



*Chemeca 2025 and Hazards Australasia  
28 – 30 September, Adelaide, South Australia*

## **Are You in Control? The Bowtie Approach to Risk and Barrier Management**

Foo Yew Jin

Tetra Tech RPS Energy

yewjin.foo@tetrattech.com

### **ABSTRACT**

*In today's dynamic and often unpredictable environment, safety managers face the critical challenge of ensuring that their organizations are prepared to manage major hazards effectively. A fundamental question that arises in this context is, "Are you in control?" To answer this question, safety professionals must first identify potential incident scenarios, assess the barriers in place to mitigate these risks, and evaluate the information available to confirm the effectiveness of these barriers.*

*The Bowtie methodology offers a comprehensive framework for advanced barrier management, enabling organizations to gain a clearer understanding of their risk landscape. By visually mapping out potential hazards and the associated barriers, the Bowtie approach simplifies complex risk scenarios, making them more understandable and communicable across all levels of the organization. This visual representation not only aids in identifying gaps in safety measures, but also fosters a shared understanding of risk management among team members.*

*Implementing the Bowtie methodology allows organizations to take a proactive stance in their safety management processes. By continuously auditing existing barriers and learning from incident data, organizations can ensure that their risk profile remains as low as reasonably practicable (ALARP). Achieving ALARP is crucial, as it enables organizations to protect their employees and assets while balancing safety with operational feasibility. The integration of real-time system data further enhances this process, providing valuable insights that can inform decision-making and drive continuous improvement.*

*In this presentation, I will explore the key principles of the Bowtie methodology, its application in real-world scenarios, and the benefits it offers for organizations striving to enhance their safety culture. Attendees will gain insights into how the Bowtie approach can transform their risk management practices, enabling them to answer the critical question of control with confidence. By fostering a culture of safety and continuous improvement, organizations can not only protect their employees and assets, but also enhance their overall operational resilience in an ever-changing world.*

## KEY WORDS

*Safety Management,*  
*Major Accident Hazards*  
*Bowtie Methodology*  
*Risk Assessment*  
*Barrier Management*  
*Proactive Safety*  
*ALARP (As Low As Reasonably Practicable)*  
*Incident Data*  
*Continuous Improvement*  
*Risk Landscape*  
*Visualising Risk*  
*Safety Culture*  
*Risk Management Practices*  
*Control*  
*Communication*  
*Threats*  
*Consequences*

## BIOGRAPHY

Yew Jin is a trainer, support specialist, and sales point of contact for the Bowtie risk assessment methodology and software. With expertise in safety management and risk assessment, he empowers organizations to effectively manage major accident hazards. Through tailored training and ongoing support, Yew Jin helps clients implement the Bowtie methodology, enhancing their safety processes and ensuring compliance with industry standards. Yew Jin commitment to fostering a culture of safety and continuous improvement equips organizations to navigate the complexities of risk management effectively.

## CONFERENCE PROGRAM

Please indicate which conference program your abstract relates to:

☒ Hazards Australasia

☐ Chemeca