



Annual Workplace Safety and Health Conference

Risk Management: What Is It and Why Is It Important to You?

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Objectives

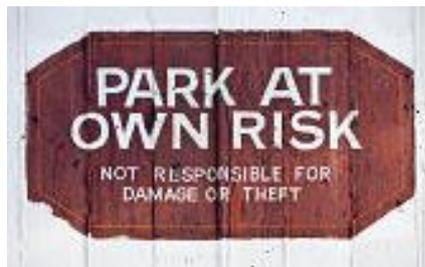
- What is risk management?
- How is it implemented within an organizations?
- How does a company evaluate and mitigate risk?
- The role of return on investment (ROI)



Risk Management



Everyday Risks



These Days Are Gone...



Framework

- Identification
- Assessment
- Prioritization
- In return, these competencies help build world-class companies that exhibit strong safety cultures and high returns on investments.



Identification

- The first step in the risk management process is to identify risks throughout the organization.
- Once the risks are identified, one must determine the severity and likelihood of an occurrence.



Identification



Identification

		Potential severity of harm		
		Slightly Harmful 1	Harmful 2	Extremely Harmful 3
Likelihood of harm occurring	Highly unlikely 1	Trivial 1	Tolerable 2	Moderate 3
	Unlikely 2	Tolerable 2	Moderate 4	Substantial 6
	Likely 3	Moderate 3	Substantial 6	Intolerable 9



S-M-A-R-T Goals

- S**pecific
- M**easurable
- A**ctionable
- R**ealistic
- T**ime-oriented



Risk Assessment

- In most cases, the risks that have the highest probability are handled first in the mitigation process.
- Furthermore, risk can be broken down into the categories of hazard, operational, financial, and strategic.



Risk Control Techniques

- Avoidance
- Loss prevention
- Loss reduction
- Separation
- Duplication
- Diversification



Risk Financing

Transfer

- Insurance
- Noninsurance risk transfer
 - Hold-harmless (indemnity) agreements
- Retention



WHY



Benefits of Managing Safety

Increased

- Productivity/efficiency
- Quality
- Worker satisfaction and morale
- Employee engagement/relations
- Public relations/goodwill



Benefits of Managing Safety

Decreased

- Accidents/ injuries
- Absenteeism
- Fines, workers compensation, claims
- Turnover



High Performing Organizations

Correlation

- Operational excellence
- Safety excellence
- Bottom-line performance



A Safety Management System Is...

An organized and structured means of ensuring that an organization (or a defined part of it) is capable of achieving and maintaining high standards of safety performance.



5-20

Components of a Safety Management System

Administrative and Management	<ul style="list-style-type: none">■ Management leadership and commitment■ Organizational communications and system documentation■ Assessments, audits, evaluations, and continuous improvement
Operational and Technical	<ul style="list-style-type: none">■ Hazard recognition, evaluation, and control■ Facility design and engineering■ Operational safety programs
Cultural and Behavioral	<ul style="list-style-type: none">■ Employee involvement■ Motivation, behavior, and attitude■ Training & orientation



Motivators for HSE Performance

- Finance – affects the bottom line
- Humanist – the right thing to do
- Regulatory – the law
- Public Relations – goodwill /image
- Employee/labor relations – companies need them



NSC's Essential Characteristics of Safety Excellence

Management Leadership and Commitment	Measuring Safety Performance
Meaningful Employee Involvement	Continuous Improvement



Management Leadership and Commitment

- Clearly demonstrates ownership and accountability for HSE.
- Ensures HSE takes precedence over schedule and cost.
- Participates in orientation process.
- Participates in meetings
 - Group safety meetings
 - Pre-job meetings



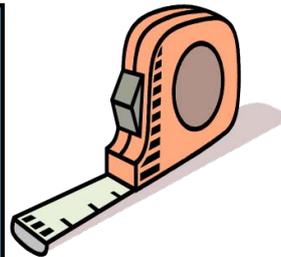
Management Leadership and Commitment

- Participates in development of appropriate actions regarding inspection findings.
- Participates in the investigation of all accidents.
- Participation ensures disciplinary process is enforced and consistent.
- Participation encourages employee participation and promotes safe behavior.



What Is Measurement?

A process of assessing an organization's activities and procedures, then assigning a numerical value.



Measuring Safety Performance

- What gets measured gets done
- What gets measured gets managed



Employee Involvement

- Provided with a direct line of communication to management.
- Involvement in group safety meetings as well as pre-job planning meetings.
- Participate in site inspections.
- Participate in job risk analysis development.
- Participate in the hazard elimination program.
- Sign off and acknowledge safety rules, policies, and guidelines.



Continuous Improvement

- Raise the bar
- Goals – increase in increments
- Benchmark other companies
- Shouldn't be proprietary



Safety Performance Programs

- Companies can generate a ROI from its safety performance.
- Effective programs can minimize costs associated with workplace injuries and improve business performance.
- Lack of programs can impose a heavy cost/burden on a company.





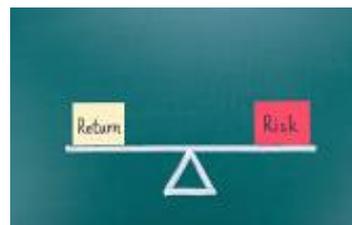
RETURN ON INVESTMENT

https://youtu.be/GXE_n2q08Yw



Return on Investment

- Ratio of the total cost to the total benefits gained
- = $\frac{\text{Total Benefits} - \text{Total Costs}}{\text{Total Costs}}$
- Payback
- Paid in dollars and lives



Reasons for a Business Case

- Rank of project initiatives – value and relative priority compared to alternative initiatives
- Integrated approach – EHS/operations/quality
- Evaluate the company's capability to deliver the objectives and stated benefits
- Usually a company's dedicated resources are usually reserved for the projects that yield the highest return on investment

Source: Wikipedia



Business Case for Safety

- Project Proposal – EHS projects integrated into budget
- How much money should we spend? (payback)
- Why should we spend the money? (benefits)
- Financial impact – pros vs. cons



Business Case for Safety

- Rate of return – Internal/external
- Payback period – how long will it take to recover initial investment?
- Cost avoidance



Business Case for Safety

- Establish baseline activities
- Outcomes for continuous improvement
- Activities – injuries/disabilities
- Indicators – leading and lagging



Liberty Mutual

- A recent poll of executives shows that for every \$1 spent on direct costs, related to an accident, there are another \$3 to \$5 worth of indirect costs...putting the actual cost of an accident (with direct medical and compensation costs of \$15,000), somewhere between \$60,000 and \$90,000.



Liberty Mutual

Executives polled said that for every \$1 their company spent on workplace safety, they saved at least \$3.



ASSE – American Society of Safety Engineers

- Every \$1.00 in direct costs associated with occupational injuries had an additional \$2.12 indirect cost.
- Every \$1.00 invested in workplace safety generated a \$4.41 return.

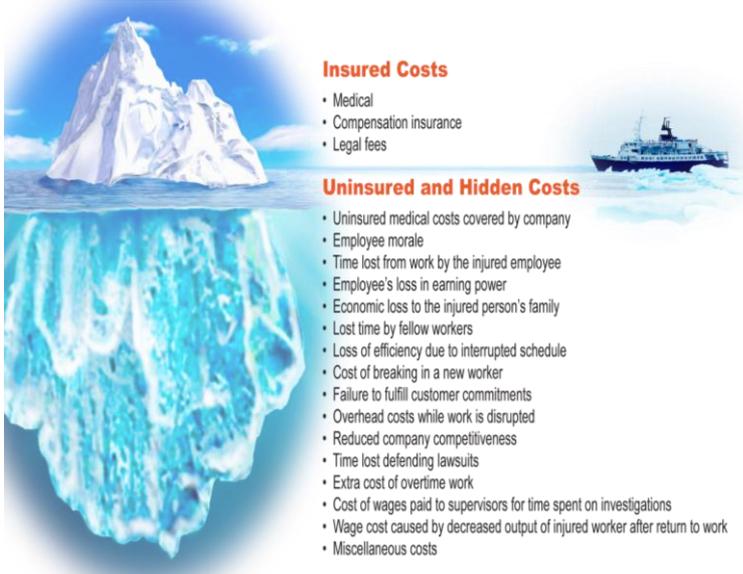


Direct and Indirect Costs

- Direct
 - Occurs immediately as the result of a particular cause of incident/accident
- Indirect
 - Cost that results from, but is not directly caused by, the incident/accident



Insured, Uninsured, and Hidden Costs

An iceberg floating in the ocean. The tip of the iceberg, which is above the water line, represents 'Insured Costs'. The much larger, submerged part of the iceberg, which is below the water line, represents 'Uninsured and Hidden Costs'. A small boat is visible on the water to the right of the iceberg.

Insured Costs

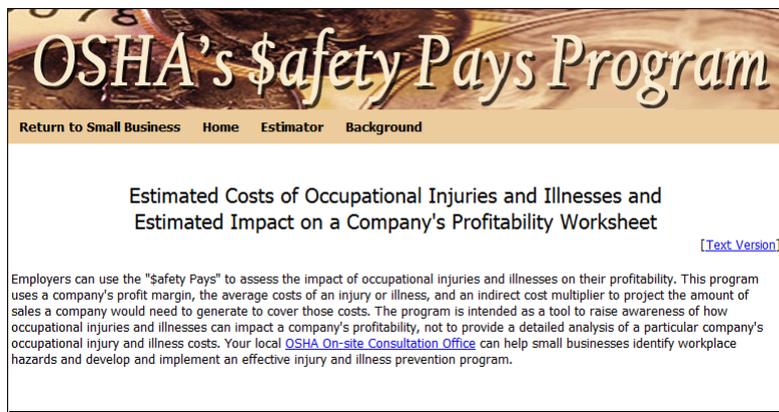
- Medical
- Compensation insurance
- Legal fees

Uninsured and Hidden Costs

- Uninsured medical costs covered by company
- Employee morale
- Time lost from work by the injured employee
- Employee's loss in earning power
- Economic loss to the injured person's family
- Lost time by fellow workers
- Loss of efficiency due to interrupted schedule
- Cost of breaking in a new worker
- Failure to fulfill customer commitments
- Overhead costs while work is disrupted
- Reduced company competitiveness
- Time lost defending lawsuits
- Extra cost of overtime work
- Cost of wages paid to supervisors for time spent on investigations
- Wage cost caused by decreased output of injured worker after return to work
- Miscellaneous costs



OSHA's Safety Pays Program

A screenshot of the OSHA's Safety Pays Program website. The header features the title 'OSHA's Safety Pays Program' in a large, stylized font over a background of coins. Below the title is a navigation bar with links: 'Return to Small Business', 'Home', 'Estimator', and 'Background'. The main content area has the title 'Estimated Costs of Occupational Injuries and Illnesses and Estimated Impact on a Company's Profitability Worksheet' and a link for '[Text Version]'. A paragraph of text explains the program's purpose and how it uses a company's profit margin to project costs.

OSHA's Safety Pays Program

[Return to Small Business](#) [Home](#) [Estimator](#) [Background](#)

Estimated Costs of Occupational Injuries and Illnesses and Estimated Impact on a Company's Profitability Worksheet

[\[Text Version\]](#)

Employers can use the "Safety Pays" to assess the impact of occupational injuries and illnesses on their profitability. This program uses a company's profit margin, the average costs of an injury or illness, and an indirect cost multiplier to project the amount of sales a company would need to generate to cover those costs. The program is intended as a tool to raise awareness of how occupational injuries and illnesses can impact a company's profitability, not to provide a detailed analysis of a particular company's occupational injury and illness costs. Your local [OSHA On-site Consultation Office](#) can help small businesses identify workplace hazards and develop and implement an effective injury and illness prevention program.

<https://www.osha.gov/dcsp/smallbusiness/safetypays/estimator.html>



OSHA

- Companies implementing an effective safety program generated a return of \$4 to \$6 for every \$1 invested.
- Necessary to generate an additional \$250,000 to cover the cost of a \$5,000 loss



Sales to Cover Cost

Accident costs	1 percent profit	2 percent profit	3 percent profit
\$1,000	\$100,000	\$50,000	\$33,000
\$5,000	500,000	250,000	167,000
\$10,000	1,000,000	500,000	333,000
\$25,000	2,500,000	1,250,000	833,000
\$100,000	10,000,000	5,000,000	3,333,000

It is necessary to generate an additional \$250,000 to cover the loss of \$5,000.



OSHA Safety Pays

These estimates include the following kinds of indirect costs:

- Any wages paid to injured workers for absences not covered by workers' compensation;
- The wage costs related to time lost through work stoppage associated with the worker injury;
- The overtime costs necessitated by the injury;
- Administrative time spent by supervisors, safety personnel, and clerical workers after an injury;
- Training costs for a replacement worker;
- Lost productivity related to work rescheduling, new employee learning curves, and accommodation of injured employees; and
- Clean-up, repair, and replacement costs of damaged material, machinery, and property.

Some of the possible kinds of indirect costs not included in these estimates are:

- The costs of OSHA fines and any associated legal action;
- Third-party liability and legal costs;
- Worker pain and suffering; and
- Loss of good will from bad publicity.

"Safety Pays" uses the sliding scale table at right to calculate the indirect costs of the injuries and illness.

Direct Costs	Indirect Cost Ratio
\$0 - \$2,999	4.5
\$3,000 - \$4,999	1.6
\$5,000 - \$9,999	1.2
\$10,000 or more	1.1



Background Cost Estimates

National Council on Compensation, Inc. (NCCI)

- Average cost of lost time workers' compensation claim costs (database)
- Analyzes industry trends, prepares workers' compensation insurance rate recommendations, determines the cost of proposed legislation, and provides a variety of services and tools to maintain a healthy workers compensation system

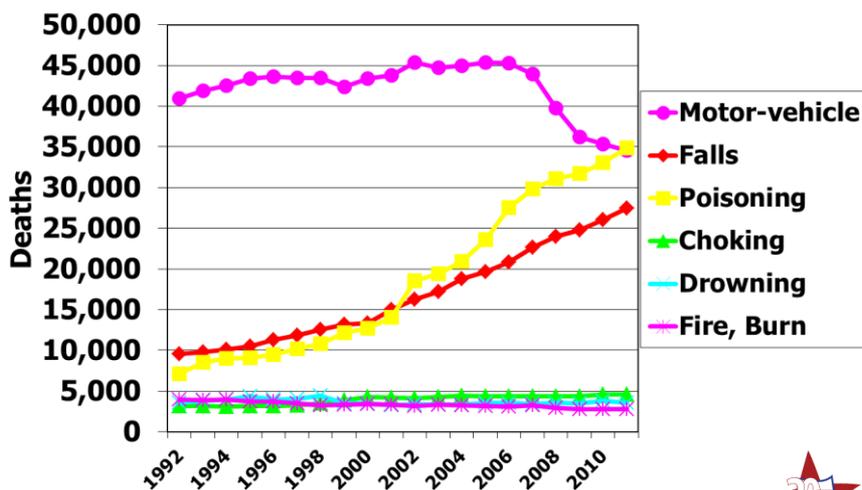


Costs of Unintentional Injuries

Cost (\$ billions)	Total (a)	Motor Vehicle	Work	Home	Public Non-motor Vehicle
Total	\$753.0	\$263.8	\$188.9	\$206.7	\$115.9
Wages Productivity	363.7	85.0	86.7	126.6	69.6
Medical Expense	197.9	57.7	52.3	56.4	34.7
Admin Expense (b)	118.8	78.3	34.2	11.3	7.1
Motor Vehicle Damage	40.6	40.6	2.4	(c)	(c)
Employer's Uninsured Cost	20.3	2.2	10.5	5.1	2.9
Fire Loss	11.7	(c)	2.8	7.3	1.6



Trends in Leading Causes



Source: *Injury Facts*, 2013 Ed.



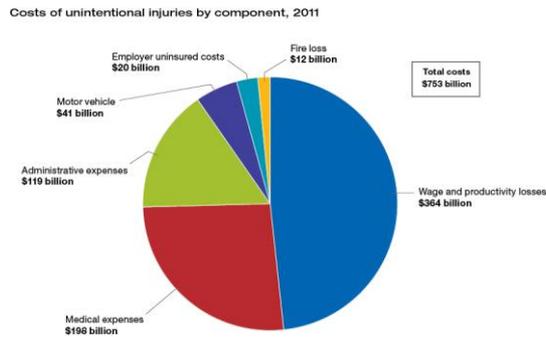
Workplace Deaths by Event, 2011



Source: Bureau of Labor Statistics



Costs of Unintentional Injuries by Component



Source: *Injury Facts*, 2013 Ed.



Wage and Productivity Losses; Medical and Administrative Expenses

Wage and productivity losses

A person's contribution to the wealth of the nation usually is measured in terms of wages and household production. The total of wages and fringe benefits, together with an estimate of the replacement-cost value of household services, provides an estimate of this lost productivity. Also included is travel delay for motor vehicle incidents.

Medical expenses

Doctor fees; hospital charges; the cost of medicines; future medical costs; and ambulance, helicopter, and other emergency medical services are included.

Administrative expenses

Includes the administrative cost of public and private insurance, as well as police and legal costs. Private insurance administrative costs are the difference between premiums paid to insurance companies and claims paid out by them. It is their cost of doing business and a part of the cost total. Claims paid by insurance companies are not identified separately, as every claim is compensation for losses such as wages, medical expenses, property damage, etc.



Motor Vehicle Damage; Employers' Uninsured Costs; Fire Loss; Work – Motor Vehicle Duplication

Motor vehicle damage

Includes the value of damage to vehicles from motor vehicle crashes. The cost of normal wear and tear to vehicles is not included.

Employers' uninsured costs

This is an estimate of the uninsured costs incurred by employers, representing the dollar value of time lost by uninjured workers. It includes time spent investigating and reporting injuries, administering first aid, hiring and training replacement workers, and the extra cost of overtime for uninjured workers.

Fire loss

Includes losses from both structure fires and nonstructural fires, such as vehicles, outside storage, crops, and timber.

Work – motor vehicle duplication

The cost of motor vehicle crashes that involve people in the course of their work is included in both classes, but the duplication is eliminated from the total. The duplication in 2011 amounted to \$22.3 billion and consists of \$4.2 billion in wage and productivity losses, \$3.2 billion in medical expenses, \$12.1 billion in administrative expenses, \$2.4 billion in vehicle damage, and \$0.4 billion in employers' uninsured costs.



Sources

Source: *National Safety Council estimates. See the Technical Appendix. Cost-estimating procedures were revised extensively for the 1993 edition of Accident Facts.*

In general, cost estimates are not comparable from year to year. As additional data or new benchmarks become available, they are used from that point forward.

Previously estimated figures are not revised.

(a) Duplication between work and motor vehicle, which amounted to \$22.3 billion, was eliminated from the total.

(b) Home and public insurance administration costs may include costs of administering medical treatment claims for some motor vehicle injuries filed through health insurance plans.

(c) Not included, see comments above.

Source: *Injury Facts, 2013 Ed.*



Business Preparedness

Contingency Plans

- The law
 - SPCCC
 - Hazardous waste classification
 - OSHA
- Just the right thing to do



Business Continuity



Summary

- Defined risk management
- Implementation within an organizations – Identification
- Evaluation and mitigation of risk – assessment
- ROI



Summary

- Risk management is only as good as the people researching the possibilities and implementing the solutions.
- An organization's willingness to act can directly affect employee morale, economic stability, and regulatory compliance.



Questions



Contact



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