Introduction to Safety and Health for Industrial Units

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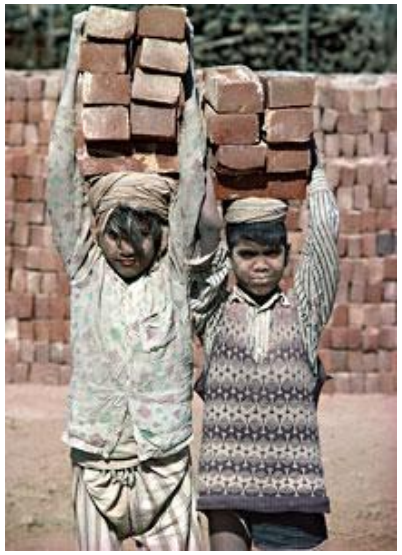
Content

- Introducing Safety and Health concepts
- Elements of Safety and Health Programs

Safety is not in our DNA!!

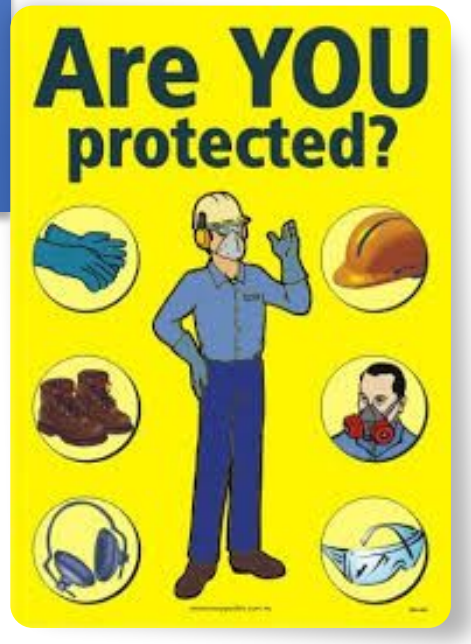
and
I am not
complaining!

And this reflects in our workplace as well



How to prevent Accidents? – Existing Approaches

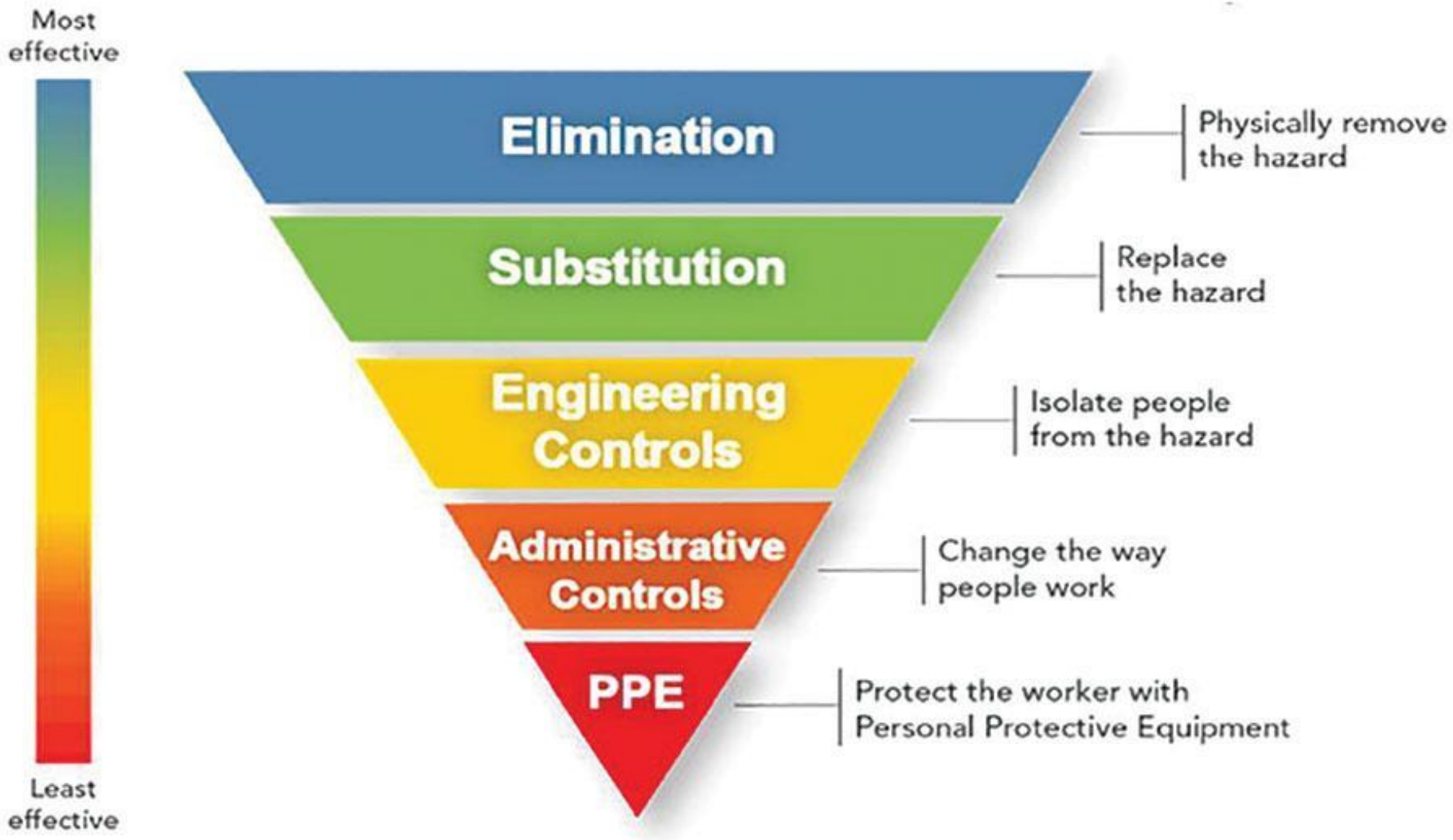
By providing employees with the maximum protection possible



By training employees to recognize potentially hazardous situations and take the most appropriate actions

Note that both the above premise implicitly recognize that the ***potential for an accident*** *is always present!*

Hierarchy of Controls



What is a Hazard?

A hazard is anything that has the potential to cause harm

- Anything that can **cut** you
- Anything that can **trip** you
- Anything that can **burn** you
- Anything that can **crush** you
- Anything that can **hurt** your **hearing**
- Anything that can **hurt** your **eyes**
- Anything that can **cause** you **pain**
- Anything that can **lead** to **illness**

Unsafe Acts and Unsafe Conditions contribute to 'Hazards'

Factors causing Hazards

Unsafe Conditions

- Untidy work areas
- Faulty equipment
- Damaged floors
- Inadequate lighting

Relates to Behaviours

Unsafe Acts

- Not following safe work procedures
- Inappropriate use of equipment
- Not wearing PPE

Intentional or **unintentional violation**

- Acts of indifference
- Lack of knowledge
  - Lack of experience
  - Poor or insufficient training

What is a Risk?

HAZARD

- Likelihood
  - Occurrence
  - Exposure

+

- Severity
  - Ill Health
  - Injury

Concept of Risk

Risk cannot be justified except in extraordinary circumstances

Residual Risk is tolerable only if further risk reduction is impractical

Risk are negligible or small and can be managed

What is an Incident?

An incident is any event that has resulted in or has the potential to result in an injury.

- Fatal Accident - any work related accident causing death
- Lost Time Injury (LTI) - if a worker is unable to work on a subsequent scheduled shift or work day because of a work related accident or illness
- Non-lost time injury (Non-LTI) - if a worker meets an accident that requires medical attention
- Near Miss Case (NMC) An event that could have resulted in injury/fatality

Some Clarifications...

- An accident is an incident which has given rise to injury, ill health or fatality.
- An accident where no injury, ill health, or fatality occurs may also be referred to as a "near-miss"
- An emergency situation is a particular type of incident

- Reportable Accident (*as per Factories Act and associated Rules*): work-related accident causing the absence of more than 48 hours, before the victim is able to return to normal or restricted work.

Determining Operational Controls

Eliminate fall hazard due to uneven surface by paving the Surface

Eliminate

Piano switches substituted with Industrial grade switches

Substitute

Grinder without safety guard fitted with guard

Engg. Control

Lock Out- Tag Out introduced for electrical maintenance

Admin Control

Use of PPEs mandated for workers

PPE

Elements of
Safety and Health Programs

Management Leadership

- Communicate top management commitment – Policy!!
- Define program goals and expectations
  - *Make them **SMART**!! - Specific, Measurable, Achievable, Realistic, and Timely*
  - *Safety Plans*
- Resource allocation
  - *Monetary as well as Manpower*
- Define Authority, Responsibility and Accountability

Worker Participation

- Encourage workers to report safety and health concerns
  - *Accident and near miss reporting system*
- Encourage workers participation and involvement
- Provide safety and health information
  - *Safety and heath hazards*

Hazard Identification, Assessment and Control

- Collate information about workplace hazards
- Carry out Risk Assessment
- Identify existing Controls and their effectiveness
- Identify gaps in control and introduce effective controls

Emergency Preparedness

- Prepare before an emergency incident strikes
- Identify Potential Emergencies
- Devise **Emergency Preparedness and Response Plan** to mitigate or control each emergency situation
  - *Identify preventive measures*
  - *Identify preparedness requirement*
  - *Define Emergency Response Procedure*
  - *State the Recovery Plan*
- Test the Plan – Mock drills

"**Emergency**" is an **unforeseen situation** that threatens employees or the public, disrupting / shutting down operations, or causing physical or environmental damage

Building Competency and Training

- Who should be competent?
  - *Each worker and employee*

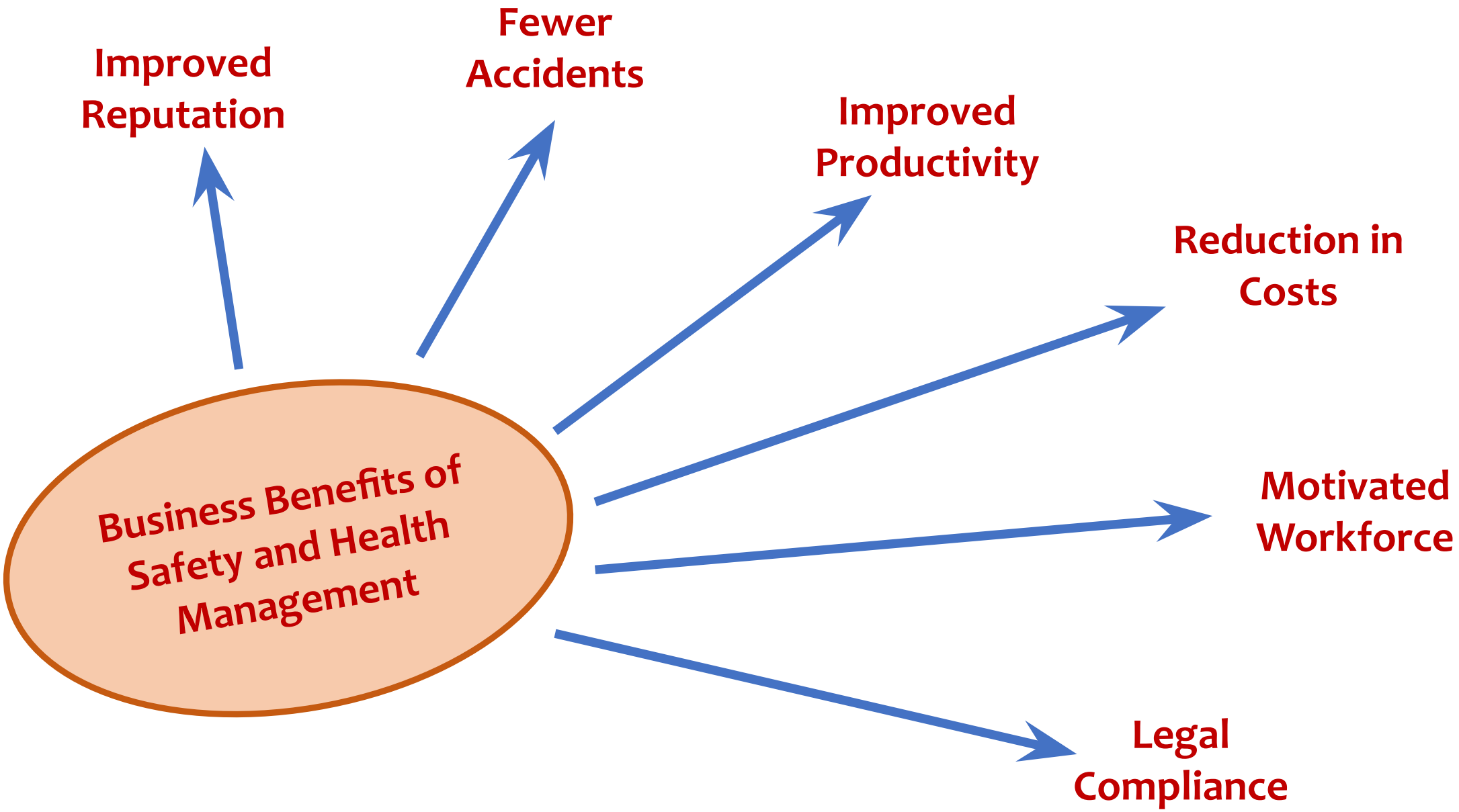
Competence in Health and safety should be seen as an important component of workplace activities, …

…not an add-on or afterthought

- Identify training needs and develop plan to deliver

Program Evaluation

- Validate Program implementation
- Ensure safety practices (Controls) are implemented
- Check incidents are reported, investigated and corrective actions taken
- Review progress routinely


Improved Reputation
Fewer Accidents
Improved Productivity
Reduction in Costs
Motivated Workforce
Legal Compliance
Business Benefits of Safety and Health Management

Thank you

PAGE PARTNERSHIP FOR ACTION ON GREEN ECONOMY

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Ministry of Environment, Forest and Climate Change

Indian Railways
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