

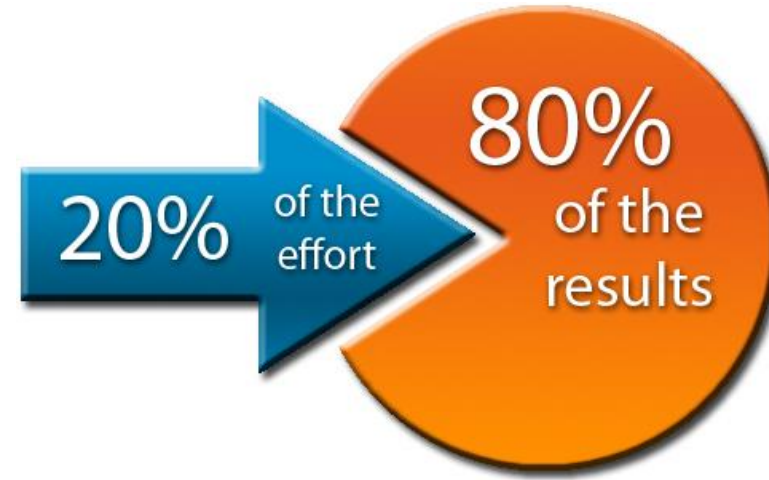


PARETO

Analysis

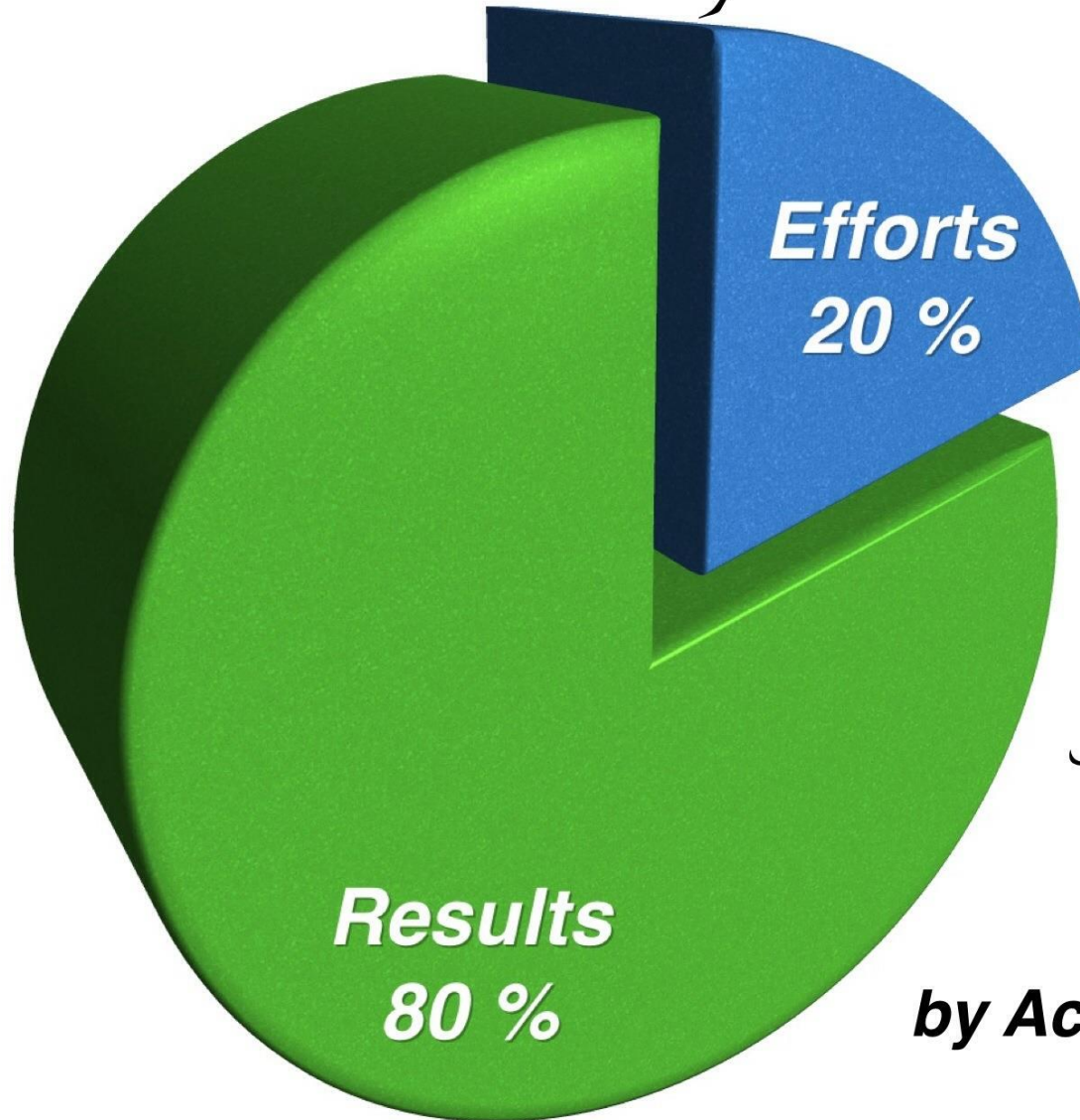
THE 80 20 RULE

The Principle
of Imbalance



 PARETO

The Pareto Principle



by Vilfredo Pareto
1848-1923

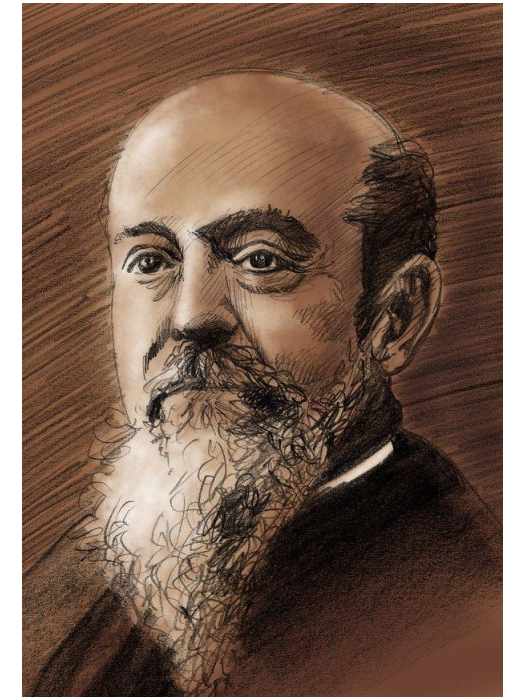
***The Secret to Success
by Achieving More with Less***



1879, Italian Economist
Vilfredo Pareto noted the
80/20 rule

Subsequently, experts in lots
of other professions noted
the phenomena.

Dr Joseph Duran recognised
this concept in manufacturing
and coined the term...
Vital few and useful many

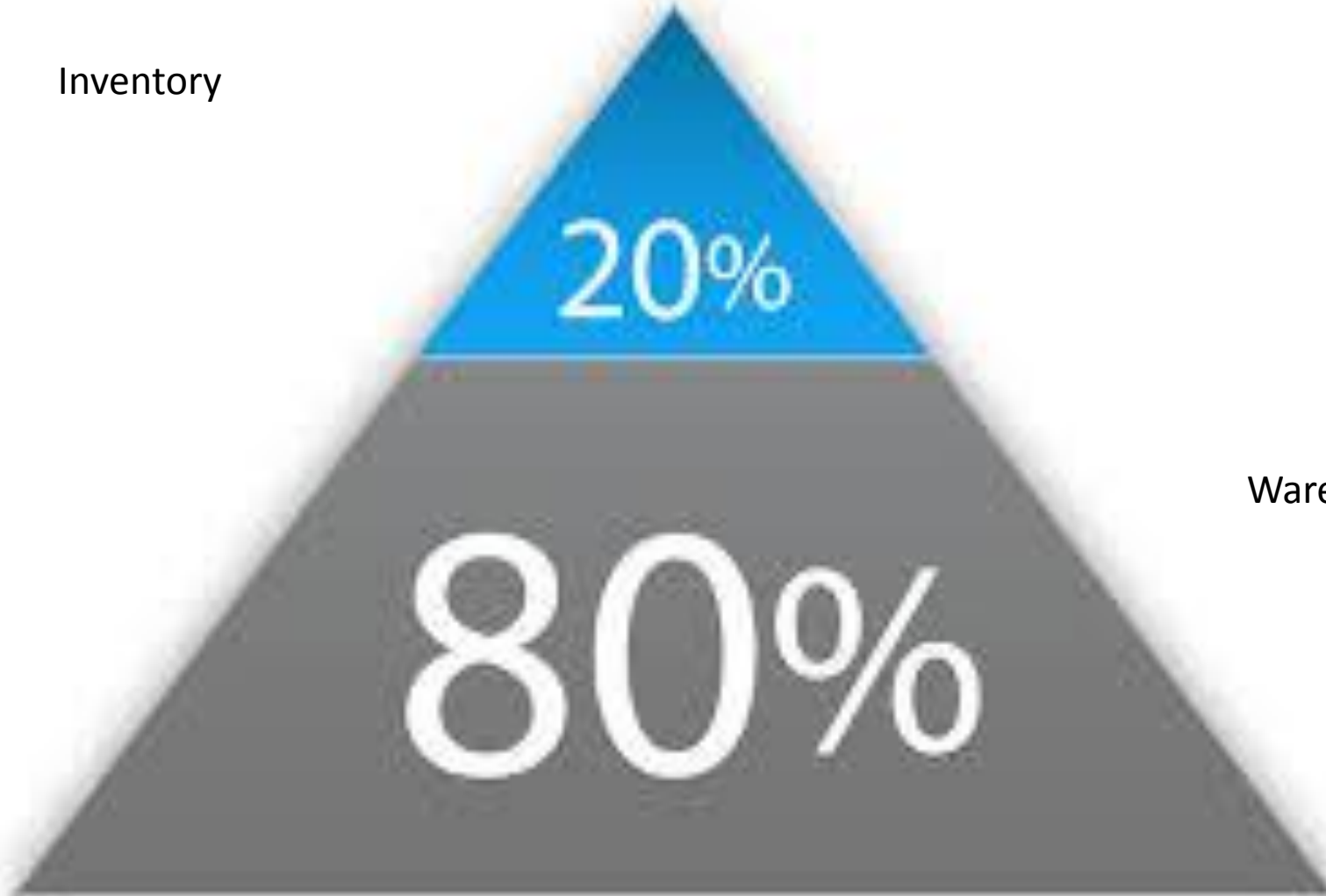


Inventory

20%

Warehouse Space

80%



Supplied by

Inventory 80%

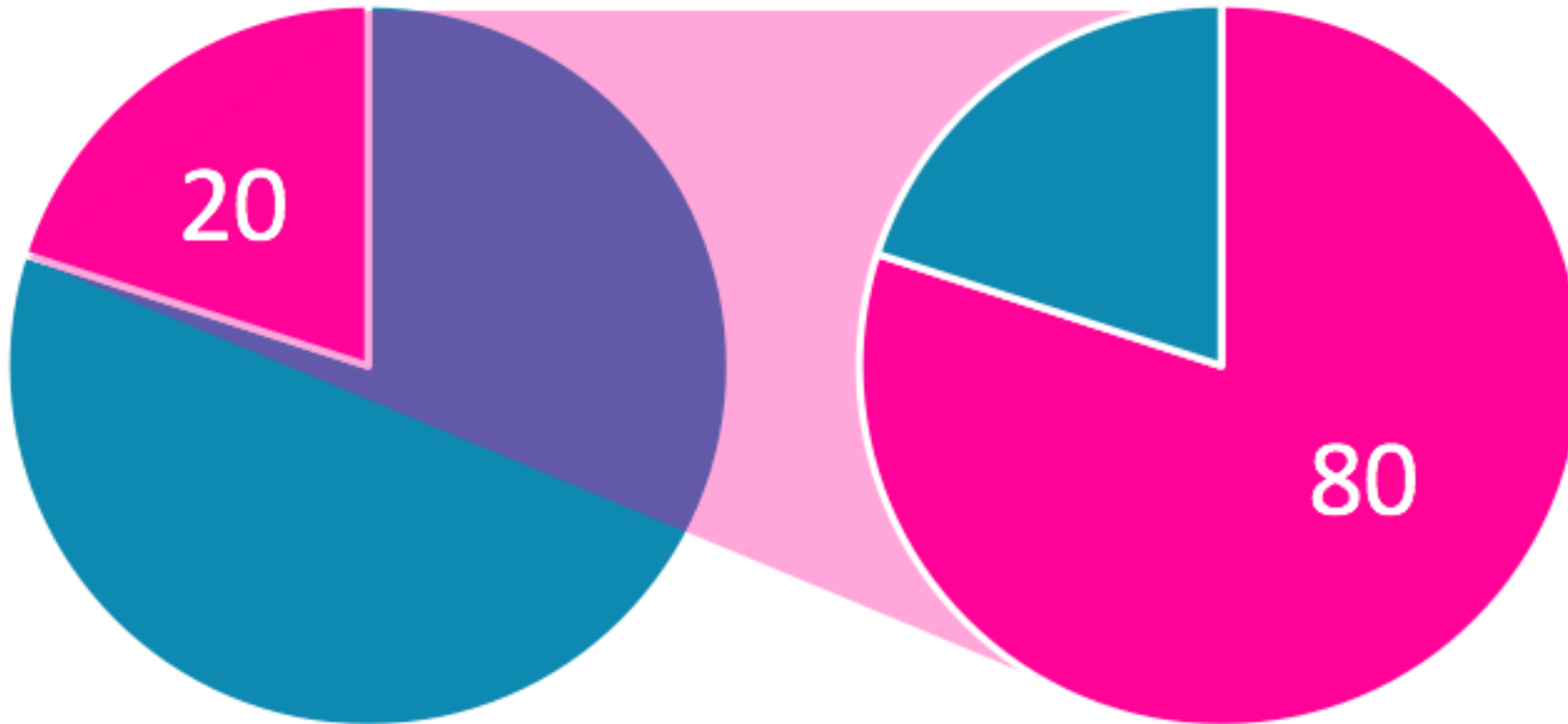
Suppliers 20%



Received from

Company Income 80%

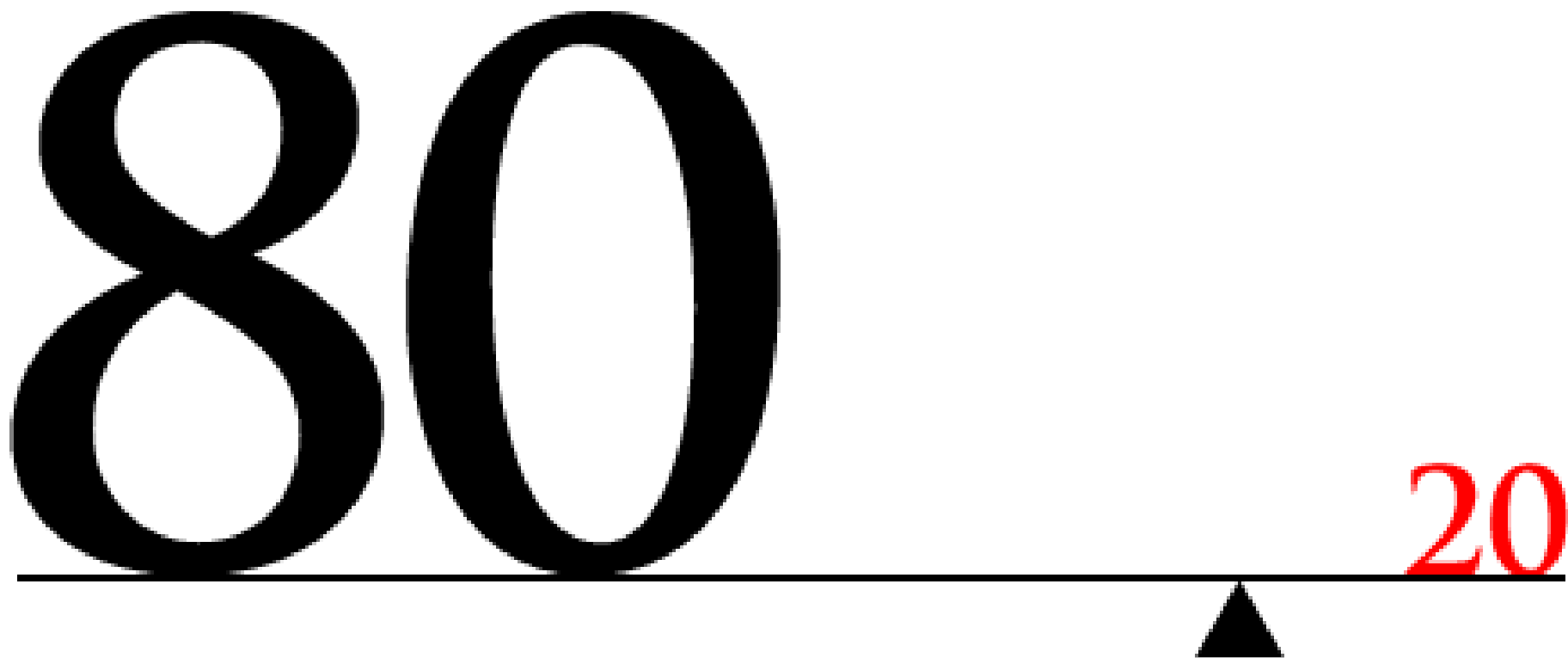
Customers 20%



Generated by

Company Business 80%

Sales Team 20%



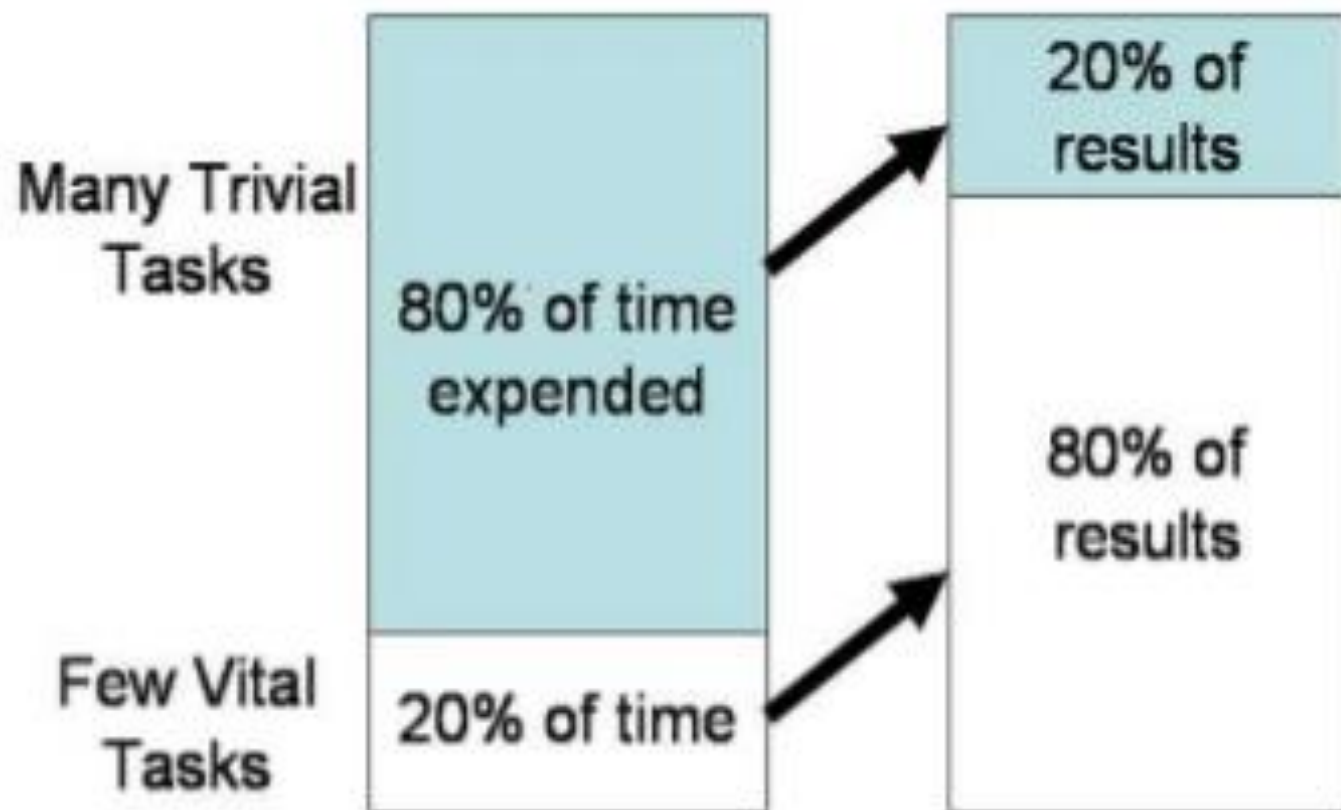


- Problem Solving
- Quality Improvement
- Trouble Shooting
- Performance Improvement
- Cost Reduction
- Efficiency Improvement

***The vital few and
the trivial many***



vital few and trivial many





PARETO Analysis

When is it used?

When we need to focus on the 20% that matters

What about the trivial many or other 80%?

When we want to understand the potential causes to a problem their relation to the effects.

Identify potential improvement opportunities

Helps groups or companies reach consensus on what should be addressed first

An effective tool for measuring the success of any corrective action

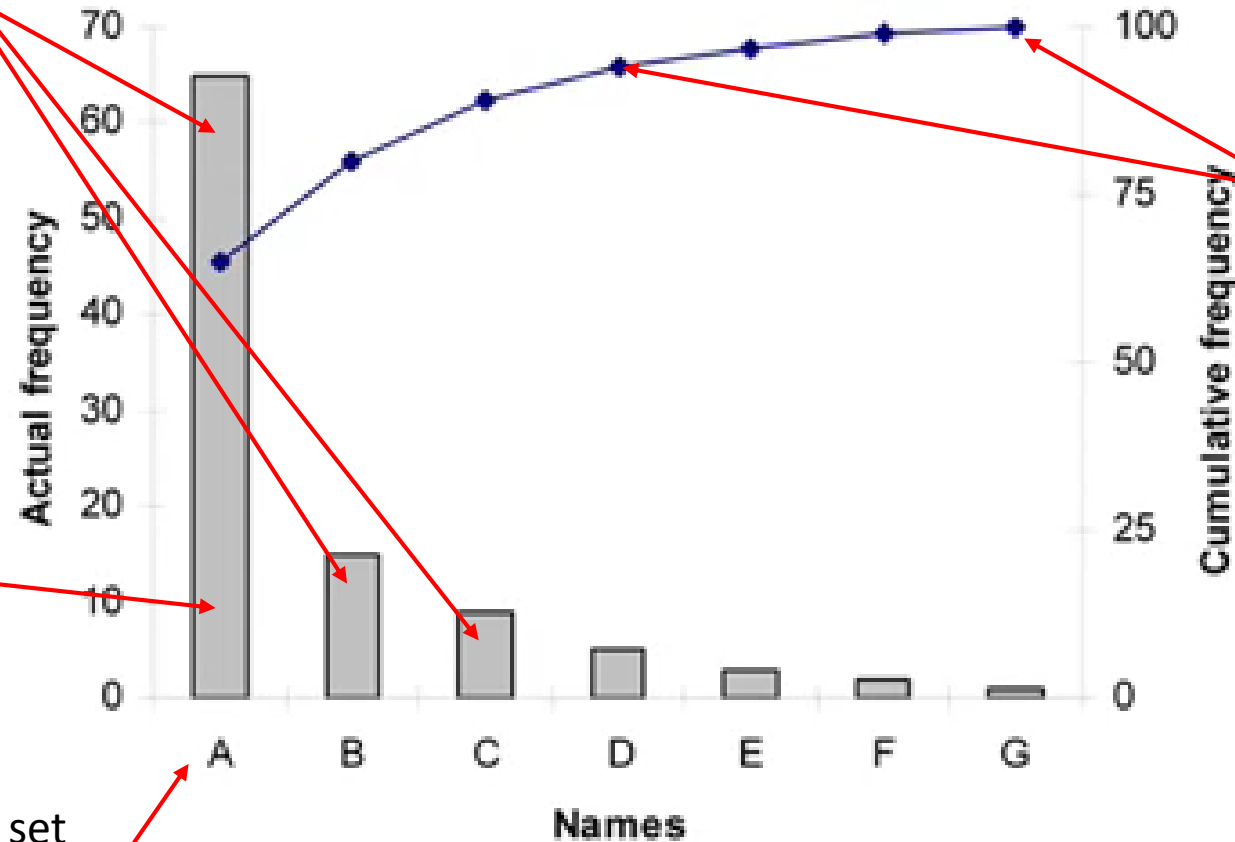
How do you carry out a Pareto Analysis?

3. Rank data set in numeric order (high to low)

6. Identify which faults are to the left of the 80% point

2. Bars to show the total number of defects

1. Identify the data set (errors / defects / complaints etc.)



4. Calculate the percentage of totals for each type of defect

5. Plot cumulative frequency for each defect type

Data collection....

How will you collect the data?

Incident reports

Interviews

Questionnaires

Complaint records

Observation – eye witness



Data preparation...

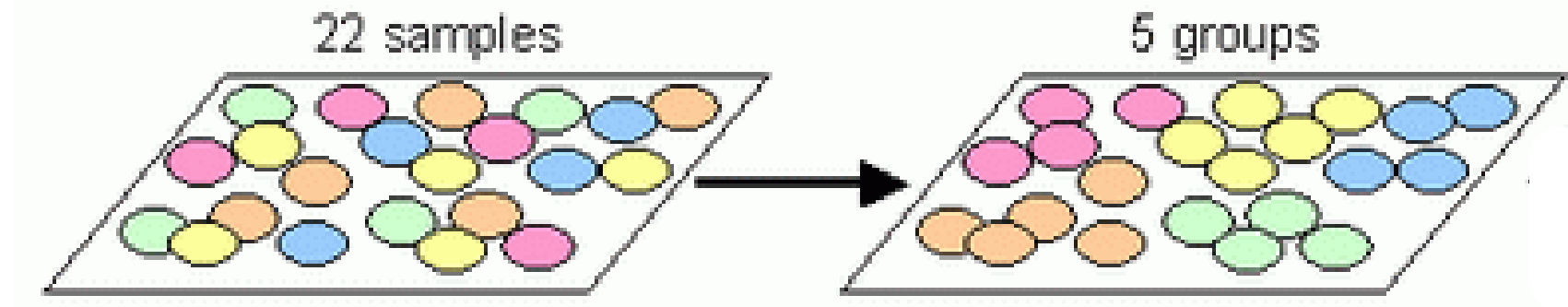
How will you group or classify and group the data?

Type

Size

Location

Cost



An example...



**KEEP
CALM
AND
Avoid
Medication Errors**

Grouping or Classifying the Errors



Medication not stored correctly

Omitted completely

Administered to the
wrong patient

Wrong dosage administered

Medication out of date

Repeated administration

Administered at the wrong time

Medication Errors	Frequency of Occurrence
Medication not stored correctly	1
Omitted completely	4
Administered to the wrong patient	8
Wrong dosage administered	90
Medication out of date	2
Repeated administration	20
Administered at the wrong time	70



Medication Errors	Frequency of Occurrence
Medication not stored correctly	1
Omitted completely	4
Administered to the wrong patient	8
Wrong dosage administered	90
Medication out of date	2
Repeated administration	20
Administered at the wrong time	70

Medication Errors	Frequency of Occurrence
Wrong dosage administered	90
Administered at the wrong time	70
Repeated administration	20
Administered to the wrong patient	8
Omitted completely	4
Medication out of date	2
Medication not stored correctly	1

Medication Errors	Frequency of Occurrence	Cumulative number	Cumulative percentage
Wrong dosage administered	90	90	$(90/195)*100 = 46.2\%$
Administered at the wrong time	70	160	$(160/195)*100 = 82.1\%$
Repeated administration	20	180	$(180/195)*100 = 92.3\%$
Administered to the wrong patient	8	188	$(188/195)*100 = 96.4\%$
Omitted completely	4	192	$(192/195)*100 = 98.5\%$
Medication out of date	2	194	$(194/195)*100 = 99.5\%$
Medication not stored correctly	1	195	100%
Total	195		

Chart Title

