

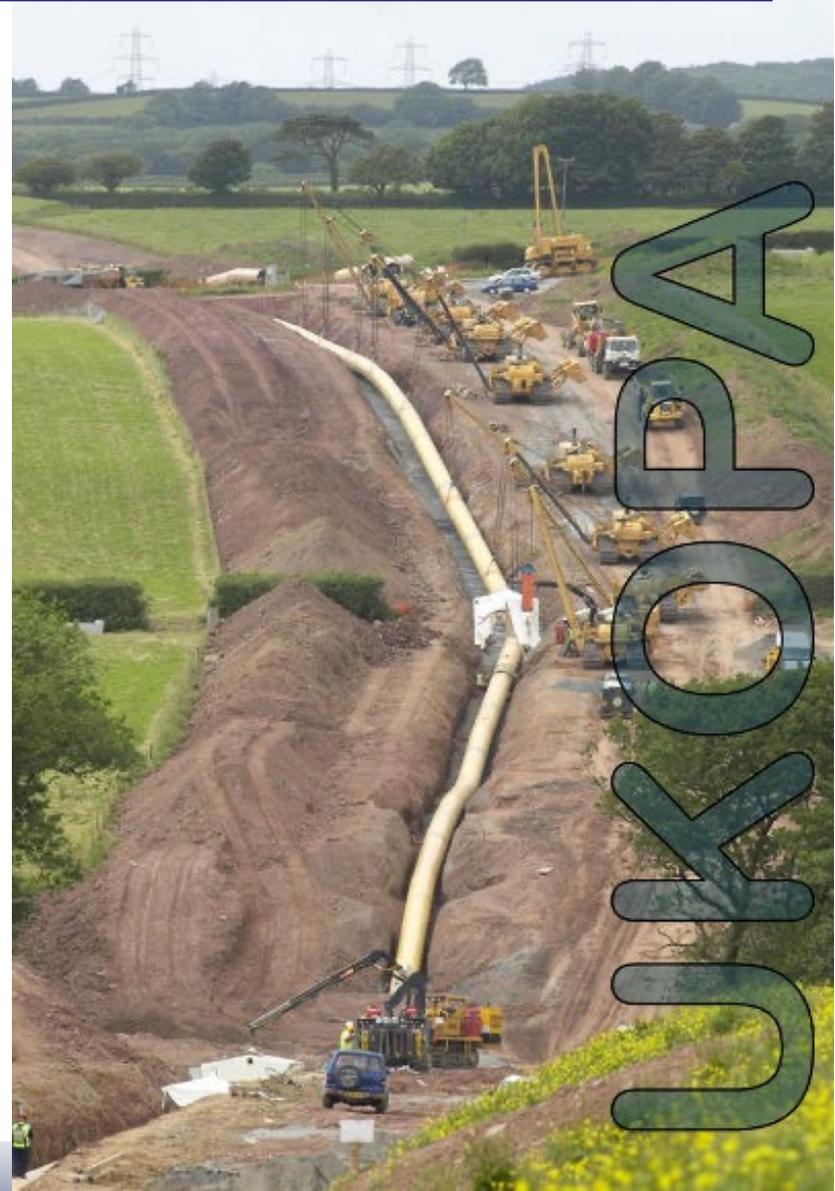
UKOPA

United Kingdom Onshore Pipeline Operators' Association

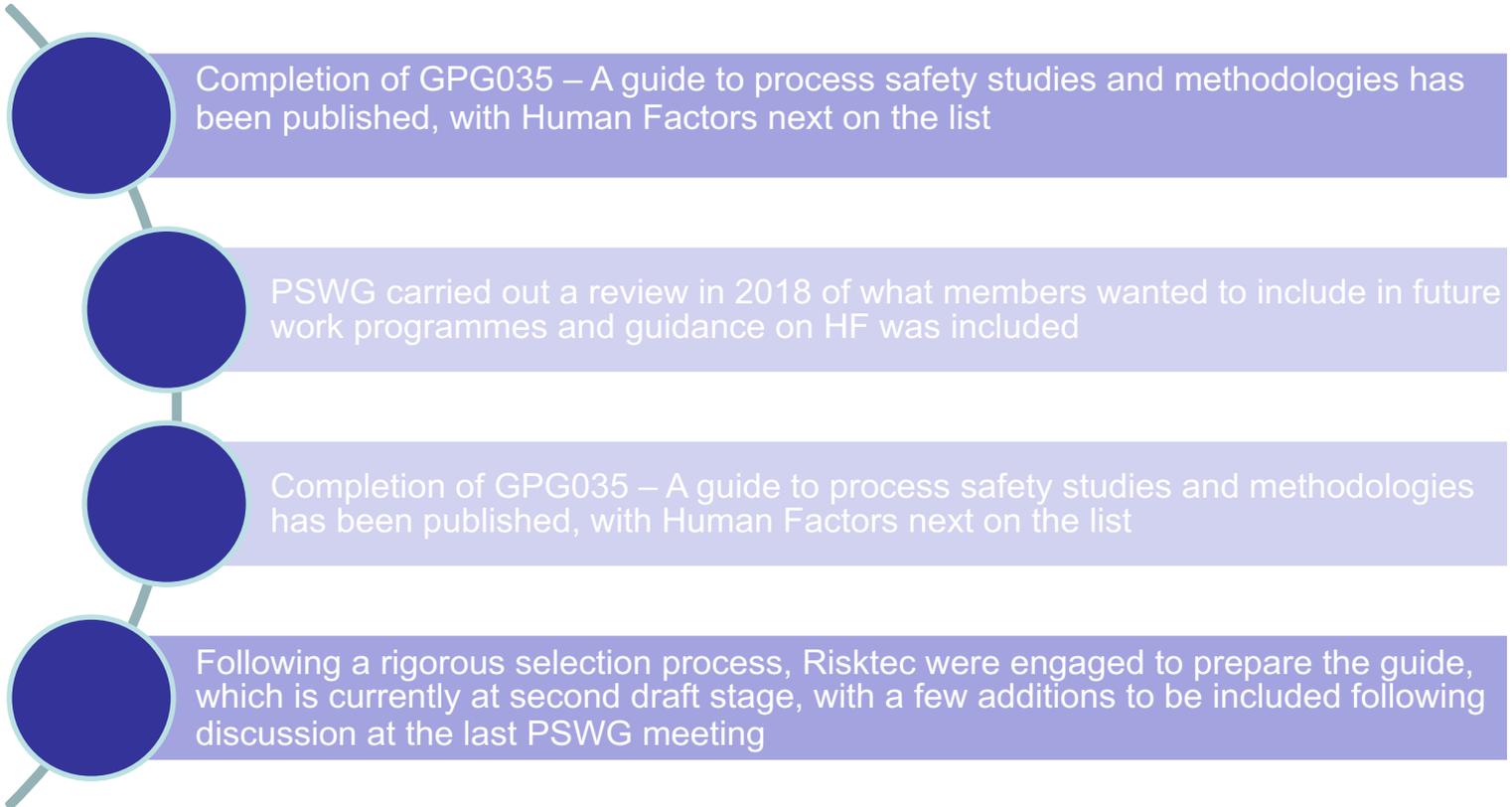
GPG046 Human Factors: An Introduction for Pipeline Operators

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Why Produce a Guide



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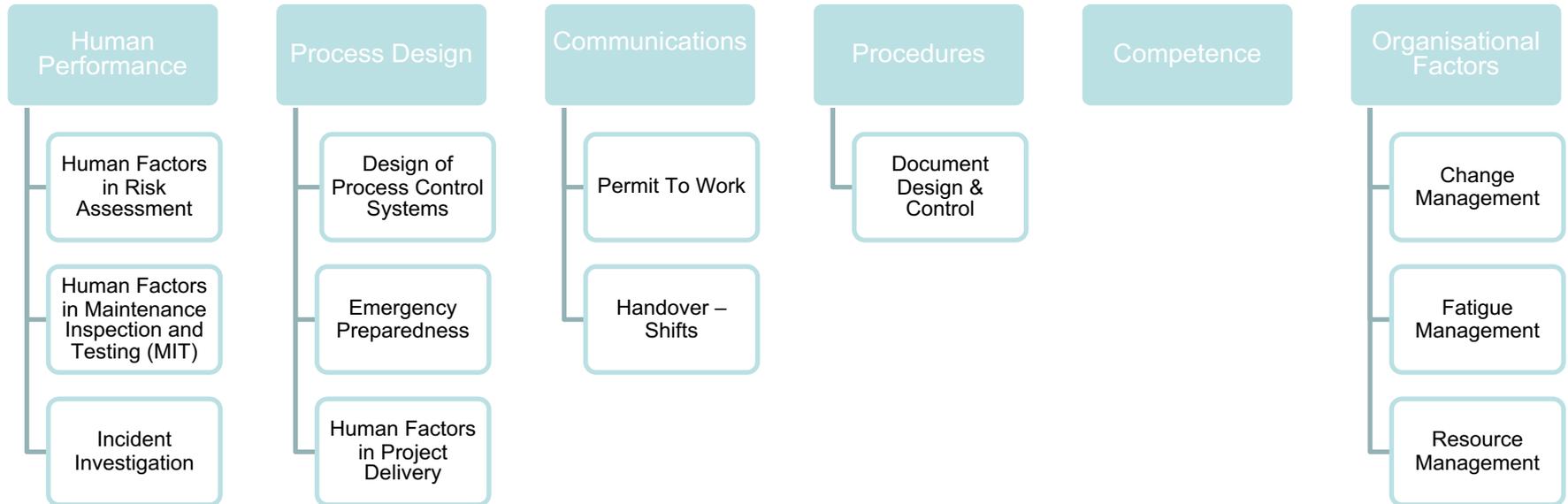
- Introduction – background, objectives, legislation, application and document structure
- Introduction to Human Factors – what is HF and scope of HF for pipelines
- Human Factors Guidance
 - HF in Pipeline Design
 - Managing Human Failures
 - HF in Maintenance, Inspection and Testing
 - Procedures
 - Training and Competence
 - Staffing
 - Organisational Changes
 - Safety Critical Communications
 - Fatigue and Shift Work
 - Organisational Culture

Legislative and Regulatory requirements

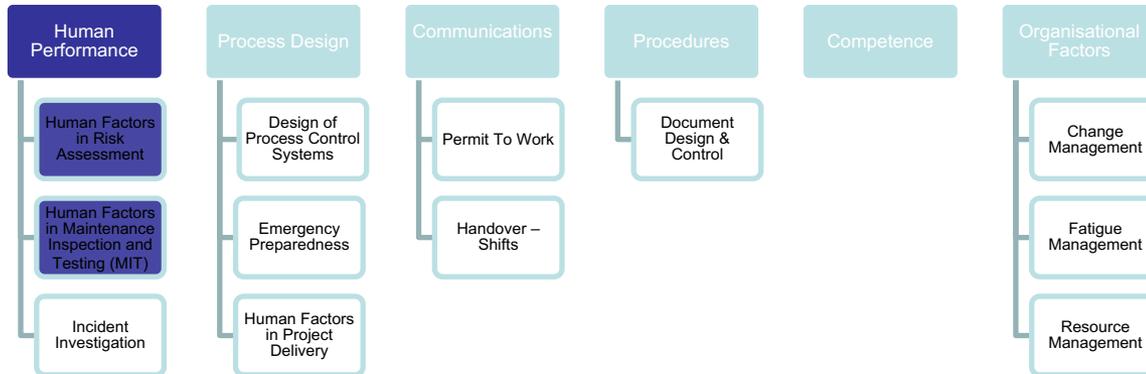
- Human factors are recognised as an essential part of achieving ALARP under HSWA and is referenced in HSG48 'Reducing effort and influencing behaviour should also be noted.
- The consideration of Human Factors (HF) made its way into regulation when it became a requirement under COMAH
- The Management of Health and Safety at Work Regulations require employers to undertake suitable and sufficient risk assessment. To demonstrate this HF should be incorporated into assessment / management of risk in relation to safety critical tasks.
- There is currently no explicit references to HF or ergonomics within PSR 1996 or GSMR or elsewhere relating specifically to pipelines



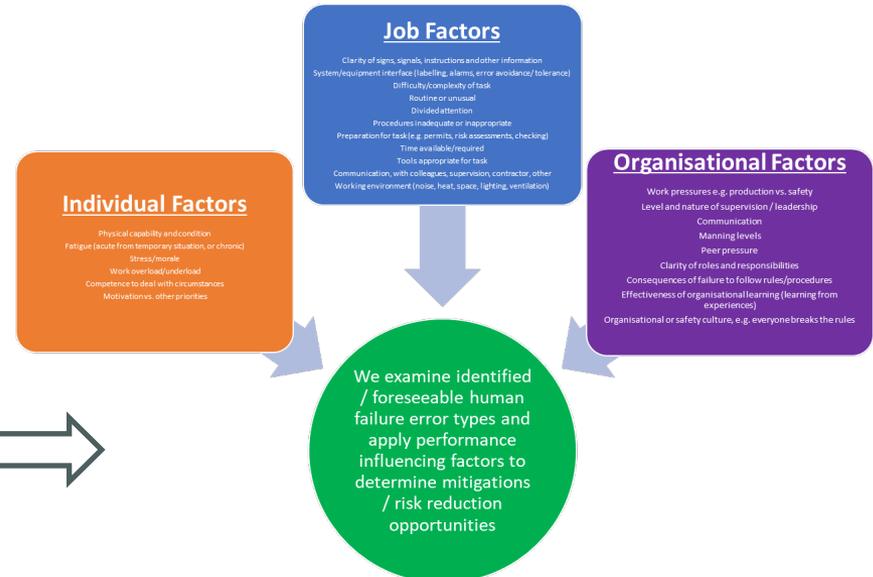
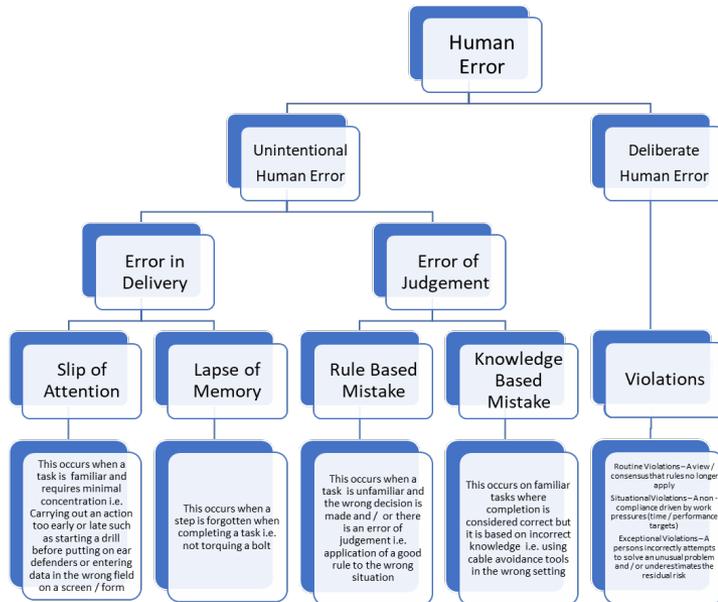
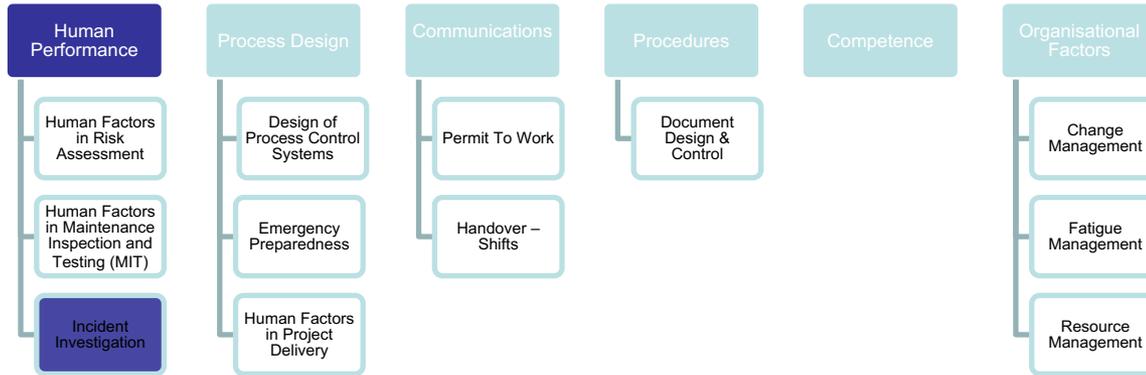
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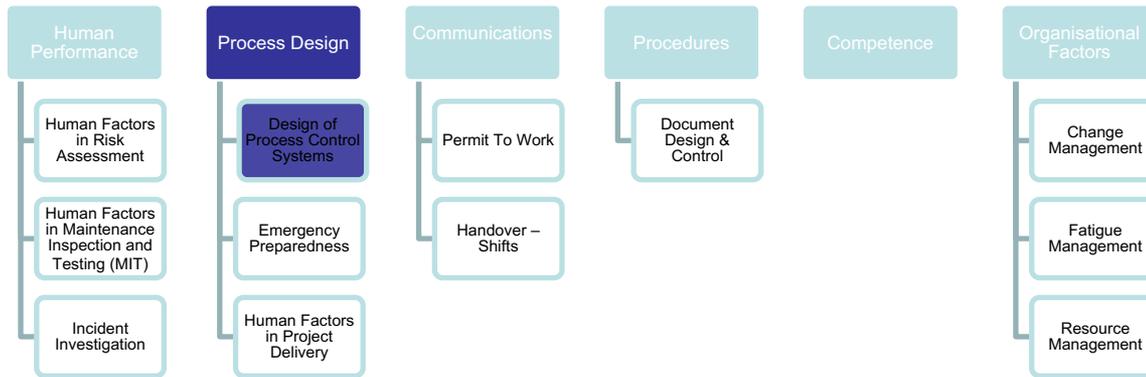
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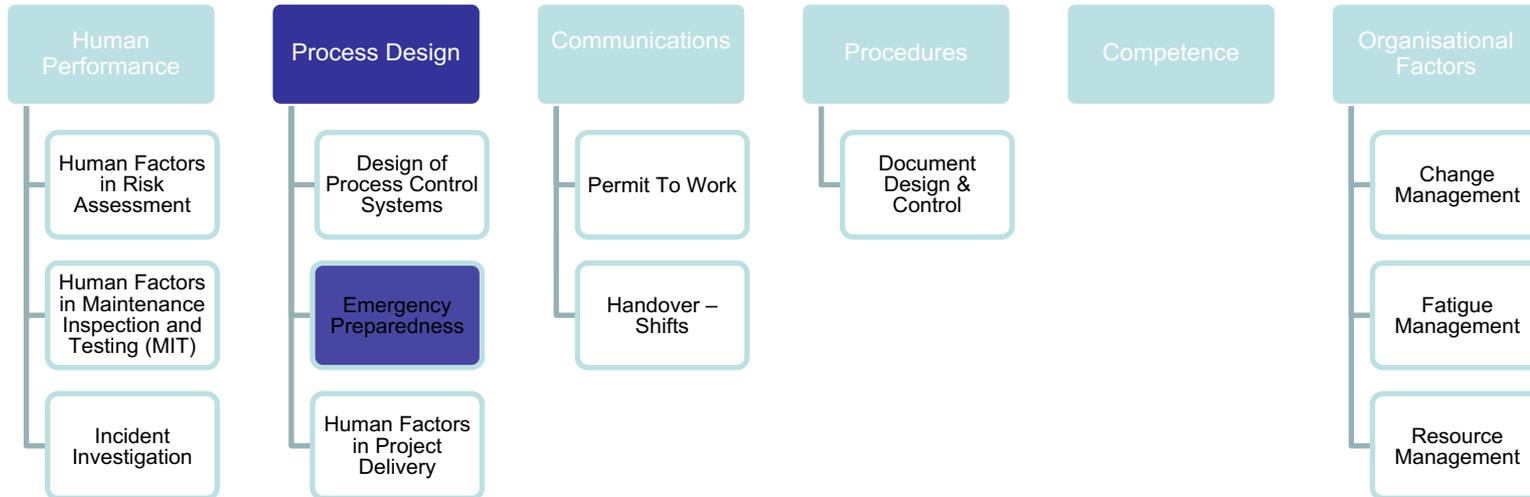


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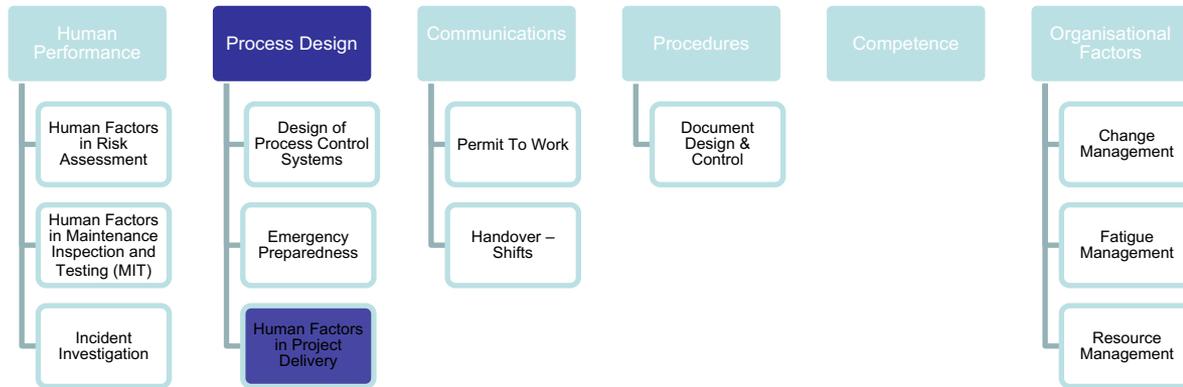


Pipeline design - Facilities must be designed in line with ergonomics ‘good practice’ principles. These principles should be applied wherever there is a requirement for personnel to interface with equipment for operations or maintenance. This will apply where new pipelines and / or controls systems are being designed, or where major changes are being proposed to existing pipeline assets.

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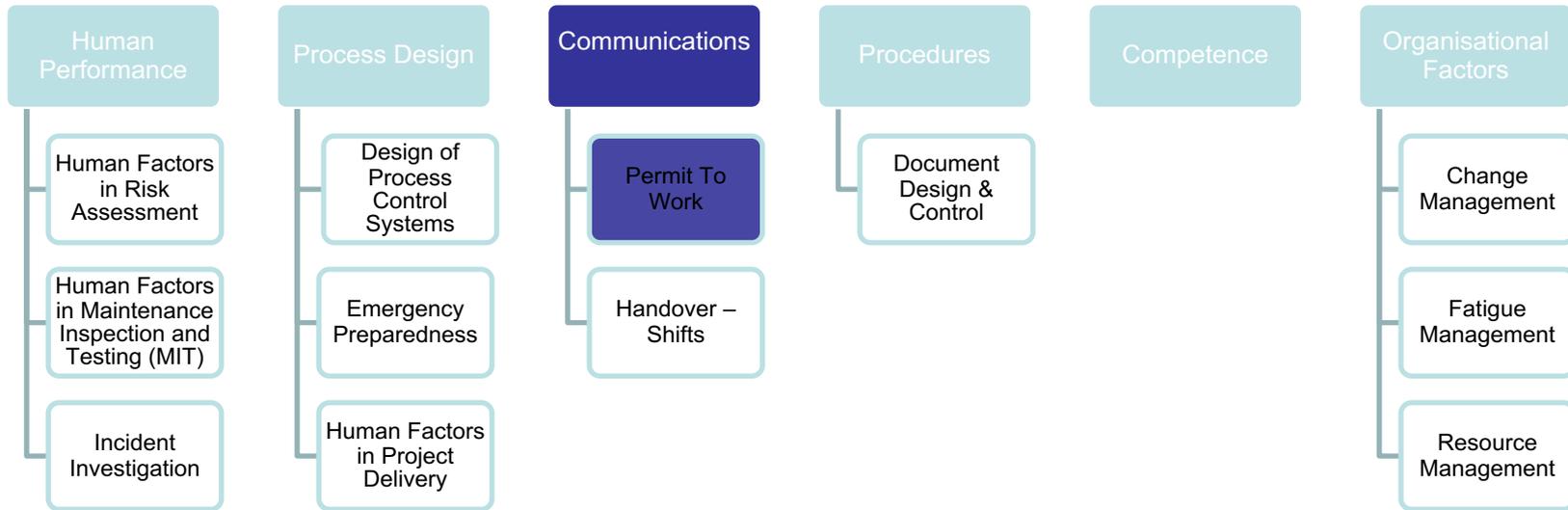
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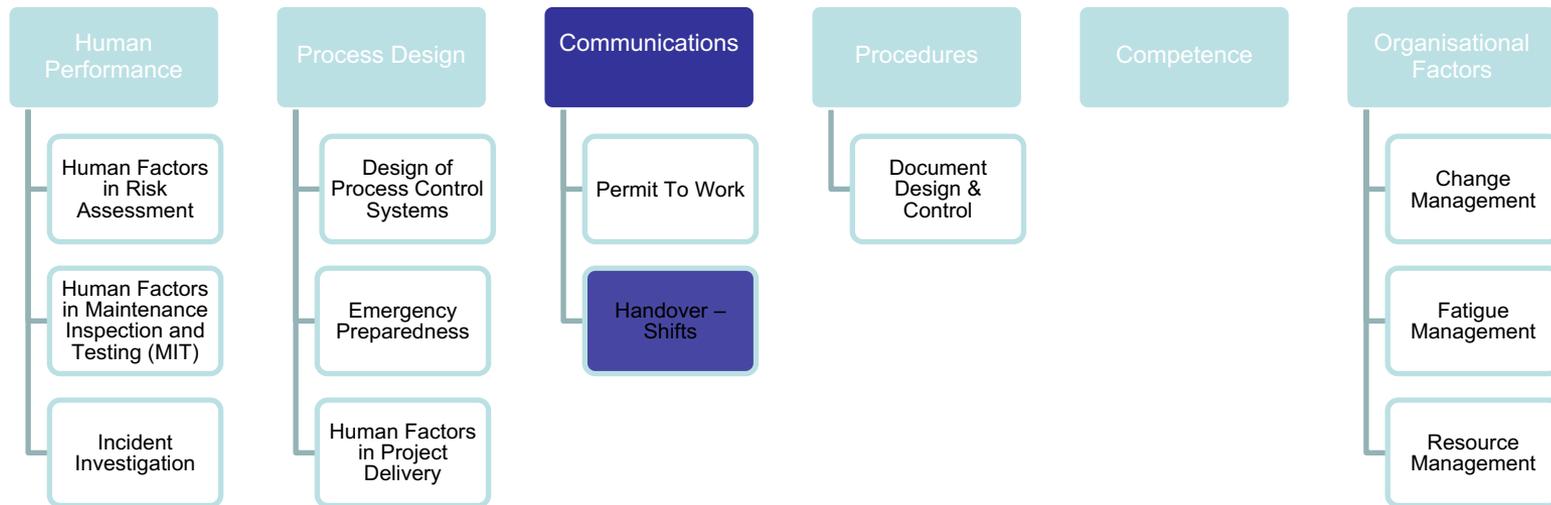
Project Delivery – Consider Human Factors in relation to the Environmental, Organisational and Job factors, and Human and Individual Characteristics, which influence behaviour at work how they will impact health and safety in project delivery



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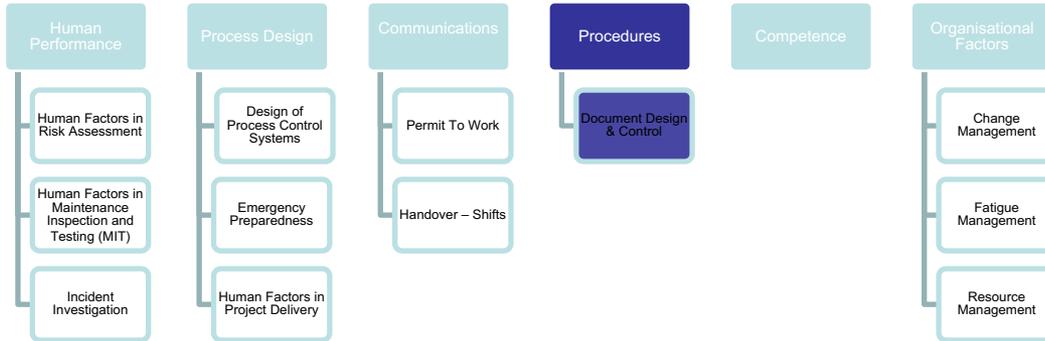


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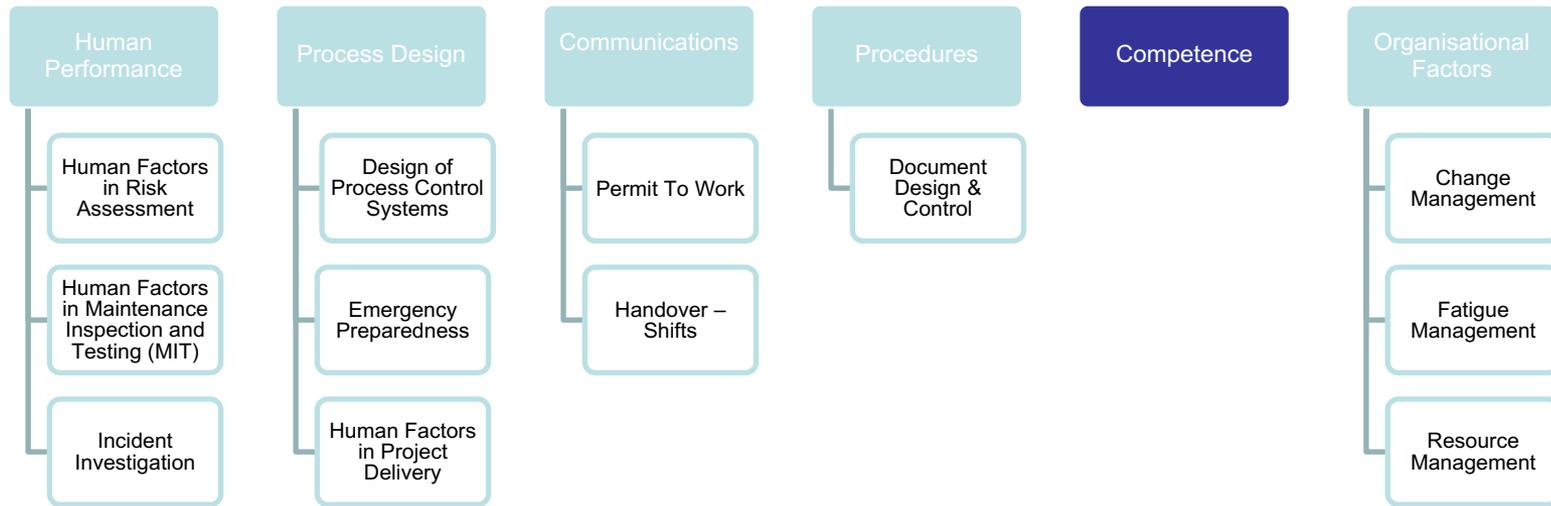
Document Design & Control

We have provided clarity on what type of document should be used to communicate key information (process flow diagram/task cards/step by step process/written procedure etc)

Alongside the application of good writing guidelines and the use of clear graphics we have improved overall communication on the completion of hazardous tasks thus reducing the risk of an incident. This has also narrowed the gap between work as imagined vs work as done

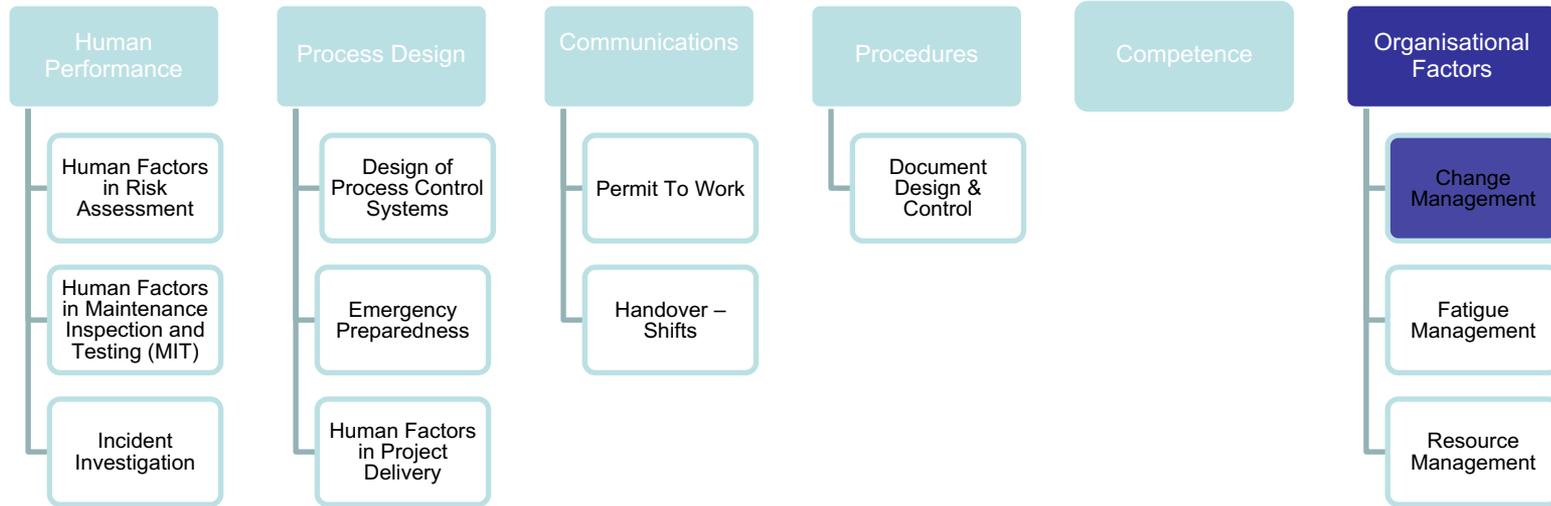


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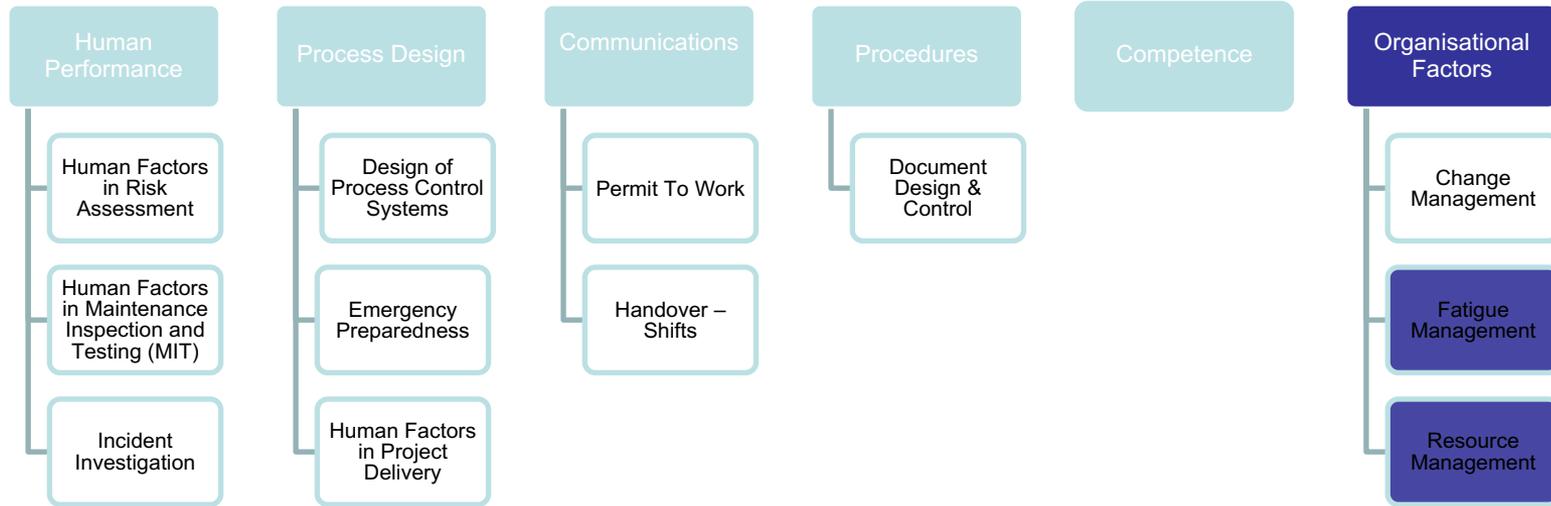
Training and Competence – all personnel should have the requisite training and competence to carry out their tasks safely. All pipeline operating companies should have a suitable Competence Management System (CMS) in place that detail how the competence requirements of personnel will be identified, developed, and maintained. The delivery of training must be tailored to the audience.

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Organisational Change - HF implications must be considered as part of the management of change. For example, the introduction of new equipment for pipeline maintenance is likely to have implications for operator training, staffing numbers or roles.

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Fatigue and Shift Work - Fatigue negatively impacts human performance and increases the likelihood of human errors and has a negative impact on health and wellbeing. It is therefore critical that the potential for fatigue, and its impact on safe operations, is recognised by both employers and employees so that the risks can be effectively risk assessed and managed.

GPG046 – How do I get a copy?



A blog has been compiled and will be posted on various social media platforms – This will provide a link that members can use to obtain a copy of the guide.