

Integrating
Human Factors
in European Railways
Information
for workers

Integrating Human Factors in European Railways

What is 'Human Factors'?

Human Factors concerns the optimisation of human performance in the workplace for the purpose of safety, well-being and efficiency.

It considers the working environment from a human-centred viewpoint, looking at the whole system and its influence on the way people behave and interact with the railway.

Human Factors (HF) focusses on the 'fit' between the user, equipment and their environments.



The individual is at the centre of the socio-technical system. (Courtesy of RSSB)

Why 'Human Factors' are important?

'Human factors' play an increasingly important role in modern complex, safety-critical systems.

Even when some processes are automated – often as a measure to reduce human error – people are an essential part of European railways.

People are at the centre of this technological, social and organizational system and are the key to success or failure.

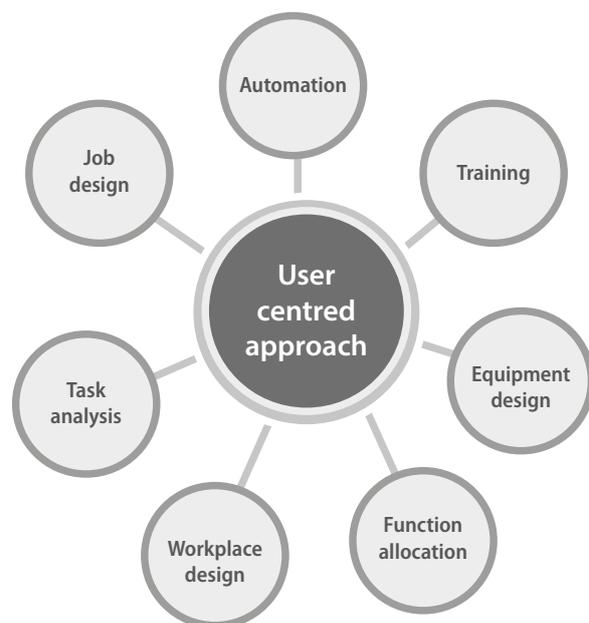
What influences you at work?

People bring their own values, experiences and abilities to their work. The way people work - their decisions and actions – is also influenced by factors within the company.

These factors include your training, your work mates, the equipment you use, the job you are doing, the environment and the organisation. Such 'performance influencing factors' may help or hinder you at work.

The challenge for the company is to take these factors into account and to integrate them into the safety management of the organisation, to improve the quality of work.

It is the workers who deliver the safe and effective performance of the railway system. This is why it is essential that the worker is seen as a central part of the organisation.





Who is the human factors specialist?

He or she provides the knowledge about human performance and the techniques to find out about how you do your work—this is the user-centred approach for developing all aspects of your working environment.



Organizations need the right people doing the right job. Recruiting, selecting and retaining the right people are all crucial to the success of an organization.

People need to be developed in ways that fulfil their own potential as well as the needs of the organization for which they work. Training should be seen as a continuous process by which organizations get the most out of people—and vice versa.



The human factors approach is concerned with the impact of workload, shift work, morale, motivation and stress on performance and wellbeing.

The organization's culture is both a product and a cause of the way people behave with each other. The culture is apparent in the behavior of its leaders, its teams and its managers, and in the style and expectations with which its people communicate with each other.

Design must be fit for purpose, which means adequately defining at the design stage both the way products are to be used and the technical problems they are intended to solve. Ignoring the human factors of design can lead to a severe decline in performance, loss of staff or customers through accident or wastage, and often substantial financial cost.



European Union Agency for Railways

120 rue Marc Lefrancq
BP 20392
FR-59307 Valenciennes Cedex
Tel. +33 (0)327 09 65 00

era.europa.eu
Twitter @ERA_railways

Following the entry into force of the technical pillar of the 4th EU Railway Package (Reg. 2016/796), the European Union Agency for Railways replaces and succeeds the European Railway Agency. The change of name requires also a new corporate design. The "Agency" refers as from now to the European Union Agency for Railways. However depending on the context, some parts of this brochure still refer to the former European Railway Agency.

For more information, please visit:

- <http://www.era.europa.eu/tools/sms/>
- <http://www.hse.gov.uk/humanfactors/>
- <http://www.sparkrail.org/Pages/HumanFactors.aspx>
- <http://www.vbg.de/>

Other leaflets about Integrating Human Factors in European Railways, also in other languages:

- Safety Management Systems
 - Incident and Accident Investigation
- Search for 'Human Factors' on www.era.europa.eu

Making the railway system work better for society.



Publications Office

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