

What the Maritime Industry Can Learn from Safety Training in the Process Industry and Why Non-Technical Skills Are Indispensable for Mariners in Critical Situations

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Abstract. The increase of automation makes operations safer and more efficient, although the account of the human error remains stable in the maritime industry. Thus, new challenges and demands within the socio-technical environment might be evolved to which the operator is not yet fully adapted. Semi-structured Subject-Matter-Expert and Focus Group interviews were conducted to explore challenges considering automation, critical incidents, non-technical skills (NTS), and additional potential challenging factors. The main cause for critical incidents was attributed to the human due to a change of the operators' role from active to passive. However, demands increased by anticipating future states and being prepared to intervene at any time. Since NTS are beneficial within complex operations and closely interconnected, trainings should focus on a full set of skills. For the development of a training and assessment tool, future studies should focus on relevant behaviours that influence safe and efficient performance within the maritime industry¹.

Keywords: non-technical skills, high responsibility teams, human element, socio-technical systems, team training, safety training

¹ This study, which is assigned to the Project 'Enhancing Human Performance in Socio-Technical Systems' has received funding from the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie Grant agreement No 823904.