The Customer Window

A model for combining market research, quality control, and organizational development to design products and services

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"THE CUSTOMER IS ALWAYS RIGHT" is a traditional business maxim and the underpinning of current quality control literature. W. Edwards Deming writes that "the consumer is the most important part of the production line." Kaoru Ishikawa states "the first step in quality control is to know the requirements of the customer." Even business bestsellers such as Peters and Waterman's *In Search of Excellence* describe successsful companies as being "close to the customer."

Sound advice. But how can a company be close to the customer? How can a company know the requirements of the customer? How can customer input become part of the production line?

Several other questions surround this issue. What exactly are customers? Are they the outside users of a company's product or service or are there internal customers as well? Should anyone listen to "internal" customers?

Should a company's quality improvement efforts involve the customer? Who defines quality? What input should customers have in the development of a product or service? Who should talk to customers?

To address these questions, ARBOR, Inc., a market research and training firm, formed a special team consisting of experts from the fields of quality control, market research, and organizational development. The result of this collaboration is a concept called the Customer Window—a method of identifying customers, gathering customer data, and using these data to deliver a quality product or service. The Customer Window is based on three premises:

1. Everyone in an organization has customers. The customer may be the ultimate user (external customer) or someone within the organization (internal customer). A customer is anyone to whom someone provides service, information, or a product.

2. Everyone—not just the marketing department—can benefit by becoming more customer oriented.
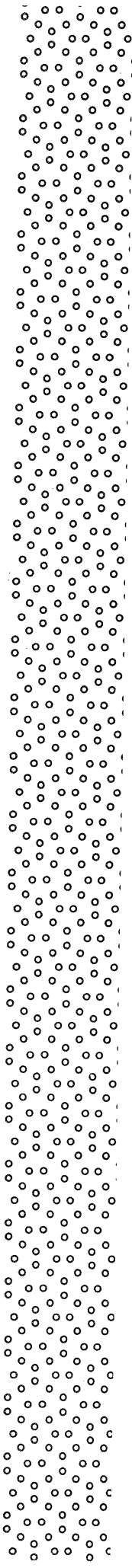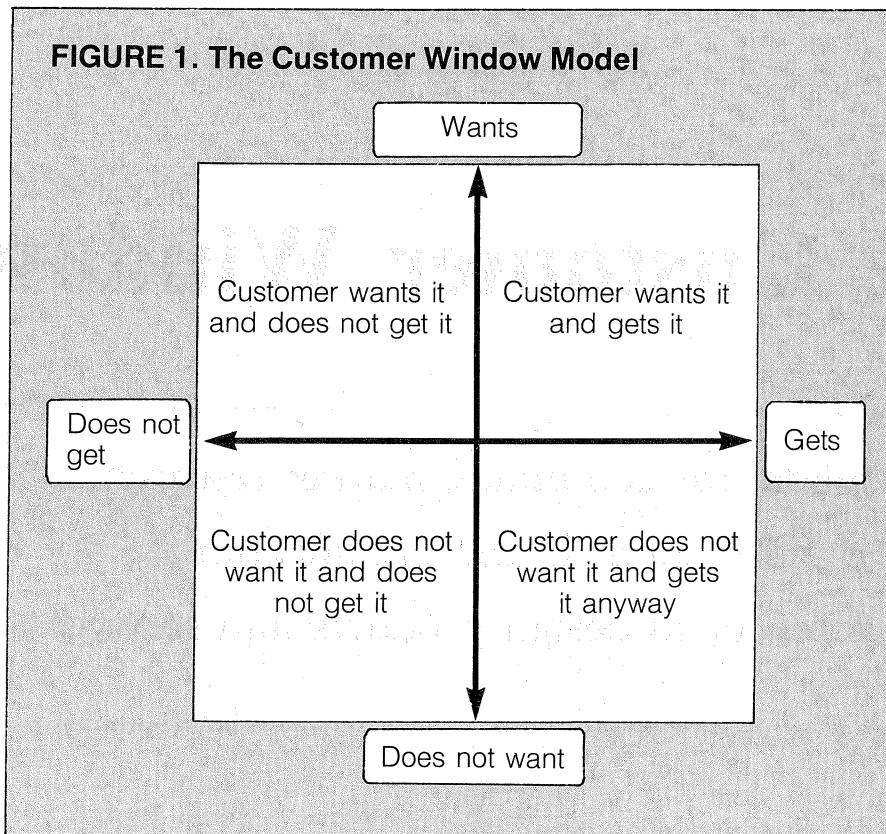
FIGURE 1. The Customer Window Model

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                          Wants
                            ↑
  Customer wants it    |   Customer wants it
  and does not get it  |   and gets it
                       |
Does not ←─────────────┼─────────────→ Gets
get                    |
  Customer does not    |   Customer does not
  want it and does     |   want it and gets
  not get it           |   it anyway
                            ↓
                      Does not want
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3. Quality is defined by the customer. To improve quality, find out what the customer wants but isn't getting—and then, whenever possible, provide it.

The simple graphic device shown in Figure 1 summarizes the goal of the Customer Window concept—giving customers what they want. The Customer Window Grid is based on quadrant analysis, a market research tool. The Grid divides product features into four groups or quadrants:

1. The customer wants it—and gets it.
2. The customer wants it—and does not get it.
3. The customer doesn't want it—and gets it.
4. The customer doesn't want it—and doesn't get it.

For example, if a new product is being designed, potential attributes or features of this product can be placed in the appropriate quadrant of the Customer Window Grid. Which quadrant? This can be answered by conducting customer research. Knowing where a feature or attribute falls can guide the decision-making process. Energy should be devoted to those features that a customer wants/needs but is not getting. If the customer wants it and is getting it, then there is no problem; the feature is meeting the customer's needs. If the customer is getting a feature and doesn't want or need it, it may be possible to eliminate or alter that feature, or to educate the customer on how that feature can be helpful. If it isn't delivered and isn't important, there is little reason to be concerned about it.

The Customer Window Grid provides a concrete, visual guide for discussions about quality and the value of a product's attributes. This analysis is applicable for day-to-day decisions about internal customers, as well as for major, critical decisions related to external customers.

Background

To begin its study, the ARBOR team examined existing literature on market research, quality control, and organizational development. The team's end product—the Customer Window—combines strategies and skills from all three disciplines.

Quality Control

1. *View the planning, development, and delivery of a product or service as a cycle of continuous improvement.* Walter Shewhart's plan-do-check-act cycle, popularized by Deming, became an important element of the Customer Window. The concept of studying customers tied in smoothly with the ongoing cycle of planning, implementing, measuring, and improving. Plans are more realistic and accurate if customers have input. During implementation, customer reaction is important and can indicate "bugs" in a new system, method, or product. Customer feedback can be measured on an ongoing basis to identify areas for improvement (see Figure 2 for a sample management-led customer study).

2. *When addressing quality, focus on quality of design as well as quality of conformance.* J.M. Juran differentiates between quality of design and quality of conformance. Ronald Snee, last year's Shewhart Medalist, points out that "quality of design is an important consideration in all aspects of the overlapping product and process development steps."

The team found many examples of the danger of approaching quality from only a conformance standpoint. For example, a financial institution began tracking data entry error rates on a new investment product. Each mis-entered

certificate resulted in an error that would appear on customers' statements. After tracking daily error rates for two weeks, the institution discovered a high error rate which, if allowed to continue, would result in hundreds of thousands of dollars in rework each year—as well as a large volume of frustrated customers.

The institution first tried to address this problem by asking employes to follow the directions and procedures more carefully—in other words, to comply. However, analysis showed that the errors were resulting from unclear data entry instructions. In this case, the problem was with the system's design, making conformance impossible.

Based on repeated examples of similar situations, "quality of design" became a key element of the Customer Window. Control charts of error rates can identify problems, but often redesign is necessary to solve them. By communicating with internal customers (the users of the system) during the system design phase, the financial institution's software designers could have prevented a problem that affected the external customers' perceptions of the bank—and its quality.

Managers who do gather information from both internal and external customers tend to make better decisions and can offer quality based on customer perceptions. If quality is defined by the customer, it makes sense to find out what the customer thinks. But what are the ways to communicate with customers? Are some ways more effective than others? The market research field provided the answers.

Market Research

1. *Employ market research tools to communicate with customers.* The market research discipline offered a set of tools to:
- clearly identify and define customers (segmentations and profiles).
- collect customer data (interviews, questionnaires, focus groups, etc.).
- analyze customer data and summarize them in a clear format (statistical analyses, quadrant analysis, etc.).

Traditionally, these techniques have been applied mainly to "consumers"—the outside user of a company's product or service. The research team believed that many of these tools would prove valuable on a broader scale. The application of certain market research tools might help managers and departments better serve their "internal" customers and might prove valuable in day-to-day decision making.

2. *Because everyone has customers, everyone can conduct customer research.* Would the software designers at the above-mentioned bank have required a professional market research firm or an in-house market research staff to conduct internal customer research? Probably not. As shown in Figure 3, some customer research requires professional assistance. Advertising tests, new product introductions, and other major undertakings may require professional market research. However, there are countless times, in any organization, when information from customers would improve quality, decision making, productivity, and eliminate wasted effort. Decisions are frequently made with little or no direct customer study.

As is true with any research report, market research results sometimes sit on a shelf, unused. To increase the likelihood of customer research being used, the team incorporated concepts from organizational development.

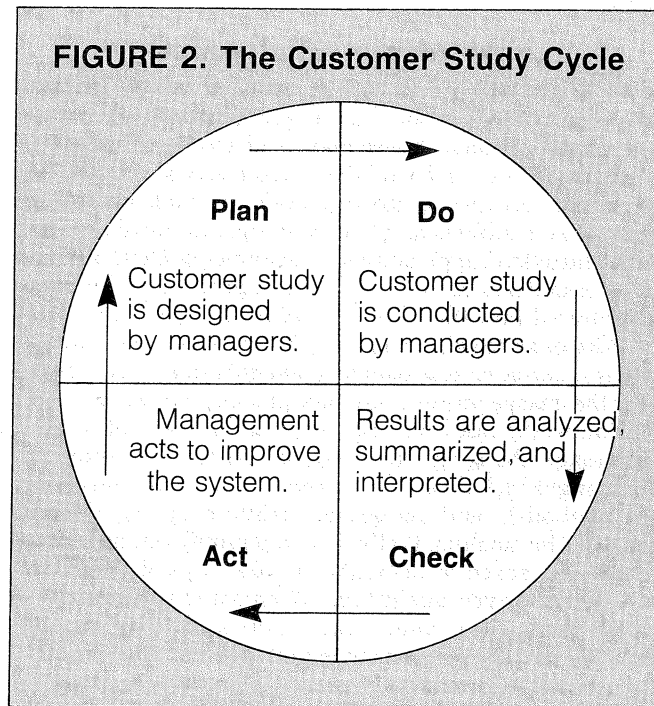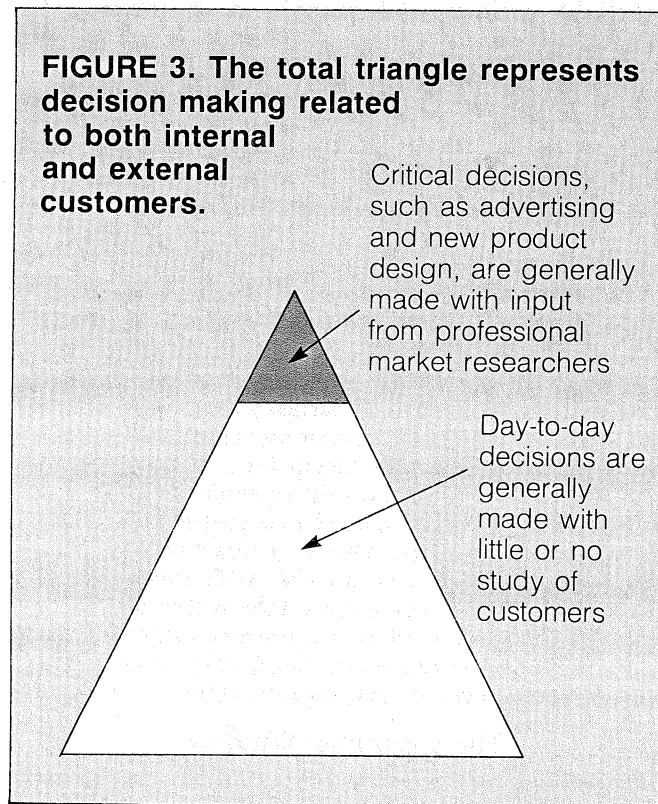FIGURE 2. The Customer Study Cycle

Plan — Customer study is designed by managers.

Do — Customer study is conducted by managers.

Act — Management acts to improve the system.

Check — Results are analyzed, summarized, and interpreted.

FIGURE 3. The total triangle represents decision making related to both internal and external customers.

Critical decisions, such as advertising and new product design, are generally made with input from professional market researchers

Day-to-day decisions are generally made with little or no study of customers

Organizational Development

Even armed with a definition of customer-driven quality, many organizations cannot take action to improve their systems. Organizational change may be viewed as threatening to individuals for a myriad of personal reasons. Over the past several decades, a growing body of applied research has evolved to address the process of organizational change. For the beneficial applications of customer studies, a number of organizational development approaches have been incorporated into the Customer Window approach:

1. *Organizational change can be difficult; the change process requires careful planning and attention.* Kurt Lewin broke the change process into three phases: unfreezing (communicating the need for change, creating awareness, and motivating); changing (providing new patterns of behavior, which might include a new procedure, new equipment, or new methods); and refreezing (reinforcing the desired change). This analogy is effective in pointing out how people become frozen in or bound by old ways of behavior.

Customer-driven quality improvement may represent a drastic change for some organizations. It may require educating management on the importance and impact of using customer information in quality improvement projects. Some of the Customer Window tools and techniques may be new to managers who are being asked to use them. And to reinforce or "refreeze" this new approach, organizations should measure, document, and publicize the impact of improvement projects and changes in customer attitude/satisfaction.

2. *Clarify the scope and theme of any intervention.* Another helpful concept involves the "depth of intervention." How far are the individuals and groups willing to go? Is the change something an external consultant wants, but something that is not generally desired by the organization? How is the change being positioned? It is often helpful to communicate with employes about the personal benefits of a customer orientation.

The benefit of customer-oriented research is that it can bring all employes closer to their internal and/or external customers. Information produced by customer research can be shared with every level of the organization. The Customer Window Grid gives all parties a visual means of discussing each change from the customer's perspective, rather than from the bureaucratic viewpoint.

3. *Develop structures and roles to ensure success.* Finally, models for organizational change suggest the defining of various roles, such as: Who is the target of the change? Who is the sponsor? Who are the facilitators or change agents? Who will measure success? Who will ensure that action is taken? Customer-oriented research can be a valuable tool for an organization's existing quality circles, quality improvement efforts, or management teams.

The Customer Window

Professional market and customer research has become a complex and highly technical field. In product development, for example, a method called conjoint analysis is often used to predict which combinations of product features will be most attractive to customers when developing a new product. These studies, which require large customer samples and complex multivariate methods, are generally best left to research professionals.

Although complex questions require complex techniques, there are simpler and more direct methods that are often appropriate for day-to-day decisions. Line managers, quality engineers, and management teams can conduct and will benefit from simple customer studies. The steps involved in constructing a Customer Window analysis are:

1. Identify, segment, and profile the customer base.
2. Develop research questions, such as those based on gaps in the profile.
3. Define the sample and collect data using an appropriate collection format.
4. Analyze and summarize data.
5. Take action.

Step 1: Identify, Segment, and Profile the Customer Base

To start a customer study, first identify and segment the customer base. Who are the internal customers? Who are the external customers? In one simple example, the external customer in a fast food restaurant would be anyone who eats at the restaurant. Four possible segments might be: families with young children, hungry eaters, weight-conscious patrons, and elderly patrons.

Determining the segments comes through discussion, experimentation, or even initial customer research. If the segments are determined through research and statistical analysis, they are empirically determined segments. If customers are segmented based on assumptions or unmeasured perceptions, the resulting segments are termed "a priori" segments.

What does each segment of the customer base want? Usually, different customers want different things. Each segment can be profiled by answering questions such as:

• What are the demographics of this customer? (Characteristics such as age, sex, income; company size, location, product; organizational level, department, etc.)
• What is important to this customer?
• What do they like about our product/service?
• What do they dislike?
• Who is competing for this customer's business?
• How could this customer be better satisfied?
• How does this customer define quality?
• What is the size of this segment?
• What percentage of the total business does this segment represent (dollars and/or time/effort)?

The result will be a matrix (see Figure 4) containing a series of data about the customer. If these are *a priori* data, some of the assumptions will be right on target. Some will be off by a little, and some will be dead wrong. There may be other pieces of information that will be unidentifiable without collecting customer data.

Segmenting and profiling internal customers can be beneficial to any manager. Just as companies position different products or services to different market segments, managers can profit from recognizing and meeting the needs of different internal customers.

In the earlier example of the bank, the system designers could have identified the data entry clerks as one customer of the new system. If the data entry clerks had been asked the above segmentation questions, it is likely that "clear, unambiguous instructions" would have surfaced as an important issue. Armed with this knowledge, the system designers could have tested the instructions carefully to ensure that they were clear and accurate.

FIGURE 4. Profiling the Customers

	Segment #1 **Families With Kids**	Segment #2 **Hungry Eaters**	Segment #3 **Weight-Conscious**	Segment #4 **Elderly**
Percent of Customers	40%	10%	20%	30%
Percent of Sales (Volume)	35%	50%	5%	10%
Demographics Age, Sex, Income, Education, Marital Status, Family Size	More female, with kids. Mostly married; middle incomes.	More male, teens and younger adults; blue collar; fewer married.	More female, in 20's; white collar.	Elderly, retired, live in area.
What They Buy (or require)	Kids' meals; ice cream.	Burgers; fries; sodas; shakes.	Lunch; salads; diet drinks; dessert.	Coffee; rolls.
What They Want	Child-proof surroundings; free napkins; no clean up.	Lots of food; fast service; window service.	Quick lunch with peers.	A place to talk to friends; relax; no kids.
Who Are The Competitors?	McDonald's	McDonald's; Burger King	Wendy's	Wendy's and McDonald's in early morning.
What Do They Like About Us?	The hot dog meal.	The grease burger; the super shake.	We're the only unit downtown.	Good coffee; no harassment
What Do They Dislike About Us?	No play area; napkins too small.	Poor service; unfriendly staff.	Our food.	Too many children; looks like birthday party aftermath.

Step 2: Develop Research Questions

After the customers are identified, segmented, and profiled, certain pieces of information may be missing. It may also be important to verify some of your perceptions about the customers, or to get customer input on planned changes. The next step is to develop research questions to verify or obtain information. When developing the research questions:

• clarify goals and objectives. What information is needed, and why? Each question should contribute to the end purpose.

• avoid loaded, biased questions. Ensure that the gathered data are accurate and unbiased—don't write questions that lead to a "correct" response.

• don't ask "double barrel" questions (two questions phrased as a single question). To ensure accurate responses and to make things clear for the person being questioned, make sure there is no confusion about what is being asked.

• remember the Customer Window Grid: ask "how well" and "how important." Check how important something is to the customer and how well the product or service delivers (or will deliver) this attribute. The combination of these responses will help you plot data on the appropriate quadrant of the Customer Window Grid.

Step 3: Define the Sample and Collect Data

As in any quality control activity, it is important to select an accurate sample for customer data. The above-mentioned bank designers had, in fact, spoken with several key data entry clerks when preparing instructions for the new system. Unfortunately, they chose the most experienced, highly skilled clerks. The instructions were fine from this group's perspective. But when the bulk of the "customers" began to follow the directions, there were ambiguities that created problems for "average" clerks.

There are many ways to gather customer data; those that managers might use include interviews, focus groups, questionnaires, and the "mystery customer" technique.

An interview is a conversation with a purpose—in this case, to collect some specific data from a customer. Most people already do this type of interviewing with internal customers—but often talk a lot more than they listen. One way to listen better is to prepare a list of the questions. Jot down some key ideas during the interview, and at the end of the interview, write a summary identifying the three to five key points. The written summary distills the essence of the interview into a format that can be communicated.

The focus group is a market research technique designed to gather, from a group of customers, feedback about par-

ticular features of a product or service. In a focus group, a moderator guides the group through a series of prepared questions. Often, a proposed product or service is demonstrated so the group can react. People may be more open and creative in a group setting than when approached individually, and they can build on each other's ideas. Focus groups require careful planning and a skilled moderator, particularly when employed with internal customers. For this reason, focus groups are often conducted by professional market researchers. However, with preparation, a manager can successfully use this technique.

The written questionnaire is appropriate when a large sample size is required. If changes are planned for a product or service, a carefully designed questionnaire can serve as a pre-test and post-test of customer perceptions. In pursuing the Customer Window concept, the research team identified three types of questionnaires that meet the needs of most customer research:

- Questionnaires designed to define customer problems/opportunities
- Questionnaires to gage customer reaction to existing or planned products/concepts/services
- Questionnaires for measuring the effectiveness of communication

The beginner should seek expert advice when considering the use of a questionnaire. At the least, some special training and experimentation are required when designing written questionnaires. Always "pre-test" questionnaires to make sure they produce the needed information.

With the "mystery customer" technique, the supplier plays the role of the customer and records his or her observations. A consultant who works for a major bank opened an account to see what it was like to be a user of that service. When a manager wanted to learn how her department treated external customers who called for information, she pretended she was a customer and made several calls when she was away at a conference. When she returned, one of her first actions was to work with the department to develop a policy called "How to Deal With Calls for Information." Learning how your organization treats its customers can be an eye-opening experience.

Step 4: Analyze and Summarize Data

The methods above will produce a collection of raw data that must be interpreted. Professional market researchers employ several analysis methods. If the customer research has produced an undecipherable mass of data, a marketing professional can provide assistance. If goals were carefully established and a manageable amount of data was collected, proceed to the next step—condensing the data into a useable form.

Any data collected about customers' perceptions about the importance and current delivery for certain attributes can be plotted on the Customer Window Grid. In the example of the data entry errors, the internal customer—the data entry clerks—would list "clear, unambiguous instructions" as an important attribute of a new system. Because the instructions were confusing and unclear, "clear instructions" would appear in the "customer wants it and does not get it" quadrant. Items that fall into this quadrant are prime candidates for improvement through managerial action.

Other data analysis tools, such as Pareto charts, can help summarize customer information and indicate key issues to be addressed.

Step 5: Take Action

Customer research can and should be a driving force for new product development, quality improvement teams, quality circles, productivity improvement efforts, and managerial decision making. Customer data can aim these efforts in the right direction, and can prevent over-engineering and wasted effort.

For companies that have problem-solving or quality improvement teams in place, customer research can be a new source of guidance and motivation. Customer research can help a company's management make sound decisions and eliminate false perceptions. Analysis of customer research can guide a manager or organization in repositioning products or services to meet internal and external customer needs.

The importance of the action phase cannot be overemphasized. Data are useless without action. Unless the customer data will result in quality improvement, it doesn't make sense to talk to the customer. When customer data identify something that needs action, treat the action as a project. Employ project management skills to clearly define the project, assign resources, schedule activities, and control progress. Determine how the effect of the project will be measured. In essence, this means following the plan-do-check-act cycle, and adding customer research to each step.

The Results

William J. Latzko, author of *Quality and Productivity for Bankers and Financial Managers*, suggests a 15th point to W. Edwards Deming's 14 points for management. Point 15, Latzko says, should be: "How do you know?"

In many organizations, decisions are made without understanding how the decision will affect customers. No one—or only the market research staff—talks to customers. Often, the customer is an annoyance—someone who gets in the way of production.

The Customer Window combines simple skills from market research, quality control, and organizational development to help any manager better communicate with customers. By taking action to understand customer needs and implementing customer-based improvements, any manager can make true "quality improvement" a reality.

Customer research, and the actions based on analysis of that research, are beneficial on any scale. The manager who better understands and meets customer needs will be more effective. The salesman who demonstrates a true concern for customer needs will be more effective. Departments that are customer-focused will be more productive. Companies that are customer-focused tend to be market leaders.

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