

## Learning from Incidents: Research with Shell International & Energy Institute

This industry-academia research project was led by the Caledonian Academy at Glasgow Caledonian University. Industry partners included the Energy Institute, Shell, and Conoco Phillips. The project developed new approaches to enhancing learning from health and safety incidents in the workplace. The research was conducted across industrial sites at the Shell Mossmorran Gas Plant and the Conoco Phillips Humber Oil Refinery, both in the UK. The aims were to:

- Find ways of improving learning from incidents in the workplace;
- Transfer learning from incidents to the workplace through a participatory methodology involving key staff;
- Improve HSE results by promoting deep and active learning.

### Starting point

We hypothesised that incidents would be reduced in a culture of continuous learning across organisations. By implementing a participatory Change Laboratory Method, employees would improve their understanding of why incidents occurred and how they might be prevented in the future. Connecting organisational learning with practice would help develop safer workplace environments and create generative organisations within the energy sector.

### Action research

Through a baseline study, we determined the factors that improved learning from incidents and reduced the number of incidents at each site. We identified key factors that impacted upon Learning from Incidents (LFI) and developed a framework to enable holistic implementation and analysis of LFI initiatives. Based on this baseline data, we redesigned practice in partnership with key staff at each site. We used a method known as the Change Laboratory. Frontline staff were actively

involved in diagnosing and solving issues at each site.

### Impact

Redesigned practices were implemented as interventions in the testbeds. Cross sectional case studies were developed, together with recommendations on implementing the interventions across the energy sector. The main outputs of the project were the LFI Framework and the LFI Process Model that can be used in companies to guide improvements in LFI processes and practices.



Figure 1 LFI Framework

### Project team

Dr Dane Lukic, Research Fellow  
Professor Allison Littlejohn, Director  
Dr Anoush Margaryan, Senior Lecturer  
Caledonian Academy, Glasgow Caledonian University

<http://www.gcu.ac.uk/academy/>

### Industry collaborators

Dr Mark Scanlon, UK Energy Institute  
Mr Peter Jefferies, Conoco Phillips  
Mr Tyne Archer, Shell International

**Timescale:** 2008-2011

### The Caledonian Academy

The Caledonian Academy is a research centre in Technology Enhanced and Professional Learning at Glasgow Caledonian University, UK.