



KEYNOTE

Making Operational Excellence Work







Confidence
BEYOND
Compliance

KEYNOTE

Making Operational Excellence Work



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Who is this guy?

15+ yrs Health, Safety & Training in high-risk Industries (Aviation, Mining, Civil, Oil & Gas, MHF, Medical).

Partnered with Fisher Improvement Technologies 15+ yrs as a Human Factors/Human & Organisational Performance Specialist.

Specialties in:

- Human & Organisational Performance (HOP) Deployment & **Integration**
- Advanced Error Reduction in Organisations (AERO) Integration
- Learning from Success & Failure / Root Cause / Catastrophic Failure Analysis / Incidents and Near Misses/Human Adaptability
- Procedure / Programs / Process Excellence
- Leadership Coaching

Conducted over 50 successful integration strategies in: • Manufacturing / Heavy Industry / Chemical / Oil & Gas

- Utilities / Generation / Transmission / Distribution
- Construction / Mining / Refining / Engineering
- Aviation / Agriculture / Supply Chain



Matt Schlapfer

Personal Background

- Chef
- **Underground Mining Technician**
- Offshore Safety Coach
- Executive Mentor and Coach
- Tennis Enthusiast

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Some FIT Clients















Consumers Energy











USDOE Oak Ridge National Lab Brookhaven National Lab Los Alamos National Lab Idaho National Lab



















Ambatovy







Bonneville



Resources for a changing world











COMPANY









































Is it reasonable to **BELIEVE**

Why Human & Organisational Performance



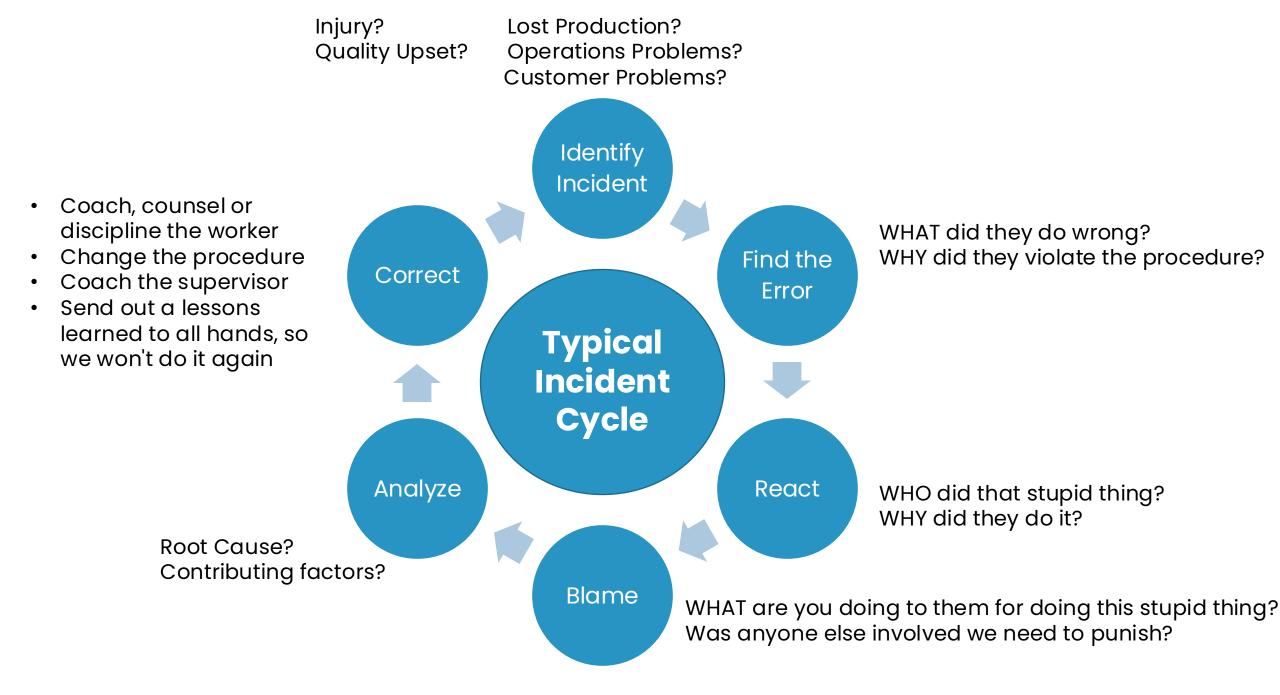
Chernobyl, 1986

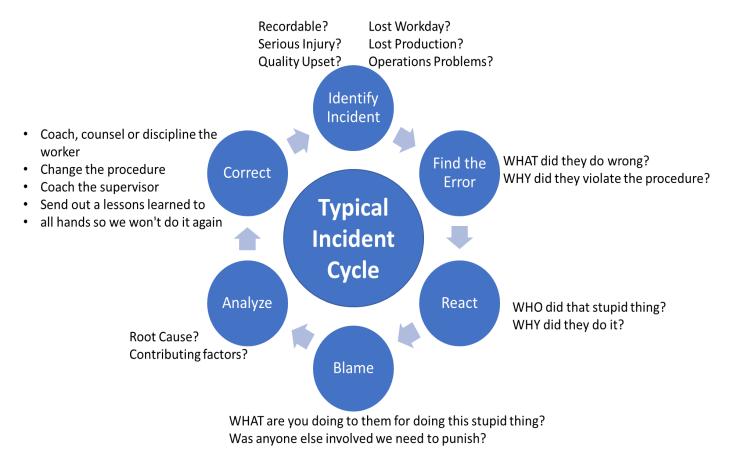
Leaders Drive Operational Excellence

The Gear Model

If you want someone to shift their paradigm you must give them a new paradigm that makes more sense to them than the one you are asking them to leave







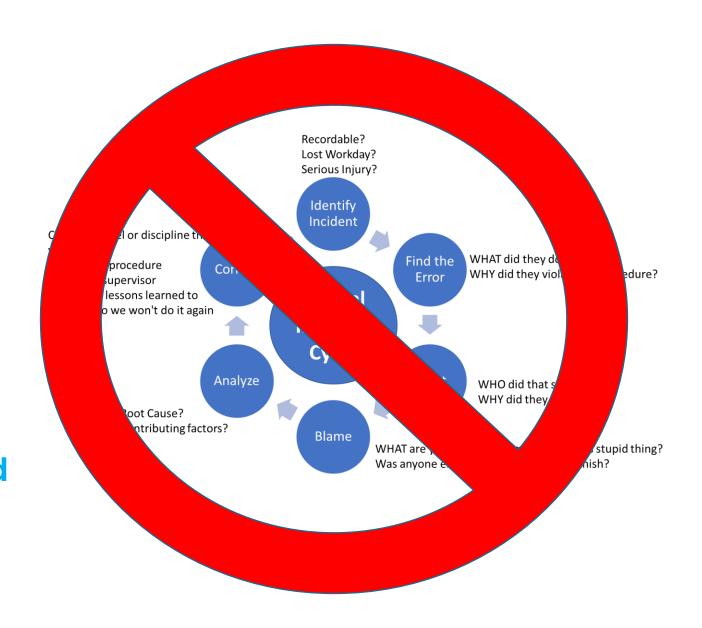
Typical tools enable this cycle, but it is usually not the tool that is bad but the application of the tool...

- "Why" Staircases are opinionbased
- Fact-finding meetings DON'T
- Root Cause analyses don't go deep enough to fix the real problems
- Accountability models are there to do just that

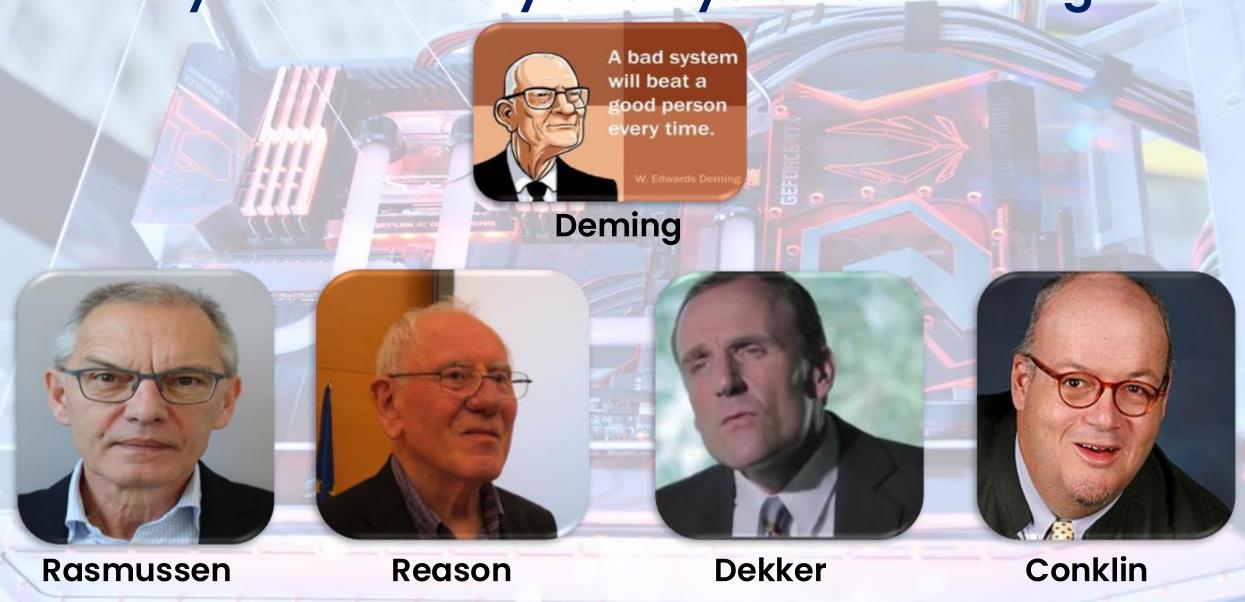
How has that been working?

- Serious injuries flat
- Surprised by events
- Repeat incidents
- Low Worker engagement
- Trust is low
- Accountability is always a problem
- High Turnover

We must
THINK differently,
SPEAK differently, and
ACT differently
to do better!



Systems Theory and Systems Thinking



^{* -} Derived from "Out of the Crisis", W.E. Deming, 1996 Copyright Fisher IT, Inc. - All Rights Reserved

The 5 Principles of HOP



Error is Normal

Blame Fixes Nothing

Systems Influence Behaviours

Response Matters

Learning is Essential

Moving From Concepts to Behaviours

Error is Normal

- Science-Based Definitions and Applications
- Performance Modes, Traps, Triggers & Tools

Blame Fixes Nothing

- Blame as a human instinct
- Blame can be managed

Systems Drive Behaviours

- The task-based System, Essential Leadership Cycle
- Deviation and Adaptability Analysis

Response Matters

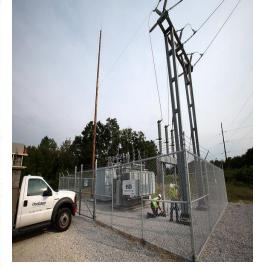
- Leader Response Matters
- Moving from a Reaction to a Response

Learning is Essential

- Incident, Near-Miss, and Task Learning
- Essential Leadership Cycle









Most problems in industry are related to **Human Error...**

Some Basic Understandings

90% of events are caused by something
OTHER THAN JUST The individual*

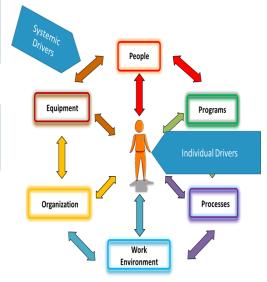




95% of people react very similarly (physiologically) to the same stimuli



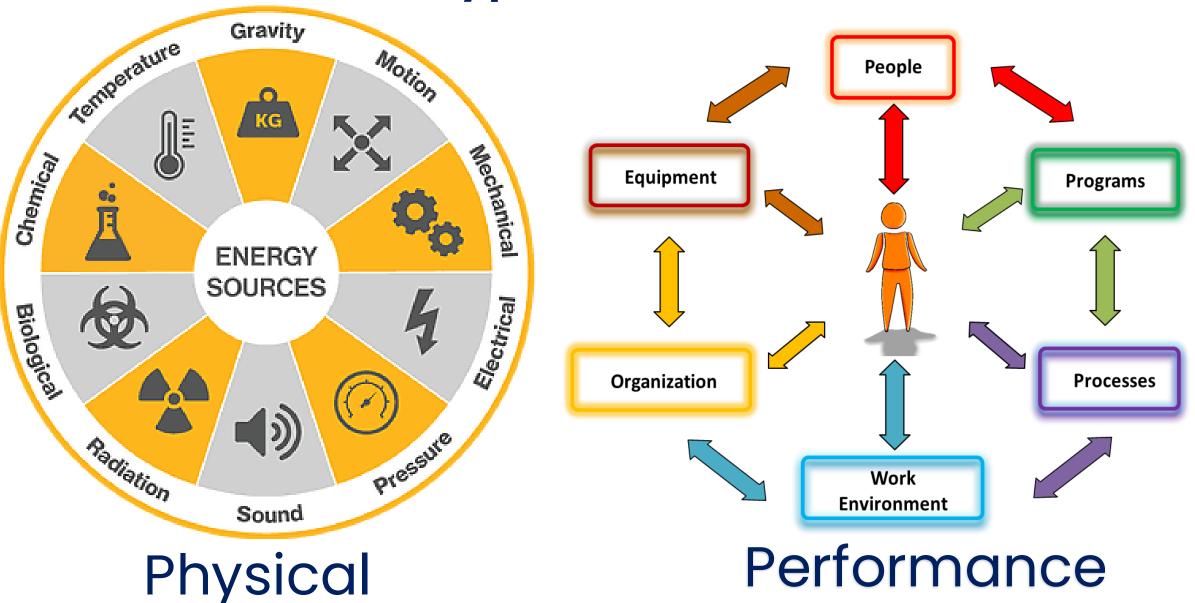
People do what they do, at the time that they do it, for reasons that make sense to them at the time**



HOP is **NOT** common sense!

- * Derived from "Out of the Crisis", W.E. Deming, 1996
- ** Derived from "The Field Guide to Understanding Human Error", Sidney Dekker, 2013

Two Types of Hazards...



The Task-Based System



Science-Based Definitions

Error

An action or inaction that **unintentionally:**

- Results in an undesirable or unwanted condition OR
 - Leads a task or system out of limits OR
 - **Deviates** from a rule, standard, or expectation

Event (or incident)

The undesirable result of an error, a set of errors or a set of conditions

Deviation

Not strictly complying with a rule, standard or expectation

Violation

An action or inaction that intentionally deviates from a rule, standard, or expectation

Active Error

An action or inaction that results in immediate consequence

Latent Error

An action or inaction that results in consequences that are delayed or create latent conditions

We MUST learn to separate the ERRORS from the EVENT

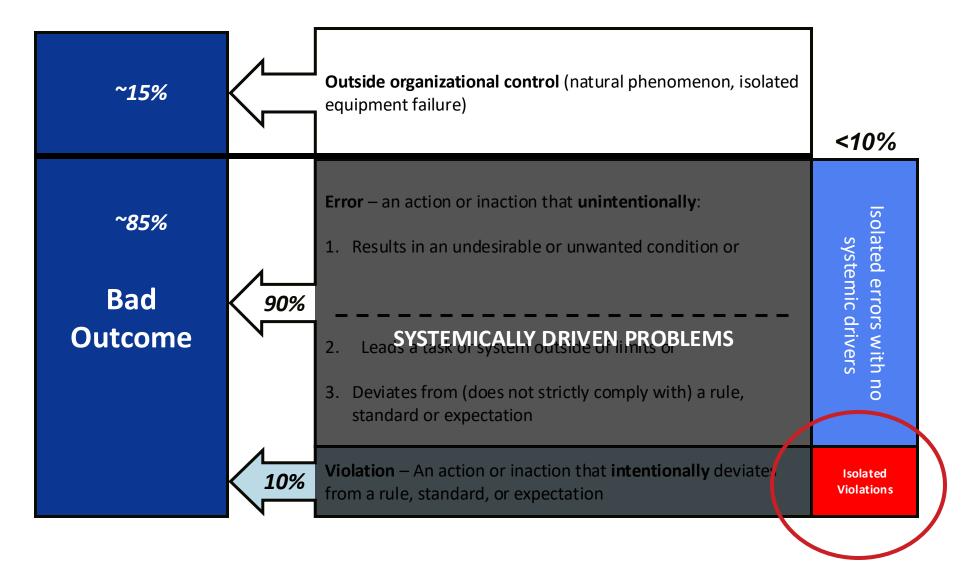
If LEADERS don't know the definition of Error...

ERRORS and **VIOLATIONS** are **DIFFERENT THINGS**

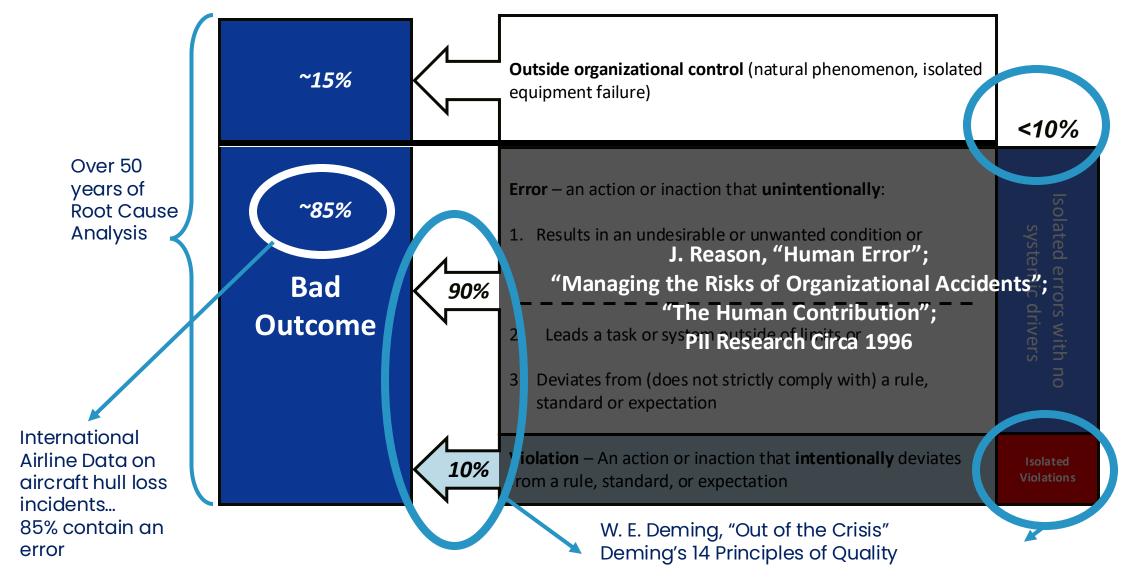
it is hard to get the workforce to believe you want to help prevent them.

We **MUST** pay **ATTENTION** to **ALL TYPES** of **ERRORS**

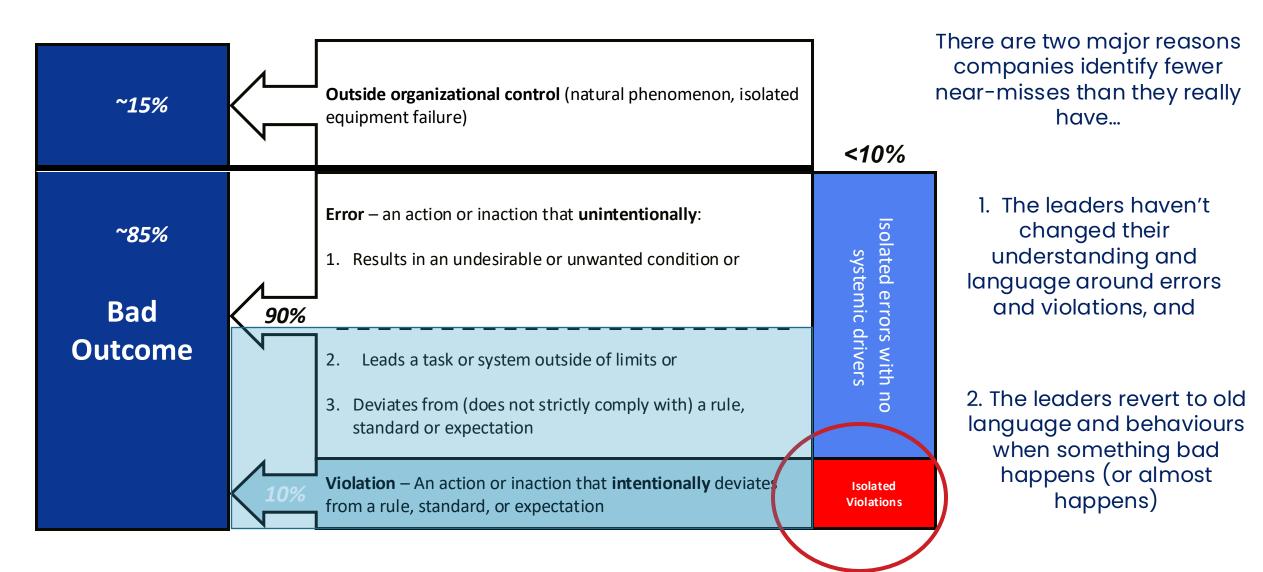
How Bad Things Happen



How Bad Things Happen



How Bad Things Happen



Leaders Ask Better Questions

Instead of WHY?

Engage with T E D S

TELL me...

what happened and how it happened

EXPLAIN to me...

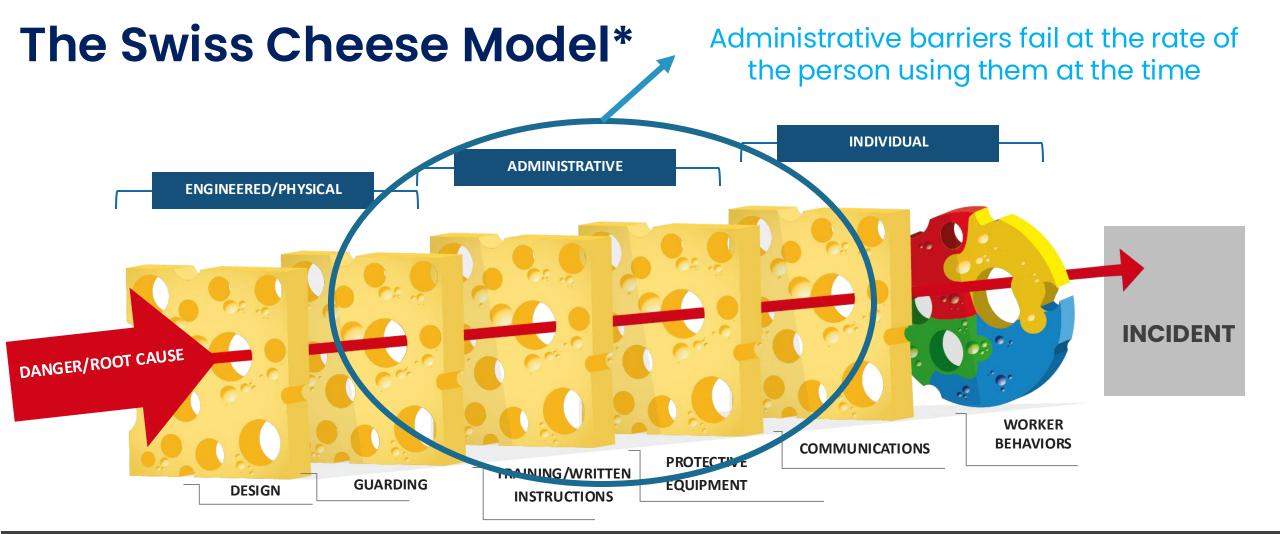
the conditions under which this occurred

DESCRIBE to me...

how this played out – how did we get here

SHOW me...

where this happened and other places it could happen



Failed Barriers CANNOT be Root Causes

^{*}Designed after Dr. James Reason's Swiss Cheese Model – Managing the Risks of Organizational Accidents

Performance Modes
Relate to...
This PERSON on
This TASK at
This TIME

WE ARE HIRED TO DO AN OCCUPATION

OPERATOR-ELECTRICIAN-TECHNICIAN-ENGINEER-WELDER...

THESE OCCUPATIONS REQUIRE US TO DO **JOBS**

SWITCHING, WELD, DRIVE FORKLIFT, DESIGN SYSTEM, OPERATE SYSTEM, PERFORM LOCKOUT-TAGOUT

THESE JOBS
CONTAIN **TASKS**

LOCK-OUT TAGOUT
SYSTEM "A"

DRIVE FORK LIFT INTO THIS TIGHT PLACE TO HANDLE THIS LOAD THIS WAY

THESE TASKS CONTAIN ACTIONS (STEPS)

Hang locks on each electrical supply

Hang locks on each water supply

Lift load up to see tight space

Load goes into area in truck



Understanding Performance Modes improves our abilities at the **TASK** and **STEP** level

Performance Mode	Characteristics	Error Rate
Skill Based	Habitual tasks that need low to no conscious thought and you don't have to think (>50 times and <7 steps)	HABITS 1:1000
Rule Based	There is a rule and the person knows the rule exists but does not have to KNOW the rule (we cannot know all the rules)	PROCESS 1:100
Lack of Knowledge Bused	The person does not know what they don't know – they THINK they know but have some doubt You cannot THINK your way out!	GAPS 1:2 - 1:10

What's in it for

WORKERS

AERO: Why Performance Modes?

Avoids having to work in the face of **UNCERTAINTY**

Makes them aware of **PROBABLE FAILURE** rate

Allows them to APPLY THE RIGHT TOOL for the situation

Applying The right tool, The right way right situation reduces error rates factor of 10!*

Source: * Using the right tool the right way in the right performance mode reduces your error rate by a factor of 10. Derived from James Reasons creation of GEMS based on Rasmussen's research.

What's in it for

Leaders

HOP: Why Performance Modes?

When designing or preparing for tasks, consider whether the task may put people in **KNOWLEDGE-BASED MODE**

When
observing
tasks –
knowing the
performance
mode
"FRAMES" THE
OBSERVATION

When something does happen... allows you to **RESPOND APPROPRIATELY** for the situation

Top 10 Error Traps

- Stress
- Multi-tasking/High workload
- Time pressure
- Poor communications
- Vague/poor written guidance
- Overconfidence
- Infrequent or first-time task
- Distractions
- First working day following time off > 4 days
- The end of work shift or extended hours



All Feel the Same



Put us in or keep us in Knowledge Based Mode



Interact With Other Traps



Procedure Error Drivers

These traps put you in or keep you in Knowledge-Based Performance Mode where the Error Rate is 10%-50%!

There are 20 known error traps that writers put into guidance that *DRIVE* errors!

- Poor communications
- Vague/poor written guidance
- Overconfidence
- Infrequent or first-time task

Triggers for this trap include:

If applicable / when applicable

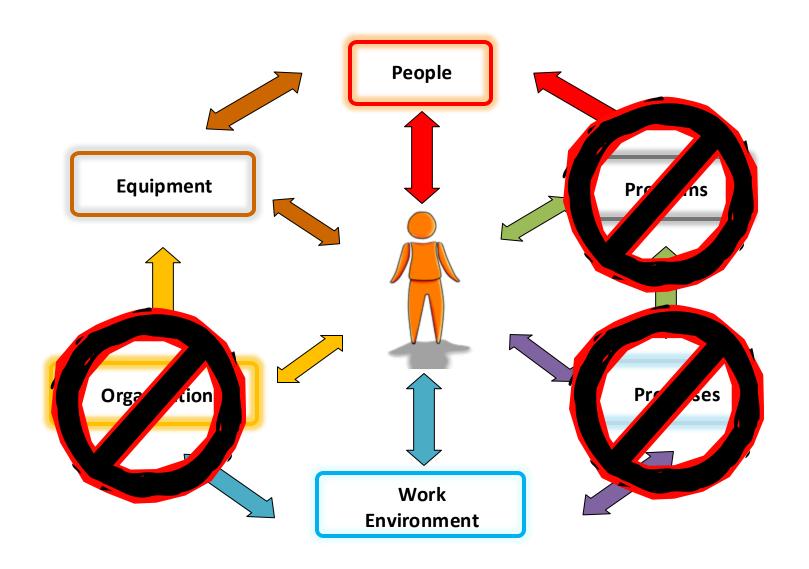
If needed / when needed

If appropriate / when

appropriate

If required / if desired

How many of these traps do you think the average guidance developer knows?



Key Error Reduction Tools

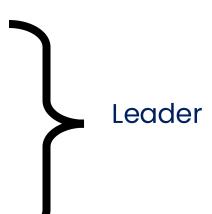
Verbalise, Point & Touch Step-by-Step Stop & Seek Out Help

3-Part Communication
Pre-Task Brief & Workflow process

Show & Tell
Values-Based Engagements &
Method based observations
High-Risk Task of the Day
Essential Leadership Cycle

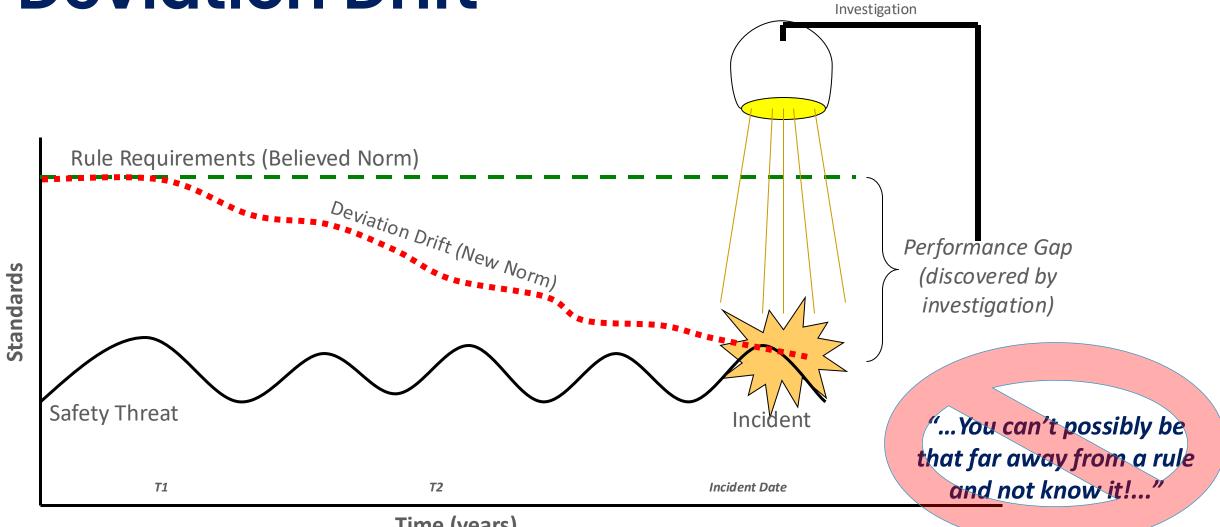
Individual

Group





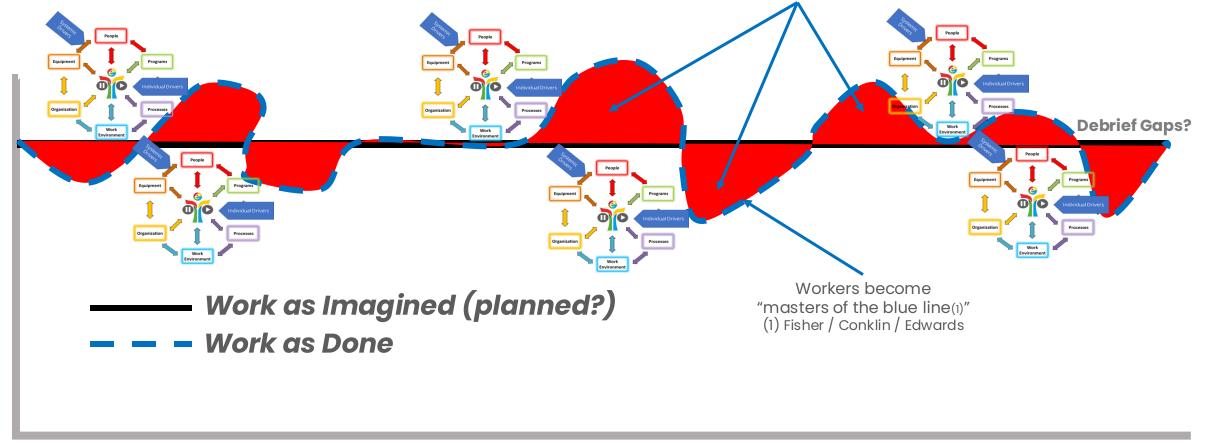
Deviation Drift



Time (years)

Real Drift....

Adaptability

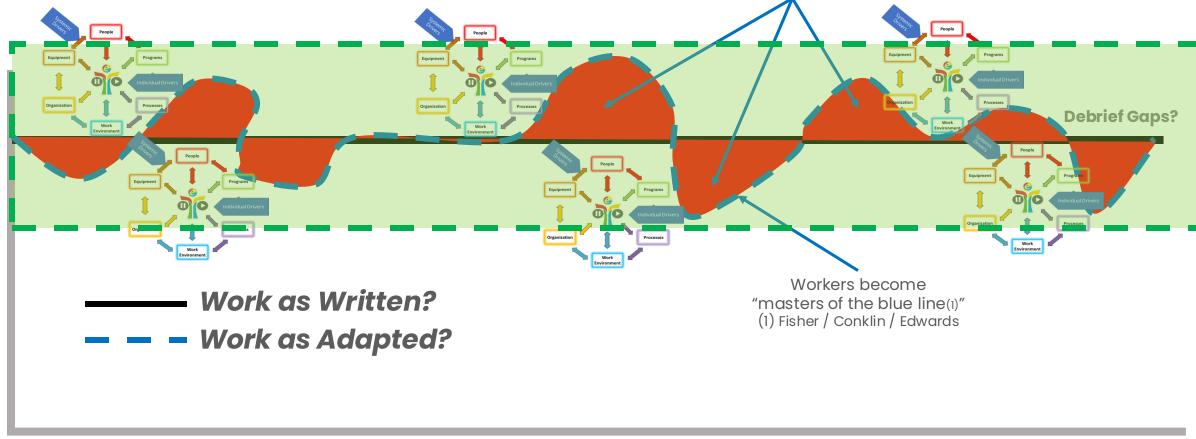


Task Start Task End

What is the probability that the need for adaptability is systemically driven?

Real Drift....

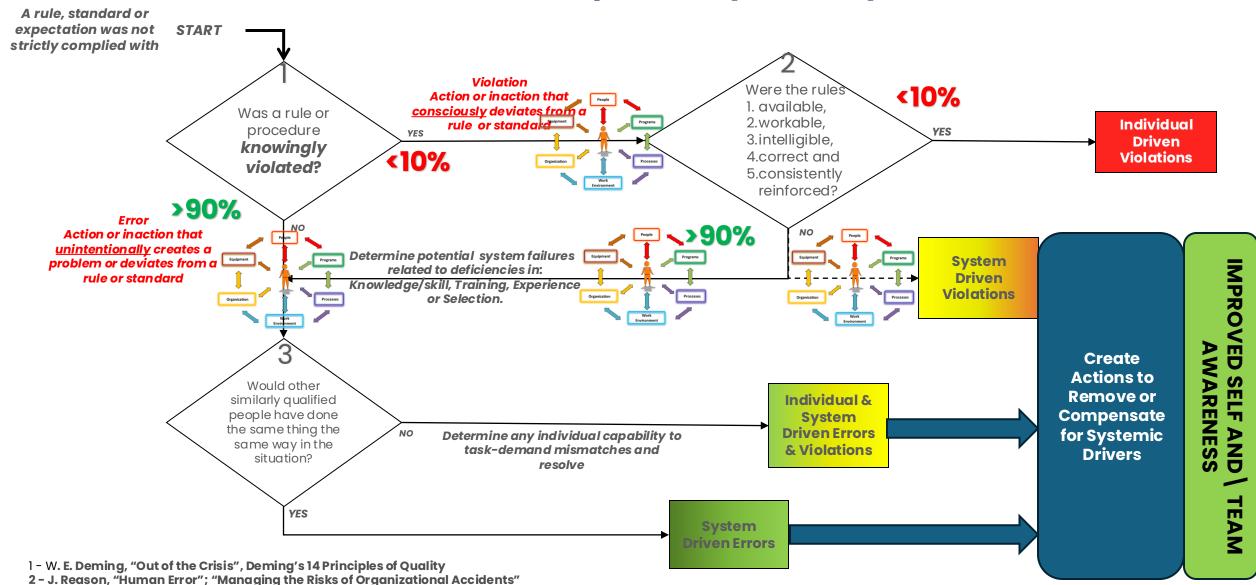
Adaptability



Task Start Task End

The WORKERS can tell us the control limits!

Deviation (Adaptability) Analysis



Derived from "Managing the Risks of Organizational Accidents", James Reason, 1994, pp 209

ERROR IS NORMAL

If you don't know what it is, how they happen, what drives them, and what you can do about it... it is hard to prevent.

Leaders must know and use the definitions DAILY

Error

An action or inaction that unintentionally:

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Blame Fixes Nothing

It is not about shifting blame or accountability...

Treat "blame" like the 11th Error Trap

It is about finding the drivers of errors and events and increasing organisational learning.



Top 10 Error Traps

- Stress
- Multi-tasking/High workload
- Time pressure
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- Distractions
- First working day following time off > 4 days
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#11 - BLAME!



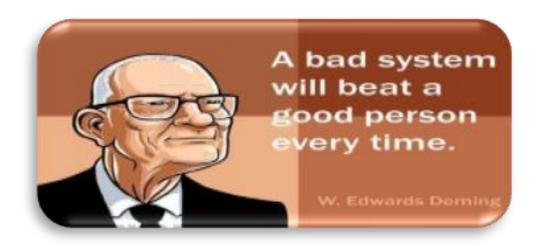
Put us in or keep us in Knowledge Based Made

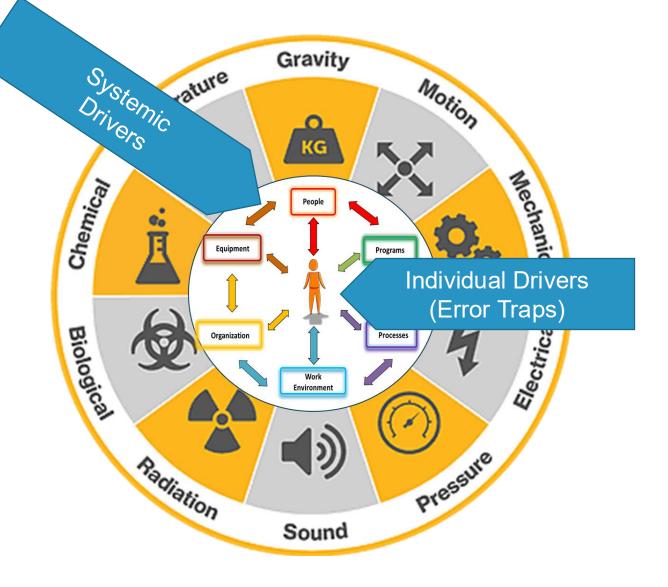
Interact With Other Traps

SYSTEMS INFLUENCE behaviour and CONTEXT DRIVES behaviour

People do what they do, at the time that they do it, for reasons that make sense to THEM at that time!

(Systemic & Individual Drivers)





Response Matters

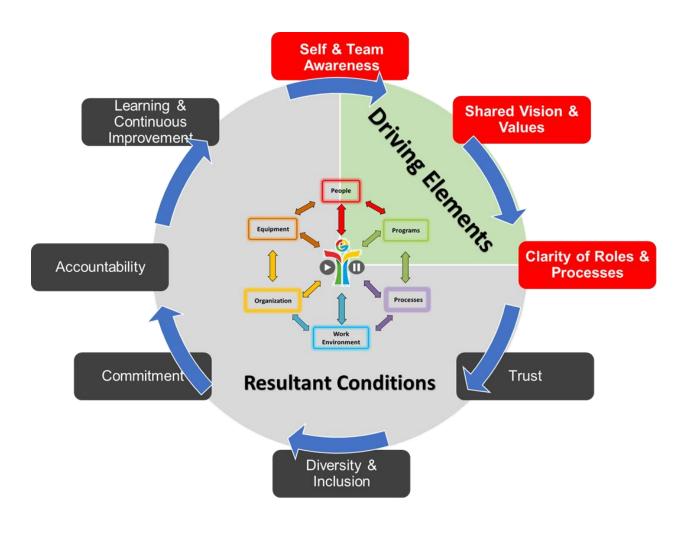
There is a difference between a reaction and a response

Leader response to success AND failure matter



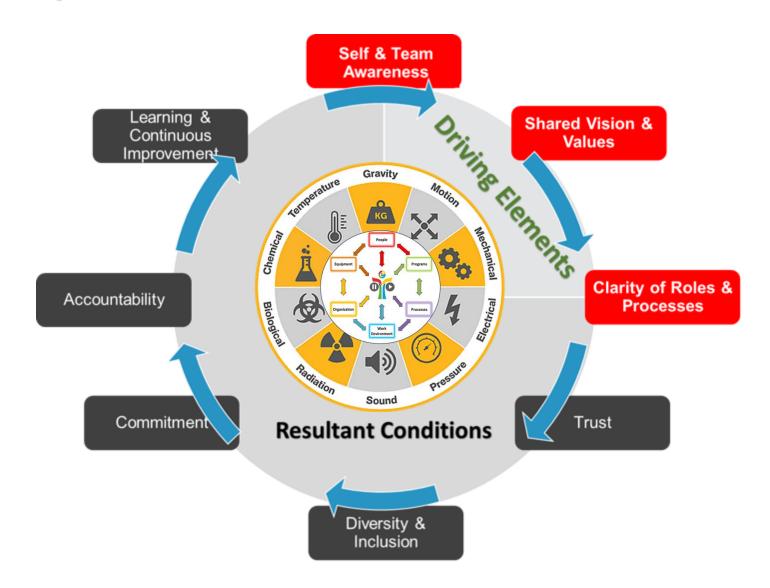
Learning is Essential

Lessons aren't learned until individual and organisational behaviours and systems sustainably change.



Use the Essential Leadership Cycle to manage outcomes

Systems and context influence behaviour



Essential Task Cycle

An interdependent system where individuals interact with people, programs, processes, work environment, organization and equipment and manage the physical hazards that produce harm

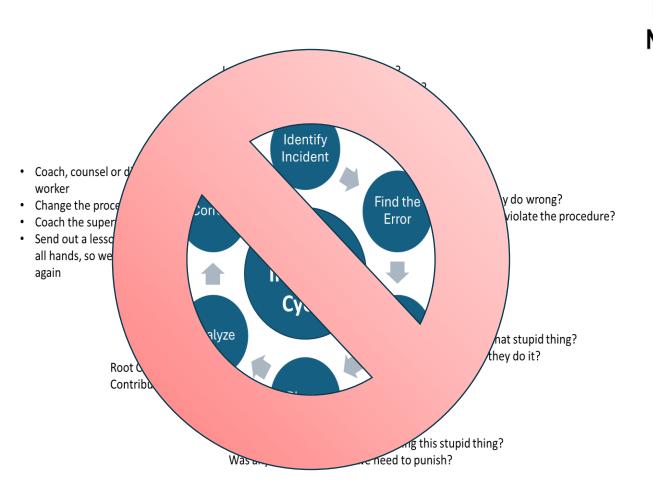
Essential Leadership Cycle

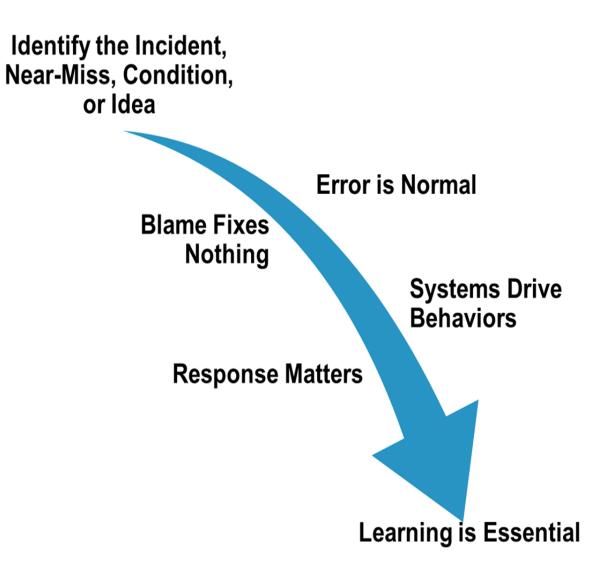
How an organization controls and manages the task-based system.



OLD View of Incidents

NEW View





NEW View

Identify the Incident, **Near-Miss, Condition,** or Idea

Interact With

Top 10 Error Traps StressMulti-tasking/High workloadTime pressure All Feel the · Poor communications Put us in Vague/poor written guidanceOverconfidence or keep us in Infrequent or first-time task

#11 - BLAME!

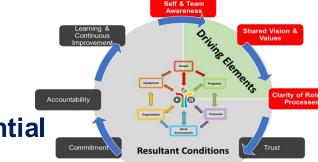
If leaders use models, processes, and tools then the workforce will too! **Error is Normal**

Blame Fixes Nothing

Systems Drive Behaviours



Performance



Response Matters



Learning is Essential

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Things You Can Do Now

- Use the new language to talk about errors, incidents, deviations and violations – <u>Ask Better Questions</u>
- 2. Use the new knowledge to analyse problems **Systemic Drivers**
- Recognise the <u>Performance Mode</u> you are in to minimise the error potential
- 4. Recognise the <u>triggers</u> that tell you an <u>Error Trap</u> exists that increases the probability and potential for errors



Avetta Summit 2025

SYDNEY

Thank you

Questions?



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