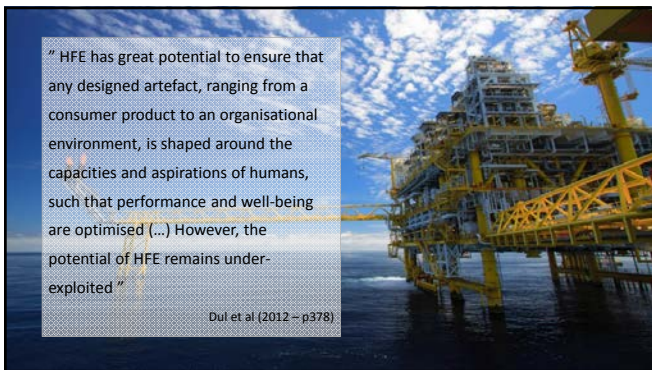


The Shape of Human Factors in the 21th Century: Developments in Theory, Methods, and Practice

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" HFE has great potential to ensure that any designed artefact, ranging from a consumer product to an organisational environment, is shaped around the capacities and aspirations of humans, such that performance and well-being are optimised (...) However, the potential of HFE remains under-exploited "

Dul et al (2012 – p378)



THEORY

1. Increased systems emphasis
 - Norros, 2014; Dul et al, 2012, EuroControl, 2014
2. The Precedence of Variability over Stability
 - Wilson, 2013;
3. The Meaning of Safety
 - Aven (2014); Hollnagel (2014)

METHODS

1. Simulator training and planning
 - Scenarios, gamification, planning of operations
2. User-Centred Design and Mobilization
 - Creating engagement and authenticity
3. Optimization and macrosimulations
 - Big data, optimizing system behaviour

4

DRIVERS OF CHANGE



Technology - Accidents - Economy & Markets - Societal values

CHANGE CHANGES EVERYTHING



RESEARCH - COMPANIES - REGULATORS - CONSULTANCY

PRACTICE

- Implementation skills
 - Dekker & Nyce (2014)
- General HFE advice vs local rationality
 - Almklov et al (2014),
- Educational systems & outsourcing
 - Norros (2014), Dekker, 2013

CONSLUSIONS

Our discipline is never better than our ability to provide value and implement change

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graph TD; Companies --- Research; Companies --- Regulators; Research --- Regulators;
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THANK YOU FOR YOUR ATTENTION

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