



2024 UAA Indiana Safety Summit

July 24-25, 2024



Morning Welcome & Thank you Message



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TOWNSEND

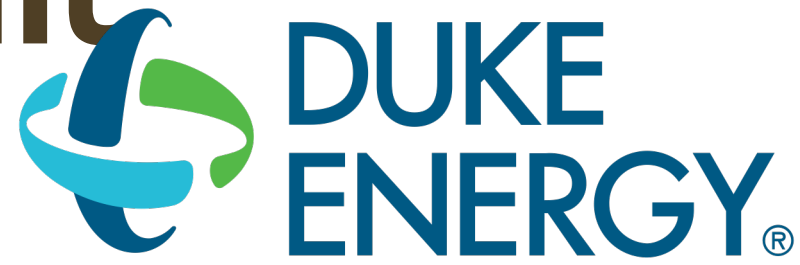




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2024 UAA Indiana Safety Summit



An **AEP** Company



Safety Differently

Tim Walsh-Vice President, Safety & Training

TOWNSEND





TOWNSEND



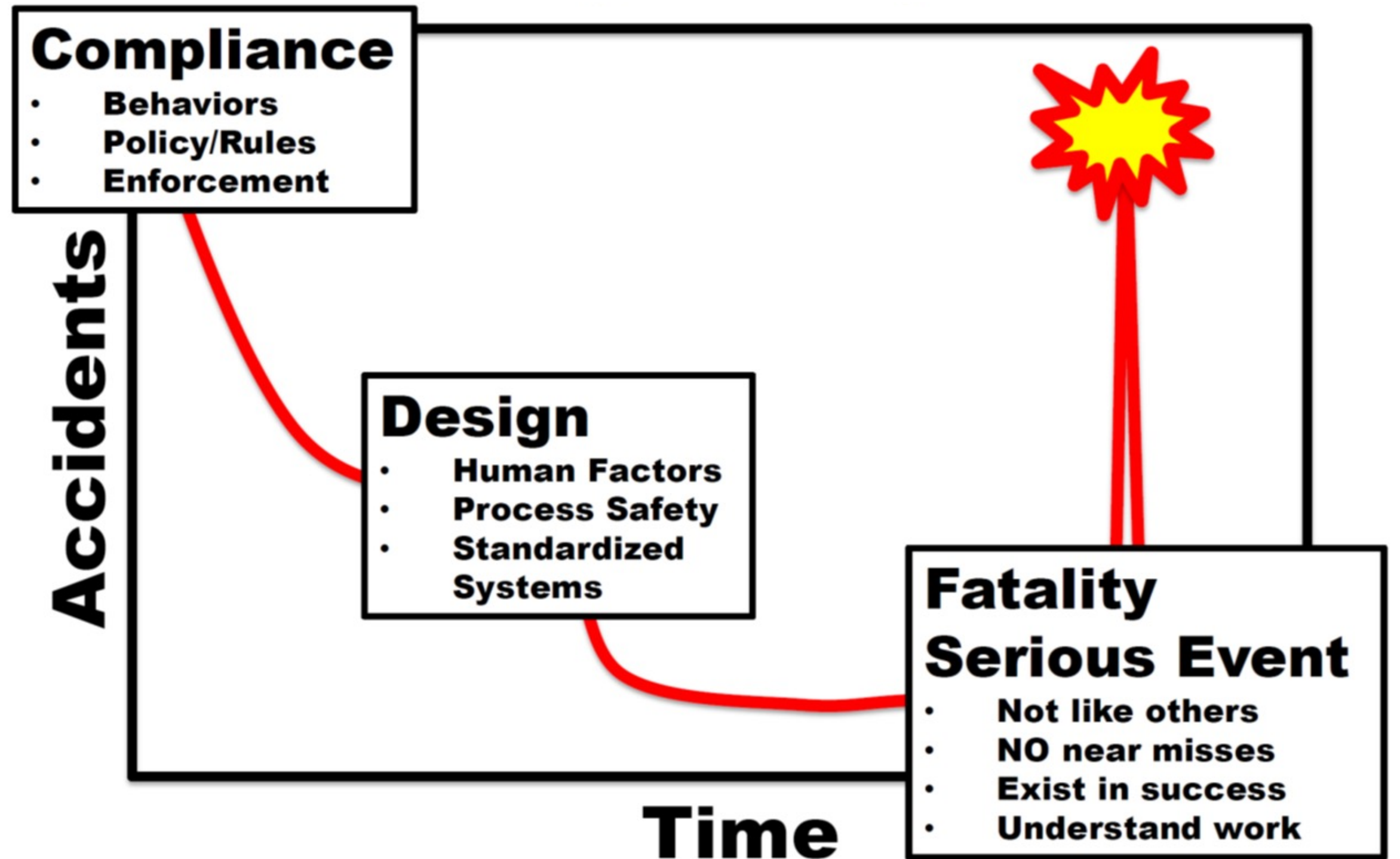
My Mission:
To bring everyone
home safely.
Everyday.



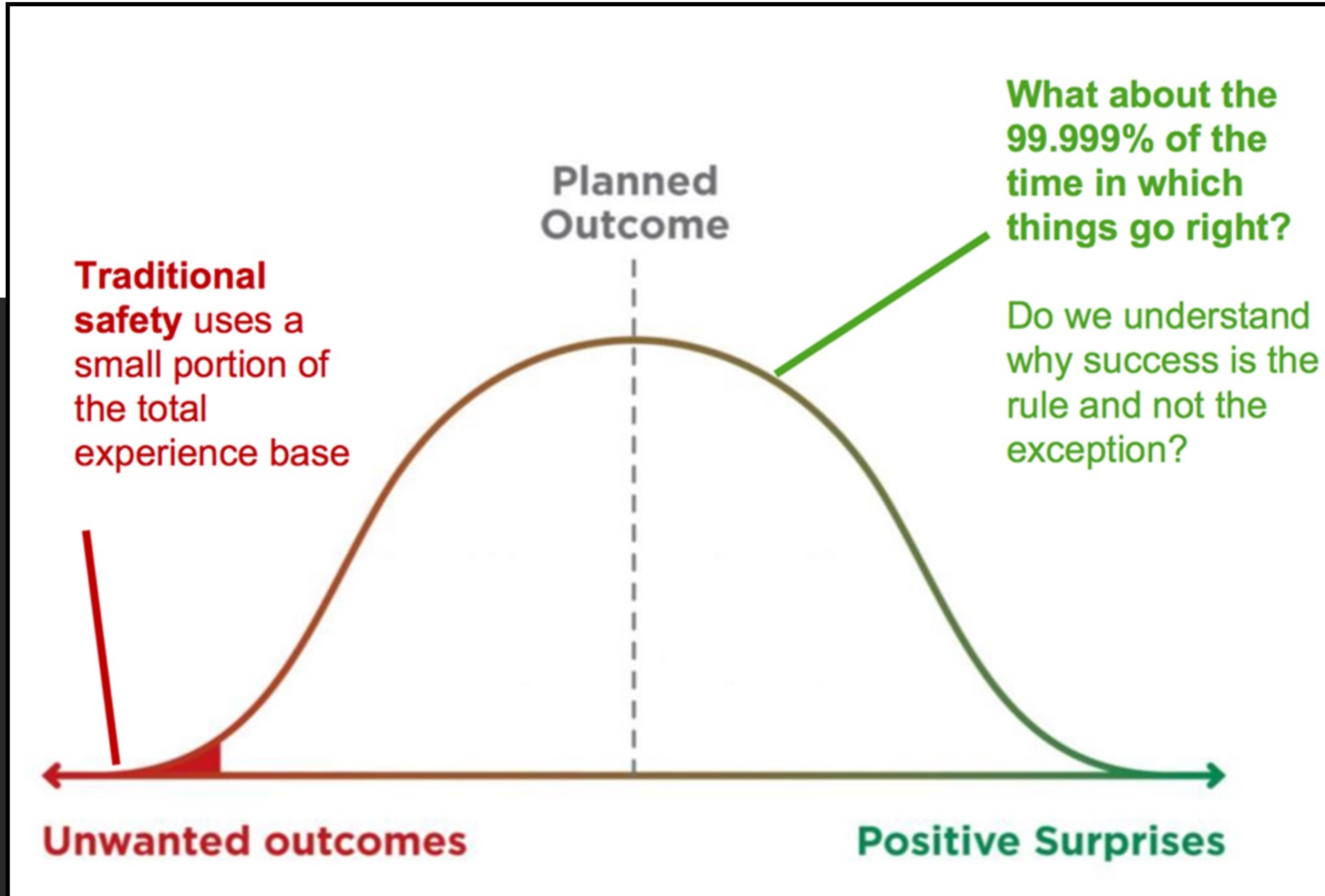
Overview

- Safety 1 and Safety 2
- HPI
- HOP
- SIF
- TRIR
- Safety Differently/Safety 2.0/The New View of Safety
- Resources

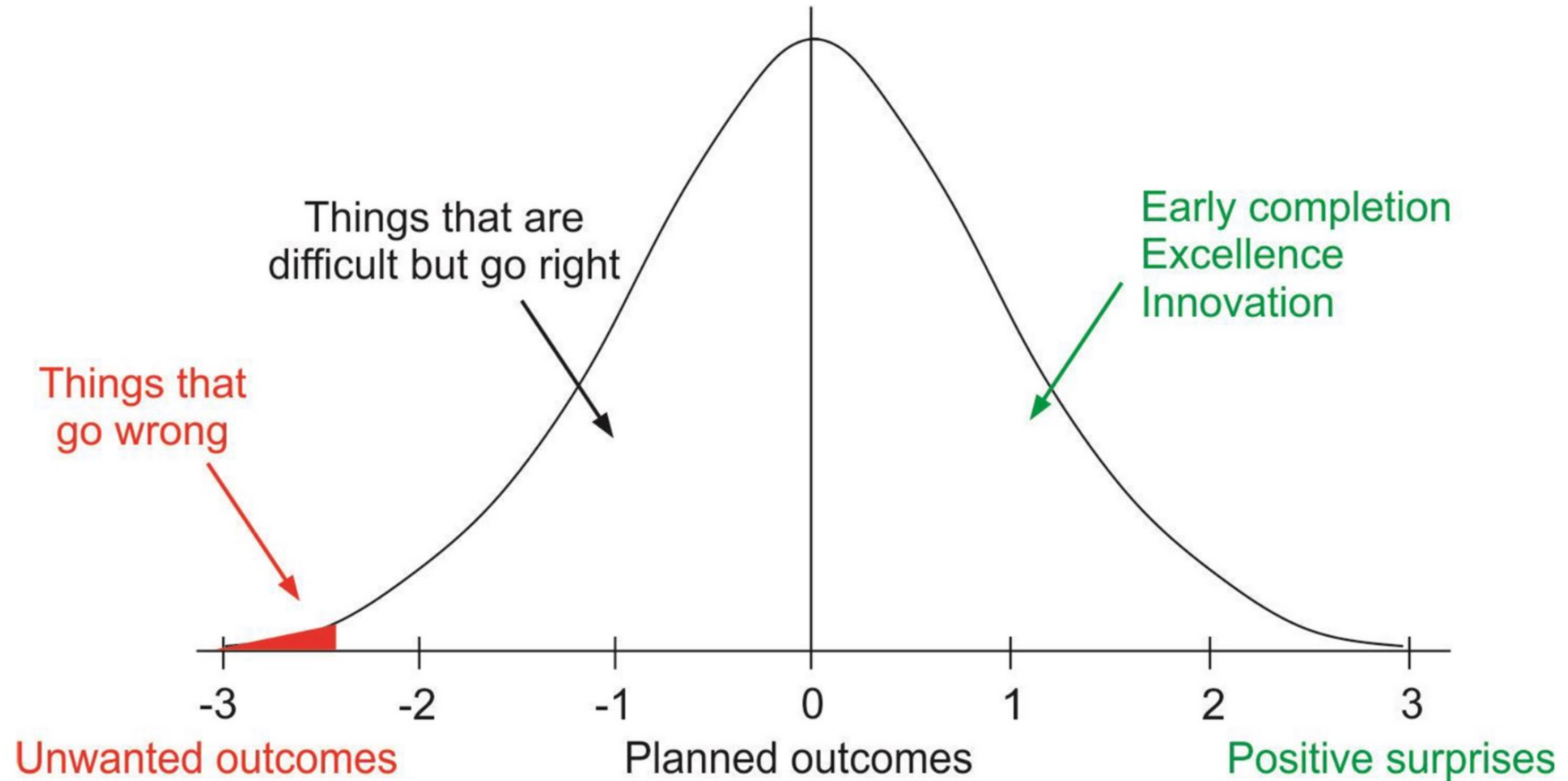
The Safety Journey so far...



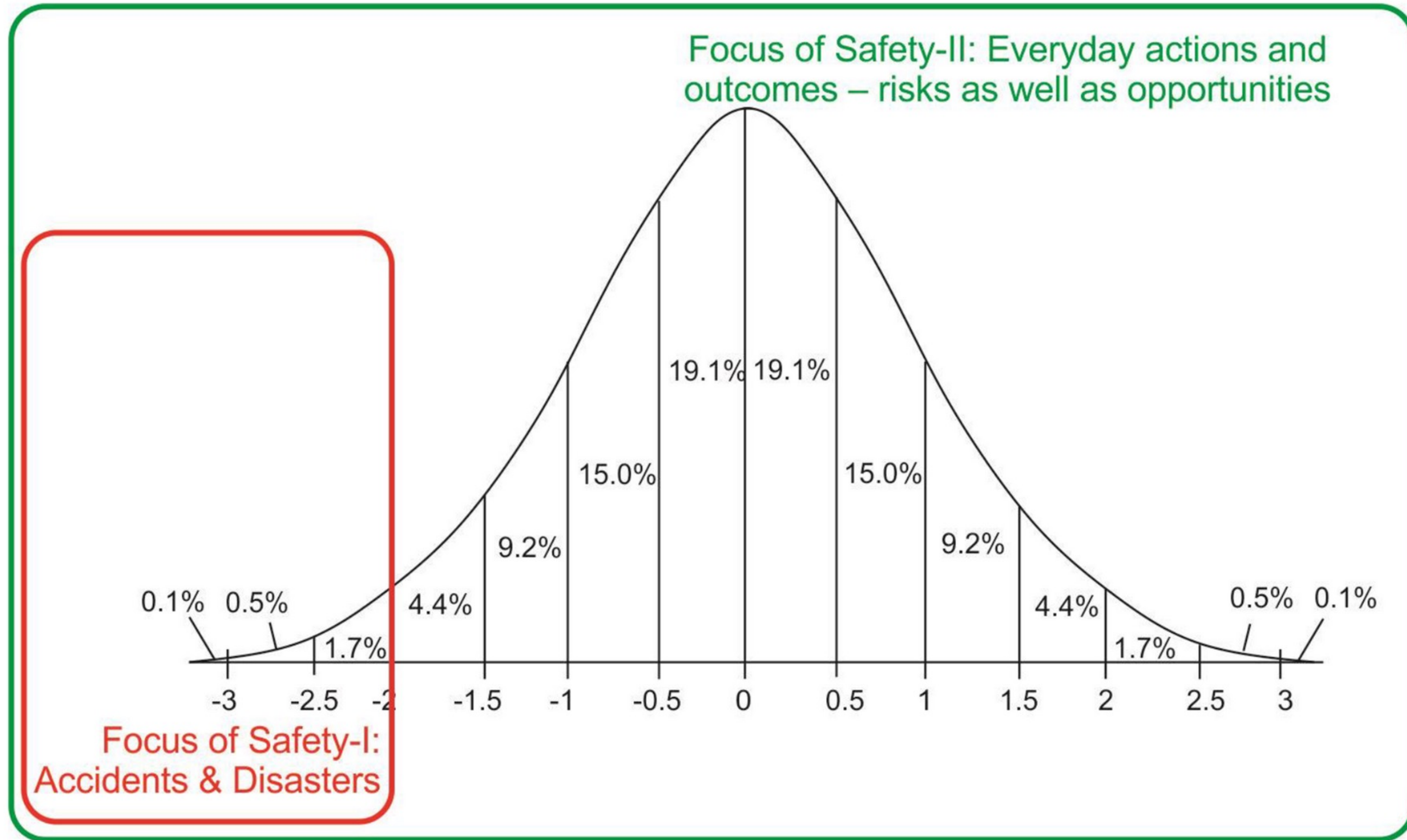
Safety 1 + Safety 2



Safety 1 + Safety 2



Safety 1 + Safety 2



Safety 1 + Safety 2

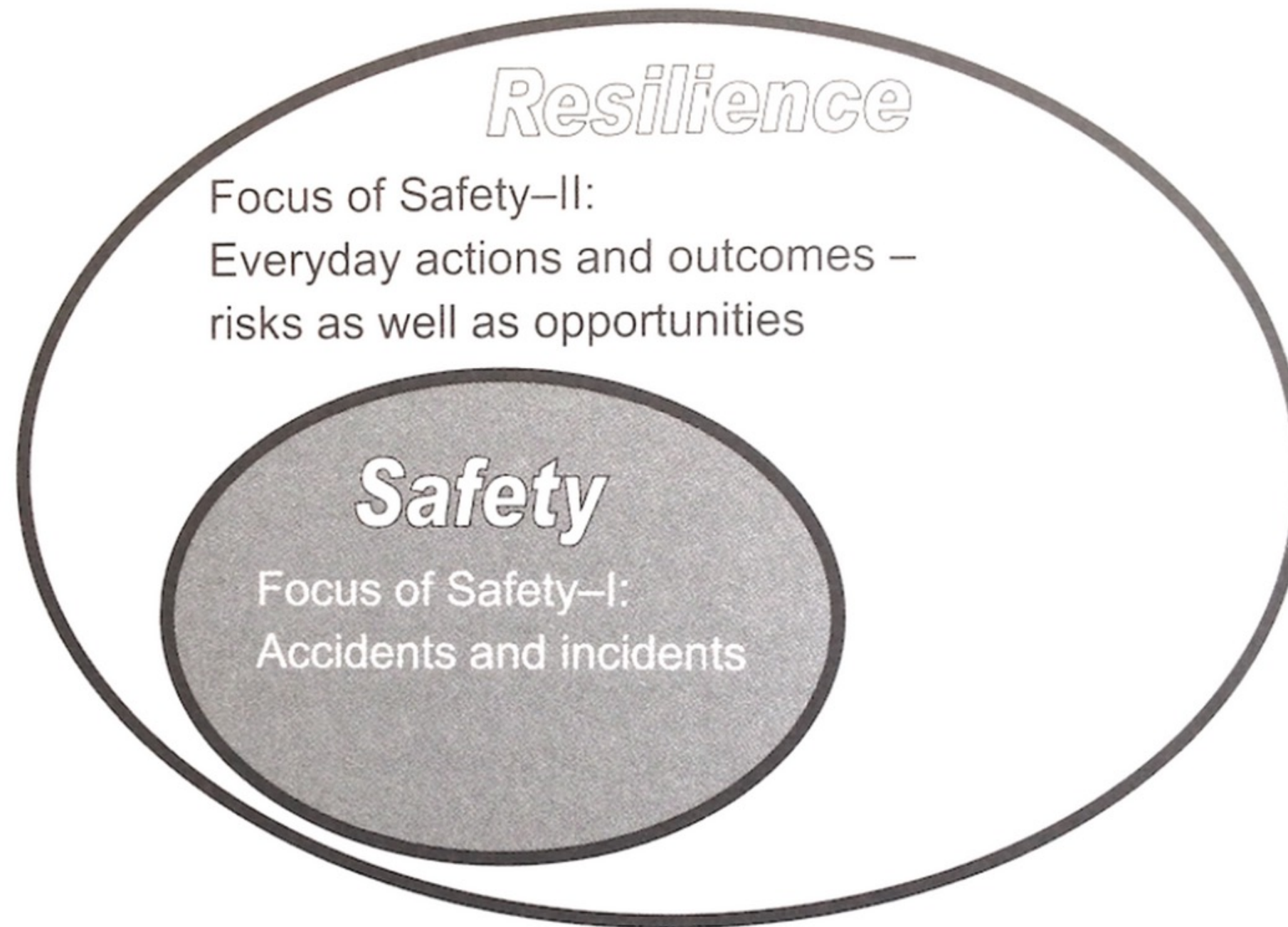


Figure 3 - Relationship between Safety-I and Safety-II (Hollnagel, 2014, p. 148)

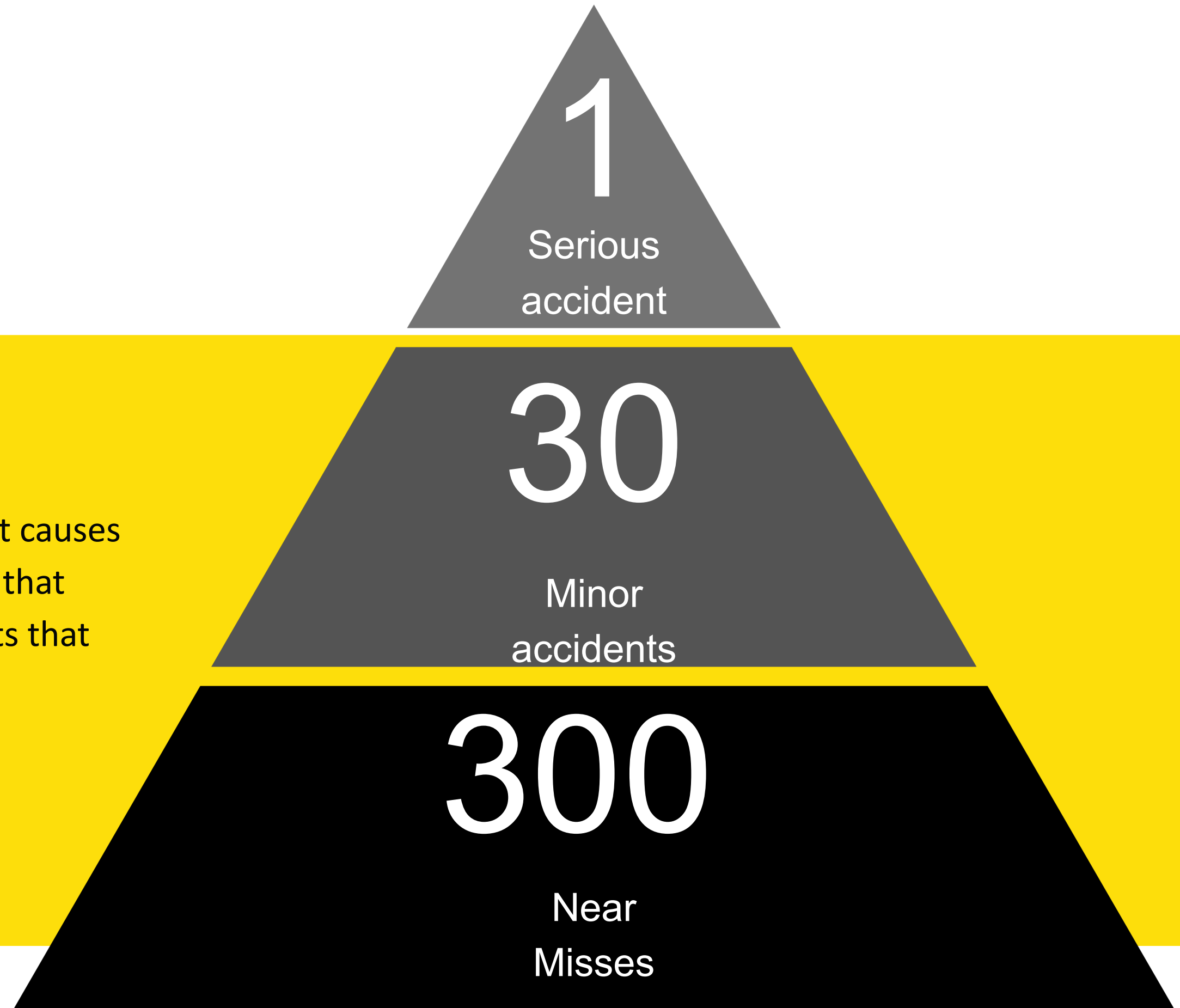
Just Safety 1...?

yeah...no



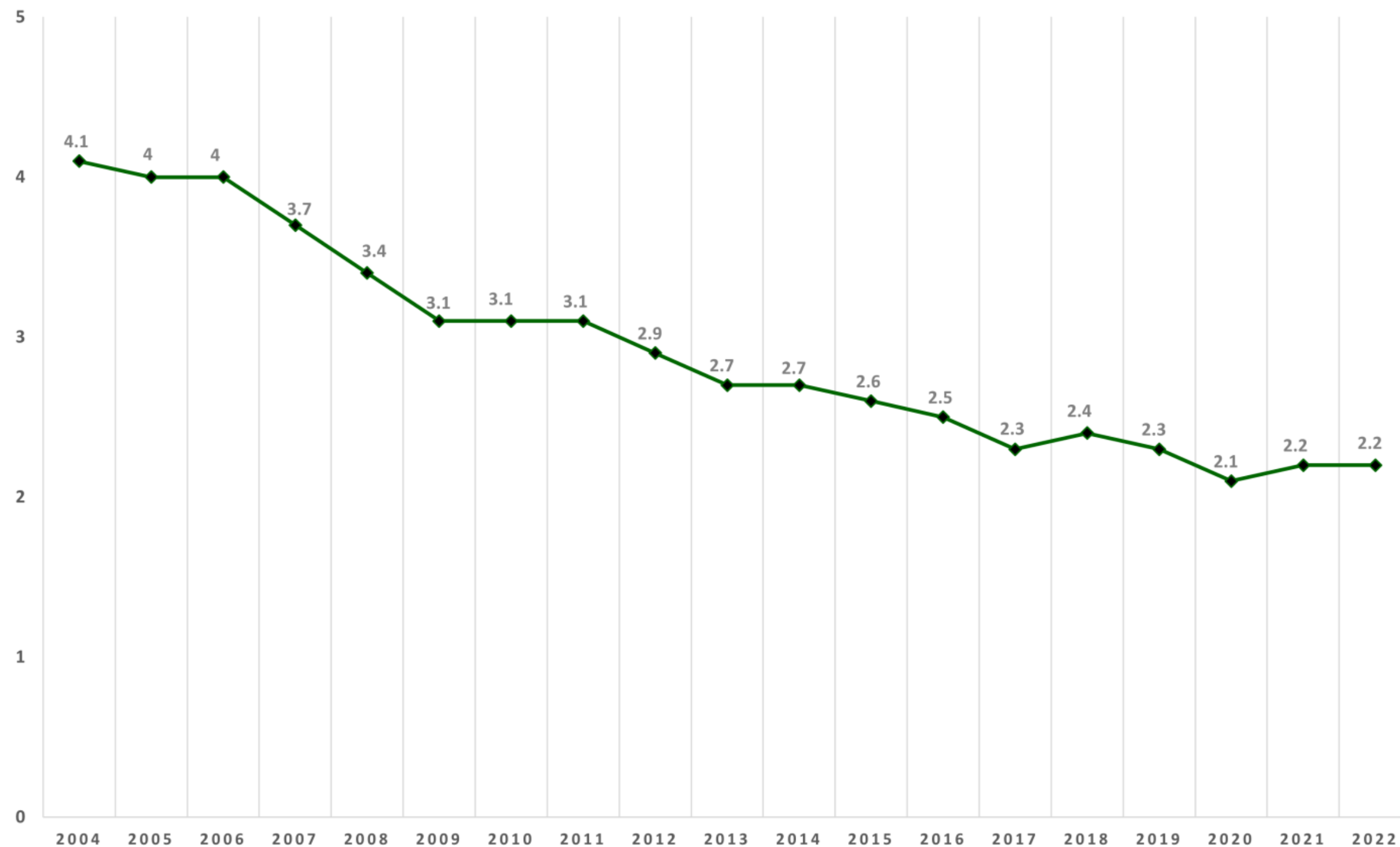
Heinrich Pyramid

Heinrich's Law:
in a workplace, for every accident that causes a major injury, there are 29 accidents that cause minor injuries and 300 accidents that cause no injuries.



TRIR

OCCUPATIONAL INJURY AND ILLNESS RATE PER 100 FULL-TIME WORKERS
NORTH CAROLINA, PRIVATE SECTOR, CALENDAR YEARS 2004 THROUGH 2022

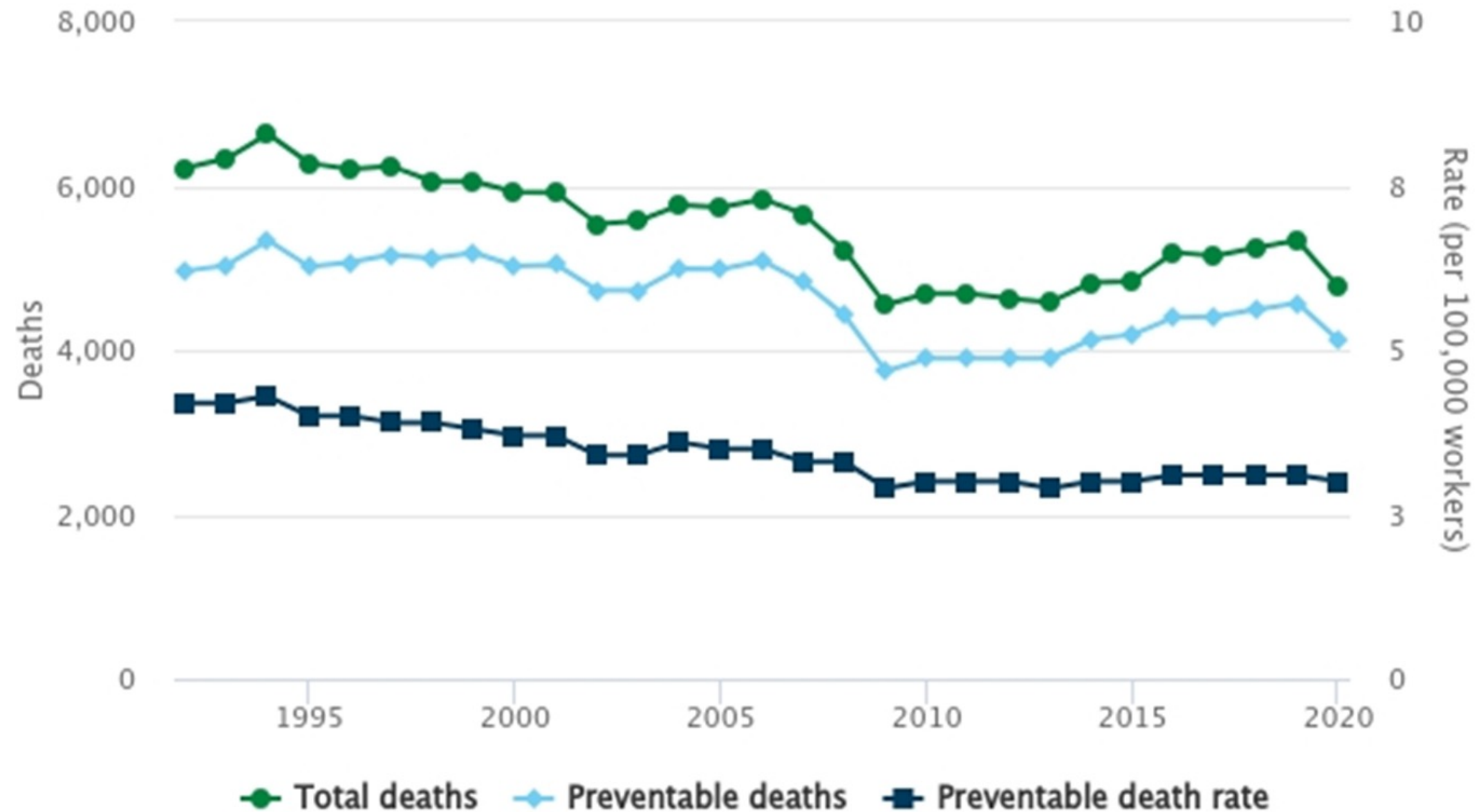


Over time there is a
reduction in recordable
incidents

Work-Related injury & death rates

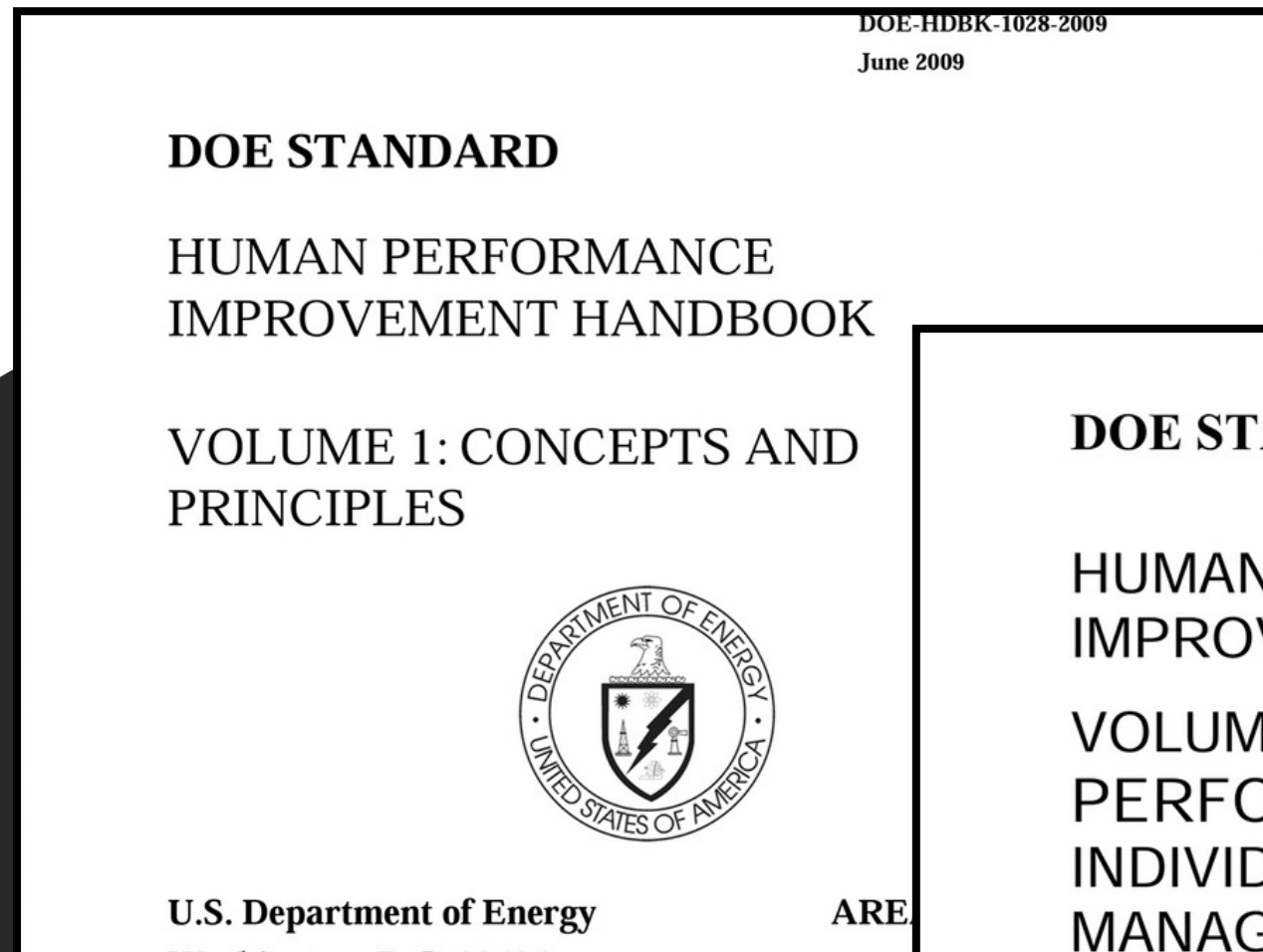
USA, 1992-2022

Injury rates are decreasing but death rates are not.

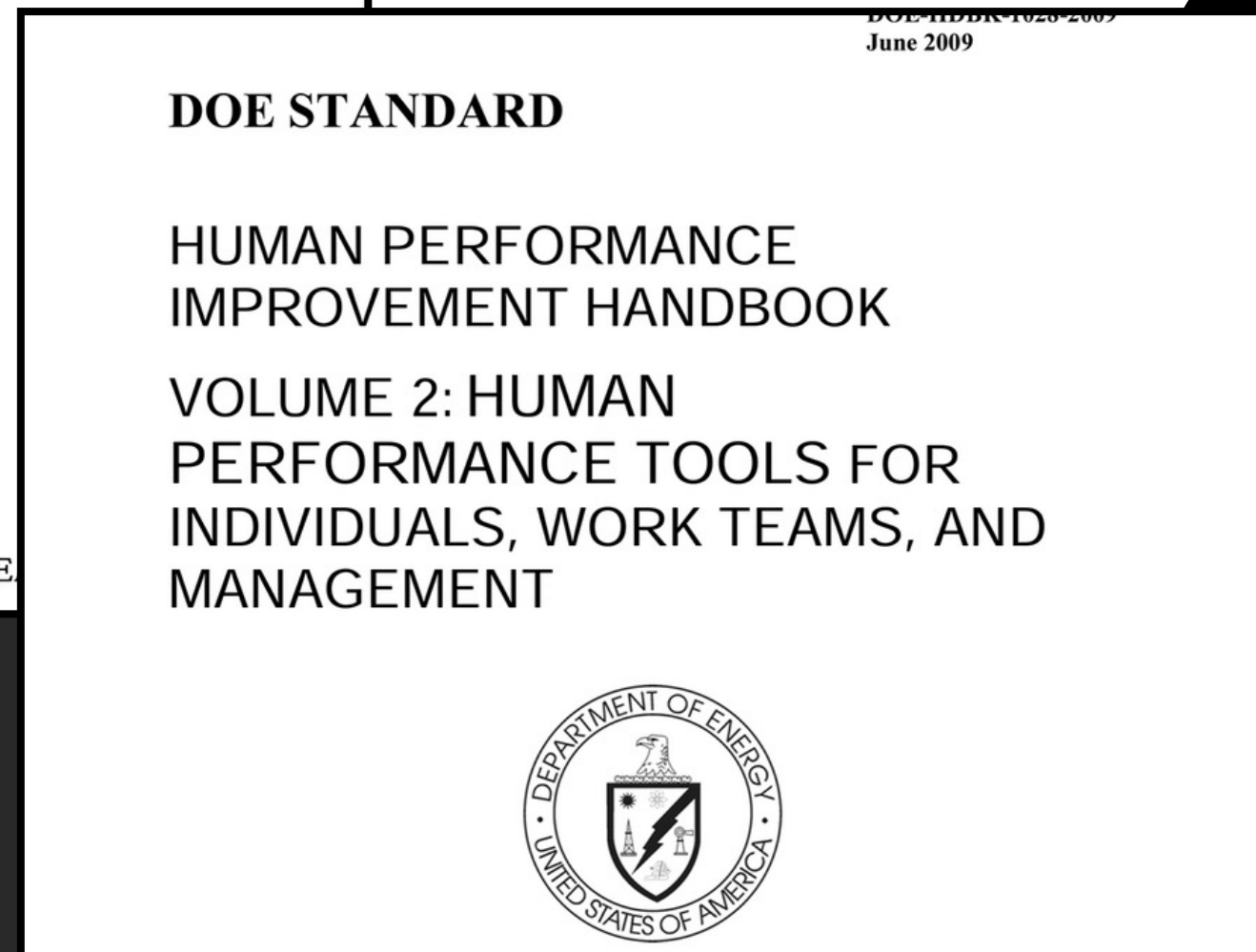


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Origins of HPI



Origin of Human performance. As a result of significant events (ie, Three-Mile Island) HPI was created



Traditional Human Performance Principles

People are fallible
and even the best of us make mistakes.



Error Likely Situations
are predictable, manageable and preventable



Individual Behavior
is influenced by organizational processes and values.



High Levels of Performance
achieved largely on the encouragement and reinforcement received
from leaders, peers and subordinates.

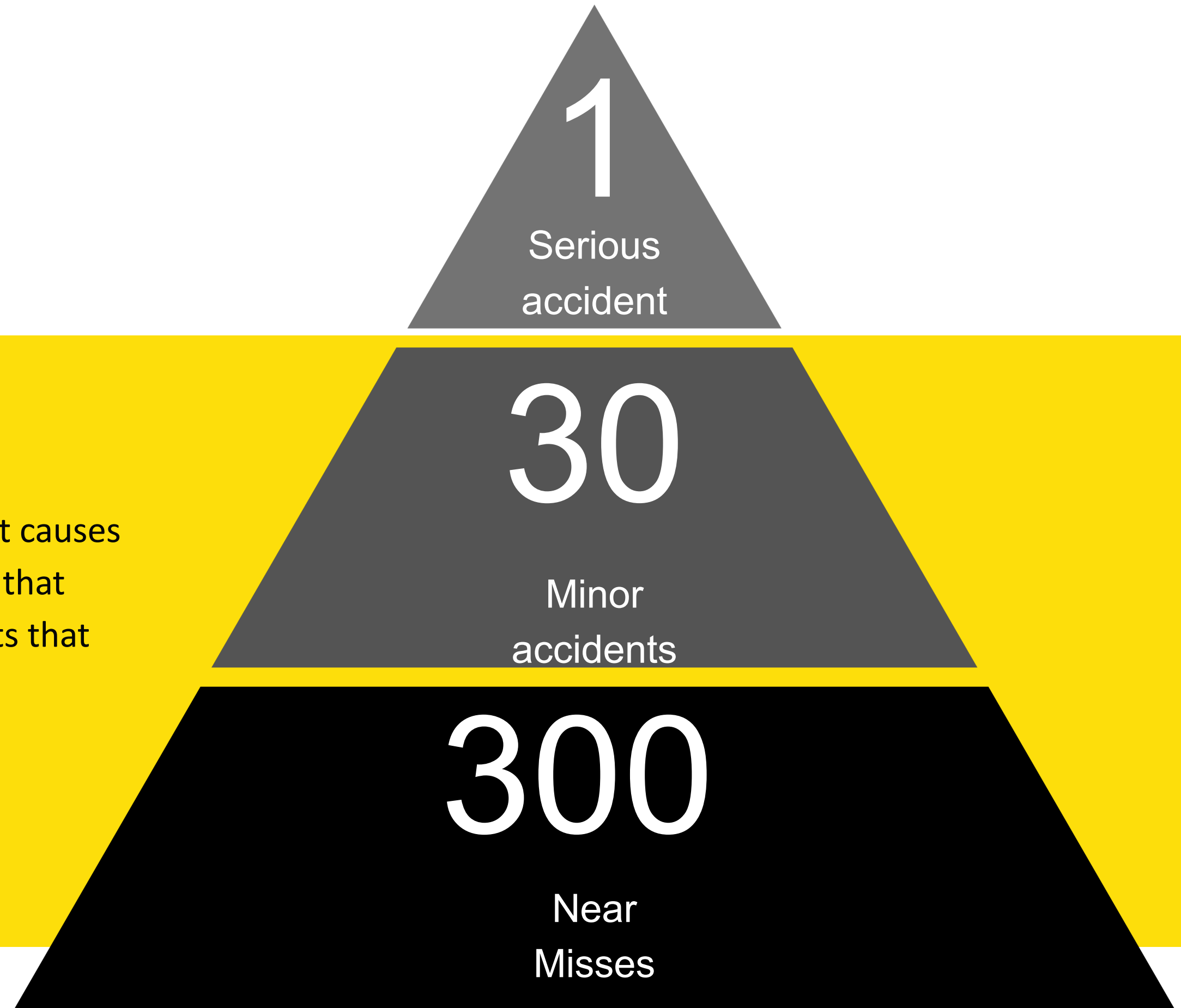


Avoid Events
by an understanding of the reasons mistakes occur and
application of the lessons learned from past events



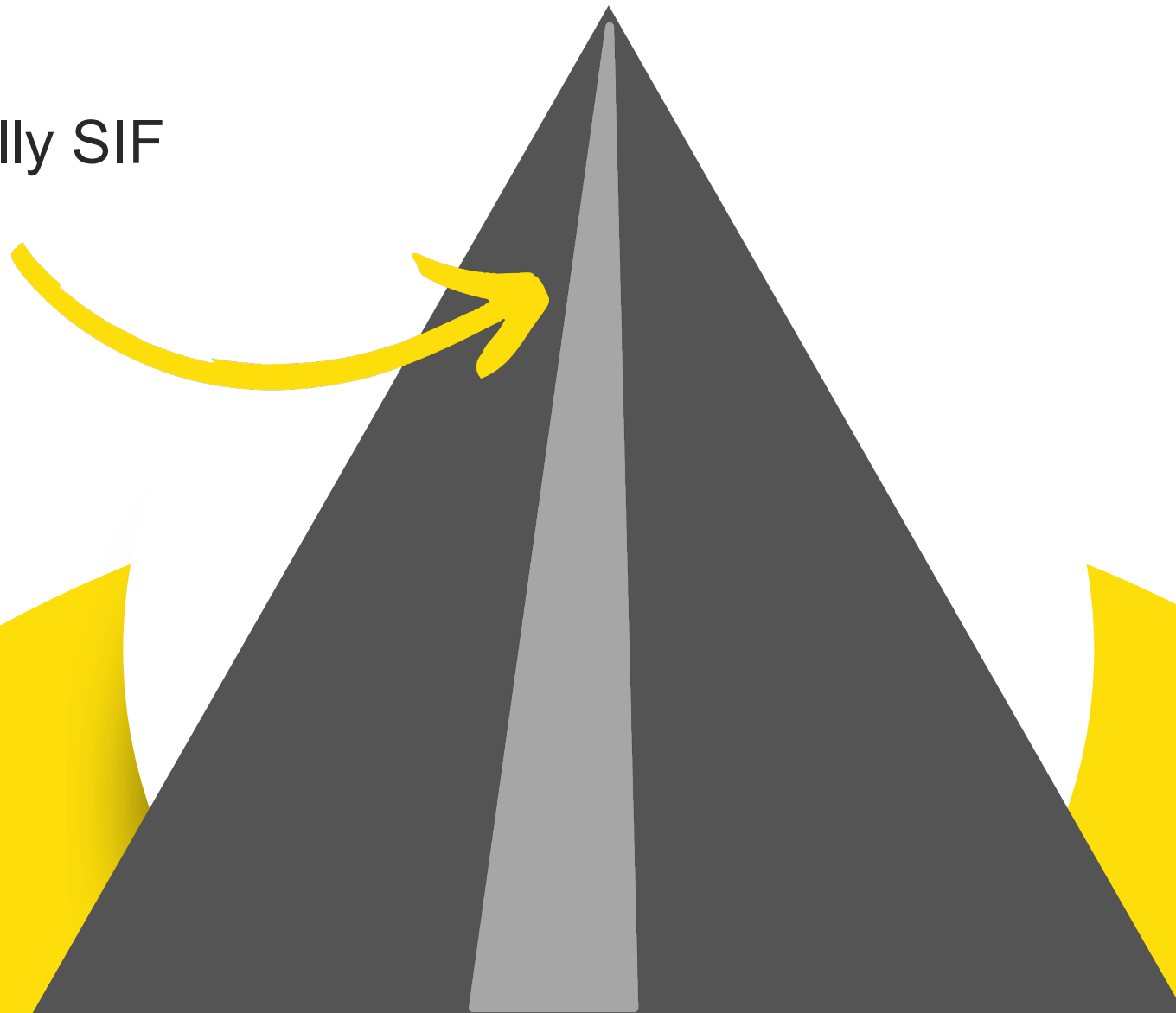
Heinrich Pyramid

Heinrich's Law:
in a workplace, for every accident that causes a major injury, there are 29 accidents that cause minor injuries and 300 accidents that cause no injuries.



Is the Safety Triangle Accurate Predictively?

21% Potentially SIF



Tom Krause, BST: The traditional safety triangle is not predictive of SIF's

SIF Reduction



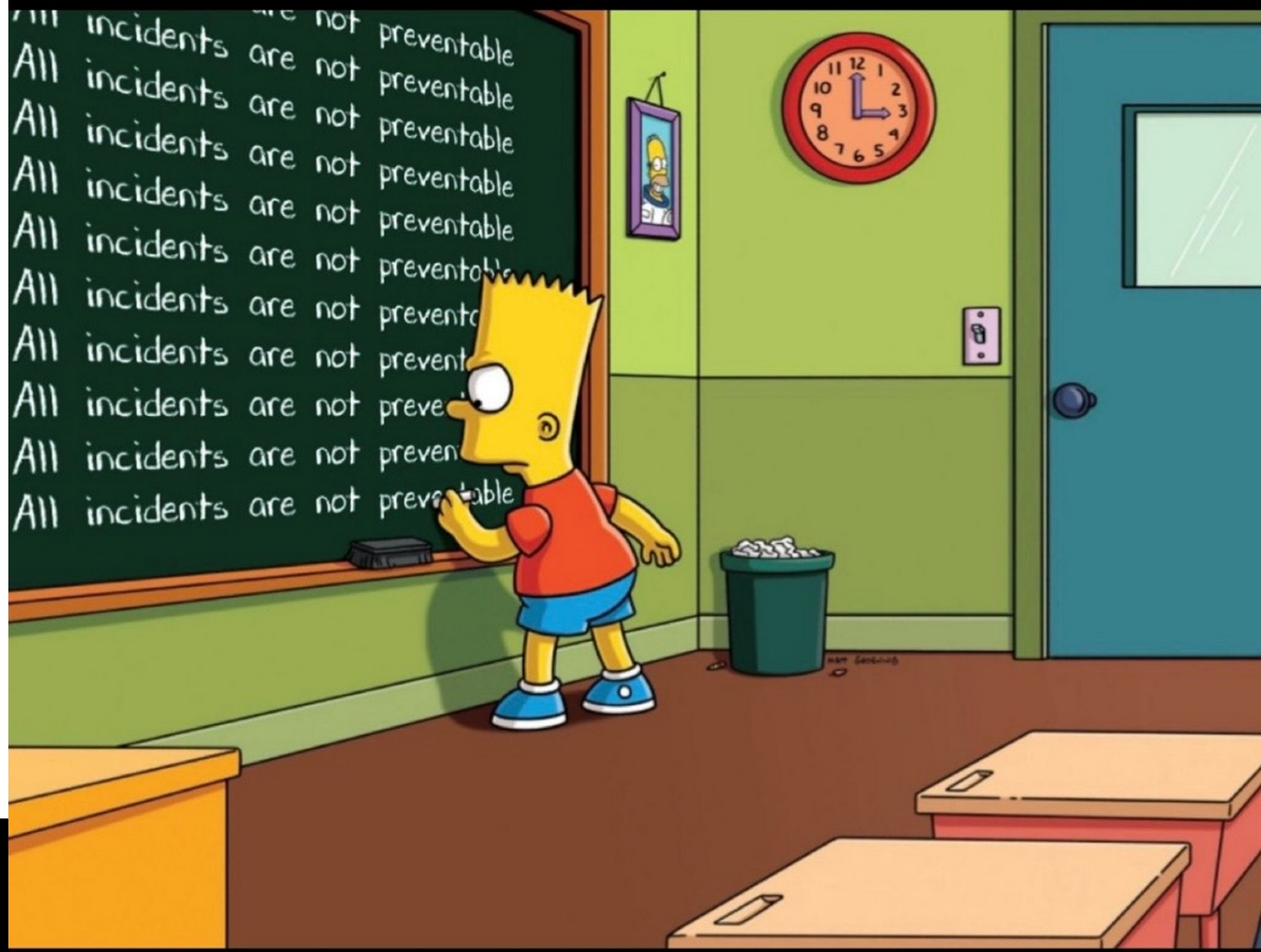
There appears to be no relationship between OSHA injury rates and fatalities



The absence of minor injuries is NOT predictive of the absence of future fatalities



The presence of minor injuries is NOT predictive of the presence of fatalities in the future.



TRIR \neq Safety Performance

3.2 trillion FTE hours
can't be wrong....



The Statistical Invalidity of TRIR as a Measure of Safety Performance

*Dr. Matthew Hallowell, Mike Quashne,
Dr. Rico Salas, Dr. Matt Jones, Brad MacLean,
Ellen Quinn*

November 2020

Key Take-Aways

Parametric and non-parametric statistical analysis data revealed that:

01. There is no discernible association between Total Recordable Incident Rate (TRIR) and fatalities;
02. The occurrence of recordable injuries is almost entirely random;
03. TRIR is not precise and should not be communicated to multiple decimal points of precision; and
04. In nearly every practical circumstance, it is statistically invalid to use TRIR to compare companies, business units, projects, or teams.

17 YEARS OF

TRILLION
WORKER HOURS

Post analytics

Timothy Walsh posted this • 5mo
OSHA Should Affirmatively State that TRIR Is Not
Indicative of Safety Performance! ...see more

TRIR Typeset 9.4.2020
matt.colorado.edu • 32 min read

Discovery ?

47,960
Impressions

Engagements ?

Reactions 503 →

Comments 64 →

Reposts 67 →

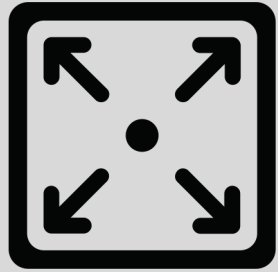
Breaking the internet



ok, maybe not



The 4 Principles of Safety Differently



Safety is not defined by the absence of accidents, but by the presence of capacity.



Workers aren't the problem, workers are the problem solvers.



We don't constrain workers in order to create safety, we ask workers what they need to do work safely, reliably, and productively.



Safety doesn't prevent bad things from happening, safety ensures good things happen while workers do work in complex and adaptive work environments.

Resilience

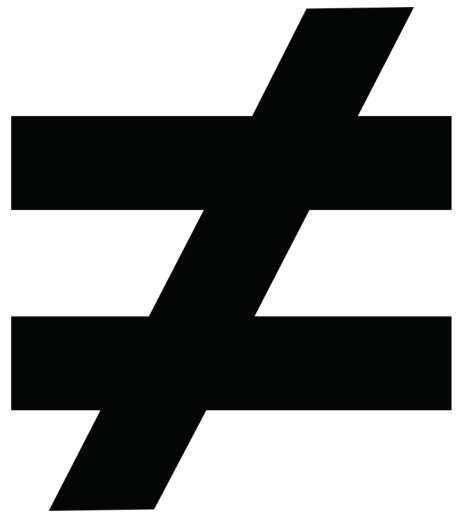


We can't really remove risk from our work...

So, we must build risk competency and failure capacity in our work systems and processes.



Is it safety?



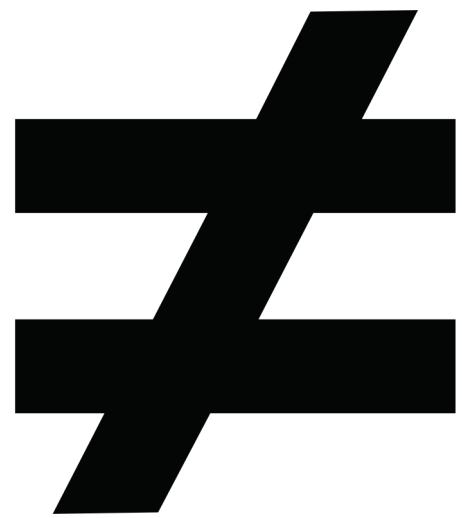
Safety is NOT
the absence of accidents



Safety is
the presence of capacity

Conklin

Is it safety?



Safety is NOT
the absence of failures



Safety is
the presence of defenses

Conklin



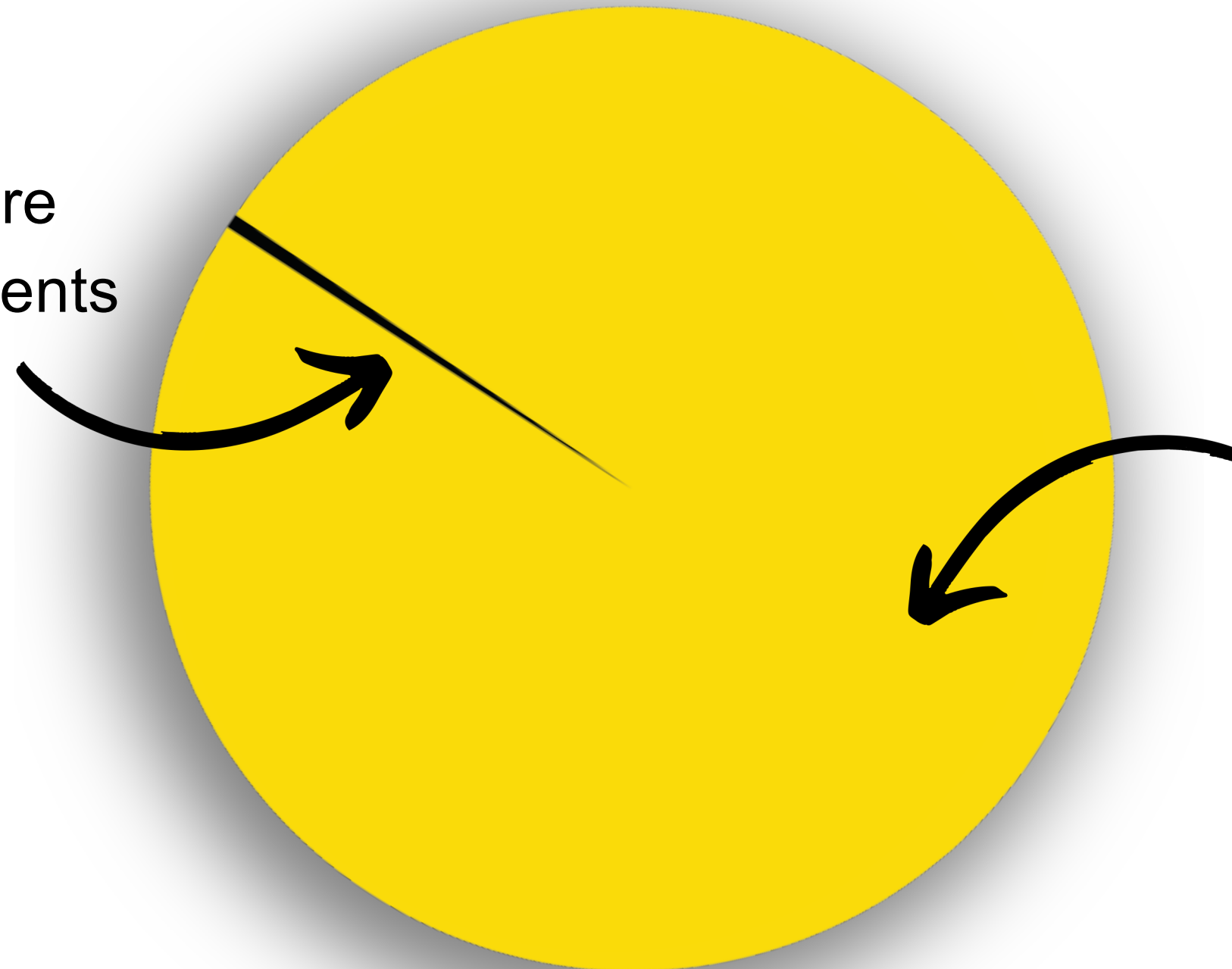
An important consequence of defining safety by operations that go wrong, is the lack of importance of operations that go right.

If **nothing** happens--
nothing is wrong.

So much good is happening.

BAD

$10^{-4} := 1$ failure
in 10.000 events



GOOD

$1-10^{-4} := 9.999$ non-failure
in 10.000 events

What is happening when nothing is happening?
What do know about work as it is actually being done?
Are we a learning organization?

Abraham Wald and Survivorship Bias



Statistical Research Group (SRG)



Need to armor planes so they don't get shot down



More armor = more fuel/less range/less capacity

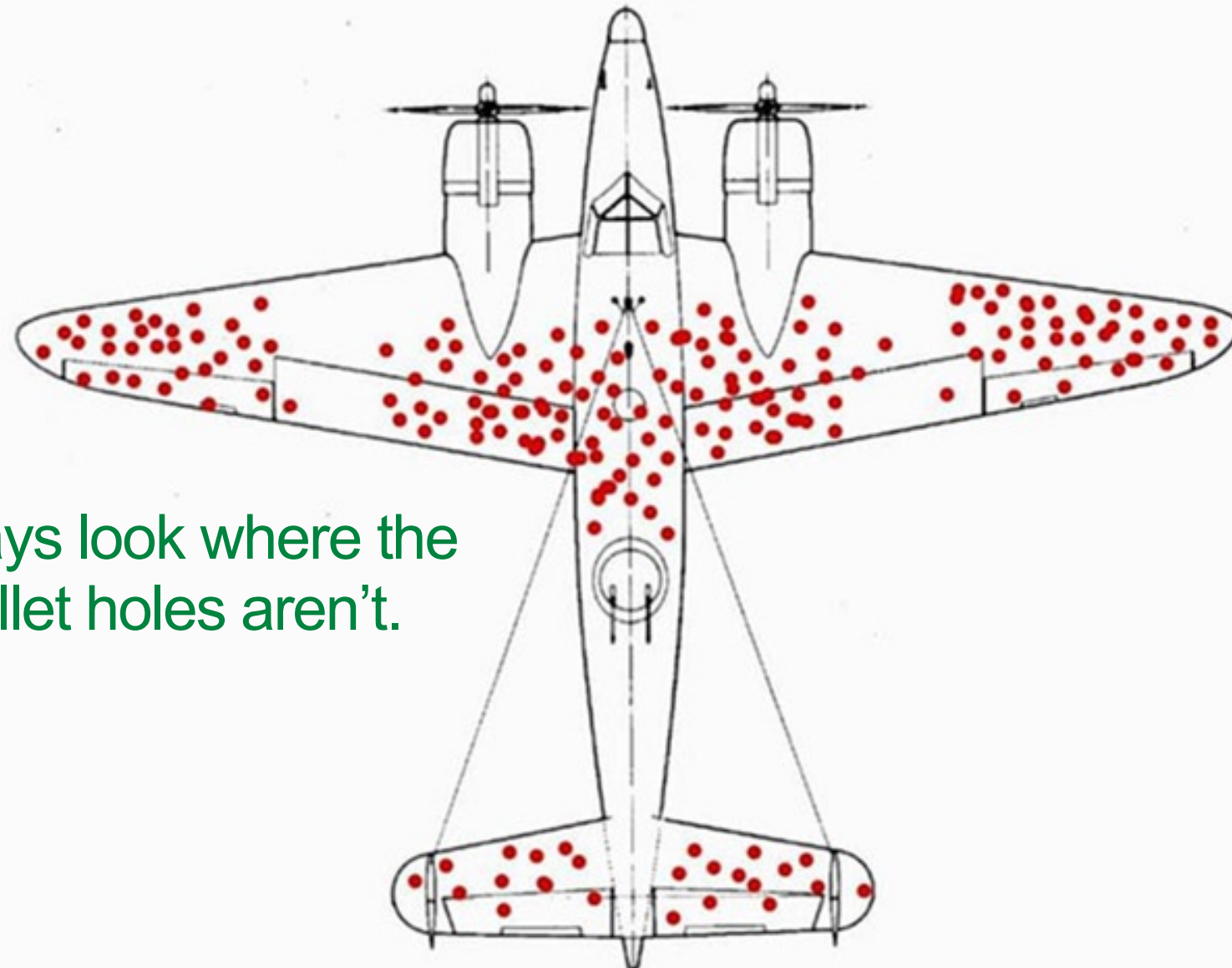


Where to put the armor?



???

Always look where the
bullet holes aren't.



Abraham Wald and Survivorship Bias



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More armor = more fuel/less range/less capacity

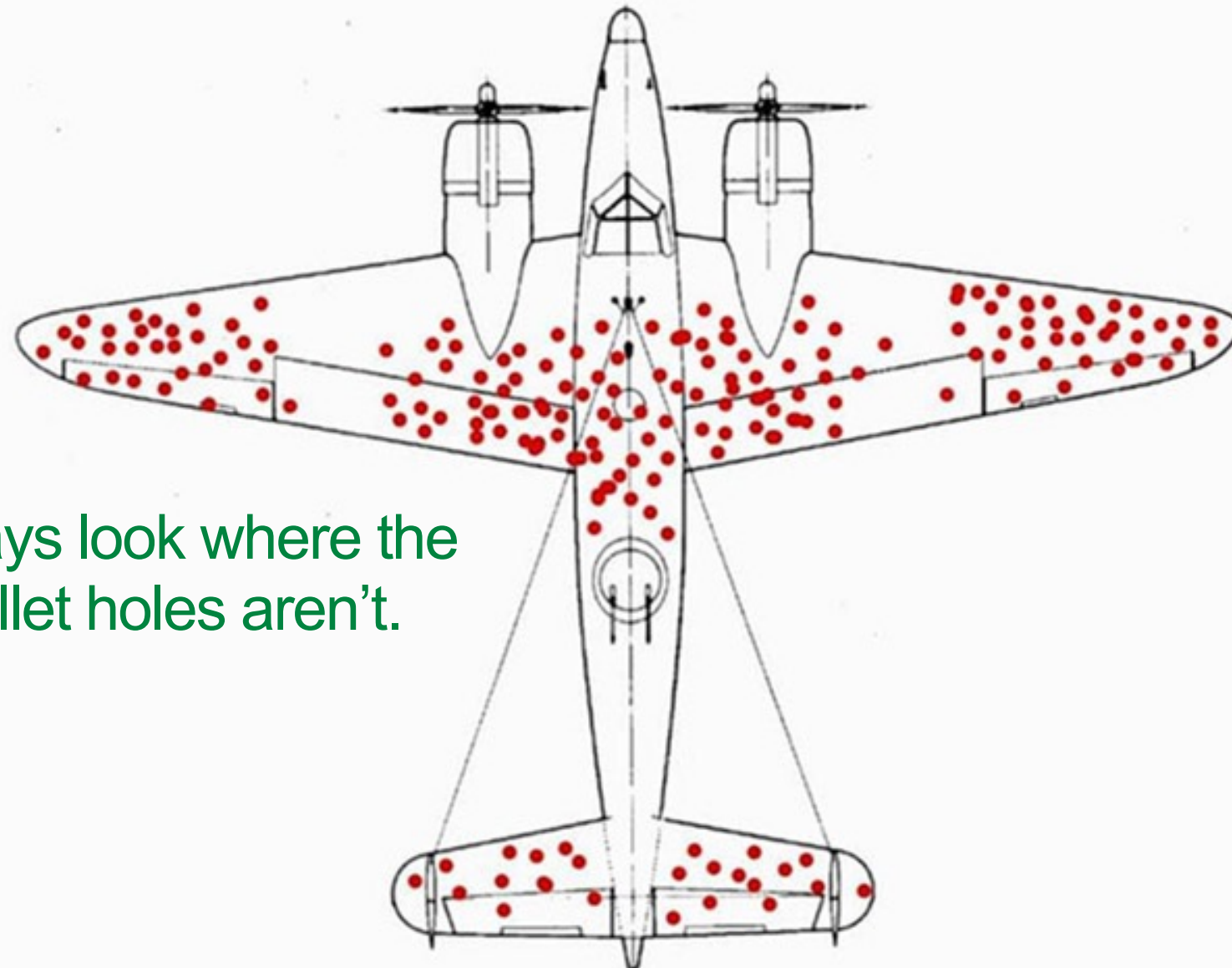


Where to put the armor?



The armor, said Wald, doesn't go where the bullet holes are. It goes where the bullet holes aren't: on the engines.

Always look where the bullet holes aren't.



Safety Differently

Todd Conklin's Updated Version



- Human error is normal.
- Blame fixes nothing.
- Learning is vital.
- Context drives behavior.
- How you respond to failure matters.

Incident Investigation

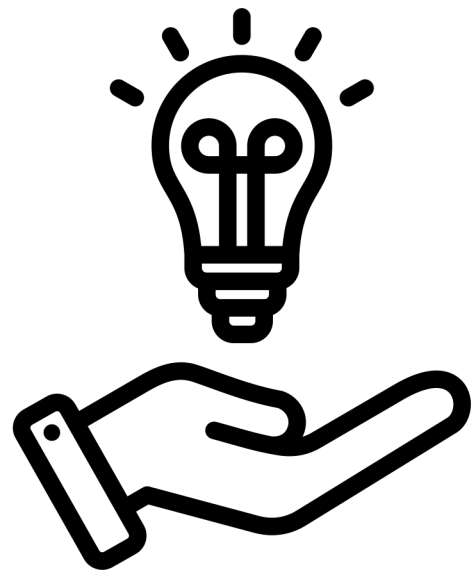
‘When an incident happens, start your investigation by looking at the system. Then if you need to, look at the worker.’

But I promise you, when you look at the system your need to look at the worker almost always goes away.’

– Dr Todd Conklin



Incident Investigation



We must stop seeing
WORKERS as problems
to be fixed. But as
SOLUTIONS to be
harnessed

- Worker's Don't Cause Failures.
- Worker's Trigger Latent Conditions That Lie Dormant In Organizations Waiting for This Specific Moment In Time.



Our work is
NOT
inherently safe.
People create safety in
practice.

Conklin



Shift your thinking from

Who

Failed.

To

What

Failed.

Conklin

It's pretty simple. You Can

Blame &
Punish

or

Learn &
Improve

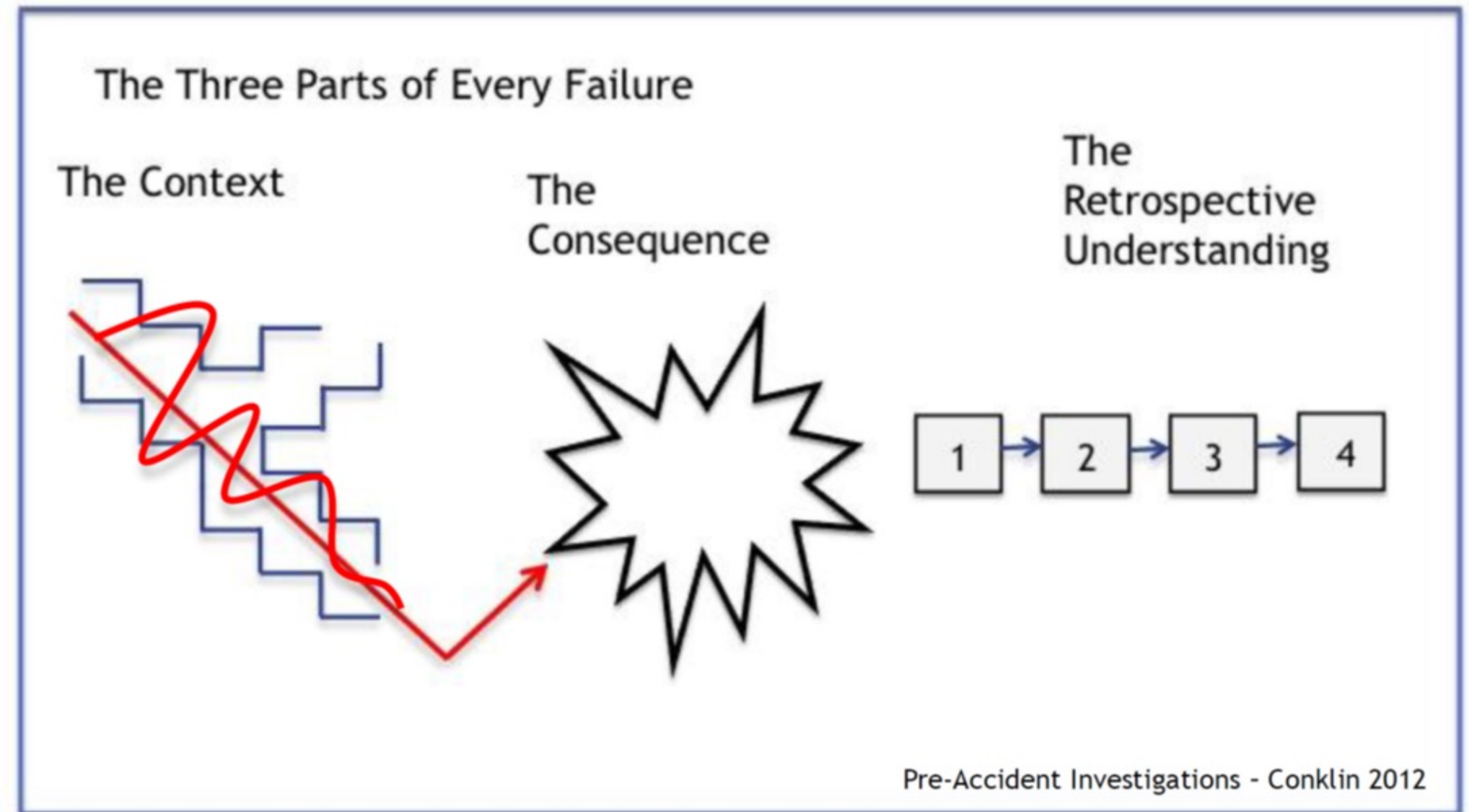
Conklin



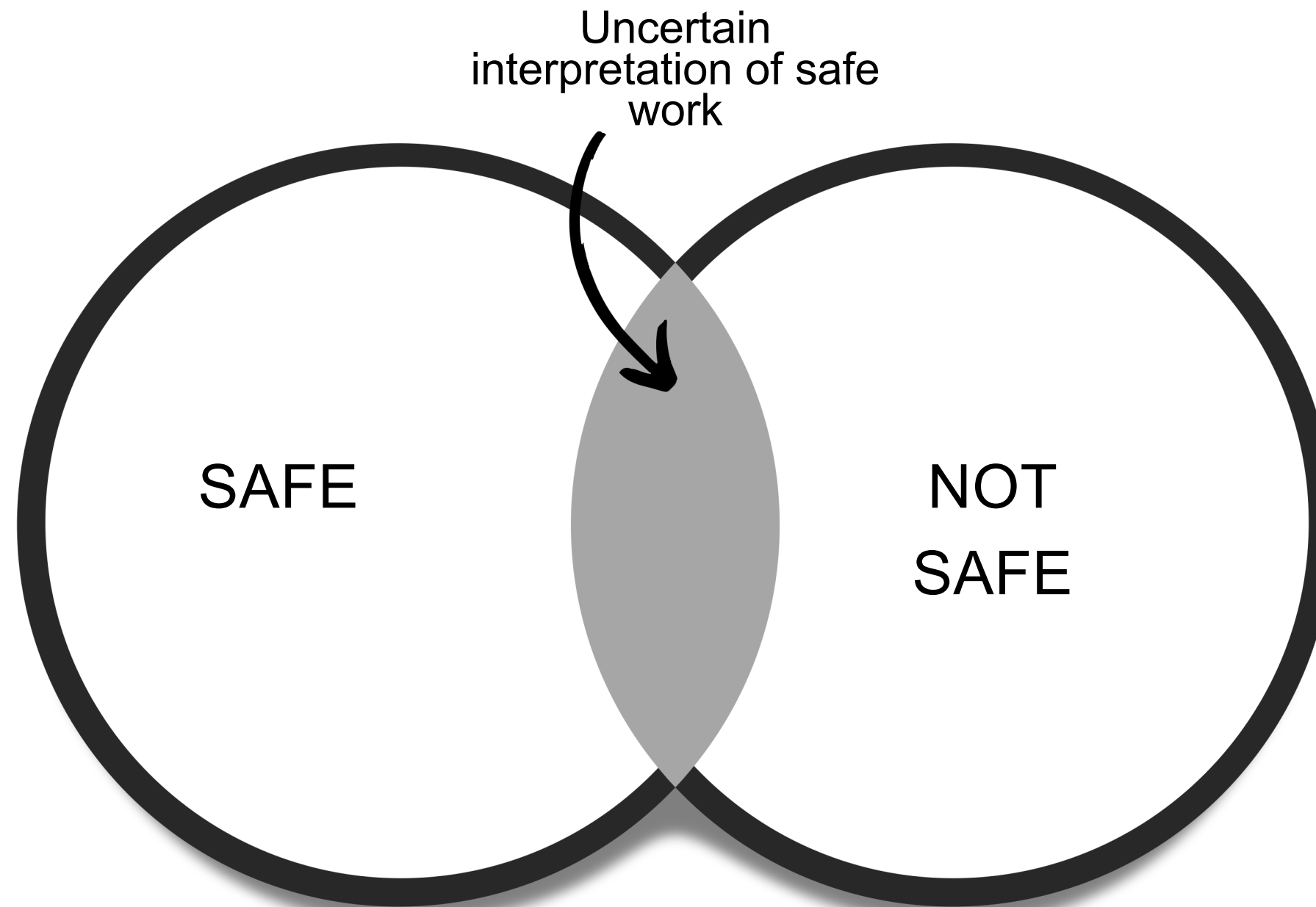
3 Parts of an Event

Conklin's approach is centered around the idea that accidents are complex and multifaceted. By examining the pre-event conditions and decisions, the event itself, and the post-event responses, organizations can move beyond blame to genuinely understand why an event happened and how similar incidents can be prevented in the future.

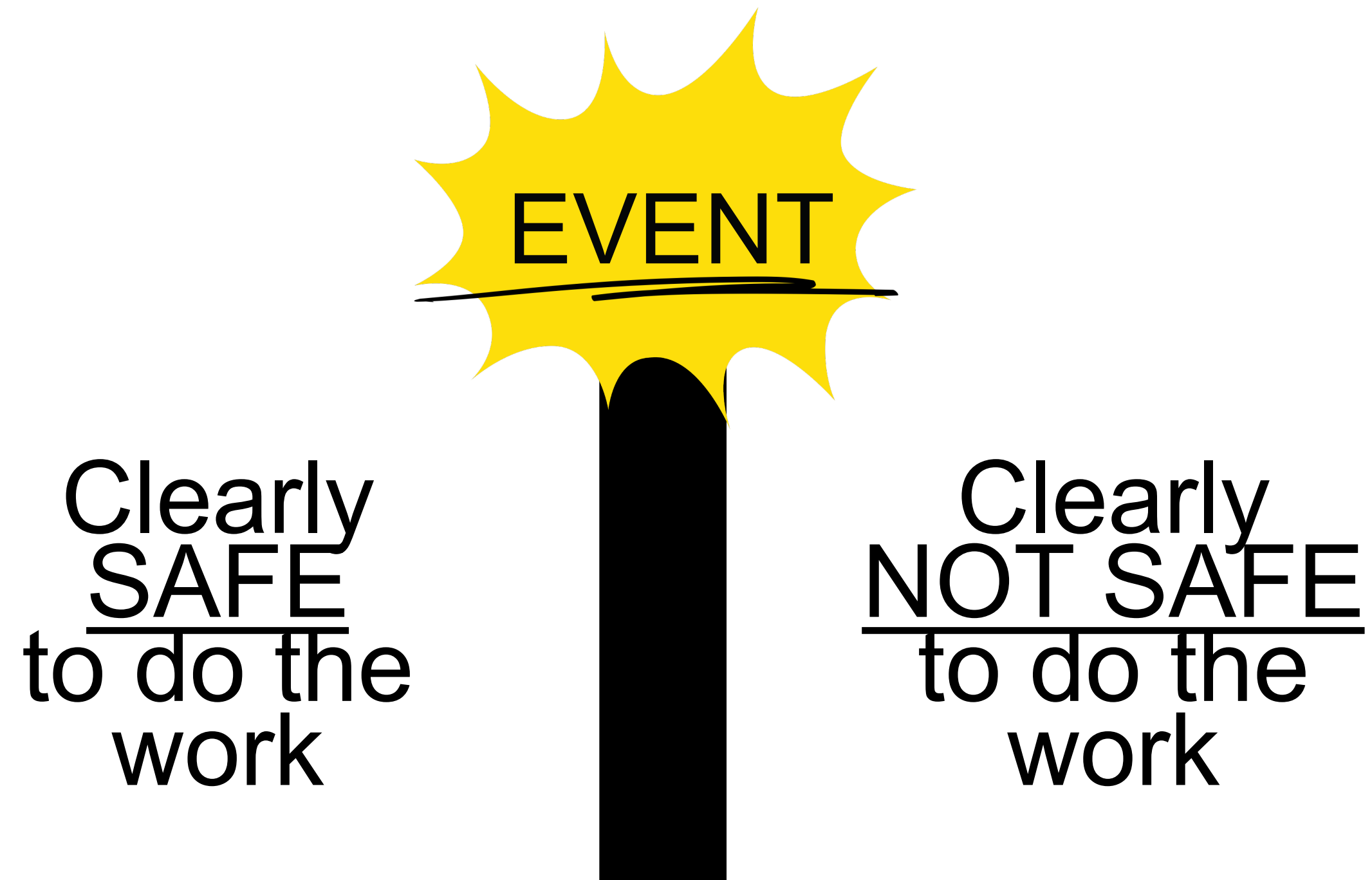
This model encourages a culture of safety and continuous improvement, where learning and systemic change are prioritized over punishment and blame.



Working in the “gray area”



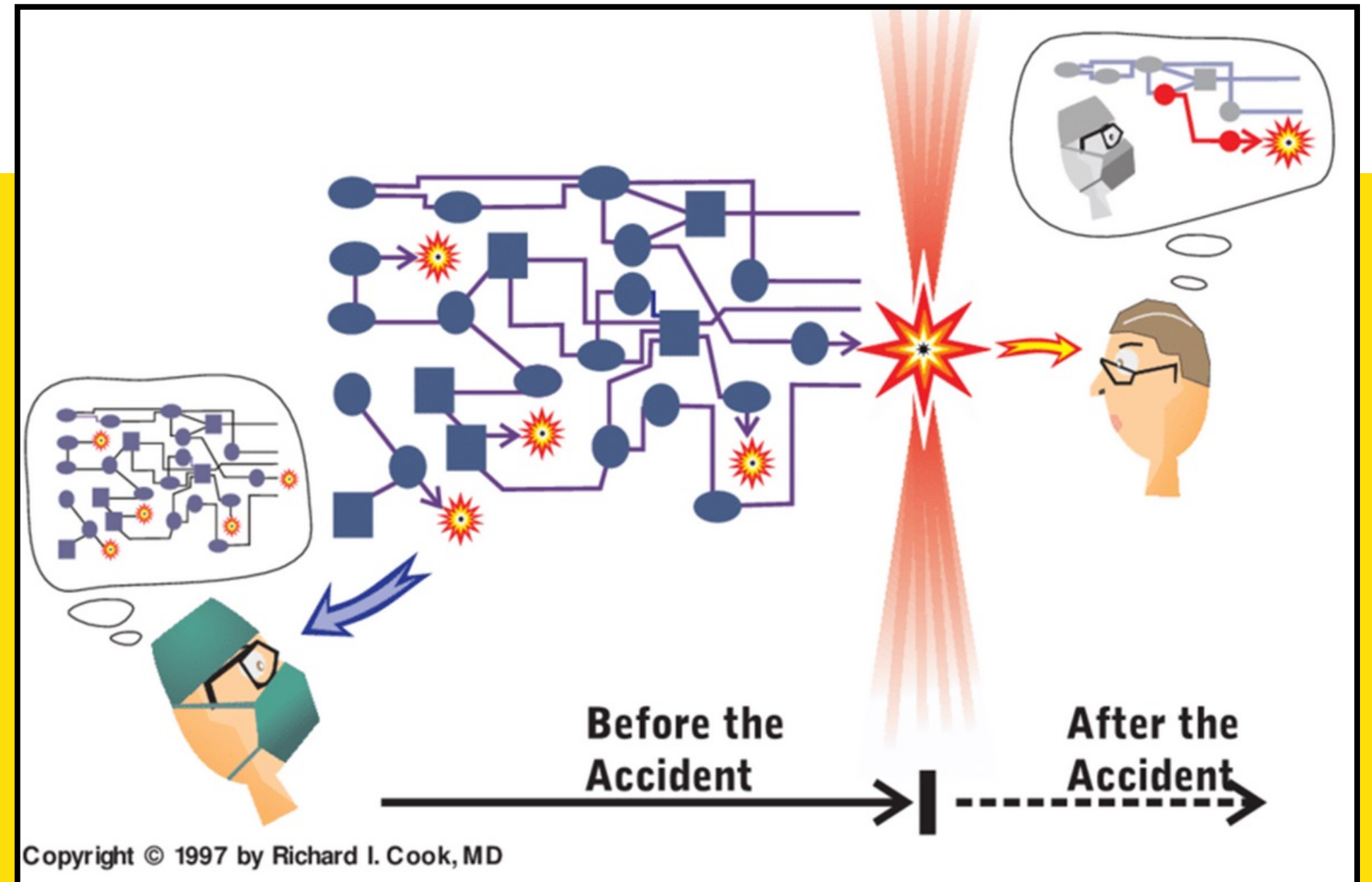
When Todd Conklin talks about "the gray area," he is often referring to the complex, uncertain, and ambiguous aspects of safety and operations within organizations. This concept challenges the traditional black-and-white thinking that typically dominates safety management and incident analysis



After the event, safety is clear...

Hindsight Bias

Hindsight bias refers to the tendency of people to believe, after an event has occurred, that they could have predicted the outcome even though it could not have been reasonably foreseen.





Safety

Is the freedom from
unacceptable risk

Conklin

We need to manage how we respond to risk



We are not reducing risk,
we are building capacity.



Absence of controls is
worse than risk.



If we rely on the worker
to be perfect, we are
bound to fail.



What's happening when
nothing is happening?



Safety and Luck are
identical twins, being
able to tell them apart is
crucial.










Seatbelt on heavy
equipment is designed to
keep the operator from
jumping out.

Safety Culture- Language Change

Seriously, let's just stop

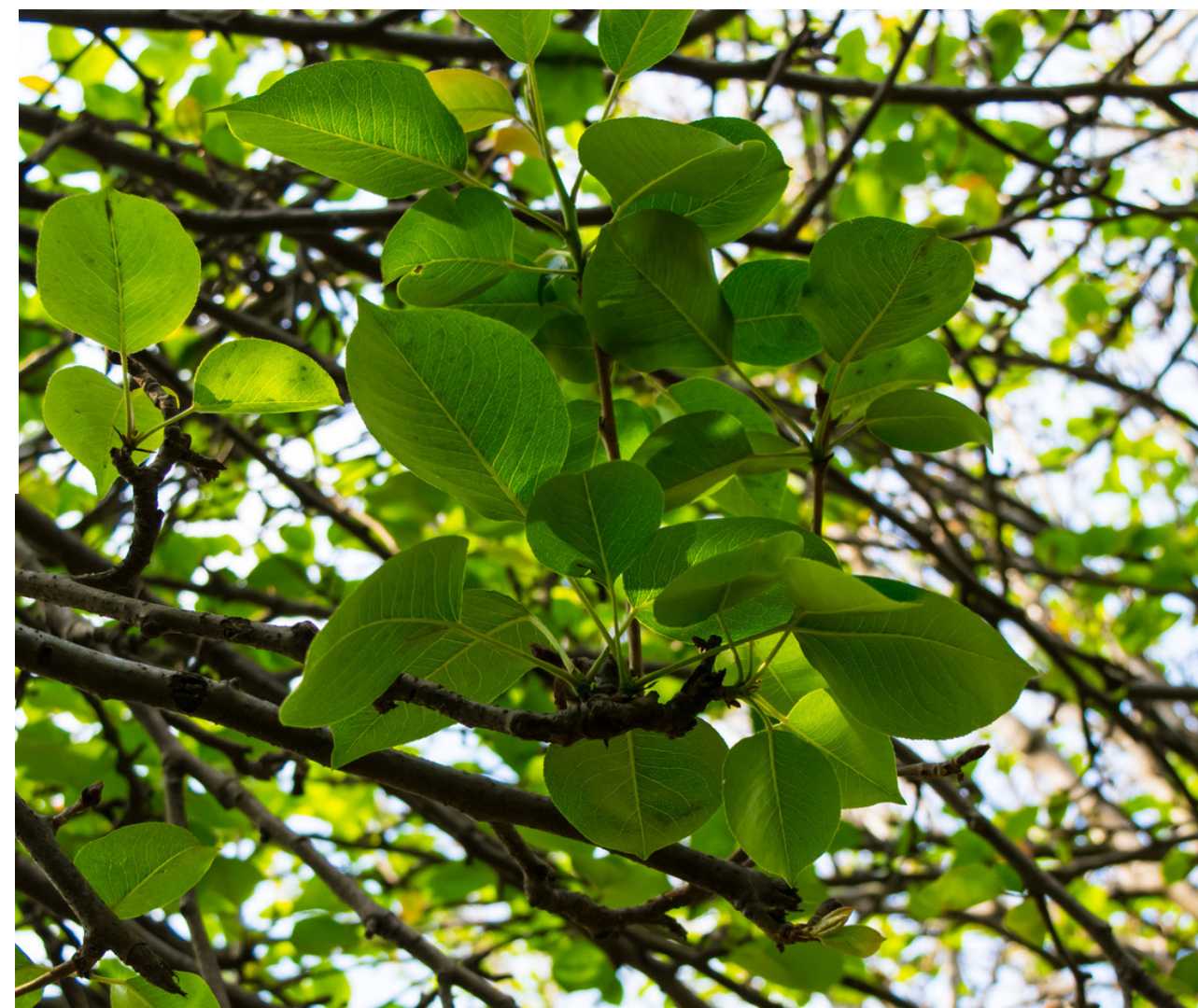


-  Incident Prevention
-  Incident Investigation
-  Root Cause
-  Behavioral-Based Safety
-  Compliance
-  Frequency Breeds Severity
-  Zero

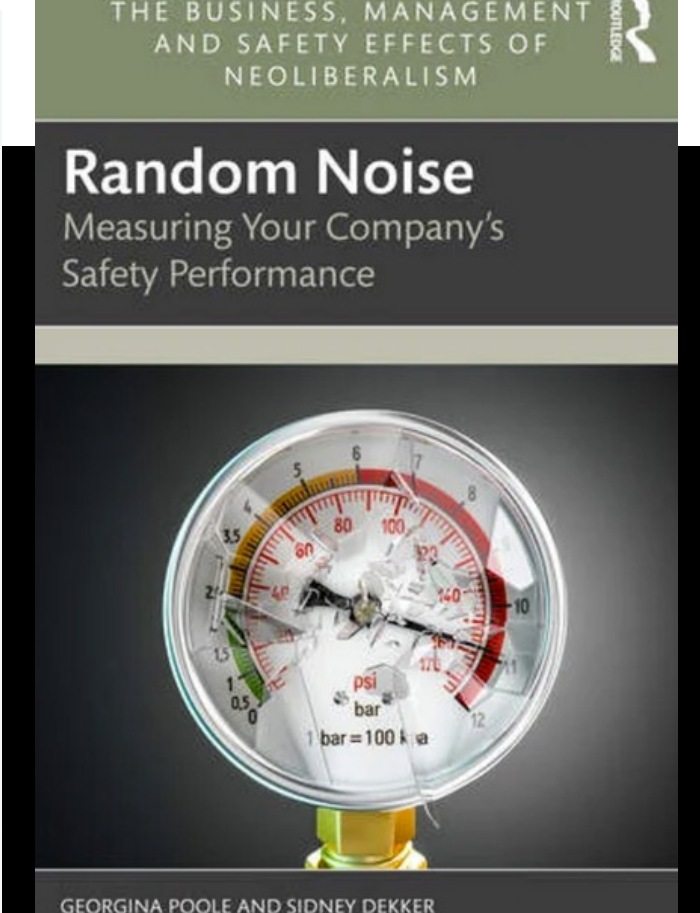
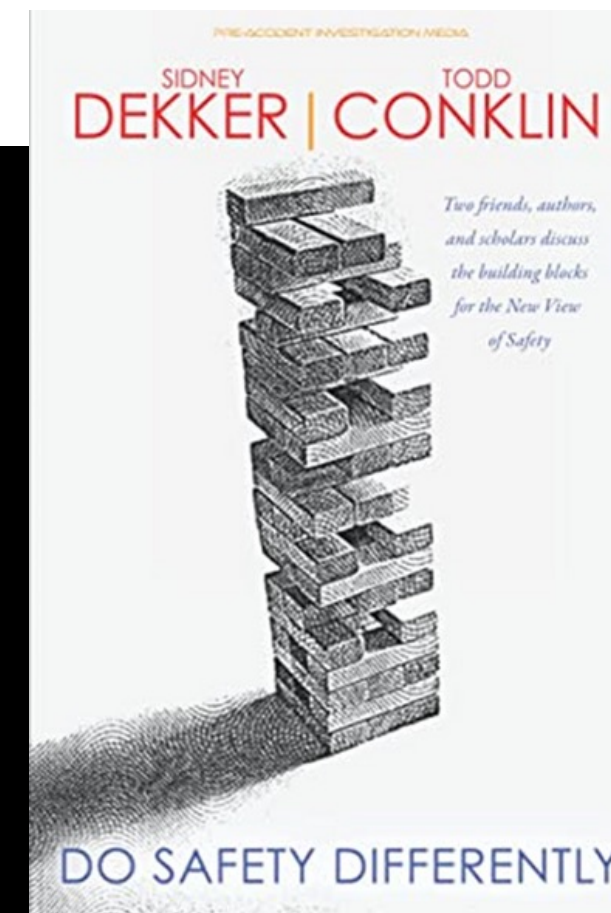
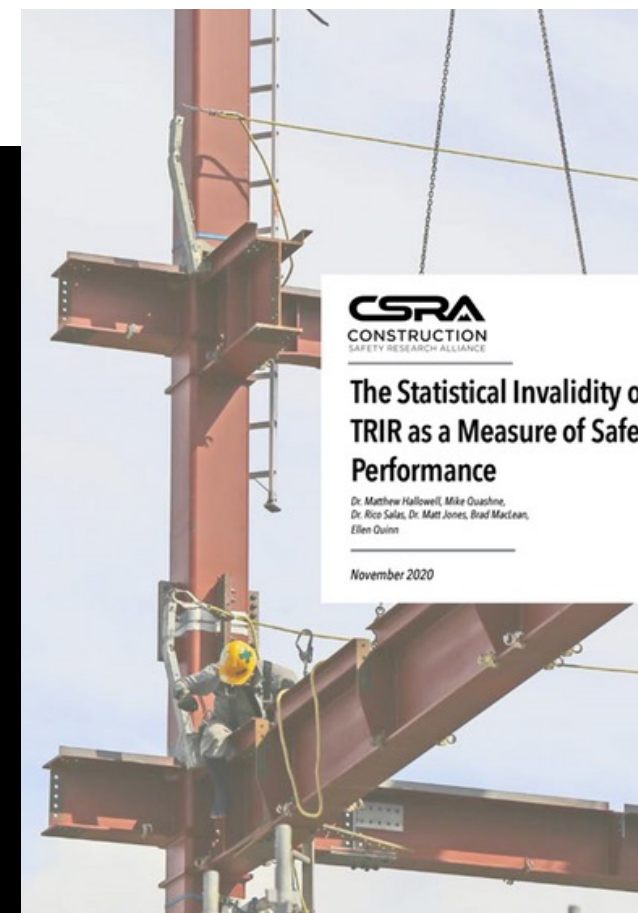
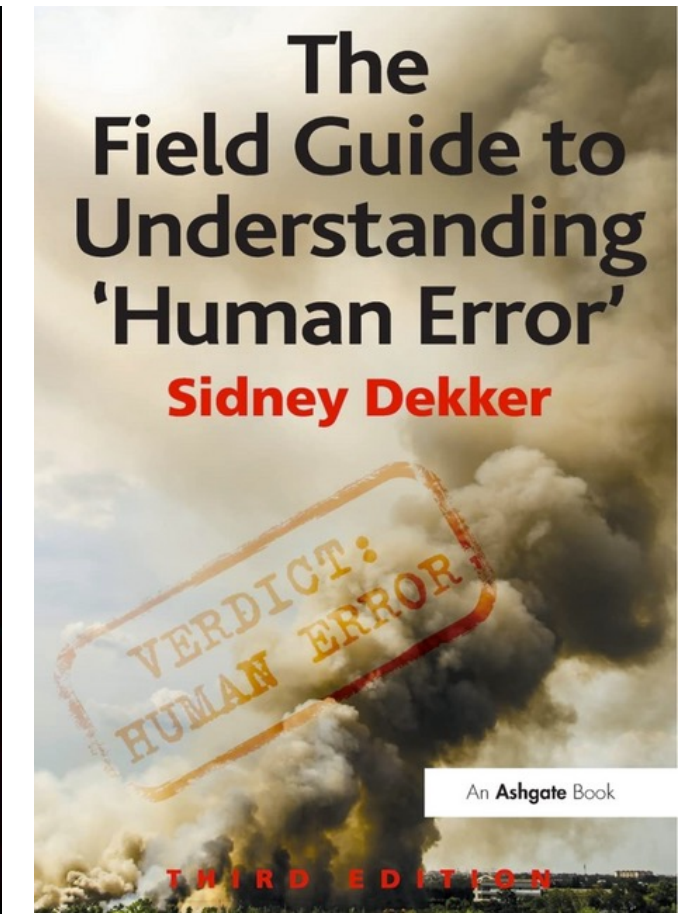
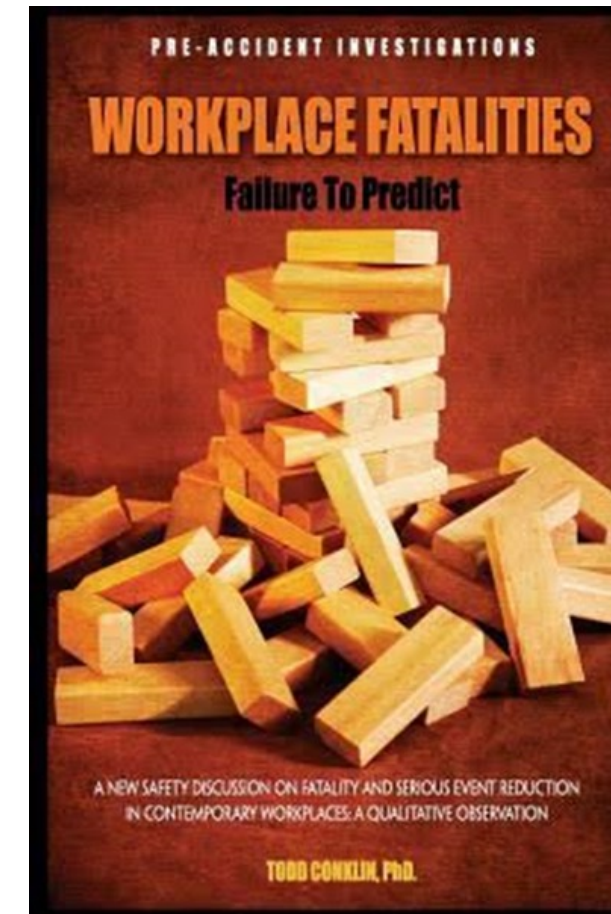
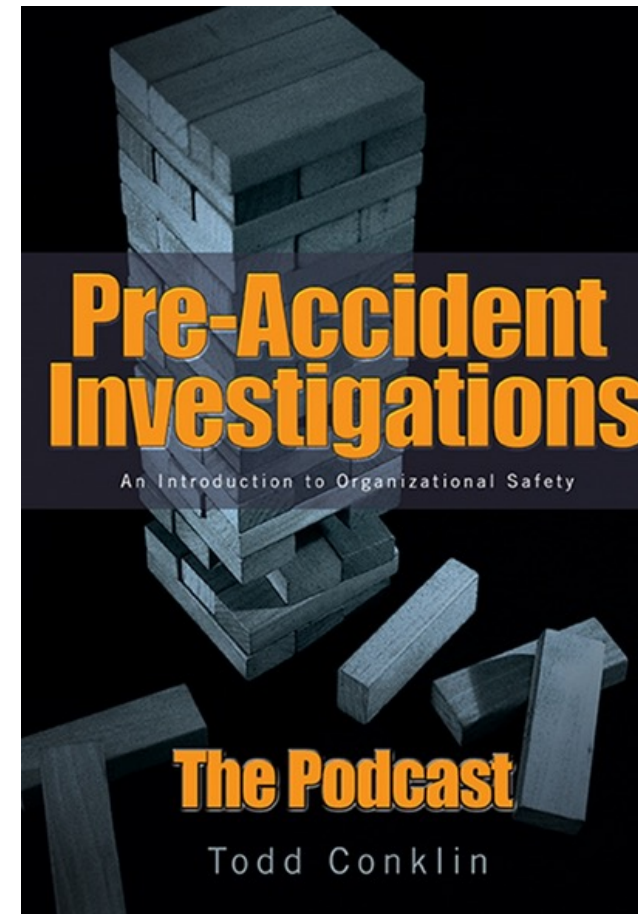
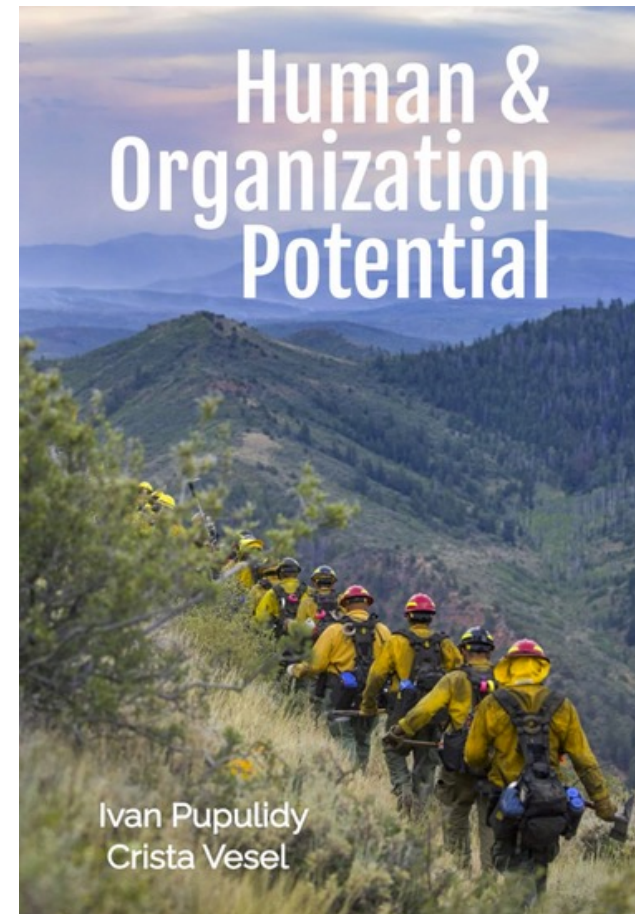
Safety Culture- Language Change

Let's get talking...

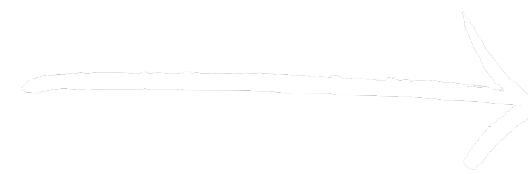
- ✓ Resiliency
- ✓ Capacity
- ✓ Failing Safely
- ✓ Context Matters
- ✓ Common Cause Analysis
- ✓ Learning Teams
- ✓ Micro-experiments



Must Read List



THANK YOU!



Let's Connect!

TOWNSEND



Aggressive Homeowners

Liz Westberg; Growth Solutions

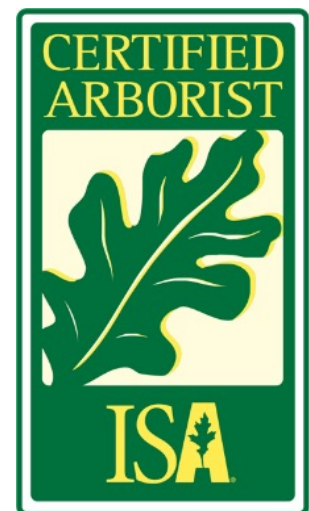
Best Practices for Staying Safe During Encounters with Aggressive Members of the Public



GROWTH
SOLUTIONS

Liz Westberg

- Manager of Quality Assurance and Training – Growth Solutions
- LWestberg@gs4trees.com
- 612-616-0017



Why Train on this?



This Talk Will Cover:

- Example of Policies
- Understanding of Easements
- De-escalation
- Possible Unsafe Situations
- Best Practices
- Suggested Mitigations



There is no certain type of neighborhood, nor certain group of people that are more or less likely to be aggressive.

Be vigilant, always. And focus on keeping calm.



You could do everything “right” in a situation, and have no guarantee that it will turn out okay

The goal is to keep the situation from escalating, and getting to safety.

Suggested Policy on Unsafe Situations:

- An employee is never expected to remain in an unsafe situation.
- The expectation is that they leave unsafe situations, then document them to prevent a future incident.



Suggested Policy on Reporting:

- If an unsafe situation with an aggressive member of the public is encountered, documentation is required.
- We do this also to keep future technicians or other contractors safe.



Weapons

- Possession of weapons has been shown to escalate contentious encounters
- Most Utilities, cities or other tree care clients have policies against carrying weapons on their jobsites
- For these purposes, we consider a weapon to be considered an item designed for use on other people



Easements

- An easement is a right in which a non-owner of the land can use the owner's land for a specific purpose.
- Other examples include:
 - City Easements
 - Landlocked Properties
 - HOA's/Shared spaces in developments



Easements

- Easements are part of the deed for the land but can vary widely in details.
 - Know the width of the easement in the areas you're working!
- Easements allow for ingress and egress of a property to inspect and maintain utility lines.
- Legally do not require notice – but should be given when practical.



What is an Aggressive “Homeowner”?

- Anyone:
 - Property owner, tenant, neighbor, or member of the public
- Makes us concerned for our physical safety
- Engages in harassing behavior



- Making threats against you or other potential tree care workers
- Physically intimidating
- Person is carrying or brandishing weapons
- Biased and verbally abusive
- Stalking behavior
- Homeowner does not let you leave property
- Most seriously – someone who uses a weapon, pursues, or attempts to cause harm to you



Responding to Hostility:

- a) Assess the situation
- b) De-escalate
- c) Walk Away
- d) Document and Report



De-escalation

1. Don't take it personally

- Respond calmly, without blame or being defensive



De-escalation

2. Reset your objectives

- Go beyond simply 'delivering a message' or 'gaining approval'
- One objective should be to actively listen, with empathy



De-escalation

3. Identify and validate that you've heard their concern

- "You must be frustrated," "You must care about this tree," "You're upset with the communication about this"



De-escalation

4. Enroll them in the conversation

- Work their interests into the conversation
- Highlight mutual benefits
- Offer choices that are both acceptable to give a sense of agency



Making Threats

What about when members of the public make threats against you or other potential tree workers?

Real example: "I'd just as soon shoot the next one of ya before I let you touch my trees again."



Making Threats

- Such threats need to be taken seriously
- Remain courteous, and leave the property
- File police report
- Inform client (utility, city, etc.) to protect future workers



Intimidation

Use of physical intimidation:

- Invading personal space
- Aggressive posture and clenched fists
- Big gestures



Intimidation

- Remain courteous, do not escalate the situation
- Back away to a comfortable distance as necessary
- Leave and report if you feel threatened.



Armed Individuals

Person is carrying or brandishing weapons

- Assess the context of situation
- Open carry is common in many areas
 - A holstered handgun is not *necessarily* cause for alarm on its own in places where open carry is common



Armed Individuals

- Behave with heightened concern if a person is:

- Carrying a firearm in their hands
- Hand on their holster

- If someone feels threatened:

- Wish them a nice day and leave
- Report internally at your company
- Consider police report depending on situation



Biased Incidents

- Verbally abusive based on appearance
- Harassment from homeowners that is motivated by:
 - Race
 - Gender
 - Sexuality (perceived or otherwise)
 - Accent



Biased Incidents

- Policy and training suggestion:

- Have a commitment to support the well-being of your team.

- Train field staff that they do not have to put up with any harassment from homeowners.

- That they may choose to leave the jobsite or may choose to complete it if it is safe to do so.



Biased Incidents

- Policy and training suggestion:
 - There is a time and a place for “educating” biased individuals. While completing tree work on their property is not that time.
 - Do not escalate the situation.



Biased Incidents

Employee Wellbeing:

- Train lone-workers to call their supervisor to explain what happened and decompress
- Make it safe to have conversations about these encounters
- Assess whether it's even worth sending someone else back to that site if possible.



Stalking



- A person follows a lone worker from jobsite to jobsite, or beyond:
 - A resident who isn't satisfied with the interaction at their home
 - A tenacious "neighborhood watch" type
 - Someone overly interested in a lone worker
 - The same vehicle/driver has passed by multiple times



Stalking



- It may not always be possible or wise to approach these individuals. Use discretion if making contact.
 - Contact any supervisors or coworkers in the area
 - Request that they swing by to show support
- Make record of this individual: description of person and/or vehicle
- Consider involving law enforcement



“Hostage” Situations

- Homeowner does not let worker leave property until they are satisfied or until police arrive
- Homeowner physically blocks path
- Homeowner has blocked the vehicle from being able to leave



“Hostage” Situations

- NEVER enter the home of a stranger for any reason
- Decline invitations for refreshments
- Insist on going around through side gate, not through the house



“Hostage” Situations

- Remain calm – more importantly:
Confident
- Contact company management or
utility partner
- Cooperate with police, if they are
involved



Violence

Most serious and dangerous situations:

- Physical Assault

- Almost any contact could be considered assault

- Releasing dogs on worker

- Someone uses a weapon

- Aimed at you or a warning shot – doesn't matter

- Gives chase if worker tries to leave



Violence



- Defend yourself as necessary
- Leave area immediately and with urgency
- Call 911 if warranted
- Report once safe to do so

If Held at Gunpoint:

1. Remain Calm

a) Control breathing

b) Think calming thoughts



If Held at Gunpoint:

2. Comply with instructions*

- a) Keep hands visible
- b) Keep movements slow
- c) Inform them if you are reaching into your pocket

*Do not comply with instructions that might result in abduction



If Held at Gunpoint:

3. Protect self, not possessions

a) Don't worry about personal or company property

b) Focus on staying safe



If Held at Gunpoint

4. Resist only if they turn violent or attempt to abduct you.

a) Fight back only in self-defense

b) When fleeing, run for cover and unpredictably



Other Considerations – Mental State:

- Inebriated individuals
- Mental faculty:
 - Alzheimer's, dementia, etc.
 - Mental disability



Other Considerations – Prevention:

○ Make appropriate attempts at contact

- Require knock before beginning work on property
- Make phone calls when option is available

○ Maintain Professional Appearance

- Company ID and uniform
- Marked vehicles
- Hard hat + high visibility gear (Utility work)



Actions Utilities can take to help:

- Provide Contractor and Employee ID badges
- Logos and Contractor magnets for vehicles
- Notice to customers about work
- Updated contractor company list for website and customer service
- Established process for reporting incidents:
 - Sharing and requesting list of known addresses of concern prior to work
 - Maintaining database of blacklisted clients



Review:

- Employees should believe they are never to remain in a dangerous situation
- Train field staff to:
 - Practice methods of de-escalation
 - Leave and report as unsafe or hostile interactions occur
 - Always strive to appear calm and confident, and to not escalate situations
- Appropriate preventative measures are crucial
- Prioritize safety over personal or company property



Questions?

Liz Westberg

- Manager of Quality Assurance and Training – Growth Solutions
- LWestberg@gs4trees.com
- 612-616-0017





Morning Break



2024 UAA Indiana Safety Summit

Best Practices Learned



Briotix Ergonomics: Alexis Cleveland; Briotix



- **Power Stance**

- 3 Power Zones (keep your work facing forward)

- Overhead/Below Knee
 - Reach Distance
 - Twisting

- **Think**

- Tighten your core
 - Increase base of support
 - No twisting
 - Keep it close when lifting

- **Stretching Program**

- Develop a stretching routine
 - Micro break (individual stretches)
 - Conditioning break (group/crew break)

- Position closer to your work

- Slips, trips, and falls

- Extrinsic -things you can't control
 - Intrinsic - things you can control



Live Line: Michael Smith; Townsend Tree





Important take aways:

- **Watch the videos and be aware!**
- **Safety travels at the speed light**
- **Gear checks**
 - Dry & clean is better than wet & dirty
 - A minor imperfection can affect everything
- **Direct contact vs indirect**
- **Arborists are less protected than linemen so don't get brave or stupid**
 - Lineman are rubbered up







Innovation on Climbing Gear & Techniques: Don Watson; Wright Tree Service



Key Take Aways:

- Tech has moved from a closed system into more versatile and complex systems including mechanical
- Due to the increase in investment, more resources and time are needed to ensure competency and to keep the equipment maintained
- We have transitioned from a foreperson level in the field training into a higher investment level (competency & time)
- We must bring along the direct supervision as we transition ensuring the GF is not left behind.



PPE Inspection & Fitment: **Brent Baker; Lewis Tree Safety Supervisor**





Key take aways

- **Hygiene kits / cleaning kits**
 - Try to clean on a daily basis (especially work glasses & hard hats)
- **Routing equipment checks:**
 - Full inspections of equipment at least once a year
 - Check hard hat everyday
 - Hard hat is to be replaced if falls more than 6 feet
 - No beanies under hard hat
- Class E hard hat for utility work
- Surface of hard hat should not be flaky
- Safety vest for men vs women
 - Class 2 (generic under 50 mph)
 - Class 3 (BMP and required at night and by DOT)
- Safety Glasses:
 - Z87 safety glasses
 - now multiple styles for multiple faces
- Anything over 85 DB requires hearing protection
- **Chaps Classes**
 - Class A calf is covered with Kevlar
 - Class B does NOT have Kevlar