

Small Business Management ^{19e}

LAUNCHING AND GROWING ENTREPRENEURIAL VENTURES

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CHAPTER 21

Managing Small
Business Operations

Inventory Management and Operations

- Objectives of Inventory Management

**Ensuring
Continuous
Operations**



**Maximizing
Sales**



**Protecting
Assets**

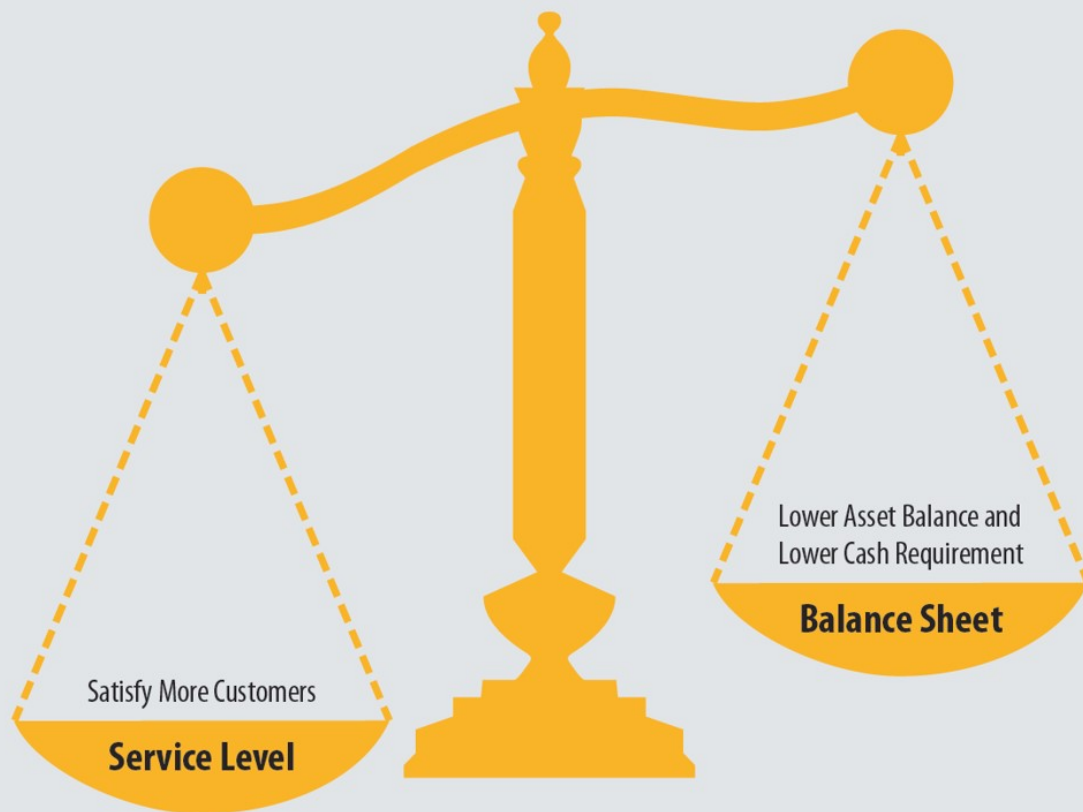


**Optimizing
Inventory
Investment**



21.2 Service Level and Balance Sheet Considerations

Balancing inventory to support customer demand and balance sheet concerns is critical for a healthy business.

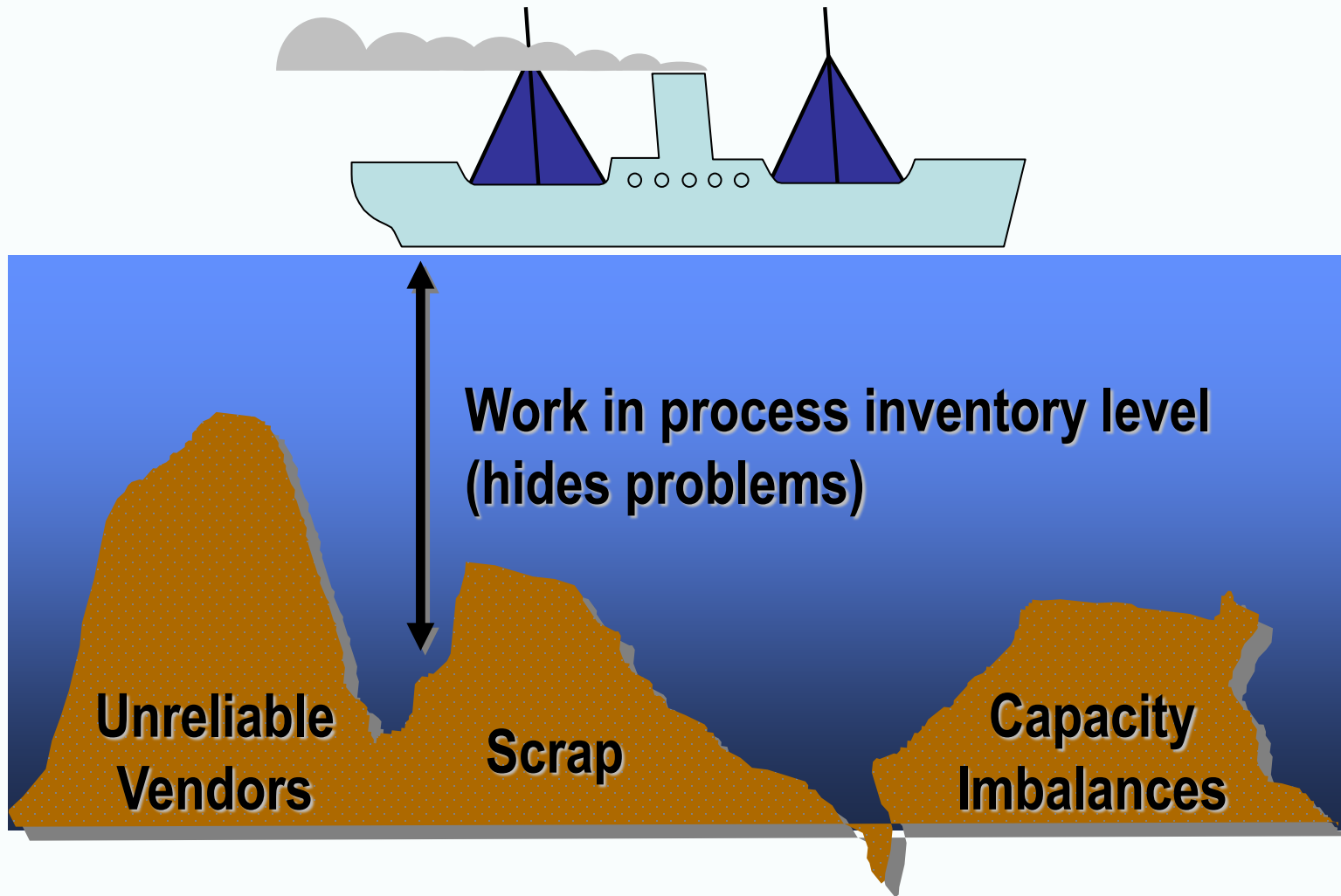


Inventory Management and Operations

Just-In-Time Inventory (JIT) System

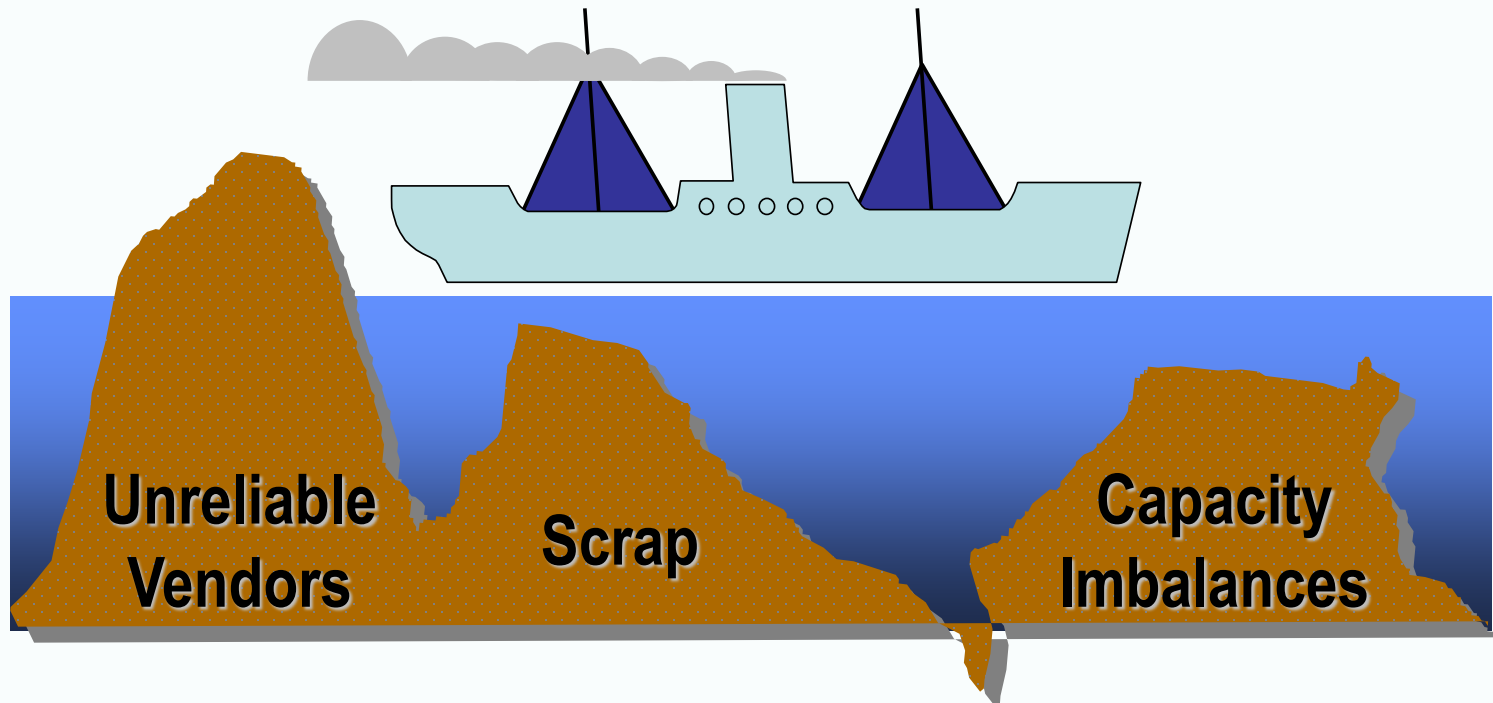
- A demand (pull) method of **reducing inventory level to an absolute minimum.**
 - New inventory items arrive at the same time that the last inventory item is placed in service.
- JIT promotes:
 - Closer coordination with suppliers
 - Consistent quality production
 - Lower safety stock levels

Just-In-Time (JIT) Example

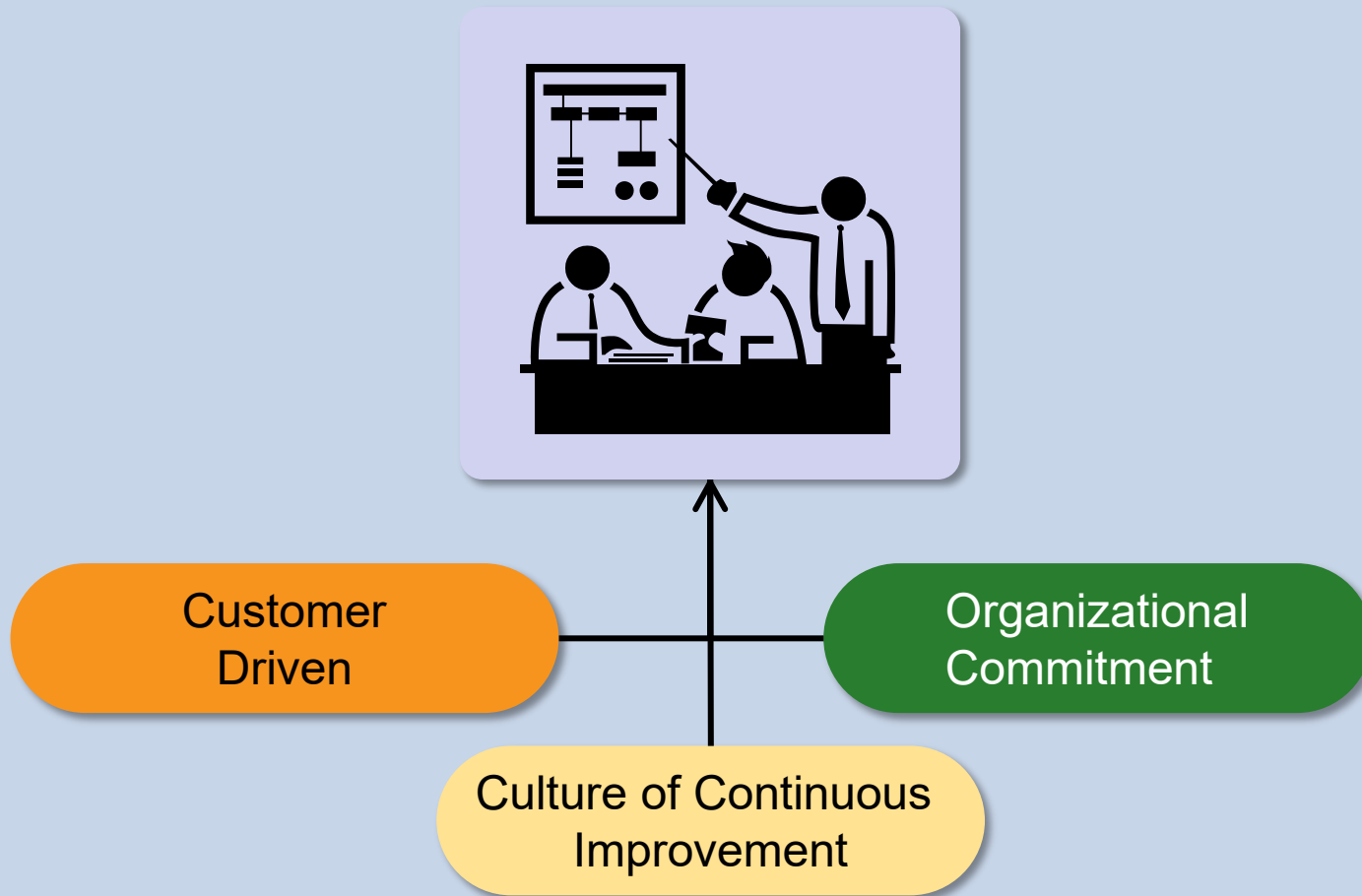


Just-In-Time (JIT) Example

Reducing inventory reveals problems so they can be solved.



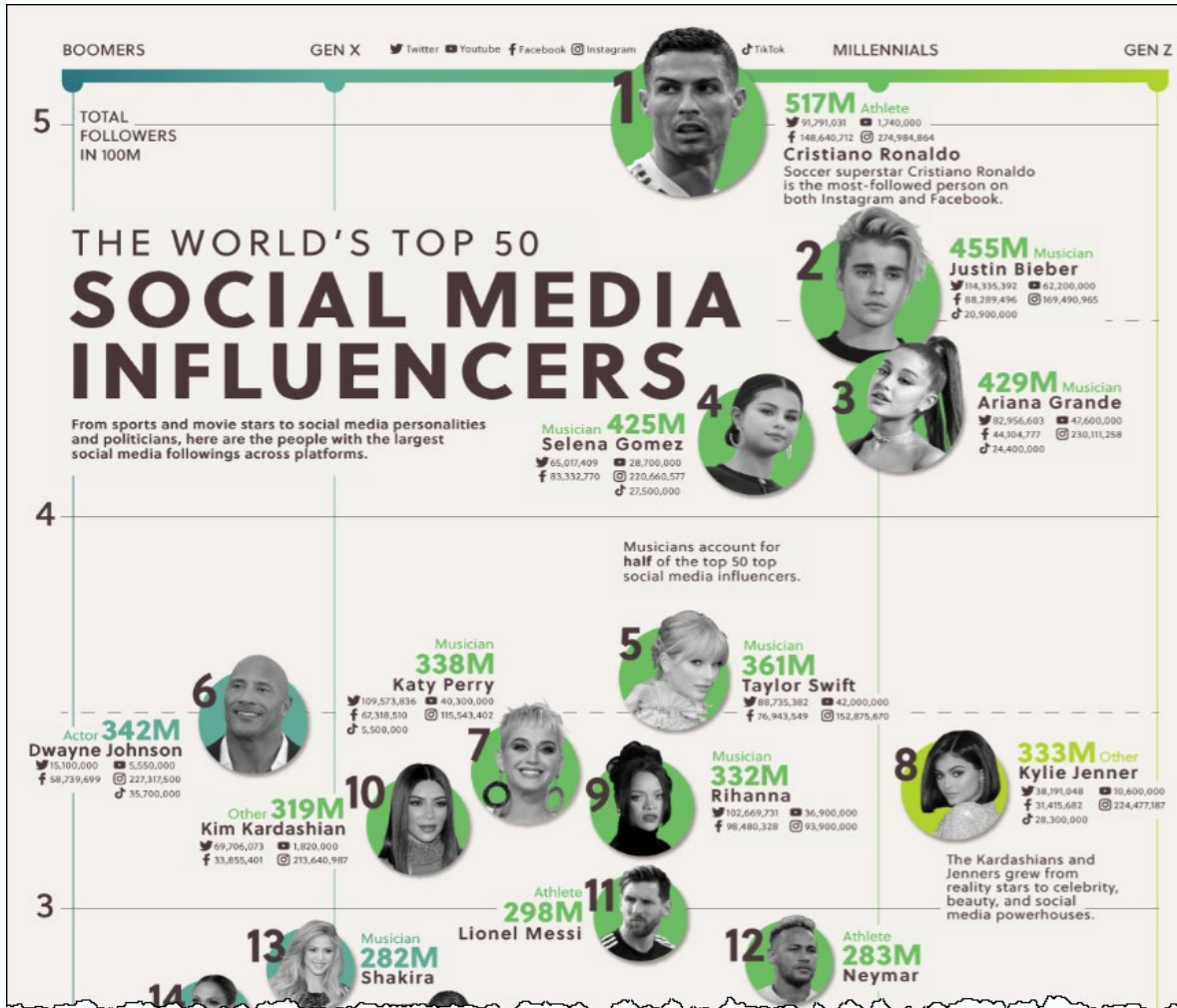
Essential Features of Successful Quality Management



The Customer Focus of Quality Management

- Customer Expectations
 - **Quality** is the extent to which a product or service **satisfies customer's needs and expectations.**
 - Product quality
 - Service quality
 - Product and service quality combinations
 - “The customer is the focal point of quality efforts.”
- Customer Feedback
 - Customers are the eyes and ears of the business for quality matters.

Satisfy Customer's Expectations



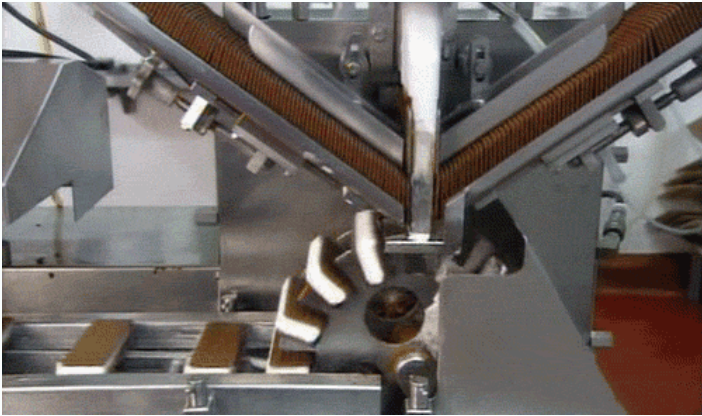
Social Influencers often set expectations (March 2021)

Do you follow anyone on ?

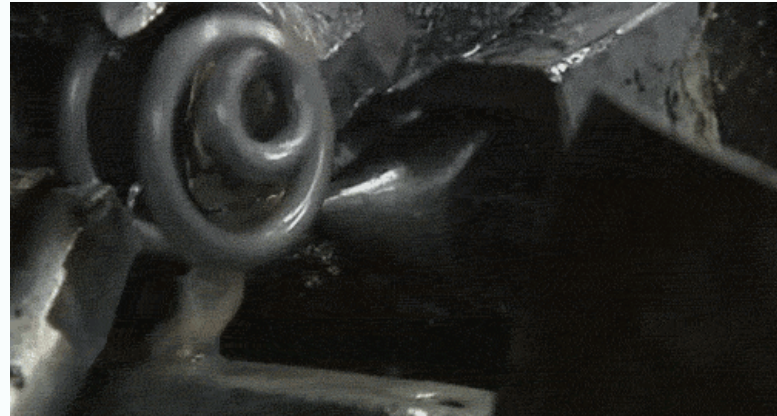
Have you ever bought anything based on their input?

Automation can help quality

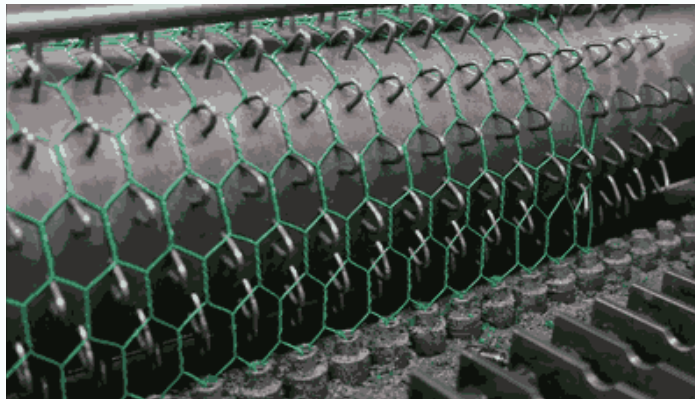
Ice cream sandwiches being made:



Springs being made:



How fences are made:



Quality Tools

FILM (5 min)

Paper:

List and describe the 8 Steps to the Practical Problem-Solving Process of Toyota

- 1. Clarify the Problem*
- 2. Break Down the Problem*
- 3. Set a Target We WILL Achieve*
- 4. Analyze the Root Cause*
- 5. Develop Countermeasures*
- 6. See Countermeasures Through*
- 7. Evaluate Both Results and Process*
- 8. Standardize Success, Learn from Failures*

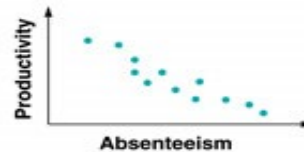
Quality Tools

Tools for Generating Ideas

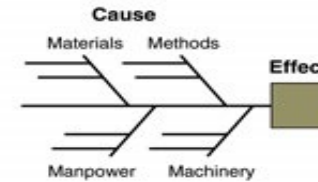
(a) *Check Sheet*: An organized method of recording data.

Defect	Hour							
	1	2	3	4	5	6	7	8
A	///	/		/	/	/	///	/
B	//	/	/	/			//	///
C	/	//					//	////

(b) *Scatter Diagram*: A graph of the value of one variable vs. another variable.

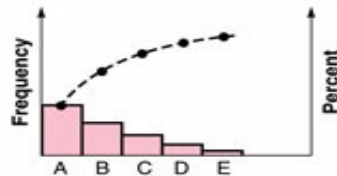


(c) *Cause and Effect Diagram*: A tool that identifies process elements (causes) that might effect an outcome.

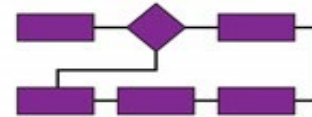


Tools to Organize the Data

(d) *Pareto Charts*: A graph to identify and plot problems or defects in descending order of frequency.

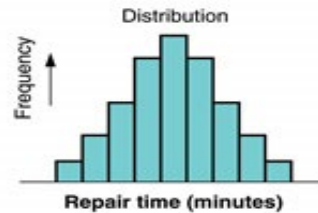


(e) *Flow Charts (Process Diagrams)*: A chart that describes the steps in a process.

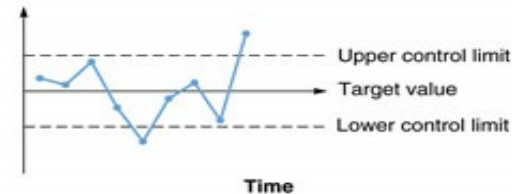


Tools for Identifying Problems

(f) *Histogram*: A distribution showing the frequency of occurrences of a variable.



(g) *Statistical Process Control Chart*: A chart with time on the horizontal axis to plot values of a statistic.



Lets explore some of the tools to use ...

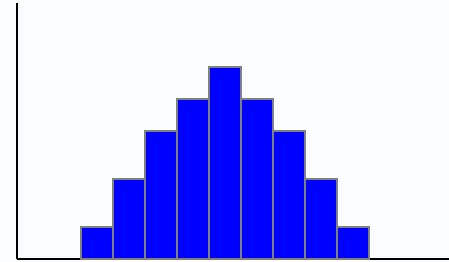
Histograms

What is it?

- A Histogram is a **bar graph**
- Used to present frequency data

How does it Work?

- Define **Categories** for Data
- Collect Data, sort them into the categories
- **Count** the Data for each category
- Draw the Diagram. each category finds its place on the x-Axis.
- The bars will be as high as the value for the category



What is its use?

- Evaluate Data **distribution across different categories**

Pareto Charts

What is it?

- A Pareto Chart is a **Histogram**
- **Plus - a cumulative line (seek 70-80%)**

How does it Work?

- Similar to a Histogram
- First define categories, collect Data and sort them into the Categories. Count the occurrences for each category.
- Now rank the categories starting with highest (frequency) value.
- Draw cumulative points above all the bars and connect them into a line.



What is its use?

- Pareto Charts are used to apply the 80/20 rule of Joseph Juran which states that 80% of the problems are the result of 20% of the causes.
- Used to **identify that 20% root causes of problem**

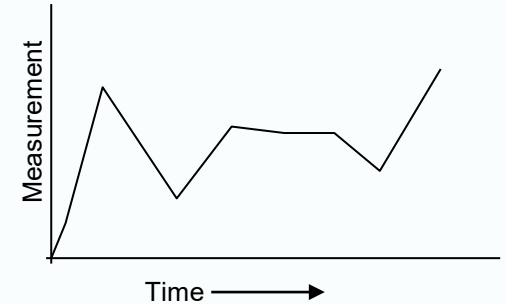
Run Charts

What is it?

- Run Charts **represent change**
- Measurement **over a sequence or time**

How does it Work?

- Gather Data
- Organize Data
 - » Measurements (y) must be confronted with time or sequence of the events.
- Chart Data
- Interpreting Data



What is its use?

- Determining **Cyclic Events** and their average character
- **Look for patterns**

Control Charts

What is it?

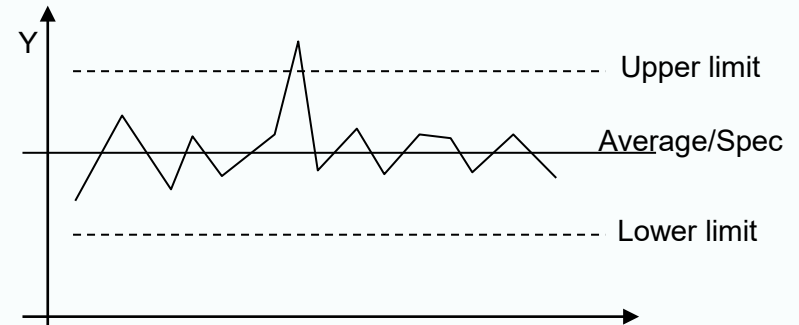
- Is a **process in control** or not

How does it Work?

- Define **Upper limit, lower limit, and medium value**
- Draw Chart.
- Gather values and draw them into chart

What is its use?

- **Taking samples of a process**
- **Detect possibility of process being out of control**



Scatter Diagrams

What is it?

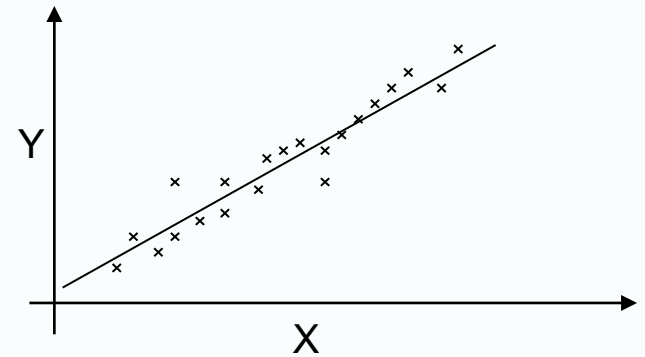
- Shows trend in a series of values.

How does it Work?

- Gain values series
- Draw graph with value points
- Draw trend line

What is its use?

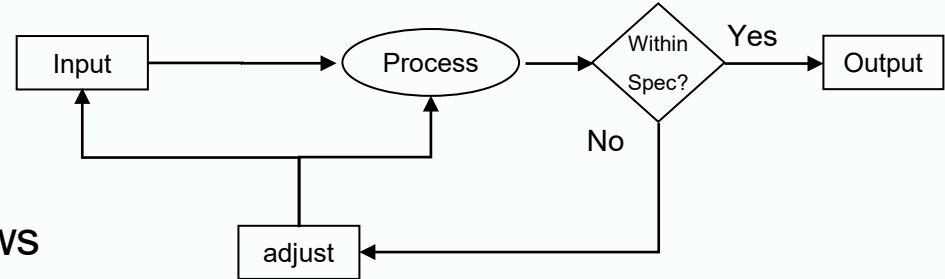
- Demonstrating **correlations between values**
- **Showing trends** for value changes.



Flow Charts

What is it?

- Represents a Procedure
- Uses simple symbols and arrows
- Shows activities in a process and their relationships
- Operations and Decisions can be represented



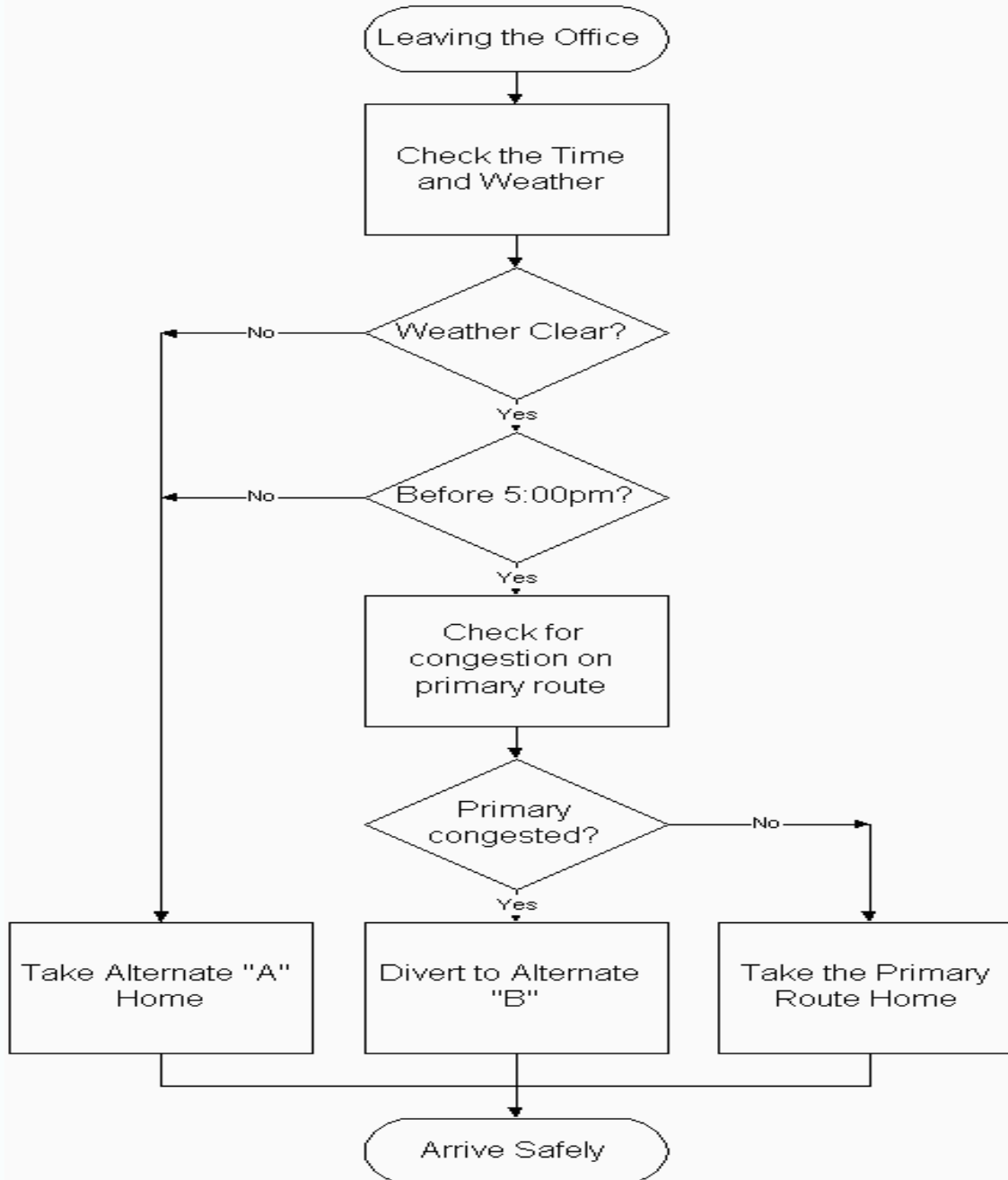
How does it Work?

- Determine what Process or Procedure you want to represent.
- Start at a certain point and go then step by step using circles or rectangles for operations or other elements, diamonds for decisions, arrows show the flow and the direction.
- Document the elements with titles. Let it close with an ending point.

What is its use?

- **Easily understand a process or procedure**
- demonstrate the **relationships among elements**

The Best Way Home



Great tool to develop a consistent way to do things ...

Get everyone on the same page ...

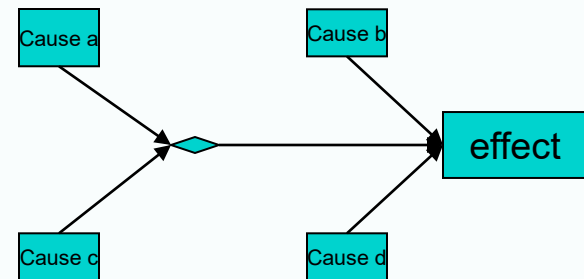
Cause and Effect Diagrams

What is it?

- **Relationship between Effects and Categories of their causes**
- The Arrangement of the Diagram lets it **look like a fishbone** it is therefore also called fish-bone diagram

How does it Work?

- Determine the Effect or Problem you would like to examine
- Categorize the possible causes
- find subcategories
- Describe the possible causes

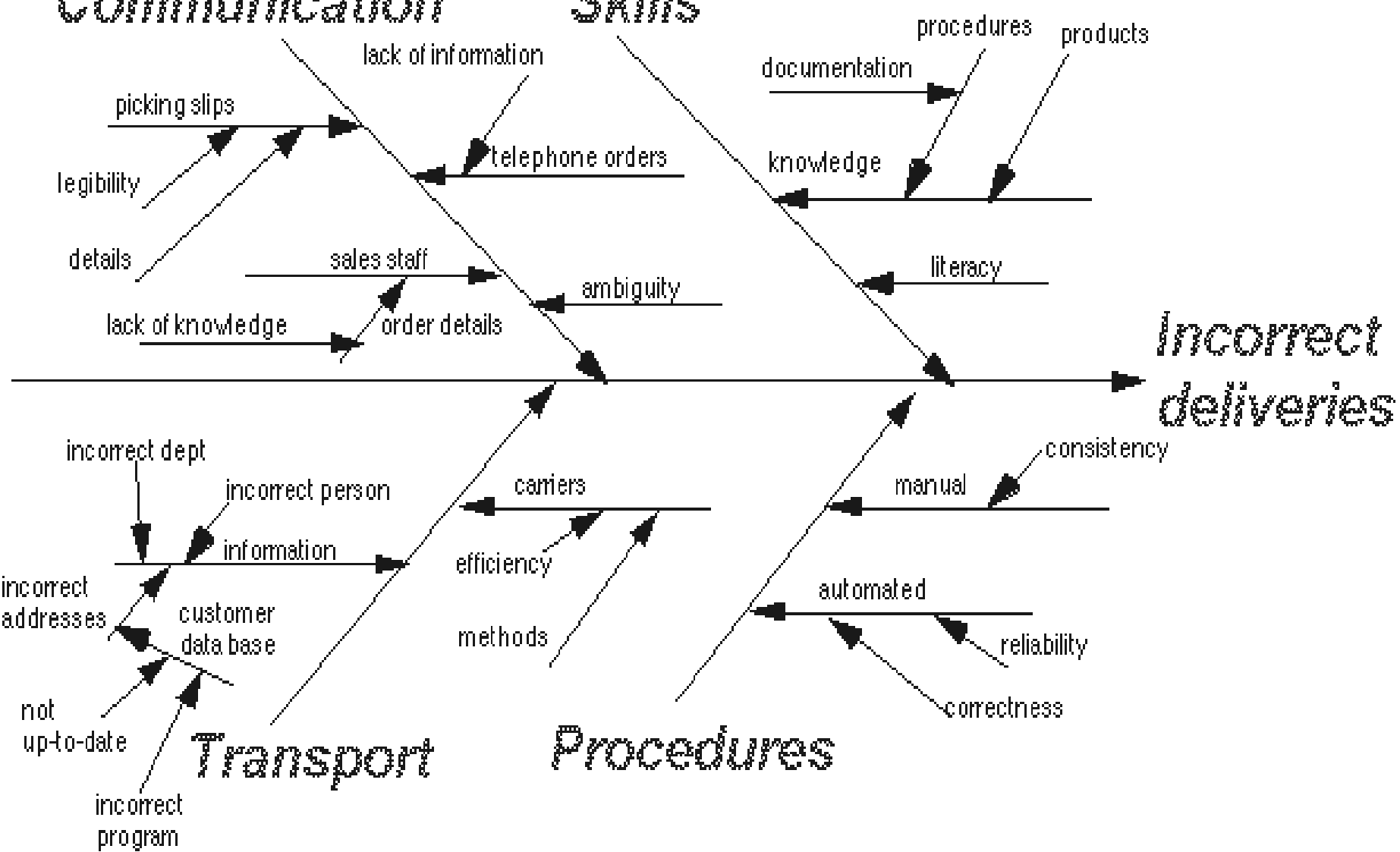


What is its use?

- Launching a new product, **recognizes factors that affect final product**
- **Depict problems before they begin**

Communication

Skills



Incorrect deliveries

The 80/20 Rule in action

FILM

How can you discover what the 20% (really productive) people do to be efficient?

Pay attention to Best Practices

Talk with a neighbor -

Discuss these questions:

- 1. How did he apply the 80/20 principle at Panera?**
- 2. How can you find out about “best practices” at work?**

International Certification for Quality Management

ISO 9000

- The standards governing international certification of a firm's quality management procedures.
 - Documents compliance of the firm's operations with its quality management procedures.
 - Serves as an indicator of supplier reliability to its customers.
 - Is a requirement before becoming a supplier to larger U.S. and overseas firms.



Purchasing Policies and Practices (cont'd)

Diversifying sources of supply

- Reasons for having a **sole supplier (1)**:
 - Outstanding supplier quality
 - Quantity discounts for volume purchases
 - Single orders too small to divide among suppliers
 - Quality of supplier-customer relationship
- Reasons for having **multiple suppliers (>1)**:
 - Choice of best quality, price, and service
 - Supplier competes for business
 - Insurance against input interruptions

Vendor/Supplier Information

Company Name:				Type Of Business:	
Company Address:				Legal Form Under Which Business Operates:	
City:	State:	ZIP:	Phone:	Fax:	
Number Of Employees:			Number Of Employees At Headquarters:		
Size Of Headquarters:			Number Of Locations:		
Names Of Salespeople:			Names Of Key Officers:		

Vendor Evaluation

	1	2	3	4	5
1. Timeliness Of Deliveries					
2. Quality Of Parts/Products/Material Upon Delivery					
3. Overall Quality Of Parts/Products/Material					
4. Competitiveness Of Price					
5. Quality Of Service Provided					
6. Competitiveness Of Terms And Conditions					
7. Credit Rating					
8. Overall Financial Condition					
9. Reputation Of Company					
10. Quality Of Design Compared To Specifications					
11. Level Of Assistance In Research And Development					
12. Expertise Of Sales Staff					
13. Technical Support Staff's Level Of Expertise					
Column Totals					
				Total	

Vendor Evaluation
(Rank them based on criteria)