Exploring the opportunities and challenges of AI in managing Major Accident Hazards in high-risk environments.

Motivation:

Artificial intelligence (AI) is increasingly being used to enhance operational efficiency and support decision-making in businesses and operations. At the same time, introducing new technology might introduce new risks not yet understood. In high-risk environments with exposure to major accident hazards, it's crucial to address such potential risks associated with the application of AI in operations. To minimise these risks, we rely on AI having access to relevant, accurate and valid data. It is in everyone's interest to ensure AI solutions are deployed within a secure framework that enables their safe and reliable use.

When applied correctly, AI can become a powerful tool, addressing challenges where human knowledge and attention might be limited. It has the capability to generate ideas and predictions based on large quantities of data, patterns, and trends. Hence, it can provide predictive insight into potential hazards improving the risk understanding.

However, AI can also have some inherent risks. It can produce highly convincing but incorrect outputs, sometimes even confidently wrong, potentially leading to flawed decision making.

One way to mitigate this is to provide predictions with associated measures of uncertainty and explanations, with "human-in-the-loop" feedback in a continuous cycle improving the model. This can minimise the risks while maintaining innovation.

In high-risk industries such as the oil and gas industry, finding the best way to apply AI becomes important.

This session brings together expertise from the oil and gas operators, risk management consulting services, technical IT solution providers and the industry regulator to explore and discuss how to use AI responsibly. We welcome you to join our session join the dialogue.

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