundaries of its business and increase its domain of value creation.

For example, Dr. Byrnes described Nalco Chemical, a specialty chemical maker whose water treatment chemicals were becoming a commodity. Nalco installed sensors on the customers’ chemical tanks so that it could monitor them as customers drew down the chemicals. This led to big cost savings for Nalco in routing the replenishment trucks, and even led to cost reductions in manufacturing due to better production scheduling.

Nalco then realized that these sensors could be used for a new purpose. Because Nalco knew the water treatment systems that were using the chemicals, it could predict the rate of chemical use if the systems were functioning properly. Nalco started to compare actual vs. predicted chemical

use as an indicator of whether there was a problem in the overall water treatment system. When there was problem, Nalco called to alert the customer.

Since Nalco typically sold \$500,000 - \$1 million of chemicals to a major municipal system annually, and the cost of a major malfunction might run over \$10 million, the benefits were huge. At contract renewal time, Nalco issued report cards on itself to the customers showing the large benefits relative to the chemical costs.

Nalco redrew the boundaries of its product offering, providing an innovative customer service that brought benefits to both parties. The customers got systems savings that more than paid for the chemicals, Nalco got price increases, and at the same time lowered its operating cost.

1.2. "Competing on Service in the Grocery Industry," Bill Homa, CIO Hannaford Brothers and Kevin Carleton, Director of Retail Automation

Price, Quality, Variety and Customer Service

Hannaford Brothers Co., a grocery store chain of 115 supermarkets, is competing successfully against giant Wal-Mart (the nation's largest grocer) by focusing on balancing four strategies at once: price, quality, variety and customer service. Wal-Mart competes on price alone, and typically other grocers focus on two strategies, but Hannaford is competing on all four. Hannaford is price-competitive with Wal-Mart on core items, but then it goes a step further to offer much greater variety, such as 700 fresh produce items, diversity not found at Wal-Mart.

Another example of customer service is Hannaford's implementation of self-checkout lanes, which are popular with customers despite being slower (customers feel a sense of control, and 28% of customers use self-checkout options). Despite having self-checkout lanes, Hannaford has not greatly reduced the number of cashiers. Rather, the goal is to keep lines very short, not to force people to use self-checkout.

Wireless Support for Customer Service

Hannaford's strategy for customer service avoids extravagance (such as by having a wine steward in each store) but focuses on customer service that customers feel and appreciate. For example, one of Hannaford's goals is keeping its associates out front in the stores, not in back offices. To accomplish this, Hannaford relies heavily on automation -- five servers in each store linked to wireless networks that let associates access decision support systems and planograms from their wireless handhelds. Associates walking the aisles have access to the same information that typically would be available only at the desktop or at corporate offices. Associates also have mobile printers on their belt, which enables them to re-price items such as meats that are approaching their expiration date. Indeed, Hannaford has the lowest shrink (loss due to staleness/perishability) in the industry: 5%.

Hannaford extracts POS data every 5 minutes and updates its perpetual inventory in the store 4 times daily. The company uses this updated data in collaboration with its supply chain partners to improve profits for both. For example, Hannaford shared sales and inventory data with a

bread vendor, telling the vendor what to bake for the next day and offering to split the savings of fewer stales and increased sales. In just one store, the savings Hannaford gained was \$185,000.

The POS data which Hannaford extracts at five-minute intervals is put in an operational data store and then goes to the DSS (decision support system) where associates can query it for margin analysis and so on. Although the data can be analyzed down to five-minute granularity, most employees are not ready for that level of detail except in instances such as the lunch-hour rush, when 100 sandwiches are sold between 12-1 pm.

The Holy Grail

The final piece of Hannaford's wireless strategy will be to generate automated replenishment orders using advanced algorithms and history. Computer-generated orders will reduce the variability (such as new, less experienced employees placing orders). Hannaford is currently doing pilot tests with computer-suggested orders. The results so far are very promising, indicating that a 30% inventory reduction is possible. Store-level automated replenishment would take out 25% of inventory while improving service levels. This means that Hannaford could either build smaller stores or add additional products -- in short, yielding a net present value of \$100 million on that investment.

Collaboration with Vendors

Many of Hannaford's IT advancements stem from successful collaborations with its partners. Rather than playing hardball with a multitude of vendors and extracting the lowest price from each, Hannaford has built close relationships with a few selected vendors such as Cisco, IBM and Compaq. For example, Hannaford's wireless network is based on Cisco technology. Hannaford helped develop the product when the product was still in Cisco's development lab, and they put it into production even earlier than Cisco's originally-planned beta test. The mutual collaboration helped both companies gain field experience and early competitive advantages.

1.3. "Customer Information Management & CRM," Tom Gormley, MIT CISR Researcher

CRM vs. CIM

Mr. Gormley's presentation focused on customer information management (CIM), which is broader than customer relationship management (CRM). Most firms capture contact data on customers for sales and marketing purposes (CRM), but companies need to integrate all information about their customers from multiple sources and use that information for decision support throughout their business (CIM).

Mr. Gormley studied 10 firms that were currently using or implementing CRM applications from Siebel Systems. By selecting companies all using the same CRM system, the study eliminated choice of technology as a variable. The study asked companies their goals for CRM and what benefits they gained/hoped to gain. The results divided the companies into two camps, the "Process/ Data First" camp and the "Data into Insight" camp. The Process camp was reengineering processes first and planning to use the data later. That is, the focus was to

automate processes and leave the mining of the information for a later phase. For example, one company was leading a global CRM effort to integrate all customer data with a goal of improving the efficiency of the sales force. A later phase of the project would focus on getting value out of the data.

Data into Insight

The "Data into Insight" group of companies, on the other hand, recognized that they had much of the customer data they needed, and that simply automating processes wouldn't bring the value that mining the information would bring. Therefore, their goal was to get value out of their current customer information by integrating data from different parts of the company and using it to decide which markets to enter. For example, a financial service firm was analyzing customer data to understand patterns of past purchases, current purchases, and where the customer will go in the future (the profit potential for that customer). The company expected to see payoff in sales effectiveness, improved conversion rates, customer growth and customer retention.

Mr. Gormley concluded that while CRM has value by itself, the biggest payoff comes from integrating data from all points of contact, not just the front end, and using that information to drive decision-making throughout the company. For example, transactional data does not get input into the CRM system, nor does clickstream information from the company's website, yet together all of this information presents a deeper view of the customer which the company could use for analysis.

Who Owns Customer Data?

The discussion that followed the presentation focused on who owns customer data within companies. At Hannaford, the Business Information Group (BIG), a group of analysts, are the primary ones working with the data. The group is part of the business strategy area and reports to the senior vice president of business strategy. Although this group works with the data, no one function "owns" the data, thereby eliminating silos. Everyone works off of the same data, and the data is in a format usable for many operational purposes. Other companies mentioned sales & marketing owning the data, or the data being held across different business units. The key is bringing the information together from myriad sources so that it can be analyzed, segmented, and used for new initiatives to generate greater value. As a participant from Monsanto said, the value of customer information is related to the company's ability to create different products for different customer segments.

Mr. Gormley concluded by saying that companies should focus on using customer data to create accurate and predictive models. Analyzing customer information lets a company offer customized service.

1.4. "Transforming the MFA to Serve Visitors and Collections," John S. Stanley – COO & Deputy Director for Operations, MFA

Mr. Stanley described how the Museum of Fine Arts in Boston is planning a building redesign to better serve its customers. The museum's first step was to understand their customers, getting an

idea of their demographics and visitation patterns. Next, the museum worked with architects who proposed different ways of structuring the physical space of the museum and providing access to the collections. The building design had to take into consideration the history of the site, utilize the space most efficiently and attractively, and stay within the bounds of the museum's budget.

The proposed building redesign will let the museum group its collections together better, will create a separate larger space for its museum school, and will add new public spaces that can accommodate public events like banquets. This will expand and enhance the service that the museum provides to the community. Overall, the new building will not only provide more space to show the museum's collections (only 6% of the museum's holdings can currently be displayed in the museum) but will also improve the flow of people through the museum.

1.5. "Returns Abatement as a Customer Service Weapon," John Wass, CEO SwiftRivers

The Opportunity in Returns

Many companies use surveys in an effort to understand customers, but they miss mining the information that is already available to them in the returns process. Analyzing who is returning a item, what they are returning and from where they are returning it gives a company valuable information on their products, their vendors, their sales channels, and their customers.

Unfortunately, few companies see returns abatement as a revenue opportunity. Rather, the current paradigm treats returns as a cost or a drag on the business. But it is actually a high-margin revenue opportunity because the company has already spent the money to make the sale. Therefore, decreasing returns has a big impact on net sales results. Taking net sales from 90% to 91% means big profits because the cost to make that sale has already been paid. For example, if a customer buys a shirt from a catalog and then returns it because it was the wrong color, the customer has already told the company they want to buy something. If the company can sell them the right color or size when the item comes back, it will retain that sale, but most companies don't take advantage of that opportunity. Companies typically see returns as an operational cost, not a sales opportunity.

Beyond the Averages

Companies doing the most with returns abatement do not just look at averages -- such as a 14% returns rate. Rather, they analyze the specifics of each item coming back. For example, state-of-art software tools use an analytic approach that asks thousands of questions of low-level transaction data (i.e., detailed POS data out of the registers or out of the company's order management system). These tools can categorize sales and returns along many dimensions and categories to analyze which customers have the highest returns rate, as well as which sales channels, product categories and vendors have abnormal return rates. Typically, these tools can use existing data stores (typically 2.5 years of data) without disruption to existing business processes. Ultimately, these tools can then prioritize the list to highlight the areas that will provide the biggest impact.

One example illustrates the potential. In one case, one company found that focusing on returns with one specific vendor would have more impact than asking all vendors to pay the company to process returns. Analyzing the data may reveal that returns primarily involve one vendor whose products are not adhering to standards. Likewise, by looking at returns by customer, companies can understand which customers have the biggest opportunity to affect the bottom line. It may not be the company's best customers, but some customers who are expensive to work with. Finally, analysis of returns data may reveal an organizational problem, such as that high-season temporary workers need to be better trained.

Economic Benefits from Returns Abatement

Mr. Wass provided several examples of how analyzing returns data can help company profitability. In one instance, a company had shifted its marketing mix, and analyzing returns revealed that the new mix was making the company less profitable. By looking at returns in a systematic way, the company was able to understand the impact that their new merchandising mix would have on profitability. Returns analysis can also help a company forecast profits more accurately. For example, the company can understand the lifecycle of returns: what percent of returns happen in the first 7 days? Understanding how returns come in over time will help companies' profit projections and with accrual accounting techniques. Overall, when analyzing the net revenue gain from decreased returns for a \$30 billion distributor, Mr. Wass found that decreasing the returns rate by one percent resulted in a net revenue gain of \$340 million.

Implementing a Returns Abatement Process

How easy is it to implement a returns abatement process in an organization? Mr. Wass said it usually takes 4-6 weeks to get the necessary raw data and analyze it for the highest-impact opportunities. The CFO is usually the decision-maker who evaluates the opportunity and payback.

New Service Opportunities

Finally, transportation providers such as UPS have the opportunity to provide advance notice to companies of returns on the way. For example, most catalogers send a pre-printed return label with the customer's order. That order often has a bar code on it that encodes the items shipped in the original order. By scanning the bar code, the transportation company could give companies an early warning of what is being returned.

Mr. Wass also said that vendor allowances are not well monitored. For example, companies often have vendor allowances that state the company will never send returns to the vendor in exchange for 3% off of the invoice. But, companies often do not understand their total costs of handling these returns themselves, and therefore the allowances they negotiate may not be covering their total costs.

1.6. "Customer Advantage with GE Engine Services," Karl Fessenden, GE Aircraft Engines

GE Aircraft Engines Background

GE Aircraft Engines is expanding its business model of selling aircraft engines and parts to include selling services that customers need for their products. GE has launched a series of service solutions, such as "Power by the Hour" and "Material by the Hour" – which are designed to bring more value to the customer.

GE Aircraft Engines is an \$11.4 billion division of \$126 billion dollar giant General Electric Company. The division is taking ideas that drive GE value internally (such as its metrics and performance-driven culture, its sharing of best practices, its speed to market) and sharing them with customers for their benefit.

Service Philosophy

GE's philosophy is to meet customer needs by tailoring different solutions to different customer needs. For example, some companies want to overhaul aircraft engines themselves while others want to outsource the service. GE therefore offers a range of products and services that will meet these different needs. For example, GE sells new parts, renewed parts and spare parts individually or in kits that assemble all the parts needed for an engine overhaul. This service offering is called "material by the hour" in which the customer (such as Northwest Airlines) does its own maintenance but buys all the needed parts for a fixed amount from GE. For customers that do not want to do their own maintenance, such as Southwest Airlines, GE offers "power by the hour" in which Southwest pays GE a fixed fee each time they run an engine. In return, GE performs all of the maintenance and guarantees the reliability of the engine. In both cases, GE's goal is to provide customers with lower cost of ownership of the GE aircraft engine.

Digital Solutions and Remote Diagnostics

GE also provides digital solutions and remote diagnostics. For example, GE monitors engines in flight, tracking engine performance and any potential problems that may be developing. The goal is to diagnose problems before they occur. Another digital solution is the SkyRegister, which is a handheld wireless device for credit card payment for in-flight sales. Credit cards eliminate the need for customers to have correct change, and they minimize loss of revenue from collected money that is not tallied. Finally, GE Aircraft Engines is using expertise developed by another GE division, GE Medical Systems. The x-ray and ultrasound technology, which GE Medical Systems developed, can be adapted to inspect aircraft parts. GE Aircraft Engines is applying these medical technologies to inspect engines and parts, ensuring that they are vital and healthy before being put back on the engine.

Customer-Driven Metrics

Metrics drive GE's operational excellence, and the metrics which GE tracks are those that are most important to each customer. GE has customer dashboards for each of its customers, and those dashboards track the metrics most critical to the customer, whether it is

delays/cancellations of flight due to engine problems or fuel burn or issue resolution or shipment accuracy. Each dashboard contains six or seven metrics that the customer has identified as most critical to their own operations.

At the Customer, For the Customer

GE has been pursuing the Six Sigma quality and process improvement initiative for seven years. In the program, employees are trained in quality processes and the elimination of variation out of processes (Six Sigma applies not only to manufacturing but to service as well). The company has trained leaders ("Blackbelts") who pursue improvement programs within GE.

Recently, GE began offering a free service to its top customers called "At the Customer, For the Customer." In this program, GE sends a Blackbelt to the customer site, and the Blackbelt works with a team of the customer's employees on a project designed to improve the customer's processes. The program does not even have to relate to GE in any way -- the goal is mainly to transfer best practices and help GE customers remain profitable. Many of GE's customers have been hard-hit by the Sept. 11 crisis, so GE doubled the number of Blackbelts it offers on loan to its key customers (currently 40 staff are devoted full-time to Blackbelt projects at customer sites). Blackbelts train others at the customer site in Six Sigma techniques and have completed 1500 Blackbelt projects in first quarter 2002. Example: Blackbelt projects include an investigation into why items get held up in customs (which delays the repair of engines) or exhaust gas analysis to improve engine performance. Other projects focus on billing or finance or warehouse management.

Growth of Services

In 1996, the revenue contribution of services to the GE Aircraft division was \$1 billion, and in 2001 it was \$5 billion, indicating the growing importance of services to GE. GE's business model is no longer to simply sell an engine and then 30 years' worth of spare parts for the engine. Rather, GE is partnering with its customers to reduce their total cost of ownership of the engine, maximizing engine performance and uptime at minimum cost.

1.7. Summary by Dr. Jonathan Byrnes, MIT CTL

The basic strategic paradigm of business is changing, Dr. Byrnes said, as companies extend the boundaries of their business and offer services that help customers run their own businesses better.

Dr. Byrnes led a discussion in which participants were asked to describe what customer service move *their competitors might make* that would be their worst nightmare. The answers included a competitor

- identify a critical service I missed and offer it to customers,
- have a culture of cooperation and collaboration that brings them closer to my customers,
- become organizationally aligned around the customer and build interfaces to the customer across the value chain,
- enter the market between my company and my customers,

- have better customer information and use that to offer new services to my customer, and
- integrate its multiple divisions and present one contact point for the customer.

Dr. Byrnes concluded the session with the idea that the essential characteristic of the new era of customer service is the extended supply chain. Companies need to understand the customer's business better than the customers themselves do, and find solutions that customers did not realize they needed.

The penalty for not moving fast on this idea is losing the best customers, as companies pursue vendor consolidations. Unlike price competition, if a competitor wins a customer through service innovation, often your company cannot get the customer back.

Dr. Byrnes suggested that each participant identify the single most important barrier in their company (organizational, conceptual, etc.) that prevents the company from creating new levels of innovative customer service, and then create an initiative to remove the barrier.

Themes

2.1. From "Service Supports the Product" to "Service is the Product"

Dr. Brynes, in concert with audience commentary, emphasized a major shift in the meaning of customer service. In the past, customer service was a subservient afterthought to the main product sold by a company. Customer service was a cost center -- a necessary evil for sales, delivery, and support of the money-making products of the company. But this notion has changed as many companies have shifted from arms-length anonymous transactional relationships with customers to more intensive partnerships with customers. More and more companies are using customer service and value-added or revenue-added services as an integral part of their offerings. The result is a new locus of competition.

Even museums have felt the shift to a service-oriented environment. In the past, museums were dusty places that displayed and stored artifacts of by-gone eras. Now, museums such as Boston's Museum of Fine Arts offer a wide range of extended services that generate both additional turnstile revenue and new revenue streams for the organization. Food services, special temporary exhibits, parking, special event services, and merchandising have all become "profit centers" for this non-profit organization.

Rising Expectations: Operational Excellence is the Norm

Part of the trend toward innovative customer-oriented services is the rising bar of expectations. The widespread use of IT to conduct and manage business means that most businesses operate at a comparatively high level of performance (in terms of cycle times, error rates, and cost efficiencies). Key elements of excellent customer service in the past (delivering what the customer wants, when the customer wants it) are now an assumed business competency. When all companies offer the same baseline of operational performance, those companies that offer more value-added services have an advantage.

Expanding the Boundary of the Organization

Much of the rising importance of customer service comes with an expanding definition of the boundaries of the company. The shipping dock is no longer the boundary of the company -- suppliers now penetrate deep into their customer's operations (and vice versa). In many cases, new uses of IT allow suppliers and customers to interpenetrate each other's organizations. The classic examples of this include the automated inventory monitoring systems that support VMI (Vendor-Managed Inventory). With VMI, the supplier expands their boundary to create invisible presence at the customer -- a virtual inventory checker and purchasing agent at no cost to the customer. For example, companies like Monsanto and Nalco, that sell bulk chemicals, use automated monitoring of chemical tanks to generate replenishment alerts. The customer enjoys extremely high service levels at lower cost, and the supplier enjoys customer loyalty and greater opportunity to tune the delivery process for maximum efficiency.

Going further, a number of companies now deploy built-in self-test and electronic monitoring systems in their products. Such systems monitor the on-going performance of the supplier's equipment at the customer's site. These systems can then alert the supplier to impending failures or future MRO needs. Such systems enable companies to offer performance-by-the-hour service contracts in place of the usual capital-equipment purchase deals. Examples of sophisticated vendor-based equipment monitoring systems are found in GE's jet engines, Caterpillar's massive earth-moving equipment, EMC's mass storage devices, and Helix's semiconductor manufacturing equipment.

But the movement of the supplier's boundary outward goes beyond technological widgets to include changes in organizational practices. Companies have realized that they can add value to their products and increase customer loyalty by helping the customer to get the most out of the company's products. Thus, more suppliers are turning to active support, collaboration, and value-added consulting service to aid the customer. For example, GE has an "At the Customer, For the Customer" initiative. This includes sending GE personnel to customer sites for what amounts to consulting engagements that improve the operations of the customer company with respect to the GE products employed by that customer.

During challenging economic times, suppliers recognize that their success depends on their customer's success. If your customers go out of business, then you will be the next one up the steps of the bankruptcy courthouse. After 9/11, for example, GE stepped-up efforts to help beleaguered airlines -- doing more customer black-belt projects in one quarter than they had done in one year, and expanding to do projects whether they related directly to GE or not. New technologies and new practices drive the deepening relationships between suppliers and customers to the mutual benefit of both sides.

2.2. Knowledge-Intensive Relationships

In building relationships with the customer, the density and intensity of knowledge increases on both sides of the relationship. Companies learn more about their customers and customers learn

more about their suppliers. Moreover, companies increasingly turn to IT to aggregate and analyze information about business partners. With more knowledge of customers, companies can offer a greater range of customer solutions. Even if the company sells a single-product category, (e.g., jet engines), they can offer the identical product under a wide range of financial terms and service-added packages (e.g., capital purchase of the engine, leasing, per-hour service contracts, per-overhaul service kits, etc.). The ability of companies to convert a single product into a diverse range of service-augmented offerings is part of the shifting locus of competition.

Fewer Suppliers = More Attention per Supplier

Dr. Brynes noted that many companies have slashed the number of suppliers they do business with by 20% to 40%. An informal poll of the audience confirmed this trend. With fewer suppliers, companies can devote more time to the relationship with each remaining supplier. And with each remaining supplier garnering a greater portion of his or her customer's spend, the supplier has greater incentive to know the customer. The result is a greater investment in each supplier-customer relationship -- more time and knowledge devoted to customer service.

This trend benefits the remaining suppliers. As supplier-customer relationships deepen, the cost of switching to a new supplier grows. This creates a barrier to entry for other suppliers. Moreover, the incumbent supplier, with their deep knowledge of the customer, is in an ideal position to expand the range of products and services offered to that customer. Suppliers can expand their business deeper into customer organizations.

The flip-side to this is that non-incumbent suppliers face much higher costs of new customer acquisition and lower profitability during the early years of a new customer relationship (i.e., the first-year's net income pays for development of the customer relationship). Ultimately, this suggests that suppliers with especially effective customer information management will have the advantage. They will be able to build deeper relationships faster than companies that suffer from fragmented customer information.

CRM vs. CIM: Automation vs. Insight

Mr. Gormley contrasted CRM (Customer Relationship Management) and CIM (Customer Information Management) as a means of knowing the customer. He described how CRM is all the rage right now and how many companies are hoping that CRM efforts will lead to better understanding of customers. But Mr. Gormley cautioned that CRM is only a subset of the broader domain of CIM (Customer Information Management). CRM captures only a subset of customer data -- primarily data related to sales contacts. Many sources of crucial customer data fall outside the bailiwick of CRM. These include transaction data (in ERP systems) and externally-derived data (such as government demographic data or data from credit-rating bureaus).

Mr. Gormley's research revealed that companies fall into two camps -- those focused on automating customer-facing processes and those looking to gain insight from customer data. The first camp, those focusing on process automation, has a "gather-first, use-later" attitude toward customer data. Such companies tend to view CRM as the core of their customer information efforts. Yet Mr. Gormley argued that the benefits of CRM, while valuable, are generally limited to efficiency improvements.

The second camp, the insight-oriented companies, enjoy a much more powerful set of benefits. For example, gambling industry companies have used integrated customer information to generate customized offers that boost profitability by 20%. This raises the issue of ambitious efforts to collect the perfect all-encompassing data set. Yet most organizations already have volumes of data about customer behavior -- they just haven't bothered to integrate it or analyze it. Mr. Wass noted that the transaction data set alone (inherent in every company's ERP system) yields a wealth of knowledge about the customer-related phenomena.

Mr. Gormley indicated that financial services companies have the most advanced CIM systems and efforts. Many financial services companies have fine-tuned models of customer behavior and customer profitability. For example, these companies can tell when a customer is likely to leave and whether (or not) to offer any incentives to that customer to induce them to stay. Financial service companies also deploy their customer knowledge to the front-line (vs. more restricted management-oriented decision support systems used by other companies). For example, one company uses a real-time red-orange-green color indicator to indicate the importance (i.e., profitability) of each customer who calls their call center.

A Customer's Knowledge of Your Company

Your customers also learn valuable information about your company in the process of doing business with you. Mr. Wass mentioned how such knowledge can drive initiatives at a company. He described what he called "returns spasms" in which a company becomes hypersensitive to its rising rate of product returns. These can be caused when a valued customer complains to the company president. Sometimes customers know more about the problems at a supplier than the supplier does.

Some companies actually help their customers to know them better. For example, GE helps its customers track GE's performance as a supplier/service provider. GE Aircraft Engines works with major airline customers to create a dashboard of half-a-dozen metrics. These metrics track GE's performance in terms that are most relevant to the customer. Monthly reviews of the dashboard ensure that GE understands what the customer expects of GE and ensures that the customer understands GE's efforts for continuous improvement.

2.3. Challenges

Many challenges remain for companies that compete on the basis of customer service. Those companies that surmount these problems will be the winners of the future.

Barriers to Knowledge Flow: Private and Proprietary Knowledge

Sometimes the customer does not want to be known. Consumers may fear abusive marketing practices (e.g., spam and the dreaded dinner-time sales call) from companies that know too much about them. The running joke that diaper manufacturers know you are pregnant before you do highlights consumer uneasiness with overly-intimate sellers. Even companies are leery about sharing too much knowledge for fear that competitors might gain access to proprietary knowledge.

These fears might even stifle some of the more interesting examples of technologically-augmented customer service. Sometimes the copious operations statistics gathered by remote monitoring equipment make the customer nervous. Data from the equipment often reflects how the customer uses the equipment. For example, Helix noted that some of its customers fear that these monitoring systems represent a leak of highly proprietary semiconductor manufacturing knowledge about the customer company's operations.

Barriers to Knowledge Flow: The Gatekeeper's Zeal

The siloed structure of many companies hampers knowledge flow between suppliers and customers (it also hampers internal knowledge flows, but that is another problem entirely). Many suppliers face the problem of zealous purchasing agents that prevent the supplier from learning about the actual internal customer. When suppliers do not understand the real application (as opposed to the official specs in the RFQ), they are unable to offer more innovative solutions. When knowledge is filtered through an intermediary, misunderstandings occur and opportunities are lost. The greatest mutual value occurs when suppliers and customers collaborate to find the best overlap between their respective capabilities and needs.

The Last 100 Yards

Now that companies have spent so much time and effort optimizing their back offices and supply chains, Hannaford sees the last 100 yards as the next challenge. For a retailer, getting stock from the back of the store onto the shelves is a major challenge. Hannaford showed a planogram image of what was supposed to be on a single store shelf. This confusing Warhol-esque image of cans, bottles, and boxes illustrated how hard merchandising can be. Yet this last 100 yards is the key to great customer service -- creating well-stocked and well-organized shelves to improve the customer's experience at Hannaford. In meeting this challenge, Hannaford also believes that it can reduce back-of-store inventory by 25% without reducing service levels. These savings would let the company either expand the front of the store (and offer still greater variety) or open stores in smaller retail spaces.

Expanding Boundaries Leads to Channel Conflict

As the boundaries of a company expand, the company inevitably comes to overlap with the activities of others. GE mentioned that GE's expansion into engine services led to grumbling and suspicions among those airlines already providing outsource engine servicing. Competing with your customers is a dicey proposition. Even innocuous service practices like automated replenishment represent an encroachment on someone's turf. Those that would offer the service must convince the customer's purchasing agent that one of the advantages of the system is that the customer won't need the purchasing agent for routine reordering.

The Abuse of Averages

A number of the speakers lamented the problem of management by averages -- oversimplifying assessments of the business performance. These averages ignore both the natural and undesirable variations in the business performance.

For example, Mr. Wass highlighted the problem of using averages in rates of product returns. Decision-makers are ill-served by these averages on two levels. First, averages tend to hide a host of problems in the business. Drilling down through the averages helps a company uncover aberrant and excessive return rates and take corrective action. Example sources of excessive returns might include vendors with poor quality, defective product runs, ill-trained salespeople, and unprofitable customers.

Second, naive analyses can uncover meaningless variation in the rates of product returns. Some product categories (e.g., clothing) have higher rates of return than do others (e.g., laundry detergent). A management by the averages approach might focus on the high rates of return for clothing that signify nothing, while ignoring some low level of returns of laundry detergent that signify a serious vendor quality problem.

Gaming the System

GE also mentioned one of the terrible side effects of management by averages if those performance averages underpin incentives and performance evaluations. Unscrupulous managers can game the system and damage the company's reputation. For example, many companies measure the average percentage of shipments delivered on time. Yet this encourages employees to horribly delay an already late shipment in favor of not missing deadlines on other shipments. The result is that the manager's "averages" look good, but the customers see wildly inconsistent service from the company. For this reason, GE uses 6-Sigma principles that focus on reducing the variability of service. One such measure is the span of cycle times -- measuring the range from the worst-case to the best-case level of performance.

2.4. Best Practices

A number of companies shared best practices in this new realm of enhanced customer service and expanding company boundaries.

Wireless Networks for Enhanced Service

Hannaford is turning to in-store wireless networking to both coordinate and mobilize its workforce. Handheld wireless scanners let roving employees tap into corporate data while out in the store. These practices improve customer service beyond simply helping employees do their job. Hannaford believes that the key to a better ambiance in its stores is to have more employees deployed in the aisles rather than hidden in back offices. Greater contact with customers and greater presence of staff make customers feel better about shopping with Hannaford. Hannaford also fields wireless checkout terminals that let the company deploy impromptu checkout lines for especially busy periods.

Hannaford's wireless networks example is actually a best practice on two levels. Hannaford's development of the system illustrates the sort of deeper supplier-customer relationships that this conference highlighted. Hannaford collaborated with Cisco in designing the system. As Cisco's customer, Hannaford got a leading edge solution tailored to their specific needs. As Hannaford's supplier, Cisco got a new product and valuable experience in the grocery industry.

The Value of Variety

With greater knowledge of the customer, companies can identify a myriad ways of serving the customer. For example, the GE Aircraft Engine division offers a wide range of product and service options. These range from selling the engines as a straight capital purchase to more service-oriented, power-by-the-hour arrangements. Some customers outsource engine maintenance to GE, while other customers are skilled engine maintenance providers in their own right. Hannaford touts its upwards of 700 items in its produce department. Hannaford also uses locale-specific planograms in its stores to suit local tastes. The point is that greater knowledge of customers lets a companies create a diversified portfolio of offerings -- spawning multiple business models to best suit the needs of disparate customers.

The Value of Consistency

As the world becomes more complex and dynamic, customers increasingly value consistency and predictability. This fact underpins Hannaford's dual strategy of being an Everyday Low Cost (EDLC) buyer and offering Everyday Low Prices (EDLP) to consumers. Hannaford eschews sales gimmickry on both the supplier and customer sides of the business. Rather than participate in forward buys and promotional buys, Hannaford prefers to negotiate stable low prices for stable steady buying from suppliers. On the customer side, Hannaford emphasizes cheaper overall average prices, rather than a confusing array of promotions. This combination smoothes fluctuations in demand and makes it easier for both suppliers and consumers to do business with Hannaford.

GE's discussion of 6-Sigma also highlighted the value of consistency as a measure of customer service. Although fast cycle times are certainly desirable, consistent cycle times may be more valuable. That GE, as a supplier of parts, can provide confident statements of delivery time makes GE a more-trustworthy supplier.

Simultaneously Balancing Multiple Competitive Dimensions

Hannaford argues that its success stems from offering a balanced high level of performance on four dimensions simultaneously: low price, high quality, wide variety, and good customer service. Hannaford argues that most other grocery store chains only compete on one or two of these four dimensions. While being the best in one dimension can lead to a profitable niche business, multidimensional performance offers more range of the company to expand into wide range of opportunities.

GE competes on multiple dimensions in two ways. As discussed, GE offers a range of financial purchase models and service options that add tremendous value and flexibility to the basic product line of jet engines (GE is a maker of jet engines, a financier of jet engines, a service provider of jet engines maintenance, etc.). Second, GE tailors each relationship with its dashboard of monitored performance metrics. The half-dozen customized metrics on each customer's dashboard define the performance dimensions of greatest importance to that customer. They also represent the competitive dimensions for winning and retaining that particular customer. As different airlines choose different dashboard metrics, GE is essentially creating competitive performance across a very wide range of dimensions.

The ability of suppliers to offer multiple forms of service-added products, variety, and high operational performance on multiple dimensions is quite taxing. It seems that suppliers need to be all things to all customers. Although that is an absurd impossibility, those companies that can offer the widest range of best-fitting products and services will have an advantage. Customer service is a cornerstone to competing in the future because customer service underpins many of the dimensions of competitive advantage that companies seek. But more importantly, customer service creates the basis for the knowledge that a company must have to understand customers. That knowledge is a prerequisite creating the value-added product and service offerings that will win and retain those customers.