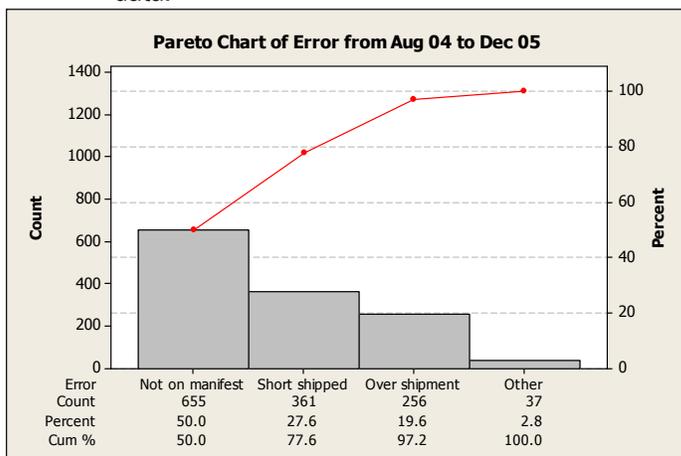## 1. What is a Pareto Chart?

- A Pareto Chart is a bar graph used to graphically display the relative importance of each category in a group of data based on the frequency, importance, or cost.
- Pareto analysis is based on the Pareto Principle, or 80/20 rule, which is the idea that 20% of the causes generate 80% of the results.
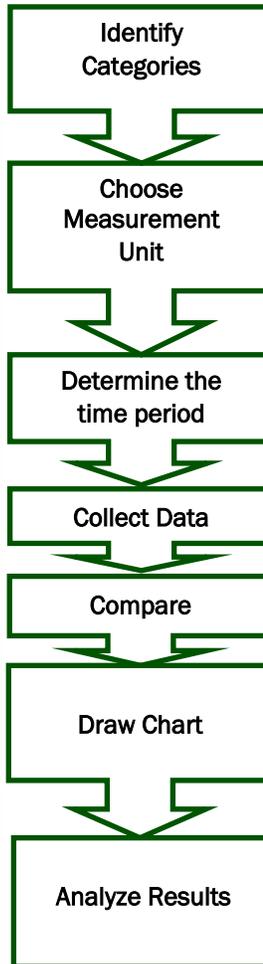
2. Why use a Pareto Chart?

- To analyze data about the frequency of issues in a process.
- Displays the relative importance in a simple visual format.
- Allows the focus of continuous improvement efforts on the issues that are the most significant.
- Easily communicate issues and causes to others.
- Helps the team focus on the issues that will have the greatest impact if solved.

3. What factors are critical to Pareto Charts?

- Use real data.
- The categories represented on the chart are related and grouped appropriately
- Each category is measured in the same units; frequency, quantity, cost, or time.
- Categories are arranged based on total, with the highest on the left.
- The most important unit of measurement is used to measure and display the data.
- Other detail can be added to the chart, such as, percent of total or before and after data.
- Include the source of the data on the chart. Indicate time period, location, and source of the data.

4. How are Pareto Charts used?

Identify Categories
- Identify the categories the data will be grouped into.
- Determining the goal of the Pareto Chart will help determine categories.

Choose Measurement Unit
- What unit of measurement is most appropriate for the categories you are analyzing?
- If you have trouble determining the best unit, consider measuring multiple ways using frequency, quantity, cost, or time.

Determine the time period
- What time period will the chart represent; day, week, month, year?
- The time period should be appropriate, longer doesn't always mean better data.

Collect Data
- Collect data by category,
- Use existing data, if available.

Compare
- Sort the categories in order based on the total of the appropriate measurement unit.

Draw Chart
- List the categories in descending order, starting at the left, along the X-axis
- The Y-axis of the chart is the measurement unit.
- Draw the bars to represent each category.

Analyze Results
- Generally the tallest bars represent the most frequent or costly issue.
- The most frequent or expensive issue is not always the most important

Pareto Chart of Error from Aug 04 to Dec 05

Error	Not on manifest	Short shipped	Over shipment	Other
Count	655	361	256	37
Percent	50.0	27.6	19.6	2.8
Cum %	50.0	77.6	97.2	100.0

Customer Complaints, week 7

Billing	Packaging	Shipping	Other	Quality
46	27	18	13	8

Oshkosh Corporation

Process Tools