

## Guest Editor

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A new chapter in a global energy renaissance is beginning to emerge – one focused on the effective execution of capital projects, which are often further from shore, deeper and more complex, at the same time as maximising the return from mature offshore assets and planning for decommissioning. As the size and complexity of capital projects grows, the ability to effectively execute, often on multiple large projects, becomes a critical competency for many companies. The years 2015 and 2016 will be critical in any attempts to successfully deliver major capital projects. In many cases, the results of the projects will significantly influence company stock prices, as well as liquidity.

To be ready for a promising and yet challenging future, oil and gas companies need to be thoughtful about the following challenges: financing and capital effectiveness, regulatory uncertainty, skills shortages and costs of operation optimisation. The recent crude oil price fluctuations between \$149/bbl (July 2014) and \$49/bbl (October 2015) have also contributed to the shaping of the competitive landscape of the oil and gas industry and particularly for the North Sea operators.

The first paper ‘Considerations for Industry-wide Certification of Training in the Oil and Gas Sector of Scotland’ in this special issue introduces the concept of industry-wide certification of training programmes in the oil and gas sector. The main emphasis is being made on the demand and challenges in implementing the industry-wide evaluation of training. This paper introduces an accessible framework of credit rating, which would provide a robust, internationally recognised, quality assured credit system for industry-relevant courses.

The second paper in this special issue, by Georgia Brown of Cairdene Ltd, introduces a solution to the industry-wide demand for strong internal planning resources to coordinate project activities. It utilises the focused, credit-rated training solutions combined with work-based mentoring to support in-house skills development by North Sea operators.

The third paper, by Ritchie Duncan of Augmentic Visualisations Ltd, might be classified as a look into the near future. The author provides an in-depth explanatory account of the potential of augmented and virtual reality technologies for use in the oil and gas industry. One of the discussed uses of these technologies is aiming to address such long-standing industry challenges as effective training in preparing technical staff for work in the harsh conditions of the offshore environment.

The fourth paper, by Frank Cairney of Mintra Training Portal Ltd, provides an analytical view on fostering a ‘safety culture’ environment by oil and gas industry

ISSN 2056-757X

<https://doi.org/10.18646/2056.23.15-008>

players. The paper introduces the potential impact on safety culture by the Control of Work programmes developed within the scope of the Mintra Academy, which takes safety-related training to a new level by making training more contextual and compliant with the industry standards utilising the Scottish Credit and Qualification Framework.

The fifth paper, by Stewart Elder of Oceaneering International Services Limited, analyses the implications of oil price fluctuations for the competitive landscape of the oil and gas industry. It explores the potential of building in-house expertise through accredited training, which is evaluated in the context of companies' skills and capability requirements.

The last paper, by Nuria Camps, a Consultant for the Oil and Gas Academy of Scotland, introduces an exploratory study of skills shortages within the oil and gas industry in Scotland. The paper analyses the perceptions and awareness of school leavers and university students, in relation to prospective careers in the oil and gas industry and how it would relate to the skills shortage issues faced by the industry.