

Safety-II, A New Approach to Investigation

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Knowledge, without *Effective Action*, is Just Art....

Problem Statement

- Industry has managed rates rather than safety.
- As rates decrease so do opportunities for learning.
- Most investigation processes are weak; they seldom identify organizational weaknesses and systems.
- Investigations are usually only conducted based on the actual outcome, not the maximum foreseeable loss.

Safety-II

- Safety-II brings forth a truth filling a gap in how we assess work tasks. “We never looked there...”
- Breaks the assumption that lack of an incident means that we did something correct.

Incident Causation Models are Weak

- A continual holdback to “something or someone failed” in order for there to have an incident.
- Also, another holdback, someone succeeded if there wasn't an incident.
- Lastly, we don't identify the incident, only the outcome and *all actions are based on outcomes.*

The Safety-II Surprise

- Organizational weaknesses and organizational strengths are everywhere but we don't capture that data.
- Safety-II assessment opened up more than understanding what made something go well.
- Created the need for a new way to observe and assess.

Work, Worker, Workplace – 3W

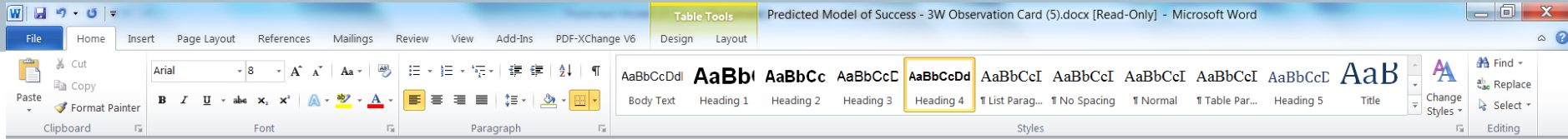
- Needed a new method to identify organizational weaknesses – management systems that were failed, weak, or non-existent.
- Same process used for identifying organizational strengths and adaptations
- Built the background to everything – perceived truths, possible choices, norms and limits of thinking and action.

Work, Worker, Workplace – 3W

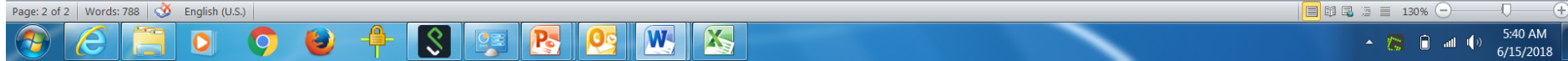
- Working with 3W builds an entirely new way of looking at success and failure.

Work, Worker, Workplace – 3W

- Categories to identify hazards, risks, error-likely situations
- Workplace divided between physical and cultural



WORK		WORKER	WORKPLACE
Physical & Mental Demand		Physical & Mental Condition	Physical Workplace Conditions
No heavy lifting, maneuvering and or positioning issues		No mental stress, not fatigued and relaxed	Good weather
No repetitive actions, monotony		No physical stress or fatigue	Low noise
Schedule: adequately scheduled work		Working with a fit team	Good housekeeping
Task was complex, needed clarification by SME		No distractions and focused	Workplace hazards / risks / error likely situations
Process & Procedure		Attitudes	No adjoining work hazards
Good clear procedure followed		Safe (explain)	Adequate space to complete the task
Knowledge based task, experienced personnel used or consulted		Intolerant of violations]	Adequate machine guarding
Adequate JHA		Not complacent of risks	Confined space managed successfully
Workplace pre inspection completed		Always adheres to regulations and policy	No chemical, dusts, mist, fumes & vapors
Design for Safety		Knowledge & Skills	Adequate lighting available
Hazards, Error-Likely Situations identified		Adequate knowledge and skills for task	Working at height / fall protection good solutions available
Contingency controls identified		Familiar with task	Cranes & lifting; plans available
Strong or effective controls used		Aware of the critical steps	Ex atmospheres / fire risk managed effectively
Tooling		Cognition	Dropped objects: Contingency deployed
Adequate tooling available		Good Situational Awareness	Mobile equipment / separation area marked
Adequate provision for tool storage whilst task in progress		No cognitive error (observation, assessment or planning)	Zero Energy final check completed



Work, Worker, Workplace – 3W

- Able to build simple management system categories under each “W” and classify as strong or weak
- If weak, how effective at overcoming?
- Categories to identify hazards, risks, error-likely situations
- Workplace divided between physical and cultural
- Able to show how combinations created failure and success.

The Safety-II Offer

- People, and organizations are just people, don't change unless there is a breakdown.
- Using Safety-II to create new and better understanding of how the organization functions, it's strengths, and it's weaknesses.
- Also used to create the breakdown in safety personnel

The Need for Data

- Safety-II gives me the necessary background to move the focus from non-valued data generation to valued-data.
- Why systems work, why systems fail, and what combination of systems produces powerful effective adaptation and what produced weak adaptation.
- Refocus on what actually is the incident

The prediction of success and failure

Understanding Safety-II in any organization improves probability of success, true success.

Failures outcomes could be safety, quality, inefficiency, customer dissatisfaction, or unrealized profits.

Why are we waiting for Failure to Learn?

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