Accident Investigation

Sandra Prior

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Objectives

- What is an incident? What is an accident?
- Why should you investigate both?
- How should you investigate?
- What results are you looking for?

What is an Incident

Unplanned and unwanted event which disrupts the work process and has the potential of resulting in injury, harm, or damage to persons or property.

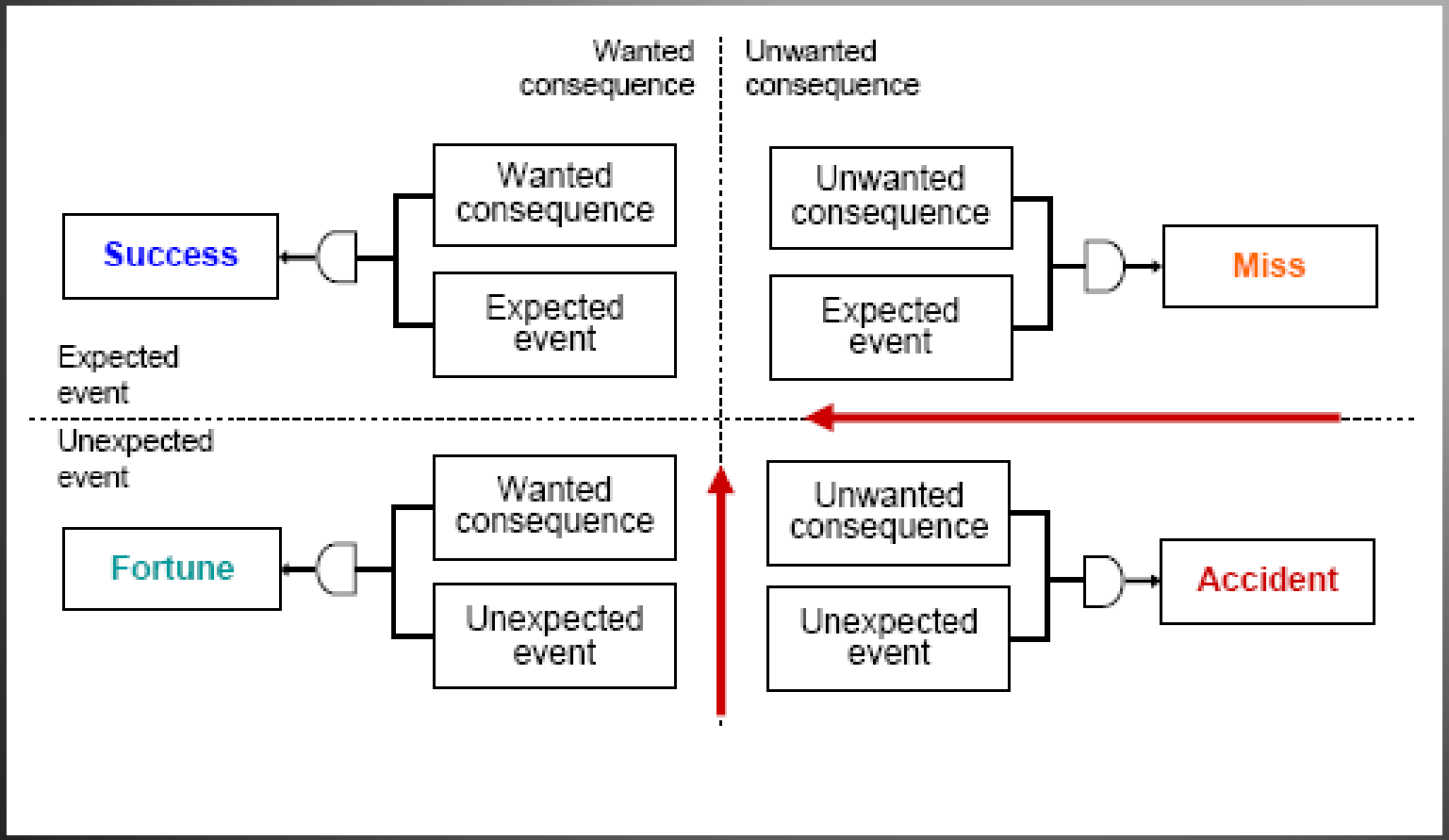
- disrupts the work process
- does not result in injury or damage
- should be looked as a “wake up call”

What is an Accident?

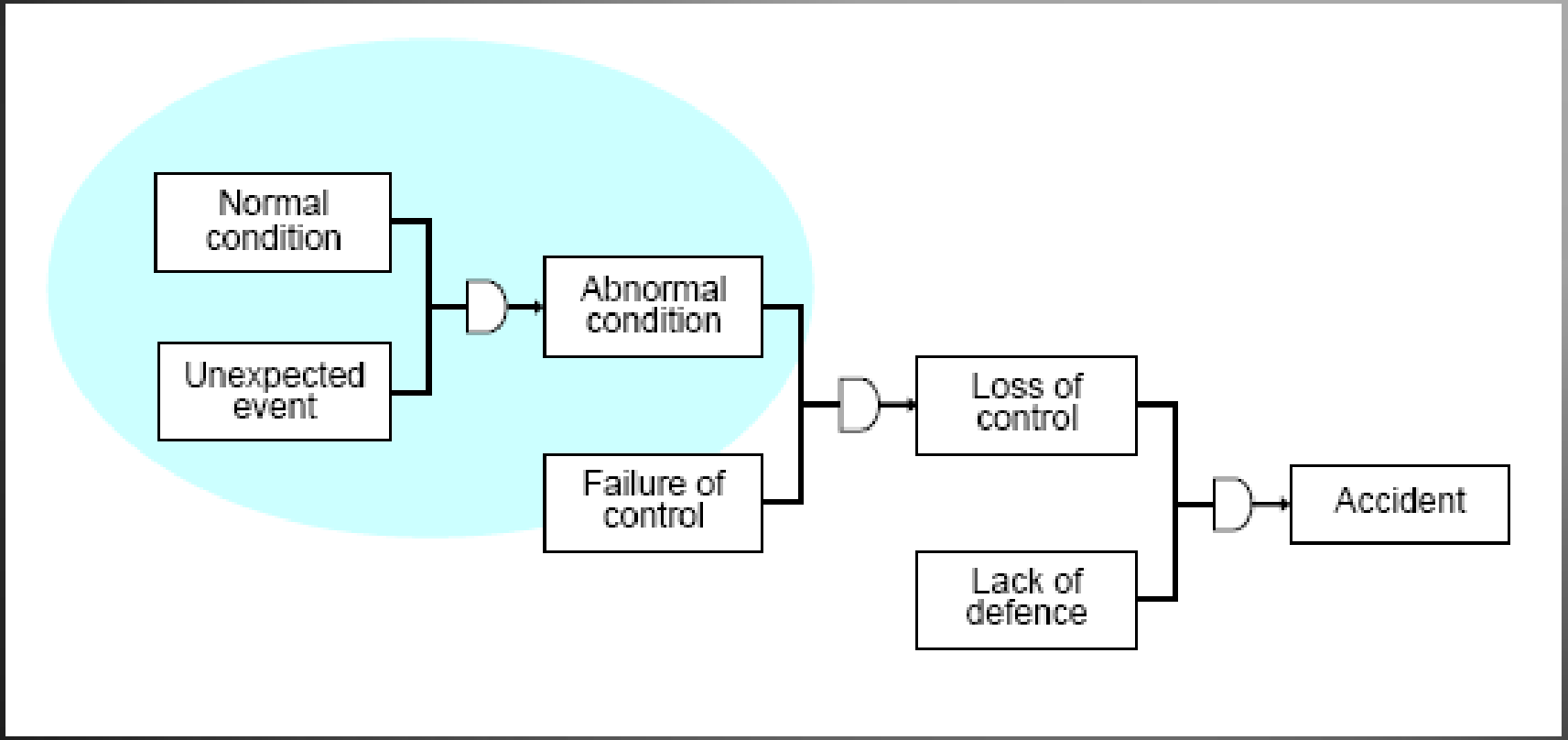
Unplanned, unwanted, but controllable event which disrupts the work process and causes injury to people.

- is unplanned and unwanted
- Is controllable
- stops the normal course of events
- Causes property damage & bodily harm

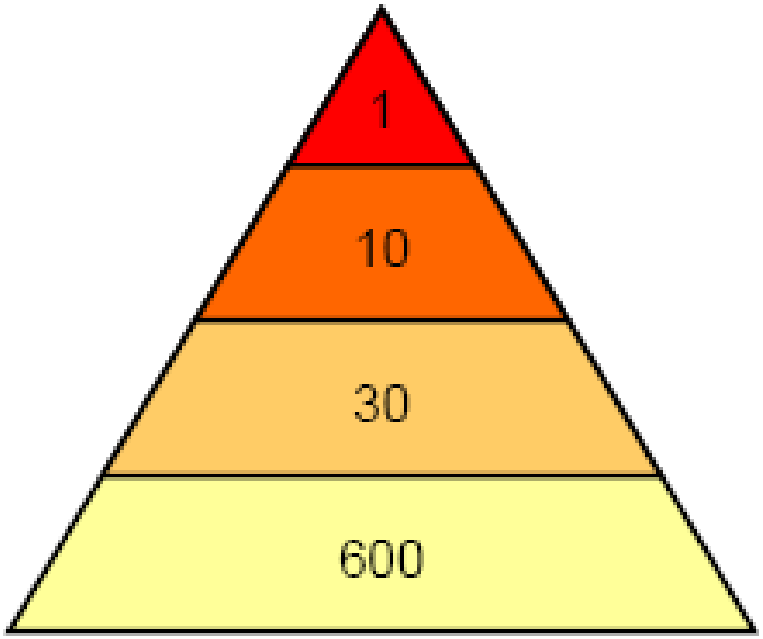
What is an accident?



Anatomy of an Accident



Accident Pyramid



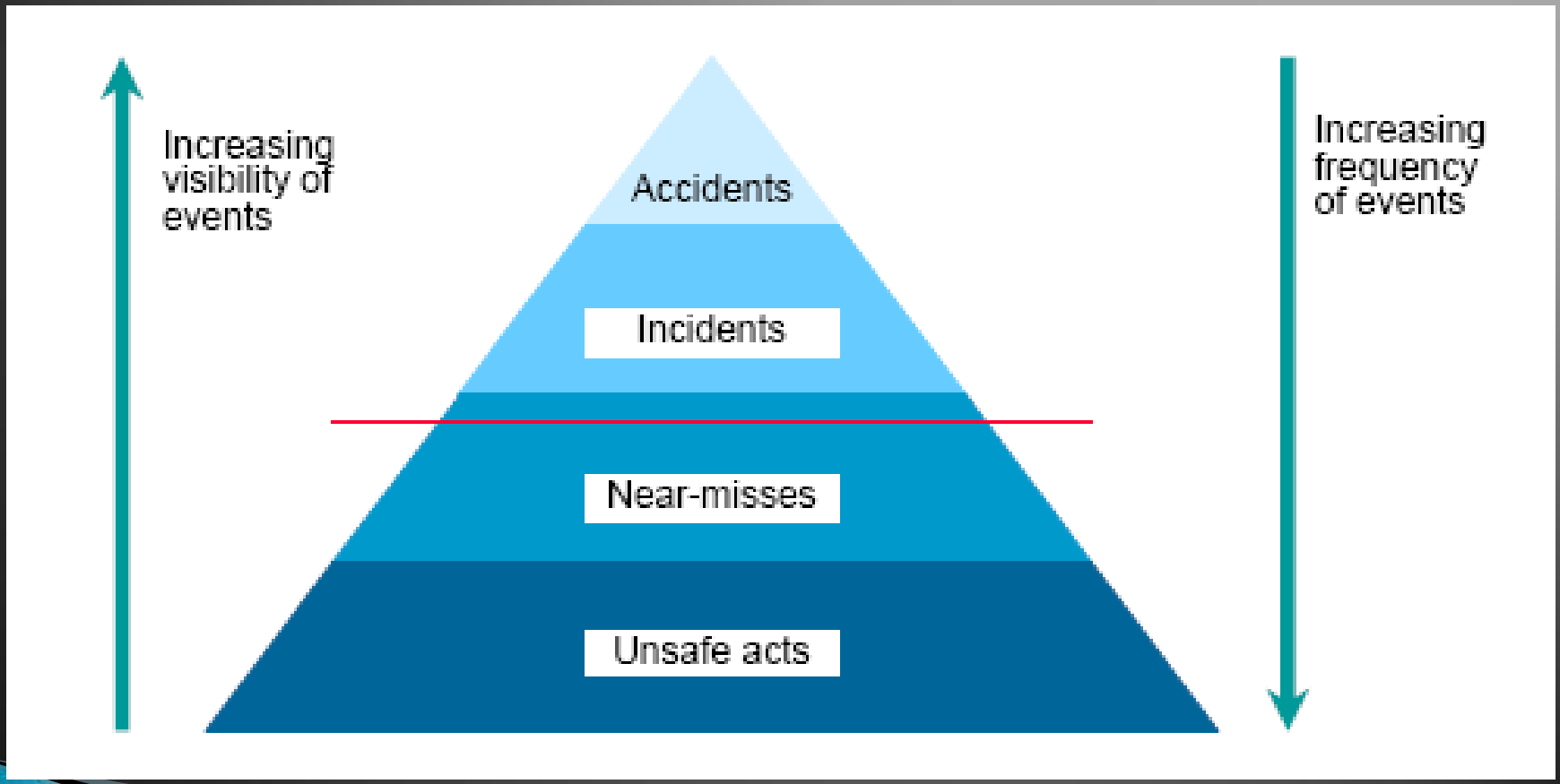
Serious or disabling

Minor injuries

Property damage accidents

Incidents with no visible injury or damage

The Iceberg Model of Accidents



Accidents

- An accident is not “just one of those things”.
- Accidents are predictable and preventable events.
- They don’t have to happen.

How Can You Prevent Accidents from Re-Occurring?

Utilize a systematic plan and follow through of investigating incidents or mishaps and altering behaviors to help stop a future accident from occurring.

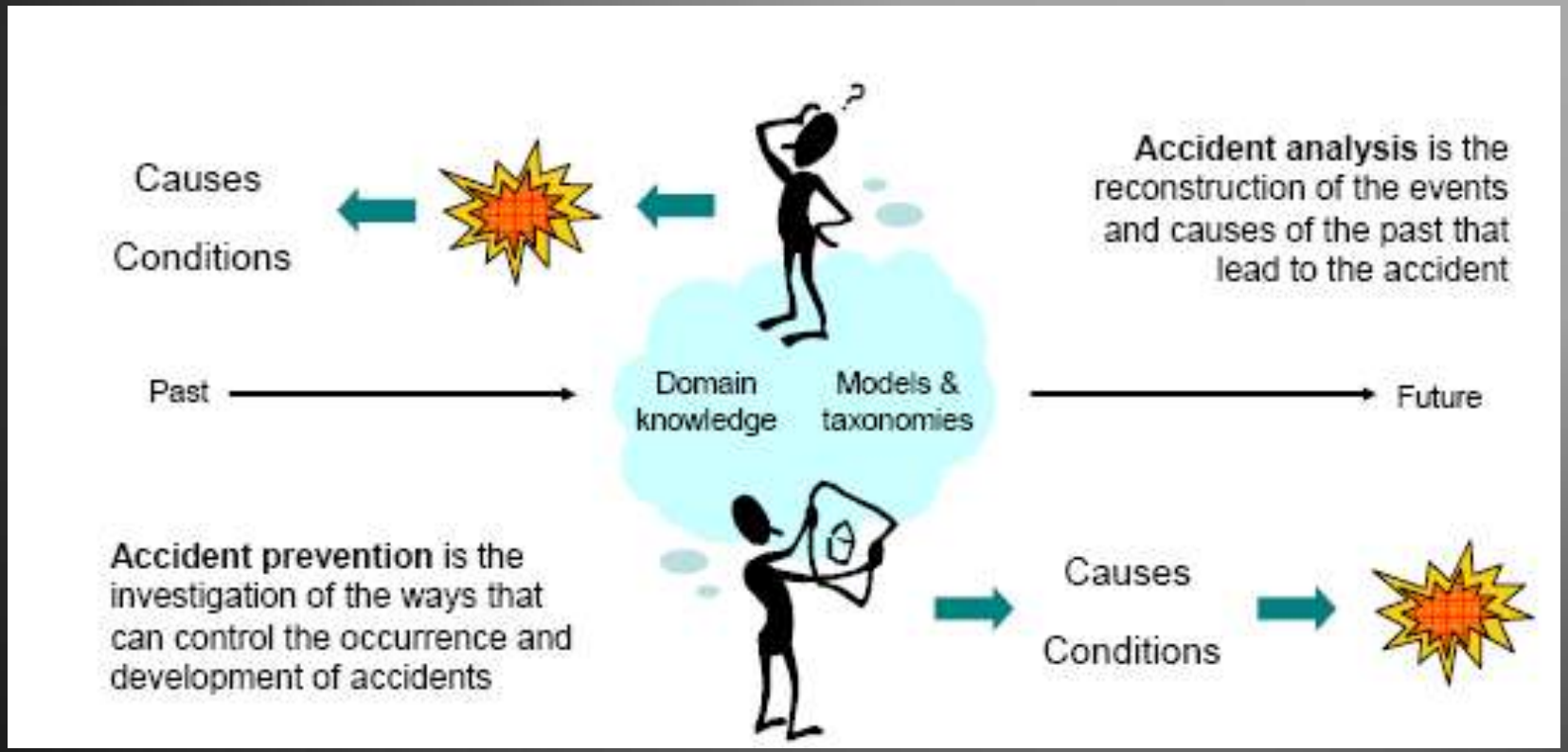
Why Investigate?

- Prevent future incidents (leading to accidents).
- Identify and eliminate hazards.
- Expose deficiencies in process and/or equipment.
- Save costs.
- Maintain worker morale.
- The rule requires you to investigate serious accidents.
- Investigate all incidents and accidents immediately

Purpose of the Investigation

- Identify the causes
- Identify, eliminate, reduce the hazards
- Recommend corrective actions

Accident Analysis & Prevention

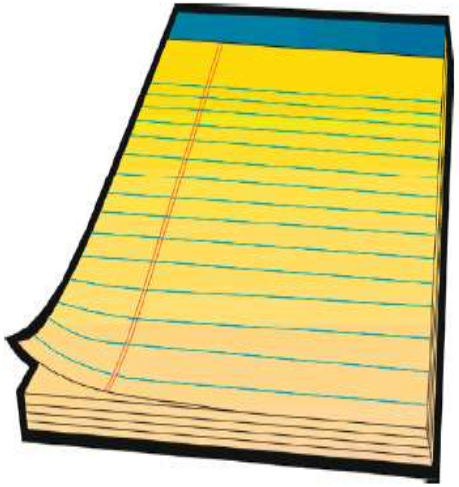


Investigation Conduct

- **An investigation answers the following questions:**
  - Who was present?
  - What activities were occurring?
  - What happened?
  - Where and what time?
  - Why did it happen?
- **Results of an investigation allow you to:**
  - Determine a root cause
  - Determine indirect causes and contributing factors

Investigation Conduct

- Gathering and reviewing the evidence
  - Work area layout
  - Environmental conditions
  - Job tools
  - Procedure violations
  - Training status
  - Supervisory oversight
  - Management support
- Verify your facts



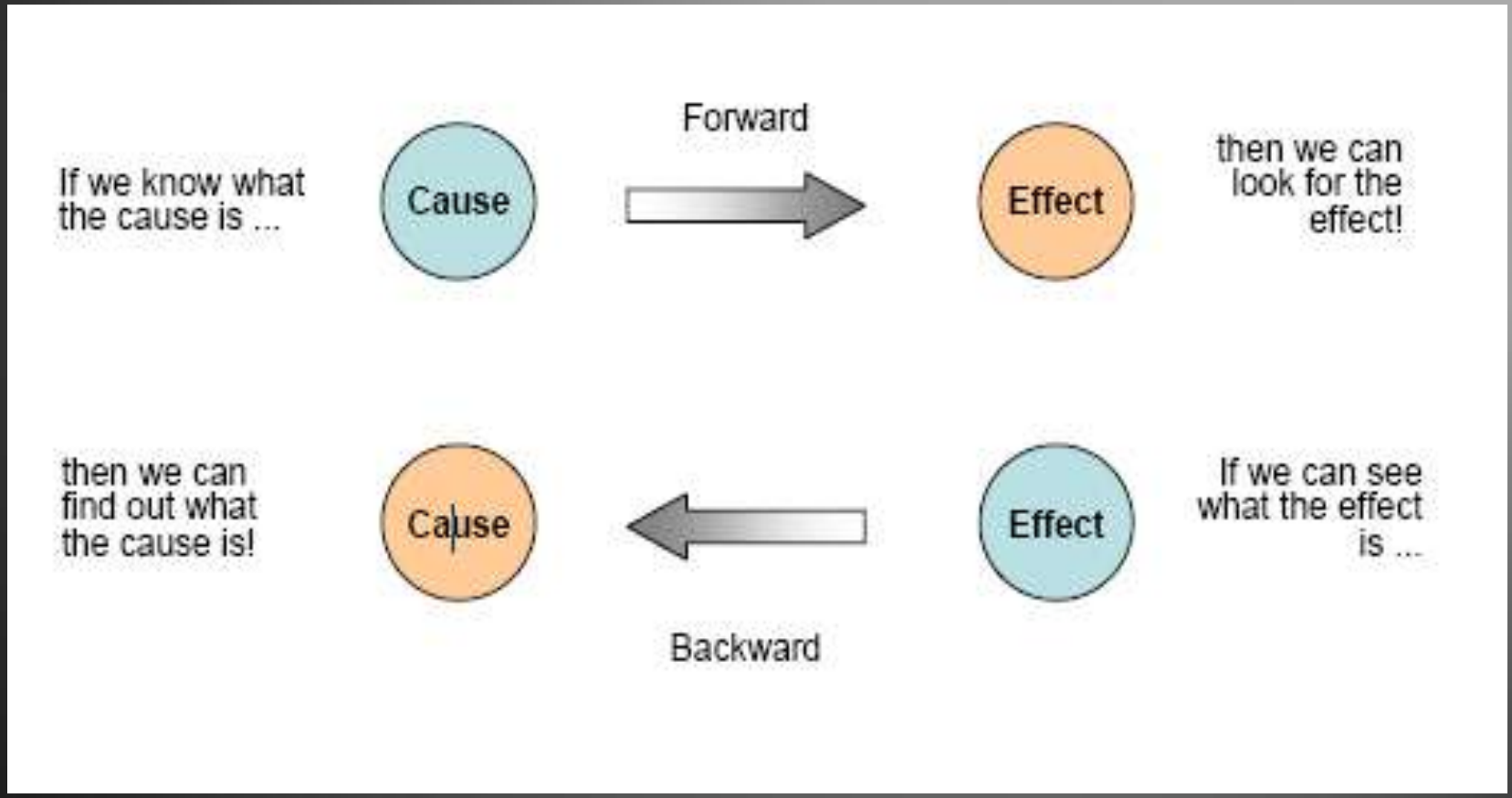
Types of Evidence

- Pictures – sketch, photographs
- Physical – debris, parts, tools, cords
- Paper – procedures, training records
- People – statements, interviews

Cause Identification

- Change Analysis
  - Accident vs accident-free sequences
  - What changed
- Job Safety Analysis
- Barrier Analysis
  - Barriers to hazards
- Tree Analysis
  - Fault
  - Analytic – why or why not
  - Management Oversight & Risk Tree (MORT)

Cause & Effect



Types of Accident Causes

- Causes – events that lead to injury, property damage, or illness
  - Root Cause – the cause if corrected would have prevented the accident
    — sometimes referred to as the “Basic Cause”
    — poor management policies & decisions; personal factors; physical facility design
  - Direct Cause – energy or hazardous material released at the time of the accident
  - Indirect Cause – unsafe acts, unsafe conditions

Accident Causes

- Site conditions
- Equipment
- Materials
- Layout
- Inspection
- Maintenance
- Procedures
- Changes
- Communication
- Training
- Employees
- Management

Developing Corrective Actions

- Every accident should have at least one causal factor
- Develop at least one corrective action for each causal factor
- Communicate corrective actions clearly
  - Who
  - What
  - When
- Make causal factors and corrective actions specific so that worker, supervisor, and/or manager knows exactly how to fix it

Follow-up

- Track corrective actions to closure

- Ensure corrective actions have been
  - Initiated
  - Appropriate
  - Effective