Preventing Fatal & Life Changing Injury Events

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Is about changing the way we think about Risk, and how we manage it.
N3L3

- Fatal & Life Changing Injuries (F&LC) impact lives forever
- N3L3 is intended to pro-actively focus on the precursors which cause F&LC events
- The Past Does Not Always Predict The Future

Question?

What is the most critical time period in the evolution of your Safety Program?

Answer: The Next 3 Seconds!
The Next 3 Seconds

Protects Your Life,
Your Loved Ones and
Your Livelihood ®

The Numbers
Non-Fatal Injury Rates

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Workplace fatalities per 100,000 workers

Source: National Safety Council
Why Focus on F&LC Events?

- Employees deserve to go home the same way they came in to work
- Past results are not always predictive of future F&LC events
- The rates of non-fatal and less severe injuries have fallen over the past 40 years – based on the traditional compliance approach.
- Yet we are still killing on average 5,000 workers/year
- The compliance approach is not having an impact!!
Traditional Safety Thinking

• Traditional methods of managing safety can only get us so far.
• We must look for new ways to improve individual and organizational safety.
• We must look deeper

Does Frequency Lead To Severity?

Heinrich’s Accident Pyramid – *Industrial Accident Prevention, 1931*

The 101st time the task is performed, the employee gets bit.

Not always predictive when it comes to F&LC events. The past does not always predict the future.
What is your Perception of Risk?

- Understand and actively manage risks
- See the relationship between processes and risk
- Investigations place blame
- Accidents are inevitable; the “Cost of doing business”
- Nothing really bad has ever happened – so why worry?

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Perception of Risk

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Presidential Pardon!

- Risk to the turkey looks different the day after Thanksgiving.
  This can happen to organizations as well

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It’s all about how we manage RISK...

1. Change our perception of Risk and where it occurs.

2. Recognize that no organization is absent of risk just because they have a “good” safety record.

3. Take an active role in implementing strategies that will change the outcomes.

Conscious vs. Intuitive Thought
Intuitive vs. Conscious Thinking

- **Intuitive Thinking** — decisions are arrived at without conscious thought. More of a reactionary response based upon input from prior experiences

- **Conscious Thinking** — critical or analytical decision making where facts or data are applied and weighed. Consequences or outcomes are considered in the process

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Baseball Bat & Baseball

Total price is $1.10

The bat cost $1.00 more than the baseball. How much does the baseball cost?
Baseball Bat & Baseball

**Intuitive Thinking Method:**
The Bat costs $1.00 and the Ball costs 10 cents

**Conscious Thinking Method:**
The Bat could cost $1.05 and the Ball 5 cents

What’s Wrong With This Picture?

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Look A Little Closer

I Can Fix This Problem!
Thinking About Potential Consequences?

Focus on Management Systems
Why do we make certain decisions?

- Easiest
- Fastest
- Has always worked in the past – so why not this time?
- Incentives
- Organizational Drivers?

Organizational Drivers of Unwanted Behavior

- Good or Bad? - Behaviors occur within the context of the organization that reinforces it
- Piece rate pay system
- Unachievable output demands
- Supervisor or Peer Pressure
- Lack of proper training or tools
- “Doesn’t matter what I do, it will be blamed on me”
Removing The Barriers

- Is Everything blamed on the employee?
- Management Systems vs. Employee Failures
- We need to remove the barriers to good decision making in order to reduce/eliminate opportunities for failure (not about “fixing” our employees)
- Success doesn’t happen by chance, Success happens through dedicated effort and persistence. Success comes from having a plan, executing the plan, and adjusting the plan as conditions warrant
- Safety is just a **Priority** and not a **Value** within the organization

Deflated Systems?

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N3L3 Concepts

- Safety is not the absence of injuries
- Accidents are the result of an organization's inability to respond, monitor, understand, and anticipate failure.
- Sustainable safety improvement is made by fixing our systems and processes, not our people.

Safety as the Absence of Injuries

- Safety has traditionally been defined as a condition where the number of things that go wrong is acceptably small.
Does this make sense?

- We measure how “safe” an organization is by the number of people we hurt!!!
- If you achieve zero, how do you know how well your organization is performing?

Trouble below the surface

- The absence of “safety issues” gives us no reason to assume something is amiss.
- Serious issues can persist below the surface
We need more information!

- We need more information about how our systems are working in order to make better decisions regarding how safety and risk is managed.
- We need to assess and analyze the things we say and do (aka our processes and systems), that get us the results we achieve.

“It's all about how we manage RISK...”

It is an ongoing process that takes place at all levels within an organization (Enterprise Wide):
Managing Risk

- **Identify** weaknesses in our organization that place resources (human, financial, assets, reputation, continuity) at risk
- **Analyze** the risks to determine the potential impact
- **Evaluate** existing and potential controls
- **Treat** the residual risk using Loss Prevention and Loss Control techniques
- **Monitor** the process and outcomes – repeat if necessary

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Common F&LC Precursors

Often “high-energy” potentials...
- Motor Vehicle operations (#1 cause Occ. Fatalities)
- Falls (#2 leading cause of Occ. Fatalities)
- Manual Material Handling – Repetitive and Acute
- High Voltage contact or work
- Mobile equipment (forklifts, Bobcats, tractors, mowers)
- Non-routine work during emergency or planned shut downs
- Construction work by “other” employees
- Confined Space Entry
- Trenching
- Crane / Hoist activities
- Chemical Applications

Other F&LC Risk Factors

- Rushing to complete the task
  - In order to move on to something more fun
  - To get done with something that’s less enjoyable
- Fatigue
  - Late in the day / week
  - Excessive overtime
- Aging Workforce
- Younger or less experienced
- Distractions or Frustrations
How do we do it...What’s Next?

• Safety Committees
• Pre-Shift Meetings
• Pre-Work Planning
• Near Miss Reporting
• Accident Reviews/Investigations
• Learning Teams
• Constant & Routine communication and feedback
• Recognition
• Risk Assessments
• Leadership
Pre-Work Planning

- Pre-job, pre-task, pre-shift
- Pre-project meetings
- Formal Risk Assessment processes
  - e.g. Job Hazard Analysis (JHA)
- What to include?:
  - What’s the scope of the job, task, etc?
  - Who’s involved?
  - Safety Requirements
  - What could possibly go wrong?

From The Employee’s Point of View

Take Time To Think About The Consequences

- Take a few seconds to think about what you are going to do.
- What could go wrong?
- What do I need to do to protect myself?
From Management’s Point of View

• Have we identified every potential high energy event?
• Have we analyzed those potential events to determine our exposure for a failure?
• Have we evaluated and treated those potential events to minimize our probability of failure?
• Have we implemented systems to continually monitor and re-identify any pitfalls within the system?

Risk Assessments
Purpose of Risk Assessment

The process attempts to answer:

- Where are our areas of potential risk?
- What are our current controls in place?
- What are the consequences?
- What is the probability of their future occurrence?
- Are there any factors that mitigate the consequence of the risk, or that reduce the probability of the risk?
- Is the level of risk “Acceptable” or “Unacceptable”?
- How do we prioritize our efforts?

Risk Assessments

- To understand our risks, we must first identify what they are
- Techniques vary from very simple to extremely complex
- ANSI Z690 / ISO 31010 standard identifies 31 different methods available – depending upon the scope of the problem
- Most often used is the standard Job Safety Analysis (JSA) or Job Hazard Analysis (JHA)
- Apply quantitative methods to measure how “bad is bad” and prioritize our efforts to control them
"Those Who Do Not Learn From History Are Doomed To Repeat It"

- George Santayana (Spanish Philosopher)
Why Root Cause?

• Why? To prevent a recurrence!
• Not about the blame game
• Benefits
  – Identifies preventive & corrective actions
  – Helps with accountability for managing change
  – Changes our future safety communication
• Close the Loop – connect the event to other aspects of the operation to modify them as well
• Can we reduce the risk incrementally (20% risk reduction, 50%)?
• No need to have an accident/incident to do a Root Cause! The principles can be applied to anything...

Root Cause Investigations

• Critical part of preventing recurrence of any unwanted or unplanned event
• Complexity of the investigation will vary with the complexity of the event
• Most effective when done by Teams
• Drill down using the 5 Why’s or 5 How’s
• Looking for the breakdowns or shortfalls in the management systems that control our operations
• Creates opportunity for further positive interaction with employees regarding safe work practices and promote the premise that Everyone is a Risk Manager
Crew Resource Management

The concept was developed in a NASA workshop in 1979 to help improve air travel safety.

Many aircraft incidents were the result of:
- Failures of interpersonal communication,
- Leadership,
- And decision making in the cockpit

Purpose was to optimize available resources (equipment, procedures and people) to promote safe operations and enhance efficiency.
Lessons Learned

Key Points from many of the airline crash investigations:
• Someone likely recognized a problem
• No one spoke up – not empowered
• No one listened – authoritarian culture

How does CRM fit in?

• CRM is a critical component to a mature Safety Culture
• Goals:
  – Promote teamwork to achieve common goals
  – Empower All members to speak up if they feel unsafe “See Something, Say Something!!”
Stop Work Policy

- Stop Work Policy
  - Written
  - Prevents bullying
  - Appropriate management response every time

Flipping the Switch in our thinking!

- To begin the process of improving safety we must begin at not what goes wrong, but what goes right!
- We must begin analyzing and critiquing normal everyday work!
- We must seek out and recognize the weak signals (aka precursors) evident in how normal everyday work is performed.
A Positive Safety Climate occurs when:

- When people are empowered to speak up
- When we are conditioned to listen & invoke change
- When we remove opportunities for failure
- When we talk about risk and reward activities that lead to further risk reduction (versus “taking shortcuts to get done early”)
- When safety is a **core value** and not just a priority

How would you rate your Safety Climate?

<table>
<thead>
<tr>
<th>Category</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Commitment</td>
<td>Management actively leads process</td>
<td>Safety is an agenda item for management</td>
<td>Policy &amp; procedure unique to company</td>
<td>Off the shelf programs</td>
<td>No written programs or materials</td>
</tr>
<tr>
<td>Safety Mgmt. System</td>
<td>Full program with staff</td>
<td>Assigned person &gt;50% of their job</td>
<td>Assigned person &lt;25% of their job</td>
<td>Rely on outside consultant only</td>
<td>Nothing in place</td>
</tr>
<tr>
<td>Safety Innovation</td>
<td>Zero accident focus</td>
<td>Working to improve safety process</td>
<td>Average Safety Committee activity</td>
<td>Focus on compliance issues only</td>
<td>View safety as an added operating cost</td>
</tr>
<tr>
<td>Perception of Risk</td>
<td>Understand and manage risks</td>
<td>See relationship of risk to process</td>
<td>Investigations place blame on employees</td>
<td>See accidents as inevitable</td>
<td>See no risks that would impact the</td>
</tr>
<tr>
<td>Behavior Based Safety</td>
<td>Near miss reporting program – not cause</td>
<td>Monitoring critical items</td>
<td>Traditional training</td>
<td>Compliance / Enforcement</td>
<td>Nothing</td>
</tr>
<tr>
<td>Employee Engagement</td>
<td>High trust / jointly set goals</td>
<td>Caring mgmt. / engaged employees</td>
<td>Warm &amp; fuzzy HR focus</td>
<td>Low turnover, but Uninized</td>
<td>High turnover, and/or low skill workforce</td>
</tr>
<tr>
<td>Safety Training Methods</td>
<td>Associate learning based</td>
<td>Competency based</td>
<td>Show &amp; Tell</td>
<td>Show videos</td>
<td>None</td>
</tr>
<tr>
<td>Accountability</td>
<td>Process improvement in place</td>
<td>Use leading indicators to measure safety</td>
<td>Use outcomes to measure safety perf.</td>
<td>Punish safety violators</td>
<td>No enforcement of safety rules</td>
</tr>
<tr>
<td>Drug Testing</td>
<td>Full program with EAP</td>
<td>Pre-hire, post accident, for cause</td>
<td>Pre-hire only</td>
<td>Inconsistent post-accident drug testing - firing “+” workers</td>
<td>No testing at all</td>
</tr>
<tr>
<td>Health &amp; Wellness</td>
<td>Incentivized programs</td>
<td>Screenings</td>
<td>Some activity</td>
<td>Nothing yet, but may consider in future</td>
<td>Scoff at the concept</td>
</tr>
<tr>
<td>Return to Work</td>
<td>Will always do – 100% policy</td>
<td>Generally will do – have in the past</td>
<td>Will try if restrictions easy to accommodate</td>
<td>May or may not – case by case</td>
<td>Will not – don’t see the benefit</td>
</tr>
</tbody>
</table>
“Workplaces and organizations are easier to manage than the minds of individual workers. You cannot change the human condition, but you can change the conditions under which people work.”

Dr. James Reason

How well are you prepared for the next 3 seconds?
Questions on N3L3?

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