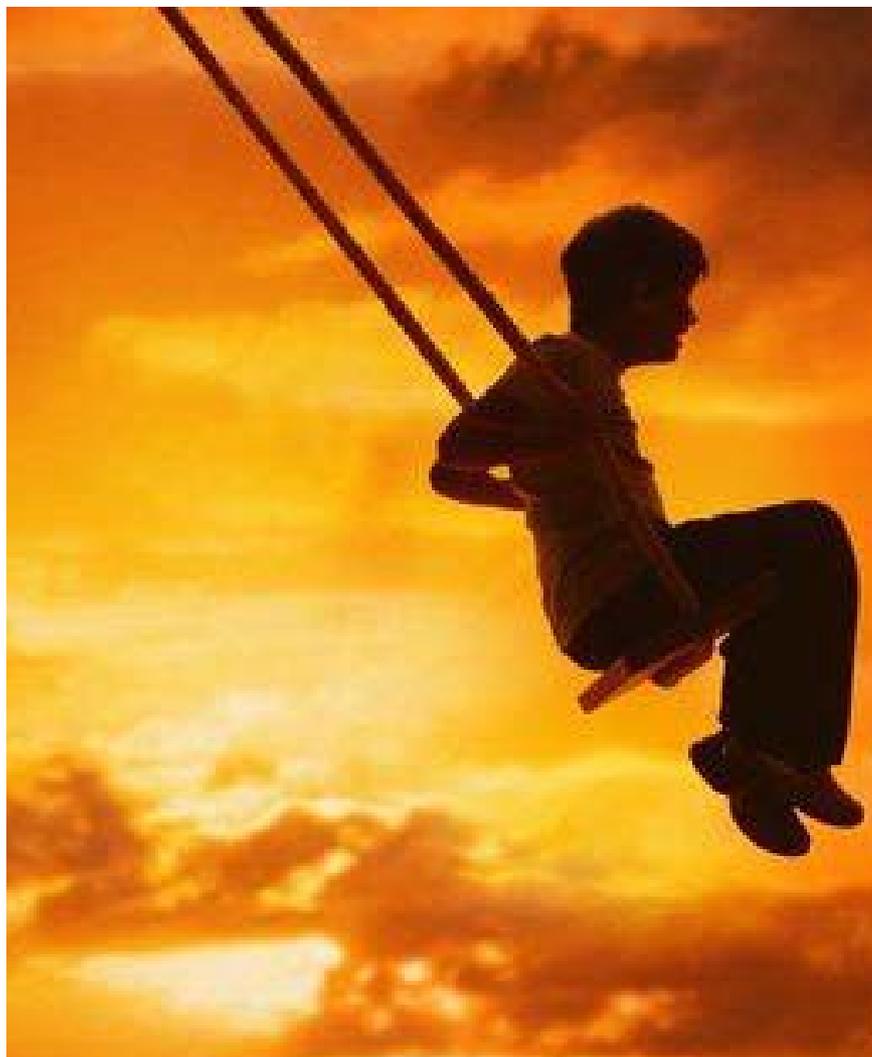


# Defining Customer and Business Requirements

## Objectives:

- Understand customer needs
- Establish and practice methods of collecting the voice of the customer
- An introduction to measures
- Converting the voice of the customer to CCR's
- Establishing performance measures and indicators
- How we can use the information gained

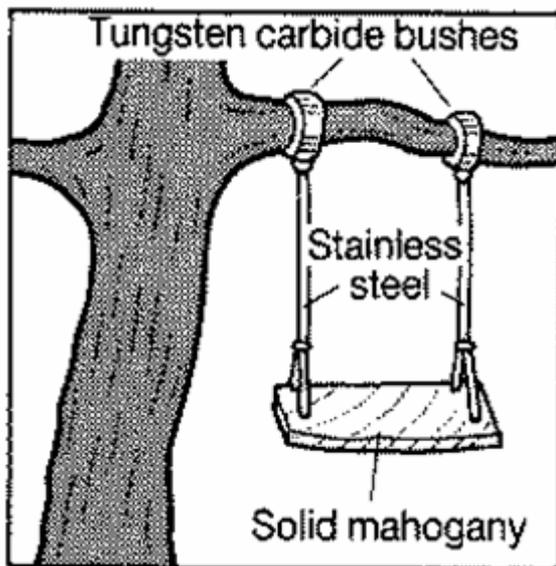
How 'VoC' normally happens in business



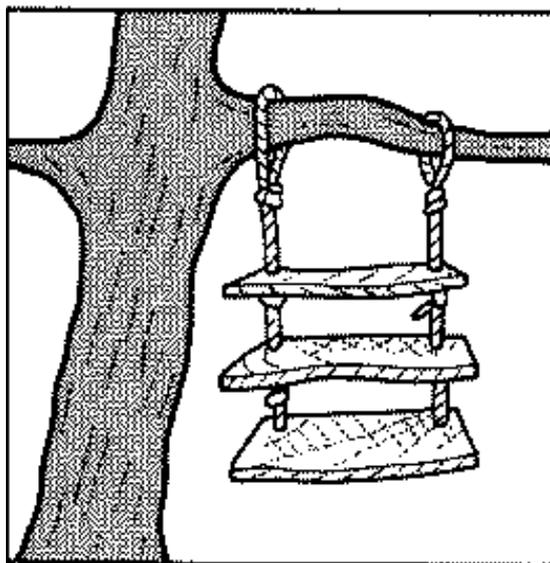
Let's imagine we are in the business of making swings.

Management decides:

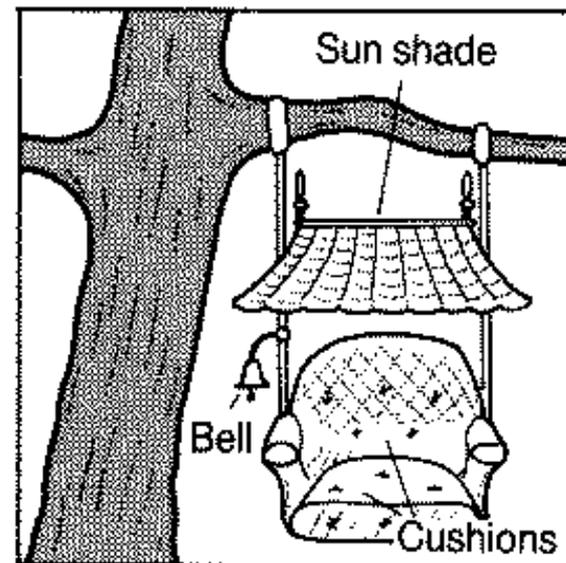
"Let's give the customer a better swing!"



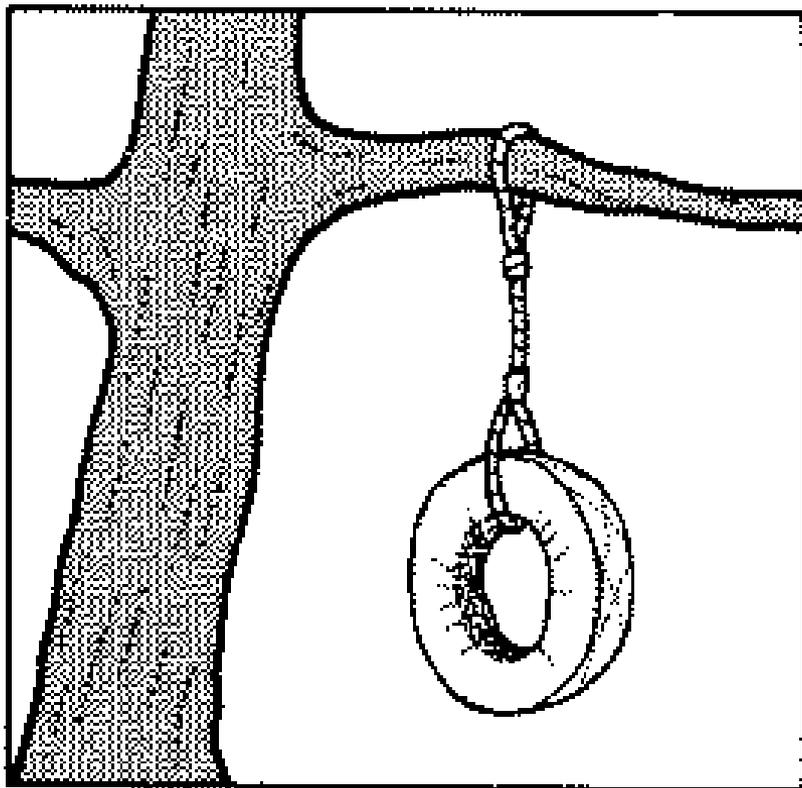
What product development specifies...



...some modifications from security, marketing, executives, etc. etc....



...what eventually hits the market...



But if we had asked customers, we would have found that this is what they actually wanted.

## DESIGNING PRODUCTS AND SERVICES WITHOUT THE CUSTOMER IS EXPENSIVE.



Number of the functions, which Mercedes Benz removed in the past year from its products, because no driver needed and/or knew how he should use it: 600

*Source: brandeins - Wirtschaftsmagazin, October 2004*

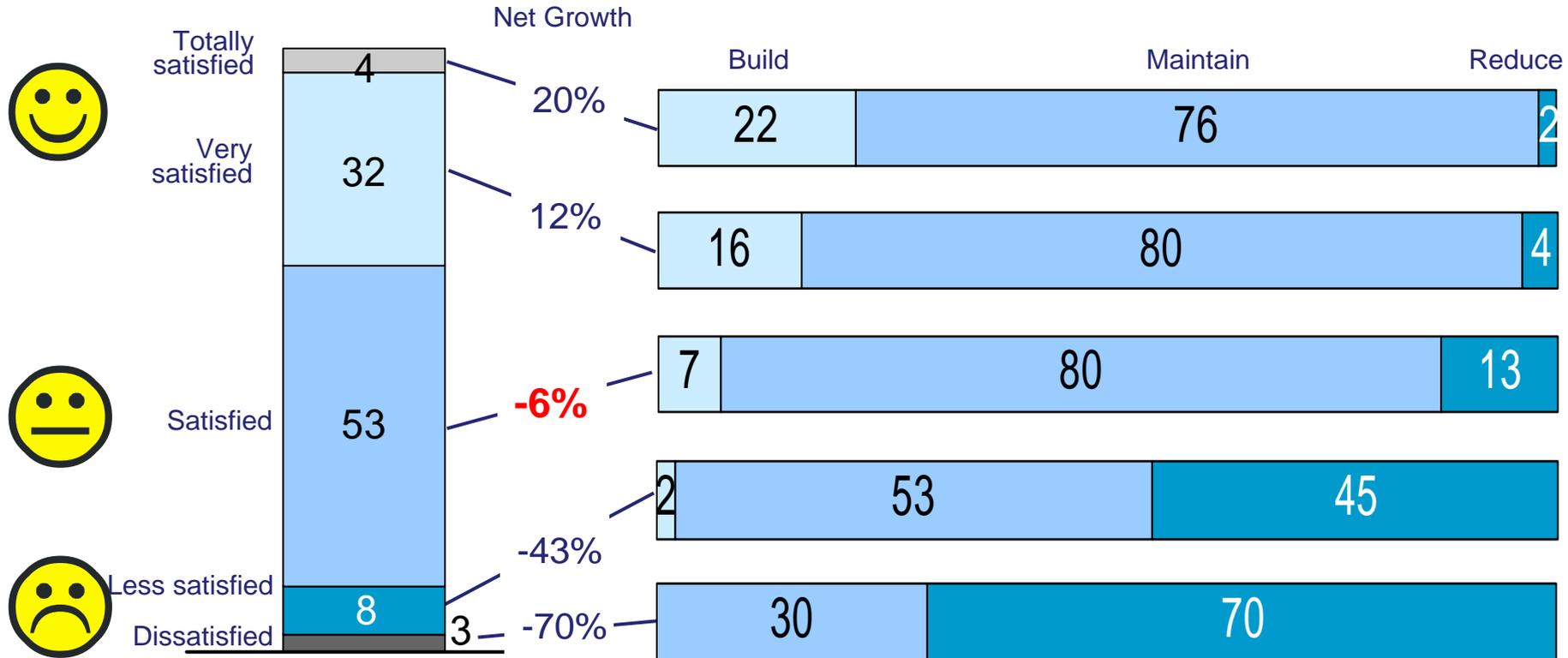
"We focus relentlessly on what customers need. And we fight anything that gets in the way of that."  
- Google

# SATISFACTION IS IMPORTANT – IT DRIVES CUSTOMER BEHAVIOUR

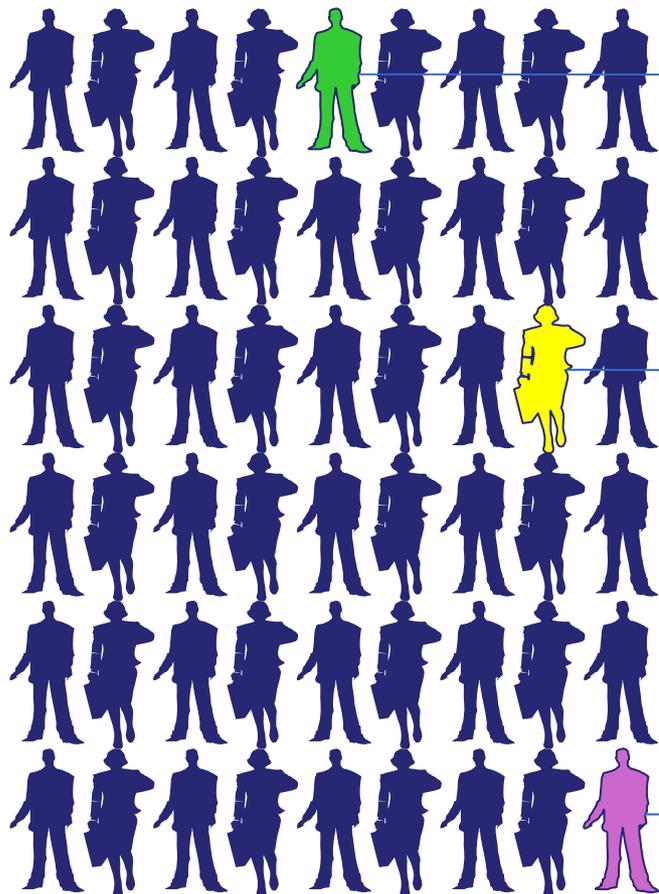
Chart: Overall satisfaction with us and correlation to intention to develop relationship

## Satisfaction

## Intention regarding relationship with us



## HOW CUSTOMERS FEEL ABOUT US INFLUENCES WHETHER, AND HOW MUCH, THEY WILL DO BUSINESS WITH US



### **Totally satisfied**

...3x more likely to do more business with us than satisfied clients

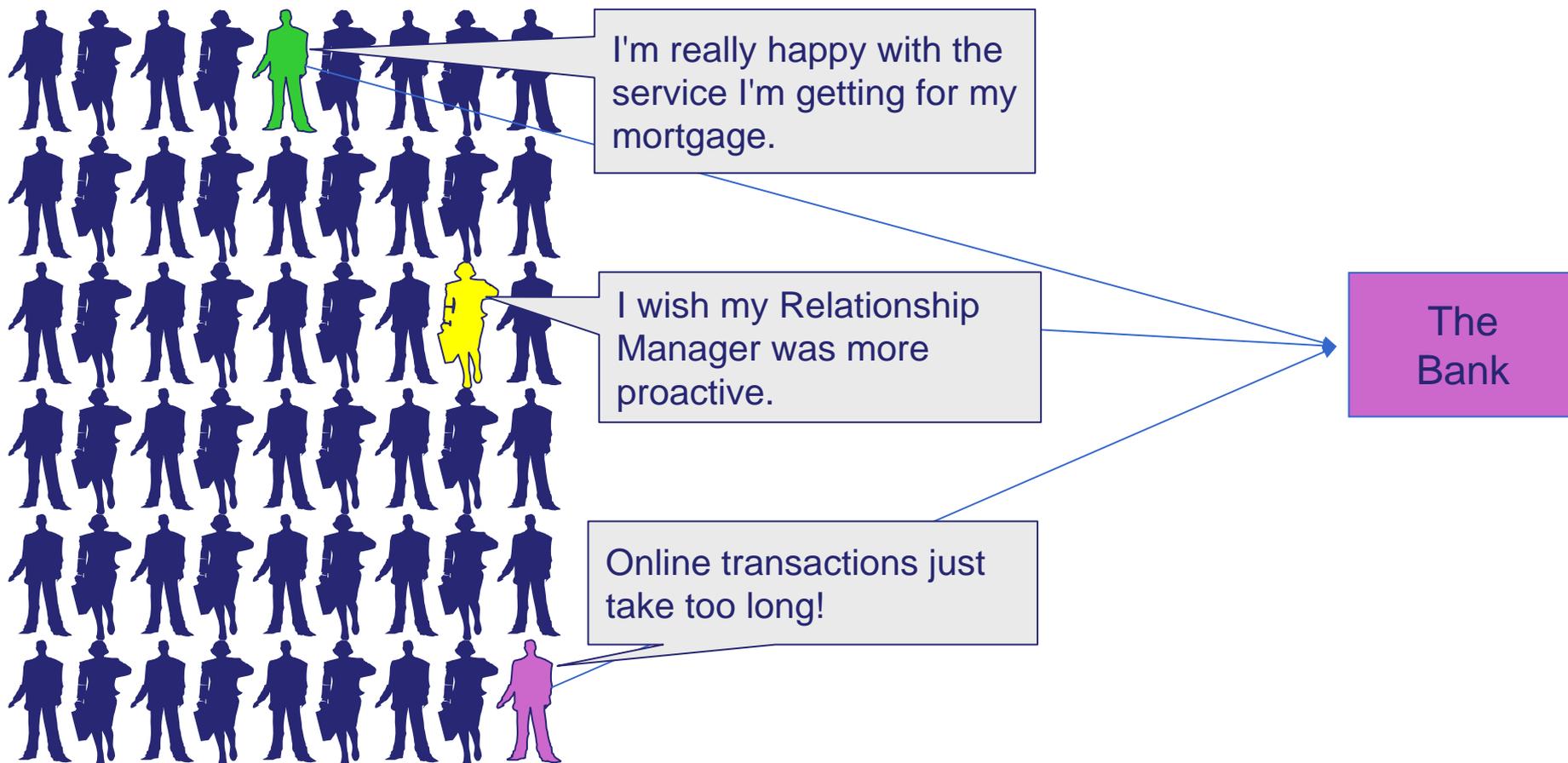
### **Satisfied**

...more likely to reduce their business with us than build it

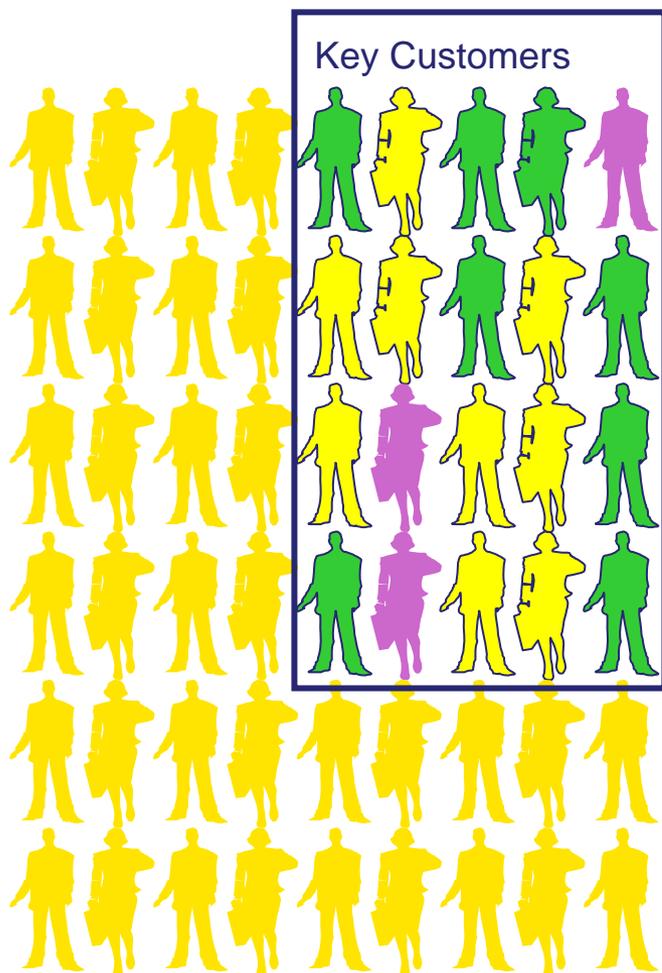
### **Unsatisfied**

...not ours for long

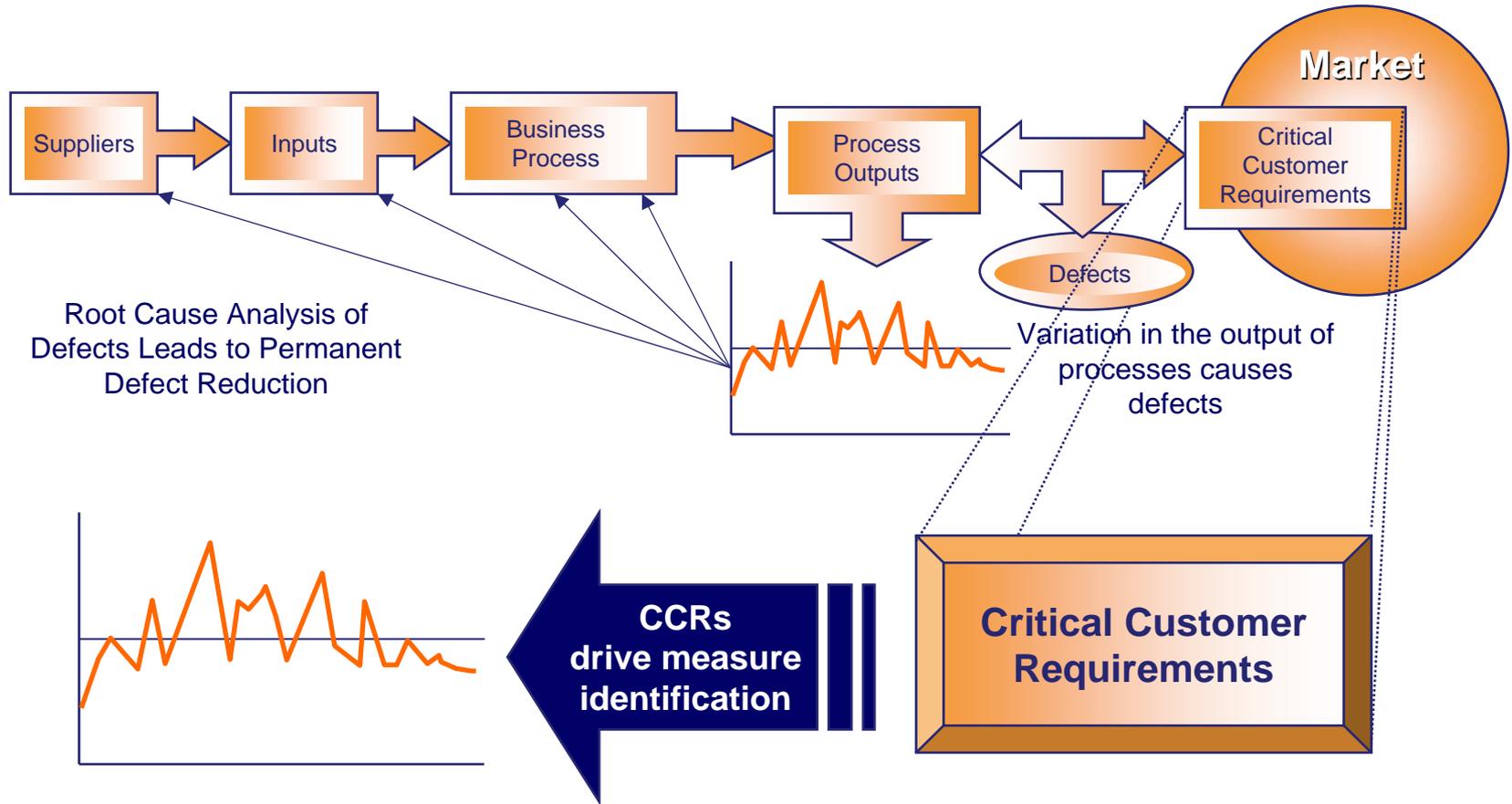
## WE NEED TO KNOW WHAT IS IMPORTANT TO CUSTOMERS AND HOW THEY FEEL ABOUT US – *LISTENING TO THE VOICE OF THE CUSTOMER (VoC)*



## NOT ONLY LISTEN TO THE VoC, BUT ALSO IDENTIFY OUR MOST IMPORTANT CUSTOMERS



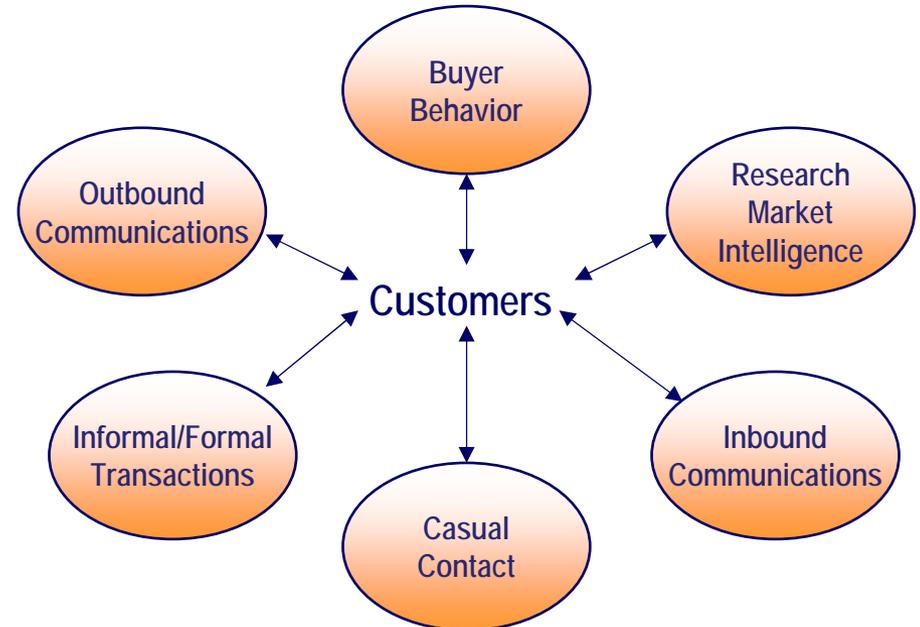
- Not all customers create equal value. In order to discover opportunities, gain advantage, and build loyalty, it's important to focus on the customers who matter most



## Types of Customer “Voices”:

- Complaints
- Compliments
- Product returns
- Product/service sales preferences
- Contract cancellations
- Market share changes
- Customer defections/acquisitions
- Customer referrals
- Closure rates of sales calls
- What other customer voices could you or do you use in your business?

## Sources of Customer Voices



The challenge is to understand how your customers define and prioritize the various needs and expectations they have of your products and services.



# The information exchange between a business and its customers is called Voice of the Customer (VOC)



## Information Exchange



## Why Measure VOC?

Measure – a dimension such as size, quantity, duration, volume, or frequency.

Measurements imply a scale or comparison. Measurement provides justification, rationale and guidance regarding the nature and scope of the allocation of investment in improvement.



Effective process improvement and pursuit of Six Sigma quality requires our business to understand and quantify the cause and effect relationship of every element of our operations.

Effective process improvement requires that the measures we use in our business are directly tied to our customers.

## **Step 1: Developing a Customer-Focused Business Strategy**

This requires:

- An assessment of the business needs
- The identification of customer segments

## **Step 2: Listening to the VOC**

Obtaining useful and valid customer information and feedback requires:

- Selecting research methods to gather customer information
- Probing for complete understanding

## **Step 3: Translating VOC into CCRs**

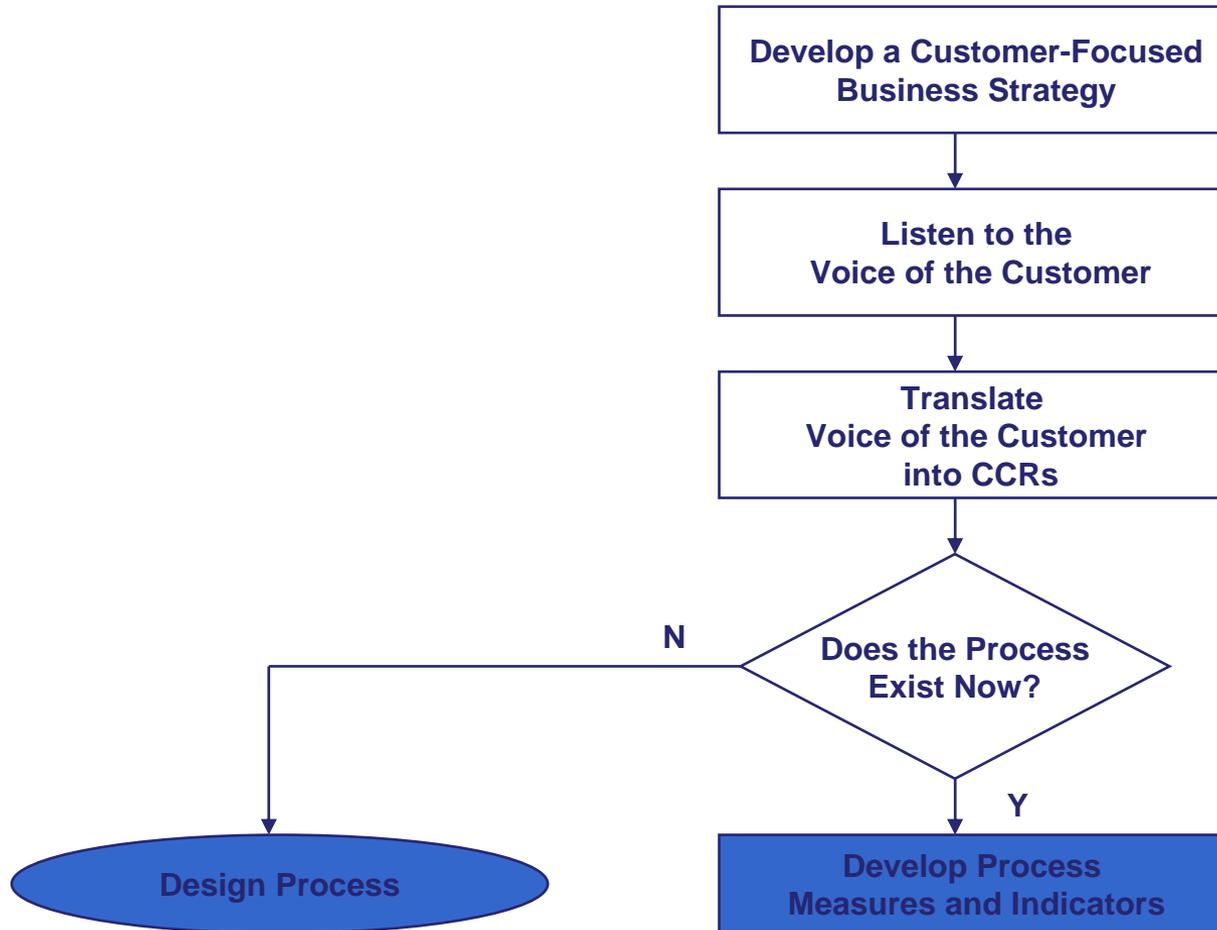
This requires:

- Organizing and verifying customer needs data into CCRs
- Determining CCR priorities
- Identifying CCR measurement and targets

## **Step 4: Developing Measures and Indicators**

Translating the CCRs into input, process and output indicators requires:

- Identifying and selecting output indicators
- Establishing output performance targets
- Determining process characteristics
- Identifying process and input indicators

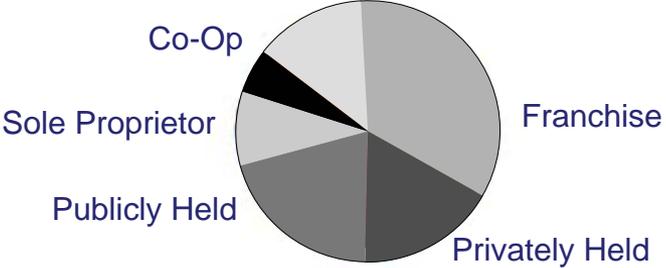


# Identify customer segments using economic, descriptive, or attitudinal categories.



## •Economic

- Frequency
- Size of Customer
- Cost
- Revenue



**Revenue**

## •Descriptive

- Geographic
- Demographic
- Product Feature
- Channel



**Geographic**

## •Attitudinal

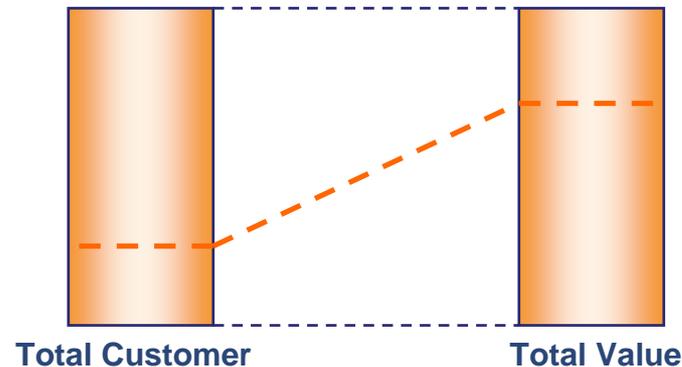
- Price
- Value
- Service



**Price or Service**

## Step 1: Develop Customer-Focused Business Strategy

Not all customers create equal value. In order to discover growth opportunities, gain a competitive advantage, and build loyalty into the business strategy, it is helpful to segment customers. Customer segmentation will also play a role in Step 2, Listening to the VOC.



Typically, various customer segments deliver disproportionate value: i.e., the greatest value can come from a small portion of your customer base.



## Objective

- To learn how to identify customer segments.

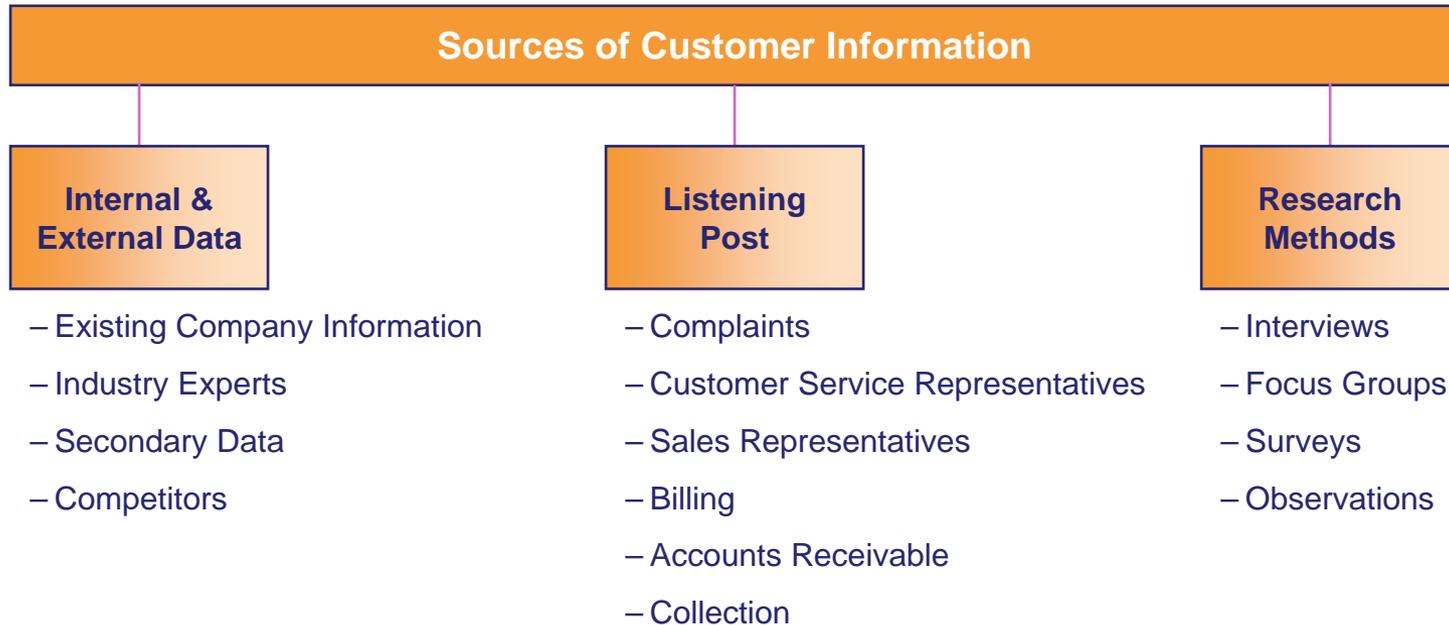
## Instructions

1. Select a specific process output (product or service)
2. List customers of the product or service.
3. Identify ways to segment each customer.
4. Present findings to participants.

Product/Service	Customers	Potential Segments

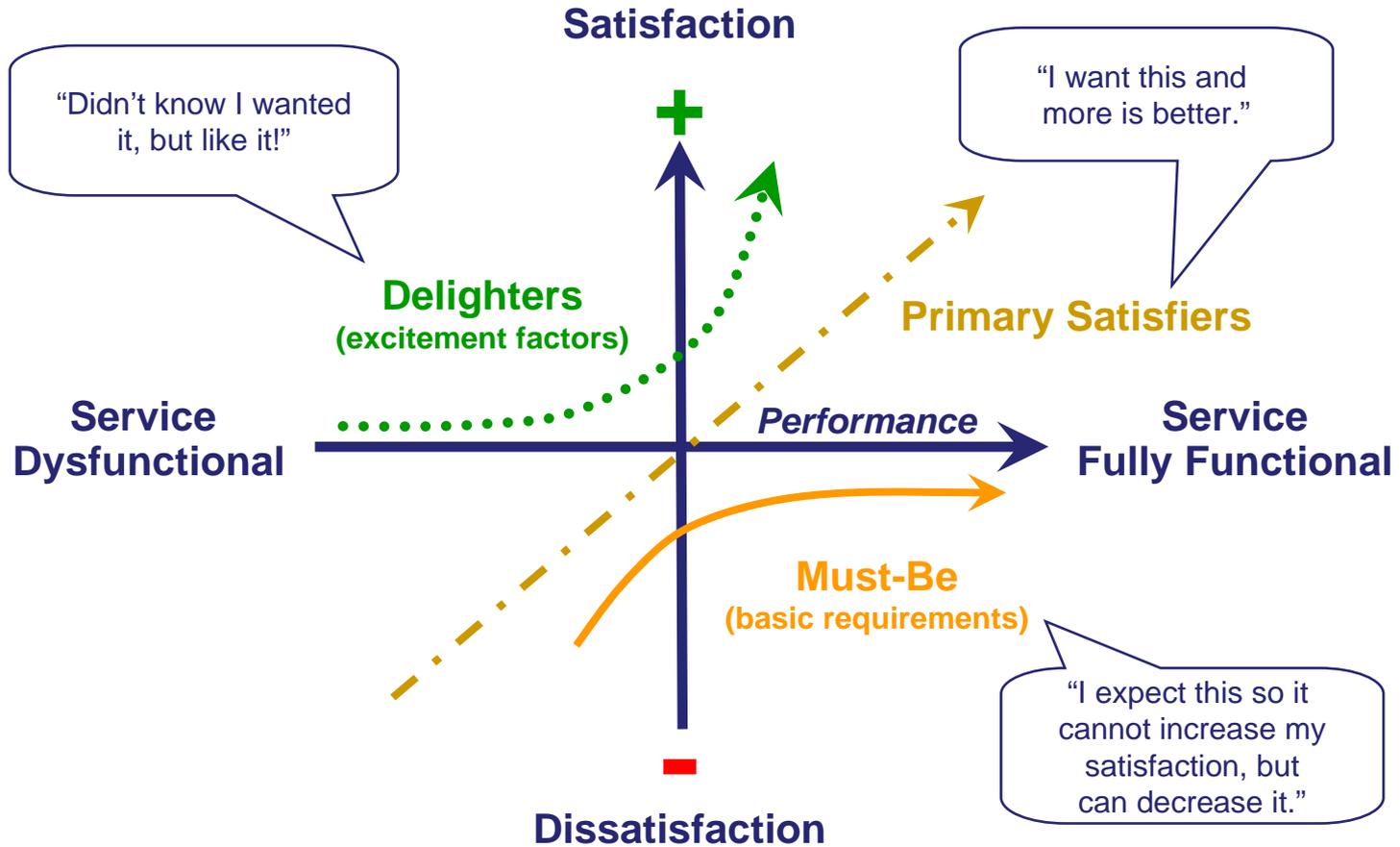
## Step 2: Listening to the Voice of the Customer

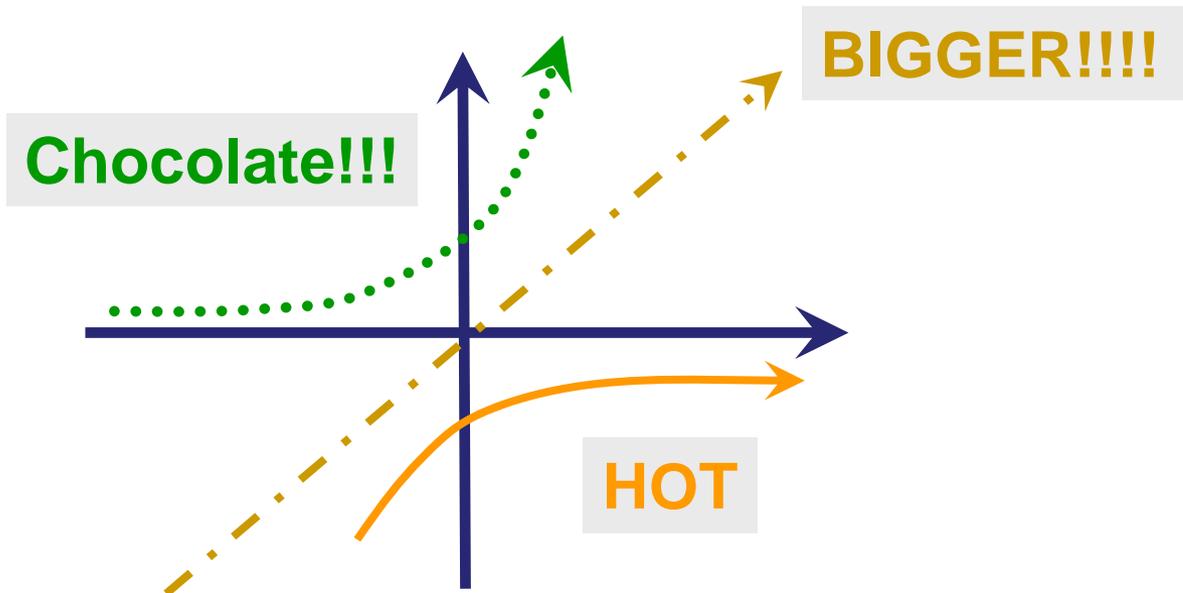
### Select Sources of Customer Information



**There are many potential sources of good customer data.**

- Teams can gather a great deal of data from customers, but be unable to translate the data into useable information regarding customer expectations and requirements.
- Those who gather Voice of the Customer data must help the customer translate vague and sometimes emotional statements into specific and measurable customer requirements.
- If this can be done during the data collection process, the team may be able to avoid later re-validation of CCRs if they are “derived” from less specific Voice of the Customer responses.





## Purpose

- To learn about a specific customer's point of view on service issues, product/service attributes, and performance indicators/measures.

Uses: Interviews are useful at several points during the process of gathering customer needs.

- ***At the beginning:*** to learn what is important to customers, which supports the development of hypotheses about customer expectations.
- ***In the middle:*** to clarify points or to better understand why a particular issue is important to customers.
- ***At the end:*** to clarify findings, to get ideas and suggestions, or to test ideas with customers.

Types of Interviews	Characteristics of Information Needed
<b>Individual</b>	<ul style="list-style-type: none"><li>• Unique perspectives</li><li>• Senior-level participation</li><li>• Input from large-volume customer</li></ul>
<b>Group</b>	<ul style="list-style-type: none"><li>• Information from customers with similar product and service needs</li><li>• Mid- to lower-level participation</li><li>• Information from many people for a single segment</li></ul>
<b>Telephone / Mail</b>	<ul style="list-style-type: none"><li>• Input from customers who are widely dispersed geographically</li><li>• Information on basic or simple issues</li><li>• Quick turnaround of information collection</li></ul>

## Purpose

- To measure the needs — or the importance and performance of — a product, service, or attribute across an entire segment or group of segments; furnishes quantitative data.

## Uses

- To efficiently gather a considerable amount of information from a large population.
- To conduct analysis that will result in data with statistical validity and integrity.
- To measure as-is conditions and drivers.
- To measure change and causality.

## The Survey Process

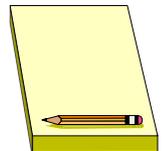
- Review the survey objectives.
- Determine the appropriate sample of the population.
- Identify the specific areas of desired information.
- Write draft questions and determine measurement scales.
- Determine coding requirements.
- Design the survey.
- Test the individual questions and the total survey against the objectives.
- Validate the questions and the survey (pilot).
- Finalize the survey.



Telephone



Mail



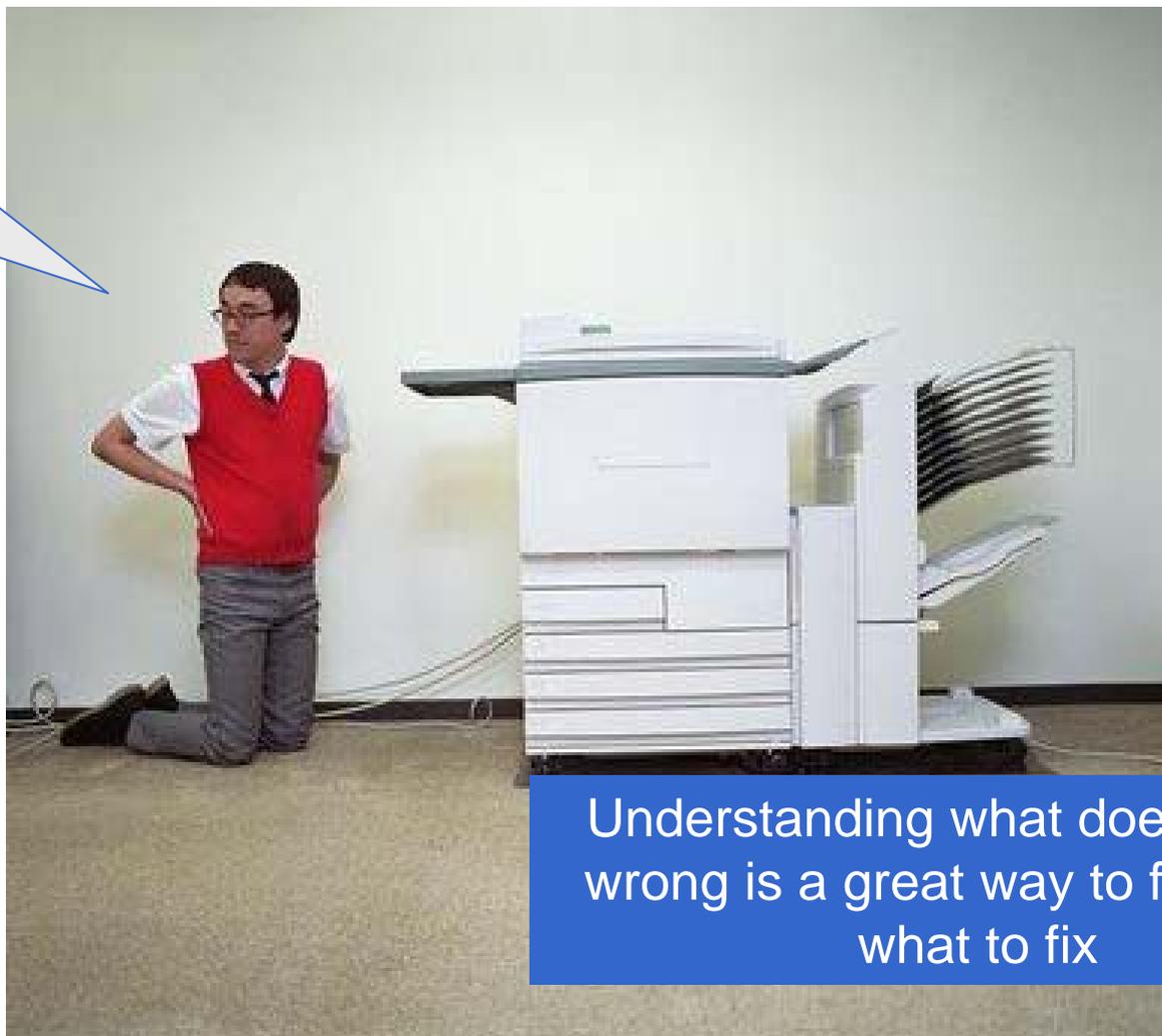
Personal

Surveying customers has three basic parts:

1. Asking the right questions
2. Asking questions in the right way
3. Understanding the answers

## LEARN - WHERE THINGS GO WRONG

Yeah, it's jammed again!



Understanding what does/can go wrong is a great way to figure out what to fix

## Objective:

- To ask the right questions.

## Instructions:

- Brainstorm a list of ways to find out the right questions to ask customers.
- Be ready to discuss an example.

## Objective:

- To ask questions in the right way.

## Instructions:

- Read the statements on the next page and determine how each one is biased.
- Discuss how to avoid bias in your communications to customers.

1. Do you advocate a lower speed limit to save human lives?
2. When you visited the museum, how many times did you read the plaques that explain what the exhibit contained?
3. About what time do you ordinarily eat dinner?
4. How important is it for stores to carry a large variety of different brands of this product?
5. Would you favor increasing taxes to cope with the current fiscal crisis?
6. Don't you see some danger in the new policy?
7. What qualities, such as timely delivery and accurate billing, are important to you?
8. When you buy fast food, what percentage of the time do you order each of the following types of food?

1. Do you advocate a lower speed limit to save human lives?

**Loaded question; does lower speed save lives?**

2. When you visited the museum, how many times did you read the plaques that explain what the exhibit contained?

**Over specificity; asking customers to remember too much detail.**

3. About what time do you ordinarily eat dinner?

**Ambiguous wording? When is dinner (mid-day or evening)?**

4. How important is it for stores to carry a large variety of different brands of this product?

**Unstated criteria; assumes you shop at stores in general.**

5. Would you favor increasing taxes to cope with the current fiscal crisis?

**Over-emphasis; crisis.**

6. Don't you see some danger in the new policy?

**Leading question; danger.**

7. What qualities, such as timely delivery and accurate billing, are important to you?

**Example containment.**

8. When you buy fast food, what percentage of the time do you order each of the following types of food?

**Over-generalization.**

## Objective:

- To practice writing questions.

## Instructions:

- Select a process at your table and draft a question to learn something important from customers
  - Identify the product or service
  - Identify the customers
  - Identify an attribute
  - Write a question

### What do you want to learn from your customers?

- What was your Product or service?
- Who are the Customers?
- What attribute is of interest?
- What is the question that you want to ask?

- Response scales help customers respond easily and help you gather data summarized into useable information.
- Measurement Scales
  - **Nominal (Name) Discrete**
    - The name of a category (e.g., location, customer types, defects, etc.).
  - **Ordinal (Order) Discrete**
    - An order in the response options (estimated sales, size, budgeted purchases, years of education, etc.).
  - **Interval (equal distance between points)**
    - The options are in order and the distance between consecutive points is of the same magnitude.
- Yes/no scales usually mean you are losing valuable information.
- Nominal and ordinal scales have significant statistical limitations.
- An interval scale should have between five and ten points - a mid-point is can be important in customer research.
- Use open-ended questions sparingly and make them very focused.

- **Level of Agreement**

1. Strongly disagree
2. Moderately disagree
3. Slightly disagree
4. Neither agree nor disagree
5. Slightly agree
6. Moderately agree
7. Strongly agree

- **Level of Extent**

1. Not at all
2. To a very little extent
3. To a little extent
4. To a moderate extent
5. To a fairly large extent
6. To a great extent
7. To a very great extent

- **Level of Satisfaction**

1. Extremely dissatisfied
2. Moderately dissatisfied
3. Slightly dissatisfied
4. Neither satisfied nor dissatisfied
5. Slightly satisfied
6. Moderately satisfied
7. Extremely satisfied

- **Level of Agreement (5 Point)**

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

- Determine the population
  - Identify segments
- Determine the number of completed interviews / surveys
- Adjust for response rate
  - If you only expect half of the surveys to be returned then send out twice the number required.
  - To determine the number to send out divide the number required by the anticipated response rate
- Randomly select individual customers to be surveyed
- Check the sample drawn. Does it appear to be representative?

## Purpose

To identify and record behavior patterns of people, given certain events.

To obtain key information regarding behavior patterns of people, events, or objects.

## Types of Observation

Structured: Specific activities are observed and measured.

Unstructured: All activities are observed to gather information that will aid in the development of a hypothesis.

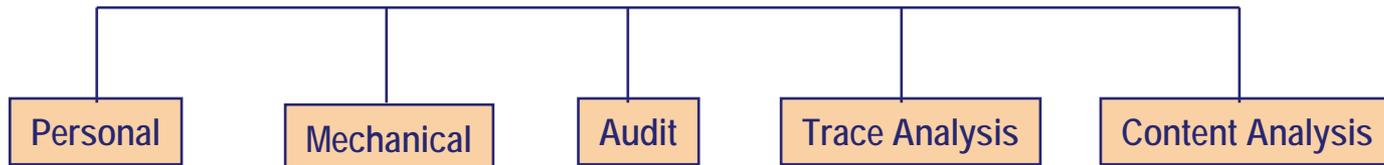
Disguised: Respondents are unaware of the observation.

Undisguised: Respondents are aware of the observation.

Natural: Observation takes place in the normal environment.

Contrived: Observation takes place in an artificial environment.

## Five Types of Observation



## Purpose

- To capture information obtained through direct customer contact.

## Customer Contact Points

- Complaints
- Customer service representatives
- Sales and service representatives
- Billing, etc.
- Receive Customer Information

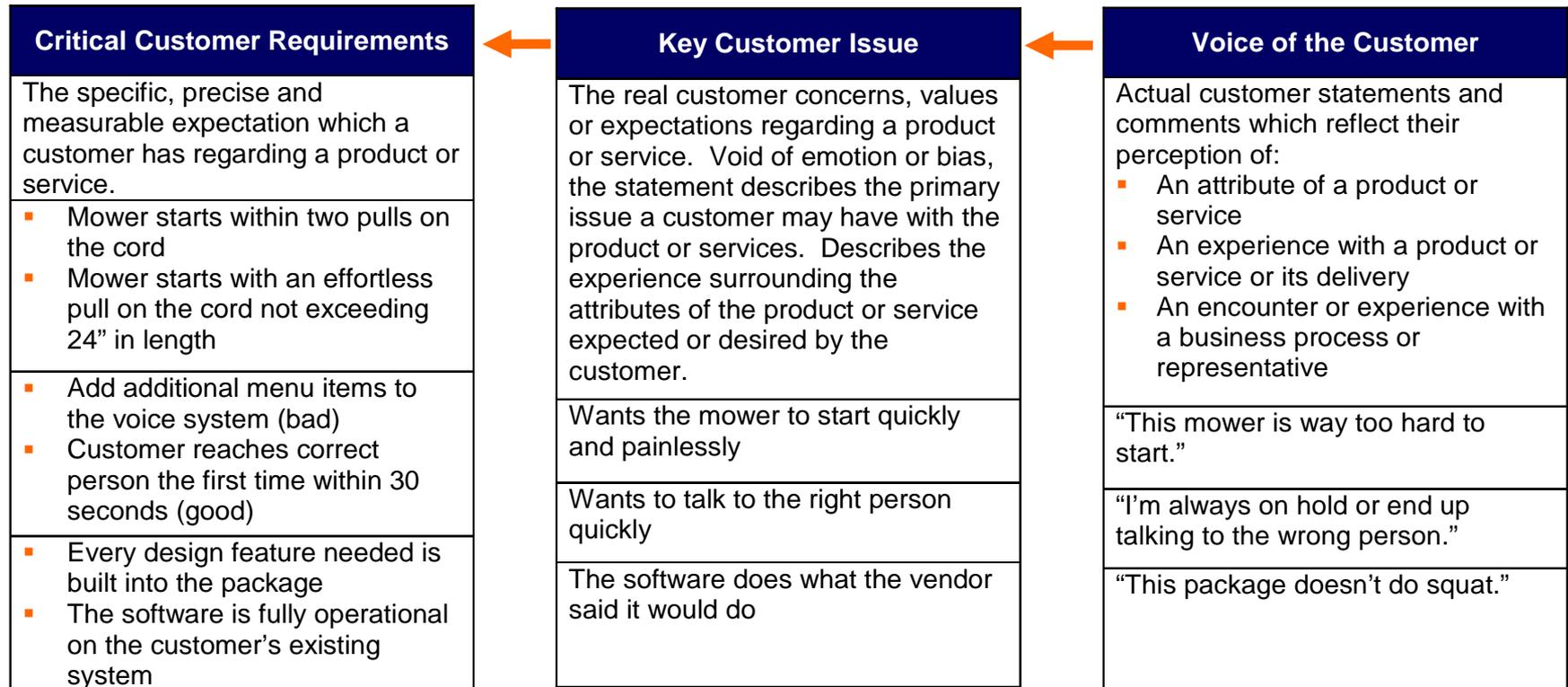


- Collecting data from customers is more than asking simple questions. It is about gathering useable information that can benefit both customers and the business.
- Teams should always make sure that customer feedback is clear, has been validated, and eventually gives the team insight in the areas of the process that affect the satisfaction of its customers.
- Remember these are your customers! Make sure the data you collect is valid and objective. Coordinate all customer contact with the appropriate members of your organization.

- Most customer surveys collect discrete data
- A scale with numbers does not mean that it is continuous
- Ask if there is another way to measure customer decision points. Customer behavior is often easy to observe
- Focus each survey statement on only one point
- Comparing survey results across different cultures and languages is possible but it requires an in-depth, in-context translation

## Step 3: What are Critical Customer Requirements?

- Important to the customer — “customer cares about it”
  - Value proposition
- Specify requirements — “must-have” or “must-be” attributes
  - Ultimately satisfy
  - Potentially delight
- Can be measured
- Establish a target
  - Customer specifications
  - Acceptable range of performance
- Ultimately, should be useful to assess the performance of our processes
  - If CCRs are not defined to the point that a clear target with specifications is established, they are not useful in determining our current defect levels or the target for new designs.



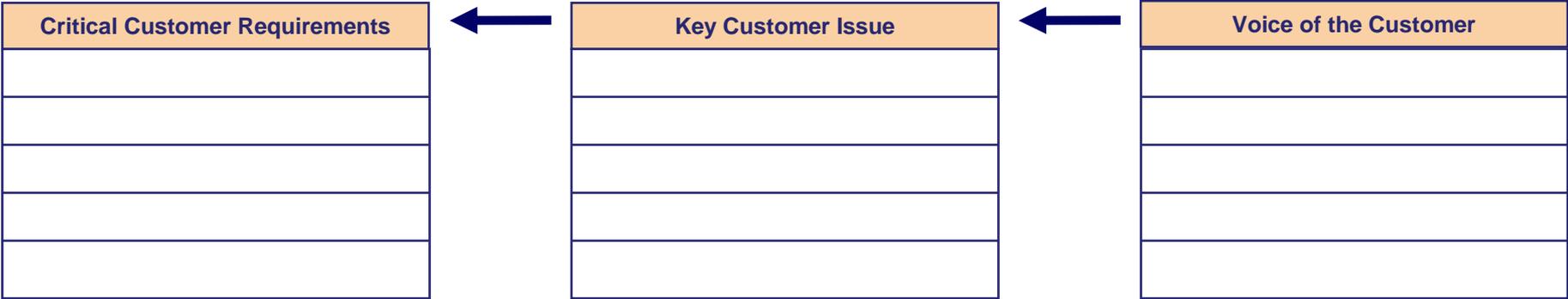


## Objective

- Translate Voice of the Customer data into the key customer issues and associated customer requirements.

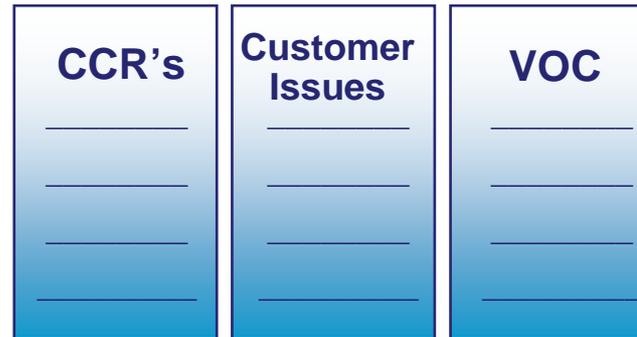
## Instructions

1. List an important, common and validated customer comment in the first box of the far right column in the table below.
2. Using knowledge of the customer and additional clarifications gathered from the Voice of the Customer, list the key issue(s) associated with the customer comment.
3. Identify the customer requirement(s) associated with each key customer issue.
4. Be prepared to discuss your conclusions with other participants.
5. Repeat for each of the customer comments considered important by customers and the team.



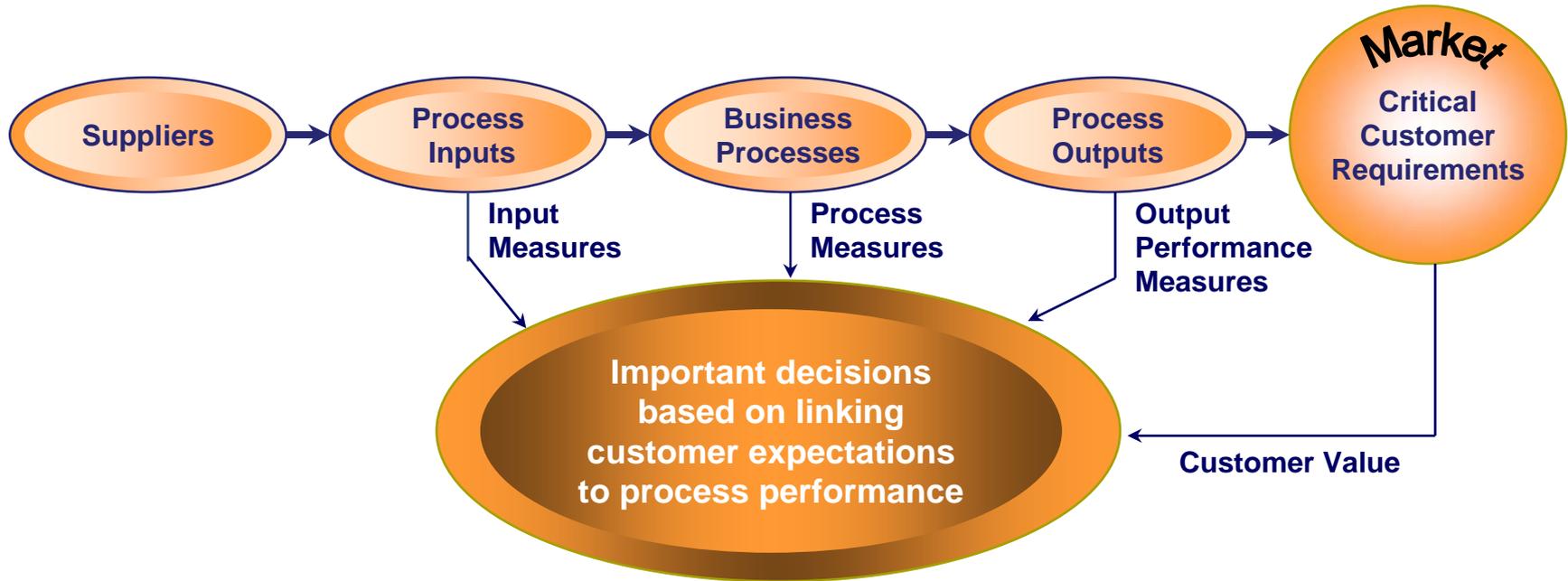
- Now we have identified what requirements we have to meet from our customers perspective. Now think about additional requirements the business itself could impose
- Most Six Sigma deployments initially focus on cost reduction. All efficiency measures typically need to satisfy managerial hunger. These needs also have to be met
- For translating VOB into “CBRs” a similar approach is followed

VOC - Voice of the Customer  
CCR - Critical Customer Requirements

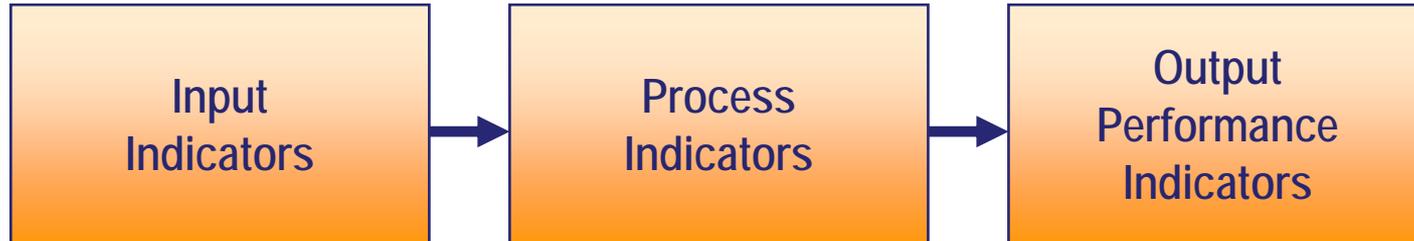


VOB - Voice of the Business  
CBR - Critical Business Requirements

## Step 4: Develop performance measures and indicators



**Good process decisions require comprehensive process data.**

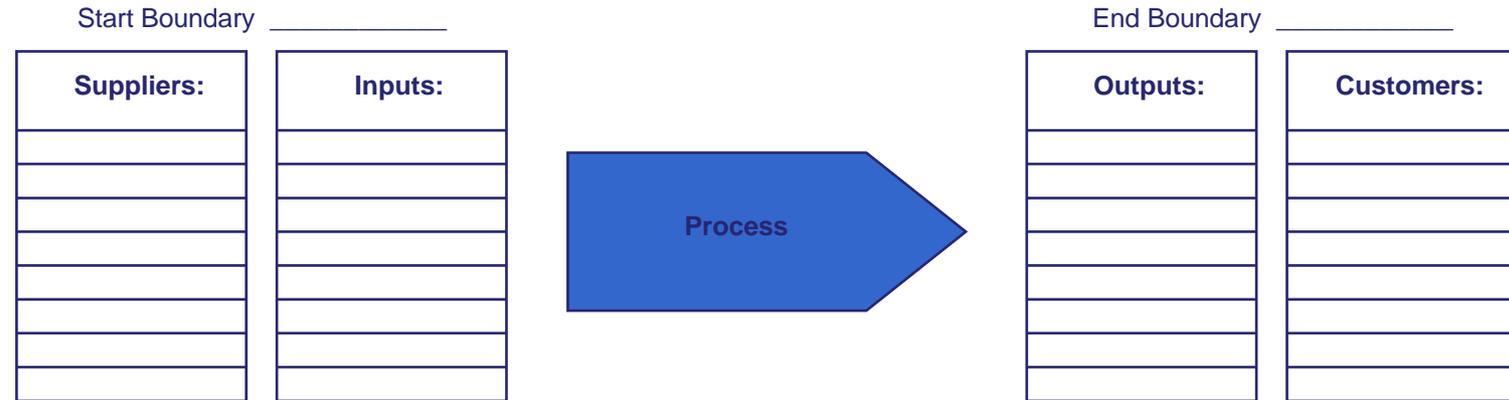


## Efficiency Measures

- Cost per transaction
- Time per activity
- Amount of rework
- Turnaround time
- Variability of an activity

## Effectiveness Measures

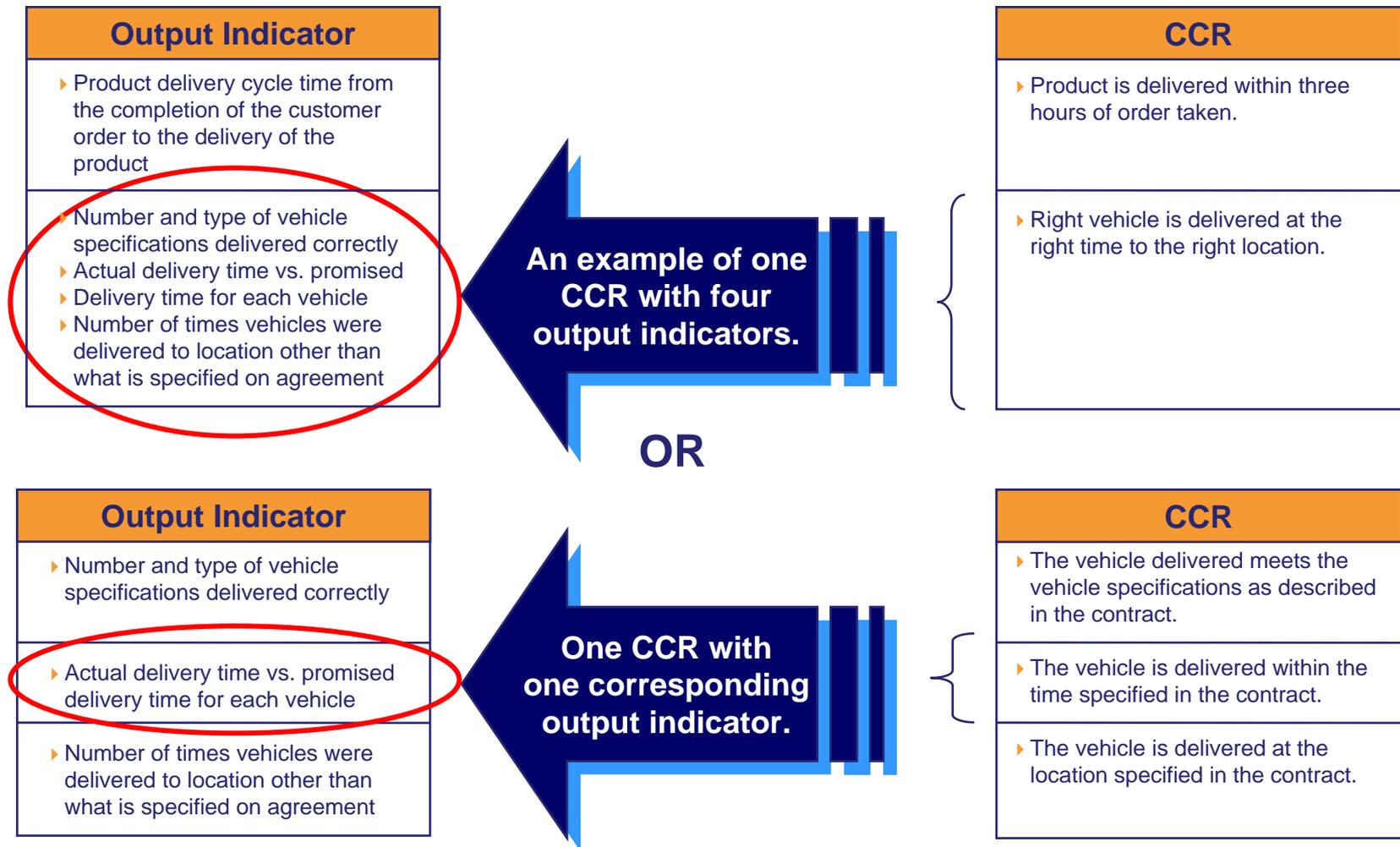
- Percent defective
- Number of errors
- Total response time
- Invoice/billing accuracy
- Revenue



Input Indicators	Process Indicators	Output Indicators
<p>Measures that evaluate the degree to which the inputs to a process, provided by suppliers, are consistent with what the process needs to efficiently and effectively convert into customer-satisfying outputs.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>▪ # of customer inquiries</li> <li>▪ Type of customer inquiries</li> <li>▪ # of orders</li> <li>▪ # of positions open</li> <li>▪ Type of position open</li> <li>▪ Accuracy of the credit analysis</li> <li>▪ Timeliness of the contract submitted for review</li> </ul>	<p>Measures that evaluate the effectiveness, efficiency and quality of the transformation processes – the steps and activities used to convert inputs into customer-satisfying outputs.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>▪ Availability of service personnel</li> <li>▪ Time required to perform credit review</li> <li>▪ % of non-standard approvals required</li> <li>▪ # of qualified applicants</li> <li>▪ Total cost of service delivery</li> <li>▪ Total overtime hours</li> </ul>	<p>Measures that evaluate dimensions of the output – may focus on the performance of the business as well as that associated with the delivery of services and products to customers.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>▪ # of calls/hour taken by each service rep</li> <li>▪ 2<sup>nd</sup> year customer retention figures</li> <li>▪ Total # of meals delivered</li> <li>▪ % customer complaints</li> </ul>

- Good output indicators relate directly to critical customer requirements (CCR).
- The correlation of the output indicator to the CCR is the most important consideration... otherwise the indicator is meaningless.
- A balance must be established between the following:
  - **Ease** of obtaining data
  - **Time** available to the project team
  - **Cost** associated with obtaining the data for each indicator

# CCR's can have one or more associated output indicators.



## Guidelines

- Designate output indicators for each CCR.
- Decide on an appropriate measurement frequency.
- Ensure measurement instructions are clear and understandable.
- Measure defects of the process.
- Use actual results for analysis.
- Think ahead and anticipate measures that will enhance the defect analysis.
- Limit the number of indicators per CCR.

Organizations must have information about process performance before products or services are delivered.

- It allows a business to identify abnormal variation or special cause before a defect occurs.
- Early defect detection prevents dissatisfied customers and retains customers.
- As CCRs change and opportunities for improvement are identified, the business will know where in the process improvement resources need to be assigned.
- If the output is defective (e.g., not meeting CCRs) we will have data to begin looking for undesired variation and identify root cause.

**Process indicators enable us to have an understanding of what is going on prior to the final delivery of the product or service.**

Effective process indicators must:

- Be based on facts and data
- Predict, or lead, at least one output indicator
- Provide valid and quantifiable data
- Enable the evaluation of cause-and-effect relationships occurring inside the process
- Lead the team to root cause analysis if CCRs are not being met

**This step allows the team to begin capturing data about the process that will ultimately have an impact on the customer.**

- While reviewing the process map, choose logical “control points” to take measurements:
  - Activities or decisions that if performed incorrectly or inadequately will result in high probability of a poor output indicator result
  - Decision blocks (how many rejects or special cases are there which are non-value-adding)
  - Activities with a high volume of work built up
  - Handoffs to the next functional area
  - Time-consuming activities
- When the control point is identified, determine the best measure for that process indicator.

Input indicators allow measurement of the consistency of the inputs to the process.

- Do the input indicators measure the critical requirements we have of our suppliers' products or services?
- Do the indicators measure elements of the input that are known to affect the ability of our process to meet critical customer requirements?
- Are the input indicators true “predictors,” or leading indicators, of at least one process indicator?
- Do the indicators measure aspects of the input that would, within a specified tolerance, eliminate significant inspection, scrap, rework or excessive cycle time?

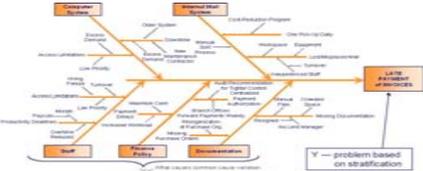


## Inputs to further analysis:

- VOC, CCR, And Performance indicators can be used in QFD analysis



- CCR's can be used in Cause & Effect analysis to establish links to the Big Y



- Performance indicators will form part of your measurement control plans

- Performance indicators will provide data input to value stream mapping

- You can use a relationship matrix to help show the relationship between the output performance measures and key input and process measures.

**Listen to the Voice  
of the Customer!  
Turn it up!**



# Define Customer and Business Requirements