



NSC Webinars

# Preventing Slips, Trips & Falls

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making our world safer®



# Agenda

- Introduction
- Compliance
- Assessments
- Human factors
- Conclusion



# Did You Know?

- Did you know that slips, trips and falls are responsible

**being done to reduce slips, trips and falls** these type of injuries remain at or near the top of the injury and severity numbers each year.



# Statistics

265,000 nonfatal injuries from slips, trips, and falls annually result in one or more days away from work per incident

- Slips, trips, and falls result in 17% of all nonfatal workplace injuries per year, the highest injury rate of any regulated activity



- Discusses the root cause of most slips, trips and falls and review some current tools being used such as risk assessment, engineering design and human factor analysis.
- The goal of this webinar is to provide supervisors, employees, safety team members and safety professionals the tools to recognize and reduce the risk factor of these types of injuries.



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Optimum Integration Into The Process



# What's New in Compliance

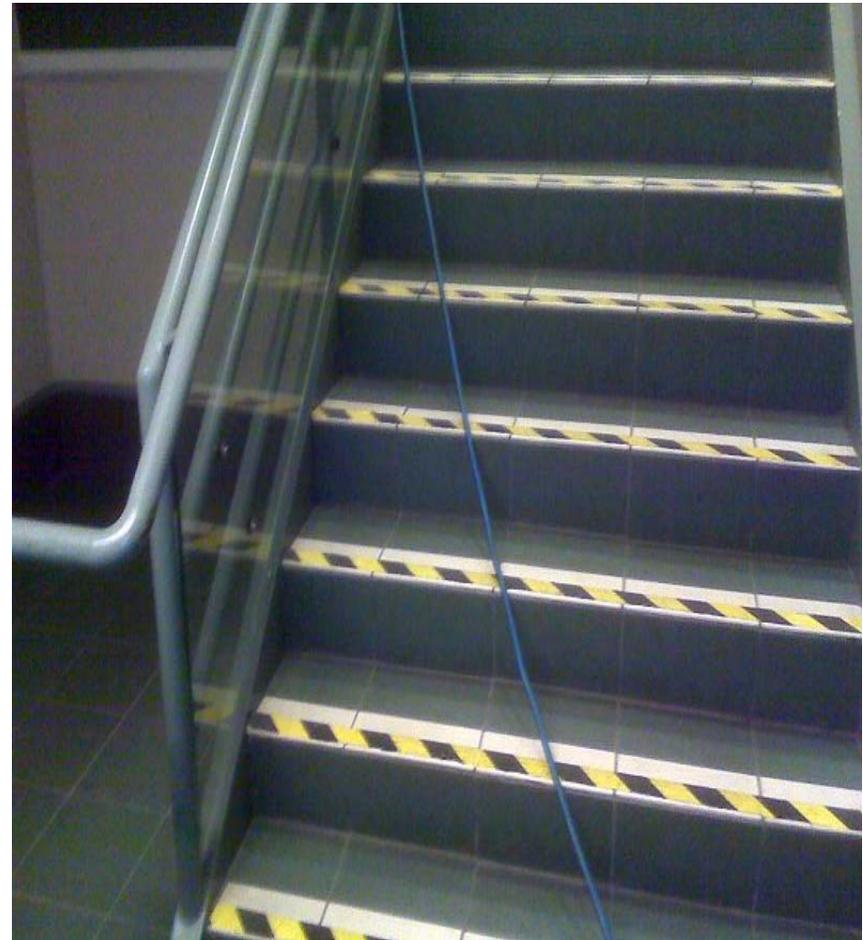
- Well not much!
- Compliance is often based on the individuals choice and my not be a deterrent to at risk activity
  - Driving speed is a choice
  - Seldom an issue of not knowing
    - Required, process, equipment etc.
- Positive Reinforcement of a Negative Act



# Slip, Trip, and Fall Hazards

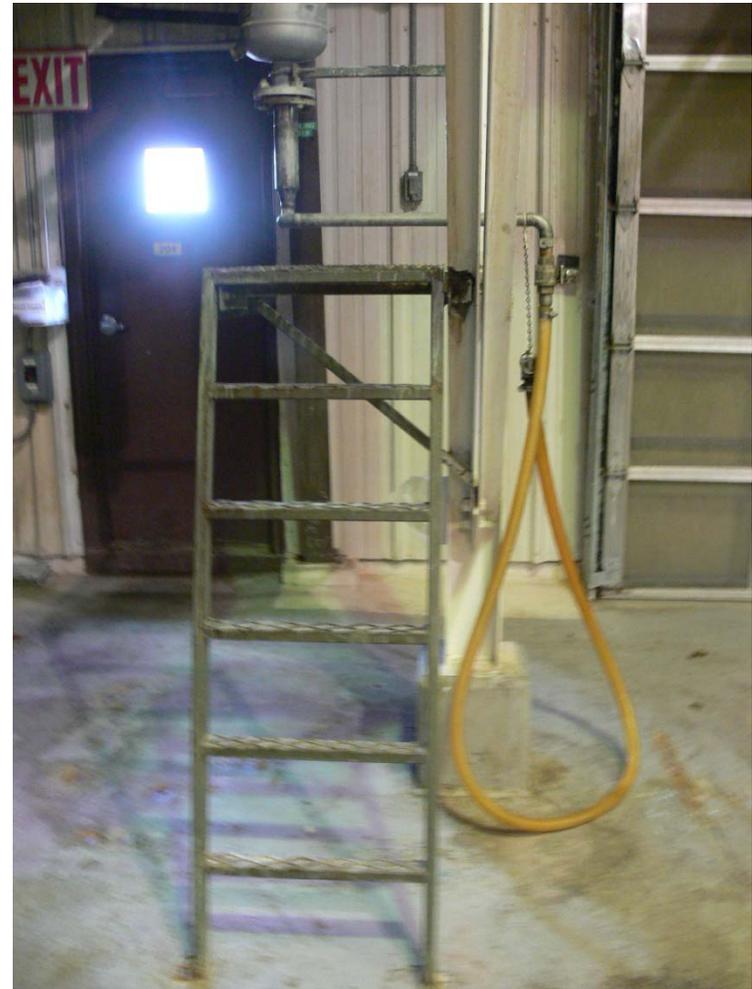
## Tripping Hazards

- Power cords, ropes, hoses across floors and walkways
- Intentional





# Common Issues





# Guardrails

- Top rail—42 inches
- Midrail—21 inches
- Toeboard—4 inches high
- Must withstand reasonable force to prevent worker from falling





# Slip, Trip, and Fall Hazards

## Tripping Hazards

- Power cords, ropes, hoses across floors and walkways
- Intentional
- Poor housekeeping





## Guarding Holes and Openings

- Hole—measures 1 to 12 inches wide
- Opening—greater than 12 inches wide
- Guard with standard railing
- Cover the hole or opening
- Attend the hole or protect with toeboard





# Engineering

- Guardrails
- Portable Ladders
- Portable Anchor Points
- Elevated Controls
- Standard Working Surface
- Standard Work Shoes
- Fencing
- Fixed Ladders
- Fixed Anchor Points
- Floor Level Controls
- Non-Slip Working Surfaces
- Specially Designed Work Shoes



# Wear Slip-Resistant Shoes

- Street shoes not intended for slip resistance
- Soft rubber sole for slip resistance
- Sole tread with channels
- Still need to walk carefully
- Testing available





# Engineering

- Guardrails
- Portable Ladders
- Portable Anchor Points
- Elevated Controls
- Standard Working Surface
- Standard Work Shoes
- Technology
- Fencing
- Fixed Ladders
- Fixed Anchor Points
- Floor Level Controls
- Non-Slip Working Surfaces
- Specially Designed Work Shoes
- Specific Systems to address the risk



# Engineering?



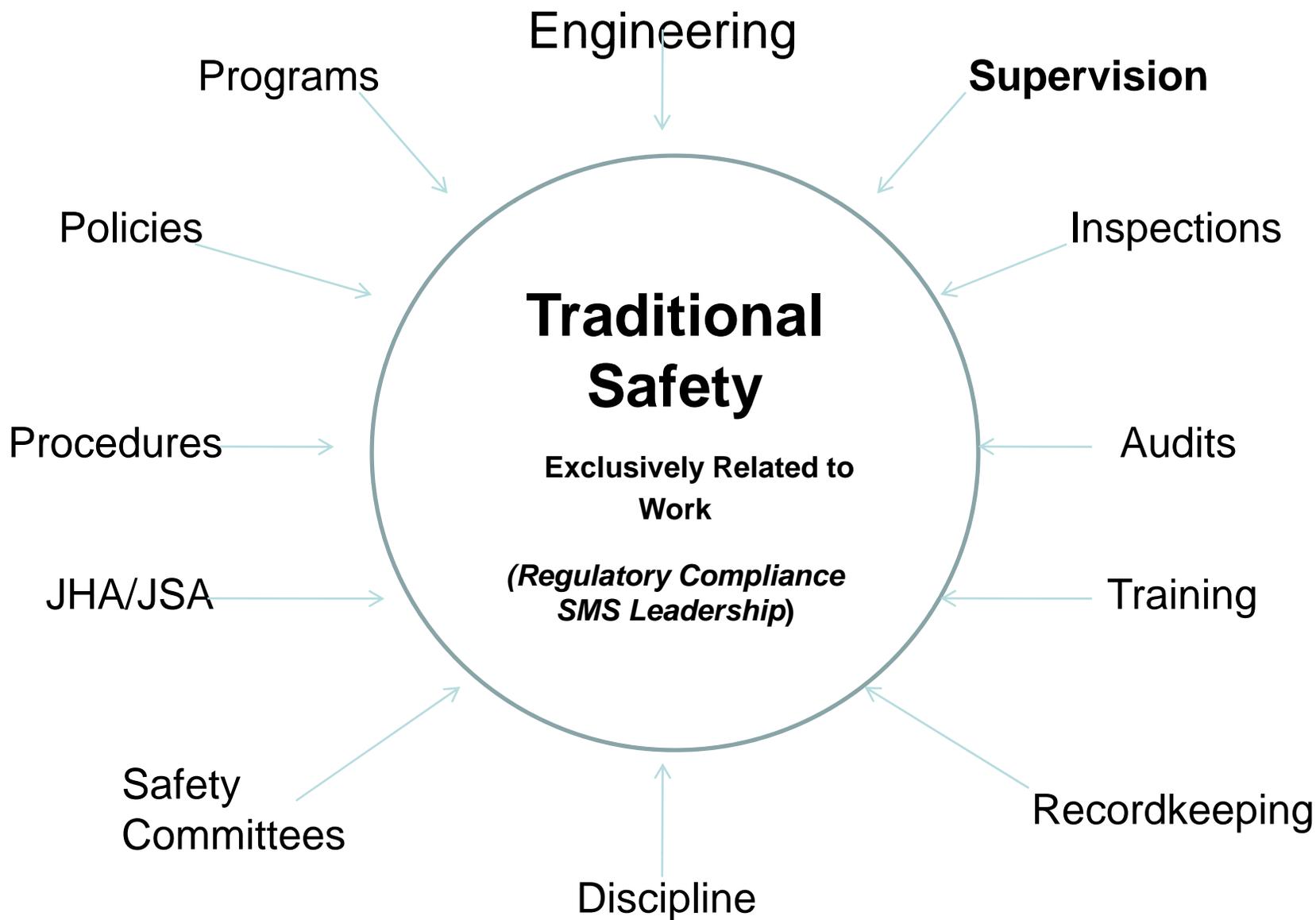


# Be Alert, Use Common Sense

- Be aware of the hazards
- Pay attention to where you are going
- Adjust your stride according to the walking surface
- Make wide turns at corners
- Don't block your vision when carrying items









# Legal Help

- Injury Analysis & Causation
- Code Compliance & Standards
- Biomechanics
- Construction Defects
- Flooring Defects & Analysis
- Mis-steps



# Risk Assessment

- ST & F Audit
- Training to conduct a risk assessment
- Certification for risk assessment
  - [g.higbee@mchsi.com](mailto:g.higbee@mchsi.com)
  - Contact Information
  - Sample checklist
- Review accident history
- Evaluate by task
  - Elevated tasks
  - Multi level tasks
  - Requires travel
  - Carry & move tasks
  - Insure OSHA compliance
    - Administrative
    - Facility
  - Insure compliance with building codes



Area / Location	General Surface Condition - Check floors in aisles and work areas for slip and trip hazards.		Are floor openings properly guarded (railings, mid-rails and toe boards or covers)?		Are elevated work platforms 48" or higher (including top of machines) properly guarded?		Check the overall condition of platform access ladders.		Are elevated wall openings, doors, gates, etc. properly guarded?	
	OK	Not OK	OK	Not OK	OK	Not OK	OK	Not OK	OK	Not OK
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
<b>Totals:</b>										

NOTES:

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FACILITY: \_\_\_\_\_

OK = \_\_\_\_\_

Not OK \* = \_\_\_\_\_

Score: \_\_\_\_\_



<b>General Surface Condition - Check floors in aisles and work areas for slip and trip hazards.</b>	<b>Are floor openings properly guarded (railings, mid-rails and toe boards or covers)?</b>	<b>Are elevated work platforms 48" or higher (including top of machines) properly guarded?</b>	<b>Check the overall condition of platform access ladders.</b>	<b>Are elevated wall openings, doors, gates, etc. properly guarded?</b>
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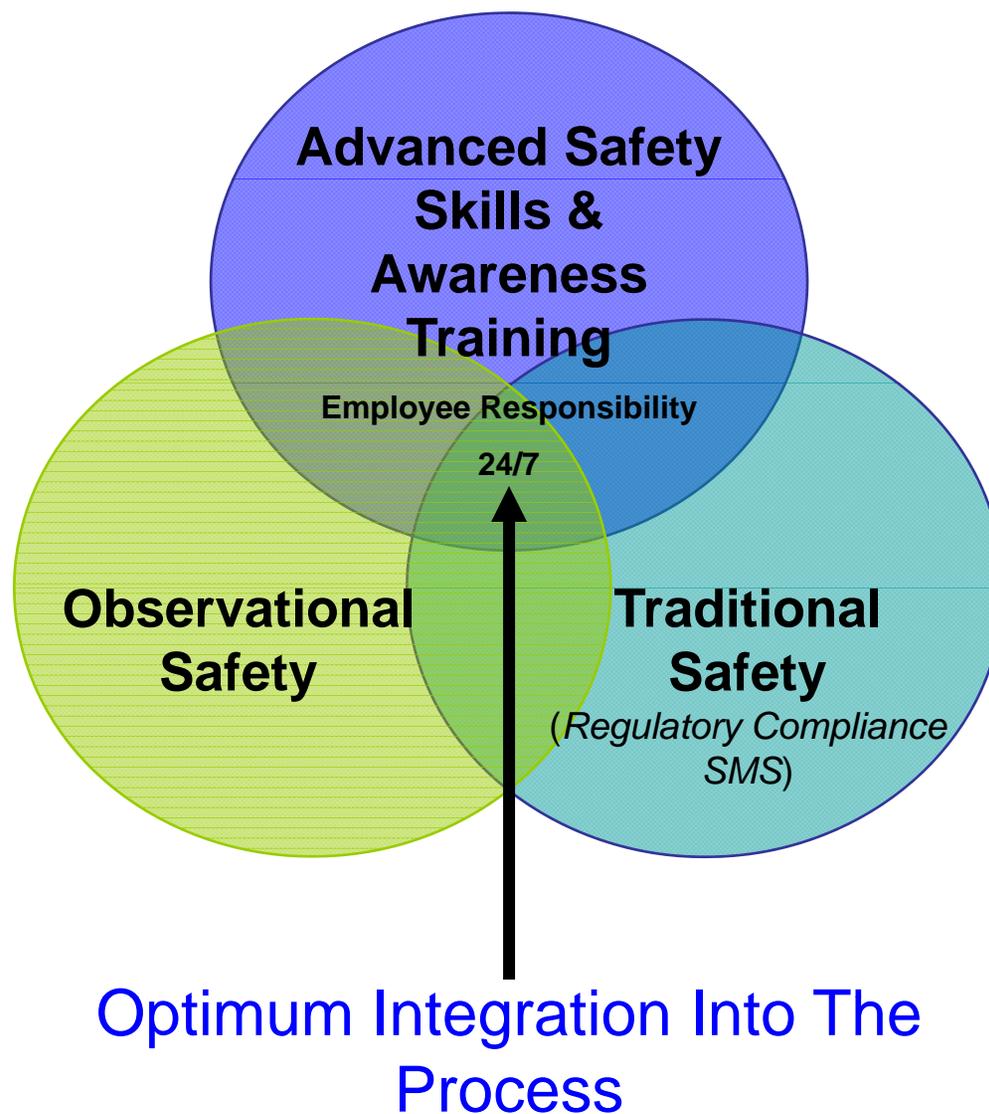


**17 FLOORS AND ELEVATED WORK PLATFORMS (MINIMUM 5 SCORING OBSERVATIONS)**

- A General Surface Condition - Check aisles and work areas for slip and trip hazards. Are there and holes, surface damage/defects, etc.?**
  
- B Verify that floor openings are guarded by standard railings (including mid-rails and toe boards) or pit covers.**
  
- C Are elevated work platforms 48" or higher (including top of machines except presses), equipped with standard guardrails (42" top rail, mid-rail, and toe board where required)?**
  
- D Check the overall condition of platform access ladders. Rung width minimum 16" with 7" clearance behind rung. Fall protection or safety cage is required on fixed ladders over 20' in height. Cage must start at a height of 7' to 8' from floor. Maximum 9.5" spaced opening between cage banding. Cage 27"-28" from center line of rung and flared no less than 4" at bottom.**
  
- E Are elevated wall openings, doors, gates, etc. properly guarded? Should not swing out without properly guarded platform extension, should have barriers when open and not in use, toe boards where applicable, grab handles, etc.**



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# Frustration With Slips, Trips & Falls

## Event

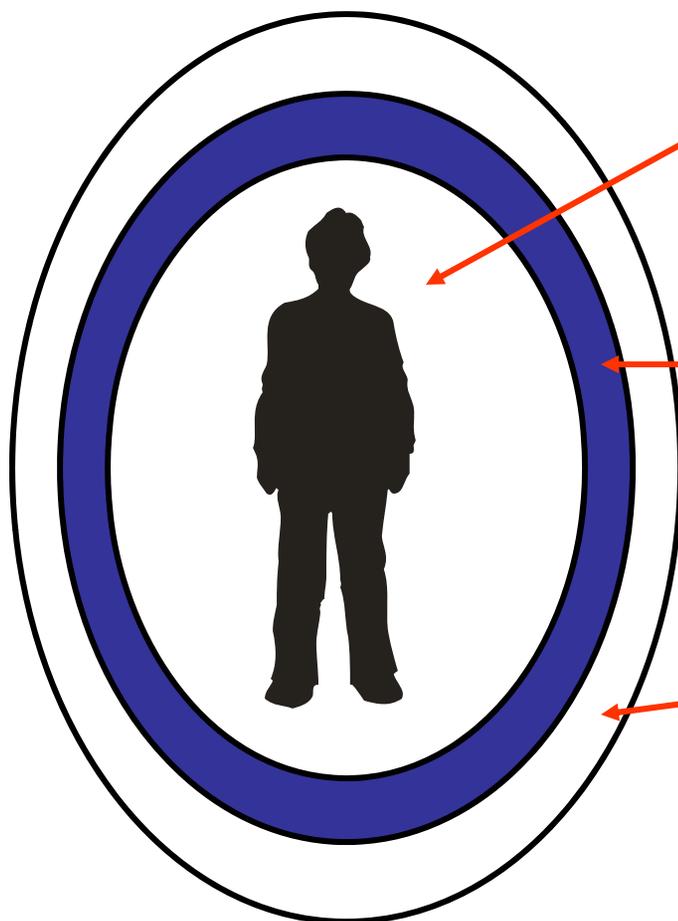
- Fall Protection Harness & Lanyard – if we make an error like loosing our balance
- Handrail on steps – if we misstep and trip
- Just trip walking

## Result

- The harness limits the result it does not prevent the error
- The handrail gives us something to help us regain our balance
- Nothing helps us here



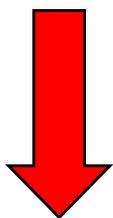
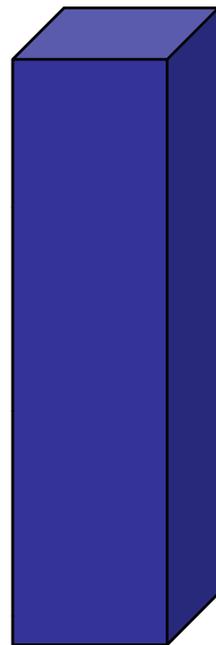
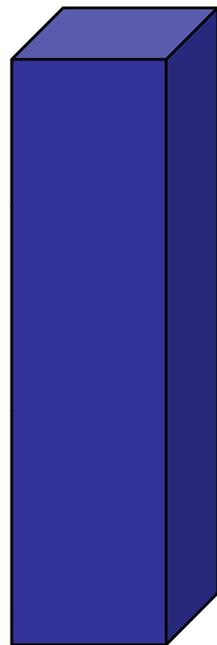
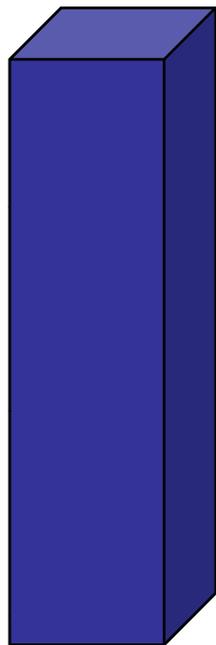
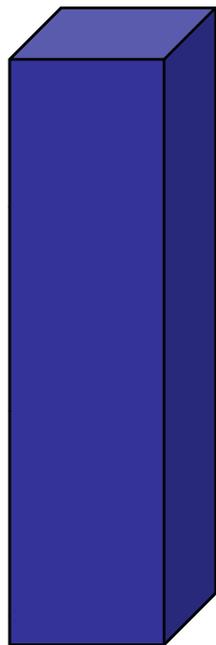
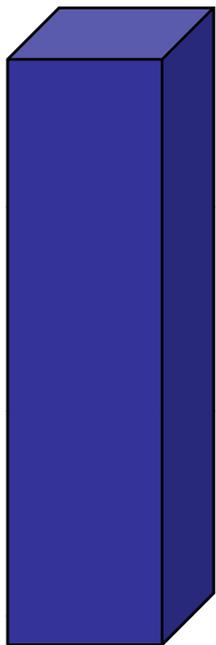
# Sources of Unexpected



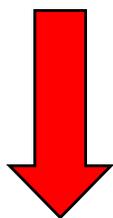
**Self - own actions cause or contribute to incident/injury**

**Other People - someone else's behavior causes or contributes to incident/injury.**

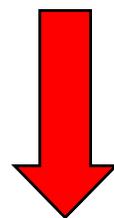
**Equipment - something unexpected happens without you or someone else involved (e.g. wire rope breaks, traffic lights start working incorrectly, coupling fails, hose bursts, etc.)**



Hazardous  
Energy



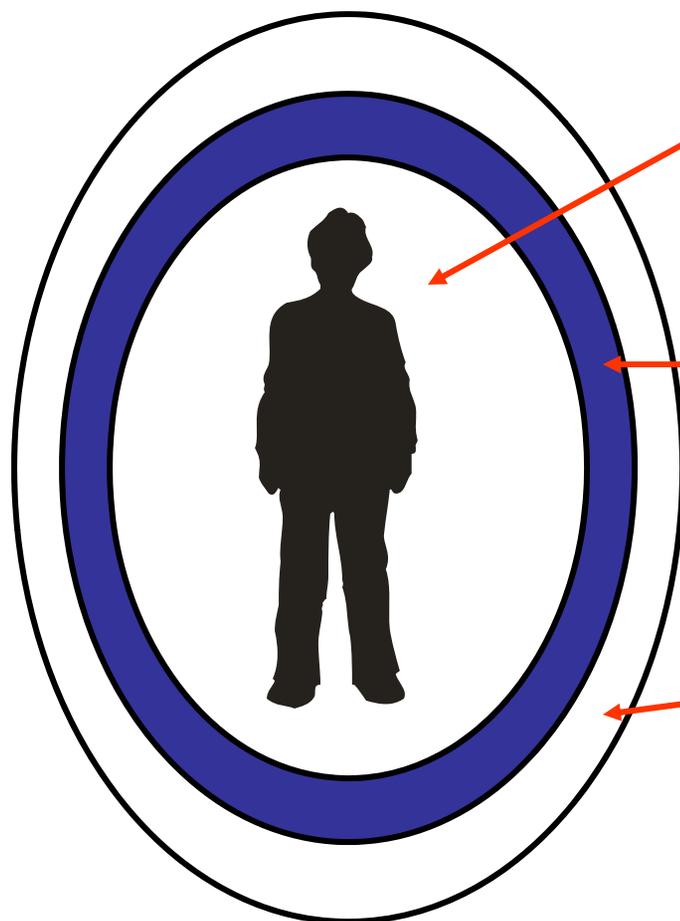
Person



Unexpected



# Sources of Unexpected



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**Other People - someone else's behavior causes or contributes to incident/injury.**

**Equipment - something unexpected happens without you or someone else involved (e.g. wire rope breaks, traffic lights start working incorrectly, coupling fails, hose bursts, etc.)**



# Knowing About the SafeStart Injury Risk Pattern is Only the Beginning





## **SAFESTART™**

*These four states...*

- Rushing
- Frustration
- Fatigue
- Complacency

*can cause or contribute to these critical errors ...*

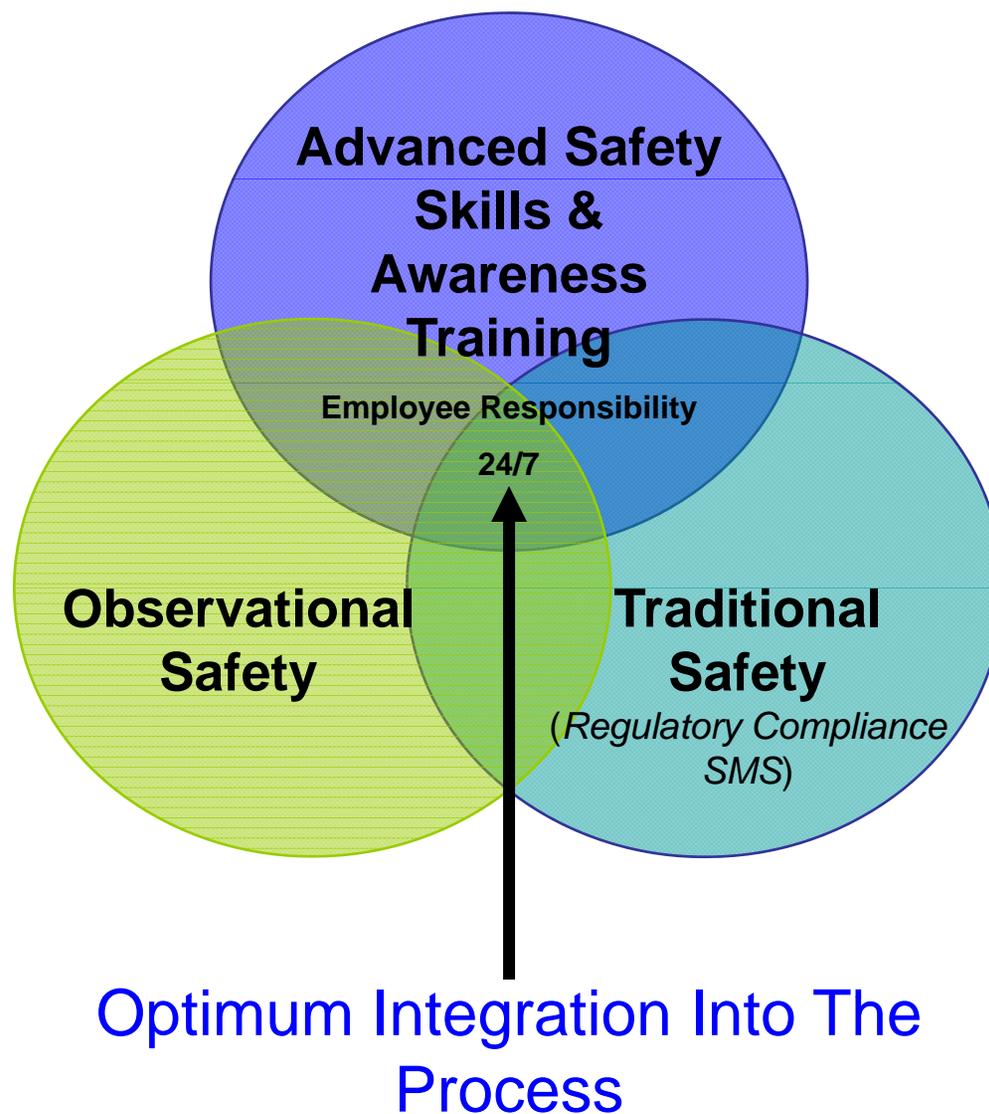
- Eyes not on Task
- Mind not on Task
- Line-of-Fire
- Balance/Traction/Grip

*...which increase the risk of injury.*

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## 3 Attributes to World Class Safety ©

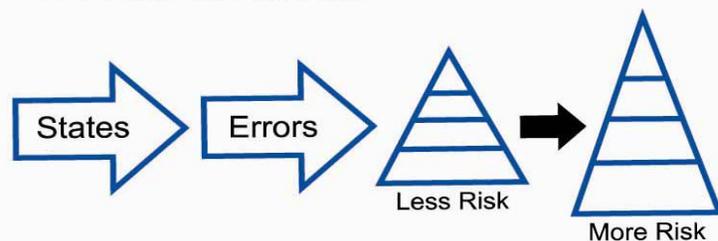




# **SAFESTART**<sup>TM</sup>

## **Critical Error Reduction Techniques (CERT)**

1. *Self-trigger on the state (or amount of hazardous energy) so you don't make a critical error*
2. *Analyze close calls and small errors (to prevent agonizing over big ones)*
3. *Look at others for the patterns that increase the risk of injury*
4. *Work on habits*



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# Analyzing Close Calls & Errors

## **SAFESTART**<sup>TM</sup>

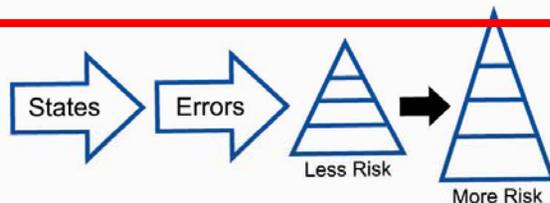
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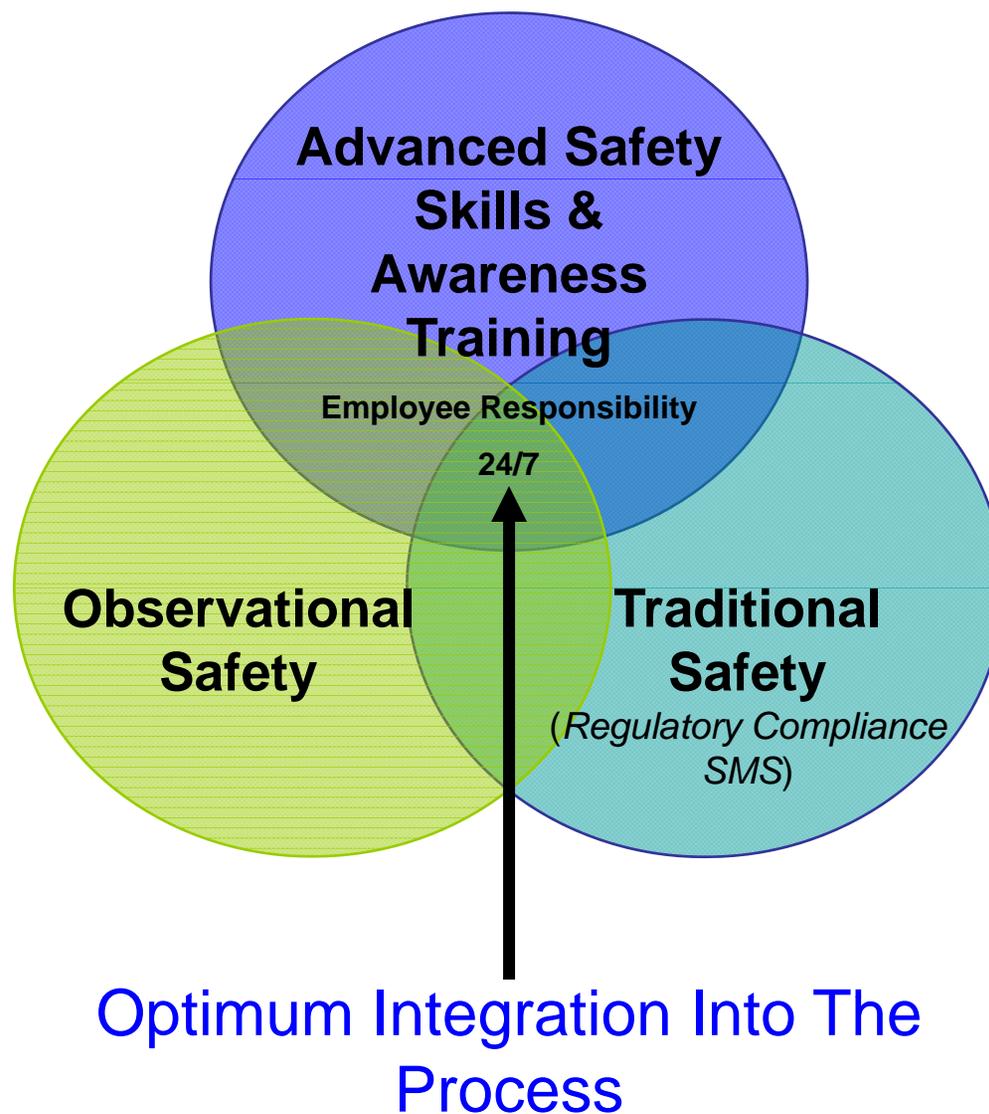
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# Review

- Slips, Trips & Falls need to be dealt with
- Compliance is necessary and help full but we need to do more
- Do a risk assessment
- Human factors can not be ignored
- There is a way to improve individual
- Never give up



# Questions

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