

Characteristics of Good Metrics

(as opposed to 'Bad Metrics')

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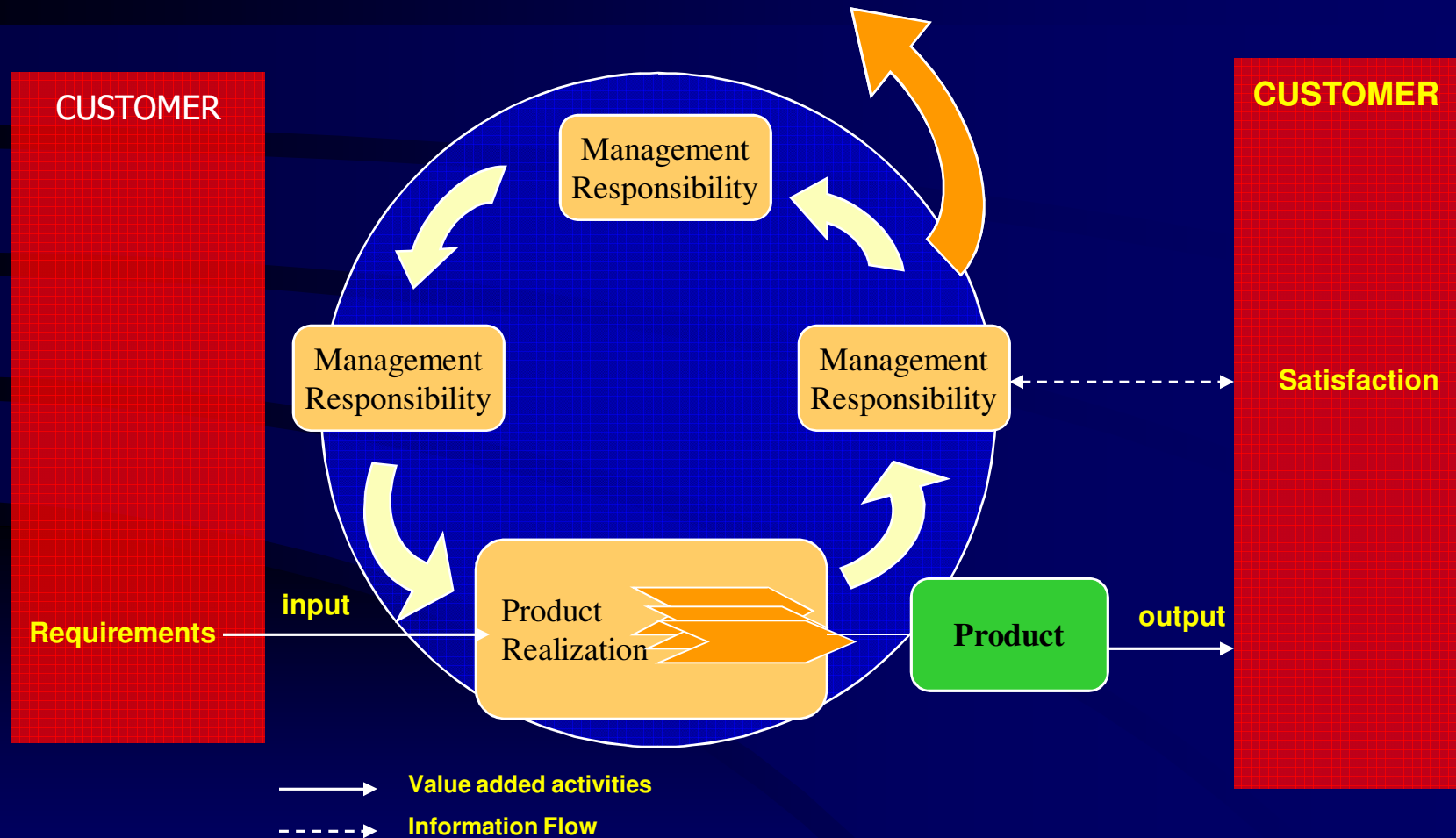
March 8th 2006

What Are Metrics?



Measurement of Processes

Continual Improvement of the Quality Management System



OUR CREDO

In GOD we Trust...

...all others bring DATA

Characteristics of Good Metrics



- SMART

- Simple – Easy to Understand
- Meaningful – Relevant to the Business or Process, Related to Objectives
- Actionable – Able to Influence or work
- Real – Low Noise in Data
- Timely – Real time collection – Relevant to Output

Customer Satisfaction Measure

Customer	Delivery	Quality	Perform	Value	Response	Total
Customer 1	8	6	5	8	7	6.8
Customer 2	9	9	8	7	8	8.2
Customer 3	7	8	9	8	8	8
Customer 4	8	8	6	7	6	7
Customer 5	10	9	8	8	9	8.8
Customer 6	1	5	5	8	6	5
Customer 7	2	5	5	8	5	5
Customer 8	7	8	7	8	7	7.4
Customer 9	6	9	7	7	6	7
Customer 10	9	8	9	8	9	8.6
Customer 11	9	10	8	7	8	8.4
Customer 12	8	7	8	6	9	7.6
Customer 13	10	9	9	8	9	9
Customer 14	4	8	4	7	4	5.4
Customer 15	9	9	8	8	9	8.6
					AVERAGE	7.39

Customer Satisfaction Measure

- External / Internal

- External Measuring

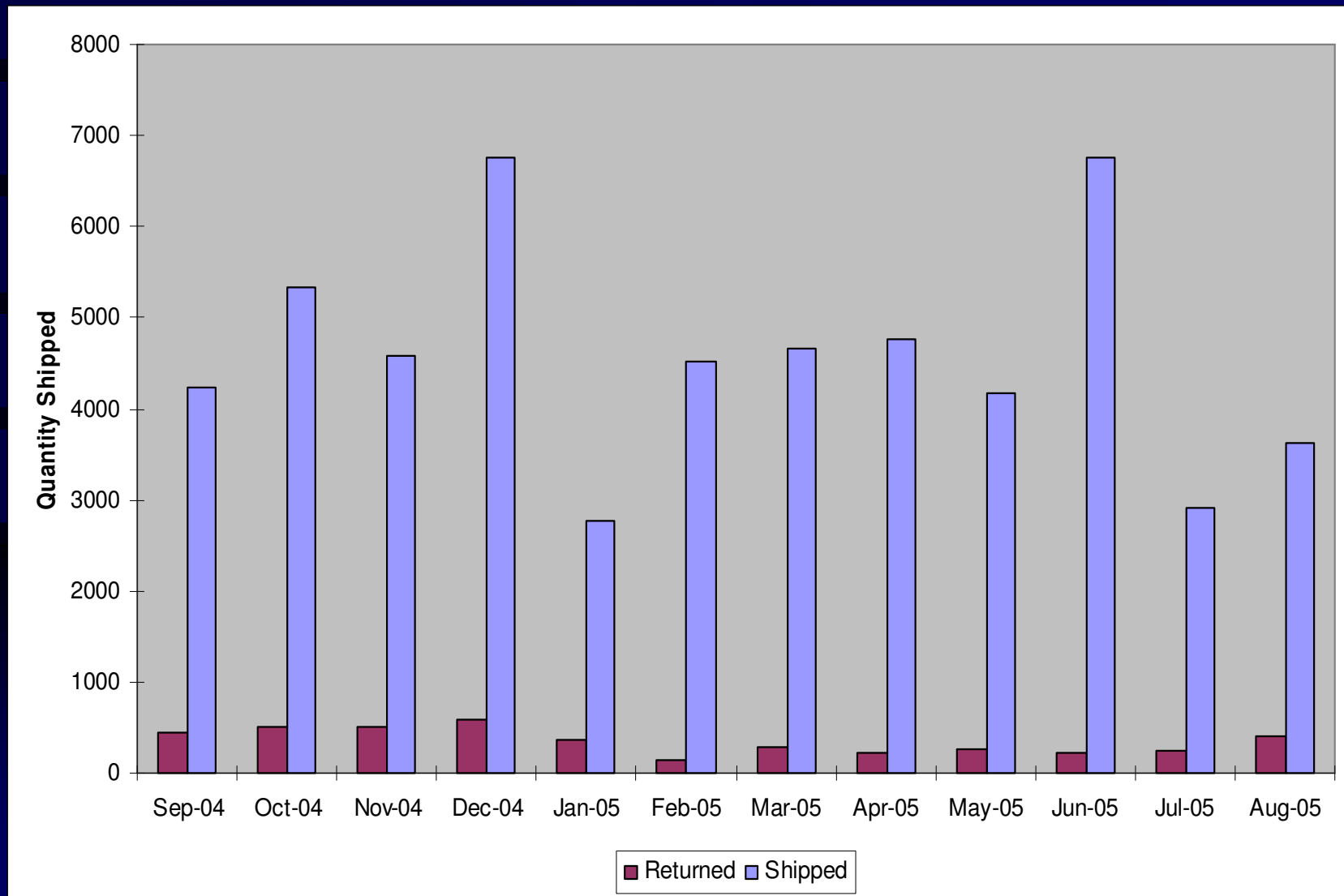
- Customers DO NOT like being constantly surveyed
 - Customer Surveys need to be easy to collect and collect specific or focused information (e-mail)
 - Customer Surveys should validate Internal Measures

- Internal Measuring

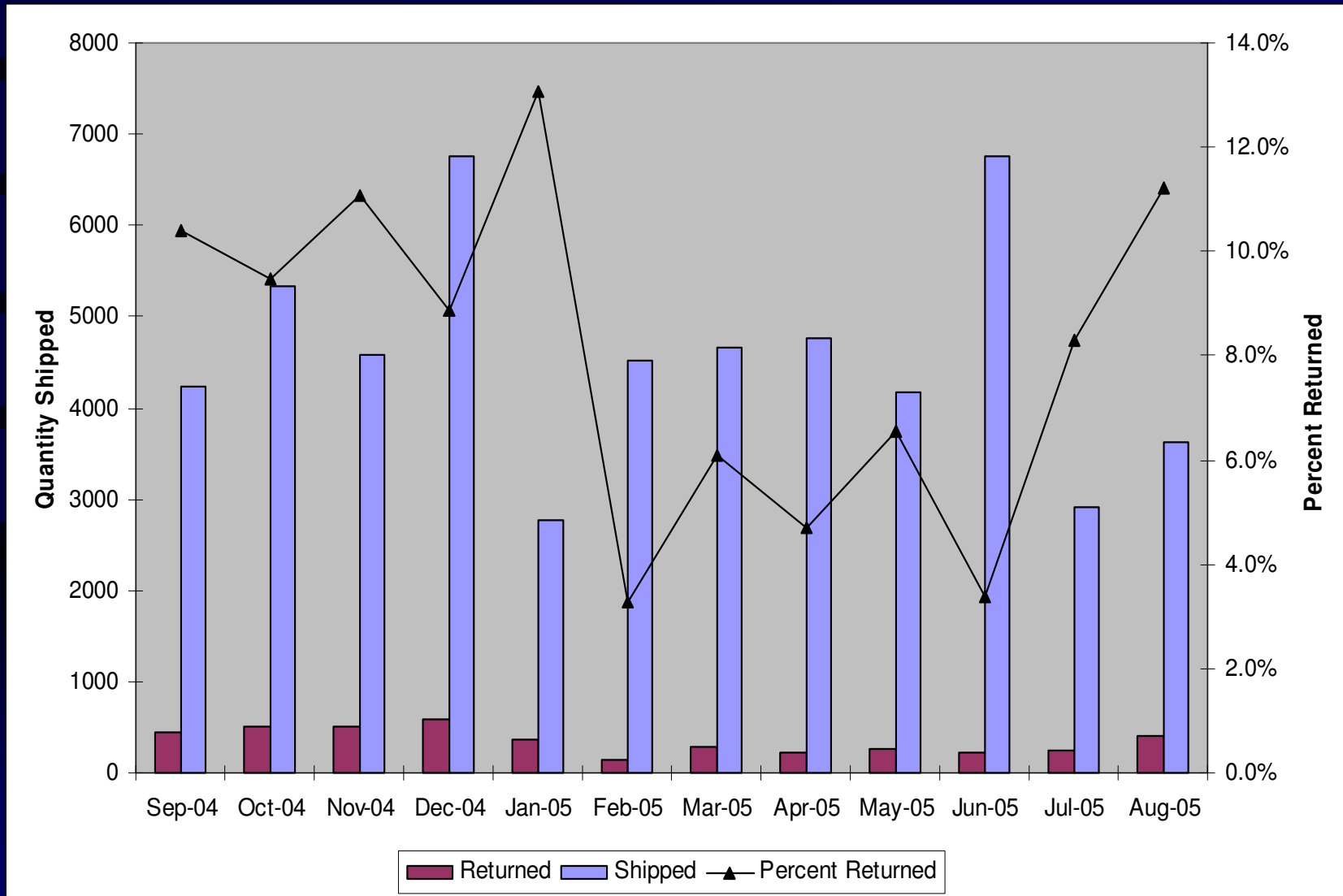
- Perception Measure
 - Should be Customer Contact Points
 - Real Time
 - Quantifiable
 - Action Plans for Negative Ratings / Trends



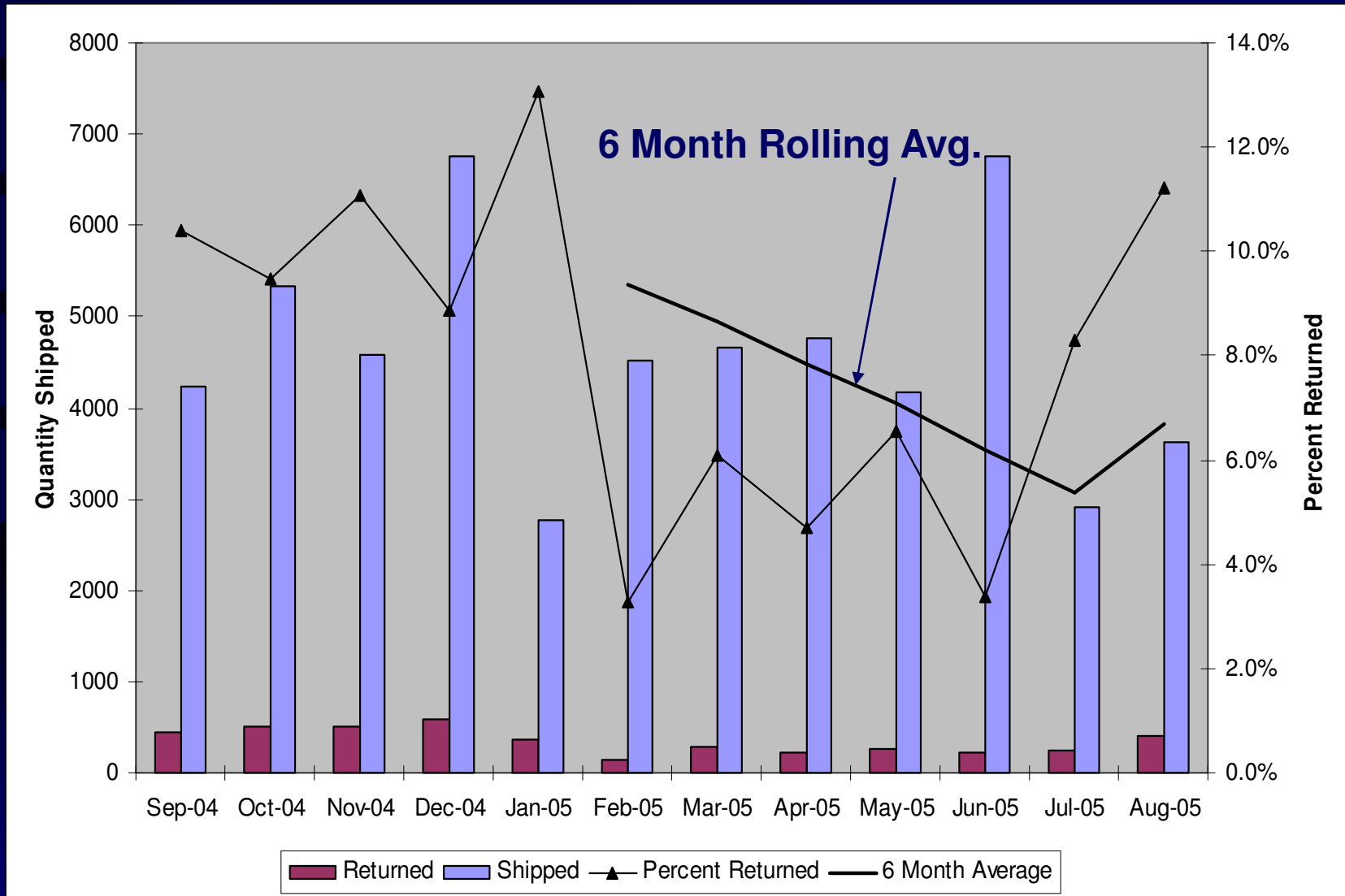
Presentation of Metrics



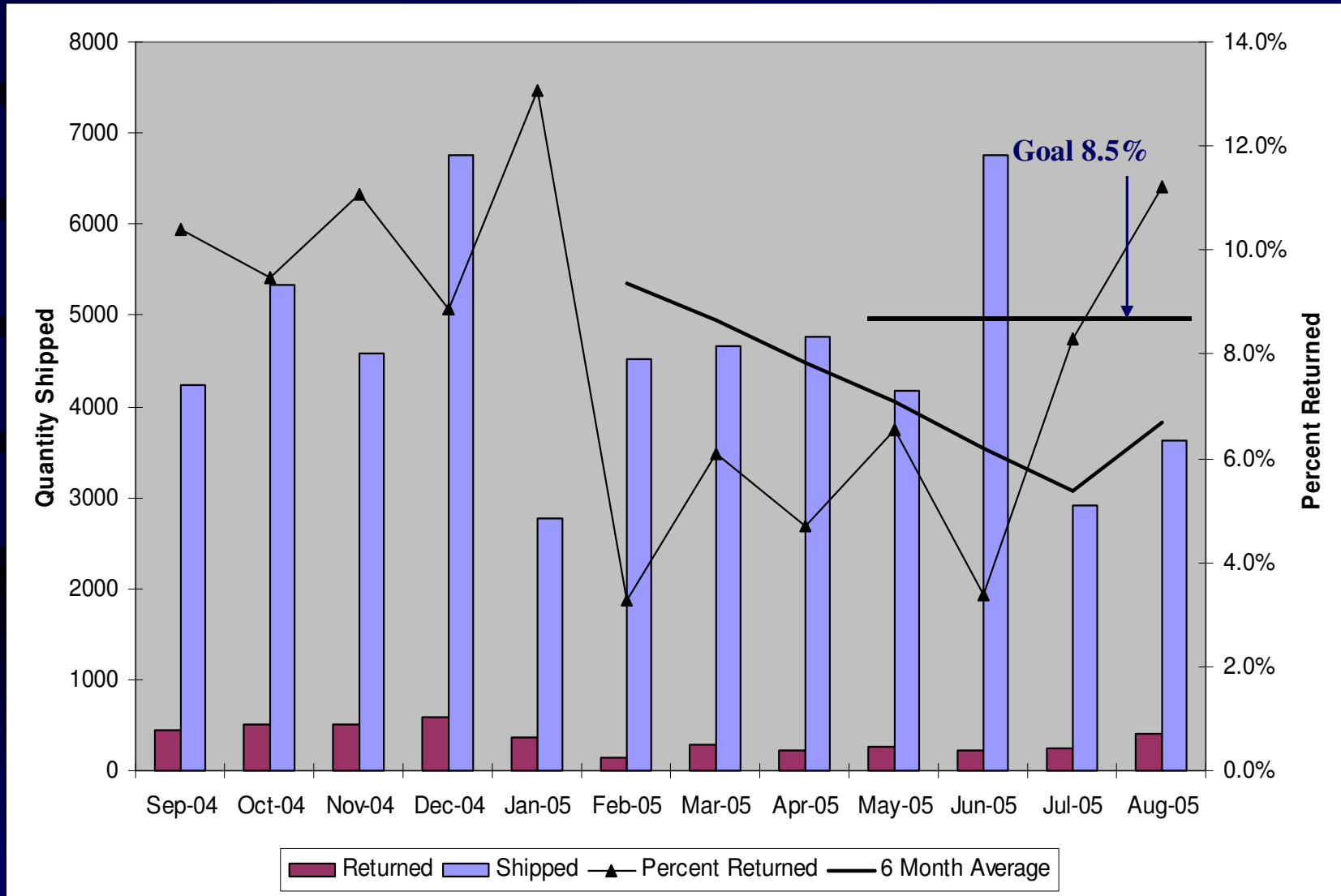
Presentation of Metrics



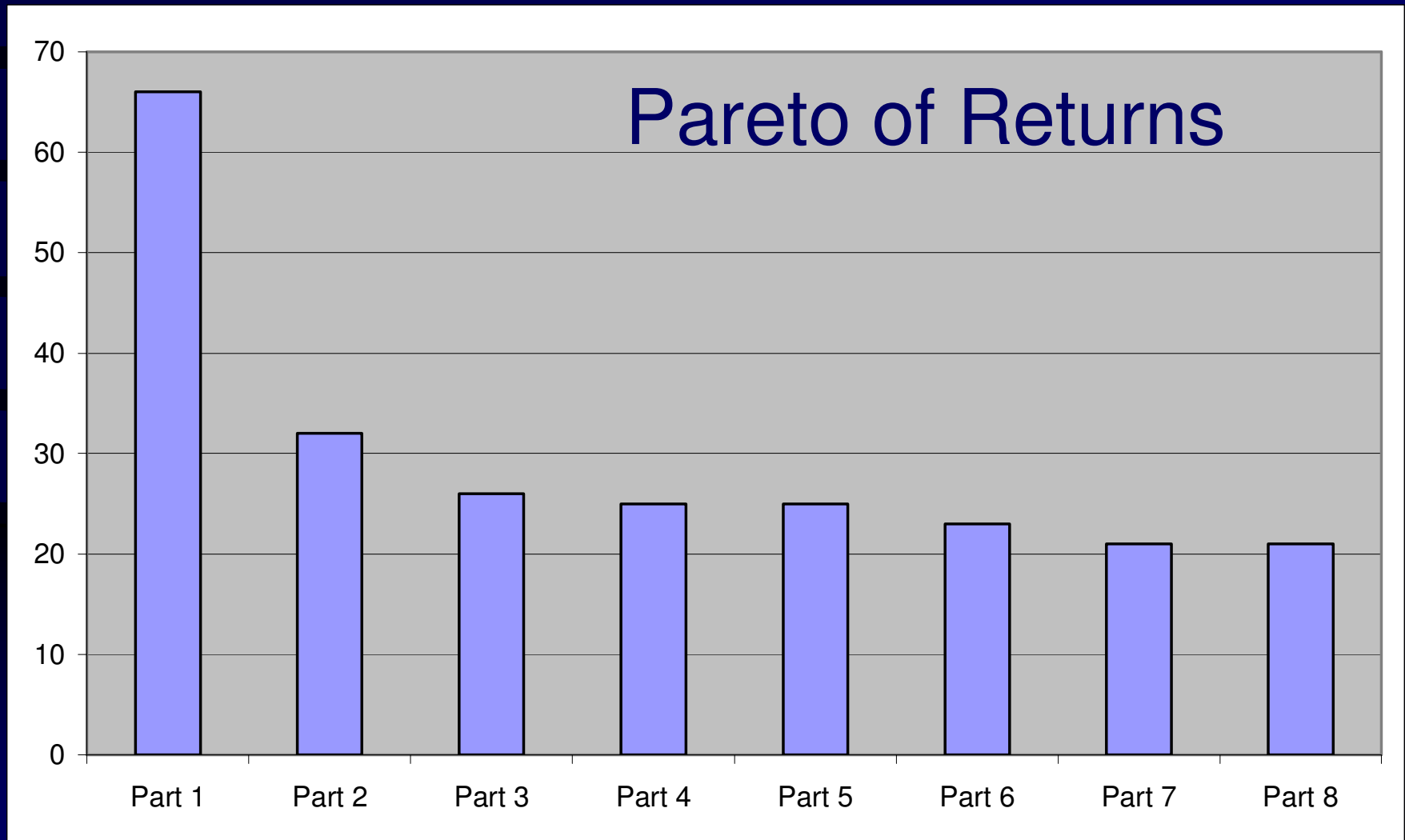
Presentation of Metrics



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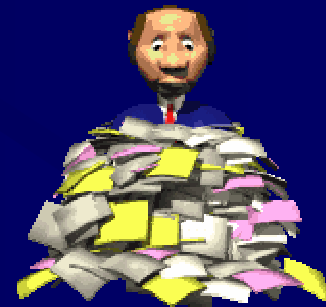


Actionable

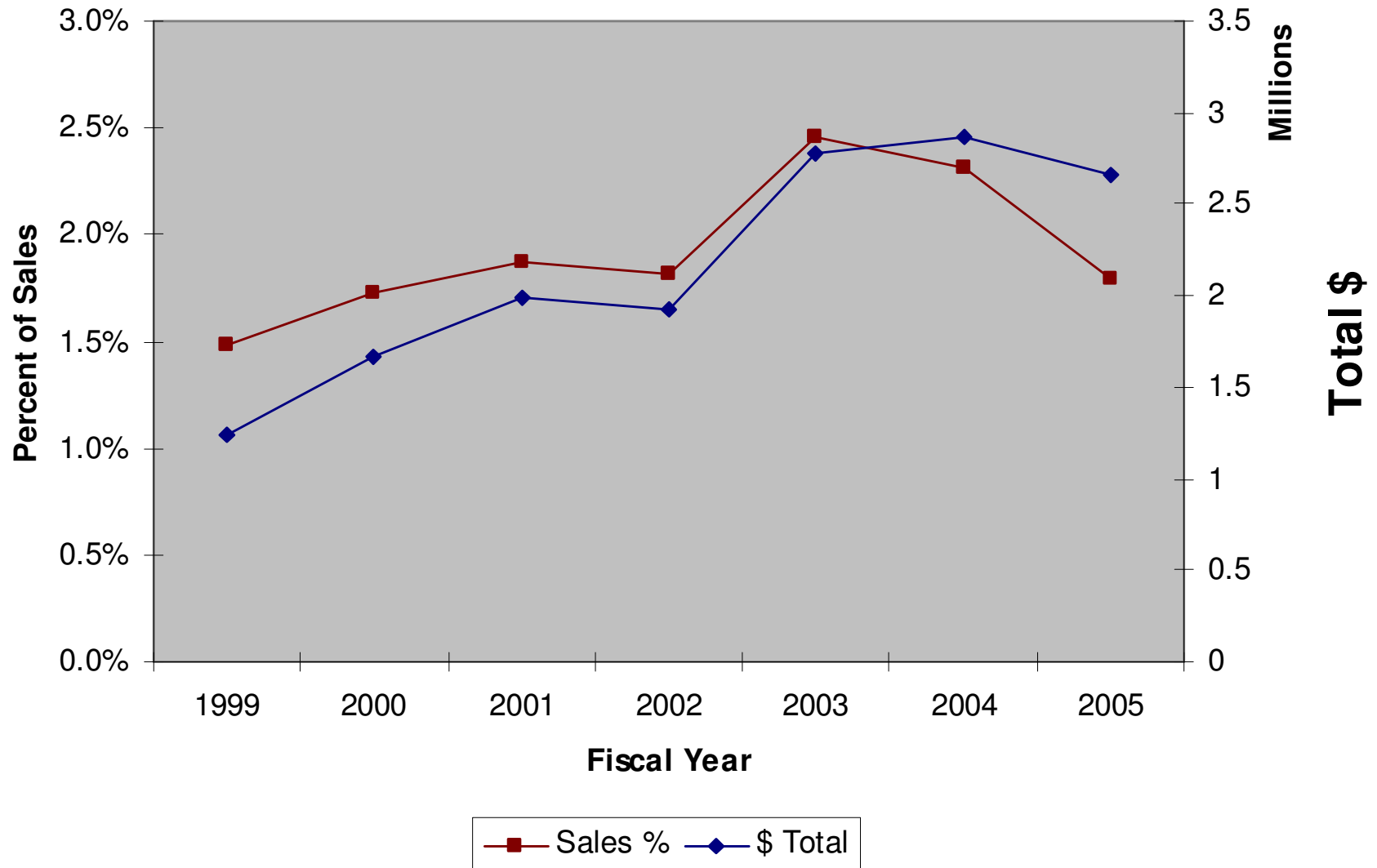


Getting the Point Across

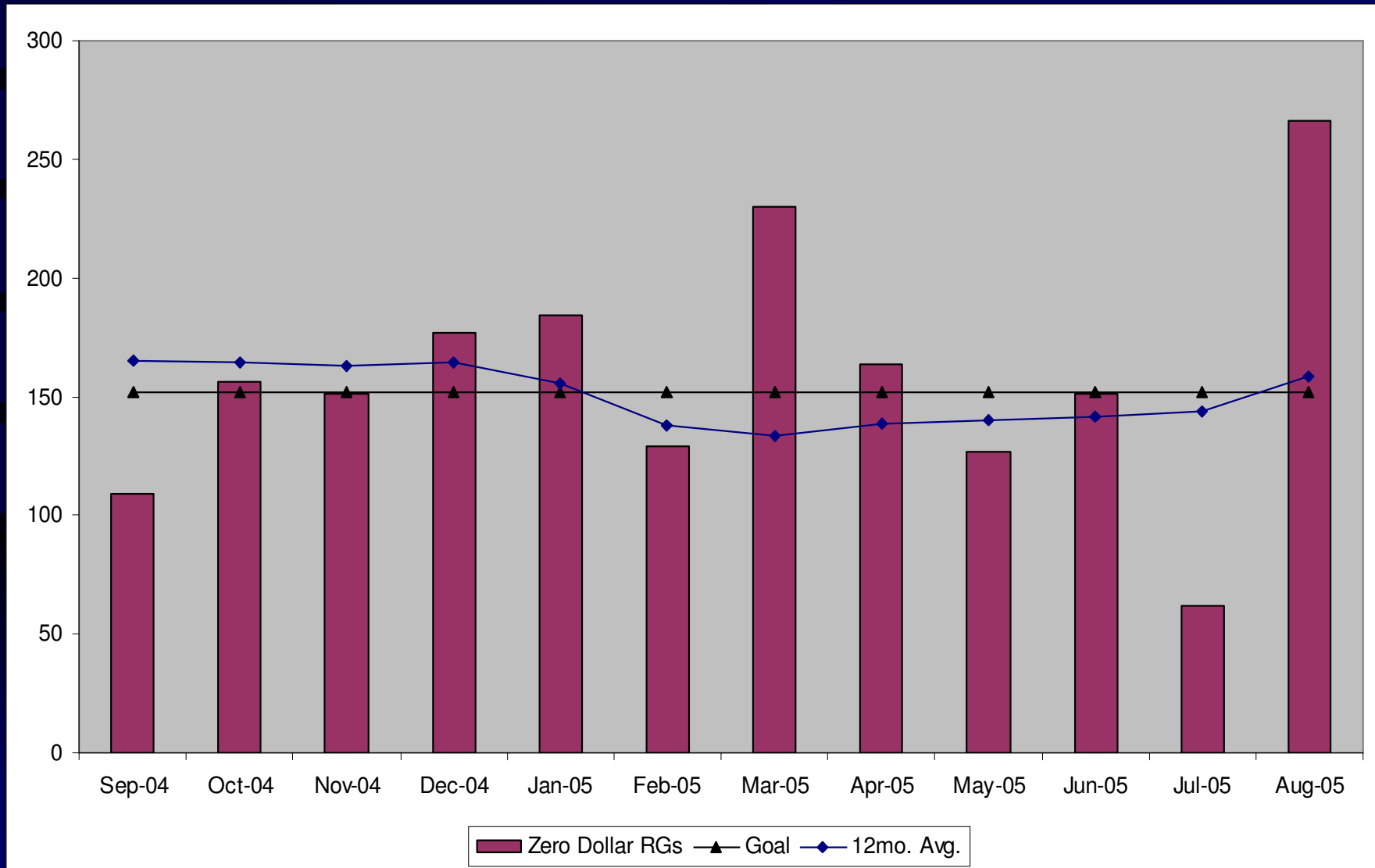
- Consider the Denominator - Who's the Audience?
 - Management = \$
 - Production = Units
 - Engineering = Failures
- How Many Metrics?
 - Significant Many vs. Trivial Few
 - Process Inputs vs. Outputs
 - Too Many becomes unworkable



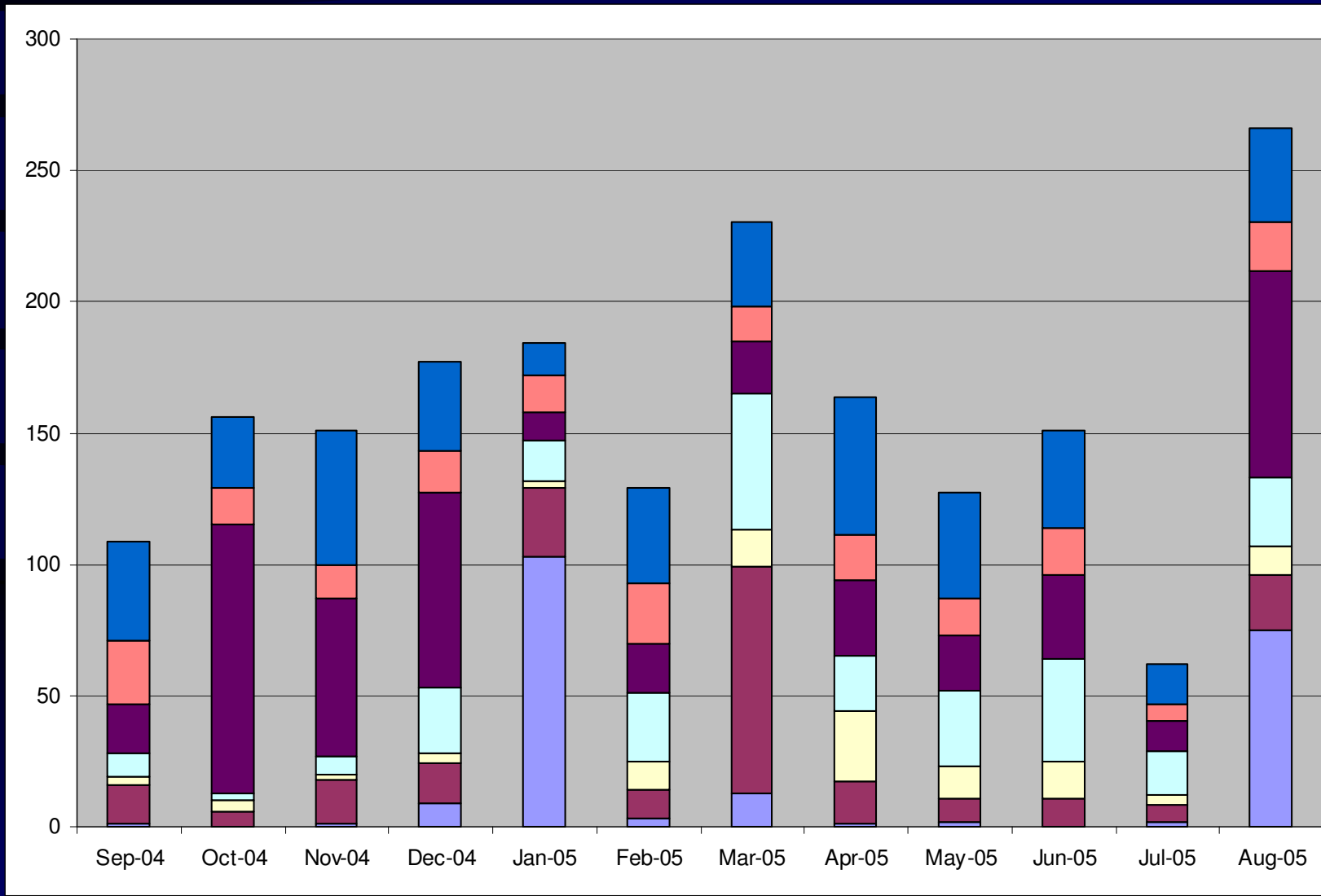
Warranty Management Data



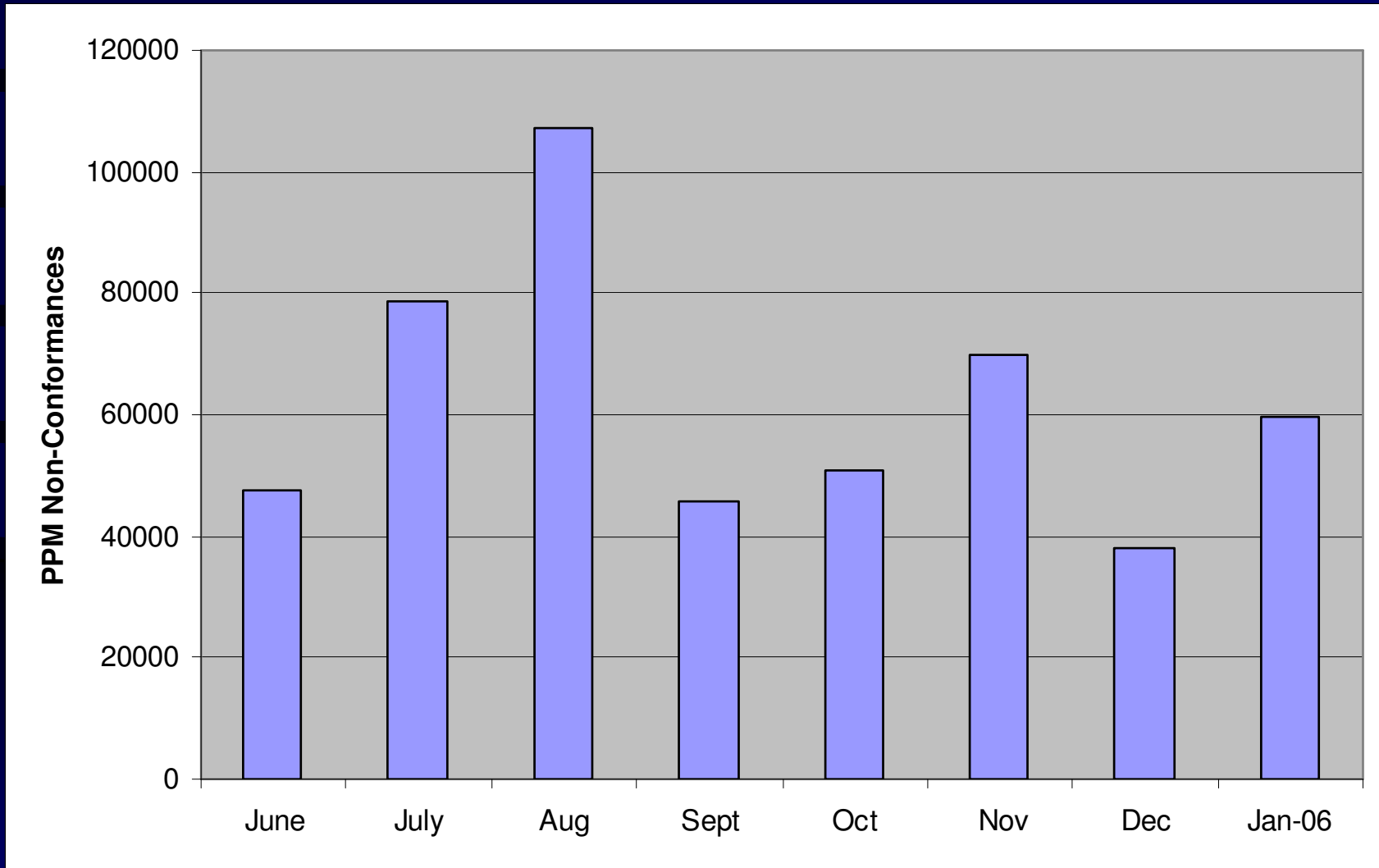
Warranty Production Units



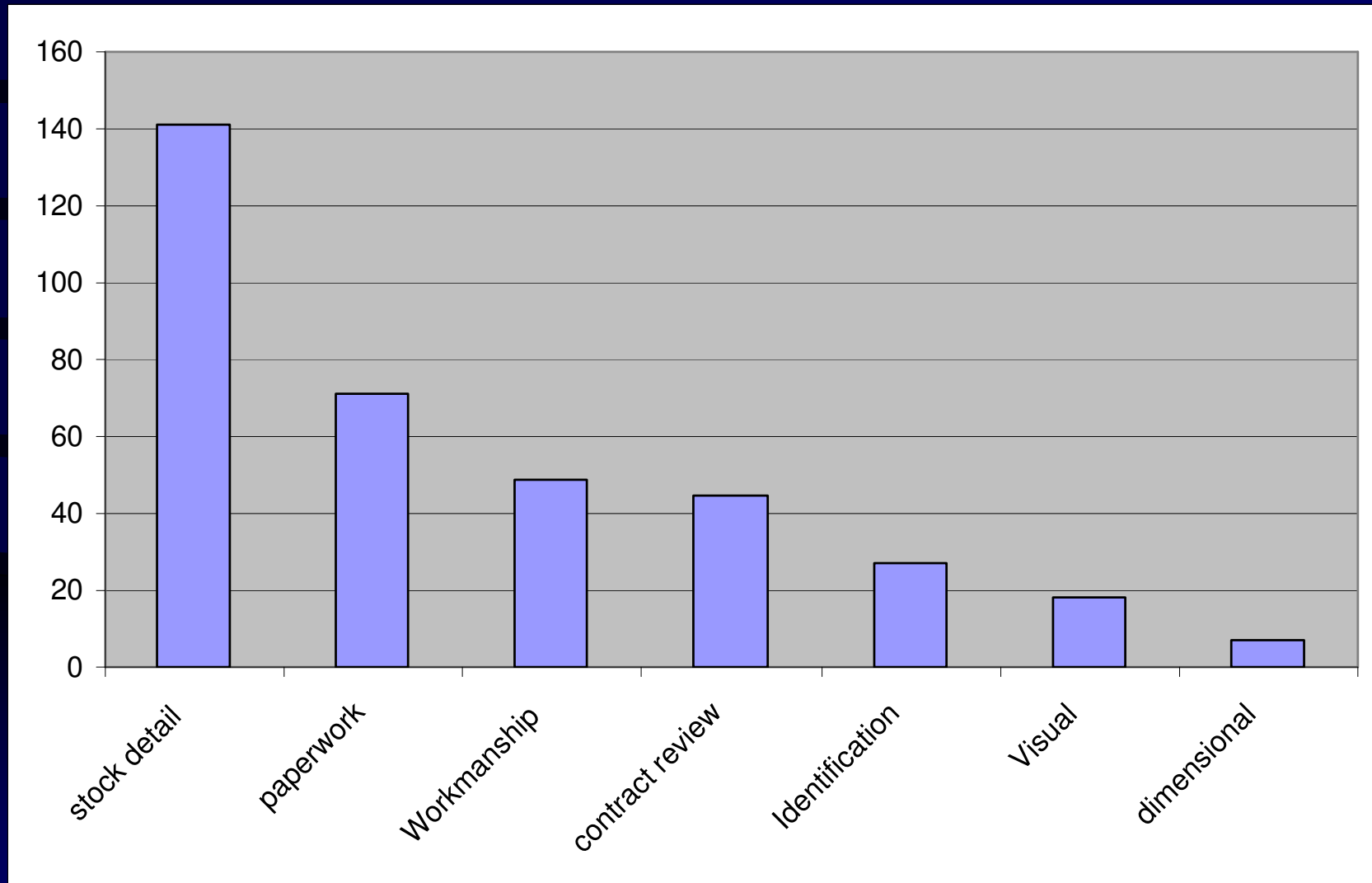
Warranty Engineering Failure by Product Data



First Pass Yield Process Measure – Simple



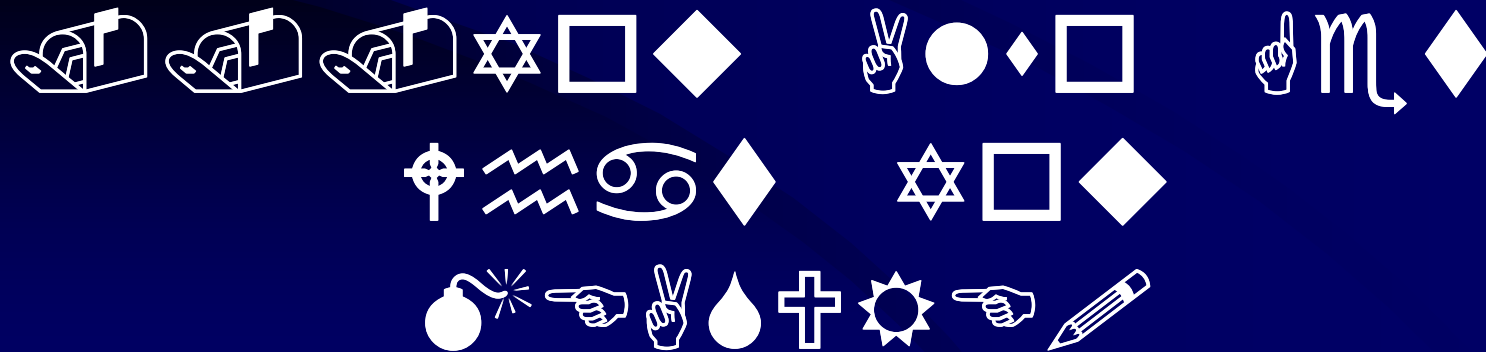
First Pass Yield Pareto Actionable



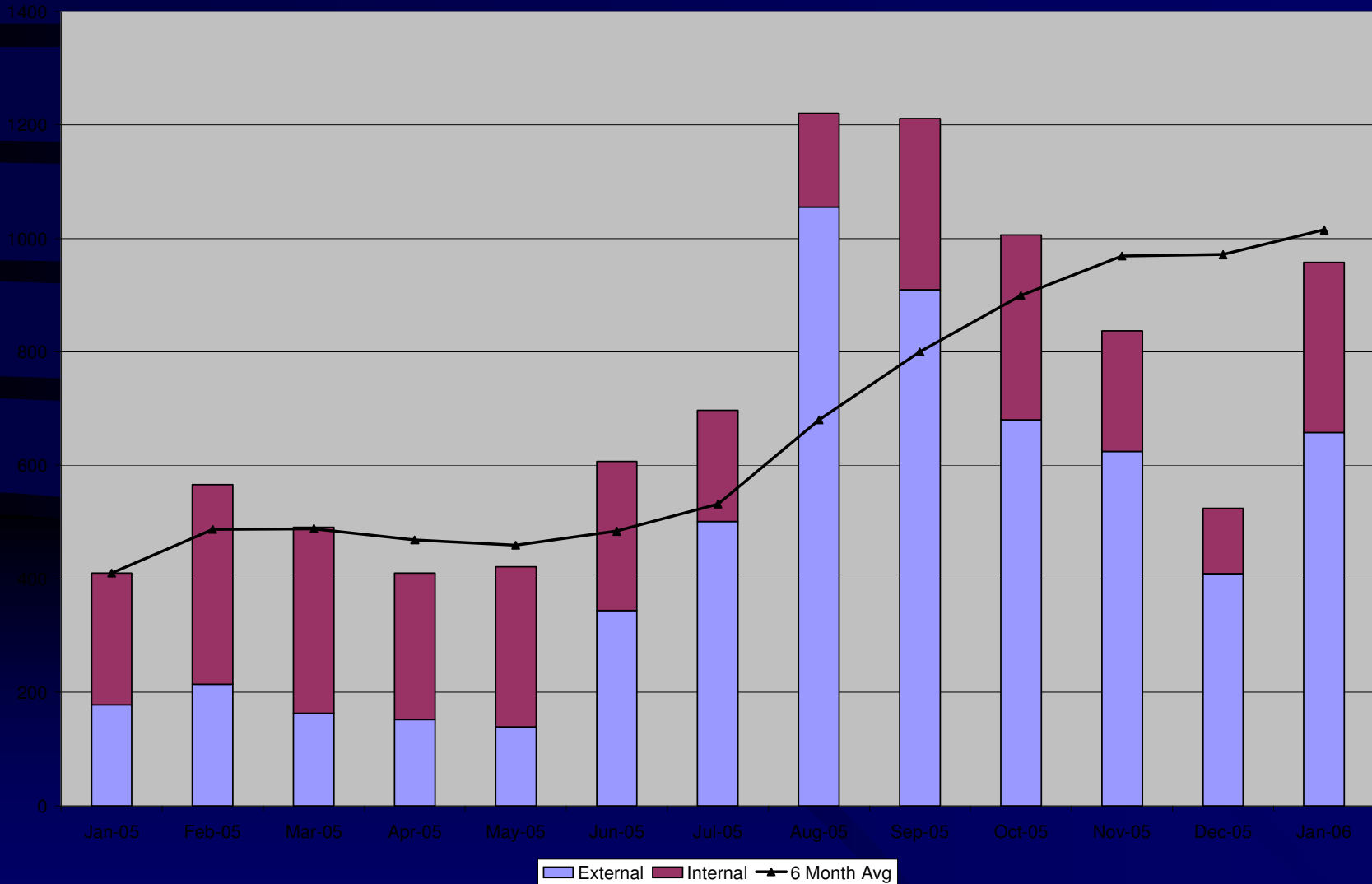
CAUTION!

You Measure What You GET...

BUT



Measure of Nonconformance



Summary

- Relevant Externally / Internally to Process
- Not Just Process Monitoring
- Metrics are Coordinated (Top to Bottom)
 - Simple – To collect and understand at any level
 - Meaningful – Relates to Goals / Objectives
 - Actionable – Data points to way forward
 - Real – Data is accurate / source is verifiable
 - Timely – Time frames are not too short or too long to be meaningful or spot trends

QUESTIONS ?

