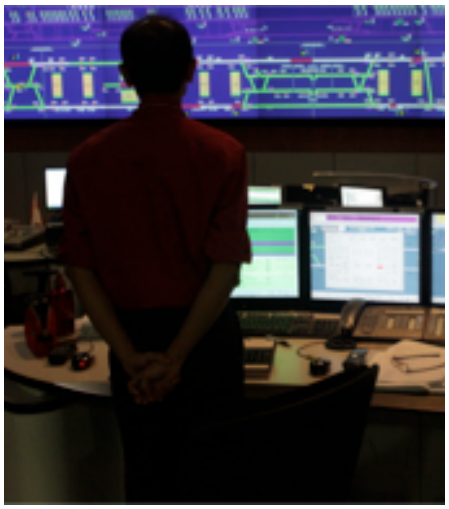
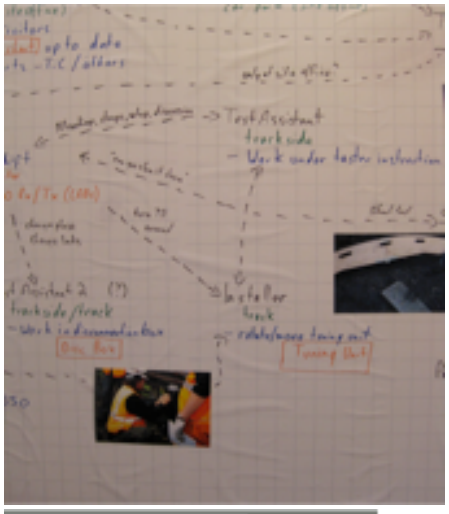
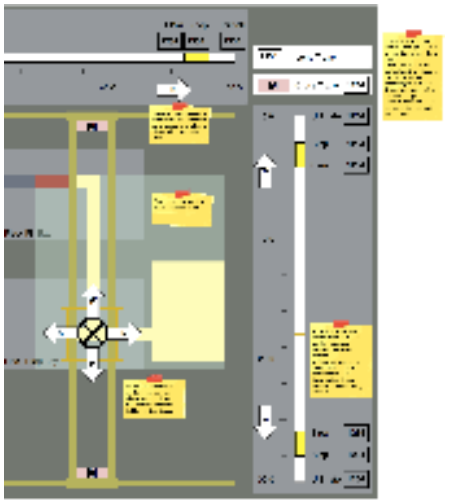
Human Factors Requirements and Guidelines







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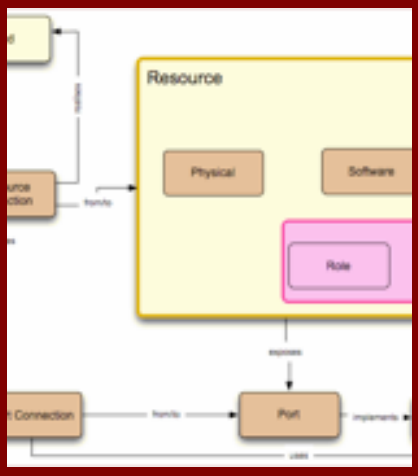

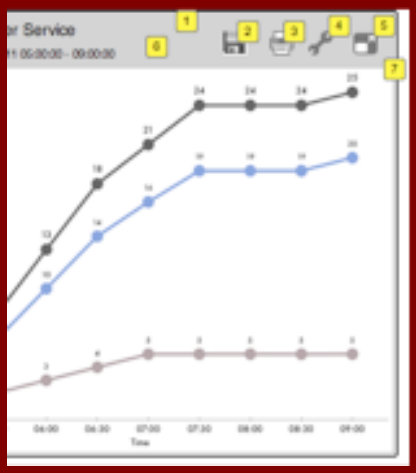

Capability Statement

Human Factors Engineering can contribute to the design and development of products and services that are safe and easy to use. This contribution needs to be properly integrated with existing engineering practices at the start of a project. Developing HF standards, guidelines, and specifications can help with the communication of this important information.

We offer a small and highly experienced Human Factors capability based in Bristol, UK. Our specialism is the human-centred analysis and validation of Human-Machine Interfaces (HMIs) and associated systems.

We offer two main services in this area:

Development of Human Factors Guidelines. These documents collect and interpret key the HF requirements and principles associated with a product or service, and communicate this information in a clear and unambiguous way. The purpose of these internal guidance documents is to ensure that product developers understand the critical HF Engineering aspects, but still have some degree of freedom in how the guidelines are addressed.

Development of Human Factors Specifications. A specification is the 'blueprint' for how the user will interact with the product or service. Specifications build on requirements analysis and user research. A specification is often produced by following a guideline.

Our experience in developing HF guidelines and specifications encompasses the following projects:

Victoria Line Human-Interface Style Guide. This project provided a 'Style Guide' for a suite of interrelated HMIs used by operators on the London Underground Victoria Line. The guidance was developed so that a common and consistent 'look and feel' could be developed. The outcome was a higher quality HMI, better compliance with the requirements addressed through the Style Guide, and less re-work as graphic design conventions can be agreed ahead of product delivery.

EDF Energy Human Factors Technical Guidance Notes. The purpose of these Guidance Notes was to provide the central engineering support function with information on the design and development of safe and operable user interfaces. The project involved taking existing corporate HF standards and showing how the contents can be illustrated with practical examples and integrated with other engineering processes.

Human Factors Development of The Rail Enterprise Architecture Framework (TRAK). TRAK is a systems engineering framework that was developed as a standard by an open, industry-sponsored working group. We supported the TRAK Working Group in the development of the standard. We worked on improving the usability of the framework and also on ensuring that HF considerations can be addressed via TRAK.

Taiwan Taiyuan Line Service Manager Information Dashboard HMI Specification. For this project we worked closely with the end-users and software developers to agree a HMI specification for an 'information dashboard' intended to summarise key status indicators for the control room supervisor. Through a number of workshops and task analysis sessions, an interactive (and paper-based) specification was developed. Costs were controlled because the specification was produced before the main software was developed.

We tend to use collaborative methods to define and develop the scope and content of these documents. We have found that stakeholder involvement in defining the purpose of these documents is crucial. Previous clients have included: Transport for London, Network Rail, and EDF Energy.

To learn more please contact us on +44 117 230 2090 or info@liv-systems.com.