PSYCHOLOGY APPLIED LIMITED & ENERGY INSTITUTE

a free, practical guide developed by experienced practitioners to help organisations embed human factors into everyday task-based risk assessment

the challenge

Across industry, very few organisations have a clear and practical way to embed human factors into task-based risk assessments such as JSAs and start-work checks, or into the risk-assessment components that sit within processes like permit to work. While there is well-established guidance for safety-critical task analysis (SCTA) in major accident hazard scenarios, this applies to only a small proportion of overall work. For daily tasks where risk still exists and conditions can shift quickly, teams often lack simple methods for recognising human-performance issues, understanding what to look for, or knowing how much detail is appropriate.

Incident and accident reports illustrate this capability gap. They frequently note that human factors "were not identified during the risk assessment". This is largely because existing tools offer very little practical support for identifying error traps - factors that increase the likelihood of errors and, in turn, raise the level of risk during normal work.

The guidance developed by Psychology Applied and the Energy Institute tackles this challenge by showing how human performance can be integrated directly into existing task-based risk assessment processes.

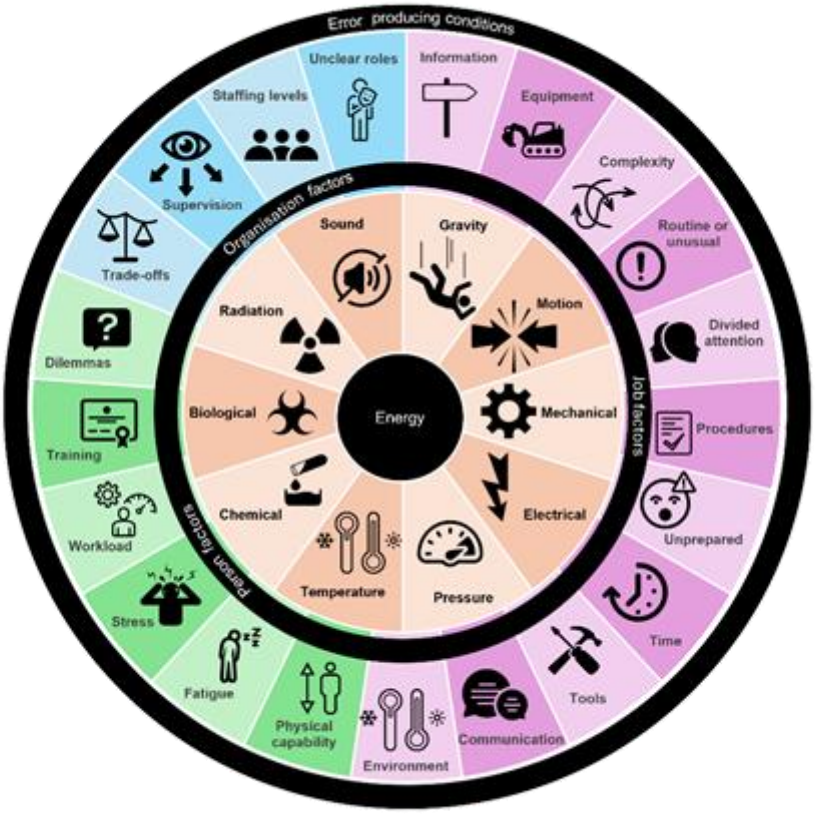
It sets out practical, step-by-step advice for incorporating HF considerations at each stage of the assessment. The guidance also includes examples and a range of tools that frontline teams can use before, during and after the job, acknowledging the dynamic and often changing nature of risk. Finally, it sets out what organisations need to have in place- appropriate training requirements, ways of aligning key stakeholders, and a feedback loop that ensures findings are fed back into the wider risk management process

the innovation

EI 3579 is a free, practical guide developed by experienced practitioners to help organisations embed human factors into everyday task-based risk assessment. It is written for non-specialists and for the people closest to the work: supervisors, frontline workers and managers- so that human performance can be considered in a straightforward way without adding unnecessary complexity.

The guide fills a long-standing gap. Although human factors are well established in safety-critical task analysis and major accident hazard studies, most organisations lack a usable approach for applying the same principles to the kind of daily work and normal operations that make up the majority of activity on site. EI 3579 addresses this by providing tools and methods that fit directly into existing safety processes.

A key innovation is the guide's step-by-step structure and practical focus. It explains how to adapt task-based risk assessments to address both hazards and error traps, and how to apply the right type of control for each, recognising that physical hazards and error traps require different approaches. It also includes examples of human factors across different categories, helping users understand what to look for at each stage of the assessment. The guide offers concrete examples of how existing tools can be strengthened and provides new, ready-to-use tools such as the Energy and Error Wheel, Last Minute Risk Assessment, the 15-Second Scan, and Look–Point–Call Out. These tools are organised into three categories that support the full cycle of work: planning, execution, and learning after completion allowing crews and supervisors to improve situational awareness and decision-making without added complexity.



energy and error wheel

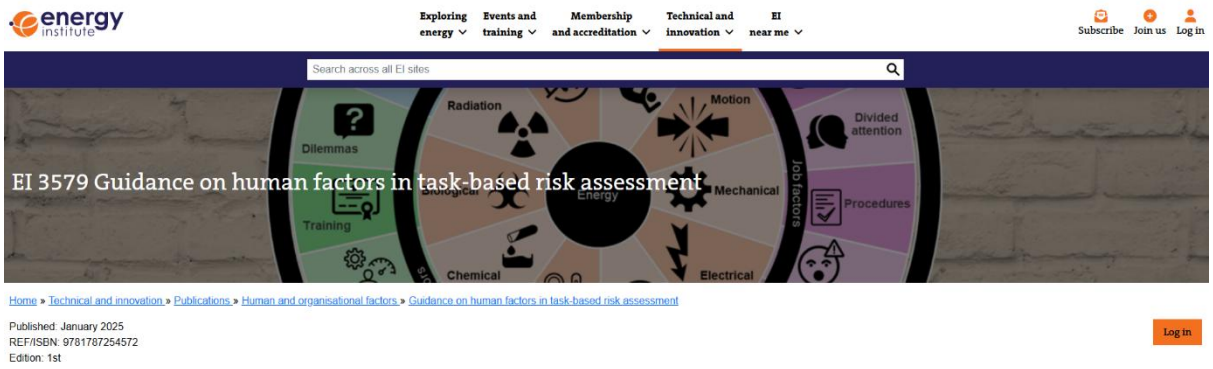
how it was implemented

Because this safety innovation is delivered in the form of a practical guide rather than a system or software, its implementation ultimately depends on organisations choosing to adopt it within their own work-planning processes. For that reason, we focused our efforts on supporting users as much as possible through the way the guide is made available and the additional resources that accompany it. EI 3579 is free to download from the Energy Institute website, removing cost and access barriers and allowing any organisation—large or small—to begin using the ideas and tools straight away.

To help organisations make an informed decision about adopting the approach, the guide contains a dedicated business case. This section sets out why integrating human factors into task-based risk assessment matters, how it strengthens operational risk management, and what organisational arrangements need to be in place. Many companies have already used this material to support updates to their procedures and training requirements.

To further assist with implementation, the authors produced a publicly available video hosted by the Energy Institute. In this discussion, we share practical examples from different industries, showing how the tools have been applied and how the approach can be scaled within existing work-planning systems. These real-world examples help users understand what implementation actually looks like on the ground.

All supporting materials—the guide itself, the business case, and the video—are openly available. The guide can be accessed here: **Link** giving organisations instant access to everything they need to begin using EI 3579.



result

Because EI 3579 is a guide rather than something that can be rolled out like a system, the best indication of its impact is how many people choose to use it. One of our main goals was to make human factors easier to access and more practical for everyday work planning, and the early interest suggests that this is working.

The guide was released around the turn of January and February, and since then it has been downloaded over 600 times from the Energy Institute website. For this type of specialised publication, that is a strong number and a good sign that organisations are actively looking for practical help with human-performance issues.

Another clear indicator of demand came from the webinar that the Energy Institute organised with the authors. More than 1,000 people watched the session, which given how niche this area of safety is, was a very positive response. The questions and comments afterwards made it obvious that many organisations want to strengthen their risk assessment processes and are looking for straightforward ways to weave human factors into them.

There was also interest from countries where English is not commonly used in safety work. For example, the guide was translated into Portuguese and published this month. Early

feedback suggests it is already helping organisations in Brazil and other Portuguese-speaking regions who previously had limited access to this type of material.

LEARNING FROM NORMAL WORK

EI 3579 author - Dr Marcin

conclusion

Human factors knowledge is still scattered across specialist programmes, academic studies and advanced regulatory guidance. For many HSE professionals especially outside the UK- this material is difficult to access, interpret or apply to day-to-day operations. As a result, human factors has not yet become a mainstream part of safety practice, despite decades of evidence showing its importance. Many practitioners know of human factors, but have little practical guidance on how to use it within the processes they already own, such as work planning and task-based risk assessment.

This gap matters. Across industries, companies continue to face recurring incidents, often involving similar patterns of assumptions, miscommunication, workarounds or task conditions that were not recognised during work planning. Despite significant investment in procedures, technology and training, the same types of accidents still happen. We argue that a contributing factor is the limited integration of human factors into the core safety processes that shape daily work. If these processes do not prompt teams to recognise error traps or understand how performance is influenced, important vulnerabilities remain invisible.

The guide turns what is often abstract human factors theory into something people can actually use on the job. Because the tools sit comfortably alongside JSAs and other planning steps, organisations can introduce human-performance considerations straight into their day-to-day decisions, without new programmes or lengthy training.

We believe EI 3579 represents a significant step toward raising the baseline of human factors understanding across industries and reducing the recurrence of preventable accidents. It makes a long-needed area of knowledge accessible, practical and ready for immediate use.

LINK: https://www.energyinst.org/technical/publications/topics/human-and-organisational-factors/guidance-on-human-factors-in-task-based-risk-assessment

LINK: https://learningfromnormalwork.com

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energy institute

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