Fact Sheet
Human Factors

Reducing error and influencing behaviour (HSG48) is the key document in understanding HSE's approach to human factors. It gives a simple introduction to generic industry guidance on human factors, which it defines as:

"Human factors refer to environmental, organisational and job factors, and human and individual characteristics, which influence b haviour at work in a way which can affect health and safety"

This definition includes three interrelated aspects that must be considered: the job, the individual and the organisation:

The job
- including areas such as the nature of the task, workload, the working environment, the design of displays and controls, and the role of procedures.
Tasks should be designed in accordance with ergonomic principles to take account of both human limitations and strengths. This includes matching the job to the physical and the mental strengths and limitations of people. Mental aspects would include perceptual, attentional and decision making requirements.

The individual
- including his/her competence, skills, personality, attitude, and risk perception. Individual characteristics influence behaviour in complex ways. Some characteristics such as personality are fixed; others such as skills and attitudes may be changed or enhanced.

The organisation:
- including work patterns, the culture of the workplace, resources, communications, leadership and so on. Such factors are often overlooked during the design of jobs but have a significant influence on individual and group behaviour.

In other words, human factors is concerned with what people are being asked to do (the task and its characteristics), who is doing it (the individual and their competence) and where they are working (the organisation and its attributes), all of which are influenced by the wider societal concern, both local and national. Human factors interventions will not be effective if they consider these aspects in isolation. The scope of what we mean by human factors includes organisational systems and is considerably broader than traditional views of human factors/ergonomics. Human factors can, and should, be included within a good safety management system and so can be examined in a similar way to any other risk control system.

Human Factors: The Business Benefits
If you think safety's expensive, try having an accident… Managing human failures is essential to prevent major accidents, occupational accidents and ill health, all of which can cost businesses money, reputation and potentially their continued existence.
Successful businesses achieve high productivity and quality while ensuring health and safety. Good technology combined with the best work systems can help to achieve these goals. The best work systems are based on having a skilled workforce, with well designed jobs that are appropriate to individuals' abilities.
The influence of biological, psychological and organisational factors on an individual at work can affect their health and safety, but it also affects their efficiency and productivity. For example, if:
• Someone needs to exert a large proportion of their strength to complete a task they are more likely to suffer injury and carry out the task inefficiently possibly causing damage to the product and tools; or
• The mental demands of a task are too high, perhaps involving diagnosing faults under significant time pressures then there can be both a health issue for the employee but also a quality, and possibly safety issue for the production line, process and plant; or
• Individuals have very limited scope for determining how to do their job then they may lack motivation and job satisfaction and be less effective at work.
Individuals have a wide range of abilities and limitations. A Human Factors (or Ergonomics) approach focuses on how to make the best use of these capabilities by designing jobs and equipment which are fit for people. This not only improves their health and safety but often ensures a better managed, more effective organisation.

Further resources