

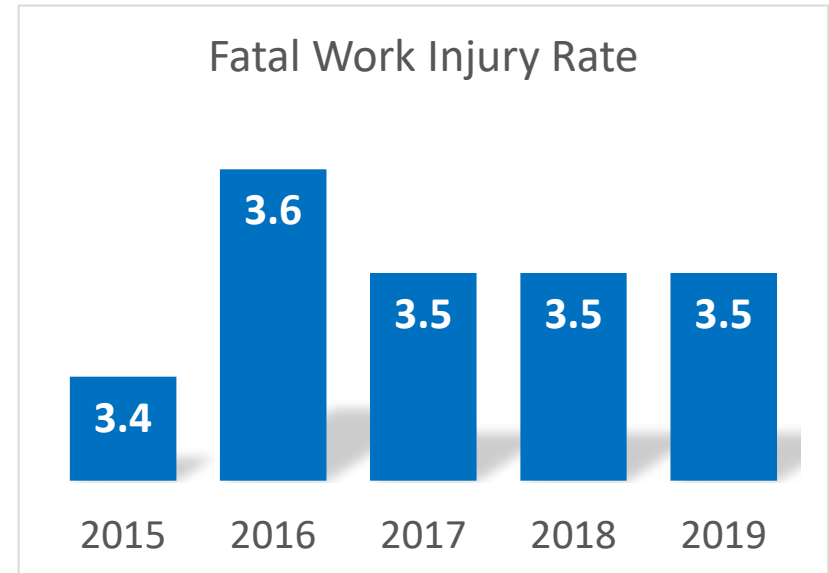
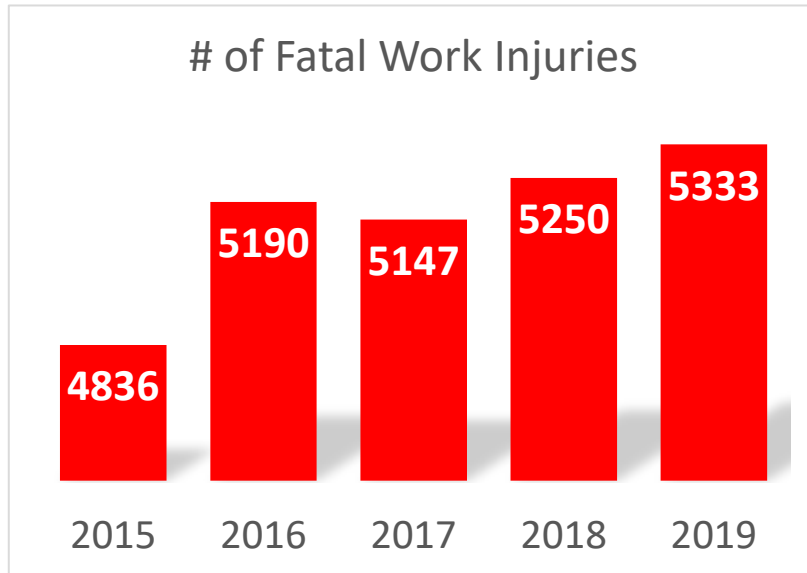
A Proven, Systems Approach to Preventing Serious Injuries & Fatalities & Organizational Losses

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Agenda Topics

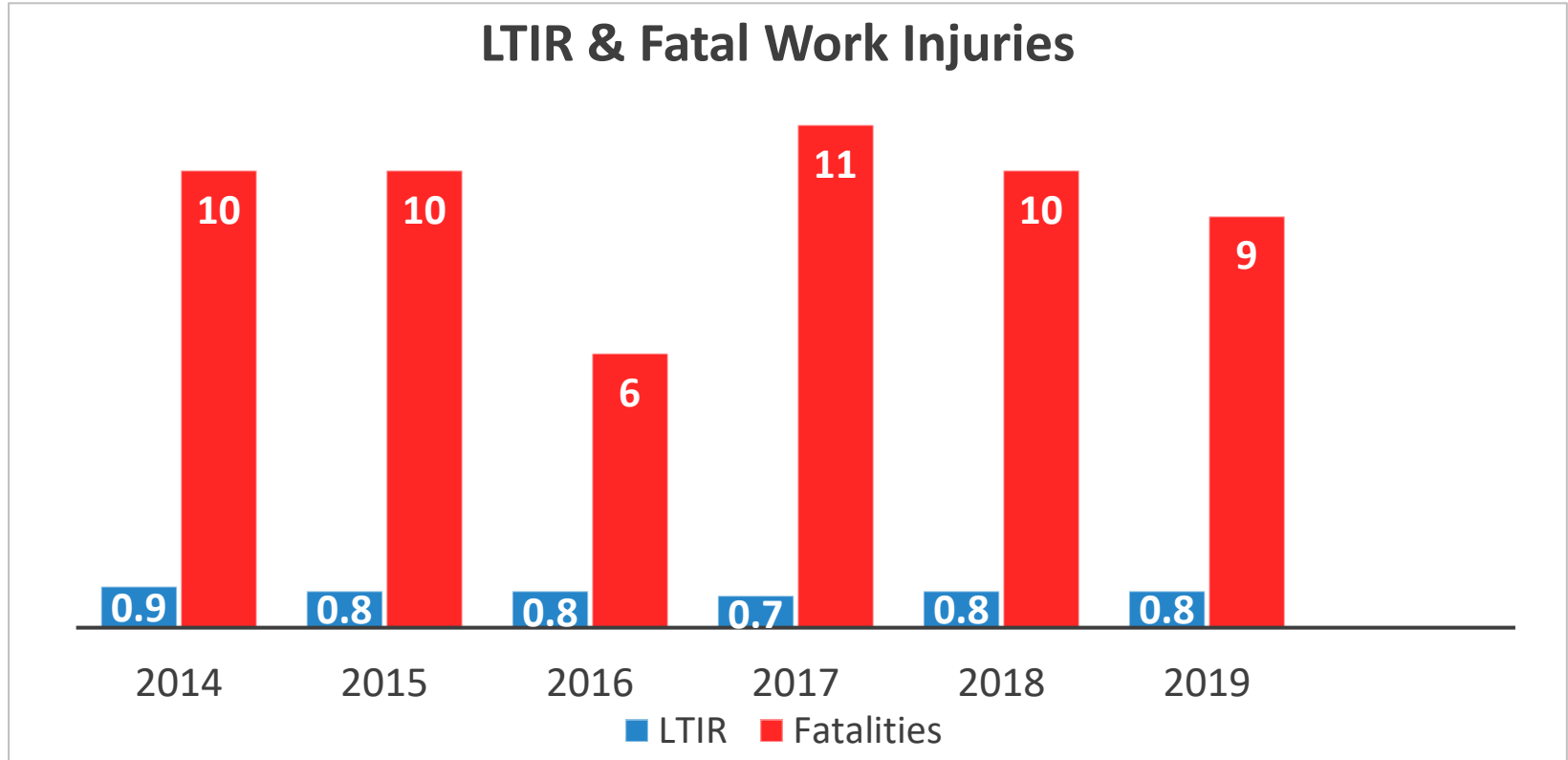
- Current Industry SIF (Serious Injury & Fatality) challenges
- Why organizations struggle with prevention
- Factors & causes of SIFs & other significant losses
- Proven & integrated systems-approach for prevention and management
- Results across industries

U.S. - Fatal Work Injuries & Fatal Work Injury Rate



In the U.S., a fatality occurs every 99 minutes from a work-related injury

U.S. - Paper Manufacturing Industry Challenges



Why are companies struggle to prevent SIFs & other significant losses

- Lack of systematic approach
- Focus on addressing symptoms, not real root causes
- Manage safety differently than normal business; not integrated
- Depend on safety staff to "make it happen"
- Reactive vs proactive (investigation focus vs prevention)

What Causes SIFs & Other Significant Losses

- Gap exists between how things should be done and how things are done
- SIFs & other losses occur due to Organizational & Human Performance/Behavioral issues.
- Organizational Gaps
 - ✓ Documentation (procedures, instructions, etc.)
 - ✓ Tools, equipment, safeguards, workplace design, & resources
 - ✓ Expectations from supervision on task performance
 - ✓ Task knowledge, know-how, acumen (challenge with younger workforce)

Human Performance & Behavioral-Based Causes

- Why good, smart, motivated people at all levels and functions can experience losses
- Common psychological & behavioral-based factors and root causes
- Represents a significant percentage (80+ %) of root causes of incidents
 - ✓ History of performing task same way before with no or minimal consequences
 - ✓ Believe they have a faster, easier, or "better" way
 - ✓ Toleration
 - ✓ Distractions (internal & external)

Focus Solely on Human Performance/Behaviors



Human
Performance
/ Behaviors

- Focusing only on behaviors & ignoring other organizational factors is not enough
- People interact with tools, equipment, safeguards, procedures, etc.
- Leads to a culture of blame
- Doesn't promote true buy-in & learning

Focus Solely on Organizational Factors

Organizational
Factors
(equipment,
tools, workplace
design, resources,
training, etc.)

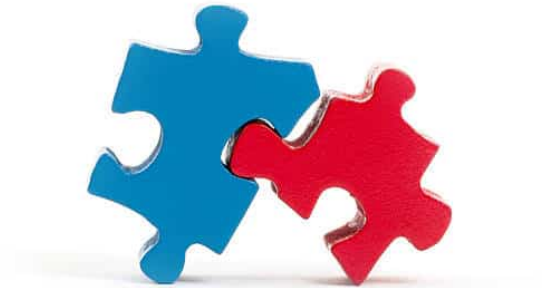
- Can't engineer out ALL behaviors
- People interact with tools, equipment, safeguards, process, procedures, etc.
- Doesn't promote individual accountability
- Ignores significant percentage of factors & root causes of incidents

Integrated Approach

Interrelated



Lack of integration



- Inefficient (financial impact)
- Creates confusion, frustration
- Full benefit not realized
- Sustainability challenges

Systems Approach

- Because these factors are interrelated, a comprehensive, integrated process.
- Multiple lines of defense to proactively address these issues.
- Proactive, user-friendly tools that are developed & used by employees
 - ✓ Risk assessment tools (Last Minute Risk Assessment, Job Task Analysis)
 - ✓ Observation process (targeted, positive & constructive feedback, etc.)
 - ✓ Near-loss & incident learnings/investigations
 - ✓ Effective RCA that focuses on behavioral issues & organizational gaps
- Management oversight and coaching to improve risk management skills.

Integrate Into Organizational Systems & Processes

- Because it positively impacts SIF prevention & org. performance, should be integrated into organizational process.
- It's an investment in safety, reliability, quality, environmental performance, etc.
- Should not be a “bolt-on” activity, but most safety & loss prevention activities are.
- We make complexity more manageable by breaking things down into individual parts & manage each part individually, not collectively.
- Inadvertently contributes to thinking in silos, not connections and relationships.



Integrate Into Organizational Processes

- Leaders must think in connections & linkages, not silos.
- Define organizational goals and objectives (e.g., no SIFs, no significant environmental or quality incidents, etc.)
 - ✓ Identify high-risk tasks, error-likely situations, tasks with loss history that have biggest impact on goals.
 - ✓ Integrate safety & loss prevention system into these tasks proactively to achieve goals.
 - ✓ No one know more about the tasks than those who do the work.

Integrate Into Organizational Systems & Processes

Safety & Business Goals	Tasks/Activities with Most Impact
No Serious Injuries & Fatalities (SIFs)	LOTO, CSE, WAH, Chemical Management, Working with & around Mobile & Rotating Equipment, Hot Work
No Chemical Spills	Valve Operations, Product Transfer, etc.
Decrease unit downtime due to poor equipment reliability and utilization	Preventative Maintenance, Operator use, etc.
Detect 100% out of operating envelope items to prevent quality & reliability issues	Unit & Production Monitoring

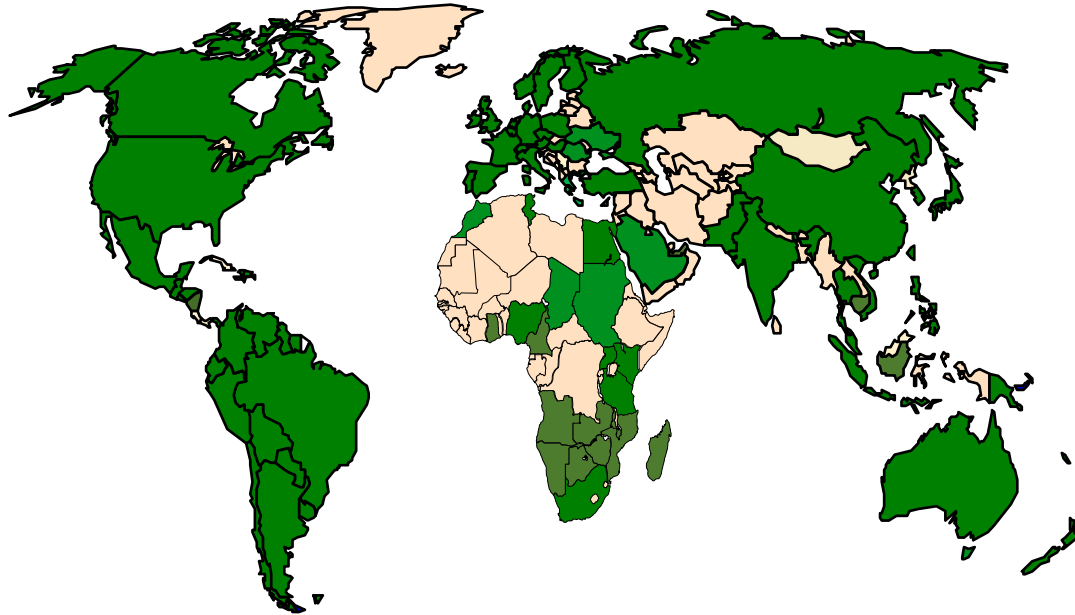
Design into the Organization

- When safety and loss prevention are properly integrated into organizational processes, it becomes HOW the organization functions.
- It becomes the standard for how work is performed.
- Leaders must alter their leadership behaviors and demonstrate the change they wish to see.
- What leaders pay attention to, control, & measure communicates what they care about.
- What practical skills are given to your supervisors and managers to improve safety performance?

Leadership

- Most supervisors are in roles because they were effective operators, technicians, etc.
- Develop criteria of leadership development activities. What's required at all levels.
- Visible leadership activities needed to engage, learn, and coach organization.
- Small investment of time to transform safety & organizational performance.
- Monitor process like other parts of the business (production, capital projects, OPEX, etc.).
- Facilitates & supports how safety & loss prevention are operationalized.

Implemented these concepts in more than 100+ countries and 10+ industries



Results



56+ Million Hours with No Lost-Time Incidents
for 13,000+ Person Manufacturing Company



\$800 million savings in one year for a multi-
national company related to reliability, product
quality, efficiencies, etc.



International workforce of 25,000+: TRIR: 0.11;
DAFW: 0.006.

Results



0 fatalities in 10+ years for a number of clients around the world.



54+ million hours with No LTIs for Contractor in International Manufacturer



380+ days without an unplanned stoppage in production for 3,500+ company



\$9+ million reduction in workers' compensation in one year

Results



Flawless Operational Excellence in consecutive years (0 recordable & environmental incidents, max. reliability).



NA workforce of 13,000+: TRIR: 0.09; DAFW: 0.02.



60+% reduction in Environmental Incidents for International Manufacturer.

Q & A

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