

The IChemE Safety Centre

2020 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 seventh anniversary 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 2020 draws to a close, the ISC provides a dynamic network for 41 companies, along with a further 40 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 encourage others to do likewise. Join us on the journey to process safety excellence at the ISC.

Stay safe.

Trish Kerin

Director, ISC
December 2020



Membership

Operating partners

These companies are represented on the ISC's advisory board. They set the strategic direction for the centres. The ISC Advisory Board is chaired by Ms Margaret Donnan.

- AusGrid
- BHP, Marcus Lemin
- BP
- Chevron, Ryan Couzens
- EnQuest, John Penrose
- ExxonMobil, Kent Alexander
- Jemena
- Oji Fibre Solutions
- Orica, Paul Cornford
- Origin Energy, Patrick Murphy
- Petronas
- Rio Tinto
- Santos
- Shell, Damian Peake
- SnowyHydro
- Todd Corporation
- Unilever, Jonathan Jett-Parmar
- Viva Energy, Emma Stuart
- Water Corporation
- Woodside

Industry partners

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

- Acting Consulting Training (ACT)
- AMOG Consulting
- Arup
- CNA Hardy
- Dekra
- Exida
- FM Global
- HIMA
- ioMosaic
- Industry Risk Control
- IRESC Global
- KBR
- PDV Consultants
- PSRG
- Process Safety Verification
- R4Risk
- RAS Limited
- Risk Consult
- Safety Solutions
- Sherpa Consulting
- Worley

Supporting partners

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

- Aston University
- Civil Aviation Authority of New Zealand
- Dalhousie University
- Government of South Australia
- Institute of Chemical & Engineering Sciences (A*Star)
- Latinamerican Council for Process Safety (CSP)
- Ministry of Environment and Food of Denmark
- Michigan Technological University
- Monash University
- Newcastle University
- Norwegian Directorate for Civil Protection
- Oil and Pipelines Agency
- Petroleum Safety Authority Norway
- Purdue Process Safety & Assurance Center
- Queensland University Technology (QUT)
- RMIT University
- SafeWork NSW
- Singapore Institute of Technology
- Universiti Teknologi Petronas
- University of Adelaide
- University of Auckland
- University of Bath
- Università di Bologna
- University of Canterbury
- University College Cork
- University of Greenwich
- University College London
- University of Leeds
- University of Limerick
- University of Manchester
- University of Melbourne
- University of New South Wales Sydney
- University of Patras
- University of Sheffield
- University of Strathclyde
- University of Surrey
- University of Toronto

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
- Centre 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

With the COVID-19 pandemic, many plans and events had to be cancelled which included face to face events with the ISC team and presence at global exhibitions, but this did not mean that process safety or the need to manage it took a break. The ISC adapted our delivery methods and found new ways to engage with members and non-members alike.

Webinars

The ISC team hit the ground running when travel restrictions and lockdowns commenced. In any typical year, the ISC would deliver four webinars, from March 2020 until November 2020 we delivered over 30 webinars, including some being translated into Spanish. Topics ranged from Safety Lore, Leadership and Safety in uncertain situations, human factors, and culture, applying process safety during concept select and lessons from regulators to name a few. Attendance and views of webinars were well into the thousands and spread across the six continents.

New guidance

The COVID-19 pandemic has created unprecedented challenges for all and consideration of new and different ways of working to ensure that major incident risks were well managed.

Following feedback from ISC member organisations, supporting partners and regulators, the ISC collated a collection of various good practices and pitfalls to avoid and to help organisations manage during the COVID-19 pandemic. These papers are available for download from our website. Dr Zsuzsanna Gyenes was invited to the Organisation for Economic Co-operation and Development Working Group on Chemical Accidents (OECD WGCA) virtual conference to present on these COVID-19 papers covering both industry and regulator response.

The ISC completed the supplementary guide – how to build and develop process safety competence. It provides an example of the tasks and activities that could be undertaken to achieve the relevant level of competence in the range of competence topics defined in the 2nd edition of the Process Safety Competency Guidance document.

The ISC released guidance on Applying process safety during concept select phase of a project. This is our first guidance document in the Engineering & Design functional area.

Ongoing projects include Delta Hazop, roadmap to resources and developing the supplementary guidance documents on metrics – alarm rationalisation and permit to work.

Work continues on some new ISC Case Studies, which we look forward to sharing with you soon.

Social media

From the start of 2020 the ISC had produced a range of incident anniversary videos targeted toward a social media audience. This meant that when the various COVID-19 impacts occurred around the world, we were ready with high quality content to help companies continue to promote process safety. This content was very well received and saw the number of social media followers rapidly increase across all our channels. We post content across LinkedIn, Facebook, Twitter, Instagram, and YouTube, making our resources easily available for people.

Safety and the next generation

ISC is working to develop useful resources that will be made available to interested academic institutions.

Other activity

Due to the ongoing pandemic, the ISC were involved with fully interactive virtual events. While this was certainly a very different way to both present and engage at conferences, we still saw interest generated in our work and continued to build recognition of our resources. We continued to engage with members all over the world, delivering webinars and providing virtual facilitation of ISC Case Studies.

At the direction of the IChemE Board of Trustees, the ISC has led the establishment of IChemE's Major Hazards Committee. This committee sits within IChemE Learned Society activities. This committee is chaired by the ISC Advisory Board Chair, Ms Margaret Donnan and brings together representatives from across the IChemE membership. It includes the Safety and Loss Prevention Special Interest Group, the IChemE Safety Centre member companies, the Hazards Committee, the Loss Prevention Panel and Process Safety and Environmental Protection Journal editorial board. This purpose of the committee, as stated in its Terms of Reference is as follows:

The Major Hazards Committee (MHC) is the volunteer body that leads major hazards strategy within IChemE.

The MHC provides an environment where the agendas of the different IChemE major hazards groups involved can be communicated, coordinated, and aligned to an overarching IChemE major hazards strategy. The MHC will develop and set the strategies that will result in promotion of good practice and continual improvement in major hazards management across industry.

Major Hazards includes the elements of process safety.

Where do we go from here?



The year 2020 has provided immense challenges, no matter where you are. Effective management of process safety has remained as important as ever, and there has been an increased focus on leadership at this time. 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 they 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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