

# Human & Organizational Performance (HOP) – Learning to Fail

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## What Do You See?

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Is this workers who made bad choices?

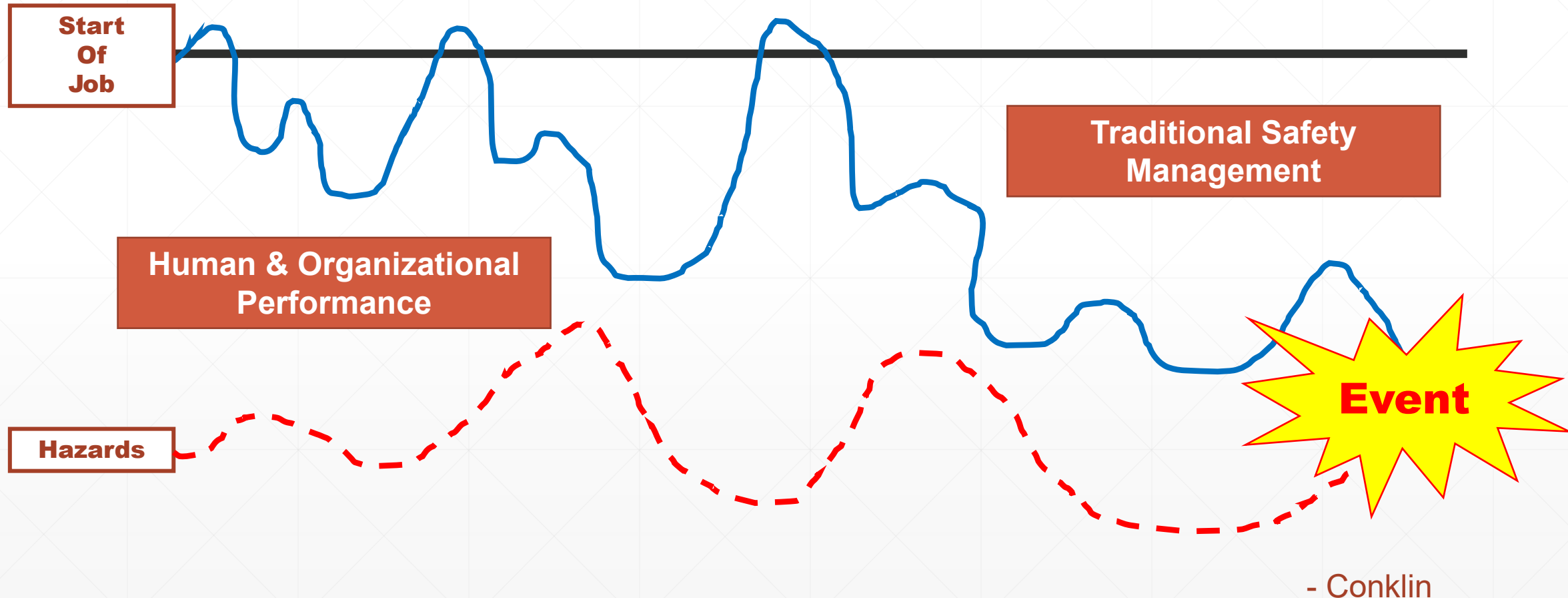
Or, is this workers who were GIVEN bad choices?

**“Everybody has a plan, until they get punched in the face.”**

**- Mike Tyson**

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# Work as Imagined vs. Work as Performed





# The Five Principles of Human & Organizational Performance

1. Error is normal.
2. Blame fixes nothing.
3. Learning is deliberate.
4. Context influences behavior.
5. How leaders respond to failure matters.

# **Error Is NORMAL!**

**So, Is ZERO The Goal?**

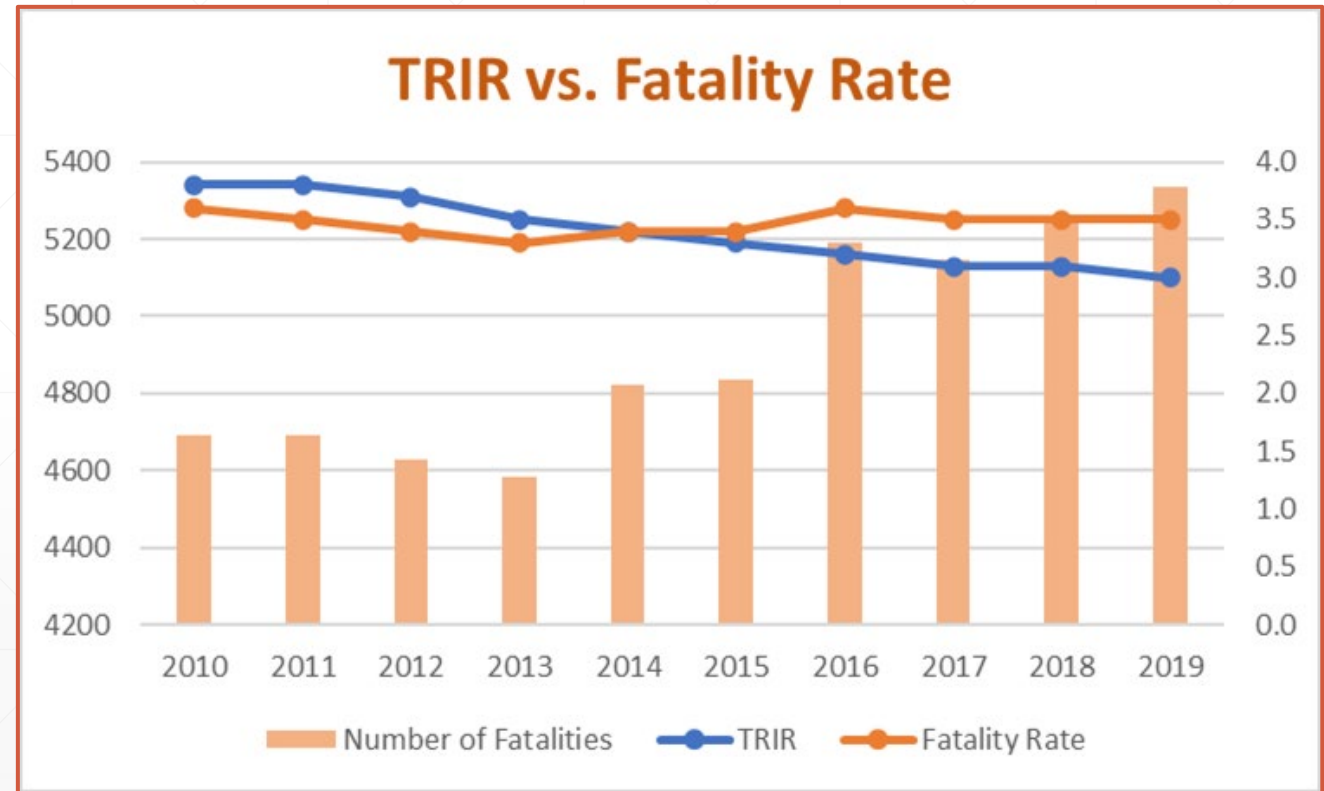
**Is every incident preventable?**

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# Is ZERO The Goal?



## U.S. Workplace Safety



U.S Bureau of Labor Statistics

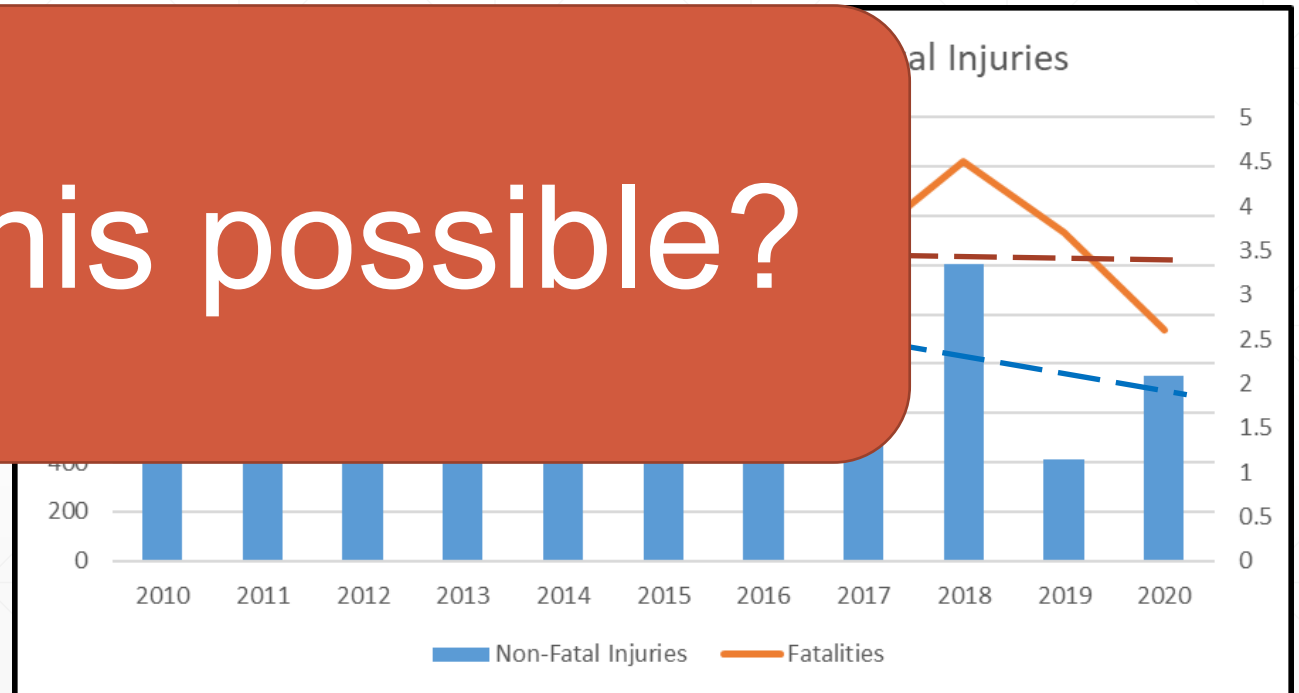
# Global Workplace Safety

Rates per 100  
countries, average

Non-fatal injuries  
declining

Fatality rate basically flat

How is this possible?



Source – <https://ilostat.ilo.org/topics/safety-and-health-at-work/>

**Expecting ZERO Incidents is  
expecting perfection.**

**In complex systems,  
failure is normal!**

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***"Safety is not the absence of incidents, it's the presence of  
CAPACITY."***

**-Todd Conklin**

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**Capacity?**

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**Stop asking, “IF”...**

**and start asking,  
“WHEN”!**

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**This is a deliberate change  
in strategy**

**Plan for failure**

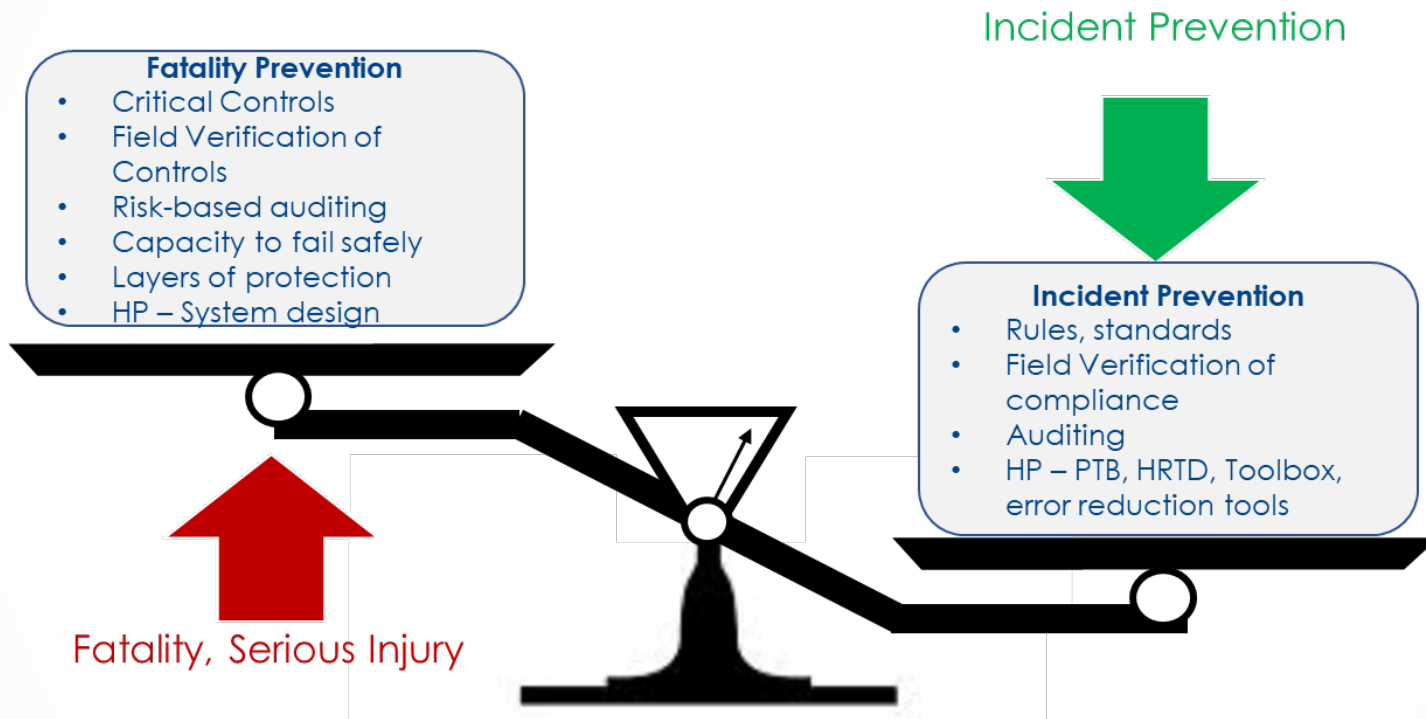
**Build in the capacity to  
FAIL SAFELY**

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**Capacity?**

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## Incident Prevention vs. Fatality Prevention

When fixated with ZERO, or on driving down lagging indicators such as TRIR or DART, we focus efforts on prevention of incidents.

We may not focus enough on protecting people **WHEN** incidents occur

# **Critical Risk Management (CRM)**

**A Systematic Approach for  
Developing Capacity to  
Fail Safely**

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# Focus on Serious Injuries & Fatalities – HL4/5

All incidents are not equal – about 21% of incidents have the potential to cause serious injury\* or fatality.

\*Serious injury is defined as an injury that is life threatening and/or life altering – AHL4.

Two types of SIF events:

- **AHL 4&5**, when a life threatening, life altering injury or fatality *actually* occurs
- **PHL 4&5**, when an event occurs that had the *potential* to cause a life altering injury or fatality, but did not

Reducing the number of events at the **bottom** of the pyramid, and working **outside of the HL4/5 triangle (i.e. hand and finger injuries, MSDs)**, will NOT result in a corresponding drop in HL 4/5 events.



# What is a Material Unwanted Event (MUE)?

*“Although the material landed on the pedestrian walkway, thankfully no one was hurt in the incident. This is partly if not wholly due to the fact that pedestrians had been stopped from walking under the load during the lift, while road traffic was held up while the load was over the road.”*

## Crane drops load into street

A tower crane working in the town of Victoria, British Columbia, Canada dropped a formwork section into the street last Wednesday.

Although the material landed on the pedestrian walkway, thankfully no one was hurt in the incident. This is partly if not wholly due to the fact that pedestrians had been stopped from walking under the load during the lift, while road traffic was held up while the load was over the road.



# High Potential Exposures (HPEs)

1. Work at Height
2. Hazardous Energy
3. Mobile Equipment
4. Confined Spaces
5. Hoisted Loads
6. Hazardous Chemicals
7. Process Safety

## Critical Risk Management

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### Step 1 – Identify your HPEs

What are the hazards that are inherent to the operations and, if not well controlled, have a high potential to cause serious injury or death?

# Critical Risk Management

## Step-by-Step Process

### Controls

An act, object or system that of itself prevents or mitigates the event - measurable, specifiable and auditable

### Critical Control

A critical control is heavily relied upon, by itself or in combination with other controls, to prevent or mitigate a potentially fatal incident

### Erosion Factors

A description of the cause for a control failure.

### Support Activities

An activity that reduces the erosion factor impact – specific to the control.

### Verification Activities

Regular scheduled activity by a person with control expertise to confirm that a particular Critical Control is being effectively applied.

# What Are Controls?

**Controls are:**

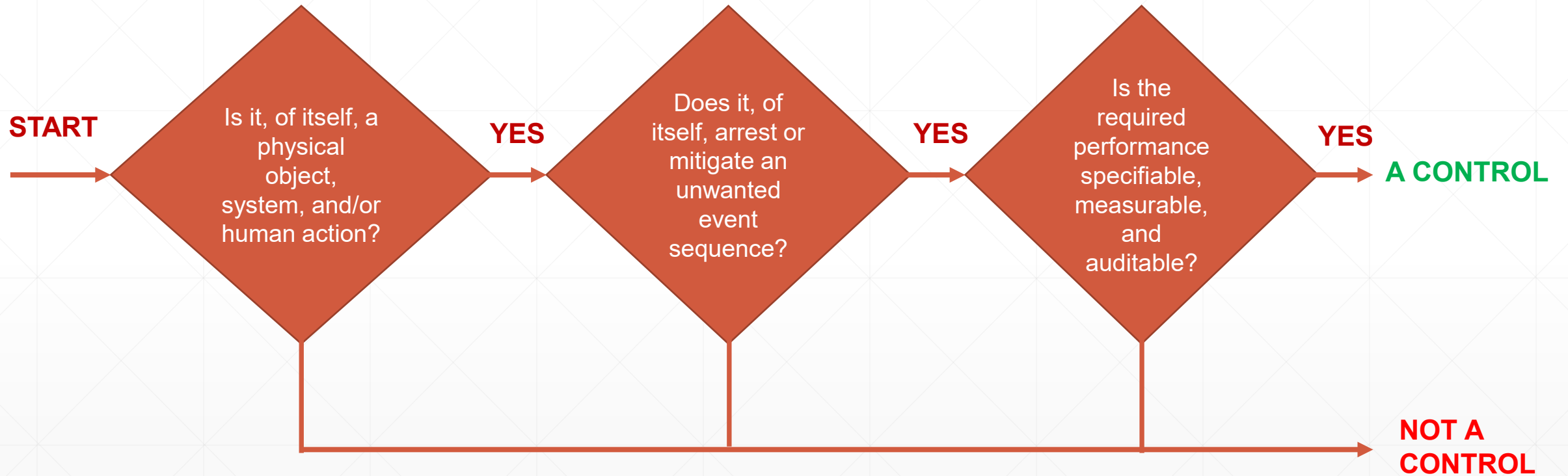
**Acts** – an action a person must take

**Objects** – a device that works when needed without a person's act(s), or

**Systems** – combination of act(s) and device(s)

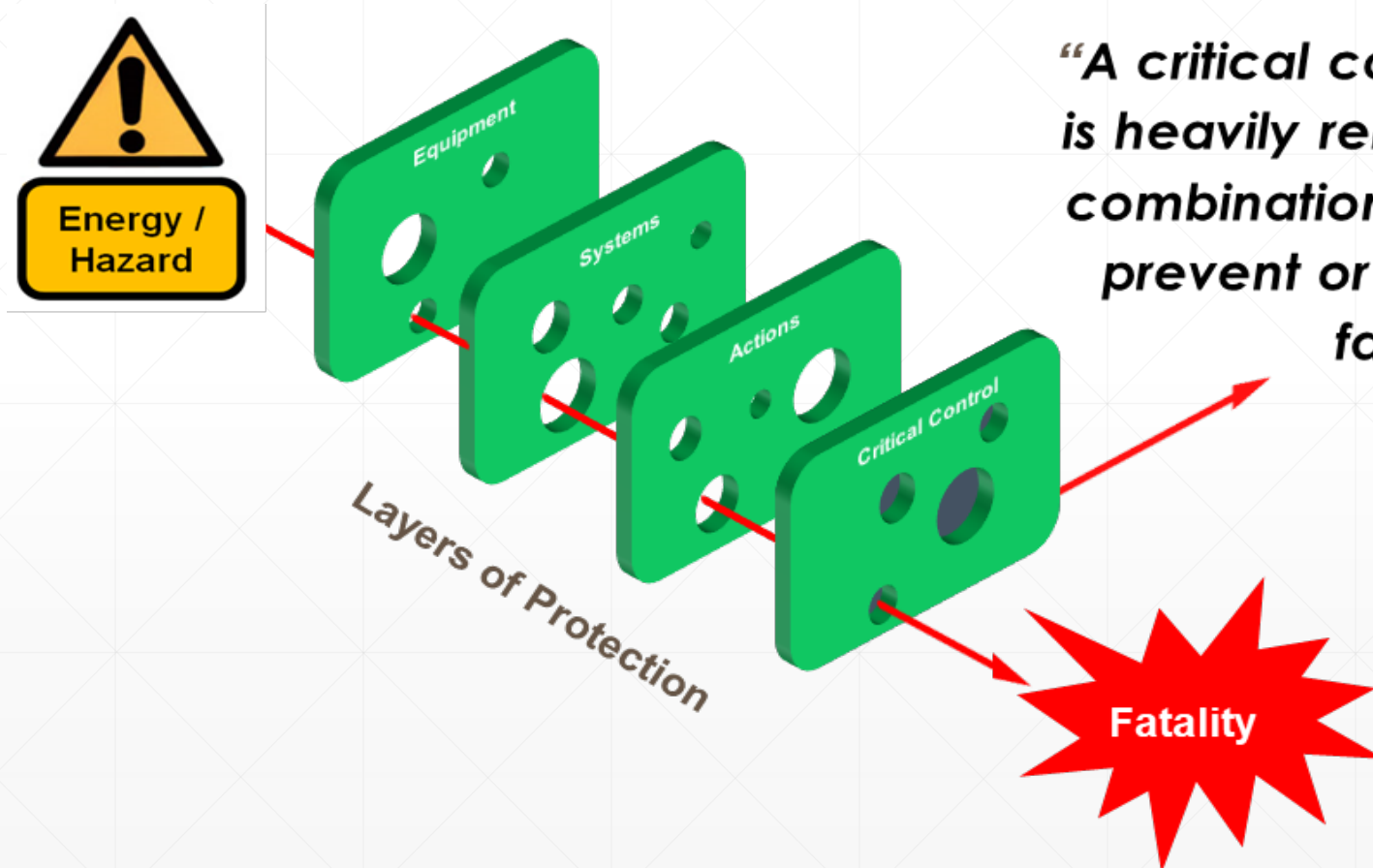
**NOT training, plans, procedures , supervision, etc. – these SUPPORT the controls**

# More on Controls



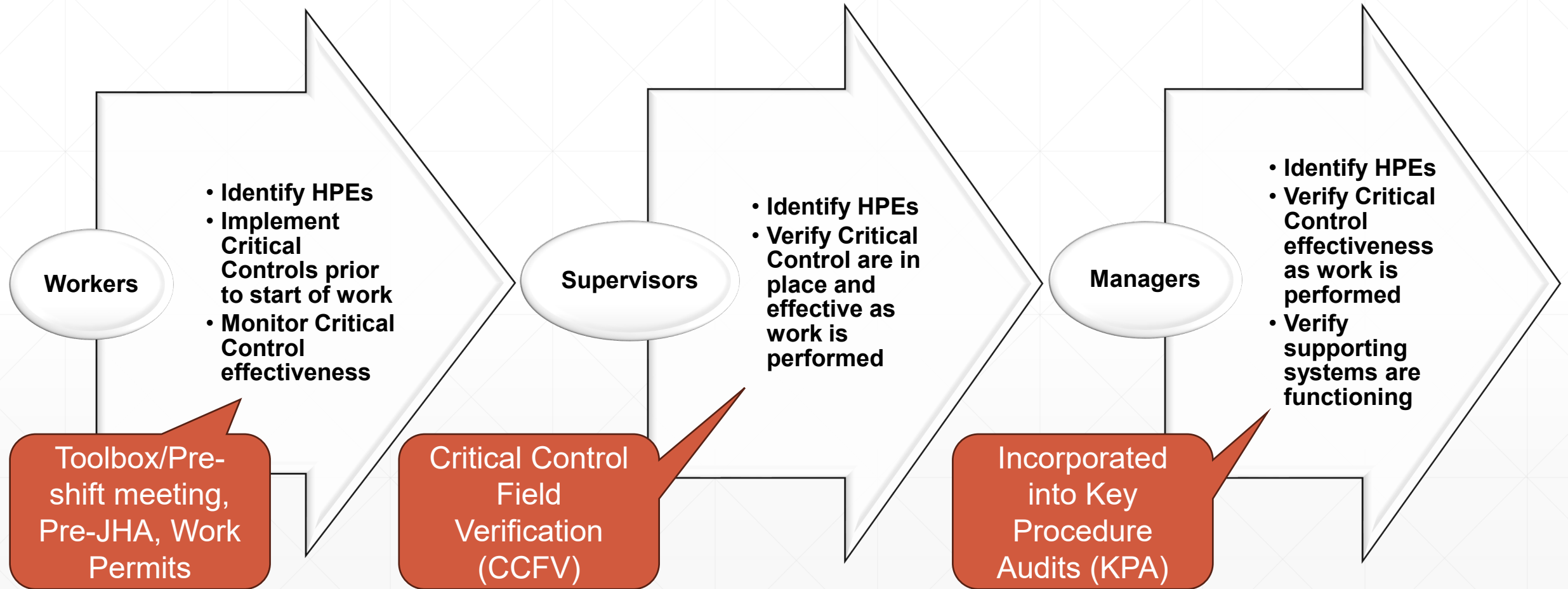


# What Are Critical Controls?



*“A critical control is a control which is heavily relied upon, by itself or in combination with other controls, to prevent or mitigate a potentially fatal incident”*

# Three Levels of Verification



## Use CCFV as an Opportunity for LEARNING!

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Don't just fill out the form!

Ask about Critical Controls on  
the **Blue Line**.

Embrace the **RED**, fear  
the green!

# What is the Goal?

## Our hypothesis is:

- If we drastically simplify those things that are most impactful in preventing SIF or HL 4/5 events
  - And, if we provide every worker with the opportunity to effectively practice this concept in their daily pre-shift toolbox meetings and apply it in their daily work
  - Then workers become able to implement Critical Controls, even when they are on the **BLUE LINE!**
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## Is This Safe?

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Are they in compliance?

What's the hazard?

When are they at greatest risk?

What's the worst thing that could happen?

**WHEN** that happens, what's the control that prevents serious injury or death?

Is this safe?

# Questions?

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