



Going Beyond Human Error in Incident Investigations to Create Real World Solutions for Railway Construction

Charlotte Kaul



17-21
Sept. 2024

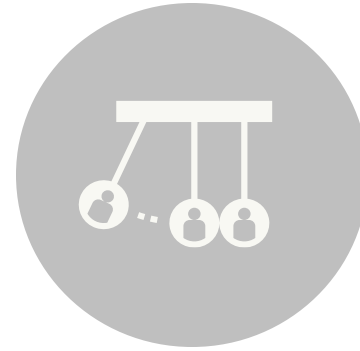


Vienna, Austria
Aula der Wissenschaften

Agenda



UNPACKING
HUMAN ERROR



DEVELOPING P5F
FRAMEWORK



USING P5F TO
UNDERSTAND
INCIDENTS

Article • Cloud & Cybersecurity

Human Error is Biggest Cybersecurity Threat, CTOs Say

By Marcus Law

March 03, 2024 • 4 mins



NEWS | WORLD

India: Train crash kills 13 people in Andhra Pradesh as human error blamed

AFP NEWS

Slovakia Blames Deadly Train, Bus Crash On Human Error



Italy
Mike Lynch yacht sinking must be due to human error, boss of boat builder says



Human error probed after Malaga train crash leaves 13 passengers, including three children, injured



NEWS

Prolific offender died after being released because of human error, inquest told

By Charlie Moloney | 4 September 2024

Performance Shaping Factors

We developed a PSF taxonomy specifically for construction via:

Thorough research of existing PSF taxonomies (including ones from aviation, rail and nuclear industries)

Incorporating the 10 Incident Factors

Analysis of underlying causes of construction/maintenance incidents, with a particular focus on rail-construction

Careful examination of PSFs in the context of construction tasks

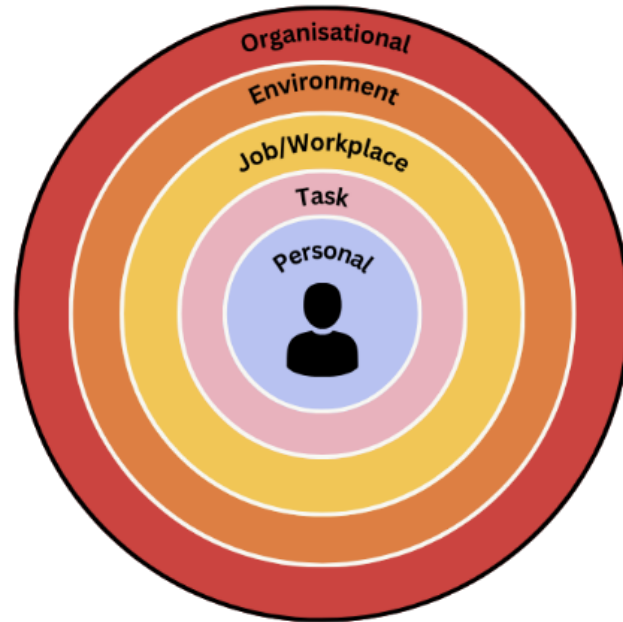


On time
On budget
Excellent
safety record



Incidents
Accidents
Delays

P5F



Organisational	Job / Workplace	Personal	Task	Environment
Resource Allocation	Housekeeping	Cognitive	Workload	Meteorological
Written Information	Equipment	Physical	Task Characteristics	Geographical
Competence Management	Materials	Medical	Automation	
Safety Management	Physical Workplace Design	Knowledge		
Team	Physical & Chemical Hazards			

Application of P5F

INCIDENT INVESTIGATION

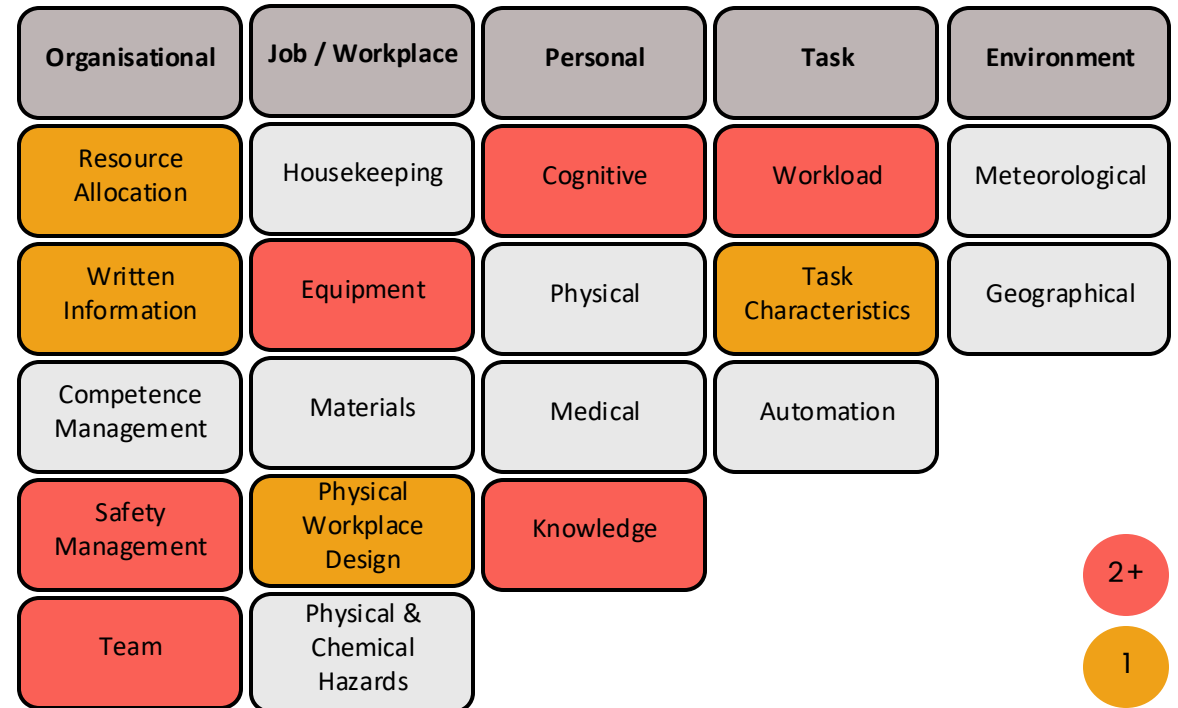
Conduct deep dive incident investigation to develop trends and improvement action plans. Deliver training to equip clients with the skills to conduct incident investigations with our framework independently.

PROACTIVE SAFETY MATURITY ASSESSMENT

Work with clients to determine safety maturity across our bespoke framework, identify areas for improvement, and develop a clear and realistic improvement plan for safety.

Application of P5F

1. Deep-dive HF analysis of key incidents
2. HF training course for investigators
3. Integration of P5F into incident investigation
4. HF awareness sessions across the organisation
5. Developing a dashboard





**Thank you for
your attention!**

Charlotte Kaul ckaul@systra.com