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Integrating Customer Focus and Measurement in Day-to-Day Business

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COUNCIL FOR CONTINUOUS IMPROVEMENT

Executive Summary

Lynn Hunsaker, manager of customer satisfaction for Applied Materials, discusses her company's efforts to introduce customer satisfaction as a principle focus across the organization. Using surveys to identify the voice of the customer, they publish the findings in targeted reports that include only data relevant to each particular employee group. She describes how this customer information is used to generate action plans in half-day workshops involving people from many different functional areas. Workshop output is transferred directly onto charts which show the action plan and key performance indicators in a single glance. These charts form the basis for discussions at operation reviews and staff meetings throughout the year, and they are published in the customer satisfaction Greenbook, which, along with financial and market performance, is the basis for executive bonuses.

Integrating Customer Focus and Measurement

"Planning for improvement must follow a model which involves all of your employees, focusing their daily activities on customer satisfaction," **Lynn Hunsaker** told CCI members during a breakout meeting at the June 1996 General Session of the Council for Continuous Improvement. Applied Materials' customer-satisfaction model begins with *customer perceptions*. They recognize that customer perceptions are influenced by anything they see or use which bears the Applied Materials logo, as well as direct deliveries and service calls. These perceptions become the impetus for their purchasing decisions.

As manager of customer satisfaction for **Applied Materials**, Ms. Hunsaker is responsible for her company's "voice of the customer" programs. "'Voice of the customer' is fancy wording for surveys and interviews, both formal and informal," Ms. Hunsaker explained. "Informally, our employees interact daily with customers. These interactions are important information sources, revealing where our customers stand and what they feel we need to improve. We also measure the entire customer base from time to time to help prioritize our efforts and allocate resources in a wise way. In this context, the voice of the customer is formal, using mail questionnaires, telephone surveys and face-to-face interviews to gain information."

The responses to the customer surveys are tabulated in a way that employees can understand (percentages, averages, comments). "These are what we call *customer satisfaction measures*," Ms. Hunsaker said. "These are lagging indicators of customer satisfaction because they are based on the customers' historical perceptions." In workshops customized for specific groups within the company, they take these lagging indicators and develop improvement action plans. The results of the action plans are tracked by key performance indicators called *customer focus measures*.

"Once we have made changes in our behavior (improving things which are important to our customers), customers' perceptions will change. However, it takes time for the customer to realize that there has been a change and assess its results, so we use internal performance indicators (customer focus measures) as leading indicators of customer satisfaction in the next overall measurement."

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Quality History at Applied Materials

Applied Materials builds machines that are used by major semiconductor producers around the world — companies like Intel, Motorola, Fujitsu and Samsung — to manufacture chips. Their customers are extremely sophisticated, and their product is very complex. "Our business has been around a little more than 25 years, since the invention of the chip," Ms. Hunsaker noted. "Technology has always been a strong driver of our business and the key differentiator for our success. Customer satisfaction, however, has become more and more important over time. Our competition is catching up to us technologically. Therefore, we need to continually improve our customers' satisfaction."

"Close to the customer" is cited as the first value in their mission statement, but it is practiced to varying degrees throughout the company, Ms. Hunsaker noted. "I see my role as creating awareness, generating participation in these programs, and getting people to integrate these practices into their daily activities. It will be another year or two before this mentality becomes a way of life and these tools are really embedded in our culture."

Changing is especially challenging for Applied Materials because the company has been doing very well. "In the past, we have not taken our competition very seriously — to feel the squeeze from competition is new for us. We have many employees with advanced degrees — scientists who, by nature, have a lot of ego in the work they do. Getting them to realize that we have major weaknesses has been difficult. Rapid growth has also created resistance to efforts to get the company aligned with the customers. They said 'We are doing everything we can. We do not have time for this. How can you say we have customer satisfaction problems when our sales are skyrocketing and our market share is growing?'"

Ms. Hunsaker's group consists of a customer satisfaction improvement manager, a quality metrics manager, an analyst and a customer satisfaction measurement manager. "It is a small team focused on measurement and improvement in tandem. Rather than being an arm of market research, we are part of the Global Quality group, because our emphasis is on improving customer satisfaction."

They use opinion surveys and internal metrics to profile their quality status. Opinion surveys provide the customers' perceptions and internal metrics track the performance of their critical processes. Both approaches lead to improved performance, which brings external rewards in the form of customer retention, market share growth and long term profits.

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Gathering Information

"We measure by different methods around the world because of cultural issues," Ms. Hunsaker noted. "We use the telephone in the US and most of Europe. In Japan we use the mail, allowing the Japanese executives to work the issues internally, come to a consensus, and then send their questionnaire in. We use personal visits between the professional consultant and our customers in Germany and the rest of Asia."

Applied Materials uses six different types of surveys, but the impetus for most of their improvement is the annual customer relationship survey. This is a very high level, broad-based measurement of customer satisfaction levels for 25 different issues, covering both product quality and service quality. Not only do they measure satisfaction with products and services, they measure perceptions of improvement (or deterioration) over the past year, and they seek comparisons with their competition. Finally, they have a relationship strength metric that combines overall satisfaction, willingness to repurchase, and likelihood of recommendation.

Executive listening sessions are held twice a year to give leaders an overview of customer opinions. Applied Materials executives talk with executives from customer organizations; without getting into specific model lines or service areas, they listen to what the customer has to say, take notes, and share that data internally. "Executive listening sessions are the only survey that applies to our bonus program," Ms. Hunsaker noted. "They are probably the most prone to bias because they are done by our own people. But so far that has been a plus because we are trying to change the culture — unless executives feel like they have control during this change they will resist it. For the time being, this is an approach that is successful for us."

After every equipment installation, they conduct a post-startup survey by mail, accessing a variety of people involved in the installation, including those who train, those who made the purchase decision, and those responsible for the startup. In addition, customer service report cards are done quarterly. These are managed at a local level, allowing more discretion regarding who gets asked what questions, Ms. Hunsaker explained. "There are five major questions we want to ask which describe service efficiency and accuracy and spare parts accuracy and efficiency. They should keep that short. They are done mostly face to face at user meetings."

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The comparison with their competitors is generated by customer interviews conducted by an industry agency called **VLSI**. "Finally, some of our customers have their own supplier ratings," Ms. Hunsaker added. "They ask their own employees to fill out some kind of form on our company. They pass that rating result back on to us."

Acknowledging that the number and variety of surveys they use may be excessive, Ms. Hunsaker explained that the current situation developed because different data collection schemes originated in different parts of the organization. They are currently reengineering their survey process to get a comprehensive pulse from their customer base with fewer surveys.

Deploying Survey Data

They strive to report the survey data in ways that are meaningful to the individuals and groups who will be responsible for acting on the information. "During workshops for action planning, we identify areas that are important to the customers and where our performance is poor. We work first on the most important, least satisfied areas, or where a significant portion of our customers are dissatisfied. We put unimportant things in the background — even if we perform poorly on them, they do not come out as a competitive disadvantage. We can also de-emphasize things we do very well but which are not important to the customers. Important areas where we are doing well must be congratulated, so our employees feel successful: we want to reward this kind of progress."

To improve customer satisfaction, you must first identify the process that created a given deliverable that the customer has said is important. "Once we can discuss the process, we ask what is the actual work activity, procedure or infrastructure that impacts that process outcome. By doing that, we can identify root causes, which helps us to be more accurate in doing improvement plans for customer satisfaction," Ms. Hunsaker said.

"Our survey consultant creates over 40 survey reports to cover each of our sales and engineering groups. One of the keys to the actionability of the surveys has been that each group gets only data pertinent to them. They cannot blame customer dissatisfaction on the performance of another group: they have to take responsibility." To ensure this narrow focus, interviewers must be sure that customers limit their answers to a specific product line.

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Typically, survey results are presented in the first hour of a half-day workshop, leaving the balance of the session for discussion and action planning. They have established a template to help people create action plans. Ms. Hunsaker described the process. "We might have workshops of 25 people or so for one of the sales or engineering groups. Within each workshop, we break them into four or five groups, each focusing on a separate issue that came out as a weakness. Each group reads through the customer comments regarding their issue, identifying key themes. Then they list the *satisfaction, momentum* (deterioration or improvement), and *competitiveness* ratings from the start of the survey effort to the current date to show the trend. The majority of the time in the workshop is then spent developing the action plan: the participants address each theme and formulate a broad plan to meet those concerns."

Ms. Hunsaker pointed out that the action plan must have an owner who works in that particular group. She observed that people have a tendency to identify some other department that is not within their jurisdiction. When facilitating these workshops, she emphasizes the need to list actions that the group can control. If they do not think they can address an issue completely on their own, they must select the parts of the customer feedback on that issue that they do control. Their action plans might then include recruiting another part of the company as a partner to pick up the other pieces that they cannot control.

Although the action plan template calls for a completion date, Ms. Hunsaker recommends specifying a kick-off date instead. "If you put only the completion date, people are more inclined to wait until a couple weeks before that to begin their action plan. When designating a kick-off date, we tell them to choose a specific date, like July 10th — we get very picky."

Improving Customer Satisfaction

As an example of this process, Ms. Hunsaker described a workshop conducted with an Asian sales team in November 1995 [*see the presentation handout, reproduced as Attachment A*]. They used data from a survey that concluded on September 30th. Although this did not allow much time to prepare the reports, they wanted the data to be as fresh as possible so that people could not avoid acting on the results by claiming that "so much has changed since the survey." The issue selected by the sales team in this case was a customer perception that Applied Materials did not have enough skilled engineers to service the volume of purchases that customers were making. Customers also felt that the company was not proactive in giving them information.

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Ms. Hunsaker pointed out that customer perceptions may arise from genuine quality problems or they may be the result of ineffective communication; sometimes both factors are present. In this case, the sales team's customer satisfaction index decreased from 6.6 (in 1994) to 4.2 (in 1995), indicating a significant problem. Their action plan included holding a bi-weekly seminar for employees to beef up their skills, cross-training junior and senior engineers in the line of action, and reviewing the technology with the customer each month. Thus, the plan covers both the quality improvement of the engineers' service as well as a communication of technological expertise to the customer. In the example, the action plan names a specific person as the owner and cites a starting date. For customer focus measures, they wanted to track the meetings they had with the employees and with the customers. They listed the current level as zero and set their goal at twelve.

Ms. Hunsaker recommended that groups critically evaluate their own plans. When they have devised their plan, she asks them to imagine they have completed it. "Imagine what the customer will feel like; do you think these things will go away? To what extent are these minimized? If they say, 'Well, actually, what we have here is not going to make enough of an impact,' then we modify the plan. Something needs to be replaced or added. We are not trying to create too big of an action list for people so that they are overwhelmed. We want to focus them and prioritize their efforts in places where we get a big bang for the buck."

Ms. Hunsaker briefly recapitulated the action-planning process. "The survey data is presented (we show those bar graphs and scatter plots) and identify customer focus areas using quadrant analysis [*see Attachment A*]. We choose three to five themes (although in some cases they only pick one or two because they are really substantial problems). The general managers of these sales or engineering organizations (and their direct reports) get together a broad cross section of functional areas which support their group. The more functions we have represented in this room, the better. We can then take this overall plan, done at the highest level, and present it to the next level of management: 'This is the data, and this is what the executive leadership came up with. What can you do in your area to impact these perceptions, and what can you do to strengthen these action plans?' We take it to cascading levels of employees and ask them to come up with their own plan that they have unique ownership of in their department which supports the upper level position."

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Ms. Hunsaker's staff is involved in conducting these workshops around the company. "We do them simultaneously with the product, sales and engineering groups. We cross-train to maximize efficiency." Every quarter they publish a *Greenbook* which identifies the measures on which the company as a whole must focus. These issues include cost control and problem resolution. "My group publishes and tracks the global issues, but at this time we do not have a program for collecting local issues on a regular basis or publishing and rewarding them. We are very concerned about that. We need something to motivate these local areas, beyond the fact that this is a local problem and they have complete autonomy to improve it."

Tracking Progress

Applied Materials tracks the ongoing progress of their customer satisfaction improvement efforts with a tool called the Tashiro chart, named for its inventor, Japanese executive Shigeo Tashiro [*see Attachment A*]. Taking its information from the action-planning workshop template, the chart states the problem (the things the customer perceived as wrong) and lists the goal, the owner, and a brief summary of the action plan. The chart then has space to compare the actual and target performances over time. "The beauty of this chart," Ms. Hunsaker explained, "is that we can show the trend and the action plan on the same page."

Functional areas with internal surveys can track their progress using these charts, providing a consistent measurement across the company. "Our management really likes that because now they have something that is comparable, group to group. They not only see what the trend is, but what is going on in that group to make that trend improve. We ask people to put in some historical data — preferably a year's worth — as well as a year's worth of forecast data. So we have 2 years shown on the graph [*see Attachment A*]. We have very specific quality guidelines for this graph."

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To create uniformity in the Tashiro charts, Applied Materials uses a checklist outlining the required elements. "They need to have an owner from their own organization. They need to have a goal on the chart; four quarters of history and four quarters of forecast; measurements in defined standard increments. We want the y-axis labeled: we want to know if they are reporting dollars or yen — that kind of thing. We want to have at least one action item per quarter for the current year. We do not want to have 'Drive corrective action' as the action plan. That is not specific; that is nothing but wishful thinking. We want to have kick-off dates specified by month and day if possible. 'On-going' should be used rarely." The Tashiro chart can be used to track other kinds of quality improvements, Ms. Hunsaker noted, not only customer satisfaction programs.

"In the *Greenbook* you will see Tashiro charts shrunk down to two per page," she said. "I think at first it bothers people because they are not used to seeing a graph that is so small. But some executives will focus more on the graph, some will focus more on the action plans. Some people focus on both. There is a lot of value having both on the same sheet. We reduced the size simply to limit the number of pages. My group collects the charts from around the company. They are sent to us electronically as Powerpoint files, we paste them into a Pagemaker document, and then within two weeks, we send it out to 150 people. We are thinking about expanding the distribution of this and putting it on Lotus Notes or something that would be more accessible."

According to the vice president of customer satisfaction, this reporting practice will continue for the foreseeable future. In spite of increasing familiarity and a higher level of participation, the VP believes that people in the Applied Materials culture still need to be reminded on a quarterly basis that they are working for customer satisfaction. The *Greenbook* Tashiro charts are a good discussion piece, encouraging managers to reinforce the action plan at staff meetings and creating momentum for them to move the plans and improvement efforts forward.

The voice of the customer is only one segment of the quality department. Specific action plans generated in the customer satisfaction workshops may fall into either the process improvement category or the assessment category, Ms. Hunsaker noted. In such cases, she will ask the leaders of those groups to share methods or tools with those teams to help them move forward more quickly with their action plans.

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Ms. Hunsaker introduced another tool that addresses human resource issues that may impede an action plan. This is a flow chart that can help managers identify infrastructure problems or barriers created by lack of training or incentive [*see Attachment A*]. A structured approach like this makes these problems easier to manage.

Applied Materials employees see a note on their paycheck every two weeks, reminding them that their salary was paid for by satisfied Applied Materials customers.

Tying Bonuses to Customer Satisfaction

In January 1996 the vice president of customer satisfaction presented the revised customer satisfaction and quality bonus program to all of the executives of the company. Emphasizing that the company will get what they measure and reward, he explained that the four major organizations at Applied Materials (sales, product, manufacturing, and after-sales/service), must have initiatives in place to control cost and improve installed base performance, as driven by the customer survey. Other quality issues (not necessarily based on the survey) are also included in the bonus plan. Specific measures may vary across the organizations, but the basic issues are reinforced in each case.

The various customer satisfaction and quality measures are weighted in the bonus plan, with variations depending upon the specific organization [*see Attachment A*]. "We try to put a decent percentage on each of these so that they have enough impact," Ms. Hunsaker said. "If we included in the bonus criteria the entire list of things the customer wanted, none of them would have a high enough percentage to be very motivating."

At the end of the year, they schedule meetings with each general manager and the vice president of customer satisfaction. They ask each one to fill out a self-assessment and bring it with him or her. "They can bring as many staff members as they like," Ms. Hunsaker noted. "It is a very open meeting, mostly an opportunity for dialog between the VP and GMs so we have full understanding of the status as well as the circumstances. There is a pool of money associated with customer satisfaction improvement. Their payout can range between 0 and 1.5. If they had a goal of 20% customer cost reduction or productivity improvement, but they reached 30%, then they could get a 1.5 payout. This gives people a greater sense of control over this bonus. It is helping us modify our managers' behavior in order to institute this cultural change."

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To illustrate the success of this approach, Ms. Hunsaker told of a business unit that started with a cost of ownership nearly 25% higher than the competition. As a result of their improvement efforts, over the course of a year they reduced their cost to approximately half that of the competition. Customer response followed the improvements, with customer satisfaction ratings rising by 21 percentage points in the next survey.

Summary

Ms. Hunsaker concluded by summarizing the Applied Materials approach to customer satisfaction. "We identify what is important and what needs to be improved by interviewing our customers in one form or another. We publish our findings in reports that are meaningful to our various employee audiences, including only data relevant to each particular group, so that they can take full ownership. We have a great sense of urgency in publishing these reports and in doing these presentations, where we focus mostly on helping people interpret the graphs. These are tools that they can use throughout the year, so we want to make sure they can read them in the appropriate way. Then we conduct a half-day workshop which includes people from many different functional areas. From the workshop, they transfer their output directly onto a Tashiro chart, which allows us to see the action plan and key performance indicators in a single glance. The Tashiro charts form the basis for discussions at operation reviews and staff meetings throughout the year. They are also published in the customer satisfaction *Greenbook*, which, along with financial and market performance, is the basis for the executive bonus. In this way we are able to close the loop in improving customer satisfaction — from our customers giving us feedback, to us doing something about it, tracking what we are doing, motivating it, and presenting the results to the customers to continuously improving our customers' perceptions."