

HUMAN FACTORS IN MARITIME OPERATIONS

Dr Trevor Dobbins
STRResearch Ltd, UK



STResearch Ltd, UK (STR)

- An SME consultancy organisation specialising in maritime human factors
- Work primarily in the UK, EU and North America with an Associate network
- Completed work for: SMEs, Prime Contractors, Gov Agencies and SAR organisations



TOPICS

Human Element Factors in Shipping Safety

- The crucial influence of the human element on safety, security and environmental protection

Expected impact:

- Improvement of safety of the maritime transport through new systems and concepts.

Safety of Ships in Arctic Conditions

- Higher vulnerability to emergencies than in more temperate climates.
- Prevention, preparedness and response developed for Arctic conditions.

Expected impact:

- The action will contribute to the development of standards for Arctic navigation and of international best practices.



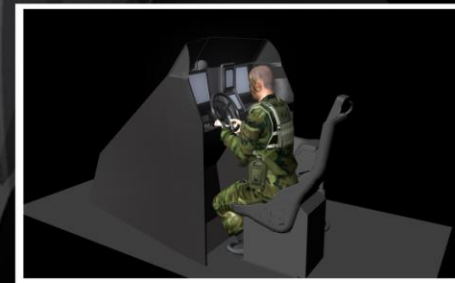
RELEVANT EXPERTISE

- Human Factors Integration
- Human Systems integration
- Developing Human-Centered Systems
Dobbins, T. (2004)
High speed craft design from a human centred perspective.
RINA; SURV 6:
- Design tools and methodologies



RELEVANT EXPERTISE

CAD - DHM Tool development



RELEVANT EXPERTISE

- **Command & Control (C2) - Risk & Safety - Threat & Error Management**

Dobbins, T., Harris, D., Smoker, A., Hill, J., Dahlman, J., Forsman, F., Brand, T., and Stark, J. (2010)

High speed craft C2: a model of navigation and crew interaction to enhance performance and safety in the harsh shock and vibration maritime environment.

RIN: NAV-10,

- **Human-Machine Interfaces (HMI)**

- Data - Information - Knowledge - speed of assimilation ?

- Control input

- Visual & Multi-Modal

Castle, H. and Dobbins, T. (2004)

Tactile display technology; A brief overview of its benefits over visual and audio displays.

Ingenia, Royal Academy of Engineering, London.



RELEVANT EXPERTISE

- Human performance or lack of it (*fatigue*)
- Education
- Competence-based training & qualifications
 - De-skilling : multi-skilling : skill-fade
- Individual and team performance: inter - intra platform
- Resilience
- Safety Culture / Management
- Leadership & Management
- Evacuation
- Integrating best practice from aviation and terrestrial systems



QUESTIONS ?



Dr Trevor Dobbins
STResearch Ltd, UK
td@str.eu.com