

***Demonstrating Business Value for
Occupational Health and
Industrial Hygiene Services***

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Setting Expectations: This session is not about a set of formulas or algorithms; it is about a way of thinking....

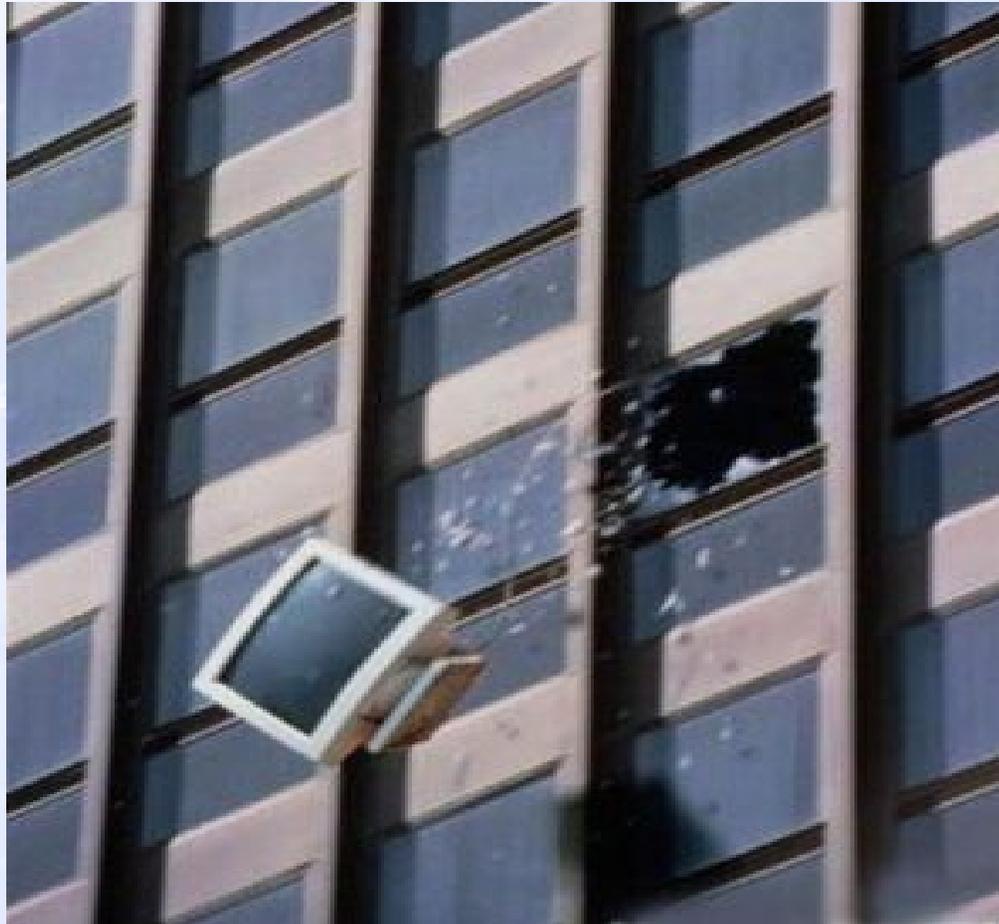
“A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty.”

Sir Winston Churchill

Real Title of Session: “S&H Value Measurement and Other Survival Techniques”



Hopefully We'll Have Some Fun and Relieve
Some of the Frustration



Today We'll Cover:

- **Challenges and barriers to making the value case**
- **A framework for value analysis**
- **Models and approaches for assessing value that may help identify opportunities for value analysis**
- **Explanation of fundamental terms and concepts**
- **“Getting real”...case studies and successful strategies**
- **Summary and questions**

About ORC Worldwide, Inc.

- **ORC's Safety, Health and Environment networks include 150+ "Fortune 200" companies with strong commitment to SH&E excellence**
- **Business value created from diversity, benchmarking, and best practices**
- **Currently nine ORC's SH&E Networks:**
 - OSH
 - WOSH
 - Executive Business Issues Forum (EBIF)
 - Lawyers Group
 - Physicians Group
 - Environmental Group
 - Intl. S&H Forum
 - EU S&H Forum
 - Asia-Pacific S&H Forum
- **Consulting**

ORC Services – *Members “Use Us and Abuse Us”*

- **ORC’s SH&E Networks**
- **Benchmarking Surveys**
- **Frequent topical updates**
- **Web services**
 - Web page
 - Web casts
- **Task Forces and work groups**
- **Access to ORC on-staff consultants**
 - Unlimited phone consultation
 - Remote training; web casts
 - Conferences and site visits
- **ORC Regional Updates and Country Profiles**
- **Ad hoc consulting**

A "Mature" Practice...Two ORC Consultants Eagerly Awaiting Calls From Clients



Context: The Current Landscape

“In Times Like These, It Is Helpful To Remember That There Have Always Been Times Like These.”

Paul Harvey

Business Realities and Converging Trends

- **Global competition + energy costs + other market forces = relatively weak economy for many key sectors**
- **90's style productivity gains through technology, integration and process improvement mostly realized**
- **Quest for profits (or survival) increases scrutiny on ALL parts of the business**
- **“Leaner is better” mentality seems to be adopted by even healthy companies**
- **OSHA regulatory inertia continues; not “driving force”**

Predictable Consequences

- **Harder to get seed money for new S&H initiatives**
- **Many companies are reassessing their S&H organization structure and staffing**
- **Many companies are also reviewing their S&H implementation process (including metrics)**
- **Some S&H professionals are fighting to save their programs, careers, etc.**
- **Getting and staying “empowered” is increasingly challenging**

What Can We Do About It?!!

- **Demonstrate the link between what we do and key aspects of the business**
- **Learn to compete for resources with other parts of the business**
- **Learn to communicate with other parts of the business in business terms**
- ***Continue Striving for Safety and Health Excellence***

The Real “Double Bottom Line”

- **We occupy the moral high ground**
- **But...to be successful in today’s business world you need to drive and demonstrate:**
 - **Performance**
 - **Value**

Current Trend in S&H Measurement = Towards Balance

What Did We Do?

- Company - specific leading indicators

What Were the Impacts?

- Injuries, illnesses, fatalities, workers' comp., absenteeism, etc.

What Value Did We Generate?

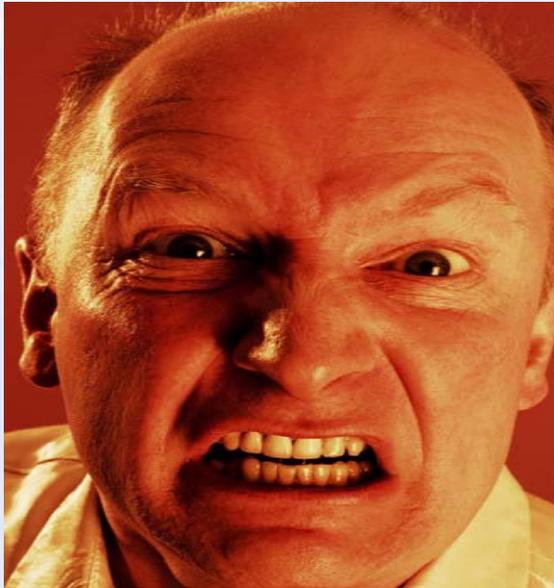
- Morality
- Reduction of loss
- Financial measures (e.g., ROI)
- Productivity
- Product quality
- Corporate responsibility/marketability
- Corporate business strategy

How Was It Perceived?

Value/Business Case Metrics

- **Leading and trailing S&H metrics assess:**
functioning of people, programs, and processes
- **Value/ Business Case Metrics Answer:**
What is the financial impact of S&H decisions?
What contribution does S&H make to the “bottom line”?
What Value does S&H add to the business?

I. Challenges and Barriers to Connecting S&H to Business Value



System Barriers: The Current State Of S&H Financials

- **Direct S&H costs can be quantified**
- **No real handle on indirect S&H costs; soft numbers discourage use**
- **Existing financial tools support project level analysis**
- **Existing financial systems often do not adequately capture S&H data**
- **Key business data often not accessible to S&H staff**

Technical Barriers:

- **Data gathering**
- **Identifying and tracking costs is complex and time consuming**
 - **Direct**
 - **Indirect**
- **Isolating and capturing “other” benefits**
- **Presenting the information in terms that are understood and accepted by the rest of the organization**

II. Framework for Demonstrating Value

**“Living at risk is jumping off a cliff and
building your wings on the way down”**

Ray Bradbury

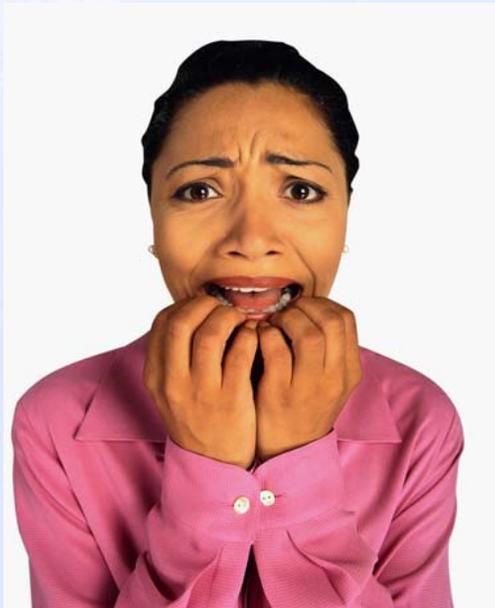
Making The Value or “Business Case:”

Fear

- S&H often isn’t a real money maker
- Companies will shift focus from human life/well being to \$\$\$

Reality

- S&H professionals can *still* keep companies focused on high moral ground
- Quantifying investment/return (or loss) *strengthens* the moral case
- S&H is good business investment; S&H Value Contribution Can be Captured



Status of S&H Value Assessment Capability:

- **Currently ability to assess:**
 - **Alternative scenarios for addressing workplace hazards**
 - **Justify/demonstrate value of new “investments” in health and safety**
- **AIHA Project = ORC developing capability to assess cost/benefit of IH interventions and programs at a facility, business unit, and corporate level**
 - **“Micro” Approach**
 - **“Macro” Approach**
 - **Overarching Framework for Analysis**

Framework Genesis

- **Phil Crosby Economic Equation re. Quality**
 - **Cost of Quality = cost of conformance + cost of nonconformance**

- **Safety and Health Corollary**
 - **Cost of S&H = cost of injury and illness prevention + cost of injuries/ill health effects (loss)**

Framework for Thinking About Value

Therefore, one method for assessing the value of a S&H program, project, or intervention is to measure its impact on costs and identify (and isolate) other related benefits. Simply put:

$$A - B - C = D + E = V$$



Three Step Process to “Overarching” Value Model

- Pre-intervention costs (A) – Post-intervention costs (B) = ***Reduced costs***
- Reduced costs – Costs of doing the intervention(s) (C) = ***Cost Savings***
- Cost Savings (D) + Other benefits (E) = ***Value***

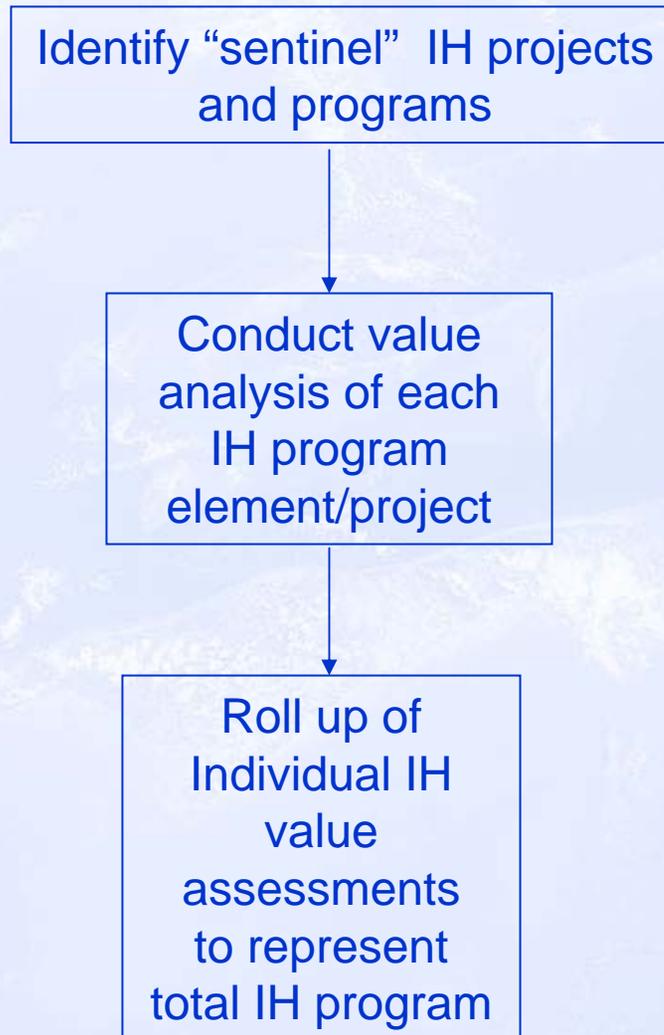
A Few Basic Concepts

- **Value demonstration requires comparison**
 - **Compare target “before and after”**
 - **Compare your program to (like) competitors**
 - **Compare to control group**
- **Use the language of the business to communicate**
 - **Financials = often how other parts of the business keep score**
- **Understand business “drivers”**

III. Models and Approaches For Assessing Value



AIHA Value Study: Micro Approach





Different Ways To Demonstrate Value:

- A. Traditional cost reduction (cost/benefit) analysis**
- B. Isolate impacts on key business indicators**
- C. Demonstrate positive impacts on business strategy**

A. Traditional cost reduction (cost/benefit) analysis

- **In this context, “cost/benefit” analysis usually means tracking the impact on direct and indirect costs.**
- **The robustness of your analysis will depend on your access to data and how deeply you “drill” in looking for cost impacts.**

Traditional Cost Examples

Implementation Costs:

- ◆ **Capital Equipment**
- ◆ **Personnel Time**
 - > S&H
 - > Operations
 - > Design & Engineering
- ◆ **PPE**
- ◆ **Safety Equipment/Supplies**
- ◆ **Training**

Cost of Losses:

- ◆ **Workers' Compensation**
- ◆ **Fines and penalties, etc.**

Examples of Costs Impacts That May Be Less Apparent

- **Employee health insurance and medical costs**
 - **Replacement labor**
 - **Production downtime**
 - **Emergency response**
 - **Remediation expenditures**
 - **Third party administration**
- **We believe that if you drill deep enough:**
- a) You can justify most investments in worker safety and health, and**
 - b) You can justify moving your prevention efforts up the hierarchy of controls**

B. Isolating impacts on key business indicators

- **S&H initiatives often have significant impacts on other parts of the business**
- **Key is to measure these impacts and take credit for them. For example, consider:**
 - **quality**
 - **productivity**
 - **human resources**
- **Data streams and metrics for these “impacts” may already exist.**

Typical Quality and Productivity Measures

Quality

- Cost to achieve quality
- Number of “turnbacks” per 1000 units
- Rework and scrap
- Warranty costs
- Customer complaints
- Customer satisfaction

Productivity

- Units of production/time
- Units of production/employee hours
- Set-up time
- Production cycle time
- Downtime due to safety incidents

Human Resource Opportunities

- Absenteeism
 - Employee turnover
 - Number of EAP visits
 - Number of temporary (replacement) workers
 - Total health and productivity
- **Technical challenge re. these business improvements: identifying and factoring out “confounding factors” that may have also partially contributed to the same result.**

Examples of Operating Costs and Savings Associated with Typical EH&S Projects

- Reduced Hazard and Waste Management Costs
- Input Material Costs Savings
- Insurance and Liability Savings
- Changes in Utilities Costs
- Changes in Operating and Maintenance Labor Burden
- Changes in Operating and Maintenance Supplies
- Changes in Overhead Costs
- Changes in Revenues from Increased (or Decreased) Production
- Increased Revenues from Sales of By-Products

Contribution to “Marketability”

- **Some companies effectively market their**
- **culture and commitment to S&H**
- **Benefits:**
 - **Helps attract and retain quality employees**
 - **Promotes customer interest, satisfaction, and loyalty**
 - **Enhances profile for business relationships**
- **Concerns over global warming and greenhouse gases may make sustainability and corporate social responsibility a business imperative and “real.” Caring for your workforce can be “low hanging fruit” for a CSR report**

C. Demonstrating positive impacts on business strategy

- **Metrics Must Reflect Priorities and Goals of the Business Cycle**
 - **Determined By Type of Business**
 - **Stage In Life Cycle of Product or Service**
- **Level of Maturity Of The Business**
 - **Product Development -- S&H Metrics Support Getting New Product To Market Quicker**
 - **Branded Product -- S&H Metrics Support Increased Profit By Increasing Productivity, Reducing Per Unit Costs**
 - **Generics -- S&H Metrics Support Maximizing Production Out Of Existing Investment**

IV. Putting a Few Financial and Business Terms In “Plain English”



Understanding Financial Concepts

- **Return on Investment**
- **Present Value**
- **Net Present Value**
- **Internal Rate of Return**
- **Payback Period**
- **Direct Cost**
- **Indirect Cost**

Return on Investment (ROI)

- **How used**: A performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of investments.
- **What it means**: To calculate ROI, the benefit (return) of an investment is divided by the cost of the investment; the result is expressed as a percentage or a ratio.

Calculating Return on Investment (ROI)

Gain from investment – Cost of investment

Cost of investment



Present Value

- **How used: Present Value is used in business to facilitate current accounting of future cash flows.**
- **What it means: Present value (PV) is the current (discounted) value of money that will be spent or received in the future**
- **A given amount of money is always more valuable sooner than later since this reduces risk and enables one to take advantage of investment opportunities. Present values are therefore discounted and smaller than corresponding future values.**

Net Present Value (NPV)

How used: NPV is used to analyze the profitability of an investment or project.

- If the NPV of a prospective project is positive, it should be accepted.
- However, if NPV is negative, the project should probably be rejected because cash flows will also be negative.

What it means: NPV = The sum of the present value of cash inflows from a project – minus the cost of the initial investment.

NPV is usually expressed in terms of dollars

Internal Rate of Return (IRR)

- **How it is used:** The internal rate of return (**IRR**) is a capital budgeting method used by firms to decide whether they should make long-term investments.
- Companies generally select projects where the Internal Rate of Return exceeds the cost of capital (often referred to as the “hurdle rate”)

Internal Rate of Return (IRR)

- **What it means: The IRR represents the yield on an investment. The IRR is the interest rate (also known as the discount rate) that will bring a series of cash flows (positive and negative) to a net present value (NPV) of zero (or to the current value of cash invested).**
- ***Internal Rate of Return* is the true investment yield expected from an investment, expressed as a percentage.**

Discounted Payback Period

- **How it is used:** Many companies have goals for the payback period of their investments that are related to their cash flow situation. Usually, the quicker the discounted payback period, the more attractive the investment.
- **What it means:** Discounted Payback Period is the amount of time that it takes for an investment to pay for itself, expressed in years.
- It is calculated by dividing the capital investment costs by the operating cost savings

Key Business and Financial Terms

- **Capital Costs:**
 - **Direct:** Costs related to the major structural components of a project. **Indirect:**
 - **Indirect:** Not directly related to the production of a product or service, but are still necessary to produce it.
- **Operating Expenses:** Costs associated with running a process to make product or provide a service

Financial Analysis

Financial Principles *Capital Investment*

- ◆ Direct Capital Costs
 - ◆ Indirect Capital Costs
 - ◆ Working Capital
-

Total Capital Investment

Capital Investment: Direct Capital Costs

- ◆ **Site Development**
 - Demolition and alterations
 - Site clearing and grading
 - Walkways, roads, fencing
- ◆ **Process Equipment**
 - All equipment listed on flow sheets
 - Spare parts
 - Taxes, freight, insurance, duties
- ◆ **Materials**
 - Piping and ducting
 - Insulation and painting
 - Electrical
 - Instrumentation and controls
- ◆ **Connections to Existing Utilities and Services**
- ◆ **New Utility and Service Facilities**
- ◆ **Other Equipment**
- ◆ **Construction/Installation**
 - Construction/ installation labor salaries and burden
 - Supervision, accounting, time-keeping, purchasing, safety, and expediting
 - Temporary facilities
 - Construction tools and equipment
 - Taxes and insurance
 - Building permits, field tests, licenses

Capital Investment : Indirect Capital Costs

- ◆ In-house engineering, procurement, and other home office costs
- ◆ Outside engineering, design, and consulting services
- ◆ Permitting costs
- ◆ Contractor's fees
- ◆ Start-up costs
- ◆ Training costs
- ◆ Contingency
- ◆ Interest accrued during construction

Capital Investment : Working Capital



- ◆ **Raw Materials Inventory**
- ◆ **Finished Product Inventory**
- ◆ **Materials and Supplies**

Value Case Studies

The Business View of EHS

“EHS people have their hearts in the right place but seldom understand true business objectives”

- **EHS has the high moral ground**
 - No one can publicly disagree with what we represent
- **But EHS management is seldom seen as a true business partner**
 - Our requests are compared with competing business objectives
 - We're never seen as balancing EHS objectives with business reality
- **We seldom make a credible business case**
- *Business case analysis is one way to change the paradigm*

Making the Business Case

Being able to complete credible financial analysis changes the EHS paradigm:

- **helps you decide which initiatives to bring forward**
- **helps you finesse management into an EHS discussion**
- **gives you business credibility**

Financial analysis resolves the manager's paradox

- **they can do the right thing**
- **and defend it to the shareholders**

Bottom line

- **you get the investment and sooner**
- **and there's no buyer's remorse**

--Dave Eherts, Vice President, EHS & Aviation Safety, Sikorsky Aircraft

Health Care Examples

- 1. In-house Non-occupational Disability Claims Management**
- 2. Expanding On-Site Occupational Medicine to Cover Primary Non-occupational Care**
- 3. Integrated Health Care and Disability Management**

OPPORTUNITY: Outsourced STD Claims Mgmt

- Nonoccupational Disability Management is performed officially by a third party on a fee-for-service case-by-case basis.
- The cases are not optimally managed
- Employee time away from work is deemed excessive. It appears that the cases are not being closely managed.
- The opportunity is to re-source the case management with a goal of spending less money and managing the cases more diligently.

Original Situation: Outsourced STD Claims Mgmt

What was paid:

Denials: \$ 100 - \$200

Approvals: \$ 200 - \$300, then \$ 50 - \$100 per month for each open

What was received:

Case Manager assigned to obtain medical information to support the disability claim, to review the information for continued disability and to confirm return-to-work status

One year's experience:

237 approved cases

11,797 lost work days

\$79,054 in Claims Handling costs

Alternative 1: Internal Case-by-Case Mgmt

Alternative 2: Complete Internal Mgmt

Costs of Internal Management:

- The cost for internal management of the simpler cases would have been administrative assistance of 32 hours per week at a fully loaded hourly wage of a little more than \$20.00 hour or about \$34,000 annually.
- Clinic coverage would have been necessary for an additional 16 hours per week at an hourly cost of about \$25 per hour or \$20,000 annually.
- Total wages to cover this assignment were estimated at about \$54,000 annually.

Benefits of Internal Management :

- Handling 71 less complicated cases could produce a savings of over \$55,000
- Time away from work could be reduced by 25% for a total of 1826 days, or salary savings of over \$555,000 annually
- Self-insured healthcare costs would also be more closely managed at significant savings to the company
- Estimated savings to HR Department based upon wasted HR Coordinators time (handling problems and complaints) of over \$65,000 annually

Summary:

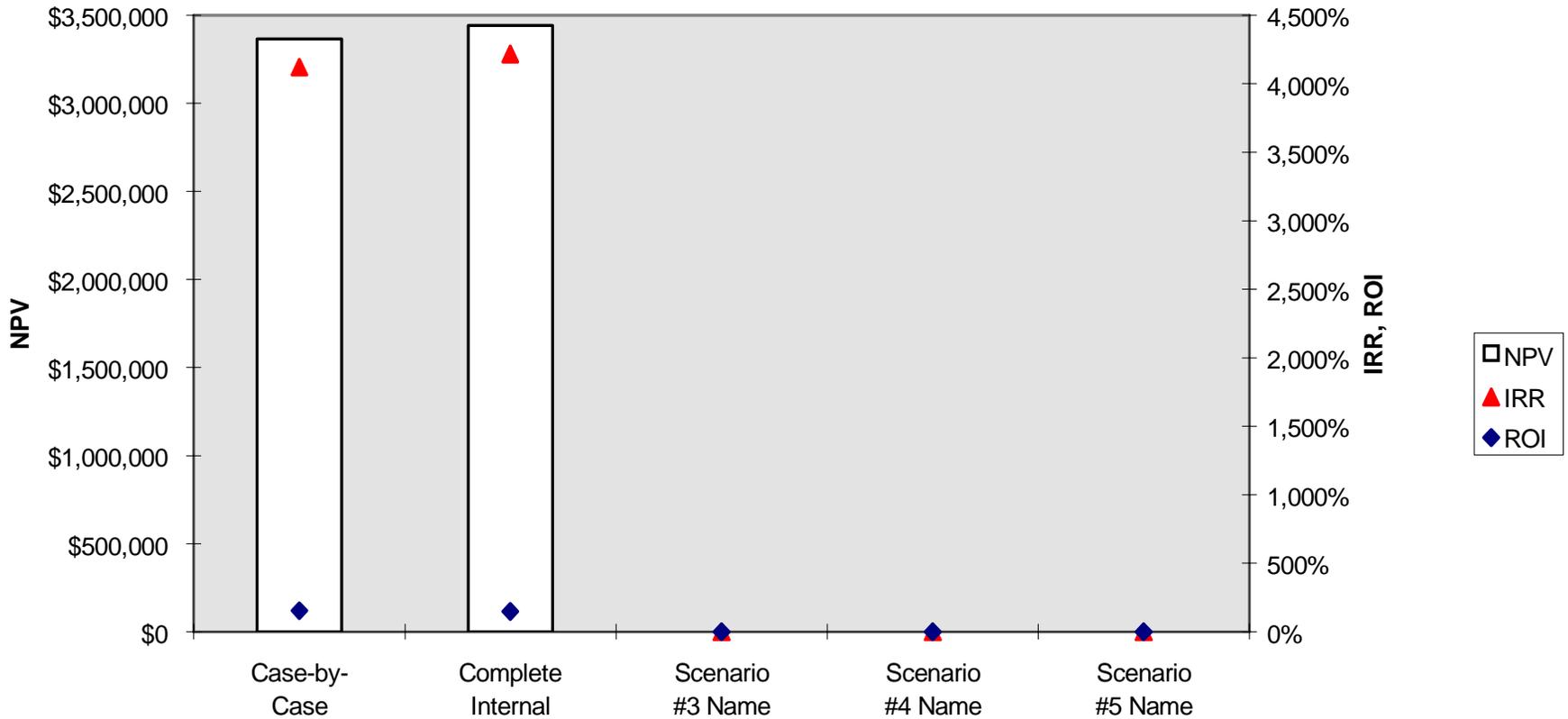
| Initial Situation: | Occ. Health Dept Management: |
|------------------------------------|---|
| 237 approved cases | Same |
| \$80,000 in Claims Handling | \$25,000 in Claims Handling |
| 11,797 lost work days | 9,971 lost work days |
| \$3,500,000 lost salary | \$3,000,000 lost salary (Savings of > \$500,000 annually) |
| \$65,600 HR Benefits Salary | \$54,000 Occ. Health Coverage |

Financial Metrics: Disability Management

| | Case-by-Case | Complete Internal |
|-----|--------------|-------------------|
| NPV | \$3,364,546 | \$3,442,146 |
| IRR | 4,121% | 4,216% |
| ROI | 154% | 149% |
| DPP | 0.1 years | 0.1 years |

Summary:

Comparative Metrics



2. Expanding On-Site Occupational Medicine to Cover Primary Non-occupational Care

Opportunity:

Control Healthcare Benefit Costs

Decrease Time Off-Site

Increase Employee Perception of Company

Increase Speed to Market

Initial Situation

- All non-occ. care offered through Flex Benefits Program
- Employees who present to clinic with non-occ. issues referred to family physician

Three Options for Management of Non-occupational Cases:

- Treat On-Site Case-by-Case, Providing Primary Care
- Full On-Site Primary Care
- Off-Site Primary Care

Baseline Case

No costs except budget for federal regulatory compliance:

- Medical Surveillance and Bio-monitoring
- Medical Emergency Response

Benefits: Compliance with Occ. Health Federal Laws

Treat On-Site Case-by-Case, Providing Primary Care

- Treat employees with non-occupational issues case-by-case
- No formal program
- Detailed records

Full On-Site Primary Care

- **Select most cost-efficient non-occupational cases to treat**
- **Formal program**
- **Formal communication**

Off-Site Primary Care

- Contract off-site, local provider to handle cost-efficient cases
- Formal program
- Formal communication

Costs: On-Site Case-by-Case

+ 6 hrs/wk for physician at ...

+ 24 hrs/wk for NP at ...

= annual increase of
~\$70,000

Benefits: On-Site Case-by-Case

**2224 non-occupational visits x .63
(tmt)**

= 1400 trips annually

Time off-site 2 hrs

= 2800 lost hrs

Benefits: On-Site Case-by-Case

Average fully loaded salary is ...
~ \$100,000 annual salary loss.

Total annual billable costs ...
~ \$70,000 x .51 (HMO)
= ~\$35,000

Costs: On-Site Full Primary Care

+ **6 hrs/wk for physician at ...**

+ **40 hrs/wk for NP at ...**

+ **40 hrs/wk for RN at ...**

= **total annual increase ~\$150,000**

Capital clinic expansion ~\$150,000

Benefits: On-Site Full

**Average fully loaded salary is ...
~ \$200,000 annual salary loss.**

**Total annual billable costs ...
~ \$140,000 x .51 (HMO)
= ~\$70,000**

Costs: Off-Site Primary Care

No capital costs

4 hrs/wk for Management

= ~\$2000 yr salary

Benefits: Off-Site Primary Care

Average time off-site now only 1 hr
= only 1400 lost hours.

Average fully loaded salary is ...
~\$50,000 annual salary losses.

Direct Impact Module Results

| | Case-by-Case | Full | Off-Site |
|-----|--------------|-----------|-----------|
| NPV | \$368,444 | \$584,187 | \$445,056 |
| IRR | | 59% | |
| ROI | 47% | 34% | 180% |
| DPP | 0.1 years | 1.8 years | 0.1 years |

Indirect Impact Module Results

| | Case-by-Case | Full | Off-Site |
|-----------------------|--------------|------|----------|
| Productivity | L+ | H+ | L+ |
| Quality | = | L+ | = |
| Customer Satisfaction | L+ | L+ | L+ |
| Weighted Average | L+ | H+ | L+ |

Final Recommendation:

- **Full On-Site Primary Care**
- **NPV indicates prudent use of capital**
- **Productivity a big issue in Operations**
- **Employee perception of Company especially important in R&D:**
 - Ability to attract and retain talent
 - Increase morale and drive to succeed

3. Integrated Health Care and Disability Management

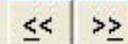
Opportunity:

Significantly reduce costs by decreasing off-site doctors' visits via medical management of workers compensation and short-term disability cases, and increasing overall productivity, while simultaneously increasing the value employees perceive, through the establishment of on-site occupational health presence at every site.

Business Case Summary: Retrospective Integrated Health at Purdue



1. Focus of Opportunity | 2. Explore Alternatives | 3. Benefits and Drawbacks | 4. Recommendations



Focus of Opportunity

Explore Alternatives

What is the problem that needs to be addressed?

Parameters

Is this project being conducted to reduce risk, reduce costs and/or increase revenue? If the purpose includes reducing risk, you may wish to describe the current risk level and explain why this level is unacceptable.

General Assumptions

Benefits and Drawbacks

Purdue Pharma is spending significantly (almost \$24MM annually) for self-insured healthcare costs though the benefits package offered is not unlike our major competitors. Though substantial, it offers no real competitive advantage vis-à-vis attracting and retaining the best talent. Likewise, Workers' Compensation and Short-Term Disability benefits are being managed (very competently) by Human Resources but, practically, employees hesitate to discuss personal medical information (or act upon recommendations) with company representatives who are not medical professionals.

Number of Incidents

Additionally, Purdue sites generally utilize nearby clinics on a contract basis in the case of necessary first aid or site medical emergencies. Though this keeps us nominally in compliance with regulatory (mainly OSHA) requirements, there is no added benefit to the wellness and fitness for duty of our employees. These clinics do not assist HR with Workers' Comp nor STD case management.

Cost of Incidents

Incident Approach Results

The opportunity is to significantly decrease costs by decreasing off-site doctors' office visits, via medical management of WC and STD cases and increasing overall productivity (for example, by reducing offsite doctors visits) while simultaneously increasing the perceived value by employees through the establishment of onsite occupational health presence at every site.

Benefits

Regular Costs (Expenses)

Capital Costs/Depreciation

Decision Matrix Questionnaire

Metrics

Decision Matrix Results

Recommendations

- Focus of Opportunity
- Explore Alternatives
- Parameters
- General Assumptions
- Benefits and Drawbacks
- Number of Incidents
- Cost of Incidents
- Incident Approach Results
- Benefits
- Regular Costs (Expenses)
- Capital Costs/Depreciation
- Decision Matrix Questionnaire
- Metrics
- Decision Matrix Results
- Recommendations

Administration: Retrospective Integrated Health at Purdue

Parameters General Assumptions

Required for all Analyses

Update Incident Costs ->

Duration of Analysis (1 to 25 years)

Discount Rate

Inflation Rate (Set to zero if using real budget numbers!)

Corporate Tax Rate

Required only if you would like to view the following metrics:

* Impact on Unit Cost

* Percent Impact on Unit Cost

Average monthly production volume

Required only if you want to calculate cash flows based on hours x wages instead of directly entering cash flows for the following parameters:

- * Operational Employee Time
 - * Health and Safety Employee Time
 - * Design and Engineering Employee Time
-

Average fully loaded hourly wage of an operational employee

Average fully loaded hourly wage of an EHS employee

Average fully loaded hourly wage of a Design & Engineering employee

Average fully loaded hourly wage of an "Other Personnel" employee

Required only if you would like to view the following metrics:

* Percent Impact on Unit Cost

Unit Cost

Required only if you would like to view the following metrics:

* Production equivalent units

Profit per unit

Business Case Summary: Retrospective Integrated Health at Purdue

1. Focus of Opportunity | 2. Explore Alternatives | 3. Benefits and Drawbacks | 4. Recommendations

Throughout the analysis, you should use this page to document important issues and assumptions about Scenarios and their benefits and costs.

In addition, summarize the key benefits and costs for each Scenario.

Current Situation: There are no costs except the budget necessary to operate the federally required first aid, medical surveillance and biomonitoring programs at Totowa, Wilson and Cranbury. Ardsley has an onsite clinic and Coventry has access to Clariant's clinic which they utilize and pay for on a case-by-case basis. The company sees regulatory compliance as a threshold expectation and the budget will continue at the current level.

1. **Integrated Primary Care and Disability Management:** Costs include a contracted NP or a part-time MD and full-time RN/MPH at each site. The NP, through a third party provider, costs \$170,000 at Ardsley, \$163,000 in Totowa (plus new equipment cost of \$26,000) and \$145,000 in Wilson (plus new equipment cost of \$20,200), \$100,000 in Stamford (for an MD 2 hours/day). Capital costs for physical space for an on-site clinic in Wilson were \$30,000.

Totowa and Ardsley are seeing an average of 50 non-occ office visits per month (employees who say that would have left the site if the clinic was not available), Stamford is seeing an average of 100 and Coventry is seeing an average of 10. We assume Wilson will see an average of 20 for a total of 230 (avoided) offsite doctors visits per month or 2700 per year. Annual billable costs for these visits, as documented by the clinic office staff, are estimated at an average of \$125 per visit (times 2700 visits) or \$330,000 in total. These savings seem extremely conservative knowing that we spend in excess of \$24 MM annually and these savings would represent an improvement of about 1%. Assuming an average of an additional 3 hours off-site per doctors appointment (travel and waiting room time), this represents approximately 8000 hours of lost productivity at an average fully loaded salary is \$55/hour therefore yearly lost salary is approximately \$440,000 total.

Costs of STD Case Management are estimated at 3932 lost days. Benefits associated with better STD Case Management (not including Workers' Compensation Case Management) are estimated to be 600 days (x 8 hours/day x \$55/hour) or \$250,000 in productivity savings, not to mention medical costs savings. Based upon 2003 annualized costs for STD of \$1.5 MM, this would represent a 15% improvement.

- Focus of Opportunity
- Explore Alternatives
- Parameters
- General Assumptions
- Benefits and Drawbacks
- Number of Incidents
- Cost of Incidents
- Incident Approach Results
- Benefits
- Regular Costs (Expenses)
- Capital Costs/Depreciation
- Decision Matrix Questionnaire
- Metrics
- Decision Matrix Results
- Recommendations

Analyze: Integrated Health (Retrospective Integrated Health at Purdue)

Integrated Health <-- Scenarios Memo << >>

Incident Approach Benefits of Project Costs of Project Decision Matrix Savings of self-insurance costs for onsite office visits (2700 x \$125).

| Parameter | Year1 | Year2 | Year3 | Year4 | Year5 | Year6 | Year7 | Year8 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Operational Personnel Time | \$440,000 | \$440,000 | \$440,000 | \$440,000 | \$440,000 | \$440,000 | \$440,000 | \$440,000 |
| Other Personnel Time | \$250,000 | \$250,000 | \$250,000 | \$250,000 | \$250,000 | \$250,000 | \$250,000 | \$250,000 |
| Vendors, Consultants and Contract Labor | \$44,000 | \$44,000 | \$44,000 | \$44,000 | \$44,000 | \$44,000 | \$44,000 | \$44,000 |
| Medical Costs and Insurance | \$330,000 | \$330,000 | \$330,000 | \$330,000 | \$330,000 | \$330,000 | \$330,000 | \$330,000 |



| | | | | | | | | |
|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Net Incident Approach Benefit | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Benefits Before Taxes | \$1064000 | \$1064000 | \$1064000 | \$1064000 | \$1064000 | \$1064000 | \$1064000 | \$1064000 |
| Net Tax Benefits | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Total Benefits | \$1064000 | \$1064000 | \$1064000 | \$1064000 | \$1064000 | \$1064000 | \$1064000 | \$1064000 |

Analyze: Integrated Health (Retrospective Integrated Health at Purdue)

Integrated Health

<-- Scenarios

Memo

Incident Approach | Benefits of Project | Costs of Project | Decision Matrix | \$170,000 Ardsley, \$163,000 Totowa, \$140,000 Wilson, \$100,000

| Parameter | Year0 | Year1 | Year2 | Year3 | Year4 | Year5 | Year6 | Year7 |
|---|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Operational Personnel Time | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Other Personnel Time | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Vendors, Consultants and Contract Labor | \$0 | \$573,000 | \$573,000 | \$573,000 | \$573,000 | \$573,000 | \$573,000 | \$573,000 |
| Medical Costs and Insurance | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |

| | | | | | | | | |
|----------------------------|---------|----------|----------|----------|----------|----------|----------|----------|
| Net Incident Approach Cost | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Costs Before Taxes | \$0 | \$573000 | \$573000 | \$573000 | \$573000 | \$573000 | \$573000 | \$573000 |
| Tax Liability | \$0 | \$204577 | \$205887 | \$206936 | \$207775 | \$208446 | \$208983 | \$208983 |
| Capital Costs | \$76200 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Total Costs | \$76200 | \$777577 | \$778887 | \$779936 | \$780775 | \$781446 | \$781983 | \$781983 |

Regular Costs (Expense)

Capital Costs

Analyze: Integrated Health (Retrospective Integrated Health at Purdue)

Integrated Health

<-- Scenarios

Incident Approach | Benefits of Project | Costs of Project | Decision Matrix

Capital Costs

| | Name | Equip. Costs | Install Costs | Other Cap. Costs | Total Cap. Amt. | Salvage Value | Deprec. Amt. | Initial Year | Equip. Life | Method |
|---|------------|--------------|---------------|------------------|-----------------|---------------|--------------|--------------|-------------|----------|
| ▶ | Renovation | \$0 | \$0 | \$76,200 | \$76,200 | \$0 | \$76,200 | 0 | 10 | Double I |
| * | | | | | | | | | | |

Capital Cost: Renovation Depreciation Method

| Year | Expenditure | Manual | Straight Line | Double Declining | Tax Credit |
|------|-------------|--------|---------------|------------------|------------|
| 0 | \$76,200 | \$0 | \$0 | \$0 | \$0 |
| 1 | \$0 | \$0 | \$7,620 | \$15,240 | \$0 |
| 2 | \$0 | \$0 | \$7,620 | \$12,192 | \$0 |
| 3 | \$0 | \$0 | \$7,620 | \$9,754 | \$0 |
| 4 | \$0 | \$0 | \$7,620 | \$7,803 | \$0 |
| 5 | \$0 | \$0 | \$7,620 | \$6,242 | \$0 |
| 6 | \$0 | \$0 | \$7,620 | \$4,994 | \$0 |
| 7 | \$0 | \$0 | \$7,620 | \$4,994 | \$0 |
| 8 | \$0 | \$0 | \$7,620 | \$4,994 | \$0 |
| 9 | \$0 | \$0 | \$7,620 | \$4,994 | \$0 |
| 10 | \$0 | \$0 | \$7,620 | \$4,994 | \$0 |

Depreciation Sums

Manual Depreciation: \$0
 Straight Line Method: \$76,200
 Double Declining Balance: \$68,018
 Variable Declining Balance: \$76,200

Regular Costs (Expense)

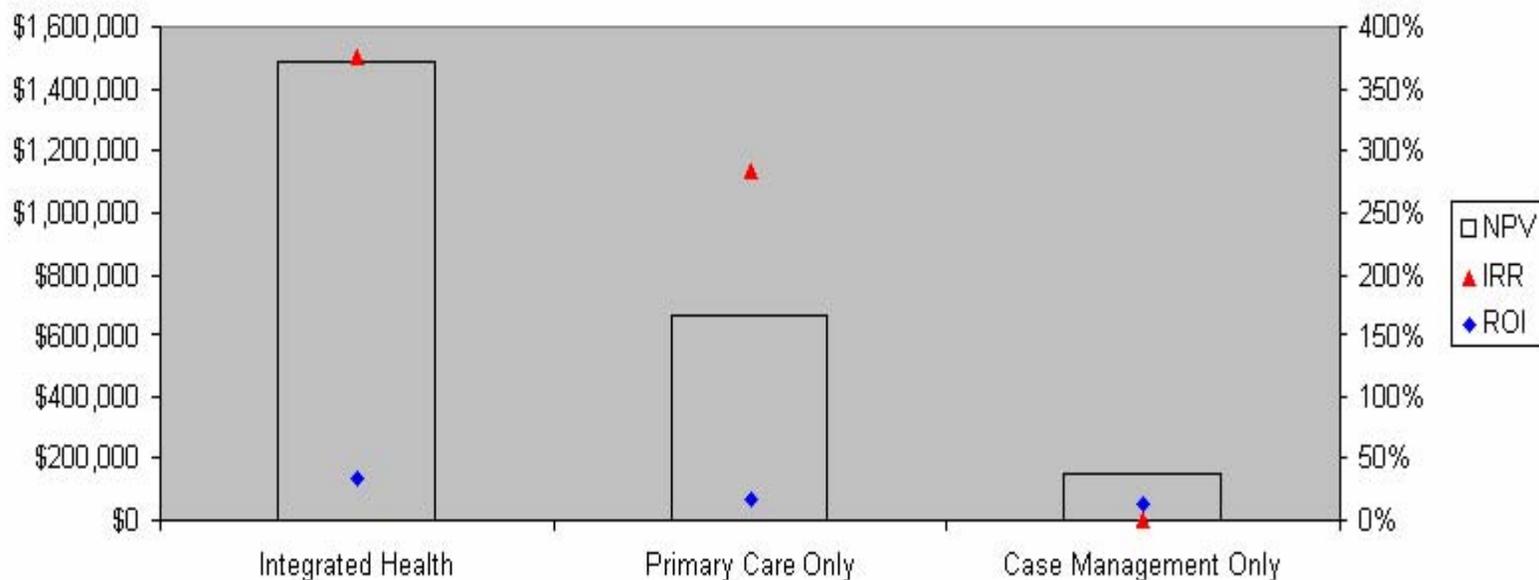
Capital Costs

Recommendations: Retrospective Integrated Health at Purdue

Metrics Decision Matrix Calculations

| | Integrated Health | Primary Care Only | Case Management Only |
|---------------------------------|-------------------|-------------------|----------------------|
| Net Present Value (NPV) | \$1,486,883 | \$668,145 | \$153,904 |
| Internal Rate of Return (IRR) | 375% | 283% | n/a |
| Return on Investment (ROI) | 33% | 17% | 13% |
| Discounted Payback Period (DPP) | 0.4 years | 0.4 years | 0.1 years |
| Production Equivalent Units | n/a | n/a | n/a |
| Impact on Unit Cost | n/a | n/a | n/a |
| %Impact on Unit Cost | n/a | n/a | n/a |

Comparative Metrics

 DPP based on initial capital costs and cumulative net cash flows. (Unchecked--based on all costs and cumulative benefits.)


Focus of Opportunity

Explore Alternatives

Parameters

General Assumptions

Benefits and Drawbacks

Number of Incidents

Cost of Incidents

Incident Approach Results

Benefits

Regular Costs (Expenses)

Capital Costs/Depreciation

Decision Matrix Questionnaire

Metrics

Decision Matrix Results

Recommendations

Integrated Disability Management Results

| | Estimated | Actual 99 |
|-----|-------------|-------------|
| NPV | \$3,364,546 | \$5,403,842 |
| IRR | 4,121% | 6,612% |
| ROI | 154% | 155% |
| DPP | 0.1 years | 0.1 years |

Integrated Disability Management Results

Financials are outstanding

Employee response overwhelming

Management sees win-win

- **Quantitative as well as Qualitative Success**

Expanding into Health and Wellness

- **Focused based upon demographics**
- **Focused based on probability of success**
 - Considering both impact on individual lives as well as potential savings

Overall Recap

**“What Counts In Knowledge Is What
You Learn After You Reach The Point
Where You Know It All”**

Anonymous

Steps to Making A Successful Value Case

- **Show overall economic impact of your project or program**
 - Cost**
 - Impact on product or services**
 - Impact on other parts of the business**
 - Links to business strategy, etc.**
- **Demonstrate high probability of project/program success (address critical success factors)**
- **Make the case that your approach is credible (anticipate tough questions)**
- **Provide insights to key managers how it will benefit them personally**
- **Weave in continuous improvement**
- **Anticipate other factors (like being offered a reduced budget)**
- **Take the risk!!!**

Communication Is Critical

Technical improvements in measuring safety and health efforts, by themselves, will not drive change.

S&H professionals must learn to communicate to the rest of the business in terms that they understand.

Making the Value Proposition

- **Demonstrating value is prudent and doable; different approaches work in different situations**
 - **Whenever possible, link safety and health performance closer to the overall business strategy**
 - **Work to enhance the ability of S&H to compete for resources internally**
- **Remember this is all about being empowered to do more good!!**

Thanks for Your Attention and
Interest!!!

Questions???

