



Oil & Gas  
Authority

# Importance of TOPSIDES in Delivering MERUK

**Gunther Newcombe**  
Director  
Exploration & Production

**Topsides Conference**  
March 2016



# Outline

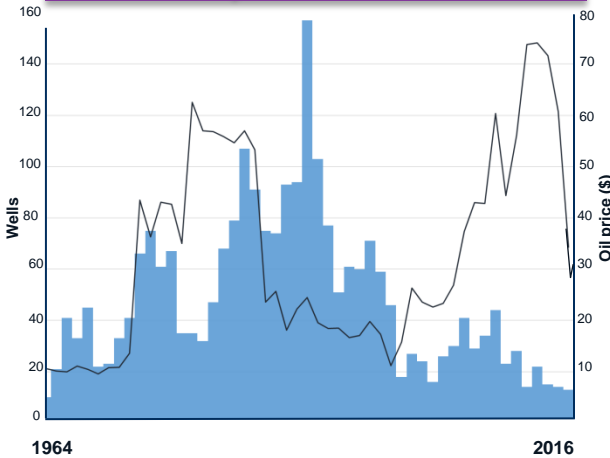
- UKCS & OGA Context
- MERUK Topsides Approach
- Topsides Focus Areas
- Key Messages



# UKCS Context

## Exploration

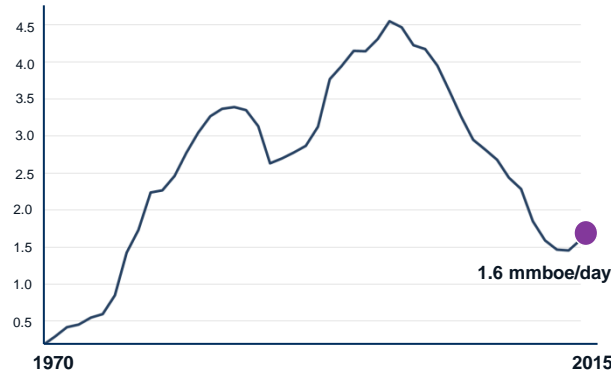
### Exploration wells



**Notable success 2015**  
 60% success at \$6/boe  
 > 150 mmboe discovered

## Production

### Daily production

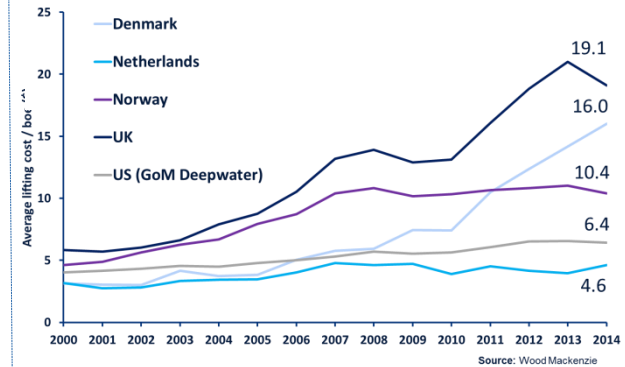


Production up by >9%  
 with new fields & PE  
 increase to nearly 70%

43bn barrels recovered  
 Up to 20bn barrels remaining  
 70% of UK's total primary energy

## Costs

### Average lifting cost per barrel (£)



Operating efficiency  
 improvements

OPEX reduction \$30/boe to \$16  
 Sustainable transformation next

**Difficult environment with low oil price but turnaround evident**

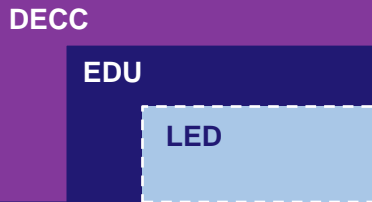


# Building the OGA

## Evolution of the OGA

Calendar

Historically



Framework Document

Calendar

April 2015



Energy Bill 2015

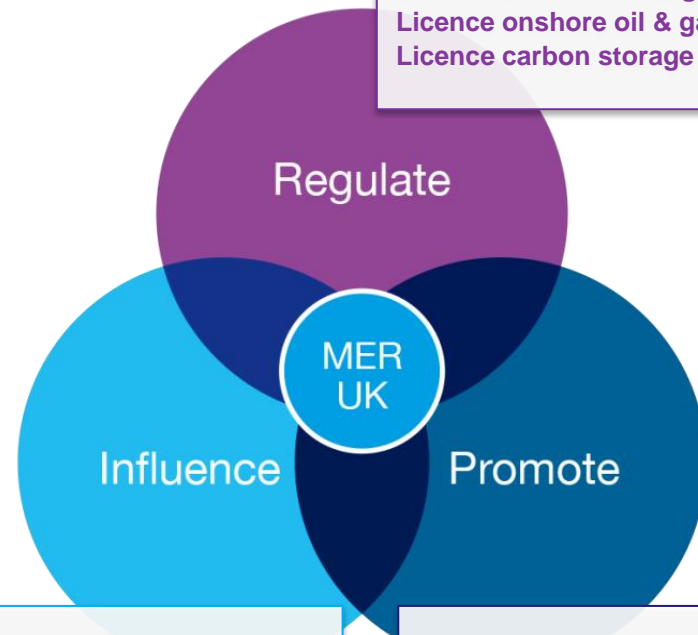
Calendar

Summer 2016



## About the OGA

Licence offshore oil & gas  
 Licence onshore oil & gas  
 Licence carbon storage



Industry culture  
 Commercial behaviour  
 Greater collaboration

Investment in UKCS  
 Value creation  
 Industry development

Energy Bill in Parliament & MERUK Strategy & Corporate Plan issued



# MER UK Boards

**Purpose**

**Deliver tangible benefits in support of MER UK**

**Objectives**

- Developing strategic approach & 5 year plans
- Deliver tangible and quantifiable results
- Tripartite approach with industry, regulator & government

**MER UK Boards**

<b>Exploration</b>	<b>Asset Stewardship</b>	<b>Regional Development &amp; infrastructure</b>	<b>Cost &amp; Efficiency</b>
Phil Kirk, Chrysaor	Ray Riddoch, Nexen	Paul Goodfellow, Shell	John Pearson, AMECFW
Gunther Newcombe	Gunther Newcombe	Gunther Newcombe	Stephen Marcos-Jones
	<b>Technology</b>	<b>Decommissioning</b>	<b>Supply chain, exports &amp; skills</b>
	Paul White, GE	Colette Cohen, Centrica	Neil Sims, Expro Group
	Angela Seeney	Angela Seeney	Angela Seeney

 **Topsides Focus**

**Frequency**

Quarterly

**Support**

OGA / OGUk

 Industry lead  Support lead

**Meetings with Government, Industry & Regulator 3 times per year**



# OGA Asset Stewardship

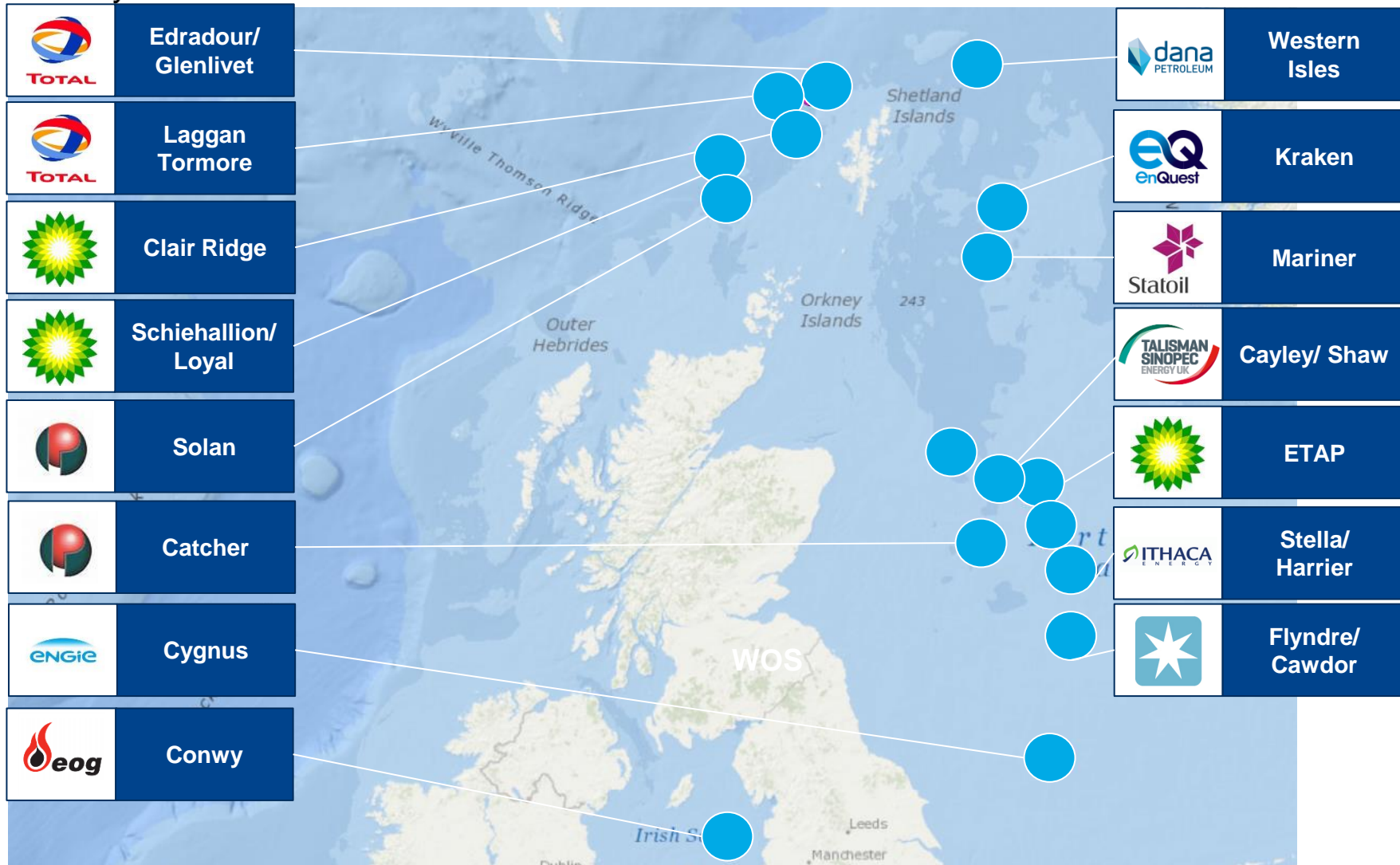
<b>Sector strategy</b>	Work with industry to develop an asset stewardship strategy and framework	Q2 2016
<b>MER UK Board</b>	Establish and sustain the MER UK Asset Stewardship Board with clear priorities	H1 2016
	Consider ways to improve asset integrity and project management	Q3 2016
<b>Improve field information</b>	Update FDP and Cessation of Production (COP) documentation, streamline approval processes and introduce annual review process for approved FDPs to ensure commitments are being fulfilled and value maximised	H1 2016
<b>Enhanced Oil Recovery (EOR)</b>	Issue an OGA EOR strategy to industry	H1 2016
	Deliver strategy to facilitate sanctioning of up to 250 mmboc of additional reserves through polymer, low salinity water-flood activity and other secondary recovery opportunities	Q1 2021
<b>Cost and efficiency</b>	Support operators to understand key cost drivers in order to develop industry-wide solutions to safely reduce OPEX by 30%	Q4 2018
<b>Performance</b>	Implement operator scorecard process and ensure performance is improved through effective transfer of lessons learnt	Q1 2016
<b>Late-life asset management</b>	Begin working with operators to ensure the future use of upstream and midstream infrastructure is considered fully prior to COP	H1 2016
<b>Contracting strategies</b>	Work with operators to ensure contracting strategies are robust and fair	Q3 2016

**A number of key areas focus on topsides delivery**



Oil & Gas Authority

# UKCS Projects

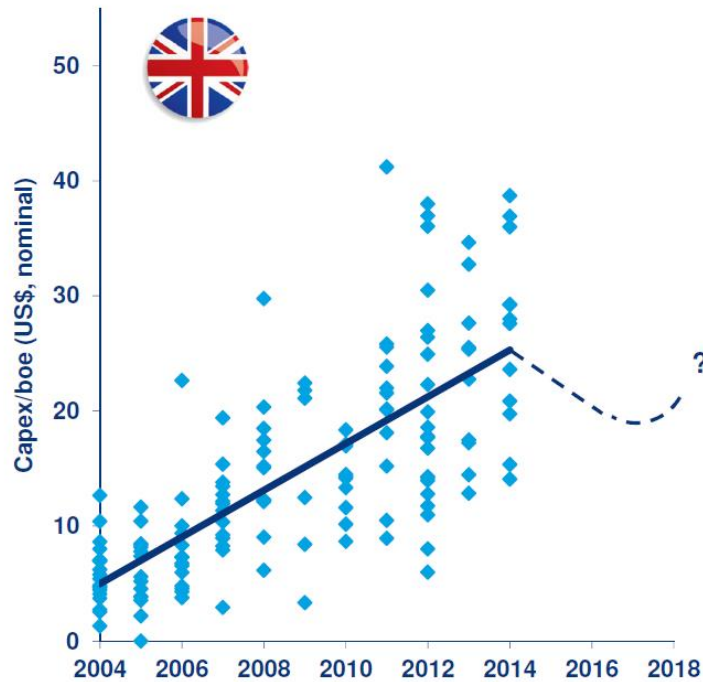


**Brownfield & Greenfield Project Delivery Sub-Optimal**

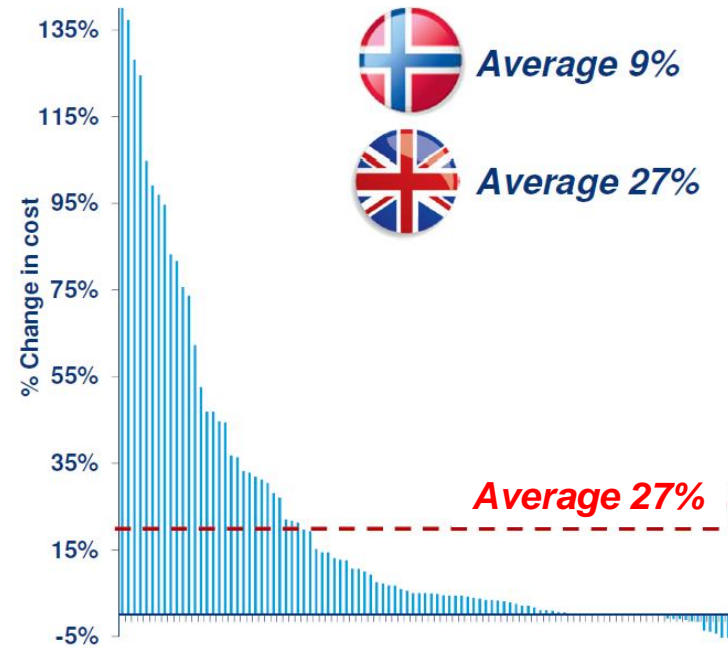


# Project Costs

Cost trends for UK assets – capex in year of sanction



Budget overspend on average in the UK vs Norway



**UKCS Project Cost Management needs improvement**





# Projects Collaboration



## Purpose

Deliver tangible, relevant & cost effective initiatives to the Oil & Gas Industry which will help promote, support and develop collaboration and trust in Project Delivery

## Objectives

1. To encourage & guide Industry to adopt Collaborative working techniques in Projects
2. To deliver Project Management knowledge resources which support cost and delivery efficiency
3. To share knowledge and good practice in Leadership and Behavioral competence

## Core areas

How to Collaborate & Trust

Challenging Blockers

Efficiency & Waste Reduction

Knowledge Sharing

## Strategy

### Collaboration

Development of a 'Project Management Toolkit – Principles of Collaboration for Project Managers'

### Blockers

'Challenge & Change' ½ day workshops by Leading experts and captured as online videos to share

### Efficiency & Waste

The mind-set of Lean in Oil & Gas Projects  
  
Technology & Case Studies from other sectors.

### Knowledge Sharing

Continued developed of Project Management Microsite for online Learning Resource with 'Experience Exchange' portal

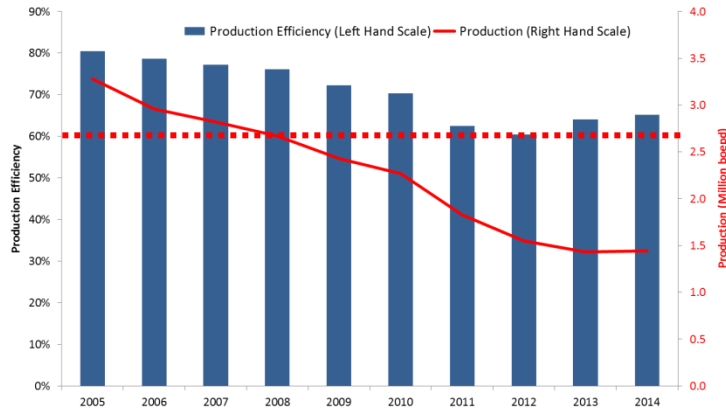
Contact Keith Scott ([keith.scott@petrofac.com](mailto:keith.scott@petrofac.com))

**ECITB Work Group established in 1Q 2016**

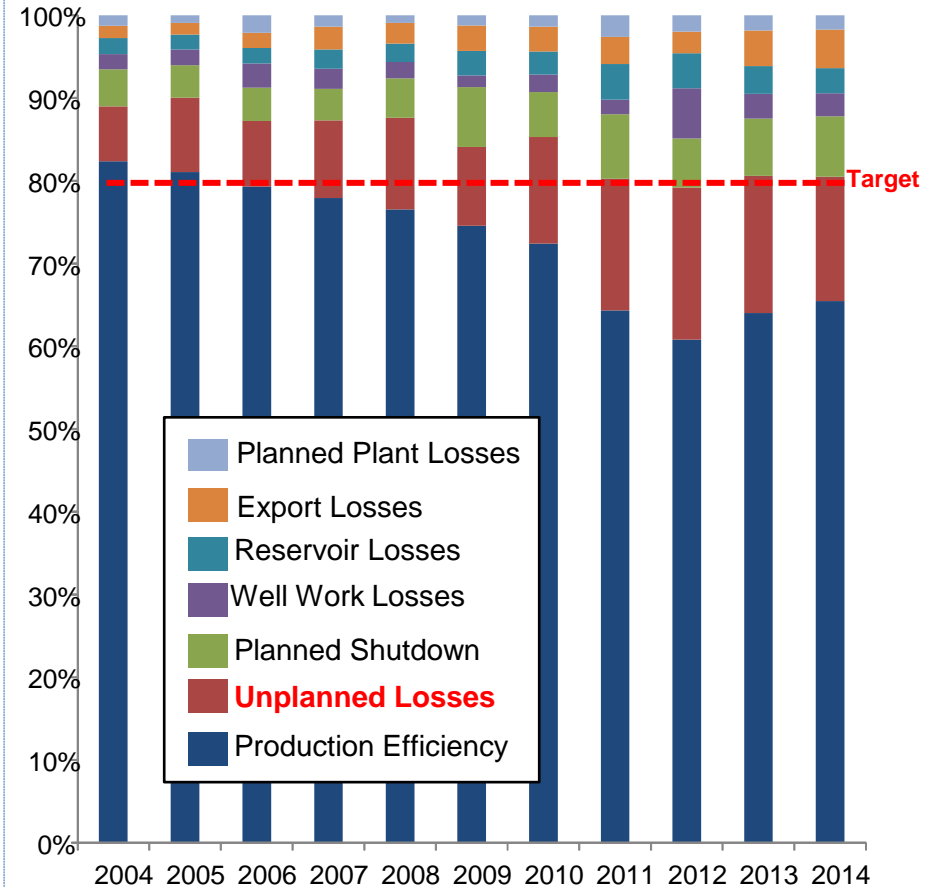


# Production Efficiency

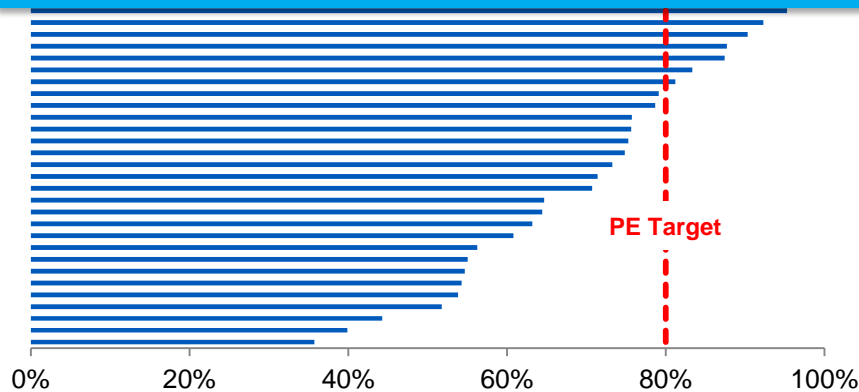
## UKCS Production & PE



## Loss Areas



## Top 20 PE Performance



Unplanned losses are major cause of production loss



# Improved Production Efficiency

## Enhanced stewardship strategy


- Senior leadership commitment from MDs
- Increased transparency on data and plans
- Stewardship across each lifecycle stage

## Data-driven approach

- Track and review 'company scorecards'
- Leading and lagging performance indicators
- Increase efficiency, value and accountability

## Managing late-life assets

- MER UK approach upstream and midstream
- OGA enhanced oil recovery strategy
- Early planning for decommissioning



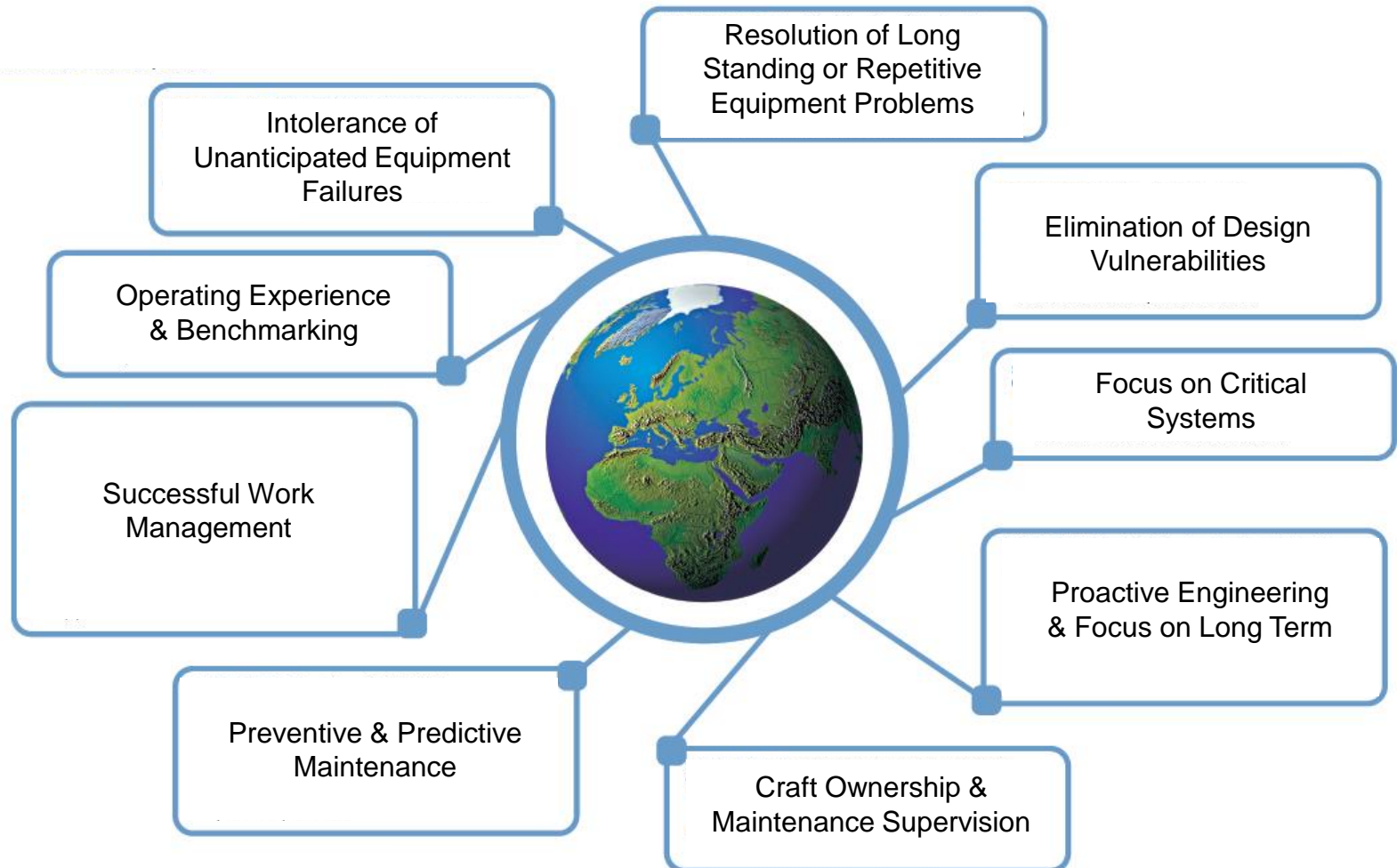
Nexen delivered a 40% improvement in water injection rates and 30% improvement in productivity

Golden Eagle

**Some great examples ....and still room for improvement**



# Equipment Reliability

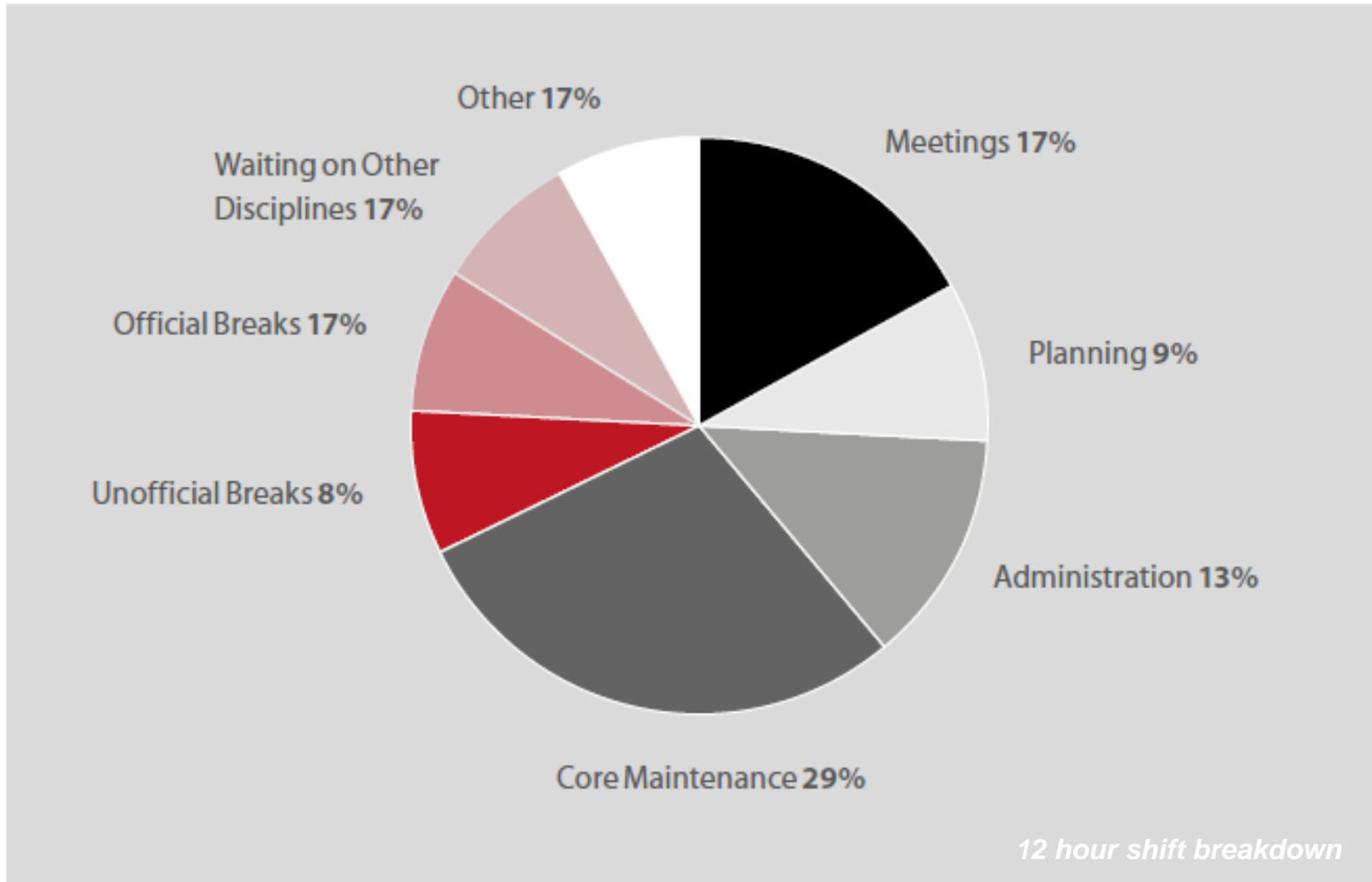


Contact [brian.cowell@edf-energy.com](mailto:brian.cowell@edf-energy.com)

**Common success factors in Nuclear Industry**



# Wrench Time



**Engagement of workforce critical for improving performance**

## Technology Leadership Board Key Themes



Small Pool Development



**Asset Integrity**

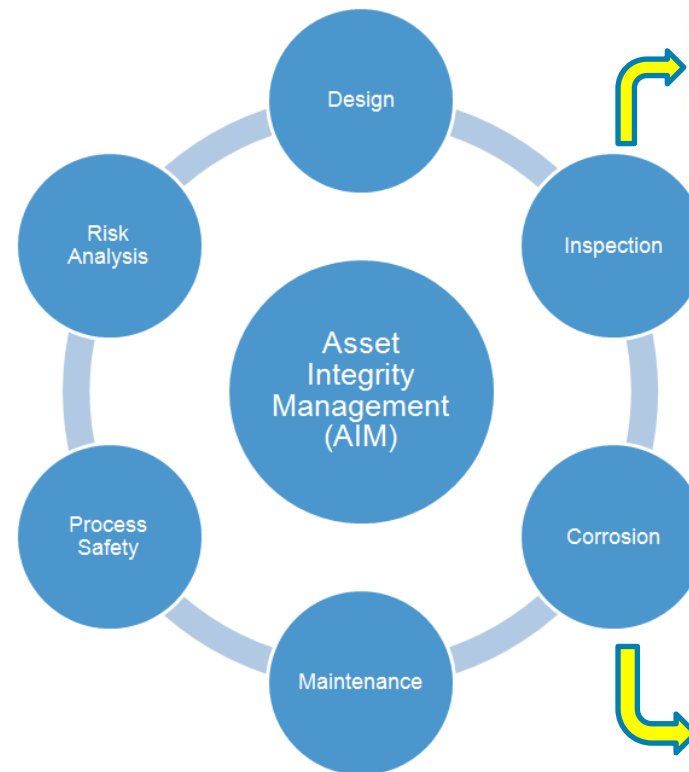


Well Construction



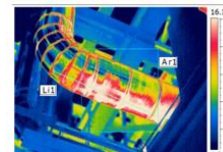
Decommissioning

## Asset Integrity Management



**Non-Intrusive  
Inspection**

**Corrosion Under  
Insulation**



**Technology application improving value**



## Vessel Inspections

- Major contributor to production downtime
- Often involves personnel entry into confined spaces
- Systems should be depressurised, isolated and gas-freed before maintenance work is carried out
- Hazardous and costly process which leads to minimising the frequency of inspections



## Corrosion Under Insulation



- CUI is responsible for up to 60% of pipe leaks in resulting in huge value loss
- Asset Integrity is a key ingredient to Maximising Economic Recovery (Sir Ian Wood, Final Report 2014)
- UK onshore & offshore process plant infrastructure is a vital asset for maintaining economic production

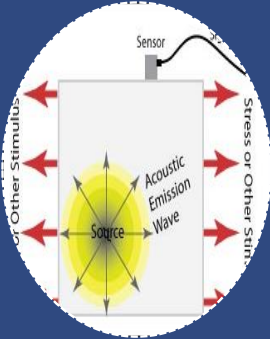
**Innovative approach to inspections & CUI will improve efficiency**



# Technology Screening



Sniffer Dogs



Acoustic  
Emission



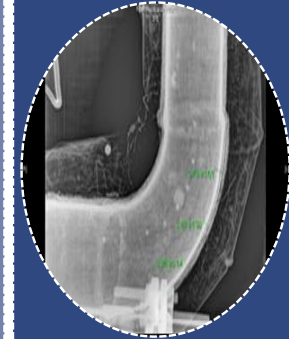
Ultrasonics



Pulsed Eddy  
Current



Guided  
Wave  
Ultrasonic



Radiography

A wide range of techniques and maturity

Technology opportunities include transfer from other industries

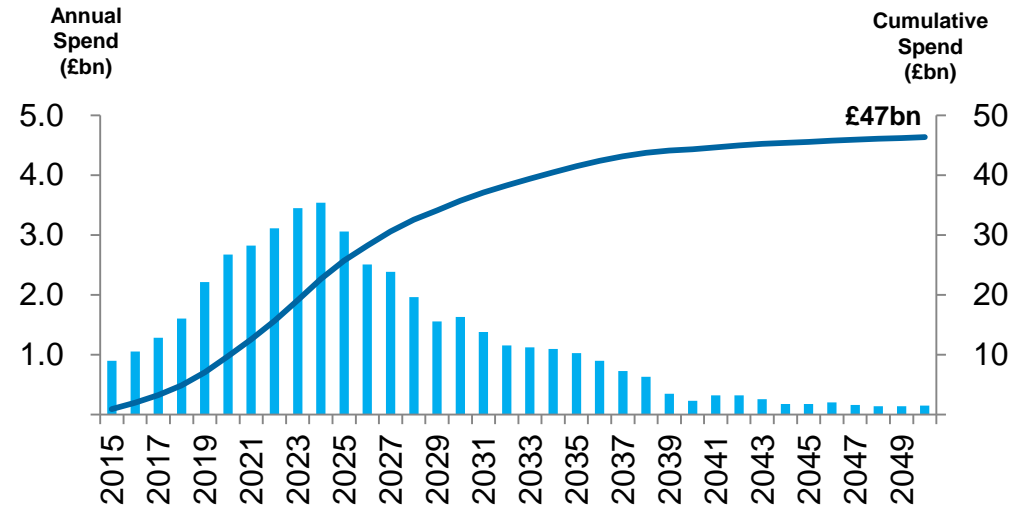




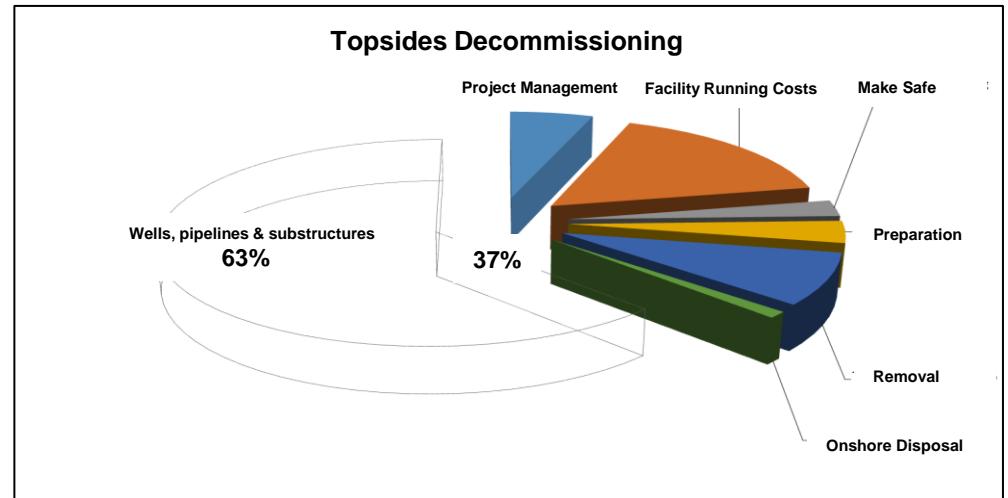
# Decommissioning



Conventional Lift



Piece Small



**Good planning & regional approach can offer significant savings**



# Key Messages

- OGA working closely with Industry & Government to deliver MERUK
- Delivering efficient topside performance is critical
- Focus on all aspects of topsides from design, efficient operations to decommissioning
- Challenge on industry to share more best practices & verify improvements

**Focus will make a difference**