



Operational human factors programme

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We rely on people for our day-to-day operations. They are uniquely flexible and adaptable, and are often quoted as “our most valuable resource.”

People form a vital link in the chain that ensures safe and effective operation.

Everyday, our staff contribute to the safe operation of our businesses, intervening to prevent unsafe operations, improving safety and efficiency.

However, people are only human.

The penalty we pay for using this unique resource is the potential for ‘human error’, which sometimes endangers people and our businesses.

Managing human performance is a vital element of our process operations, minimising or even eliminating the potential for human error, maximising the potential for human performance is what ‘human factors’ is all about.

The practical application of human factors principles (sometimes known as ergonomics) is a current industry ‘hot topic’, with increased attention being shown in the subject by production management, safety professionals, insurance inspectors / assessors and national regulators.

ABB can help manage the potential for and consequence of human error.

Capabilities

We have a range of services that can help you understand, and then improve, the human factors that impact the way your business operates. We are able to help you understand the interactions between the individual, the organization and the job, through one or more of the following areas:

Analyse

- Safety culture review
- Safety case preparation
- (COMAH / Seveso / offshore)
- Identification of critical tasks
- Human error analysis
 - HTA
 - Time line analysis
 - Human HAZOP
 - SHERPA
 - THERP
 - HEART

Tools and techniques

- Control room assessments
 - CRIOP
 - 49 CFR Parts 192 and 195
- Incident investigation support
- Fatigue analysis
- Alarm system assessment
- HMI assessment
- Critical task review
 - Maintenance
 - Operations
- Critical procedure review
- Competency system review

Design and implementation

- Culture change and transition management
- Automation system design
- Control room design
- HMI design
- Competence system design
- Human factors integration planning
- Human factors for Safety Instrumented systems (SIS)
- Critical procedure design
- Alarm system design
- Human factors in small teams
 - Crew resource management



Our experience

ABB has a background of human-centered engineering and its dedicated human factors team brings together expertise in operational organisation and culture, competency assessment, HMI design, alarm management, ergonomics, and control room architectural consultancy.

Our human factors consultants bring a practical approach, operational experience, technical ability and proven techniques to solve your human factors problems.

We run a range of human factors seminars and training courses and have trained thousands of engineers on this hot topic.

Benefits

Safety

- Compliance with legislation
- Improved safety performance

Efficiency

- Reduced outage / better uptime
- Better quality

Health

- Lower stress levels of operators
- Reduced absenteeism

Following an ABB human factors workshop:

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 “Most positive day I’ve spent working here.”

Loss Prevention Engineer, SSE



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