

Performance Measurement

Understanding the Basics, Recognizing the Opportunities, Being Aware of the Pitfalls

Michigan Manufacturing Technology Center – West Sunrise Series *Discussion Session*

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It's not that hard, dude!

Purpose of the Session

- Develop an understanding of the basics of performance measurement
- Recognize the three elements that make up a metric
- Explore the structure of performance management systems, metrics sets, and metrics
- Identify potential opportunities and gaps

What is Wrong Here?

- Waste and fried chicken
- Measuring performance of a computer chip manufacturer
- The Sydney Olympics and breakfast cereal
- Inventory velocity and jet engines
- Metrics and quality control

Some Questions to Begin

- Why do we need metrics?
- What is a metric?
- What is changing in terms of metrics in today's world?
- What are the challenges of measuring supply chain performance?

Some Questions to Begin

- How many metrics are “enough?”
- Should you ever drop a metric?
- How does the user affect the type of metrics used?

The *Real* Bottom Line – Mission and Measures

- One of the most powerful management disciplines, the one that more than any other keeps people focused and pulling in the same direction, is to make an organization's purposes tangible. Managers do this by translating the organization's mission – what it, particularly, exists to do – into a set of goals and performance measures that make success concrete for everyone. This is the *real* bottom line for every organization – whether it's a business or a school or a hospital. Its executives must answer the question, "Given our mission, how is our performance going to be defined?"
 - Magretta & Stone, *Management*. 2002, p. 129



THE BASICS

THE ELEMENTS OF A PERFORMANCE MANAGEMENT SYSTEM

Why Metrics!

- A strategy without metrics is just a wish. And metrics that are not aligned with strategic objectives are a waste of time
 - Emery Powell
- Be careful what you measure -- you might just get it
- If you don't keep score, you're only practicing
 - Tom Malone
- You get what you inspect, not what you expect

Ultimate Purpose of Metrics

- To measure and monitor...
 - Performance
 - Of a person, group, department
 - Conditions
 - Capacity
 - Load
- To link execution to planning!

Performance Management System

- This is the **system** that is responsible for **setting goals and metrics** that are consistent with and supportive of corporate/division strategic objectives and for **monitoring** these metrics and for taking **corrective actions** when **actual and expected levels** of performances do not properly align.

Elements of the Performance Management System

- The overall system
 - The Performance Management System
- Metrics sets
 - The set of metrics applied to people, groups, and functions and used to evaluate performance
- Metrics
 - The specific, individual metric
 - The building block

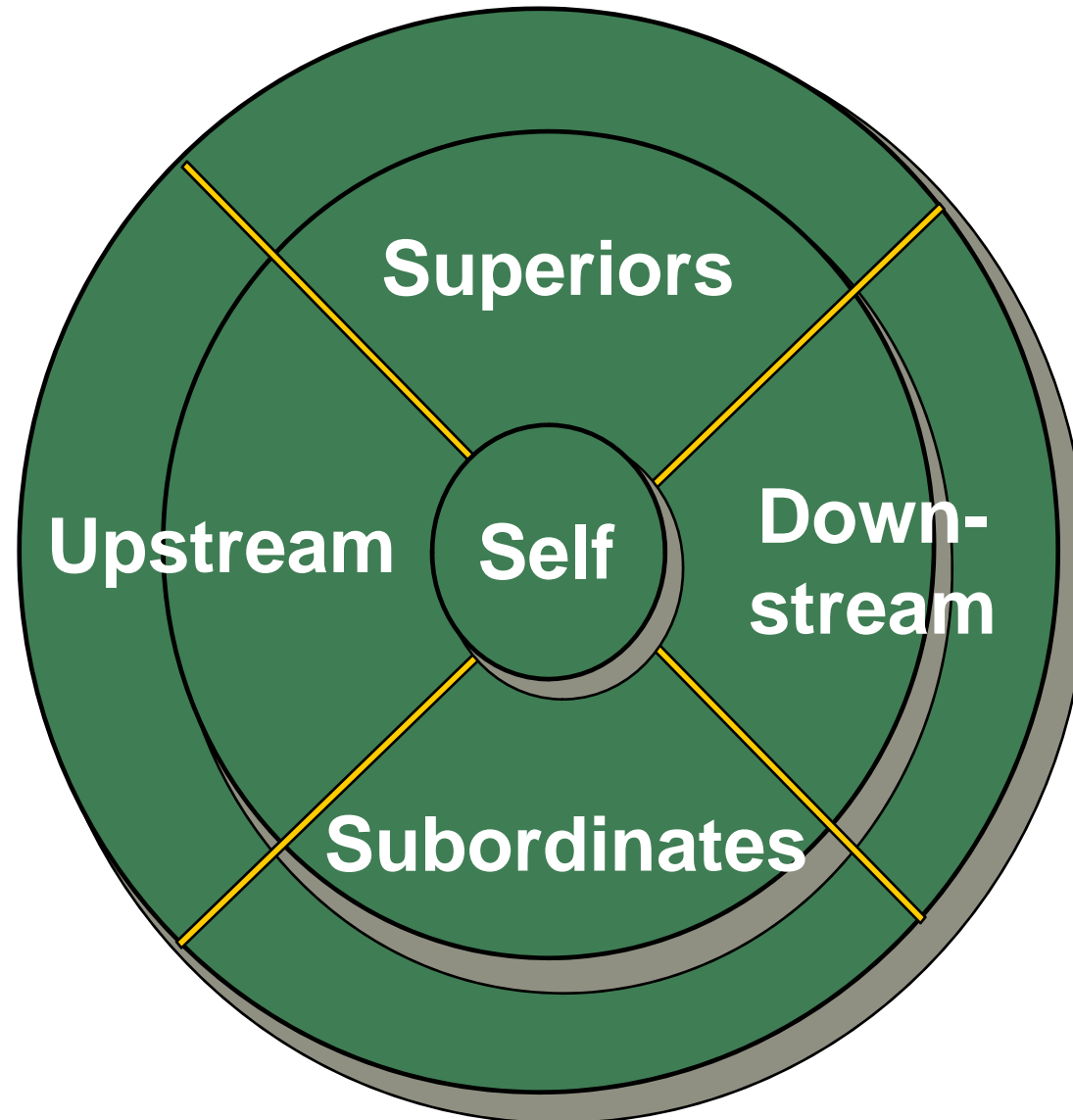
Major Tasks of the Performance Management System

- Setting metrics
 - Metrics consist of three major elements
 - The measure
 - The standard
 - The reward
- Ensuring coordination and alignment
- Monitoring performance
- Taking corrective action
 - Analysis - understand why
 - Remediation/elimination
- Ensuring balance

THREE LAWS OF METRICS

1. Management wants to measure everything.
2. All measures have unintended consequences.
3. We must have balance in metrics.

360° Leadership Model



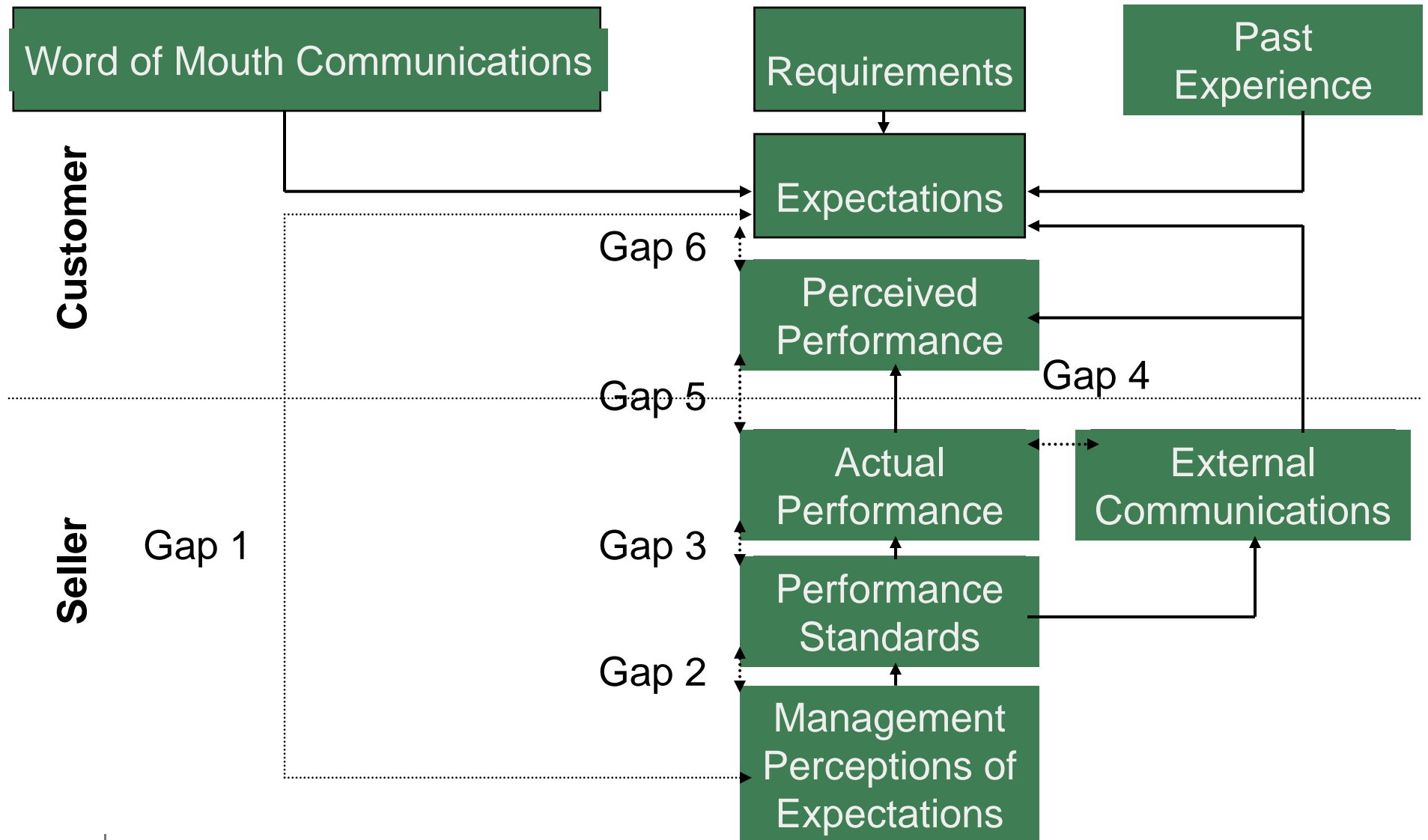
What are Metrics?

- A *verifiable* measure stated in quantitative (e.g., 95% inventory accuracy or as evaluated by our customer, we are providing above average service) terms and intended to close the gap between *value*, *strategy* and *specific activities*.
- Metrics
 - Measure
 - Direct
 - Teach

Elements of Metrics

- The Measure
 - Numerical
- The Standard
 - What separates acceptable for unacceptable performance
- The Reward
 - Punishment
 - Reward

Are all Performance Problems Metrics Problems?



Types Of Metrics

- Individual vs. systems
- Operational vs. financial
 - Utilization vs. internal rate of return (IRR)
 - Traditional focus - financial
 - Critical issue
 - Operational improvements do not always result in financial results
- Output vs. process
- Internal to the firm vs. supply chain metrics

Types of Metrics

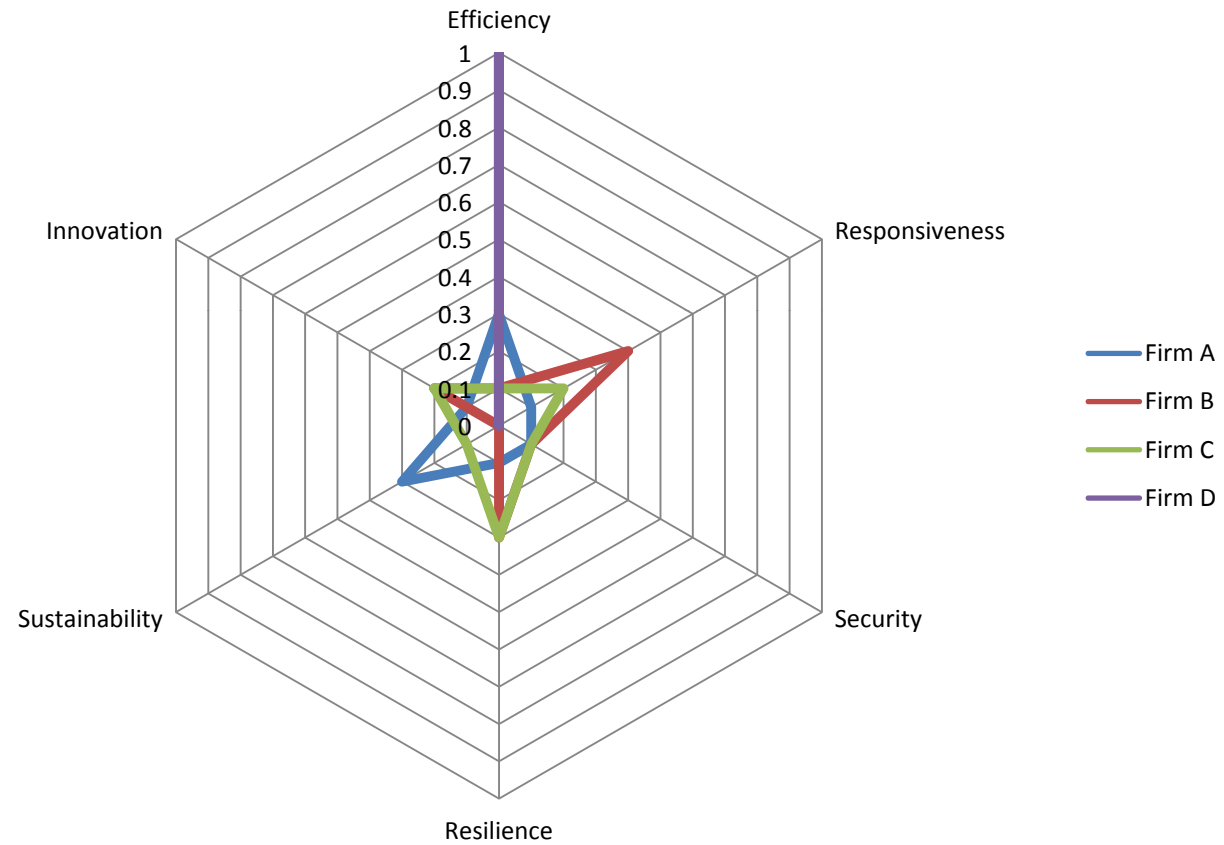
- Product/output metrics
 - Measure results, not the performance of the processes that gave rise to this performance
- Process metrics
 - Pertains to the performance of the process
 - Typical measures -- cost, time, quality, agility (the ability to adapt), capacity, variability

ISSUES IN PERFORMANCE MEASUREMENT

Outcome-Driven Supply Chains

- Six major outcomes
 - Efficiency
 - Responsiveness
 - Security
 - Sustainability
 - Resiliency
 - Innovation
- Blending outcomes requires trade-offs
- Performance measurement is more complex
- Outcome not enough; focus on solution

Building Supply Chain Outcomes



COMPONENTS VS. SOLUTIONS

WHAT ARE YOU SELLING AND WHAT ARE YOU?

Doctors and Airlines

- Two very complex systems
 - Medical
 - Airlines
- Yet, very different levels of complexity for the customer
- Which is more complex and why?

What Are You Selling/Buying?

- You can buy/sell components
 - The buyer combines the parts to create the solution
 - The supplier becomes replaceable
- You can buy/sell the solution
 - The supplier combines the components to create the solution
 - Very dynamic approach
 - Emerging approach

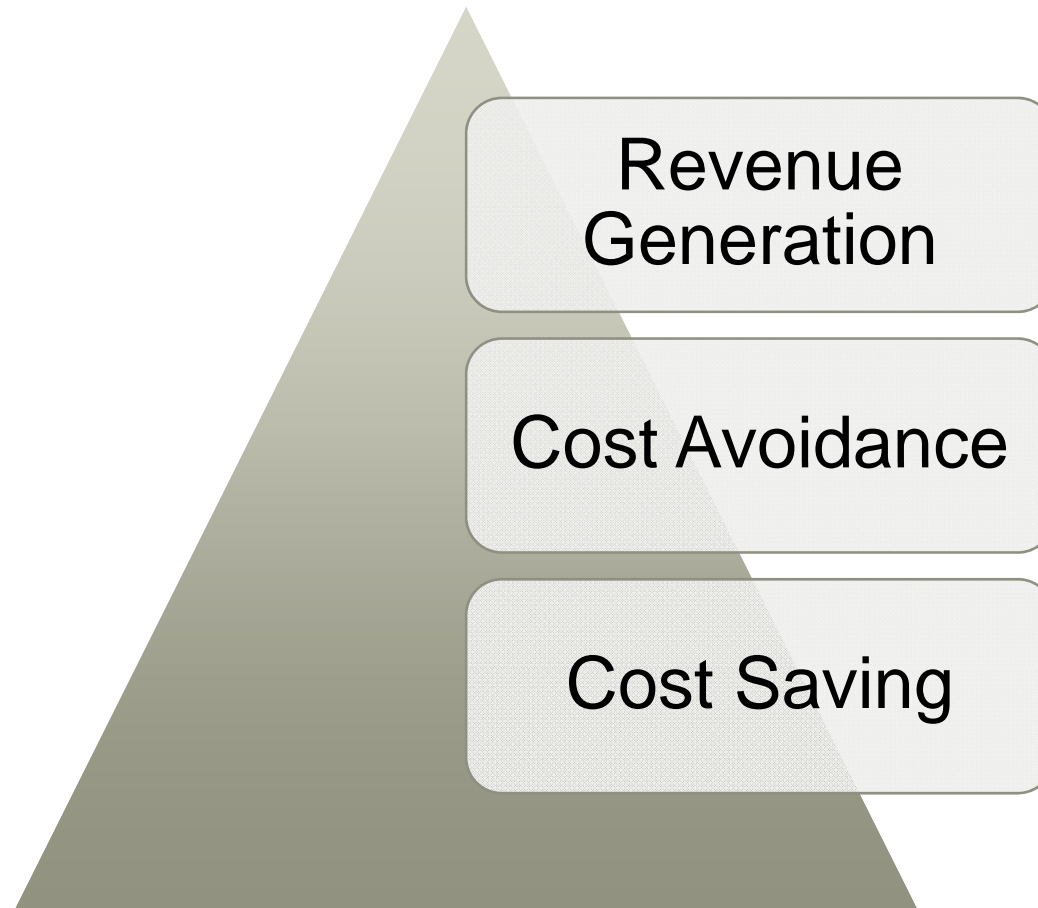
Power by the Hour



Service Oriented Manufacturing

- New approach to supply chain management
- Pioneered in China
 - Bandit culture
- A single point of contact with the customer
 - The underlying supply chain is dynamic
 - Changes in response to factors such as customer needs and technology
 - These changes not visible to the customer

New Metrics Hierarchy



Final Issues to Consider

- Are you measuring what you can rather than measuring what you should?
- Are your metrics still relevant?
- Are you measuring the performance of the supply chain or your firm's performance?
- How do we measure innovation (especially radical)?
- How do we measure:
 - Service?
 - Culture?

Concluding Comments

- Metrics are critical to success!
- Getting the right set of metrics is important!
- The challenge is that of how to develop such metrics in an ever changing environment.
- That is the challenge facing you!

A Request for Help

- Weathering the Storm
- Research project
- Your help is needed



Thank you
Questions?