



# Making \$ense of Safety

*Managing a Cost Effective Safety Process*

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making our world safer®



# Creating a Cost Effective Safety Process





# What is your business model?

- A budget driven entity?
- A non-profit or educational entity
- Corporate or private “for-profit” entity



# Your place within that model

- Safety compliance specialist
- Safety cheerleader
- Corporate safety consultant
- Supervisor
- Area manager or executive



**If your organizations purpose is to generate profit, provide a service or be a well run government program, how can you directly support that function?**



**ANSWER:** Demonstrate and promote the maximum Effective and Efficient use of employees, assets and money to accomplish the corporate mission.

Do you believe that the Workplace Safety Program is an integral part of your organizations effort to make money or perform a service?



# Definition of Safety

**The control & elimination of recognized hazards to attain an acceptable level of risk.**



# Key Safety Terms

- Occupational Safety
- Incident
- Hazard
- Acceptable level of risk
- Risk assessment
- Hierarchy of controls







# Motivators for Improving Safety & Health Performance

- Financial
- Humanistic
- Regulatory
- Public Relations
- Employee/Labor Relations





# Business Case for a Safety Management System

- Improved employee relations
- Improved productivity & reduced costs
- Improved quality
- Enhanced public image
- Enhanced Competitive Stance

*Good Safety Practice is  
Good Business Practice!*



# Safety Managers Questions

1. How profitable is your organization?
2. Where are loses occurring?
3. What is your associate turnover rate by area?
4. How much are injuries/insurance costing?
5. How much equipment repair/replacement costing?
6. How much is training and PPE costing?
7. What are you currently doing to enhance profitability?



# Gathering Data

**In dealing with Management and Supervisory personnel providing them with accurate meaningful information is crucial.**

**KNOWLEDGE IS POWER**



# **Financial Breakdown**

**How much have unsafe conditions, acts or attitudes cost your organization (either in profits or efficiency or both) during the last 3 years?**

**How much are they costing you now?**

**How about next year?**



Medical Treatment

Lost or Unhappy clients

EXCESSIVE SPILLS

Overtime pay

Legal Fees

Equipment Damage

Employee Replacement

Workers compensation



# Incidents are Costly

- Total costs: \$183.0 billion
- Cost per worker: \$1,250
- Cost per death \$1,310,000 million
- Cost per disabling injury: \$48,000

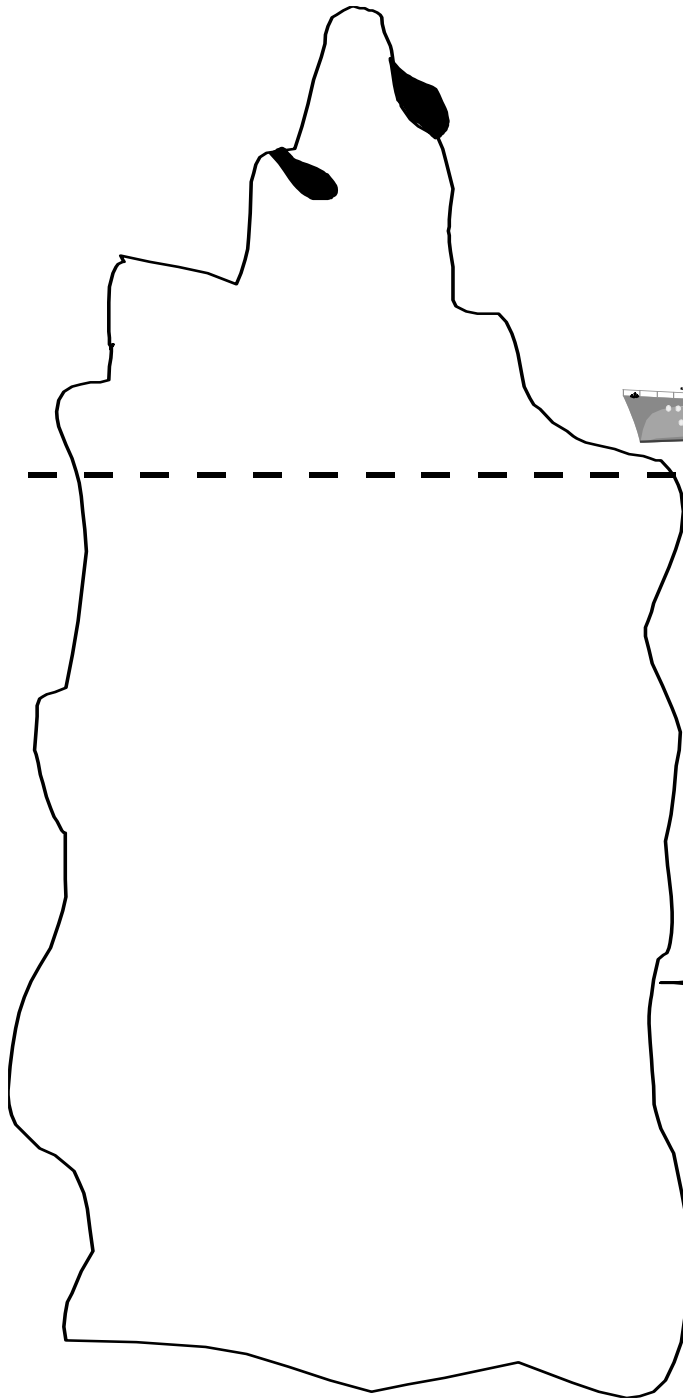
*\*Statistics taken from the NSC's Injury Facts® 2010 Edition*



# Incidents are Costly

- Incident costs
  - Insured  
(definite and known)
- Uninsured  
(not always visible on the surface)





### Insured Costs

- Workers' compensation payouts
- Insurance premium increases
- Medical
- Indemnity
- 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



# The Economic Burden of Profits

- Cost of injuries: \$500
- Profit margin: 1%

$$\frac{\text{Costs}}{\text{Profit Margin}} = \text{Sales}$$

- Sales necessary to regain lost profits:  
\$50,000



# Examples of Financial Impact (From OSHA “Safety Pays”)

## ADDITIONAL SALES REQUIRED TO COVER COST

If profit margin is:

Injury Cost	1%	5%
\$500	\$50,000	\$10,000
\$5000	\$500,000	\$100,000
\$25,000	\$2,500,000	\$500,000



# Benefits of Injury & Illness Recordkeeping

- Measure effectiveness of your safety program
- Identify high incident areas
- Enlist management support
- Enlist employee support
- Measure effectiveness of countermeasures
- Meet OSHA/government requirements



# **Experience Modification Rate Used by Insurance Companies**

- **Loss experience measured against average for industry**
- **Measured over 3 year period**
  - < 1.0 = discount on premium**
  - 1.0 = average**
  - > 1.0 = surcharge on premium**

**The EMR is often used to compare companies safety programs for contract awards, particularly in construction and service industries.**



# Goals of Workers' Compensation Program

- Prevent incidents
- Respond promptly and efficiently
- Control Costs



# Types of Workers' Compensation

- Loss of income
- Medical payments
- Rehabilitation expenses



# Disability Categories

- Temporary Total (TTD)
- Temporary Partial (TPD)
- Permanent Partial (PPD)
- Permanent Total (PTD)
- Fatality





# Managing WC Program

- Report incident promptly
- Investigate
- Appropriate medical care
- Monitor employee treatment / wellbeing
- Medical / vocational rehab
- Back to work
- Follow up until case closed



# Information Compilation

## Incidence Rate Formula

- R = incidence rate
- N = number of cases
- 200,000 = base for 100-full time employees (40 hours per week, 50 weeks per year)
- EH = employee hours

$$R = \frac{N \times 200,000}{EH}$$





# Incidence Rates from OSHA 300 Log

- Total cases
- Cases resulting in death (G)
- Cases with *Days Away* (H), job *Transfer* or *Restriction*
- *Cases with days away from work (H)*
- *Other recordable cases (J)*



# Let's Calculate a Rate

- R = Total case rate
- N = Total cases (9)
- EH = Employee Hours (340,000)

$$R = \frac{9 \times 200,000}{340,000}$$

$$R = 5.29$$



# Purchasing and the Budgeting Process

Safety must present itself as an integral part of the business plan and budgeting process.



# The Importance of Budgeting for Safety & Health

- Essential for planning
- Know where your money will come from & where it will go
- Makes you responsible for safety related procurement



# Cost-Benefit Analysis

Demonstrate costs of poor safety & health habits far outweigh cost of preventative safety.





# Information Compilation

## Cost Benefit Analysis (CBA)

1. Type of incident: 12 eye injuries in 1 year
2. Proposed fix: Drill shield
3. Cost of proposed solution  $\$800 \times 12 = \$9,600$
4. Cost of one incident  $\$2,000$
5. Compare #2 and #3  $9,600/2,000 = 4.8$
6. Number of prevented to pay for fix 4.8
7. Likelihood fix will prevent injury 70%
8. Potential loss prevention Yr 1 =  $8.4 \times 2000 = \$16,800$
9. Profit margin 5%
10. Value of savings  $\$16,800 / .05 = \$336,000$  in sales.....





# Information Compilation

## Return on Investment (ROI)

- Amount of money saved vs. cost of item

### Example

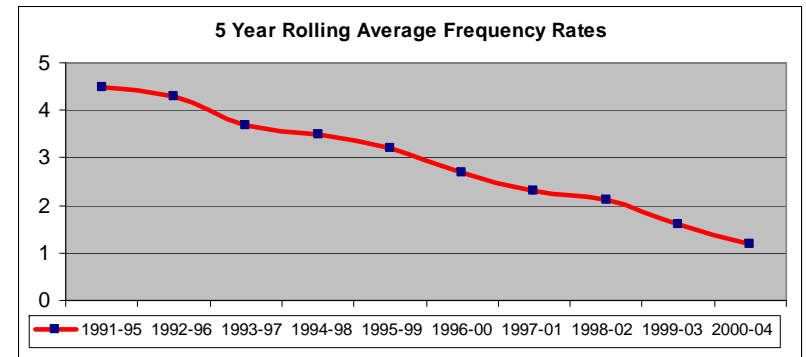
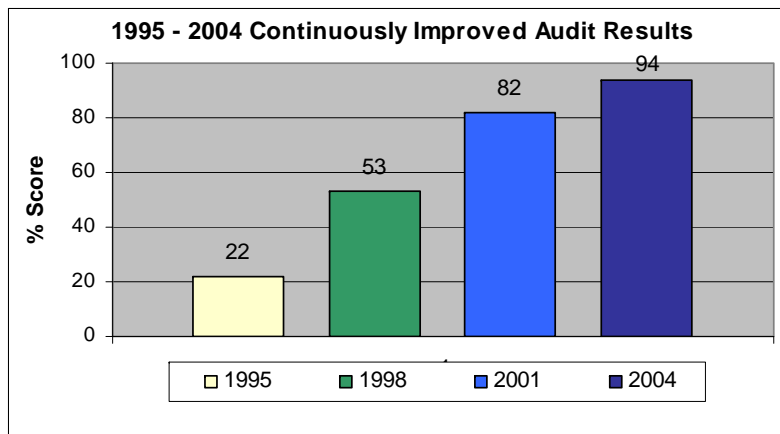
- A. Cost of incidents before trng (last yr)  
\$400,000
- B. Cost of incidents after trng -20%  
\$320,000
- C. Gross savings (A – B) = \$80,000
- D. Total training cost \$50,000
- E. Return on Investment (C-D) = \$30,000



# Providing Metrics to Consumers

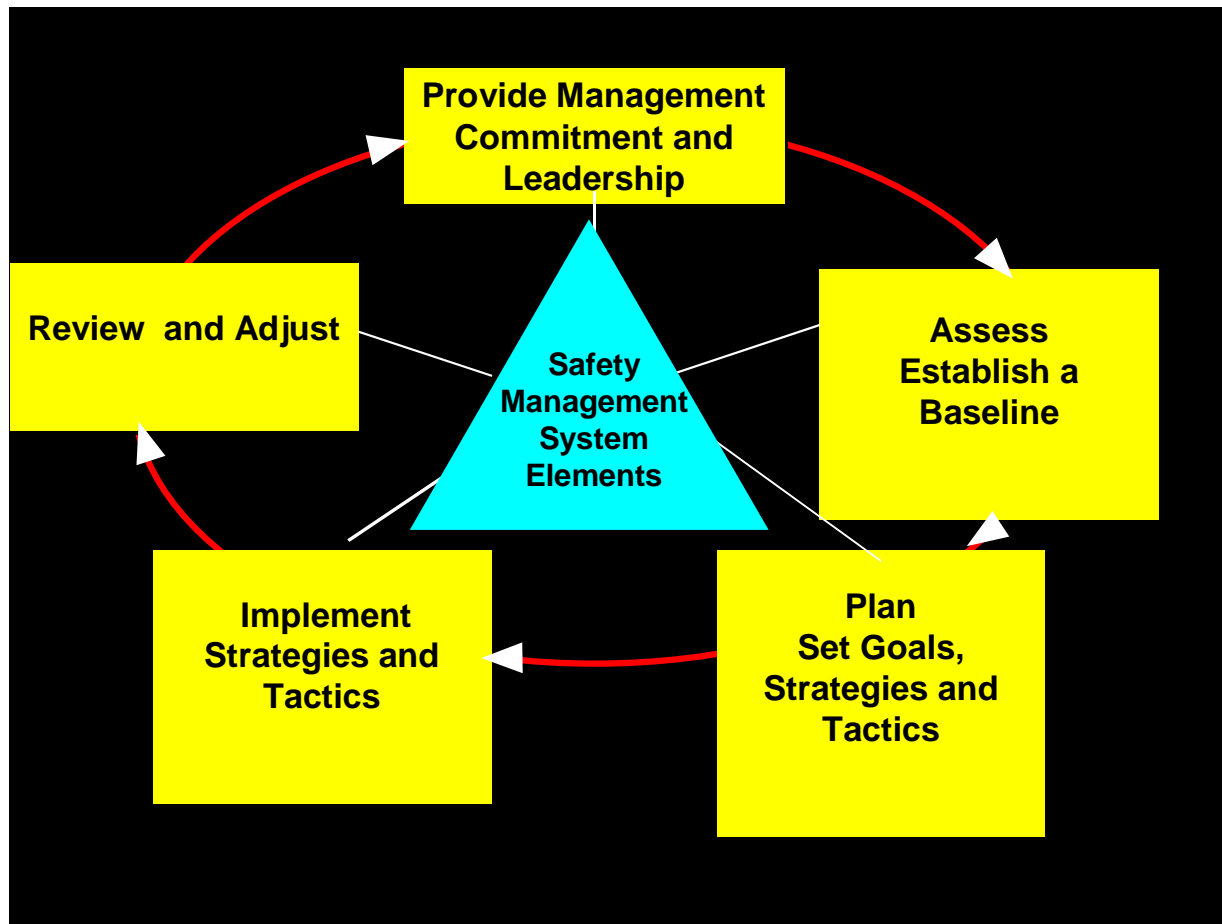
Determine format to use

Train consumers on interpretation





# Basics of Safety Management





# Four Characteristics of Safety Excellence

1. Management commitment and leadership
2. Meaningful employee involvement
3. Measurement systems
4. Continuous improvement



# 1. Management Commitment & Leadership

- Develop a safety improvement plan
- Ensure senior management is visibly participating in activities
- Create a budget for safety initiatives
- Build safety into the strategic plan & operating goals
- Reward & recognize participation & good performance



## 2. Meaningful Employee Involvement

- Involve employees from **ALL** levels
- Proactive activities
- Focus on recognition, evaluation, and control or elimination of workplace hazards



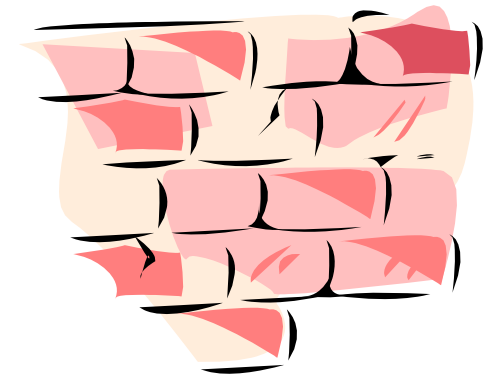
# Employee Involvement Requirements

- Management commitment
- Individual development, training, involvement, & influence
- Constant and varied communication
- Recognition, reward & reinforcement
- Appropriate proactive hazard recognition techniques



# Barriers to Employee Involvement

- Lack of trust
- A climate of fear
- Resistance from managers, unions, support people
- Lack of communication
- Lack of demonstrated commitment from top leadership







# Employee Involvement Tools

- Job Safety Analysis (JSA)
- Physical Hazard Inspections
- Employee Safety Training
- Safety Meetings
- Job Safety Observation (JSO)





# 3. Safety Performance Measurement

- Benefits:
  - Management focuses on proactive initiative to reach goals
  - Clarifying & identifying goals/plans is easier
  - SMART\* action plans
  - Compare performance among groups

\*SMART = Specific- Measurable – Action Oriented – Realistic – Time Bound



# Developing Effective Measurement Systems

- A correlation between activities & incident rates
- Measurements should:
  - Include safety-related behaviors
  - Reflect management activities that support safe behaviors

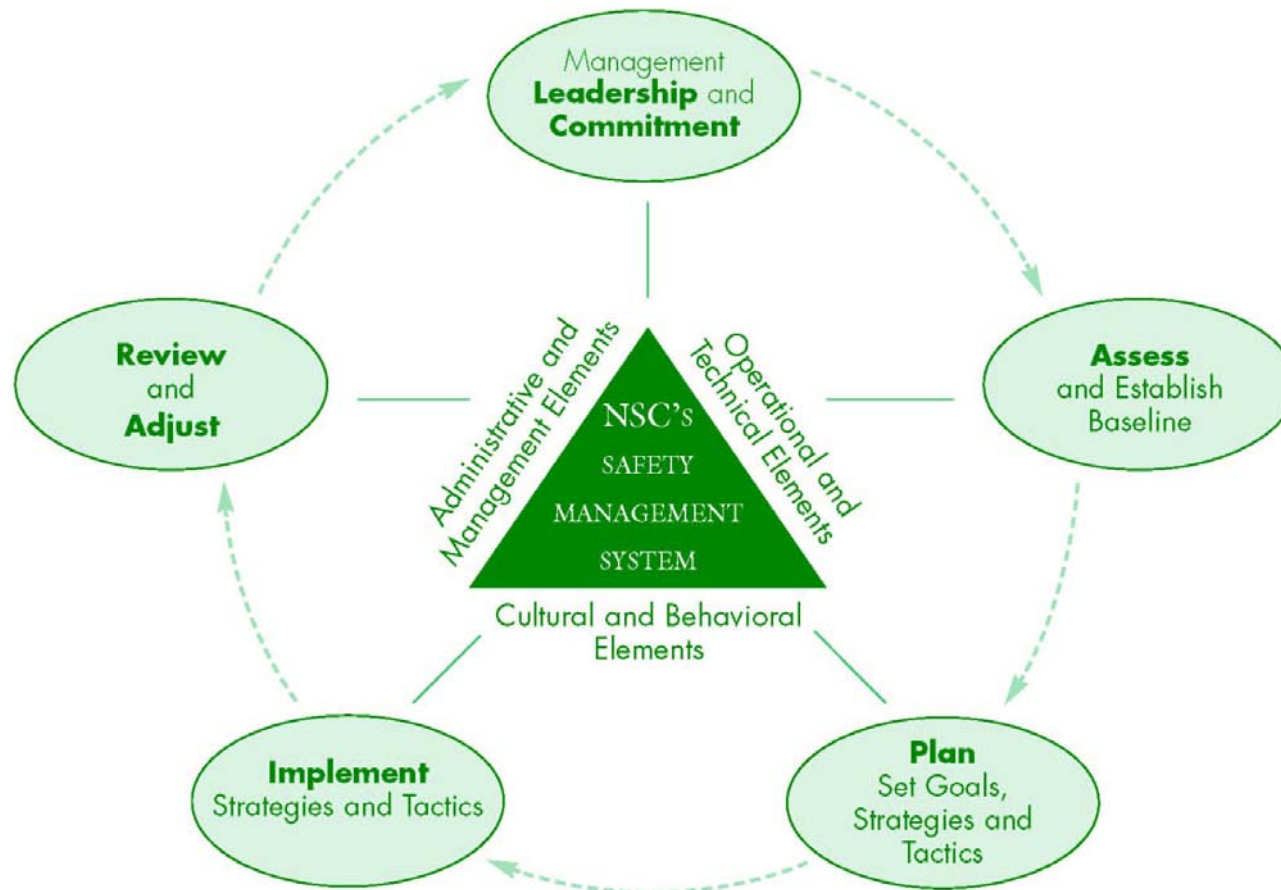


# Developing Effective Measurement Systems (cont.)

- Use activity/process-oriented **proactive** and results-oriented **reactive** measures
- Identify and apply measures to appropriate organizational levels
- Establish measurements aligned with organizational priorities and support continuous improvement



# 4. Continuous Improvement Process





# Factors for a Successful Safety Management System

- Clearly stated mission statement
- Defined safety management system goals & corresponding objectives
- Visible senior management involvement
- Employee involvement
- Responsibilities assigned to managers & supervisors
- Adequate authority & resources



# Factors for a Successful Safety Management System (cont.)

- Managers, supervisors, and hourly employees held accountable
- Periodic reviews of goals, objectives and action items
- Worksite (GAP) analysis
- Incident investigation and statistical analysis
- Safety and health training for *all* employees



# Initiating a Safety Management System

- Organized, structured, managed process:
  - Commits to safety as a value
  - Integrates safety into business planning processes
  - Emphasizes continuous improvement of safety management system



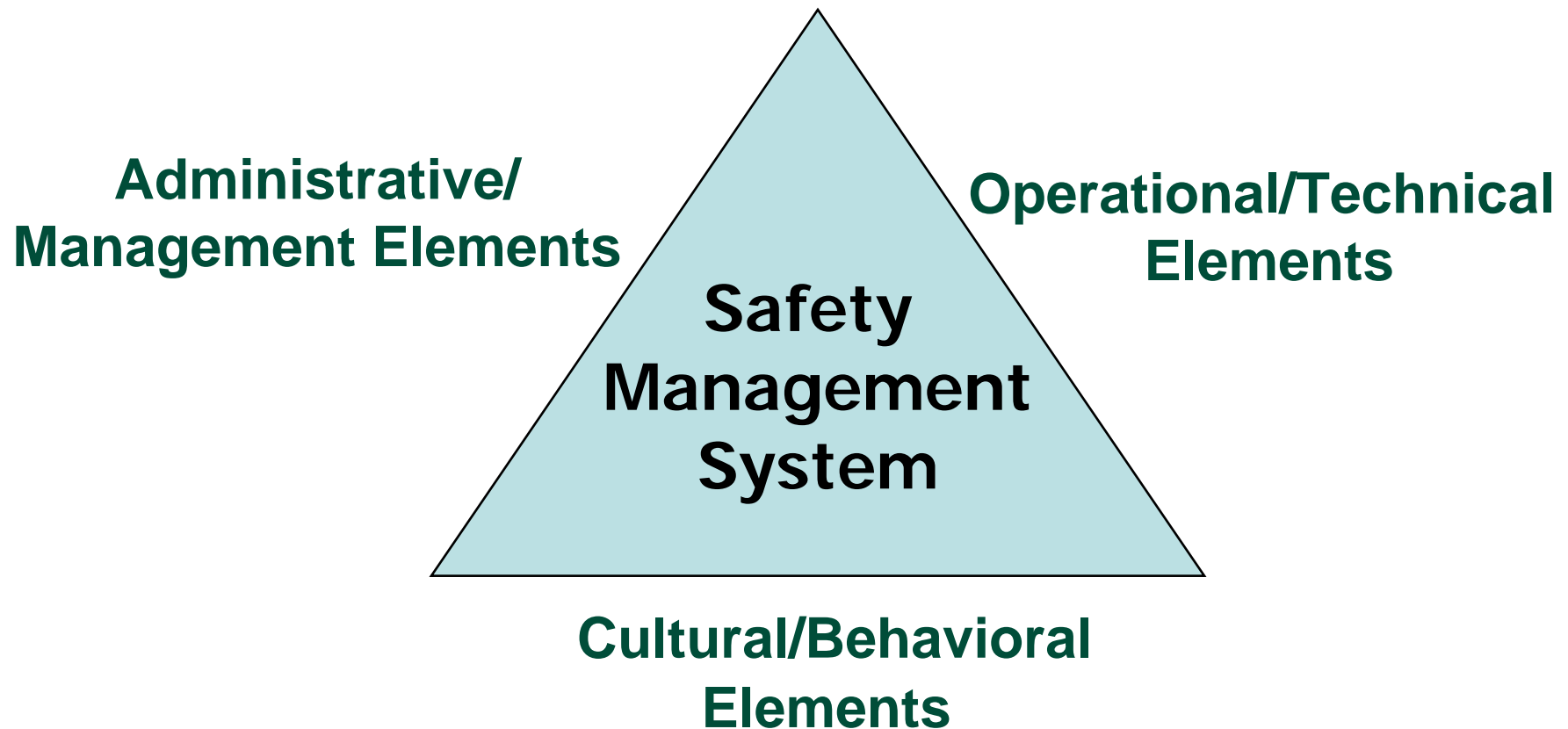


# Reactive vs. Proactive Safety Management Systems

- **Reactive** approach assumes that incidents just happen and there is not much that can be done about it.
- **Proactive** approach emphasizes prevention – doing whatever it takes to make sure incidents never happen in the workplace.



# Comprehensive System Balance Approach





# Elements of the Safety Management System

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