

# Safety's Flux Capacitor:

Learning from the Past and Present  
Determines Your Future!



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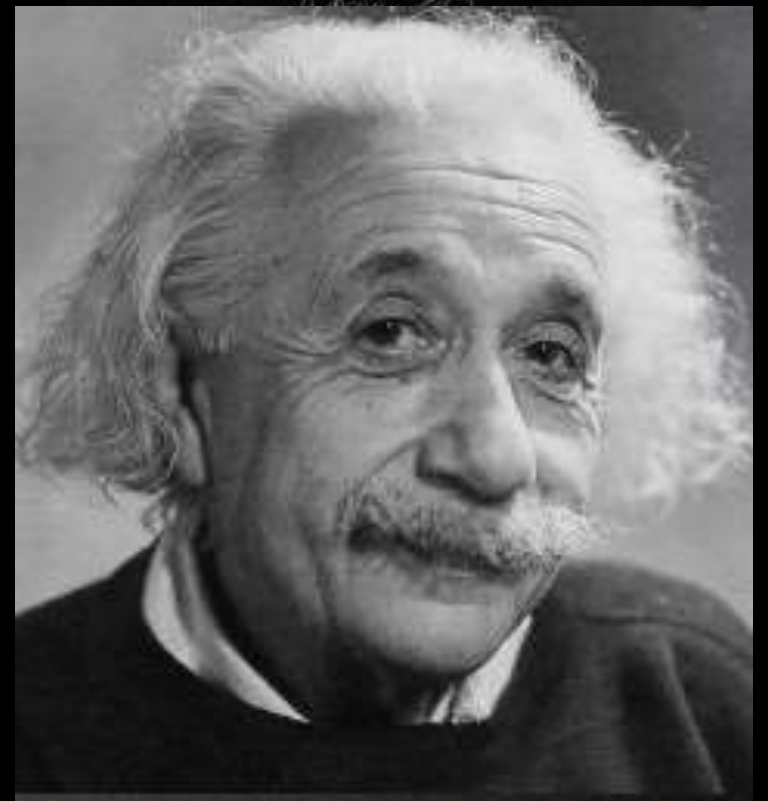
# O'Reilly's Part #121g

- This item is not available for purchase
- Time travel at your own risk
- Plutonium is required to properly operate (not included)
- Requires the stainless steel **body of a '81 – '83 DeLorean DMC-12** to properly function



\* Nonfunctioning item – for entertainment purposes only

***“If I had an hour  
to solve a problem,  
I’d spend **55 minutes**  
thinking about the problem  
and 5 minutes  
thinking about solutions.”***



# Major Organizational Challenges



INJURIES

WORKER  
On-site and  
Distributed Workforce



ENGAGEMENT

LEADER  
Supervisors/  
Frontline Managers



CULTURE

ORGANIZATION  
Senior Leadership





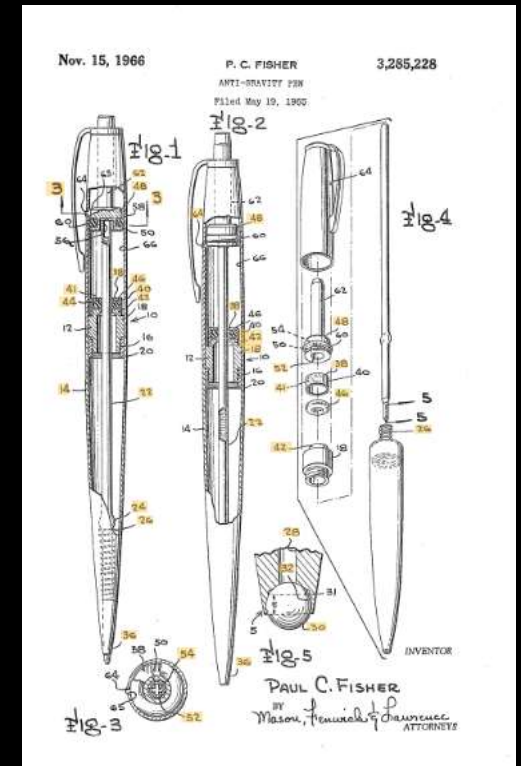
We tend to overcomplicate things!

***“Don’t worry. As long as you hit that wire with the connecting hook at precisely eighty-eight miles per hour the instant the lightning strikes the tower... everything will be fine!”***



# We tend to overcomplicate things!

- **NASA's Space Pen Myth**
- *Paul C. Fisher of Fisher Pen Company spent over \$1 million and ten years developing a zero-gravity pen (which NASA and Russia later used)*



# Let's Start With the Past – Just like Doc and Marty



# Let's Start With the Past - Just Like Doc and Marty

- **1940's**

- "Trial and Error"

- NSC - **"2 out of 3 accidents have both personal and mechanical causes"**

- **1950's**

- Accident causation models (Heinrich, Domino theory, and etc.)

- Thought process emerged that management can use systems to prevent unsafe acts

- NSC introduced the Hierarchy of Controls





# Let's Start With the Past - Just Like Doc and Marty

- Move forward through time
  - **70's** – Mostly **compliance with OSHA's creation**
  - **80's** – **James Reason's Swiss cheese model**
  - **90's** – BBS Observation programs (STOP, BST, Safety Performance Systems, SafeTrack, and etc.)
  - **Late 90's** – Larry Wilson with SafeStart (awareness and skills) and Scott Geller (People Based Safety/Actively Caring)
  - **2000's – 2020's** – Dekker/Reasons (Just Culture), Hollnagel (Safety 2) and Conklin/others (HOP)

# What I Feel Like Lately...

*“I know a thing or two  
because I’ve seen  
a thing or two!”*



# Where Are We Today?

**As a profession, we've become very polarized!**



Compliance vs.

HOP vs.






Awareness vs.

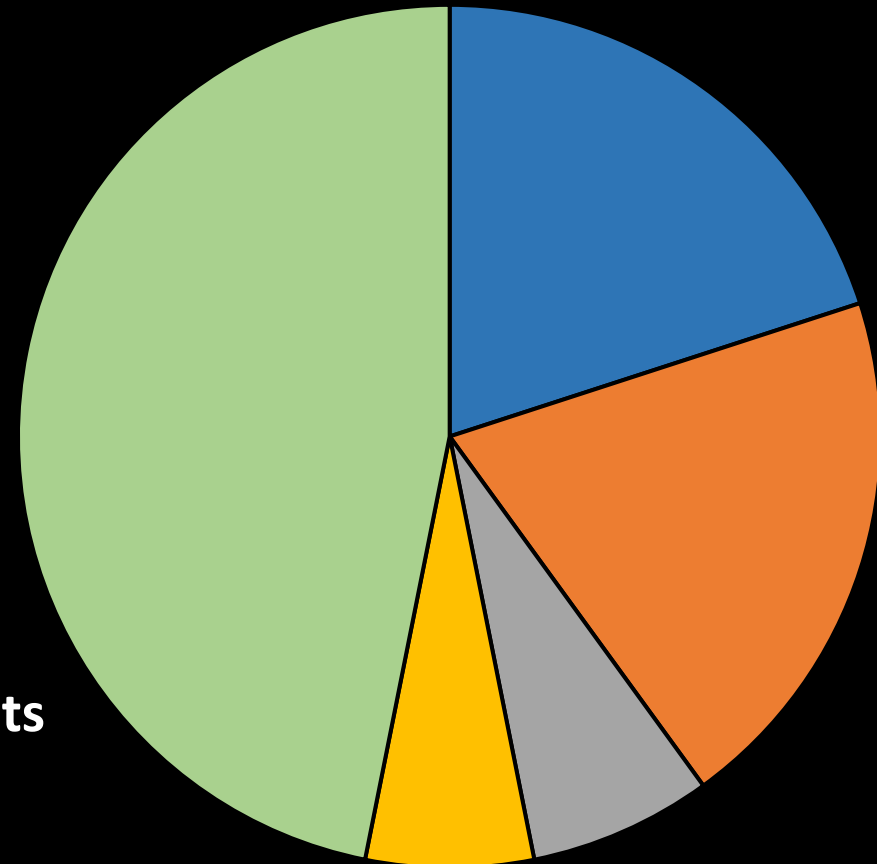
BBS Obs.



# Where Are We Today?

## Q1 – Which safety philosophy do you lean towards?






-  Combined elements from various ideas
-  HOP, Safety 2, New View
-  Behavior Based Safety (BBS)
-  Human Error Reduction Techniques
-  We're barely meeting compliance requirements

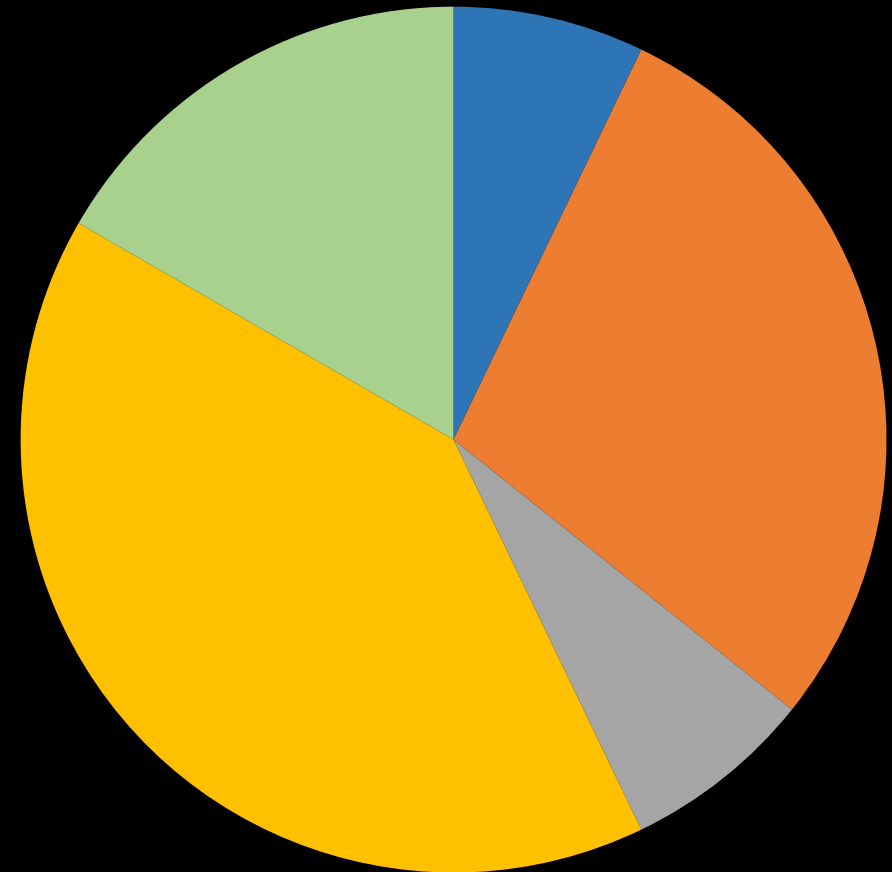




# Where Are We Today?

**Q7 – Is there a safety philosophy that receives more negativity than others?**

-  **Just Culture**
-  **Behavior Based Safety (BBS)**
-  **HOP, Safety 2, New View**
-  **Human Error Reduction Techniques**
-  **Other**



***“All extremes are dysfunctional”***

*- Unknown*



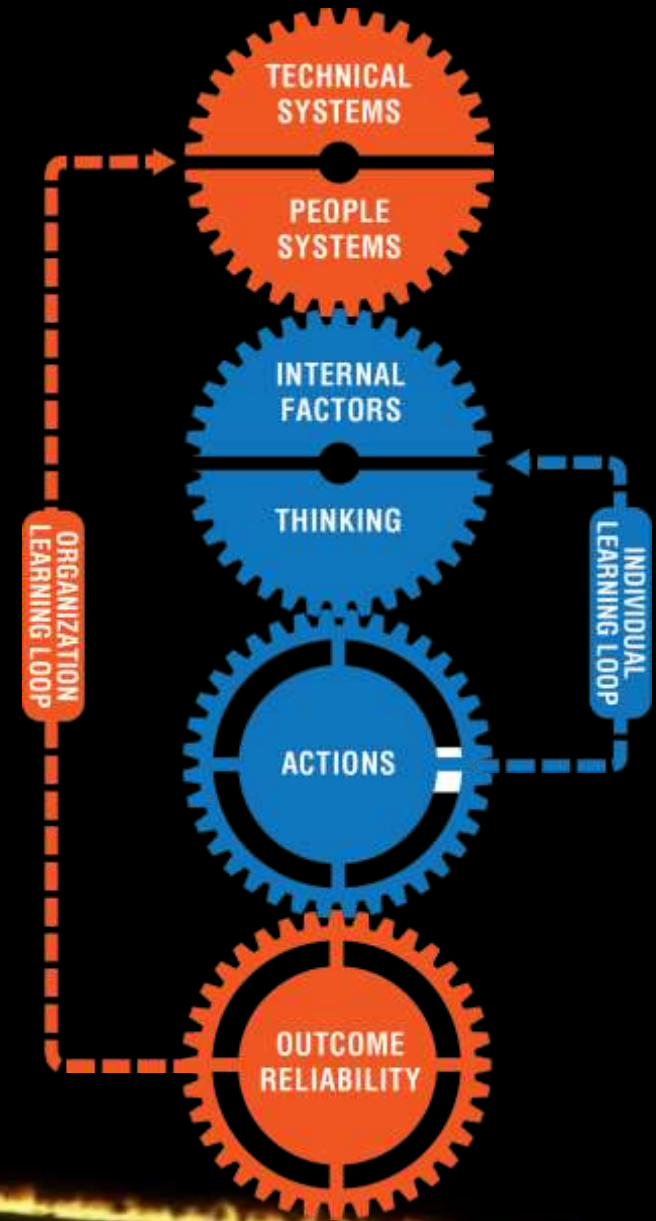
What we really need!



Compliance, BBS Observations,  
Awareness, HOP and others

# Human Factors Framework: The Future is Here

- In order to be truly holistic, we need input from all areas!
- Attempting to solve an internal, human factor issue with a technical system may or may not work.
- **You also can't fix a technical issue by only looking at individual actions!**

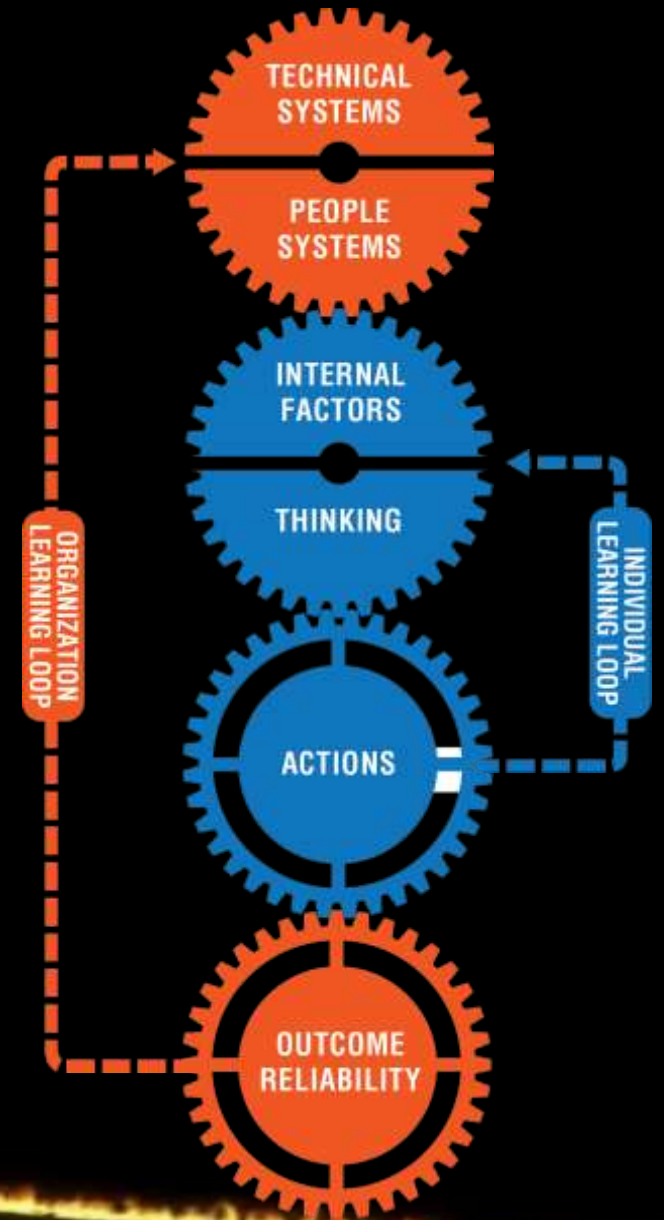




***“Wait a minute Doc,  
are you telling me you built  
a time machine out  
of a DeLorean?”***



# Major Organizational Challenges



# What Are Human Factors?

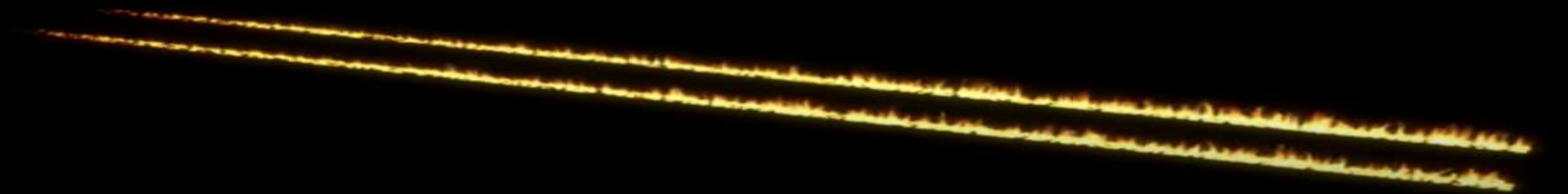
Human factors are the people elements of systems and conditions that influence performance and reliability





# What Are Human Factors?

- The physical or mental states that affect how people act and think
- Frequently the cause when people deviate from normal behavior
- Embedded in organizational systems
- **Part of being human, they don't go away!**





**With human factors, we can't assume the answer!**

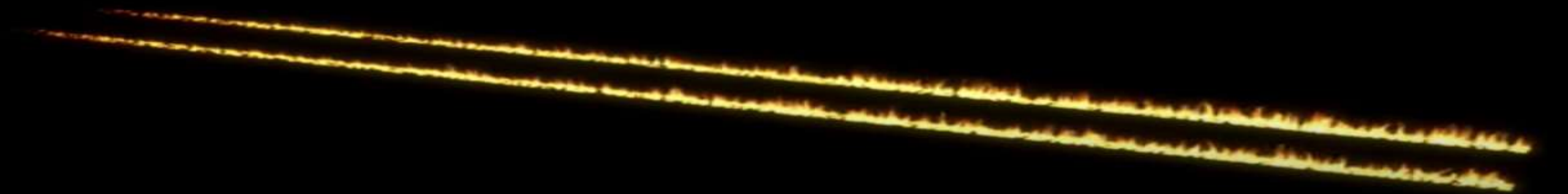
***“Calvin, Why do you keep calling me Calvin?”***

***“Well that is your name, isn't it? Calvin Klein? It's written all over your underwear.”***



# Human Factors in the Workplace

- As long as there are people in the workplace, their safety and performance will be affected by human factors.
- These can be physical, like being tired or sick.
- They can also be mental such as those times when we are frustrated or distracted.

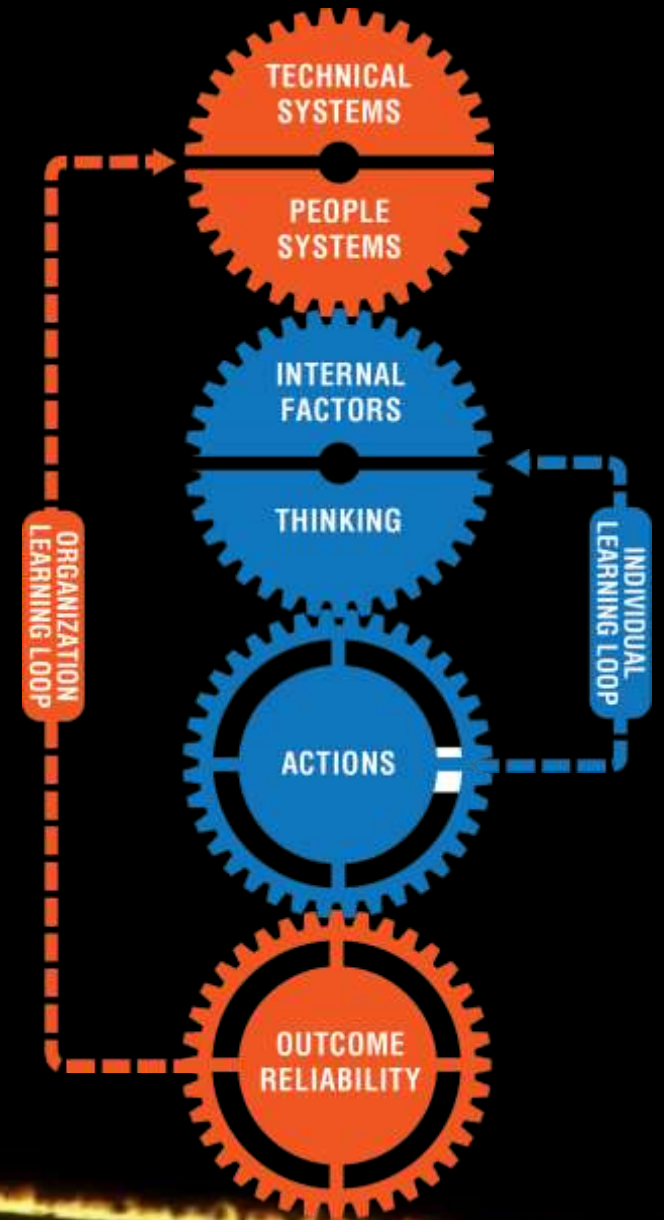


# Not All Human Factors Are Negative!

- If you have a very attentive worker who is highly skilled and experienced, they may notice things that others might miss and prevent a safety or production problem before it happens or gets worse.



# Major Organizational Challenges





# How Organizations Try To Reduce Injuries



- Eliminate or guard hazards
- Safety rules, regulations, policies and procedures
- Training on specific workplace hazards
- PPE
- Other compliance measures

# Is This Approach Enough?

- Doing more for fewer results
- Escalating effort, time and money
- Compliances goals already met
- **Safety systems don't address** human factors


*(They may be identified in a risk assessment, but rarely is guidance given on how to manage them)*



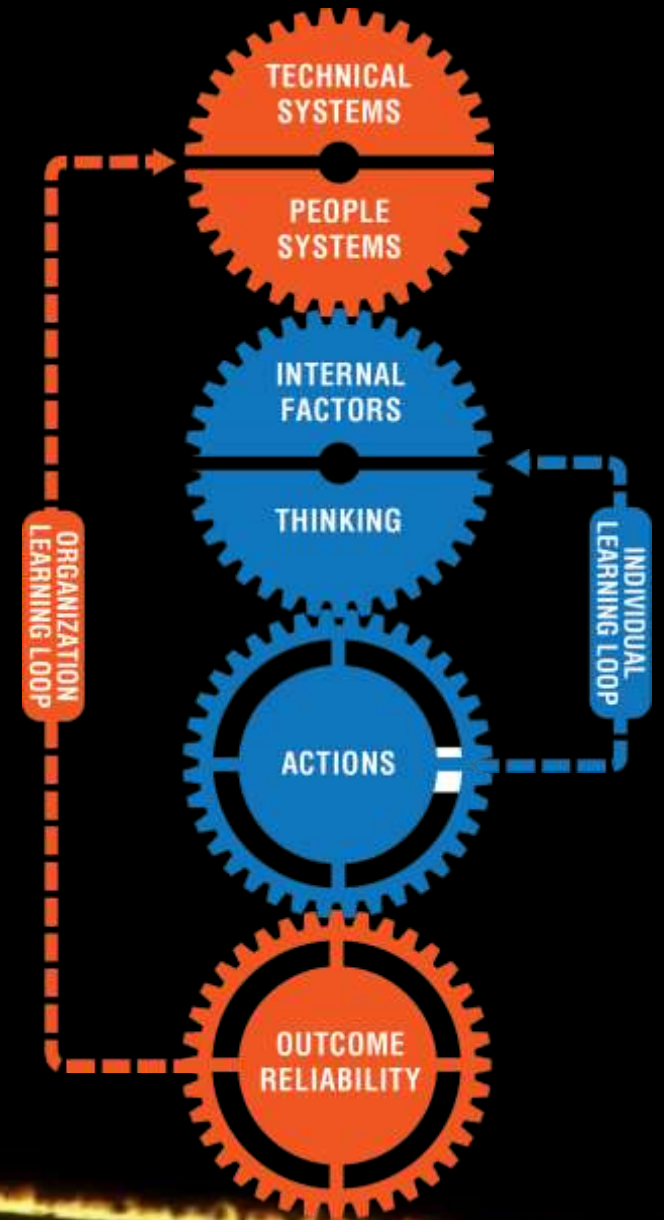
Since human factors are involved in so many organizational performance outcomes, including **safety...**

What practical skills have been given to our employees to help address these issues?

How much time, effort, energy and money is wasted trying to solve the wrong problem?

The bottom of the slide features several parallel, glowing yellow-orange lines that curve upwards from left to right, creating a sense of motion or a decorative flourish.

# Major Organizational Challenges





Safety is related to everything else in business,  
**so acting like it is unrelated doesn't make sense!**

*“Why don't you  
make like a tree  
and get outta **here?**”*





# Engagement Drives Performance *(and most people are "engageable")*

# 65

Median score on 1-to-100  
scale to the question,  
"How happy are you at work?"

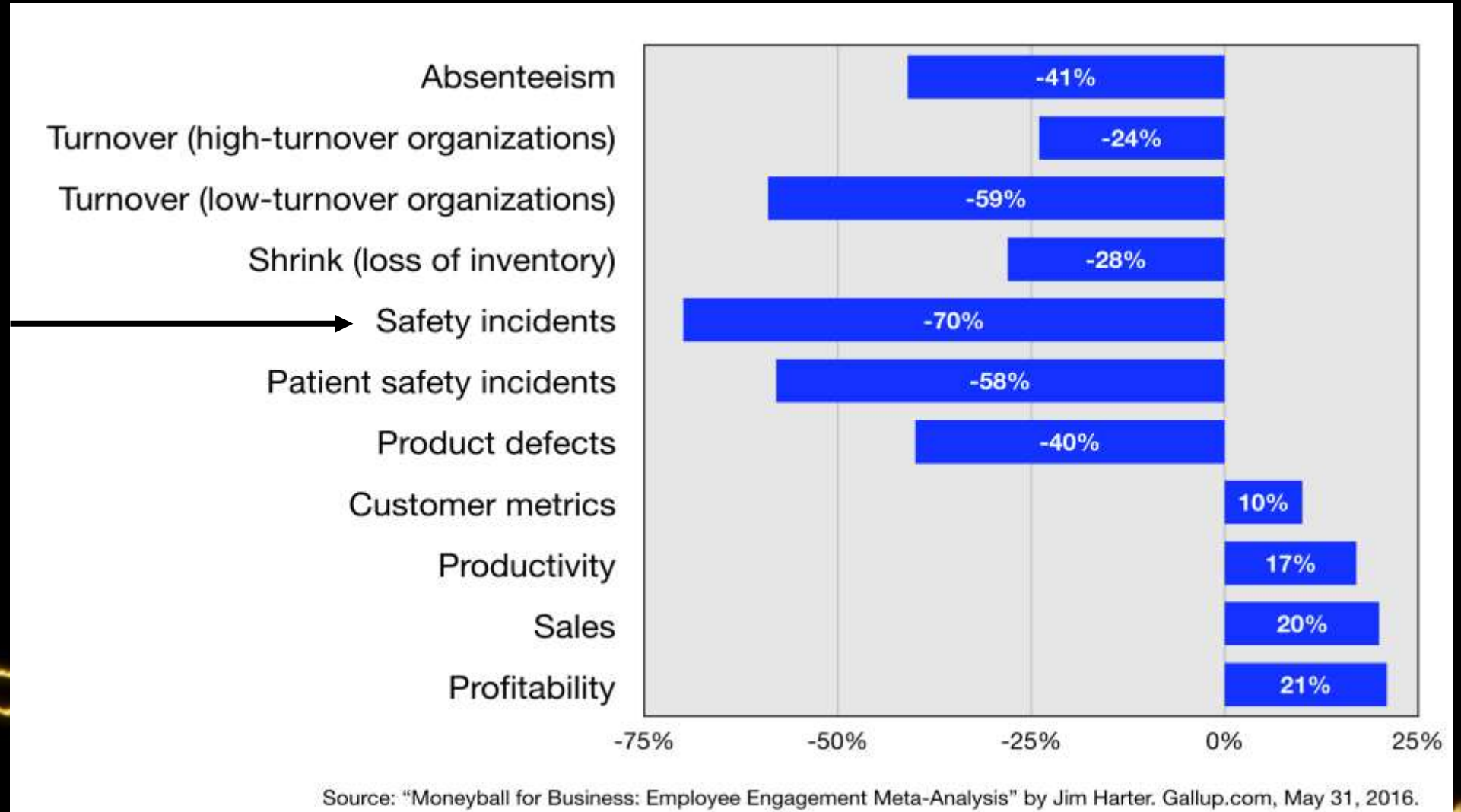
**"There is no job-**despising contagion spread across the majority of the U.S. workforce. Most people are happy at work. Most people like their jobs. Most people are intent on doing good work for their employers. **The engagement sky is not falling."**

*- Rodd Wagner, Forbes, April 27, 2017*



# Engaged Employees Are Less Likely To Be Injured

Depending on the year in which the analyses are conducted, safety is often the business outcome most correlated with high engagement.




# Challenge – The Lack of Employee Engagement

- Often there is no common safety language
- People avoid uncomfortable situations
- Repetitive compliance training
- Promotions are based upon job success, not the ability to communicate effectively



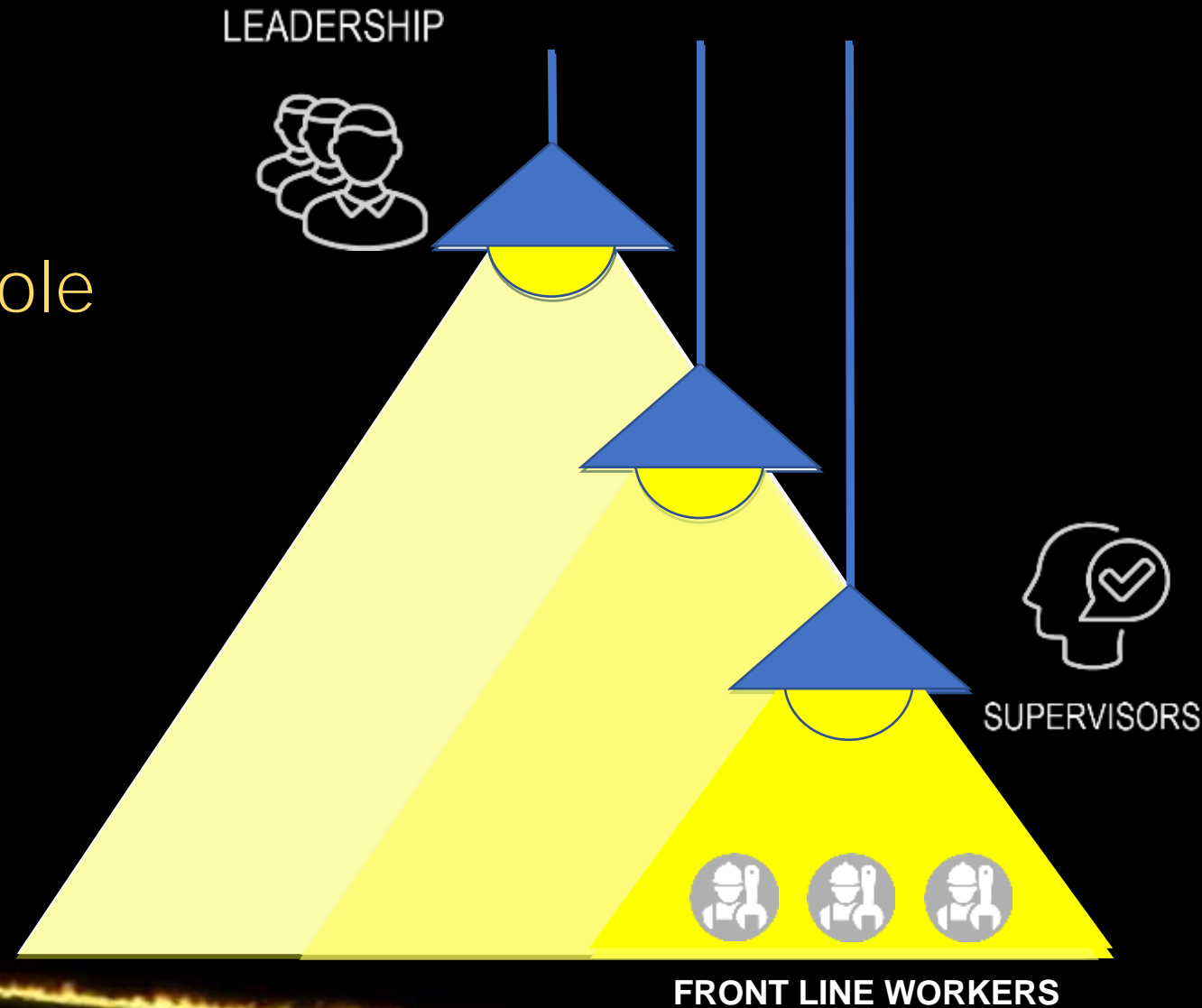
## Quote From A Client

***“When promoting supervisors from previous job success, we’d lose our best welder and gain our worst supervisor.”***

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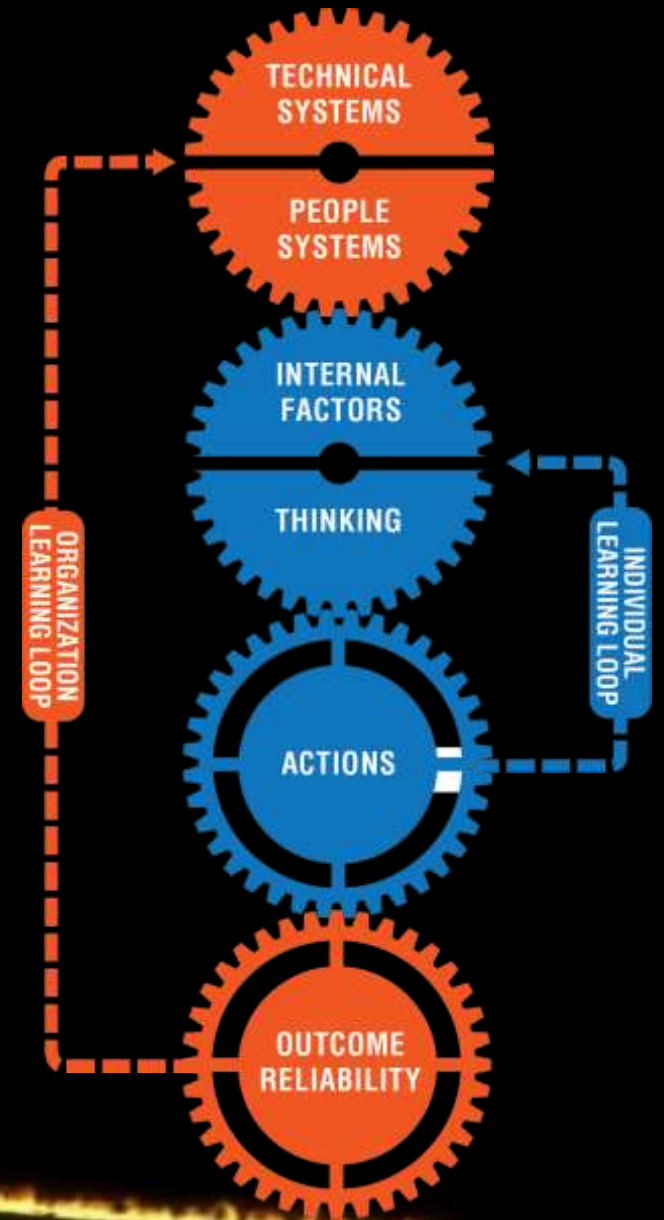
# Supervisors Are Key

- While upper management certainly influences the whole organization,
- Frontline workers interact more frequently with their immediate supervisors.
- Supervisors have a huge impact on the climate of their work areas!





# Major Organizational Challenges



**Biff isn't the only one, employees see right through the "fertilizer"**

***"I hate manure"***



# Culture vs Climate

Culture: The way things are done around here.

- The value placed on safety and degree of personal accountability for safety
- The safety personality of an organization
- What people value and believe





# Culture vs Climate

**Climate:** "How things feel around here these days..." *narrow focus*

- The perceived value of safety today
- Can be influenced **by other people's** opinions, attitudes and actions
- Changes based on circumstances (production cycles, major incidents, turnover, employee promotions)

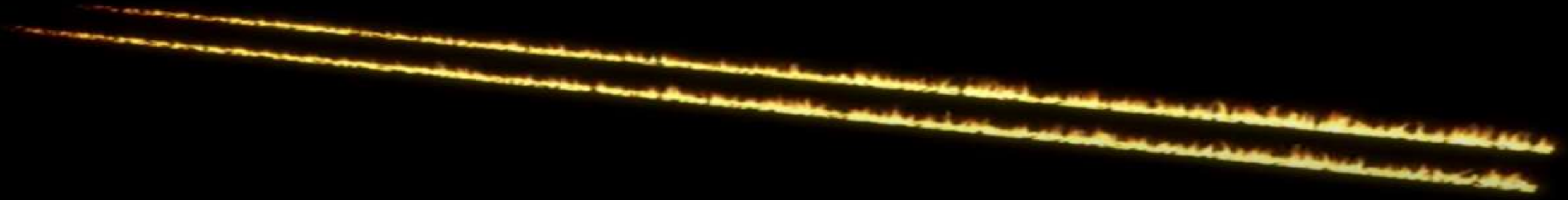




# Culture vs Climate

Typical changing climate examples:

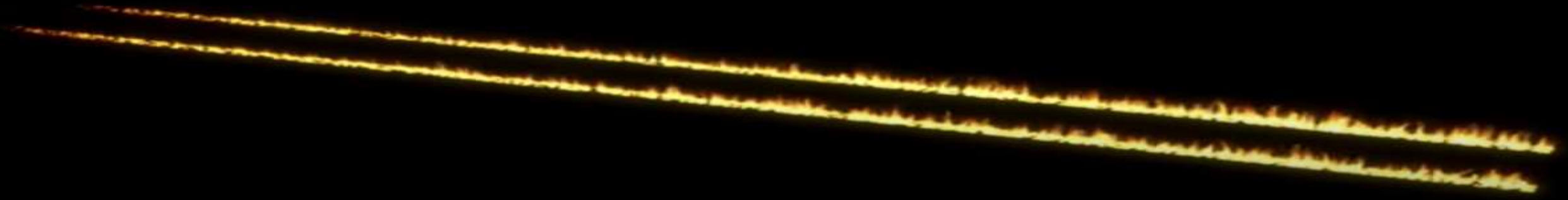
- Boss being in a bad mood
- An experienced team member being out sick
- A new rush order
- A line being shut down unexpectedly



# Culture vs Climate

New-world climate changing examples:

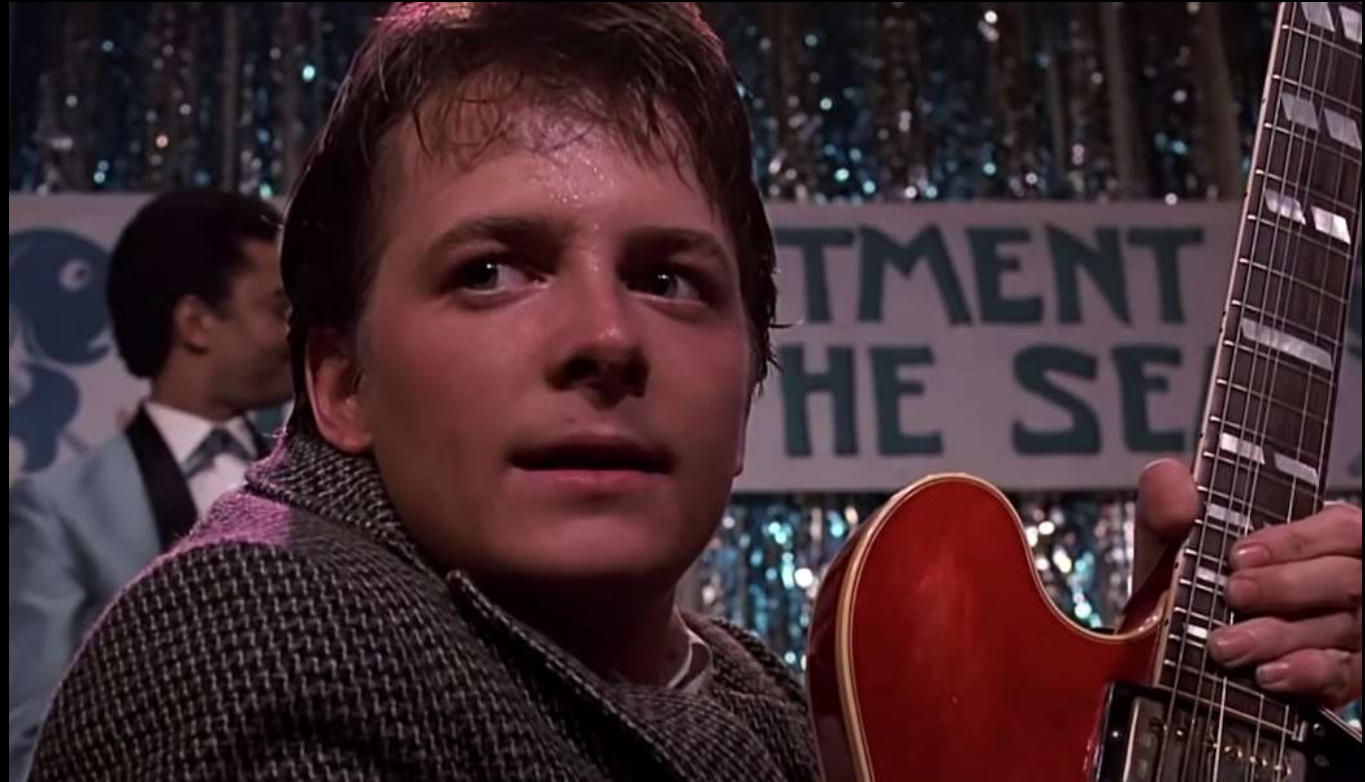
- Distributed workforces
- Stress about job security
- Worry over a sick family member
- Financial pressures



Understand not everyone is at the same place as you are. You have to bring some along slowly.

*“I guess you guys aren’t ready for that yet.*

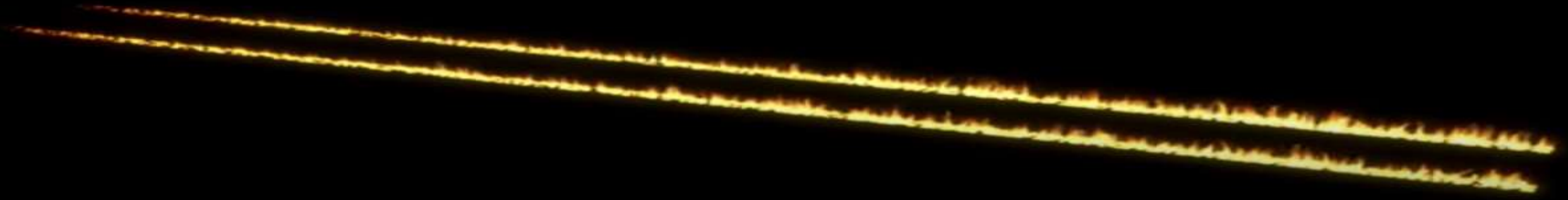
*But your kids are gonna **love it!**”*





# From Climate to Culture

- **You can't fix your culture** overnight.
- A positive safety climate reduces injuries and improves production, quality and engagement.
- Influence your day-to-day climate by improving supervisor/frontline manager skills.



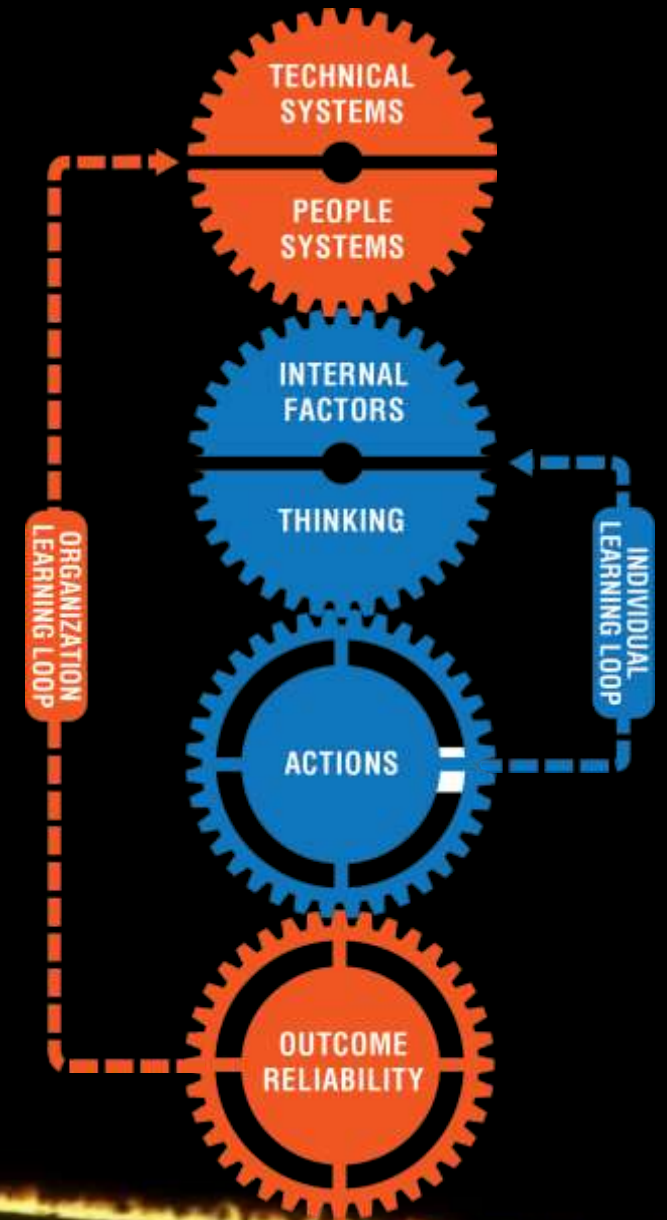


We need to think about things differently!

***“Roads?  
Where we’re going,  
we don’t need any roads!”***

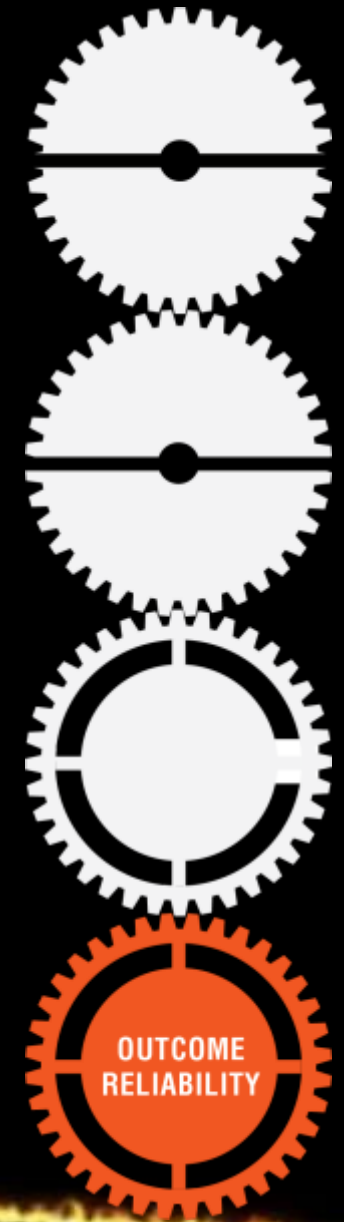


# Safety's Flux Capacitor Can Help In All Three of These Areas



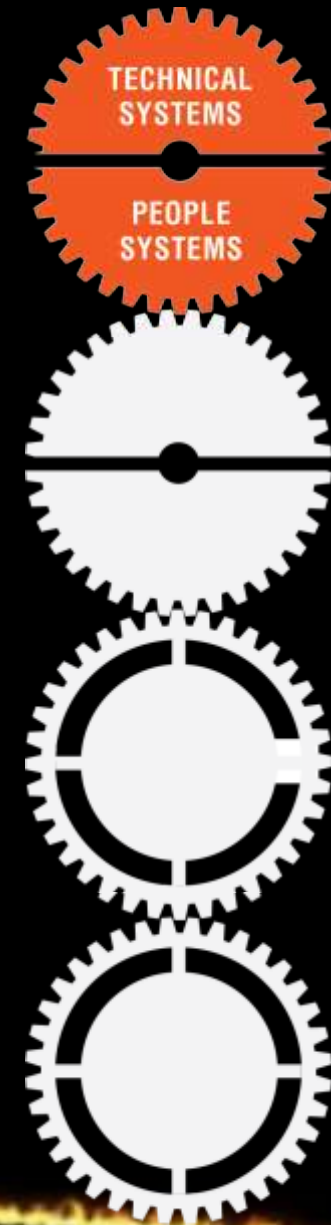
# Human Factors Framework: The Future is Here

- Outcome Reliability
  - Safety
  - Production
  - Quality
  - Organizational Performance



# Human Factors Framework: The Future is Here

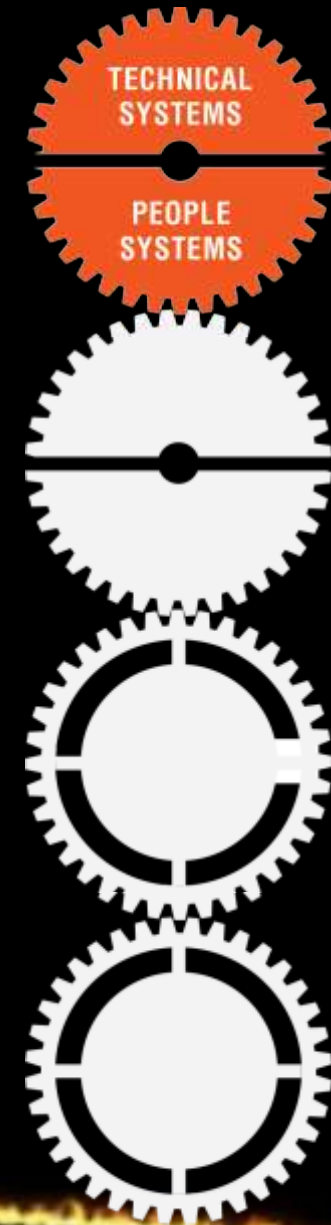
- Technical Systems
  - Engineering
  - Process
  - Equipment
  - Safety Management Systems





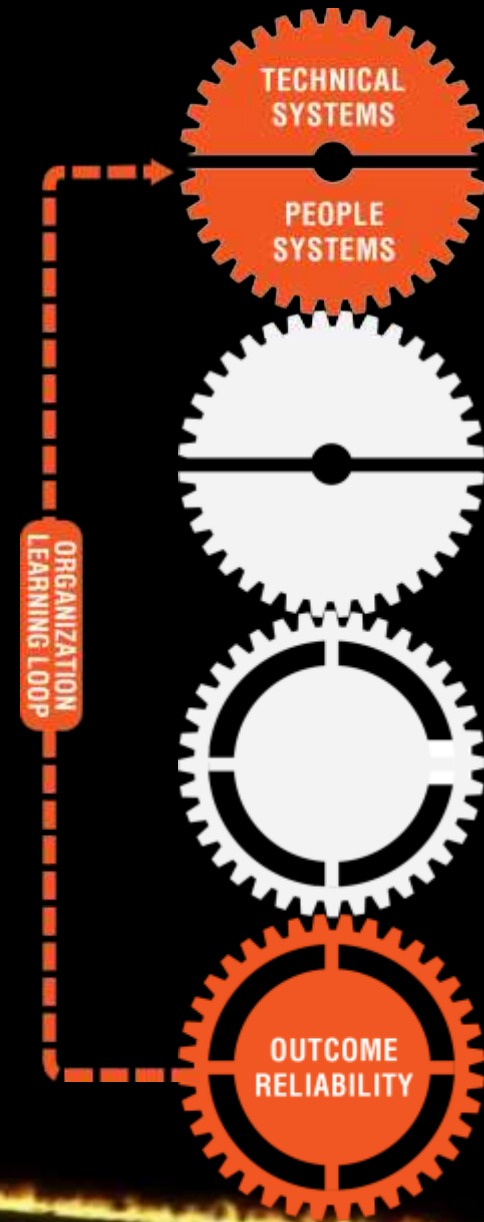
# Human Factors Framework: The Future is Here

- People Systems
  - Work Team
  - Supervisory Skills
  - Organizational Culture



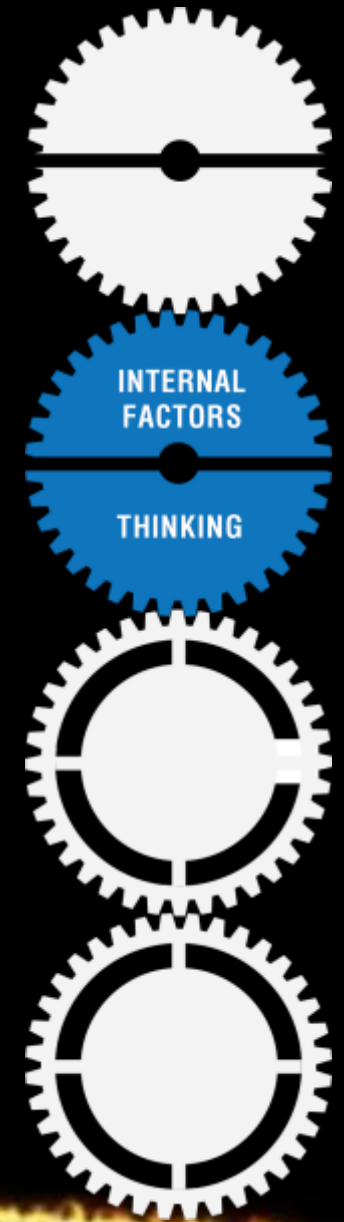
# Human Factors Framework: The Future is Here

- The Organization Learning Loop
  - Outcome Reliability
  - Technical Systems
  - People Systems



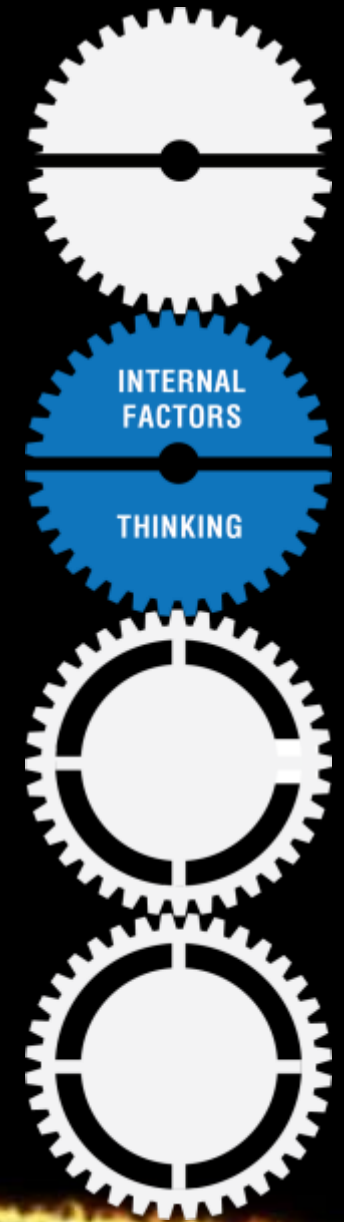
# Human Factors Framework: The Future is Here

- Internal Factors
  - Fatigue
  - Illness
  - Distraction
  - Overconfidence



# Human Factors Framework: The Future is Here

- Thinking
  - Decision-making
  - Autopilot
  - Attention
  - Habits





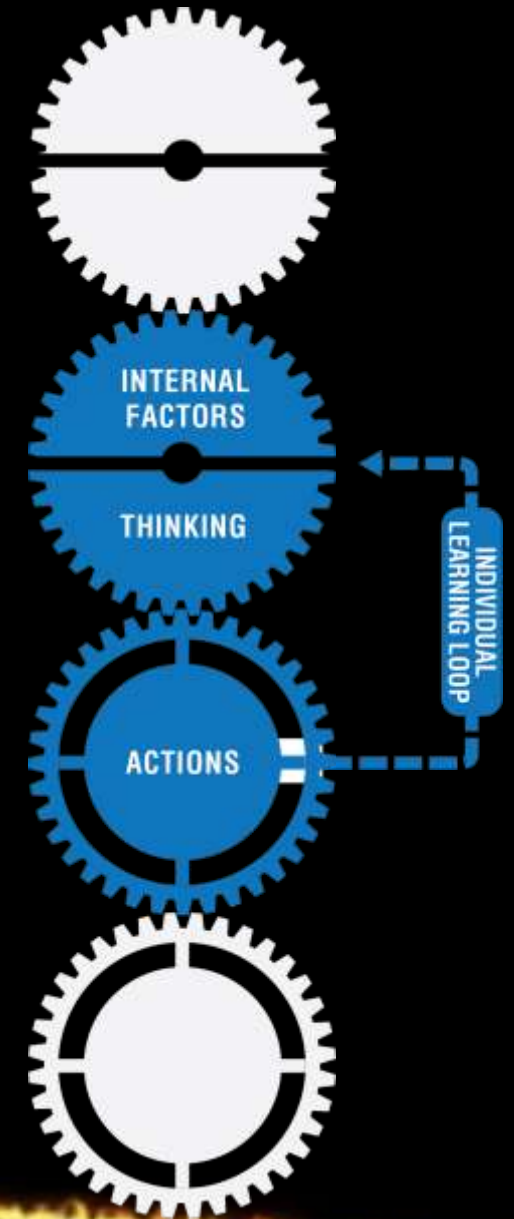
# Human Factors Framework: The Future is Here

- Actions
  - Behaviors
  - Habit development
  - Having conversations
  - Flagging issues

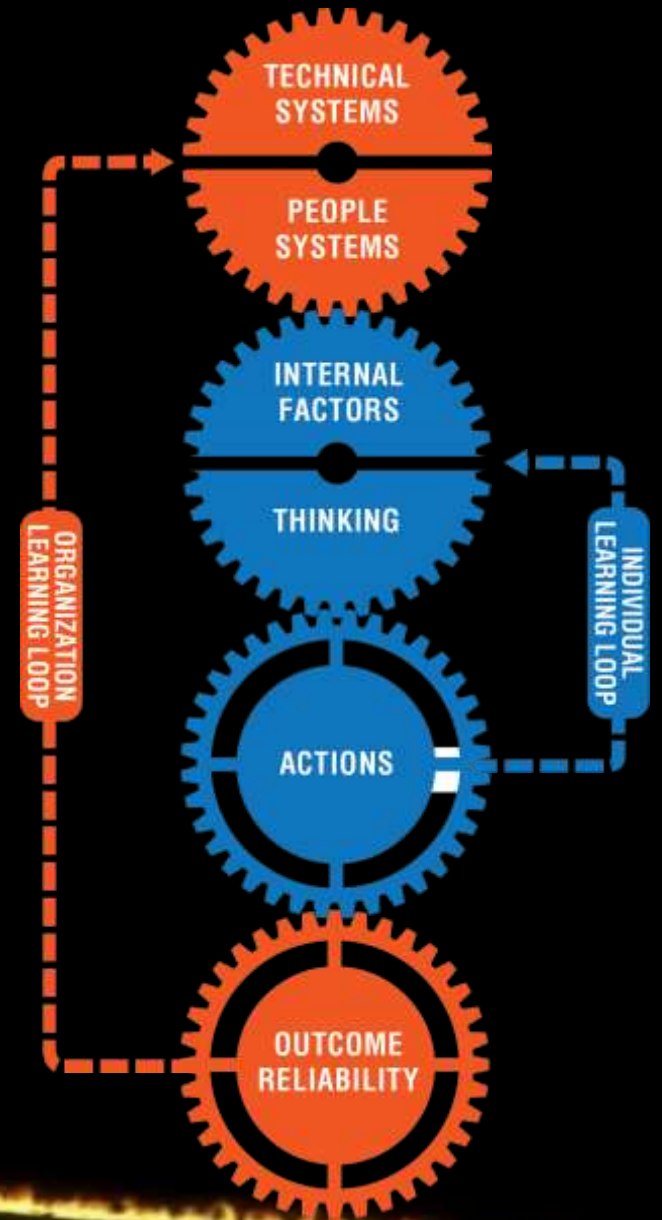


# Human Factors Framework: The Future is Here

- The Individual Learning Loop
  - Internal Factors
  - Thinking
  - Actions



# Safety's Flux Capacitor Can Help In All Three of These Areas



# Using Feedback From Both Learning Loops

- An individual recognizes they are very drained and sleepy **an asks themselves, “What is the source of my fatigue?”**
- Even though she is only three hours into her shift, she feels very tired – some of which may be attributed to prolonged sitting at her workstation. She takes a break to stretch and move around a bit.
- After hearing similar reports, the organization institutes a job rotation system to avoid employees being in a static position for extended periods of time.



# Using Feedback From Both Learning Loops

- An individual senses he is aggravated because he is constantly having to run back and forth to the tool crib for additional tools to complete a common task. They start a checklist to make sure they have everything up before starting a job.
- After hearing similar reports, the organization implements or updates a 5S system to ensure each workstation has the right tools available for each assigned task.
- In addition to reducing the possibility of injury due to the **employee's frustration and rushing about, efficiency and morale** are likely to increase as well.

***“Your future hasn’t been written yet.  
No one’s has.  
Your future is whatever you make it.  
So make it a good one!”***



***“If you put your mind to it,  
you can accomplish anything”***



# Thank You for Attending Today's Presentation!

Scan the QR code for a selection of resources on the **human factors framework** discussed in this session.



[safestart.com/cp1](https://safestart.com/cp1)



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