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BRINGING THE INDUSTRY HOME SAFE

Leading a Successful Safety Culture

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EHS TODAY'S America's SAFEST COMPANIES

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The Odds and Opportunities

- 121,000 Gas Stations in US X 18 sales per pump per day
- 18,000,000,000 gas-pumping operations annually
- 150 fires annually due to static fires, each one considered a major event

Record Performance

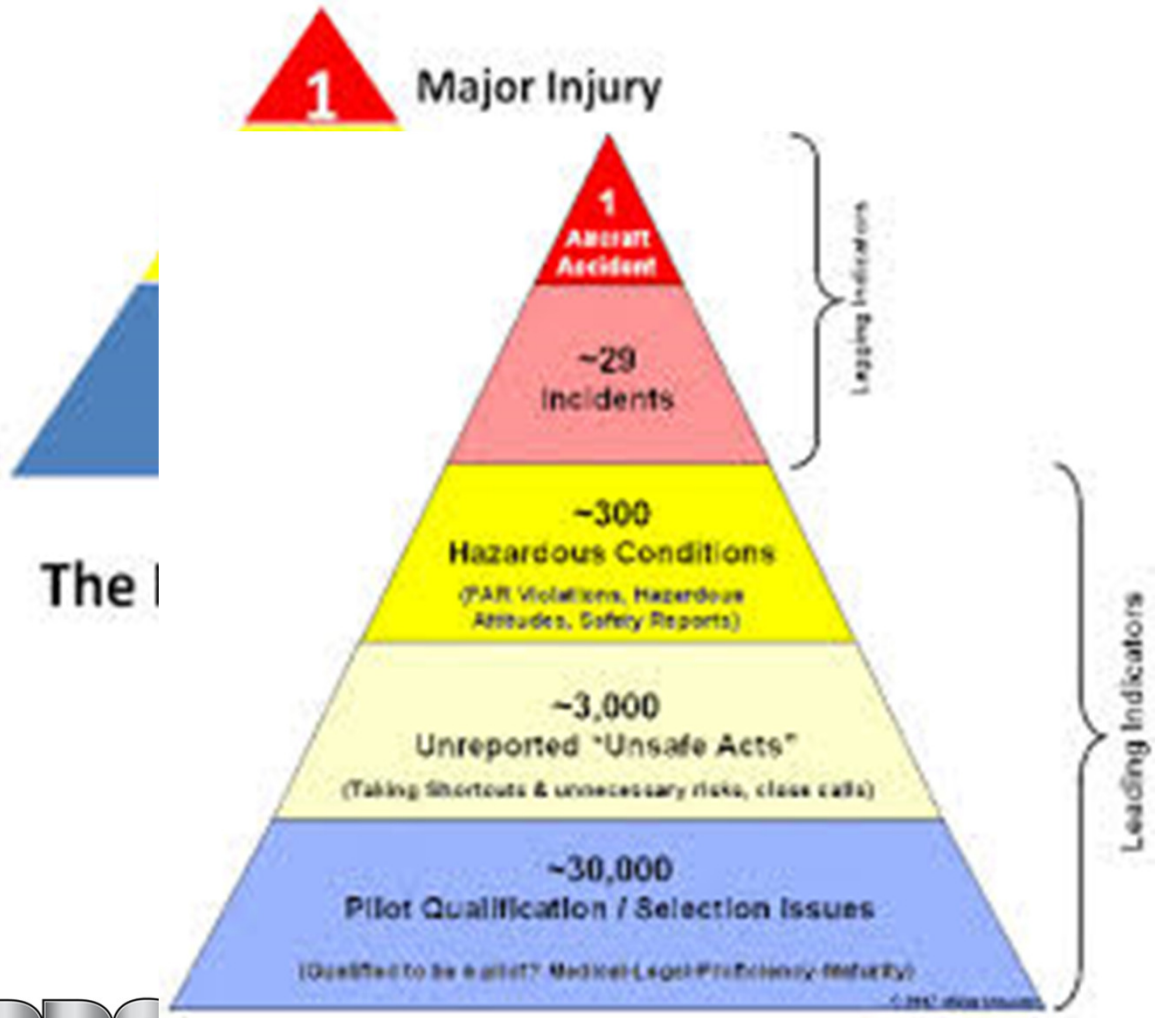
During January to December 2014:

- Preventative Maintenance Packages Completed: 340 x 12 steps (average)=4,080 task or performance critical steps
- Corrective Maintenance Packages Completed: 660x 30 steps=19,800 task or performance critical steps
- Project Support Related Activities: 8 x 20 task or performance critical steps=160 task or performance critical steps
- Lowest estimate: 24,040 opportunities for error/accidents
- Incident (ESHQ and KPI) rate: 120/year, (~10 per month)
- Summary: Though the opportunities for events are numerous, and are undesirable when they occur, they do not happen as often as the opportunities for them allow…*why*?

What are the Odds? (Mix and Match Quiz)

Opportunities/Events	Chances
1. Bowling a 300 game	• 1 in 11,500
2. Getting a hole in one	• 1 in 5,000
3. Becoming an astronaut	• 1 in 32,500,000
4. Injury from fireworks	• 1 in 19,556
5. Injury from shaving	• 1 in 6,585
6. Injury from using chain saw	• 1 in 4,464
7. Injury from lawn mowing	• 1 in 3,623
8. Being killed next year in transportation event	• 1 in 77
9. Serious accident/nuclear weapon	• 1 in 125

The Real Point: Fooled By Consequences



Incorrect View: We can have a lot of lower level events before a major one

Correct View:
A significant event can occur at any time…consequences range in severity, *causes* do not!

Cultural Contrasts

High Reliability Organization	Unreliable Organization
Healthy Preoccupation with Failure	False Sense of Security (Record)
Sensitivity to Operations (process)	Solely Focuses on Results
Accountability: Error Tolerance, Detection and Recovery Defined	Fault Finding and Culpability—capricious, arbitrary punishment
Co-responsibility for safety, quality, production expectations and goals	Management's solely responsible for safety, quality and production goals

Leadership By Design Principles

Managers manage the culture or the culture manages them

Habits, norms and rituals are formally or informally created, intentionally or unintentionally enforced and reinforced

Safety, Quality and Reliability are NOT defined by the absence of incidents but in the capacity and capability of our people (to detect, prevent and recover from errors/mistakes created by less than perfect conditions)

Our chief capability is NOT *risk aversion* but *risk competency* (“Drive Safely”)

Managers should ask what do we want for our employees more often than they demand something from them

Greatest turning point in an individual’s safety perspective and performance is when they see hazard controls as *benefits* rather than *requirements*

Team Activity

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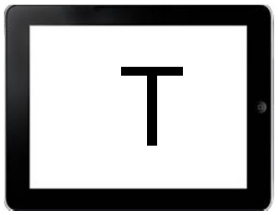
Complexity of Tasks

The complexity of tasks continues to increase

Yesteryear

Yesterday



Present

Error Management

- Error Tolerance
- Error Detection
- Error Recovery

Error Tolerant Systems

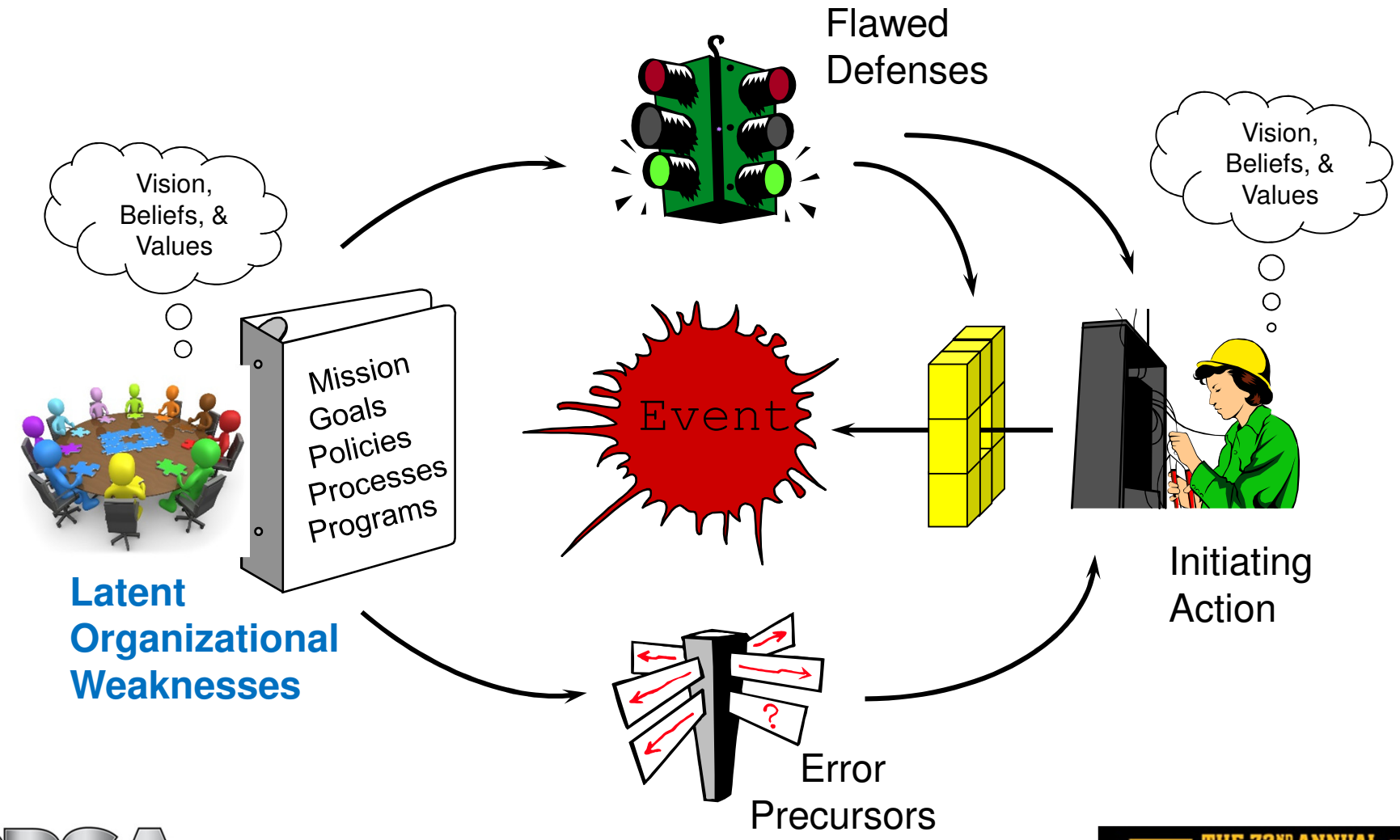
- Highway conditions and construction

- Filters—
  - 7” known failure rate
  - 5” DOE requirement
  - 3.6” Action Level
  - 3.0” Notification level

Control Paradox

By seeking to eliminate the undesirable event through the prevention of human error, we guarantee failure by ignoring human nature

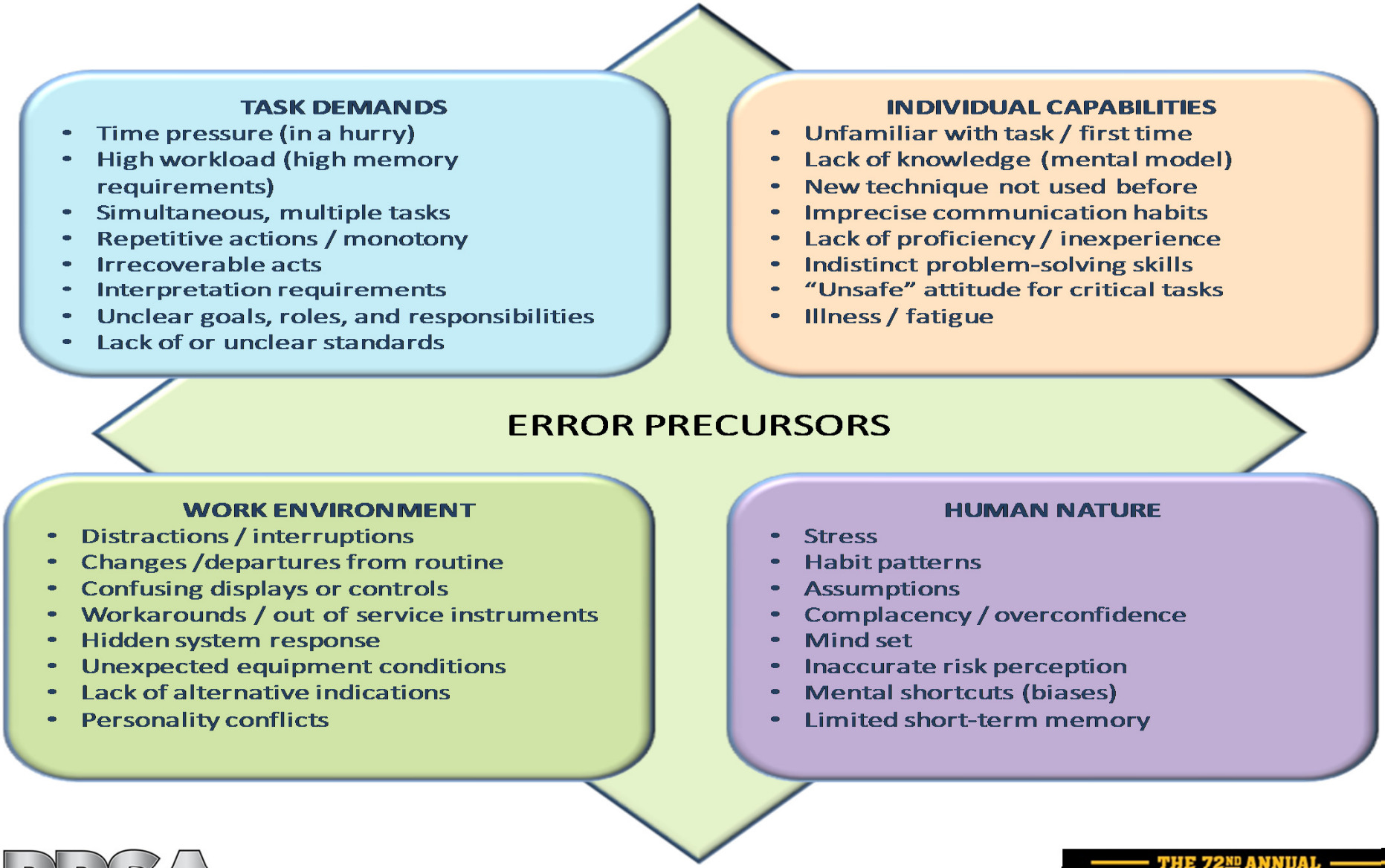
Anatomy of An Event



Error Precursors

- Error Precursors are unfavorable prior conditions at the job site that increase the probability for error during a specific action, that is, error-likely situations.

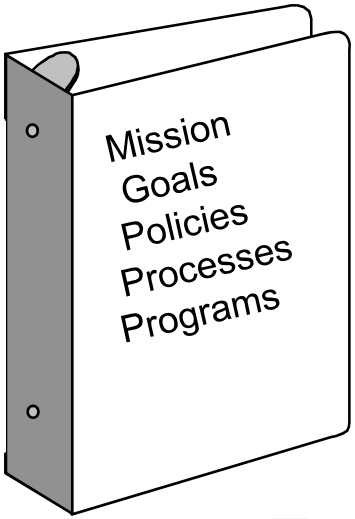
Error Precursors

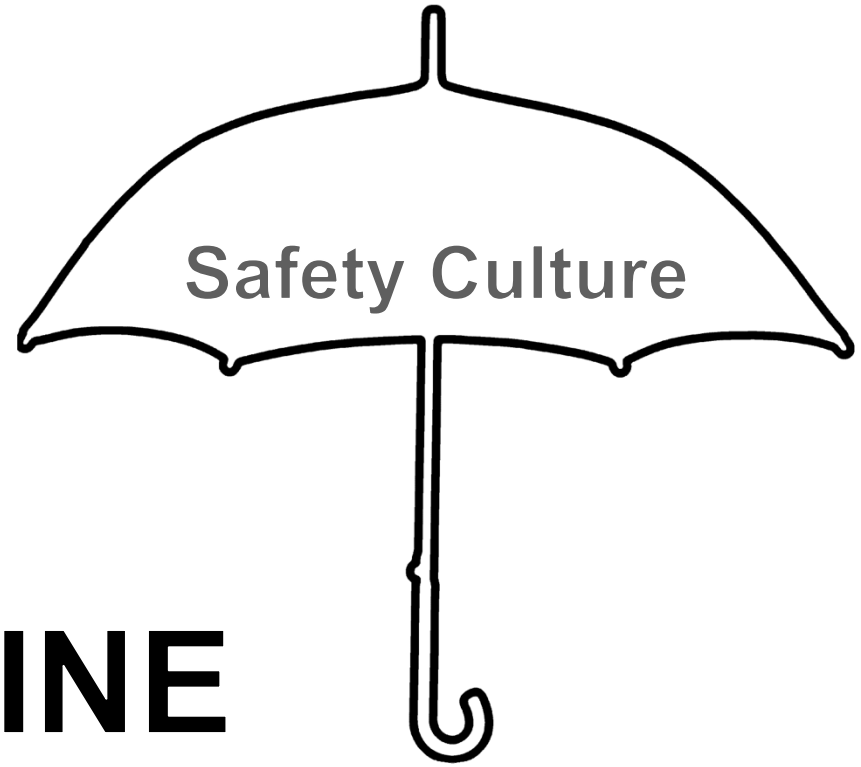


Three Types of Culture

Pathogenic (Unjust)	Responsive (Legal)	Sustainable
Consequences Trigger Culpability	Policies Determine Practices	Personal Investment Improves Performance
Backward Looking Accountability (Adversarial)	Fiduciary Accountability (Advise/Enforce)	Forward Looking Accountability (Advocate)
Confrontational Inquiry (Prosecutorial)	Diagnostic Inquiry (Probative)	Empathetic Inquiry (Productive)
Ignore or tolerate mistakes	Learn from Mistakes	**Predict/Prevent/Report Mistakes**

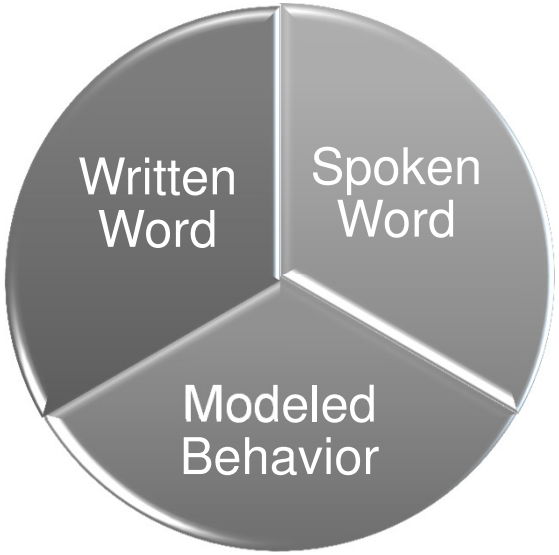
Organization Expectations





DEFINE

A Culture of Safety



All cultures consist of three basic elements:

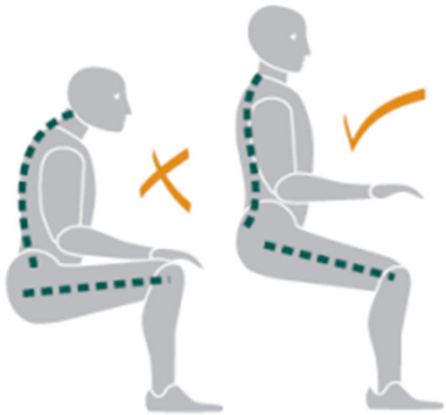
- **The written word**
  - policies, procedures, directives, signs, notices
- **The spoken word**

  meetings, briefings, expectations, reviews
- **Modeled Behavior**

  norms, informal practices, approval or disdain

Habits and Rituals: Organizational Cornerstones

- Habits exist formally and informally, deliberately and unintentionally
- They are the daily litmus test between knowledge and belief
- Rituals are mental and physical constructs or routines we develop deliberately to either empty our minds (get in the flow) or improve our results



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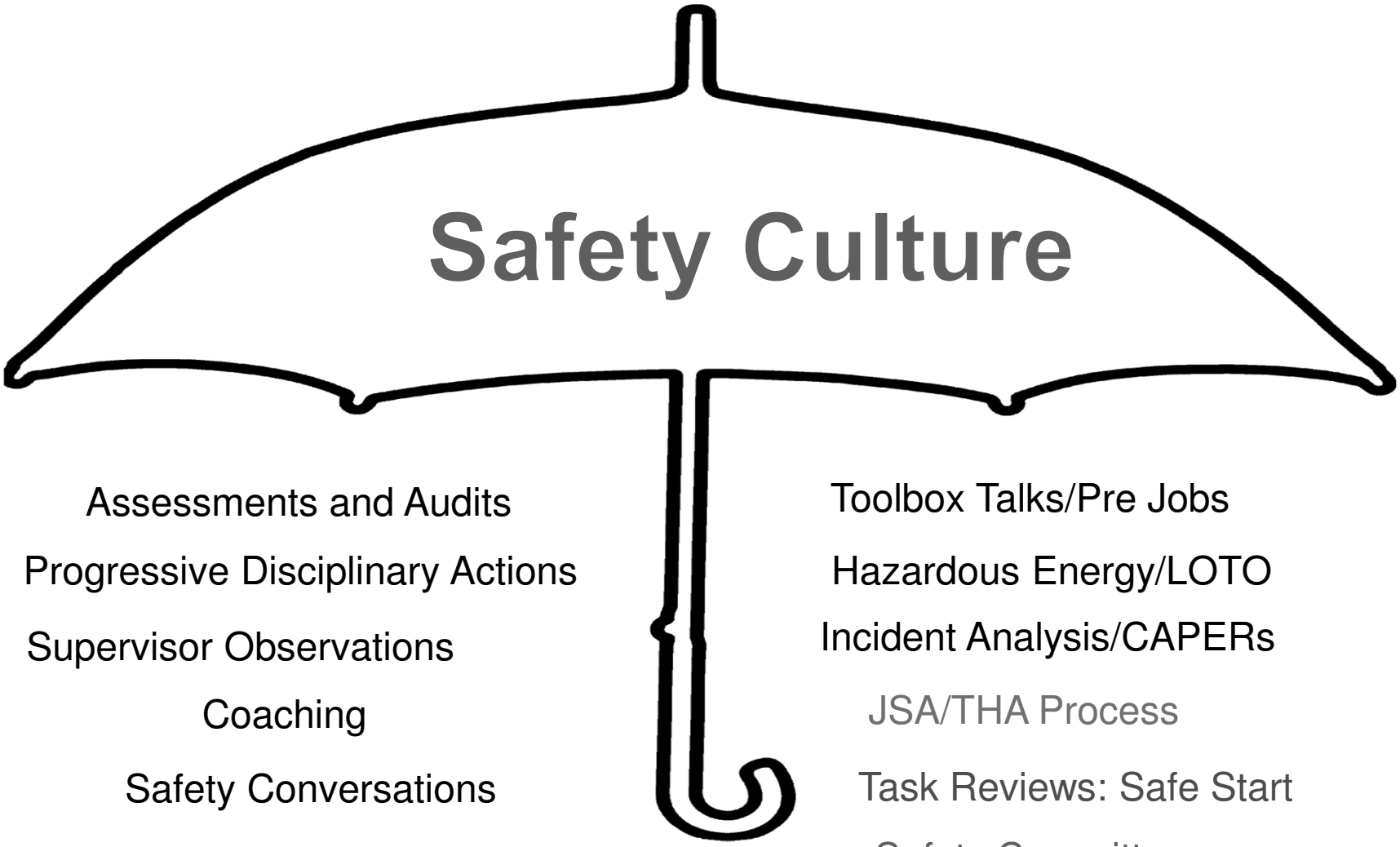
Tribal Knowledge

- The oldest form of people working in groups: Tribes
- We belong to many Tribes (maintenance, safety committees, crib players at lunch, smokers hiding in the *corners…you know who you are)*
- People long for affiliation, association, acknowledgement and achievement (some want to affiliate and associate with those who don't want to acknowledge achievement—its their only *achievement* that fills the void)
- The strongest tribal ties are with those that most engage our heads and our hearts

Our Safety Process



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Work: Three Phases

Work as Imagined

Work as Planned

- *Management Gap*

Work as Performed

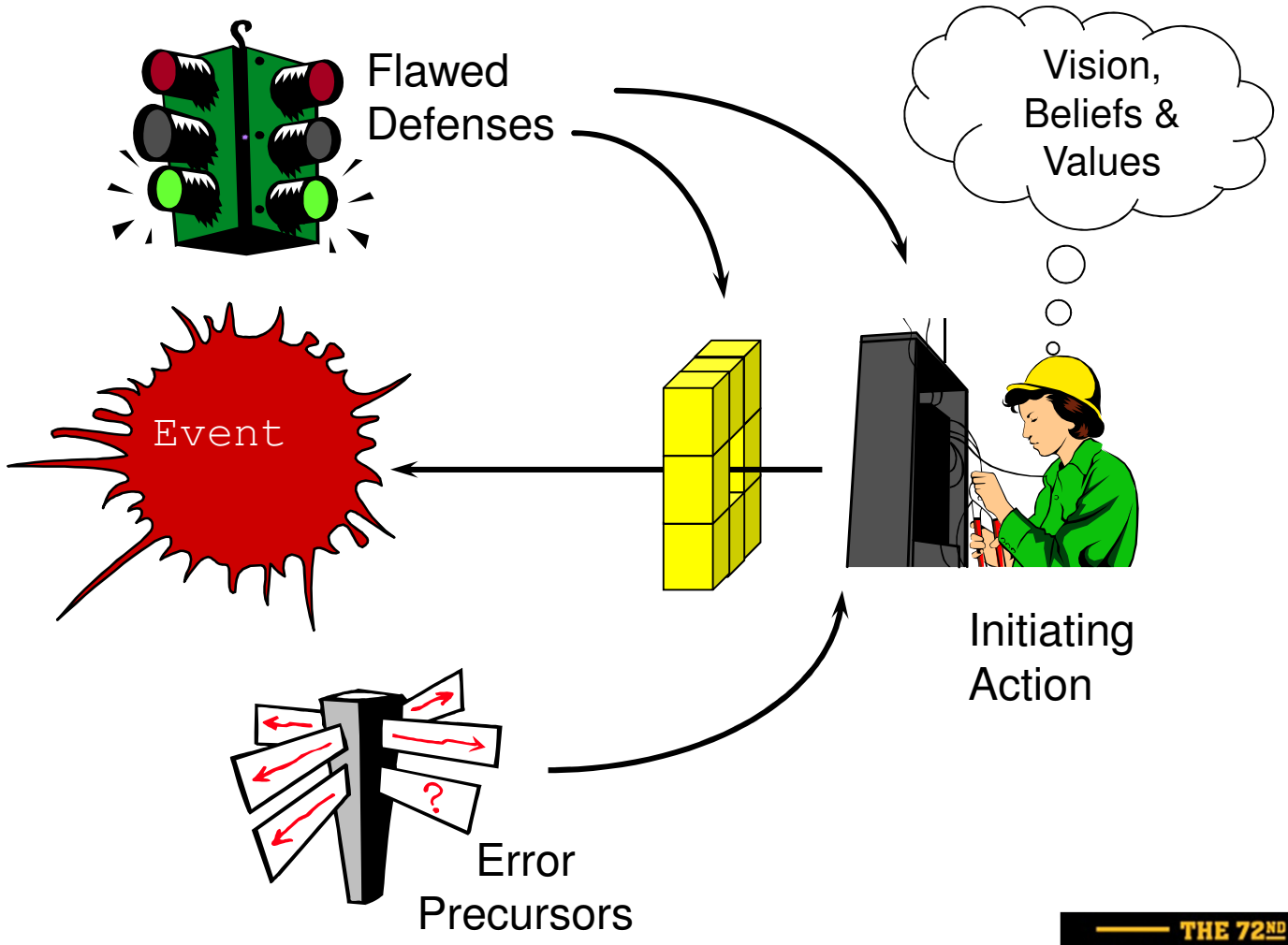
The Disconnect

- Work as Imagined
  - Project Management and Production Plans
  - Audits, Assessments and Project Reviews

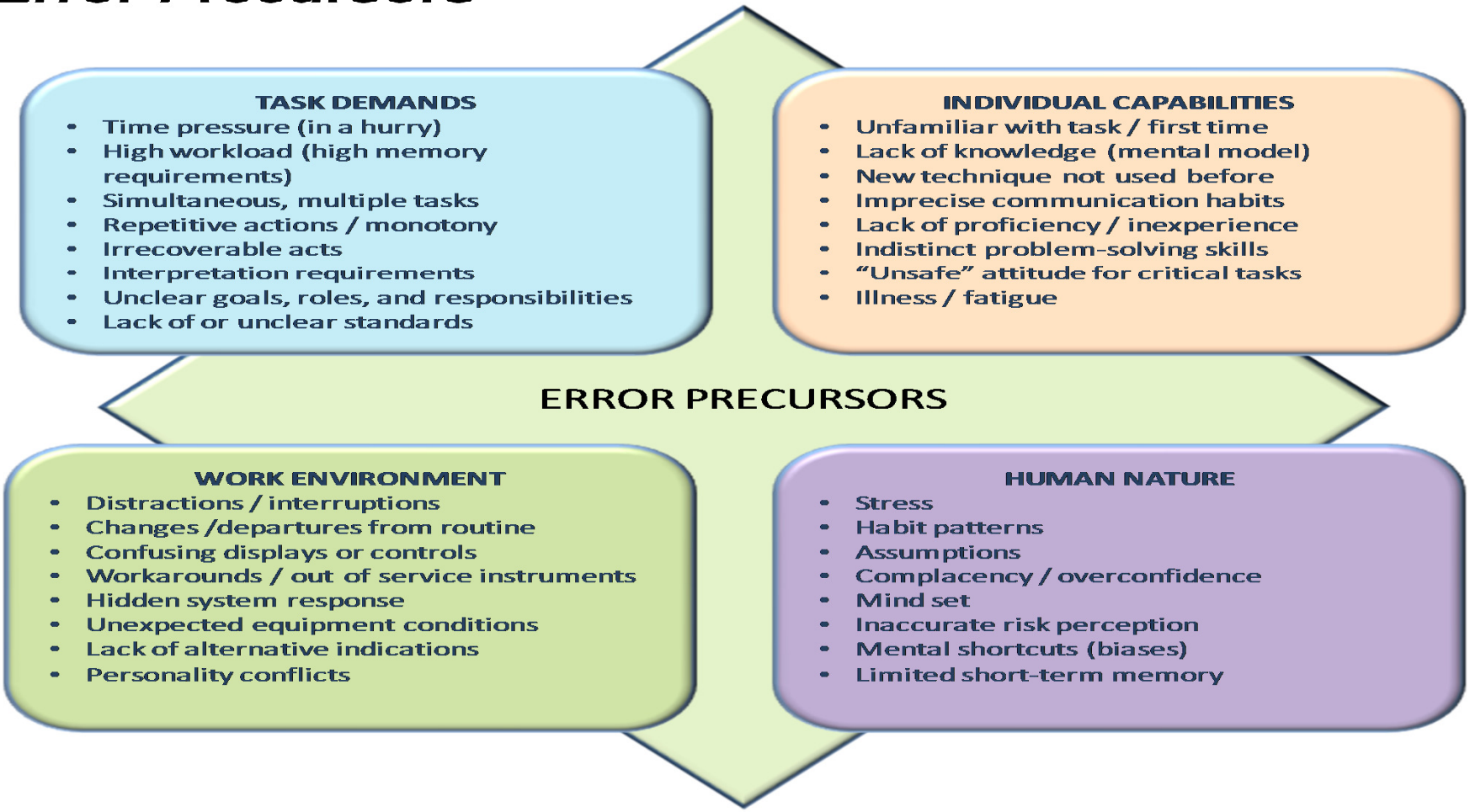
- Work as Planned
  - Work Baseline Summaries and Production Orders
  - Work Group Assignments (Plan of the Week)
  - Suspended/Interrupted Work, Stop Work, Package Recycle

- Work as Performed
  - Plan of the Day
  - Individual Task Execution
  - Management Observation and Feedback

Anatomy of an Event: Defenses and Precursors



Error Precursors



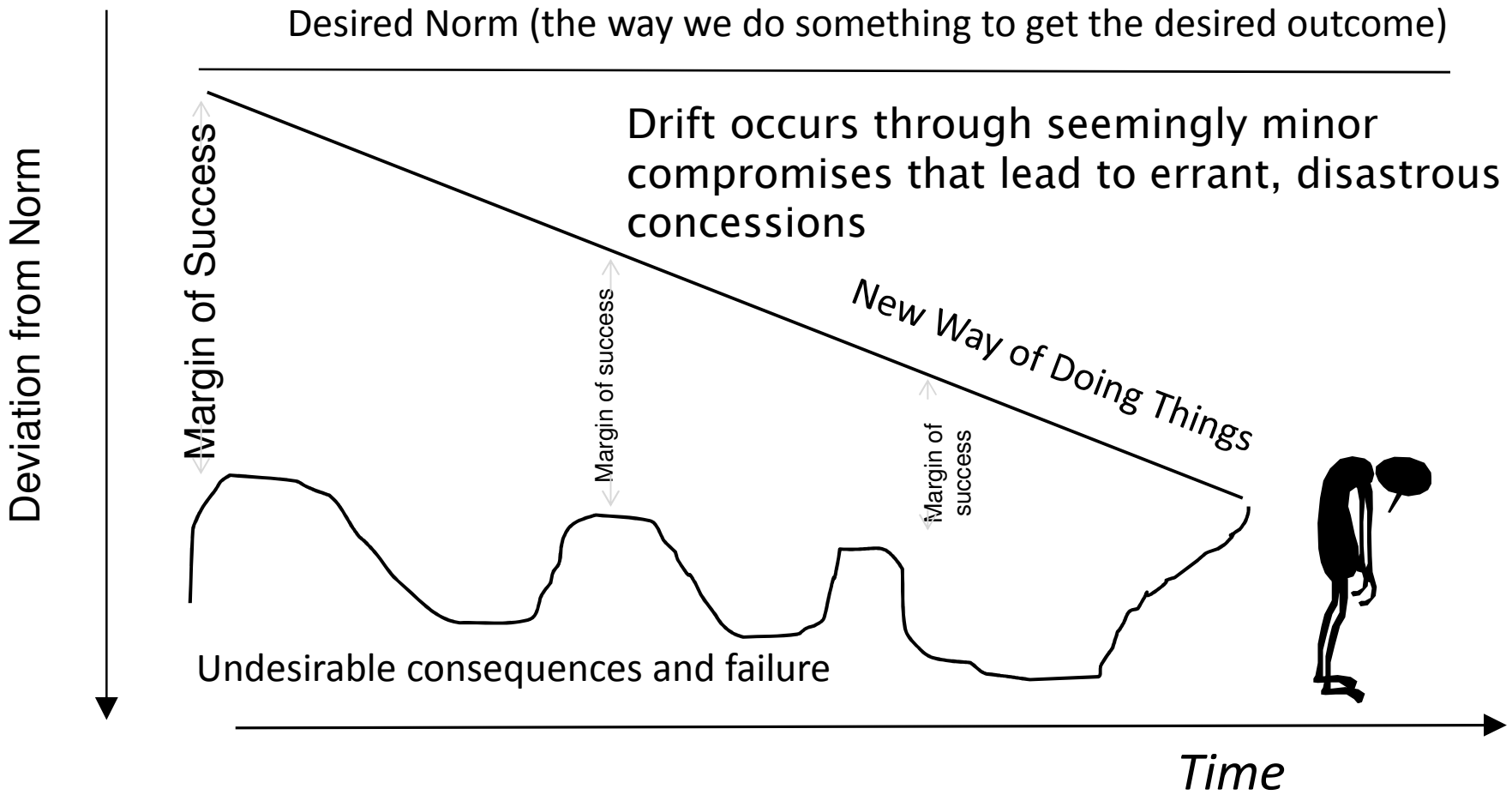
Why I Make Mistakes

Slips, errors, mistakes and lapses

Mindsets and Traps

- Positive Illusion
- Bending the Map
- Expectation Bias
- Change Blindness
- Probability Neglect

Mind the Drift….



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Practical Application

ERROR DETECTION AND RECOVERY

Performance Deficiency

Motivation:

Effort not Energy

Ability:

Skills, Tools, Practice

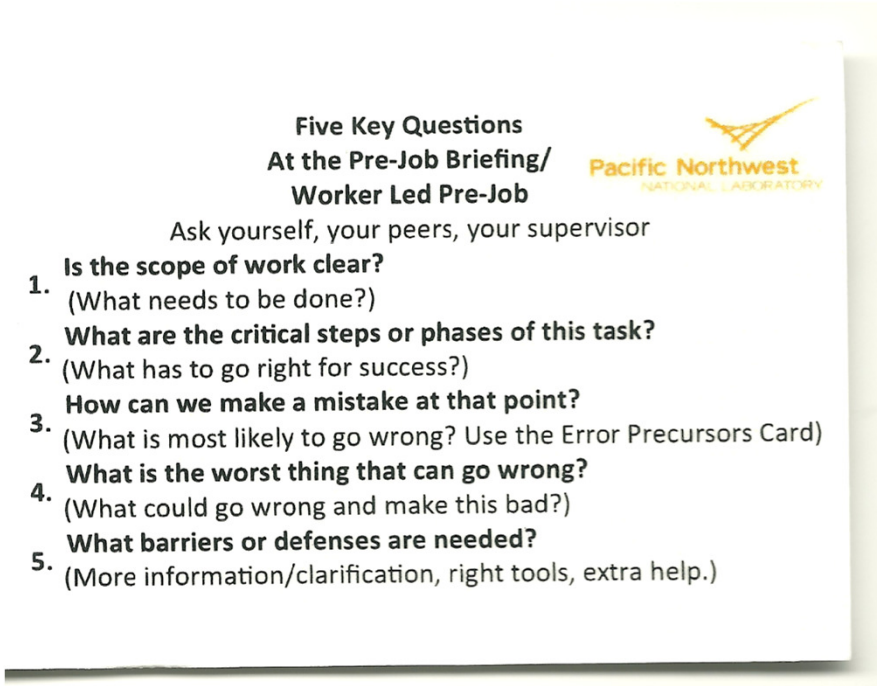
Error Detection and Reduction Tools

- Questioning Attitude: “What if and How”
- SPEAK CLEAR (Pre and Post Job Dialogue Aids)
- Just in Time Activators
- Peer to Peer Observations (positive, soon and concrete feedback)
- Supervisory Observations (with conversations)
- Visual Aids
- Brown Bag Sessions (led by employees)
- Mock Downs/Walkdowns
- Checklists
- Standard Operating Procedures
- Drills

Just in Time Activators

Memory Jogger Cards

- Pre Task Review



Five Key Questions
At the Pre-Job Briefing/
Worker Led Pre-Job

Pacific Northwest NATIONAL LABORATORY

Ask yourself, your peers, your supervisor

1. **Is the scope of work clear?**
   (What needs to be done?)
2. **What are the critical steps or phases of this task?**
   (What has to go right for success?)
3. **How can we make a mistake at that point?**
   (What is most likely to go wrong? Use the Error Precursors Card)
4. **What is the worst thing that can go wrong?**
   (What could go wrong and make this bad?)
5. **What barriers or defenses are needed?**
   (More information/clarification, right tools, extra help.)

Operations Aid

- Equipment Posting/Placard
- Importance and Role of Machine in Process
- Three common errors associated with operation
- Specific associated controls to eliminate errors and injuries

Shaping Behaviors

Growth Mindset

- Errors are the result of technical inaccuracies and ability issues
- Leads to learning from failure in order to improve the system
- Corrects the problem by identifying and remediating a step or condition

Fixed Mindset

- Errors are the result of character flaws and motivational issues
- Leads to avoiding risk in order to sustain the status quo
- Uses slogans and admonitions to change an attitude or behavior

The Words We Chose….

Character-Based (fixed)

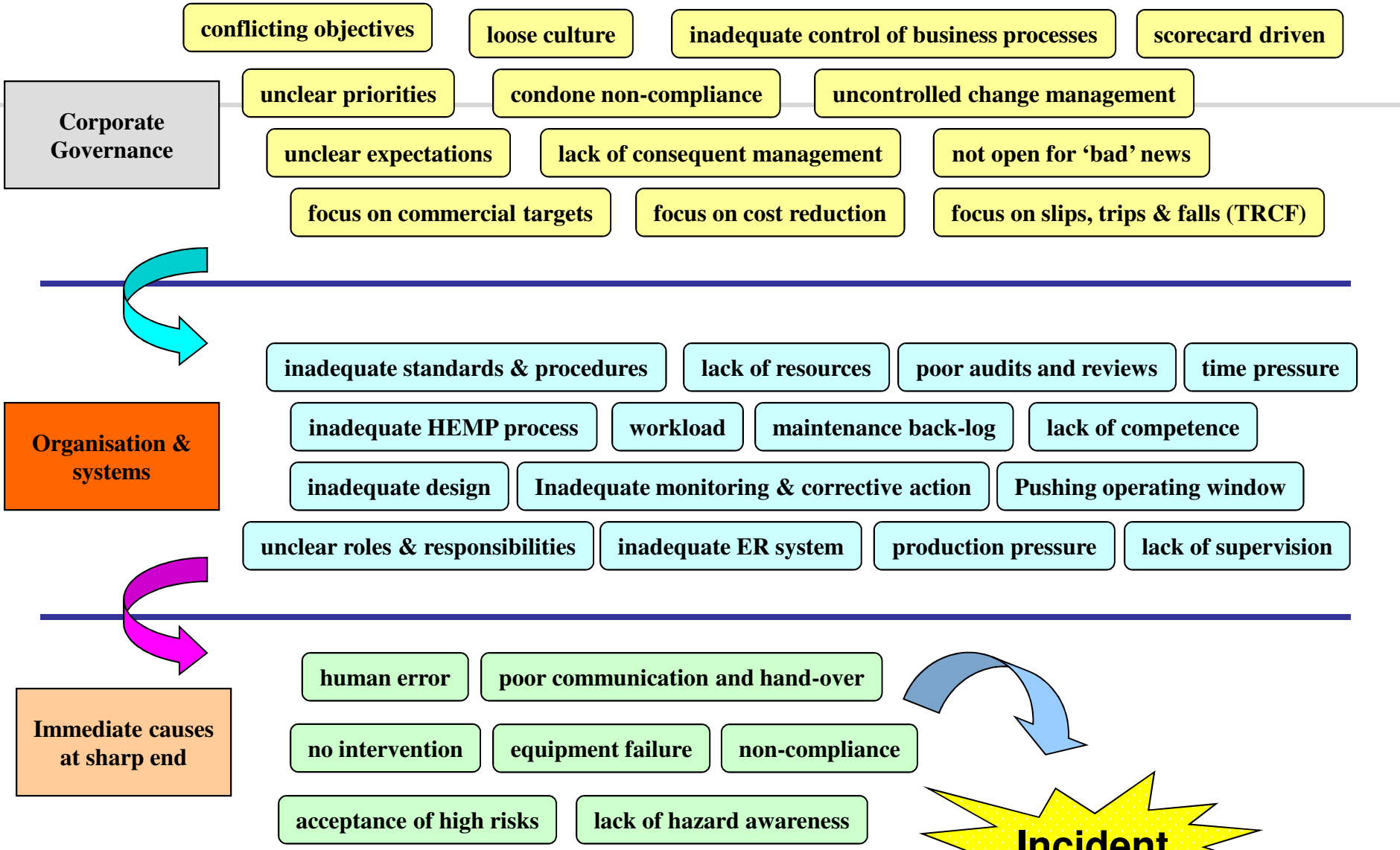
Performance-Based (growth)

Complyment: The Danger Zone

- "If you coerce and compel, rather than *'listening to gain understanding*', you will not get people moving positively and safely with the energy and investment they need to be successful," *Dr. Conners*

- *Forcing* people into alignment may get them moving, it won't get them thinking….

Factors contributing to incident causation



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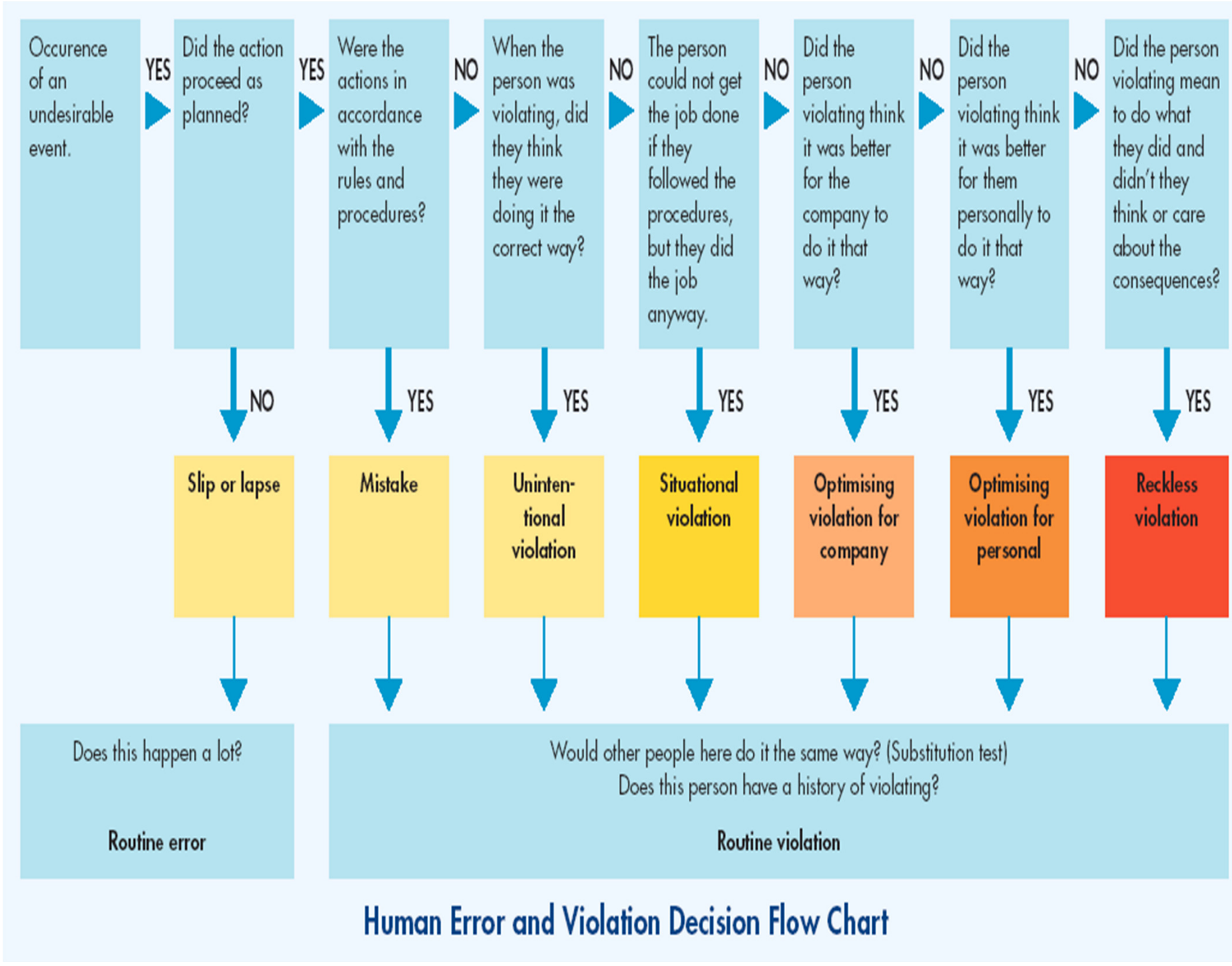
Motivation and Ability

Just Culture

- Don’t know what to do
- Don’t know how to do it
- Don’t have the tools to do it
- Think they are doing it
- Don’t want to do it
- Don’t feel they have to do it



Human Error and Violation Decision Flow Chart

Safety Champion Program
(Cosmo Specialty Fiber)

Personal Risk Tolerance Profile

Hazard Identification and Control Training

Peer Observations and Feedback

Field Observations and Recommendations

Individual Safety Improvement Plan

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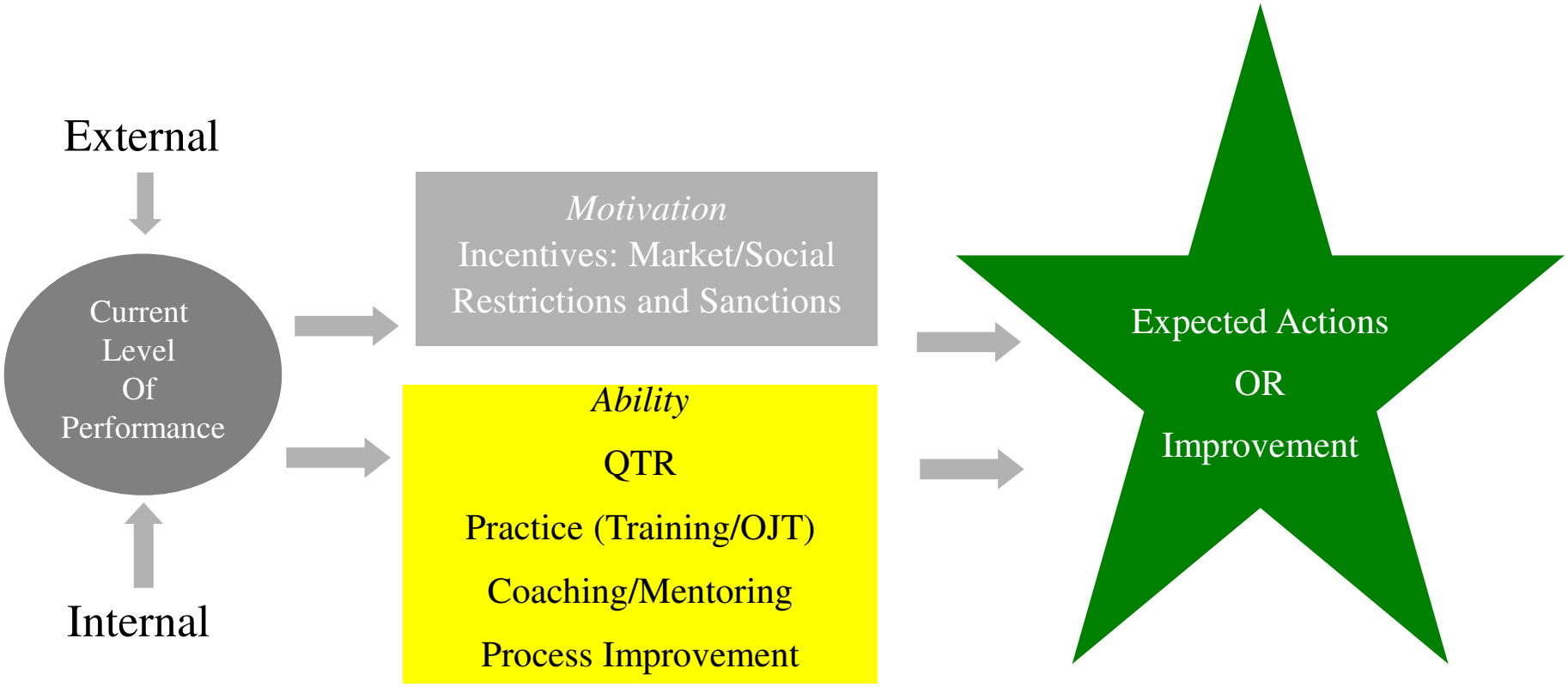
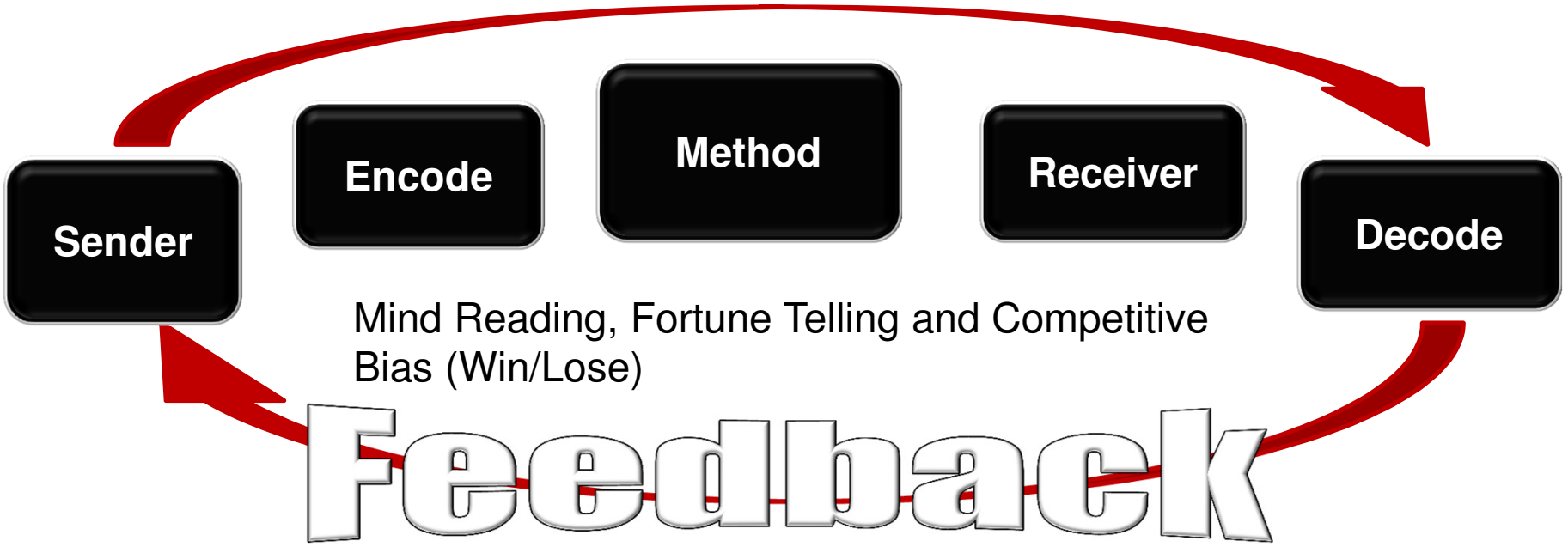
Performance Improvement Model



Social Force Motivation	Market Force Motivation	Ability
Sense of Purpose	Monetary Incentives	Awareness Campaigns
Sense of Accomplishment/Improvement	Financial Rewards	Overview/Refresher Briefs
Sense of Inclusion (Group)	Progressive Prizes (effort=reward)	Resource Allocation Priorities
Investment in Decision/Outcomes	Compensated Promotion	Schedule Allowance (time to perform)
Professional Pride (Personal)	Skill Development (resume enhancement)	Defined Accountability Measures (clear expectations)
Professional Pride (Affiliation)	Educational Opportunities (exclusive)	Visible, Current, Relevant Performance Metrics
Sense of Duty/Obligation	On the Spot Recognition Awards	Accessible and Available Point of Contact
Increasing Influence (personal)	Performance Appraisal Metrics	Personally Relevant Resource Materials
Personal Control of Corrective Actions	Loss Aversion (fear of losing what you already gained)	Knowledge/Skills Specific Training
Benefit Outweighs Effort Senior Management Support		Removal of Conflicting or Ambiguous Goals
Loss Aversion (fear of losing something)		
Competition		

The Communication Model



“Rolling Filters”: Balancing Priorities

Sr. Manager

Line (Mid) Manager

Field Supervisor

Worker

Securing the Load

Deliver the message without the load:

- Isolating: “You’re the only one…”
- Sarcasm: “There’s a problem all right, I might be looking at it or him…”
- Attaching Global Weight: “You don’t respect the rules and never have…”
- Intimidating: “I don’t want to pull rank”
- Exaggerating: “ You always, never, the hundredth time…”
- Point out their failures: “Can’t get through to you, You don’t get it”
- “If I were you…” means *“Why can’t you be more like me”*
- Gunnysacking: “This is like the time you..”

Examples of Inquiry

- “What bothers you the most about this situation?” (Diagnostic)

- “Why didn’t anyone else have a problem with it?”
- “Why didn’t you stop when you violated the safety limit?” (Confrontational)

- “What is your opinion of this situation?”
- “Is there anything about the task or job we are asking you to do that does not provide value to you?” (Empathetic)

Levels of Inquiry

- Diagnostic Inquiry
  - Steering the conversation to fix ‘an isolated problem’
  - Satisfactory Solution
  - Influences the other person’s mental processes

- Confrontational Inquiry
  - Inserting your own ideas in the form of a question
  - Judgment
  - Serves your own interest—not necessarily the other persons

- Empathetic Inquiry
  - Viewed from the other person’s perspective
  - Curiosity
  - Doesn’t assume intentions—takes the issue at face value

Advocacy Process: Teaching Others to Solve Problems

1. Encourage the identification of the issue
2. Clarify the issue
3. Determine the current impact (evidence)
4. Determine the future implications
5. Examine your personal contribution to this issue
6. Agree on the preferred, productive outcome
7. Commit to action—Check Up/Check Back

Pre Job Quality- Tasks Level Stop Criteria

SUCCESSFUL PRE-JOB BRIEFS and POST-JOB REVIEWS ARE INTERACTIVE!

6. SPEAK: *Each S.P.E.A.K. item must be discussed. Provide key information in the space provided.*

☐ **Summarize Critical Steps**: What steps, if done wrong, would have immediate negative consequences?

☐ **Prior Performance**: What lessons have we learned from this task and/or similar tasks before?

☐ **Error Likely Steps**: Where/when are WE most likely to make a mistake on THIS TASK at THIS TIME?

☐ **Anticipate Worst Case**: Related to THIS TASK at THIS TIME, what is the worst that could happen?

☐ **Kinds of Defenses**: How will WE defend OUR PEOPLE & OUR PLANT on THIS TASK at THIS TIME?

7. STOP Criteria: On this task, our team will STOP & Get Help (New PJB, Supervisor, etc.) when we face any of these challenges.

- Unexpected Conditions
- Team Members are Unsure
- Distractions
- Work Team Changes
- Job Scope Changes
- Instructions are Inadequate
- Time Pressure/Stress
-

Additional STOP Criteria Identified by Our Team on This Task at This Time: _____

_____

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Post Job Brief Quality

8. Post-Job Review: CLEAR

☐ **C**hanges: What changes should be made to the task instructions?

☐ **L**essons learned: What went right? What went wrong? What do we need to share?

☐ **E**rrors left uncorrected: What errors still exist that need to be addressed before they cause an error?

☐ **A**dequate Resources: What resources should be added to support the task?

☐ **R**esults not as expected: What happened that was unexpected?

☐ We stopped this job because:

9. Corrective Actions / Comments WR #:

☐ Follow-up Requested: Circle who should follow up: Supervisor Planner Safety Management Other: _____

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