

MythBusters: Is Everything You Know About Metrics Wrong?

NE Roundtable
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1



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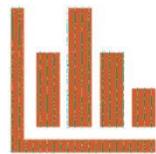
Myth #1

Our profession is aligned in how we measure safety because we use the same terms and measure the same things.

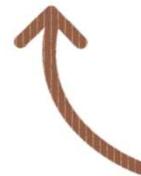
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Which One is It?



Metric



Indicator

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Which One is It?

Lagging – retrospective, subjective, passive, trailing, outcome

Leading – prospective, upstream, heading, positive, predictive, input, feedback, active, objective, process

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Terms Used in Economics

Leading

- Changes before economy starts to change
- Predictive accuracy varies

Lagging

- Measure changes after economy does
- **Not predictive**, but good at **confirming trend/outcome**

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Lagging as Leading

Leading as Lagging

Lagging metrics used to prevent future problems

“However, if we consider them in terms of the probability of similar future events and use what we learn from them to change our processes, then we are treating them as leading indicators.” (Manuele)

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What's in a Name?

I have examined the meaning of the terms “leading” and “lagging” in two recent influential publications and found that they are **not used with any consistency**. Nor do I think there is much point in trying to pin down a precise meaning since in different contexts these terms are used to draw attention to different things. **Whether they be described as a lead or a lag is ultimately of little consequence.**

Andrew Hopkins

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What's in a Name?

“Therefore, although an analysis of the lagging indicators—trending of incidents and near misses—can be a leading indicator, the incidents and near misses are called lagging indicators. **At some point, is, it not appropriate to suggest that this differentiation becomes gibberish?**”

Manuele

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Myth #2

Everyone knows what a leading metric is?
Right?

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Leading Metric Expertise?

OSH Pros Self-Rank		OSH Pros Rank Their Execs	
Beginner	7%	Beginner	14%
Advanced Beginner	13%	Advanced Beginner	29%
Competent	27%	Competent	50%
Proficient	40%	Proficient	0%
Expert	13%	Expert	7%

Campbell Institute - 2013

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Leading

“proactive, preventative, and **predictive** measures that **monitor** and provide current information about the effective performance, activities, and processes of an EHS management system that drive the identification and elimination or control of risks in the workplace that can cause incidents and injuries.

Campbell Institute 2013

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Leading?????

What Leading Metrics are You Tracking?

- BBS Observations Completed
- Near Misses Reported
- Audits Completed on Time
- Training Hours
- Safety Meetings and Suggestions

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Leading

“measurable, meaningful, actionable, evidence-based indicators that can be used to monitor, predict, or manage exposure, hazards, and conditions of work that may impact worker health and well-being”

ASSP/CSHS

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OSHA Says.....

- Number of workers who attend a monthly safety meeting.
- Percentage of workers attending refresher training.
- Completion of daily inspections for floor hazards.
- Safety perception survey participation rate.

Leading???????

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Myth #3

Lagging Metrics tell you how well your organization is performing.

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What Do They Really Tell Us?

Incidents are random events

- Bad luck/timing
- Rates are 96-98% random without millions of hours

Count only what happens

- Is what didn't happen is the result of a program or process improvement?

Severity is missing

- 10 fatalities/10 minor injuries = Same TRIR
- TRIR is "not a proxy for high impact incidents"

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Myth #4

Adding an incentive to a metric will help you achieve it.

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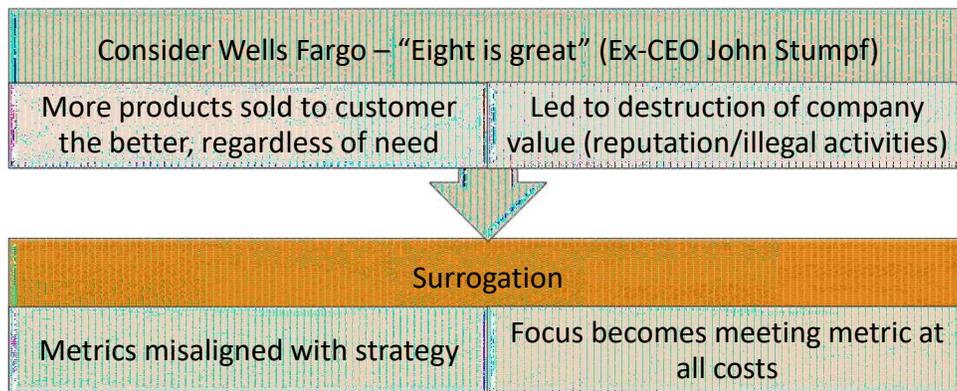
Peter
Drucker

What gets measured gets managed. [done]

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“Don’t Let Metrics Undermine Your Business”*



*HBR – 9-4-19

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Myth #5

You can use lagging metrics to benchmark your organization against others.

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Data Validity

BLS rates based on large data set, but...

- Confusing set or “rules” for recordability – are you sure your logs “right”?
- Smaller organizations are “punished”
- >100 months of your data to see statistically relevant patterns

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Now What?

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How About This?

Avoid Surrogation

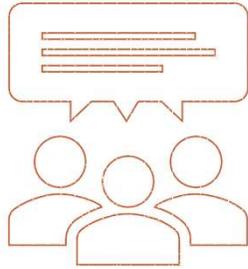
- Engage management for accountability and identification of strategy
- Engage those responsible for implementing strategy to help formulate
- No incentives tied to metrics



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How About This?



Begin with the end in mind
(Covey) doesn't work

- “When measuring effectiveness, it is more like ending with the beginning in mind.” (Peter Susca)
- Measure performance, not results

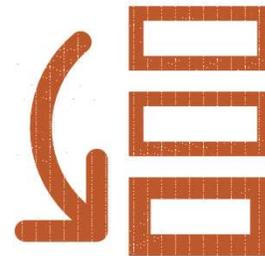
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How About This?

ANSI/ASSP Z16.1-202X - Safety and Health Metrics
and Performance Measures

- Consensus standard process
- Balanced approach - systematic and replicable approach that considers interrelationships
- Addresses impact of OSH programs/processes
- Demonstrates value to business
- Emphasis on risk management



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Standardized Definitions

Metric – a quantifiable measure that is used to track and assess the status of a specific process

Why metric?

- Includes measures and single-focus indicators
- Multi-dimensional

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Standardized Definitions

Lagging

- Consequences of actions taken/not taken
- Based on results at end of time period
- What are we trying to achieve?

Leading

- Capable of influencing/predicting results
- Aimed to prevent/control future events
- Inputs that will help us achieve it

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Impact

- Reflect “organizational impact of safety and health-related program, policies, and activities”
- Financial, productivity, quality, employee morale, etc.
- Effect of business investment decisions on OSH

Standardized Definitions

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Balanced Approach

Risk management

- Elevates significant risks – SIFs

OSH management system improvement

- Based on gap analysis and strategic objectives

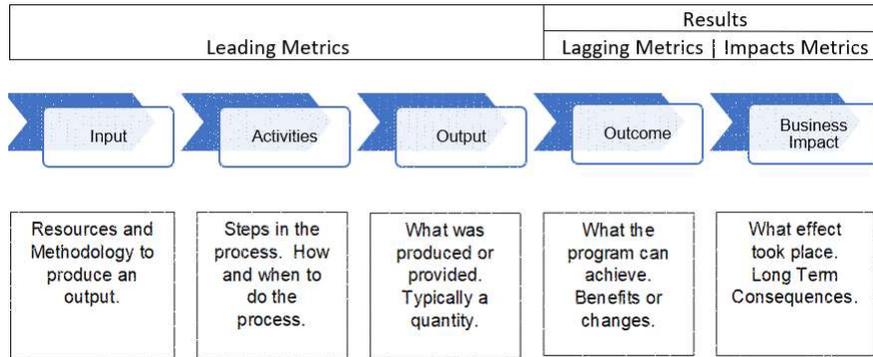
Relationship between leading and lagging is paramount – no more isolated metrics

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Here's How it Works

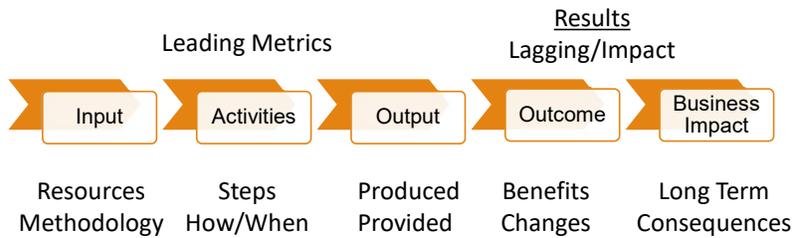
Figure A-1 Logic Model of Metrics



Z16.1-20xx Working Draft
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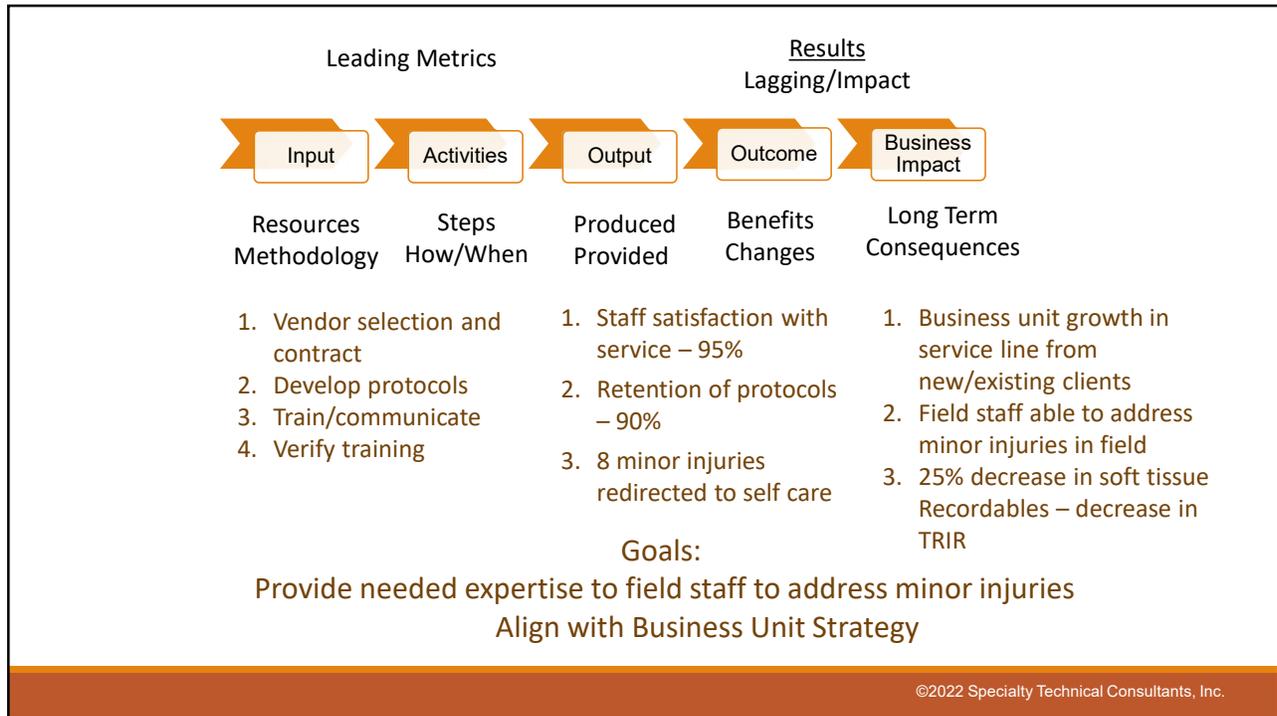
Business Unit Strategy
+25% in gross revenues from environmental field services

Situation:
Current TRIR above client benchmarks
Multiple soft tissue injuries from field work

Goal:
Provide needed expertise to field staff to address minor injuries
Align with Business Unit Strategy

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33

What Do You Think?

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34