

# The IChemE Safety Centre

## 2017 Annual Report

### Not getting hurt is a basic human right

People have a right to not get hurt, no matter where they are. Sadly, the high hazard industries have not always measured up against this moral imperative and the Institution of Chemical Engineers (IChemE) recognises that eternal vigilance, proactive learning and constant improvement are the price of outstanding safety performance. This was the driving force that catalysed the idea of a new IChemE Safety Centre (ISC) at the beginning of the decade.

The centre will celebrate its fourth birthday at the beginning of next year. It has grown rapidly from its modest beginnings back in January 2014 when six founding partners came together with the aim of creating a new framework for process safety built around leadership across six functional areas.

- Knowledge and competence
- Systems and procedures
- Human factors
- Engineering and design
- Assurance
- Culture

These areas apply to all industries, at all points in the business life cycle. In acknowledging this proposition, the founding partners unlocked a powerful learning process and the ISC began to explore and develop the concept of sharing for safety across different industries.

Today, as 2017 draws to a close, the ISC provides a dynamic network for 30 companies, along with a further 25 supporting partners and collaborators from academia, government and other process safety centres of excellence.

This short report expands on the values and behaviours that underpin our work. It describes our achievements to date and it sets our ambitions for the years ahead. IChemE does not have a monopoly on wisdom and we recognise that safety is not proprietary; that's why the centre aims to share best practice and encourage others to do likewise. Join us on the journey to process safety excellence at the ISC.

Stay safe.

### Trish Kerin

Trish Kerin  
Director, ISC  
September 2017



# Membership

## Operating Partners

These companies are represented on the ISC's advisory board. They set the strategic direction for the centre

- BHP Billiton
- BP
- Conoco Phillips
- ExxonMobil
- Orica
- Origin Energy
- PTTEP Australasia
- Quadrant Energy
- Rio Tinto
- Santos
- Shell
- Todd Corporation
- Vermillion Energy
- Viva Energy Australia
- Woodside

## Industry Partners

Employees from these companies play an active role in the centre's working groups

- Advisian
- Dekra Insight
- ERM
- HIMA
- HRO Solutions
- ioMosaic
- Industry Risk Control
- IRESC Global
- Kelvin TOPSET
- MMI Engineering
- PSRG
- PDV
- Safety Solutions
- Sherpa Consulting
- Yokogawa

## Supporting Partners

These organisations are invited to participate in ISC activity and support our work

- Civil Aviation Authority of New Zealand
- Dalhousie University
- Institute of Chemical & Engineering Sciences (A\*Star)
- Michigan Technological University
- Monash University
- Newcastle University
- Purdue Process Safety & Assurance Center
- RMIT University
- SafeWork NSW
- Universiti Teknologi Petronas
- University of Adelaide
- University of Auckland
- University of Bologna
- University of Canterbury
- University College London
- University of Limerick
- University of Manchester
- University of Melbourne
- University of New South Wales
- University of Sheffield
- University of Strathclyde
- University of Surrey

## Collaborators

ISC seeks to collaborate with other safety centres, and has agreements in place with these organisations.

- Mary Kay O'Connor Process Safety Center
- Center of Safety Excellence
- Center of Advanced Process Safety

## We are a values-based organisation

ISC's operation is guided by a series of underlying values. These have been agreed by our advisory board. All work programmes and activities are benchmarked against these values.

ISC is a thought leader in process safety for the simple reason that creating a world in which the highest standards in process safety are maintained everywhere, at all times, and is absolutely the right thing to do. ISC strives to do what is right and we always want to do things better today than we did yesterday. Our expectations are high and we constantly seek continuous improvement. We will collaborate with others whenever it is appropriate to do so. Process safety depends on partnership and we will respect our partners by keeping our promises and doing what we say we will do.

# A year of progress and delivery

Work programmes are planned and delivered by a series of working groups with leadership drawn from the ranks of ISC partners. Over the last year, the groups have focused on a range of projects and topics.

## New guidance

Ongoing projects include developing guidance on how to achieve competency and how to implement lead metrics. This metrics work will support the ISC in driving consistency in reporting.

## Occupational health and safety

ISC continued its collaboration with the Safety Institute of Australia and in April 2017 two new chapters for the OHS Body of Knowledge on Process Hazards and Managing Process Safety were launched. These are available to download from the OHS website. [www.ohsbok.org.au](http://www.ohsbok.org.au)

## Interactive Learning

The centre launched three interactive case studies in May 2016 on Coal Mine, Gas Plant and Tank Farm. These have been well received and a fourth case study was launched at the Hazards Conference in May. This case study focuses on identifying the true causes beyond the immediate direct cause on an offshore platform. A fifth case study is planned for the end of 2017 on ethical decisions.

## Future of Process Safety

Back in 2016 Trish Kerin hosted a workshop on the Future of Process Safety with Dr Sam Mannan from the Mary Kay O'Connor Process Safety Center at Hazards 26 on the key challenges to process safety. Additional consultations were held in Qatar and Australasia. A working group was created with professionals from industry and academia to develop ideas and strategies to address the key challenges. This work will be initially released in October 2017 at the World Congress of Chemical Engineering Symposium in Barcelona and will be available on the ISC website to download.

## Safety and the next generation

The ISC is leading a project to bring industry and academia together to improve undergraduate engineers' awareness of the fundamental aspects of managing safe process operations. An article by the ISC Director and one of the ISC's Operating partners published an article in *The Chemical Engineer* in its May 2017 edition. The ISC will be working to develop useful resources that will be made available to interested academic institutions.

## Other activity

Our process safety executive education program continues to run successfully around the world both in public courses and customised in company delivery and will continue next year. This demonstrates the interest level for director and senior executives to ensure they understand their due diligence requirements.

As we continue to develop member offerings we will continue to provide ISC member only webinars and networking opportunities for members to meet and discuss process safety.



# Where do we go from here?



*ISC aspires to be a global, go to organisation for process safety benchmarking, sharing best practices, education and an accessible forum for developing solutions to common problems.*

To meet this objective we expanded our staff team this year with Dr Zsuzsanna Gyenes being appointed to the role of ISC Deputy to the Director, focusing on the UK, Europe, Africa and Middle East region and Tracey Abraham joined as International Co-ordinator to support the day to day operations of ISC and manage membership interaction.

**Because nobody should get hurt, anywhere, ever.**

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