Humans are vital to the operation and maintenance of railways. Human Factors is the systematic process that integrates the human component of the railway system in a safe, effective and reliable manner.

At Frazer-Nash we ensure the working environment is considered from a human-centred viewpoint, looking at the whole system and its influence on the way people behave and interact with the railway – doing so can help ensure optimum human performance, improve system safety and reduce commercial risk.

**HUMAN FACTORS SERVICES**
Frazer-Nash Consultancy can provide a range of services tailored to the size and requirements of each rail project, including:

- Human factors integration and management
- Design of accommodation spaces and environments
- Control room design and specification
- Predictive assessment of control room staffing levels
- Human machine interface design
- Workstation design
- Development of new or modification of existing rolling stock
- Human performance modelling and simulation
- Workload prediction and assessment
- Human error analysis
- Task analysis
- Manual handling assessment
- Design for maintenance
- Integration of new assets on existing infrastructure
- Alarm design and integration
- Noise and vibration expertise
- Training needs analysis

**BENEFITS OF HUMAN FACTORS INTEGRATION**
As systems become increasingly complex, it is ever more important that human factors are taken into account in the system lifecycle. Benefits can include:

- Enhanced system usability and effectiveness
- Reduced risk to system safety
- Maximised operator comfort
- Minimised stress and fatigue
- Better team-working, co-operation
- Management of physical and cognitive workload
- Minimised end-user error
- Maximised situational awareness
- Better decision making
- Reduced training burden
- Increased end-user product acceptance

For more information please contact Gordon Bisset on 0141 341 5423 or email g.bisset@fnc.co.uk