Navigating the Metrics Landscape: An Introductory Literature Guide to Metric Selection, Implementation, & Decision Making

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Navigating your metrics knowledge journey

Finding what you are looking for is often a guessing game, our goal is to provide you with a GPS

Results 1 - 10 of about 1,370,000 for metrics
Metric Selection

• The ½ century long challenge… still studied today
• Mistakes & unintended consequences
  • Sports: We want team play but pay based on individual performance
  • Academics: We want professors to pursue excellence in teaching yet we reward them on publications
• Selection considerations
  • Value of information
  • Relation to value delivery
  • Systematic processes
3 Categories of Metric Selection Mistakes

Behavioral Effects
- Not considering effect on humans
- Hard for a team/group to impact

Value Added
- Ignoring Something Important
- Measuring only part of what matters

Commitment
- Company boundaries dictate metrics
- Not being serious about measurement

Selection ➔ Implementation ➔ Decision Making
4 Metrics Selection Steps

1. Relate Metrics to Value & Supporting Decisions

2. Identify what you know, need to know, & the value of information

3. Determine how metrics impact behavior & align with organizational levels

4. Systematic Processes, Feedback & Measurement Friendly Culture

Steps to Metric Selection

RRL = \frac{RE_{BEFORE} - RE_{AFTER}}{RISK \ REDUCTION \ COST}

Selection -> Implementation -> Decision Making

http://lean.mit.edu

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Focus on Value: An Example from Baseball

• How can a team with the lowest budget year after year systematically continue to succeed?
• Move from individual to team metrics
  • What limits potential (value) → outs!
  • What should we emphasize… homers? NO – not getting out!


if traditional organizational boundaries and mechanisms do not facilitate value identification, you can’t be afraid to go against the grain!!!
• Why do we have PM systems?
  • Motivate-Monitor-Coordinate-Control-Improve
• Juxtaposition of Approaches
  • “Traditional” financial vs. “contemporary” balanced systems
  • “Structural” vs. “Procedural” Systems
  • “Macro” vs. “Micro” Scale Systems
  • “Universal vs. Contingency”

Case Study Example:
Some PM Frameworks & Attributes

**Structural:** a typology for performance measure management (balanced scorecard)

**Procedural:** step-by-step processes for developing performance measures from strategy (Goal-Question-Metric or Six Sigma’s Define, Measure, Analyze, Implement, and Control)

**Selection** → **Implementation** → **Decision Making**

**Improve Processes**

**Feedback**

**Alignment**

**Temporal Tense**

**Innovation & Learning**
• Management Trends: MBM → MBR
  • Traditional quantitative thinking
    • Limits the perception of the decision maker to one dimension
    • Organizations are living entities with interactions and relationships that traditional methods cannot quantify
  • Decision makers jump to solutions without understanding the causal factors – leading to false positives or negatives
Decision Making (Continued)

- Knowledge Appraisal & Information
  - Decisions require a few pieces of high quality information
  - Biases
    - Anchoring-Halo/Horns-Bandwagon-Hindsight-Optimism
    - Optimism: Methods to measure, calibrate, and eliminate bias

Optimism Investigation Example:
• Understanding Value
  • Intuition – Structural Metrics – Analysis of Indicators
  • “Value-focused thinking involves starting at the best and working to make it a reality. Alternative-focused thinking is starting with what is readily available and taking the best of the lot.”

Value Focused Thinking
1. Recognizing a decision problem
2. Identifying alternatives
3. Specifying values
4. Evaluating alternatives
5. Selecting an alternative

Ralph Keeney, Value-Focused Thinking: A Path to Creative Decisionmaking, 1992.
Decision Making: Assessing a Metric or System

- Are the metrics tied to organizational goals?
- Does it identify root causes?
- Does it consider all stakeholders’ needs?
- Does it motivate action as intended?
- Does it accurately portray progress?
- Is it easy to use?
- Is the right information delivered at the right time?
**Moving Forward**

- **Selection:** Further communicate the value of metric selection & holistic selection methodologies.

- **Implementation:** Does using the right PM drive success, or do successful companies use PMs?

- **Decision Making:** Assess the value of imperfect information and work to eliminate biases.
Questions or Comments?

Hopefully, with our guide, finding what you are looking for will be a little bit less of a guessing game!
The Six Mistakes

1. Not using the right measure (ignoring something important) or choosing metrics that are wrong (i.e. for a phone help service, customers don’t just want quick answers, they want accurate ones as well)
2. Having metrics reflect functions as opposed to cross-functional processes
3. Assuming one knows what is important to measure without giving enough thought or using measures that intentionally make you look good
4. Measuring only a part of what matters, measuring from your view rather than the customers, or forgetting your goal [10; and 12]
5. Implementing metrics that focus on short-term results, or that do not give thought to consequences on human behavior and enterprise performance
6. Having metrics that are not actionable or hard for a team/group to impact or collecting too much data
Some PM Frameworks & Attributes

- **Structural**: a typology for performance measure management (think balanced scorecard)
- **Procedural**: step-by-step processes for developing performance measures from strategy (think Goal-Question-Metric)

### Table 2 - Performance Measurement Framework Typology

<table>
<thead>
<tr>
<th>Structural</th>
<th>Procedural</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Performance Prism [36]</td>
<td>A Framework for Factors Affecting Evolution [40]</td>
<td>Extended Enterprise Balanced Scorecard (Structural) and Procedural Frameworks [29]</td>
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<tr>
<td>European Foundation for Quality Management – EFQM [37]</td>
<td>Define-Measure-Analyze-Implement-Control [34]</td>
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<td>GQM’s Measurement Construct [8]</td>
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<td>Value Stream Mapping [36]</td>
<td>Steps to Metric Selection</td>
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**Alignment**, **Temporal Tense**, **Innovation & Learning**, **Feedback**, **Improve Processes**, **Selection**, **Implementation**, **Decision Making**
### References and how they were used

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- Selecting the Right Metrics in Selection
- Common Mistakes in Selection
- Lessons/Methods for Selection
- Measurement Frameworks & Attributes
- Implications of Implementation
- Metrics for Decision Making
- Case on the Right Problem
- Metrics for Decision Making
- Imperfect Information