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THE FILTHY FIFTEEN

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TO ERR IS HUMAN

**BUT TO BLAME SOMEONE ELSE
FOR IT SHOWS MANAGEMENT POTENTIAL**

THE FILTHY FIFTEEN – BEYOND EMPLOYEE ERRORS

What are Human Factors?

Human Factors are a multidisciplinary scientific field

**Focuses on interactions between humans and systems.*

Draws on knowledge from:

- Psychology
- Engineering
- Physiology
- Design

Aims to optimize:

- Human well-being
- System performance

Key goals:

- Improve safety
- Enhance efficiency
- Increase usability
- Boost user satisfaction

Involves designing:

- Tools
- Technologies
- Environments
- Processes
- Ensures designs align with human capabilities and limitations.

Are these responsible for workers' errors?

ABSOLUTELY!! Human

Factors:

- is like the ultimate team-up of superpowers in human-system interaction! It pulls in the big guns from:
 - psychology, engineering, physiology, and design

Mission Objectives:

- boost safety, efficiency, usability, and satisfaction

Main Quest:

- craft tools, tech, environments, and processes
- make sure everything fits snugly with what humans can and can't do!

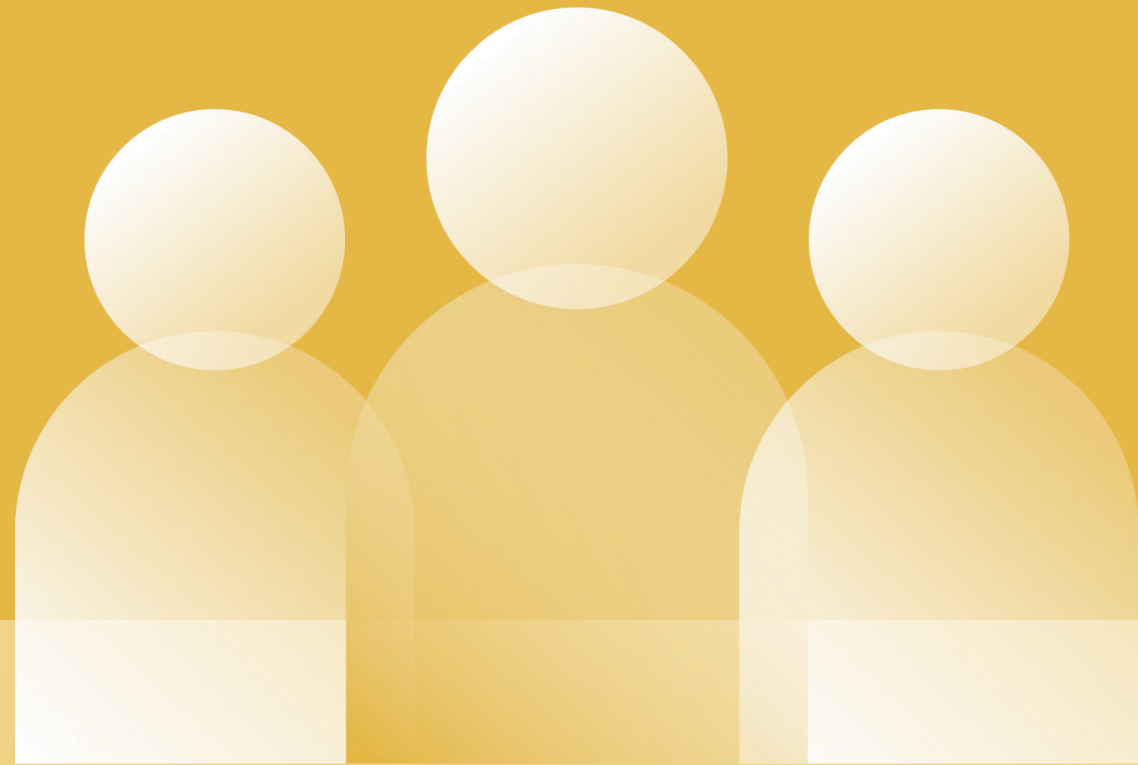
How can we address these?

To address human factors in workplace accidents,

- enhance employee training,
- implement robust procedures,
- leverage technology,
- foster a supportive environment,
- promote open communication.
- manage workload,
- address fatigue and stress,
- regularly assess risks through audits and safety checks (crucial).



DIRTY DOZEN



First Round of Kahoot

What is Kahoot and how to sign in

How does this work

Very similar to the pub games we used to play trivia with, except we use cell phones

Human Factor 1

Lack of Communication

Difficulty conveying information effectively, leading to misunderstandings and errors.

Human Factor 2

Lack of Teamwork

Ineffective collaboration and communication within a team, hindering problem-solving and decision-making.

Human Factor 3

Lack of Assertiveness

Difficulty speaking up or expressing concerns, potentially leading to errors or unsafe situations.

Human Factor 4

Complacency

A state of overconfidence or carelessness, leading to a decline in vigilance and adherence to procedures.

Human Factor 5

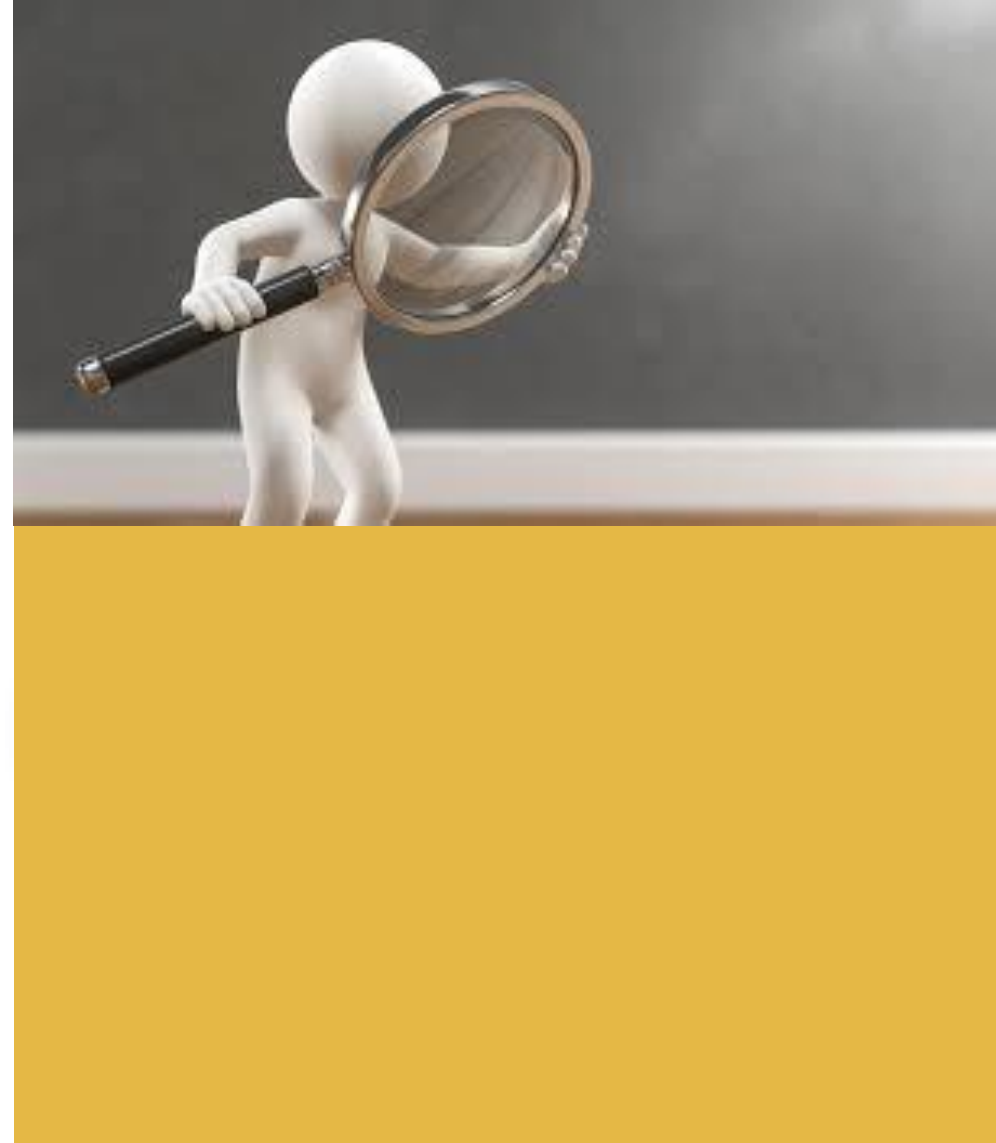
Fatigue

Physical or mental tiredness that impairs performance and judgment.

Human Factor 6

Stress

The mental or emotional strain that can impair judgment and performance.



Human Factor 7

Lack of Knowledge

Insufficient understanding of procedures, equipment, or potential risks.

Human Factor 8

Lack of Resources

Insufficient tools, equipment, or support to complete tasks safely and efficiently.

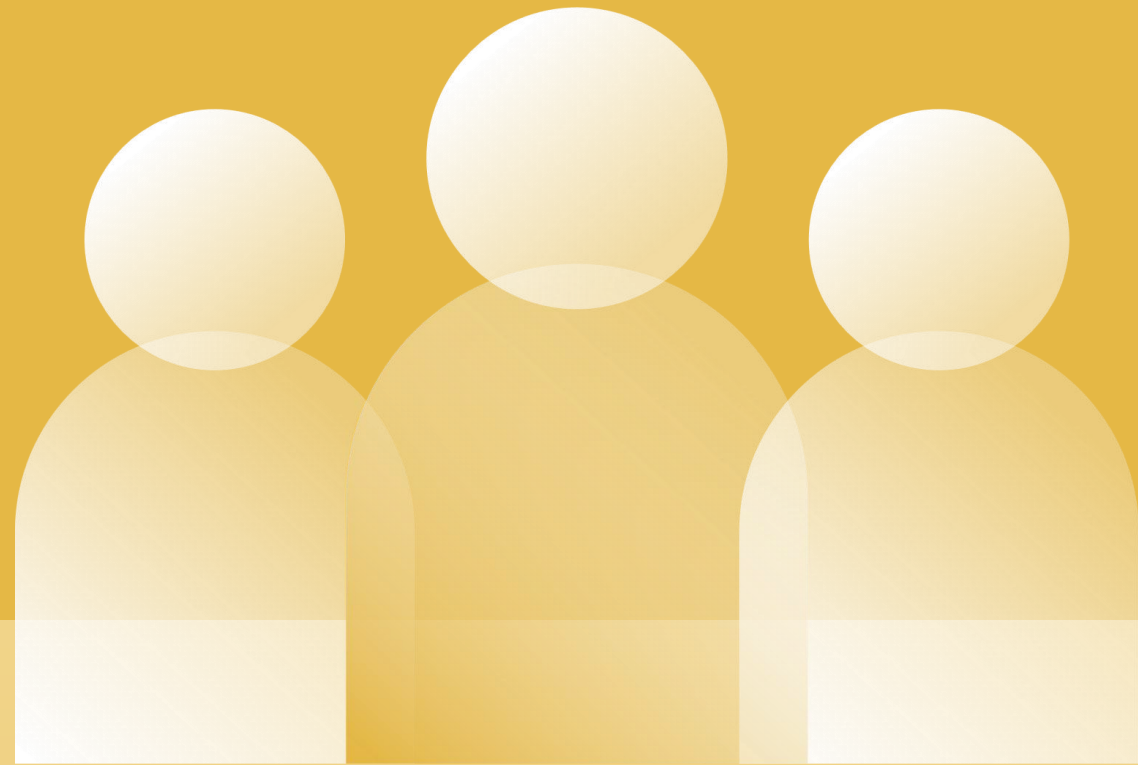
Human Factor 9

Lack of Awareness

Not fully understanding the situation, potential hazards, or the consequences of actions



DIRTY DOZEN



Second Round of Kahoot

What is Kahoot and how to sign in

Winners

How well did you do?

Human Factor 10

Distraction

Being drawn away from the task at hand, causing a lack of focus and potential for mistakes.

Human Factor 11

Pressure

External or internal demands that can lead to rushed or inadequate performance.

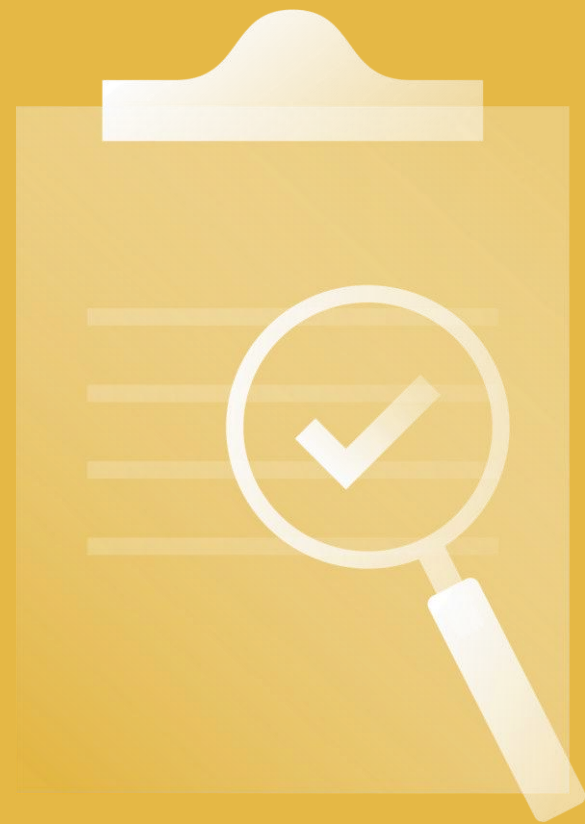
Human Factor 12

Norms

Accepted or expected behaviors within a group, which may deviate from established procedures or safety standards.

WHAT ABOUT THE FILTHY 15?

We are still missing 3!!



3 MORE FOR 15!!



Not Admitting Limitations

Failing to recognize one's own physical, cognitive, or technical limitations, potentially leading to overestimation of capabilities.



Lack of Operational Integrity

Not adhering to established procedures, regulations, or ethical standards.



Lack of Professionalism

Not maintaining the expected standards of skill, judgment, and behavior in the workplace.

TABLE WORK



- As a team you have a scenario in front of you - read it and:
- 1) Determine which Filthy Fifteen could be responsible for the incident
 - 2) Why you think this is the case
 - 3) What could have been done differently

CASE SCENARIOS



MIne Disaster, Westray
Nova Scotia 1992



Humbolt Bus Crash,
Saskatchewan 2018



Delta Plane crash
Toronto 2025



Lac-Mégantic - Train
Crash, Quebec 2013



Metron Dec 24th , 2009
Scaffold Issue



Andrew Bird

Just don't let a human factor fail to be a factor at all!

Behavior is a function of its consequences.



B.F. Skinner

An incident is just the tip of the iceberg, a sign of a much larger problem below the surface.



Don Brown

“
NOTHING IN SAFETY IS GOING TO SHIFT UNTIL WE TACKLE EVERY SINGLE THING THAT LED TO THE INCIDENT— ESPECIALLY THOSE PESKY HUMAN FACTORS!

-Michelle Ruest 2025



Acknowledgments:

Information obtained from:

- Transport Canada
- Federal Aviation Administration
- FAA
- AAR Corp
- Wikipedia
- CTV news
- CBC news
- Power to Fly
- You Tube

