

The IChemE Safety Centre

2023 Annual Report

Not getting hurt is a basic human right

The IChemE Safety Centre (ISC) will celebrate its tenth anniversary at the beginning of 2024. It has continued to grow 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 2023 draws to a close, ISC membership provides a dynamic network of 54 operating and industry partners along with a further 51 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 is why the centre aims to share best practice and encourages others to do likewise. Join us on the journey to process safety excellence at the ISC.

Stay safe.

Trish Kerin

Director, ISC
December 2023



Membership

Operating partners

These companies are represented on the ISC's advisory board. They set the strategic direction for the centre. The ISC Advisory Board is chaired by Dr Marlene Kanga AO HonFIChemE FTSE FREng.

- AirServices Australia
- Alcoa of Australia
- Ampol
- Anglo American
- APA Group
- AstraZeneca
- BHP
- BP
- Chevron
- EnQuest
- ExxonMobil
- Fortescue Metals Group
- Jemena
- Methanex
- Oji Fibre Solutions
- Orica
- Origin Energy
- Santos
- Scottish Water
- Shell
- SnowyHydro
- Suez Recycling and Recovery UK
- Todd Corporation
- Viva Energy
- Wessex Water
- Woodside

Industry partners

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

- ACT
- AMOG Consulting
- Arup
- Aurecon Group
- CNA Hardy
- Dekra
- ERM
- Exida
- FM Global
- Gexcon
- Global Industrial Safety Solutions
- HIMA
- ioMosaic
- Industry Risk Control
- IRESC
- Jensen Hughes
- KBR
- PDV Consultants
- Process Safety Verification
- PSRG
- R4Risk
- RAS Limited
- Risk Consult
- Salus Technical
- Safety Solutions
- Sherpa Consulting
- Vanguard Solutions
- Worley

Supporting partners

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

- Aston University
- Civil Aviation Authority of New Zealand (CAA)
- Latinamerican Council for Process Safety (CSP)
- Dalhousie University
- Fujairah Oil Industry Zone (FOIZ)
- Government of South Australia
- Heriot-Watt University
- Institute of Sustainability for Chemicals, Energy and Environment (ISCE2)
- Ministry of Environment and Food of Denmark
- Michigan Tech
- Monash University
- Newcastle University
- Norwegian Directorate for Civil Protection
- Oil and Pipelines Agency
- Petroleum Safety Authority Norway
- Purdue Process Safety & Assurance Center (P2SAC)
- Queen's University Belfast
- Queensland University Technology (QUT)
- RMIT University
- SafeWork NSW
- Singapore Institute of Technology
- Universiti Teknologi Petronas
- University of Aberdeen
- University of Adelaide
- University of Auckland
- University of Bath
- University of Bradford
- University of Canterbury
- University College Cork, Ireland
- University College Dublin
- Università degli Studi Dell'Insubria
- Università di Bologna
- University College London
- University of Greenwich
- University of Leeds
- University of Limerick
- University of Manchester
- University of Melbourne
- UNSW Sydney
- University of Patras
- University of Sheffield
- University of Southampton
- University of Strathclyde
- University of Surrey
- University of Toronto
- University of Western Australia

Collaborators

The ISC seeks to collaborate with other safety centres and has agreements with these organisations.

- Mary Kay O'Connor Process Safety Center
- Center of Safety Excellence
- Centre of Advanced Process Safety
- Jordan Engineers Association (JEA)
- Energy Institute (EI)

We are a values-based organisation

The 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.

The 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, 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 partnerships, and we will respect our partners by keeping our promises and doing what we say we will do.

A year of progress and delivery

New guidance and white paper

The ISC released guidance for a risk-based audit programme, a supplement to the ISC guidance document *Lead Process Safety Metrics – selecting tracking and learning 2015*. This guidance provides context for the lead metric 'number of process safety related audits to plan' and 'number of non-conformances found in process safety audits'. The guidance is intended to complement existing publications in the areas of metrics and audits by providing guidance to enable a company to measure the effectiveness of its audit programme.

The ISC issued a white paper *Hazards from Emerging Technologies in the Energy Transition*. The ISC members undertook a member survey to understand the hazards associated with emerging technologies and reviewed whether companies have the right tools to manage them. The survey highlights that the existing risk assessment methods are effective for identifying and mitigating hazards associated with emerging technologies and that organisations should continue to utilise these methods to ensure safe and responsible development and implementation of emerging technology hazards.

Ongoing projects

The Risk Assessment Methodologies Project is undergoing a review and restructure and it is expected to be available in early 2024.

New projects

In 2024 we will commence with three new projects (Management of Change, Transient Operations Risk Assessment and Digitalisation). *The Management of Change Project* will develop guidance that focuses on understanding what elements need to be reviewed as part of the assessment process with a focus on the cumulative impact of a change and this expands on creeping change as a concept. It will focus on the practical application and what are the leadership behaviours needed to make it work effectively. *The Transient Operations Risk Assessment Project* will produce guidance to assist companies to plan and undertake transient operations risk assessments where appropriate. *The Digitalisation Project* will examine the use of digital techniques in process safety, seeking to understand effective applications.

Process Safety Leadership and Culture Programme

Since the development of the Process Safety Executive Education Programme this has been run over 55 times and involved almost 600 participants. This continues to run successfully around the world both in public courses and customised in company delivery and will continue next year. In 2023 this program was delivered five times in five countries.

Membership and Social Media Growth

The ISC began in 2014 with six members and membership has slowly risen over the years. However, 2023 saw a phenomenal rise from 91 members to 105, an increase of over 15%.

Since 2020, the ISC has produced a range of incident anniversary videos targeted towards a social media audience. We continued to produce these short videos across 2023 and the content is well received. Our social media impact continues to grow month on month, with an average of 16% growth over the different platforms in 2023.

Ethics in Safety

In March 2023, the ISC held an event on Ethics in Safety where a panel were invited to discuss their real-life stories and experiences with ethical decisions. The panel consisted of Dame Judith Hackitt, Professor David Bogle (past President IChemE), Dr Steven Flynn, Trish Kerin and Craig Wright.

International Process Safety Week

In 2023, the Center for Chemical Process Safety (CCPS), IChemE Safety Centre (ISC), Mary Kay O'Connor Process Safety Center (MKOPSC), Fire & Blast Information Group (FABIG) and the European Process Safety Centre (EPSC) announced that they plan to develop an ongoing annual event on raising awareness for process safety at an international level. The plan is for a week-long series of virtual events that will take place in the first week of December. This event will kick off in December 2024.

Other activity

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



Where do we go from here?



The IChemE Safety Centre is committed to continuing to develop and share useful resources in process safety so that everybody, no matter where they are can access the information. These resources need to play their part in improving process safety outcomes. Because nobody should get hurt, anywhere, ever.

We welcome your support and input to our valuable work. Please contact us if you would like more information on the ISC, its work or how it may add value to your organisation.



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