

# Have you invited Human Factors to the table?

**D**o your safety processes integrate Human Factors when screening for Safety Critical Tasks?

There is no established definition of what a Safety Critical Task (SCT) is within COMAH regulations. The Energy Institute provides guidance on Safety Critical Task Analysis (SCTA)<sup>1</sup>, referring to SCTs in terms of Major Accident Hazard (MAH) consequences, as a task in which a human failure could:

- Lead to a MAH consequence;
- Result in the escalation of a MAH consequence;
- Reduce effectiveness of barriers against a MAH;
- Impact the potential to recover from a MAH consequence (i.e., emergency response arrangements).

By understanding the complexity, frequency, and consequences of tasks, this ensures that sufficient time and resource is spent analysing those tasks where the operator plays an important role in maintaining safety.

Performing Human Factors (HF) task analysis on SCTs provides opportunity to identify, prioritise and eliminate or reduce the risk of a MAH occurring<sup>2</sup>. To ensure a thorough and robust HF assessment is achieved, the following activities should be undertaken:

- The SCTA process needs to identify which tasks/operations are safety critical and identify which tasks therefore require assessment.
- Assess human actions or inactions that might make a MAH more likely or may result in a more severe consequence.
- Identify and implement adequate risk control measures for these SCTs, to reduce the likelihood or consequences of human failure.

HF assessments aim to ensure that systems match the physical and psychological capabilities and limitations of their users and promote error-free performance.

A holistic approach to risk management must include the integration of HF assessments within the hazard and safety assessments and engineering substantiation processes. HF assessments are an important component of the overall safety justification, producing optimised performance and a reduction in human error.

<sup>1</sup> Energy Institute Guidance on Human Factors Safety Critical Task Analysis, 2nd edition, 2020

<sup>2</sup> Smith, E., Koop A., King S., Guidance on Human Factors Critical Task Analysis xlii paper 54, 2011, accessed at <https://www.icheme.org/media/9267/xlii-paper-54.pdf>



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