

# Making the Business Case for Occupational Safety & Health: A Dose of Realism

Board of Certified Safety Professionals  
Research and Innovation Summit  
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College of Health and  
Human Sciences  
Department of  
Public Health

# Agenda

1. Work Experience in this Space
2. What we know & What Could be Known
3. Strategy & Structure for Guiding Decision-making
4. Example of Application
5. Q/A

# 20 years examining the topic

- SEMATECH
- EPA Laboratories
- Nike (Asian Factories)
- Arco Products Company (LA Refinery)
- Electric Utilities (LA & NYC)

# Business Case Defined

The means to justify a financial investment in safety

# Research & Development

What does a financial analysis framework look like that makes a business case for safety?



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# Why Explore this Question

1. Settle conflicting suppositions
2. Answer calls for research on the issue
3. Answer a fundamental question



Do financial investments in safety **bolster** or **detract** firm financial performance?

No  
compelling answers, **yet**

- The reality is that safety investments do not routinely bolster financial value; however, the opposite stance that safety investments seldom provide a financial pay-off is also incorrect.
- More empirical research is more likely to attract investment into safety and reduce skepticism of non-regulators

# Significance

1. A way to demonstrate the value of investments in safety so that investment allocation decision-makers can be more **motivated** to devote resources toward protecting workers
2. A transparent economic based arrangement for safety specialist to integrate with engineering, operational, and finance specialists to **explicitly** consider the safety implications of their business decisions

# Significance

3. A way of fashioning safety needs as a **critterion for making business decisions** and business needs become a **critterion for making safety decisions**
4. A way of creating **stable & robust** safety operations that contribute to firm financial value and improve reputation in consumer, labor and equity markets

# WHY I ROB BANKS

Bank robber Willie Sutton (1901-1980) did rather well at his profession: Over the course of his career, he made off with an estimated \$2 million in ill-gotten gains. He was a daring and resourceful robber who used disguises and trickery to achieve his ends, including dressing as a policeman, window washer, maintenance man, bank guard, mover, Western Union messenger, and striped-pants diplomat.



# Getting into Position

## Design and Process Level of Analysis (Operations)

Where the action is



Safety and operations **share a focus** on applying work practices that occur in the **same space**, involve the **same workers** and **same production/management systems**, and the **same risks**

# Focus Of Model

- Limited to Internalities vs Externalities

# Method

## Exploratory and inductive

**Exploratory research** provides insight into the circumstance surrounding a research problem in its operational context and the direction needed to answer the research question

**An inductive research approach** starts with an identified problem, reviews information relevant to the problem, explains patterns and construct a model to support decision-making

**In a deductive approach** the steps are reversed. The researcher starts with examining a model published by other researchers, and then develops and tests hypothesis that either confirm or reject the theory of the model with data.

# What we know

- Companies are not as effective as they would like to be in profiling the cost impact of safety **issues** & profitability potential of safety **practices**
- US based companies tend to invest in safety in spite of knowing the full life cycle costs that are linked to new, existing and upgraded organizational activities

# What we know

- Most firms do not understand which organizational activities provide more or less value compared to their safety costs
- Estimating safety costs is more quantifiable than estimating safety benefits
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# What we know

- Safety does not hold a prominent place with respect to what is relevant financial information for internal decision-makers

The more uncertain the return is on an investment or the more difficult it is to show explicitly its value the less likely it is to be valued. There is evidence that investment allocation decisions makers respond more favorably when a business case provides transparent financial information

# What we know

- **Investments in safety as hedges against risk** be should managed differently from investments intended to pay off in the near future. It is essential to go beyond the 1-year timeframe used by most companies to evaluate the viability of an investment. A longer time horizon 3-10 years may needed to capture benefits such as reduced risk

# What we Know

- Conventional accounting practice tends to focus on aggregating safety costs. This practice tends to hide safety costs in general overhead accounts and fails to account for the full range of life-cycle safety costs so that those costs can be allocated to the organizational activity responsible for their generation.

# What we Know

- Conventional safety costing systems tend to suffer from imprecise cost collection and estimation and fail to consider the financial returns that can be expected later from the investment, thus losing their decision relevance

# What we know

- **Financial analysis of investments** such as break-even analysis, payback period, and internal rate of return tend to bias decisions away from safety investments. Although useful tools in the financial analysis of investment decisions, their exclusive use can result in making incorrect decisions, such as accepting safety proposals that lose money or rejecting safety proposals that may represent financial opportunities.

# What we Know

- Making a business case does not necessarily mean delivering a positive financial payout to investment allocation specialists; it can also mean informing them about the costs that lie ahead to realize a particular safety benefit. It would be unreasonable to suppose that safety investments would all have a positive net financial value. Maybe a more limited question namely, **at what cost is it to get a safety benefit is needed**

# What we know

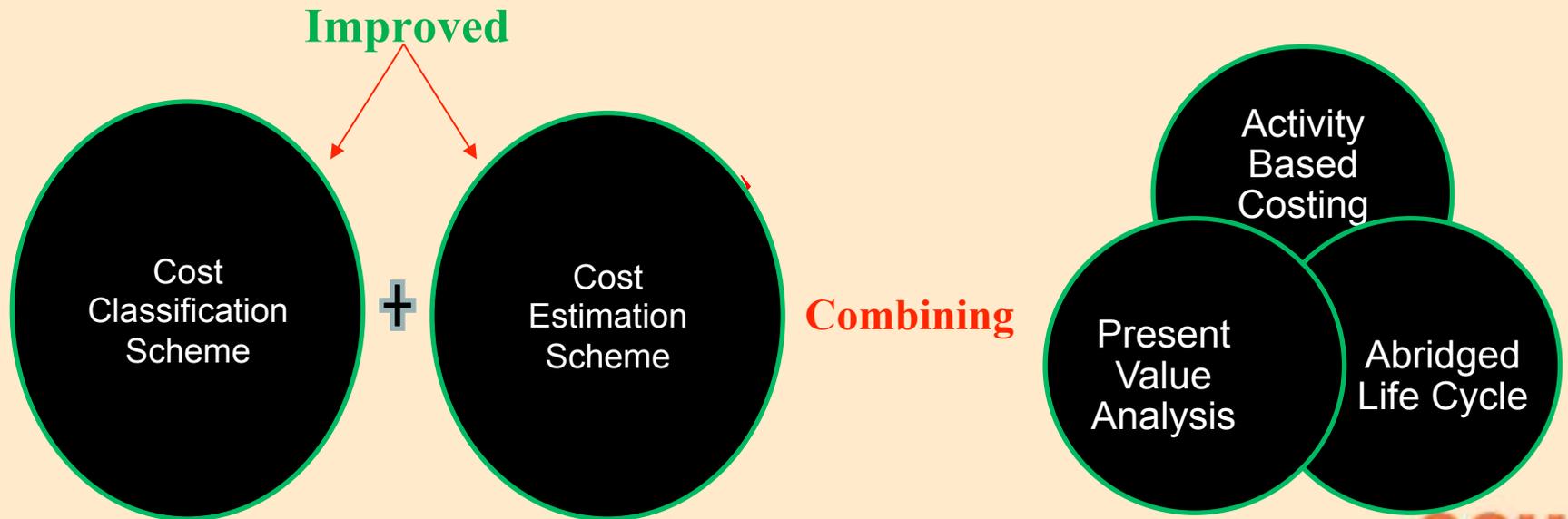
- Safety issues must be managed throughout the life-cycle
- The return on investment for safety decisions is greatest when the decisions are made early in the life-cycle

# What could be known

## How to invest in safety?

- Which organizational activities drive costs?
- Which strategies and tactics control costs and enhance firm competitiveness?
- What level of investment would be required?
- What are the potential financial and operational outcomes

# Economic Analysis Structure



# Classification Scheme

Ordering Arrangement

4 Stages

9 Cost Factors

50+ Activity Drivers

# Ordering Arrangement

## **PRE OPERATIONAL STAGE**

the stages a product goes through from when it was first thought of until it finally reaches its productive value

## **Cost Factors**

an element or condition related to an activity for which money must be spent

1. Risk Profiling
2. Acquisition of Safety Permits & Capital

## **Activity Drivers**

an accounting term that affects expenses

- a) identification, evaluation & control of exposures to hazards stemming from the designed product
- b) Permit review, fee, process reengineering

# Abridged Life- Cycle Activity Based Costing

- Limits scope and a system boundary
- Less quantifiable and less thorough
- Practical to implement.
- Identifies the majority of the useful safety actions that could be taken in connection with engineering and operations activities,

# Present Value Financial Analysis

- Provides the most reliable means of comparing the financial performance of mutually exclusive safety alternatives.
- Delineate the long-term financial impact of safety investments by presenting the after-tax cash flow and the present cost and present profitability potential of the investment over a sufficient time horizon

# Quotes

Overcoming public perception that organizations spend little on safety”

Chief Financial Officer Consolidated Edison of NYC

“If you don’t know your costs; you don’t know your business”

Bank President in West Virginia



# Quotes

“The design intent (i.e., functionality and form) of a firm’s products and technologies and its operational processes and services, are first expressed by their economic attractiveness; and foremost judged from an economic point of view; and any other features are secondary to the initial economic review”.

Former Chair of the WVU Safety Studies  
Program

# Quotes

“A manager will usually pay more attention to information when expressed or associated with cost terminology”.

President International Loss Control Institute

# Future Driver

- SEC and ISO Pending / Existing Regulations to Disclose ESH Liabilities and Costs in Corporate Financial Statements
- Dow Jones/SAM Sustainability Index
- Today's New Concern for Transparency

# Quotes

“If you can practice safety well it’s a proxy that you are doing everything else well”

Investment Banker, NYC

# Final thoughts

To make a business case, safety should be structured as an enabler of operational and business performance. We have now reached a time in which traditional approaches for justifying safety investments must yield to a new fashioned and more economic value way of thinking.

# Features

- provides annual & life-time cost by stages, cost factor, activities, accidents, non-compliance fines
- provides a cost impact per unit of productivity,
- provides cost information by design engineering, production operations, and outside consultants.

# FEATURES

- calculates the incremental cost difference between alternative process change options,
- calculates after tax cash flows,
- calculates net present value,
- performs sensitivity analysis,
- estimates escalation rates for certain cost factors

# FEATURES

- accounts for activities that drive safety costs, (existing & proposed)
- estimates financial impact of activities,
- allocates the costs to the organizational activity responsible for generation,
- calculates the profitability between existing and alternative options.

# How investments decision made

**As a rule, firm level investment decision-making hinges on:**

- competitive strategy of the firm,
- research and development capability,
- management and operational wherewithal, technology,
- human means to productively use and protect organizational resources.

**As a rule, safety level investment decision-making hinges on:**

- regulatory compliance
- enhancing firm reputation in consumer, labor and equity markets
- reduce risk
- enhance worker protection

# How investments decisions made

<u>Rate of Return</u>		<u>Investment Proposals</u>	<u>Safety Proposals</u>
100%		10	
75%		15	
50%		20	
25%	MARR 25%	25	5
0%		30	3
-25%		25	1
-50%		20	1
-75%		15	2
-100%		10	3