

AVOIDING AVERSION: THE RISK COMPETENT WORKFORCE

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LUCAS ENGINEERING AND MANAGEMENT SOLUTIONS



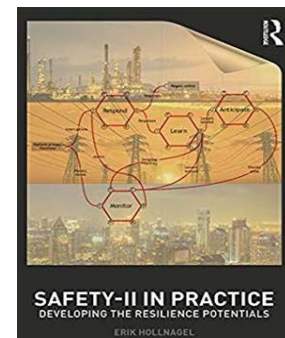
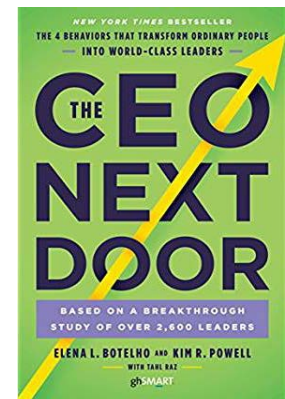
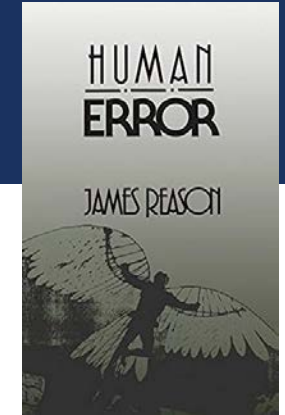
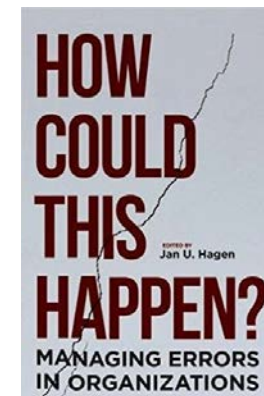
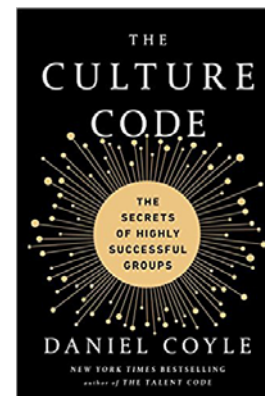
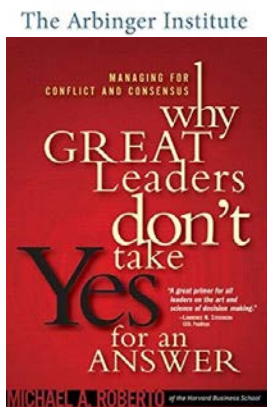
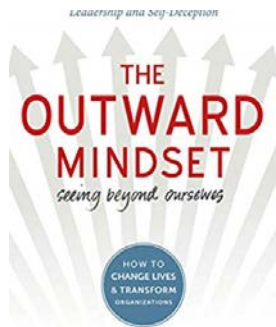
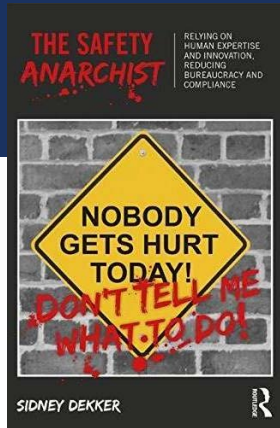
EXPERIENCE GETS INGRAINED—EDUCATION GETS FORGOTTEN

Learning is what's left when all of these slides have faded from memory



“REDUCE THE VOLUME WHILE KEEPING THE ESSENCE”

KITCHEN JACK ADAMS



DIFFERENT WORK, SAME CHALLENGES: IDENTIFY, MANAGE AND MITIGATE RISK



SOME PRINCIPLES USED TO PROMOTE RISK COMPETENCY

- Curiosity and interest should drive us to examine our practices—not consequences
- Event evaluation (‘investigation’) and the search for ‘why’ needs to be driven and managed by those who own the work to avoid creating a ‘Repair Shop Mentality’
- We cannot achieve by avoiding--to achieve something, you have to do something

A TALE OF TWO CULTURES

Protective Safety
Tombstone Mindset

Risk Aversion

“Variation is Your Enemy”



Productive Safety
Milestone Mindset

Risk Competency (Drive Safely)

“Variation is Your Reality”



WHAT IS RISK COMPETENCY?

- Application of knowledge and skills relating to:
 - Achieving desired end state or expected outcome through the use of a defined, proven process (ISM, RADAR, SAFER, IITG, 5S, etc.)

IT ISN'T MAGIC....IT'S A PROCESS



WHAT IS RISK COMPETENCY?

- Application of knowledge and skills relating to:
 - Achieving desired end state or expected outcomes through the use of a defined, proven process—Like ‘drive safely’-(ISM, RADAR, SAFER, IITG, 5S, etc.)
 - “Reading a Situation” well rather than relying on random acts of guessing

READING THE SITUATION....

Complete the table by having someone answer the question affirmatively and correctly, place their initials in the box. Once the person initials box, they cannot place their name in any other box on your paper—until you have met someone else—Winner gets a name for every box listed on the sheet before anyone else does.

Has a family member that also works at Hanford LJE	Traveled to at least three continents (Antarctica, Asia, Oceania/Australia, Africa, Americas)	Cross country or downhill skied on at least three different Mountains	Has painted the exterior of their current house	Bi-lingual: Fluent in two languages
Can name one song by <u>Beyonce</u> AND the Beatles	Has SCUBA <u>dived</u> in a tropical environment	Can name sports team whose name starts with "D" (not the location—Denver, Detroit, Dallas, etc.)	Is a Collector of (write in) With at least 20 in their collection	Serves in Armed Services, any branch, any country
Has had breakfast, lunch and dinner in three different cities, all in the same day	Has seen every Star Wars movie (including Rogue One)	Bungee Jumped, Sky Dived or Base Jumped at least once	Stepped foot in the Pacific and <u>Atlantic</u> ocean in their life	Knows how to tie three different knots 1. 2. 3.
Plays a musical instrument (not a CD player, iPod or a Boom Box)	Would rather play board games like Scrabble, Pictionary or Cranium than videos games	Would rather ride a bike than drive a car (any type of bike—motorized, unmotorized)	Worked at a Fast Food restaurant at some time in their life	Born and raised in the Tri Cities (even if they have left and returned)

30 seconds to study the statements and participants

When queued:

- Ask someone you believe can correctly and/or affirmatively answer the statement—
 - If 'yes', they initial the block and place answer in the square
 - If 'no', move on to someone else
- You cannot ask the same person two different questions consecutively—you must ask someone else—does not have to be the same question
- Desired outcome: a different initial in every block completes the exercise
- Questions?

WHAT IS RISK COMPETENCY?

- Application of knowledge and skills relating to:
 - Achieving desired end state or expected outcome through the use of a defined, proven process (ISM, RADAR, SAFER, IITG, 5S, etc.)
 - “Reading a Situation” well rather than relying on random acts of guessing
 - Agility in responding to changing or unexpected conditions while appropriately eliminating or reducing the consequences *before* they are experienced
 - Recognizing when an incident has occurred at the lowest level of ‘pain’ possible (weak signals, close calls, near misses) and communicating the lessons learned to those who can best benefit from them

TWO KINDS OF CULTURE

Protective Safety Tombstone Mindset

- Risk Averse
- Fix the *Now*
- Legal Requirements (Prescribed)
- Zero Error Focus
- Results-Only Focus



Productive Safety Milestone Mindset

- Risk Competent (Drive Safely)
- Fix the *Why*
- Legitimate controls and defenses (Coinvested)
- Learning Focus (failures and successes)
- Process-Focused

TURNING POINT

“Leaders and safety teams change their world when they stop thinking about what they want *from* the employees and focus instead of what they want for the employees”



BEFORE ACTION AND AFTER ACTION REVIEWS: (PRETASK PLANS AND POST JOBS)



- 2016: Began audio and video recording Pre Task Plans and Before Action Reviews to ensure the Start Work Criteria was adequately addressed
- After action reviews on non-routine, high hazard work includes debrief using recordings as a learning tool
- Next PTP/Tailboard includes lessons learned or revisions based upon reviews
- Recordings can be kept or erased based upon the Crew's discretion

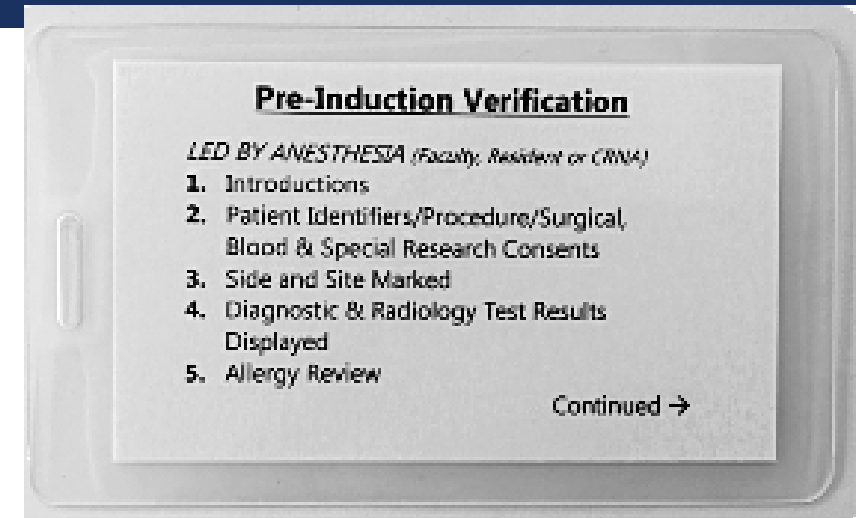
START WORK OR STOPWORK CRITERIA?

(DANIEL PINK, WHEN, 2018)

440,000 fatal medical errors in US (2015-2016)

93,000: Anesthesiologists

Focus on Start-Work Indicators

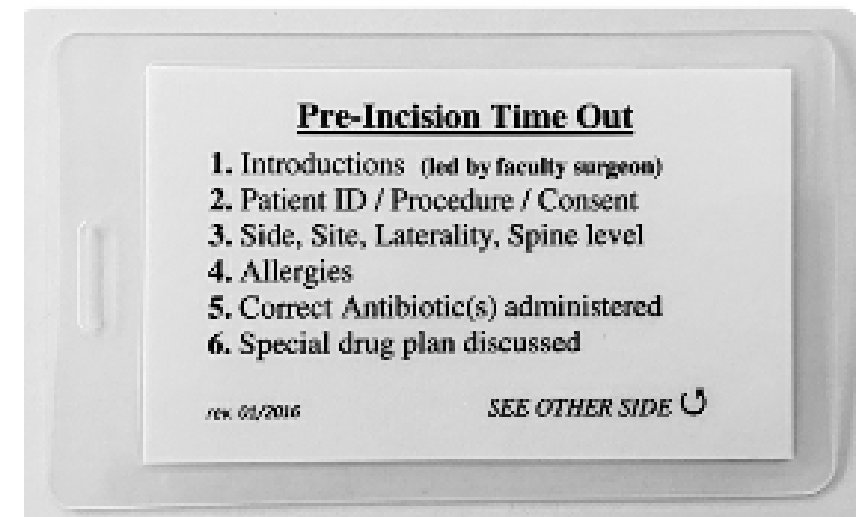


Pre-Induction Verification

LED BY ANESTHESIA (Faculty, Resident or CRNA)

1. Introductions
2. Patient Identifiers/Procedure/Surgical, Blood & Special Research Consents
3. Side and Site Marked
4. Diagnostic & Radiology Test Results Displayed
5. Allergy Review

Continued →



Pre-Incision Time Out

1. Introductions (led by faculty surgeon)
2. Patient ID / Procedure / Consent
3. Side, Site, Laterality, Spine level
4. Allergies
5. Correct Antibiotic(s) administered
6. Special drug plan discussed

rev. 01/2016 SEE OTHER SIDE ↺

TOOLS TO INCREASE SITUATIONAL THINKING

- SPEAK CLEAR PRE AND POST TASK DIALOGUES
- Summarize Critical Steps?
- Past Performance: What happened last time?
- Error Likely Situations: Tripwires and Triggers
- Anticipate most likely consequence of error
- Know our defenses BEFORE we start
- Changes: What needs changing in the instructions
- Lessons Learned: What went right? Wrong?
- Errors left uncorrected? Did we leave a problem?
- Adequate Resources: Need anything different next job?
- Results not expected? What happened unexpectedly?

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?

☐ **Past 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?

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

7. STOP Criteria: On this task, our risk is to STOP & Get Help When PSC, SafeWork, etc. when we face any of these challenges.

STOP 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:

8. Post-Job Review: CLEAR

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

☐ **Lessons Learned:** What went right? What went wrong? What do we need to share?

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

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

☐ **Results 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:

MEANINGFUL METRICS MOVING THE NEEDLE

- Quantitative (Lagging) Metrics are not discussed nor posted beyond where they are legally required
- Qualitative examples of leading indicators including worksite improvements, learning from failure (After Action Reviews) and observations and conversation reports are routinely discussed at executive, staff and crew meetings.
- Identifying, Managing and Resolving Issues
 - Goal: *Avoid the Repair Shop Mentality*
 - Who reports the issue?
 - What are the types of issues?
 - Who resolves or fixes the issue?
 - How long does it take?
 - Was the fix effective?

