

UK Onshore Pipeline Operators Association

Pipeline Process Safety and UKOPA Benchmarking

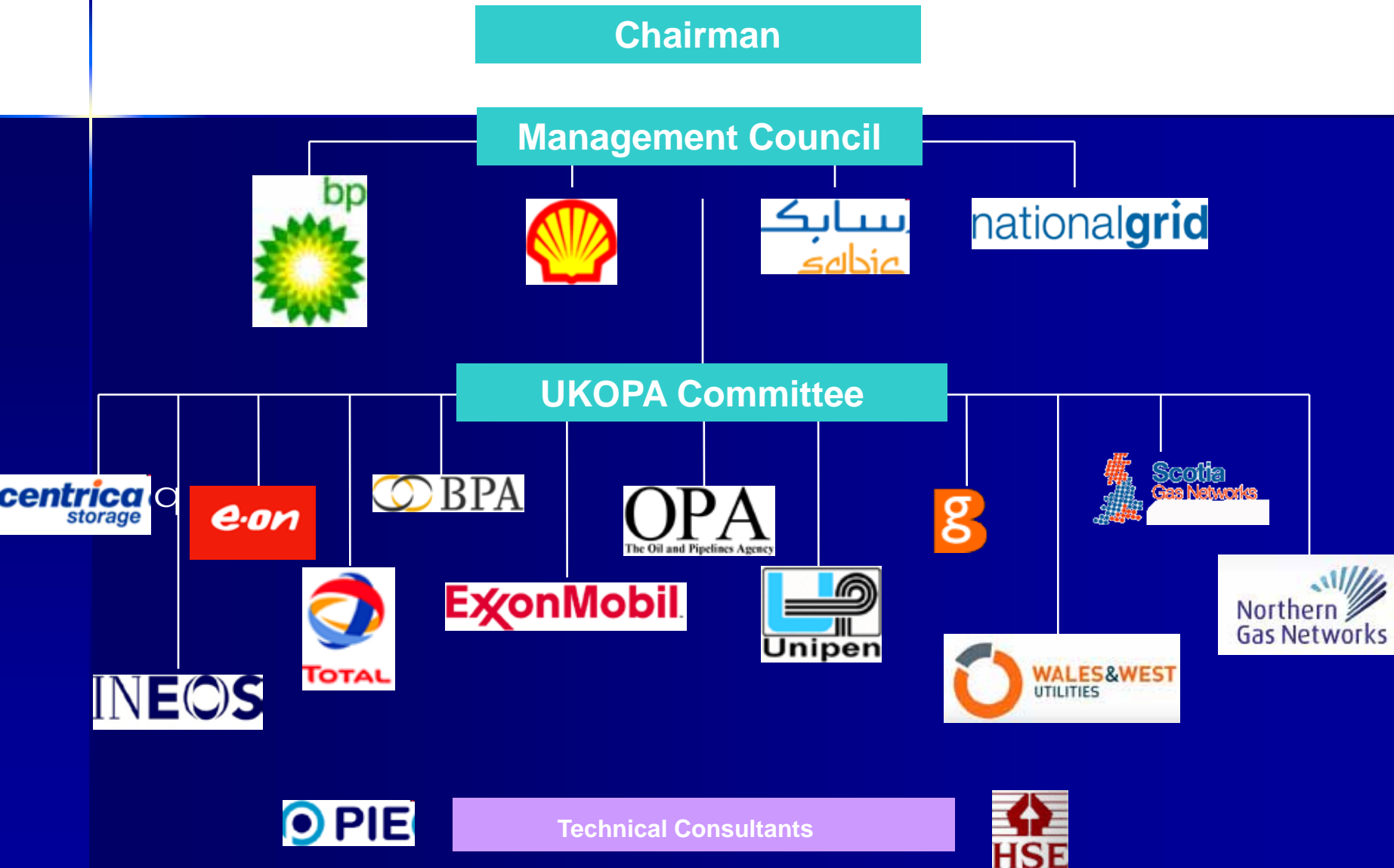
Roger Ellis
Pipeline Manager

Shell UK Stanlow



UK Onshore Pipeline Operators Association

- Who am I, Roger Ellis
- What is UKOPA
- UKOPA process safety benchmarking
- How the information has been used
- Future plans



UKOPA STRATEGY

Safe Operation of Pipelines

Management of Risks Associated with pipelines

Sharing of experience and promoting best practice

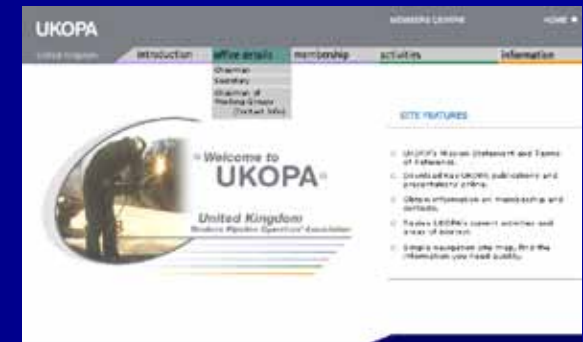
Single Industry Body and influencing statutory legislation

Codification of best practice



UKOPA Working Groups

1. Fault Data Management
2. Risk Assessment
3. Emergency Planning
4. Process safety
5. Infringement



What is Process Safety ?



Piper Alpha

July 1988

167 of the 228 people onboard were killed.

What is Process Safety

“Process Safety” is a collective name for the measures, systems, procedures or policies which prevent incidents and/or protect people/ environment from effects of Major Accidents

What do we mean by Major Accidents ?

- Multiple Fatalities
- Significant effect on the Environment
- Major news items

High consequence – low frequency events

What does Process Safety mean to UKOPA ?

UKOPA Members

Operate 22,000+ km of major
accident hazard pipelines

- **World Wide - Increased focus**

Belgium Gas Pipeline Failure 2004

- 3rd Party Damage – 21 died

BP Texas City 2005

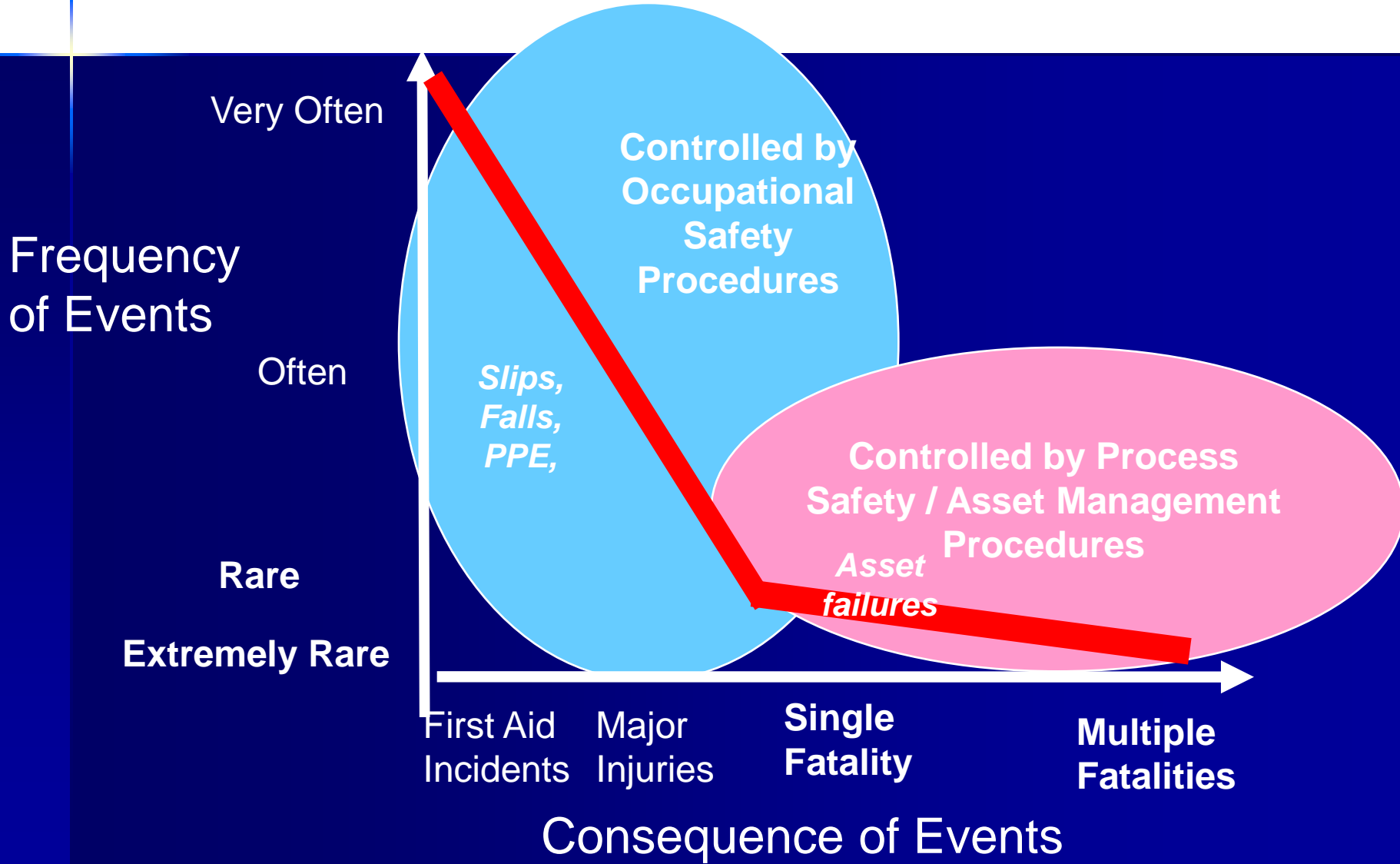
- 15 died 180 injured

Buncefield Explosion 2005

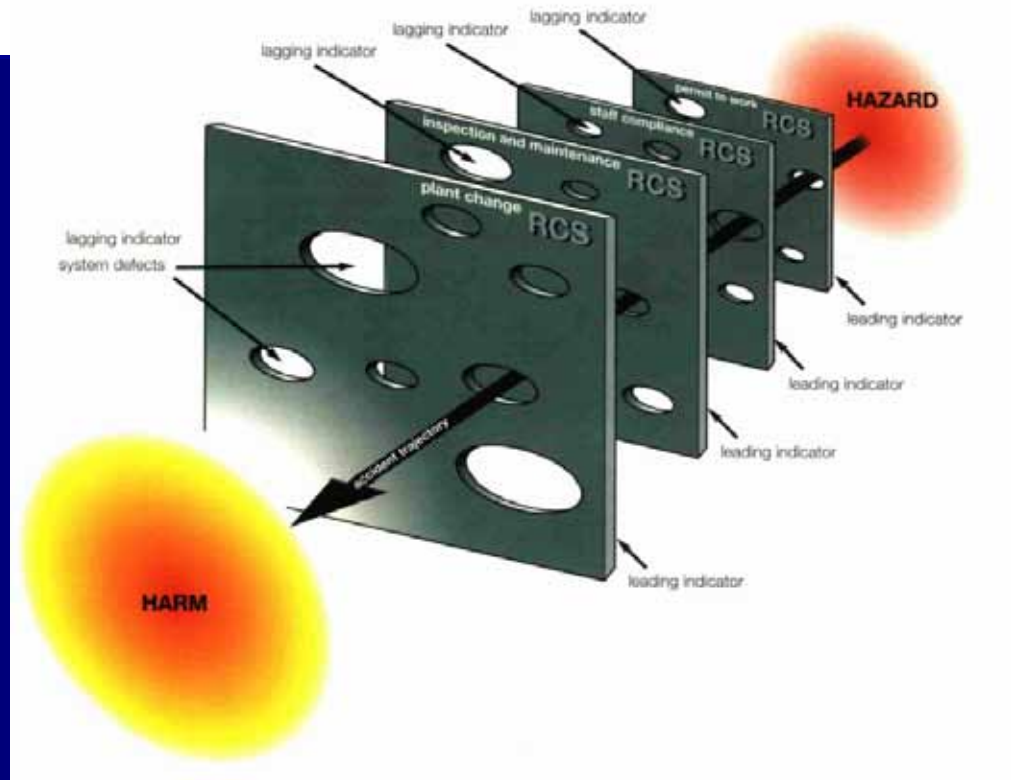
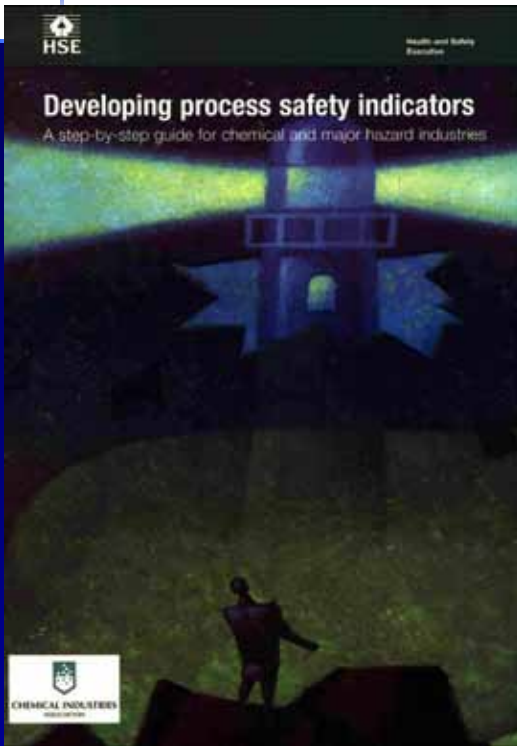
- 40 Injured
- major environmental incident



Comparison – Occupational Safety and Process Safety



Measuring Process Safety Performance

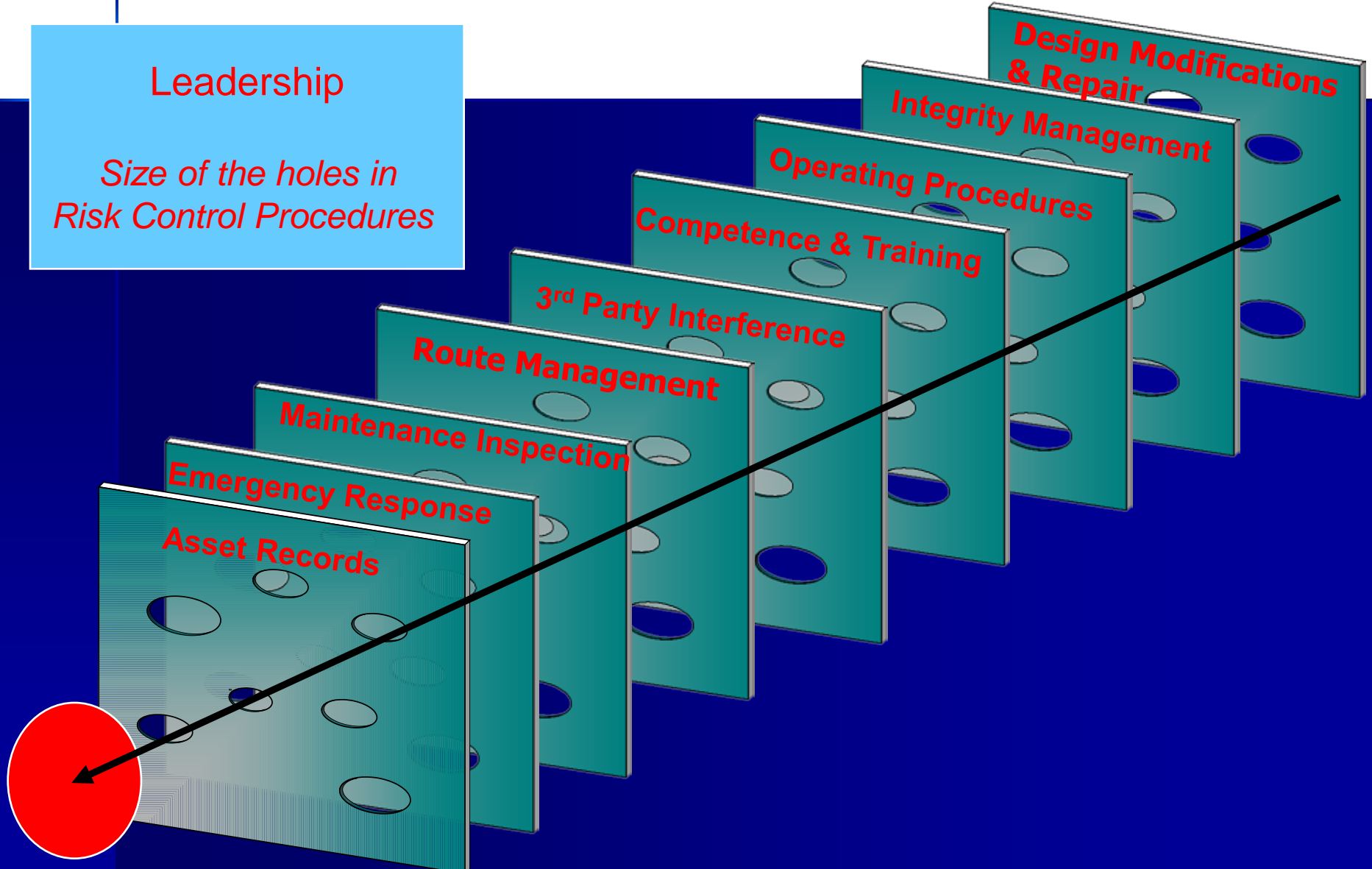


Measure whether risk control barriers are in place and effective – dual assurance of leading and lagging indicators

Pipeline Operators - Risk Control Areas

Leadership

Size of the holes in Risk Control Procedures



Design Modifications & Repair

Integrity Management

Operating Procedures

Competence & Training

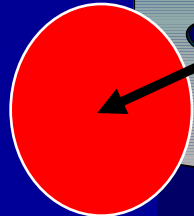
3rd Party Interference

Route Management

Maintenance Inspection

Emergency Response

Asset Records



Example - 3rd party damage for Pipelines

Description	Leading KPI Indicator	Lagging KPI Indicator
Procedures in place and implemented to avoid 3 rd party damage	Km of aerial surveillance undertaken to schedule	Number of significant sightings (A1& B1)
	Km of vantage point surveys undertaken to schedule	
	No. of landowner liaison letters dispatched on time and response followed up in 12 months	Number of third party interference damages to pipelines
	No. of contacts with statutory bodies, local authorities etc. undertaken to schedule	
	No of queries where response time to 3rd Party Enquiry <5 Working days	
No. of Marker Post replaced in period	No of Marker Post identified as missing through aerial survey and vantage	

UKOPA Actions

Developed some example Leading and Lagging KPIs

KPI based on each members Control System

Control system varies

- Size of pipeline network

- Interface with upstream and downstream operators

- In house or out sourced management of the pipeline network

Unable to compare performance and effectiveness

UKOPA Approach to Process Safety Improvement

Developed a Self Assessment Tool to allows members to assess their control measures and identify improvement areas

Process Safety Assessment Tool (PSAT)

10 control areas apply to all pipeline operators

Questions require each Operator to evaluate their performance



Process Safety Assessment Tool 
Onshore Pipeline Operator's Association

Comprehensive Assessment 324 Questions covering the 10 Areas

Route Management – 28

Asset Records – 40

Operating Procedures 40

Competence and Training -20

Emergency Response – 56

Leadership -19

3rd Party Interference Management – 37

Modification and Repair Process – 17

Maintenance and Inspection – 41

Integrity management -26

UKOPA
United Kingdom

PSAT

Route Management

Route Management Example Questions

Line Walk

Do you carry out line walks to assess markers posts / ground conditions etc?

Not at all

Over 4 years

Between 2-4 years

Between 1 and 2 years

Every year

Route Survey

How often do you carry out aerial or vantage surveillance?

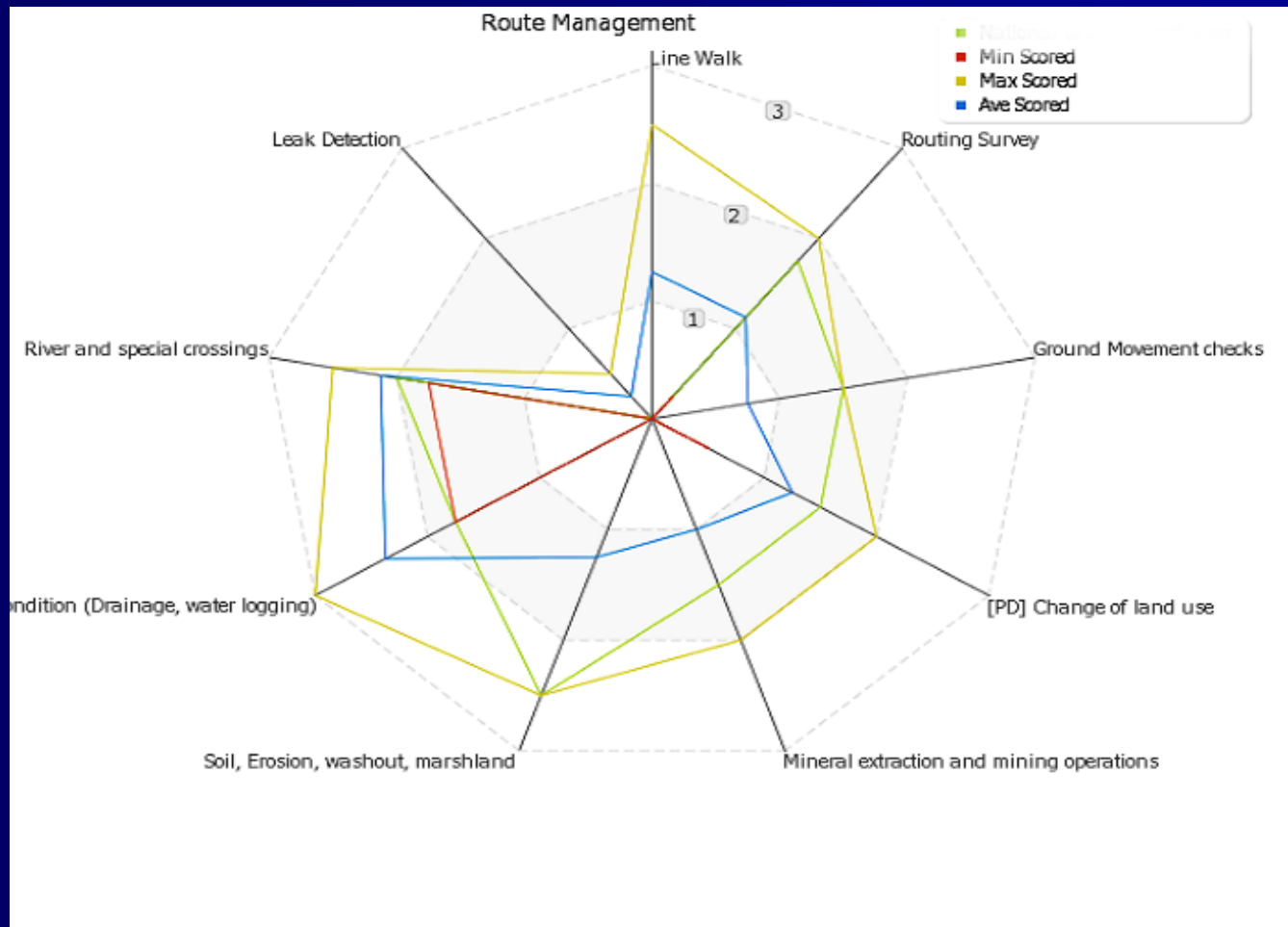
Not at all

More than 4 weeks

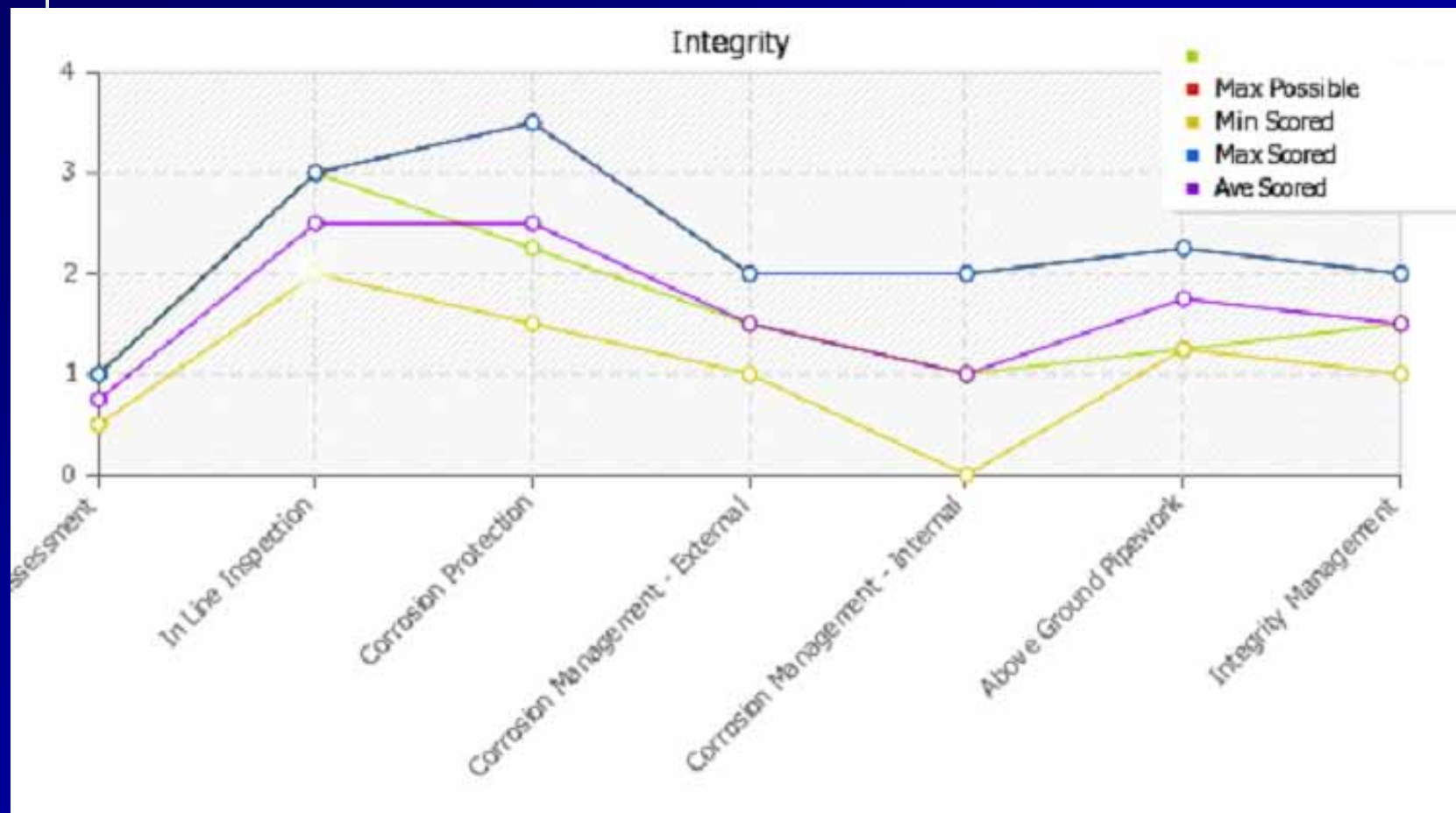
Between 2 and 4 weeks

Less than 2 weeks

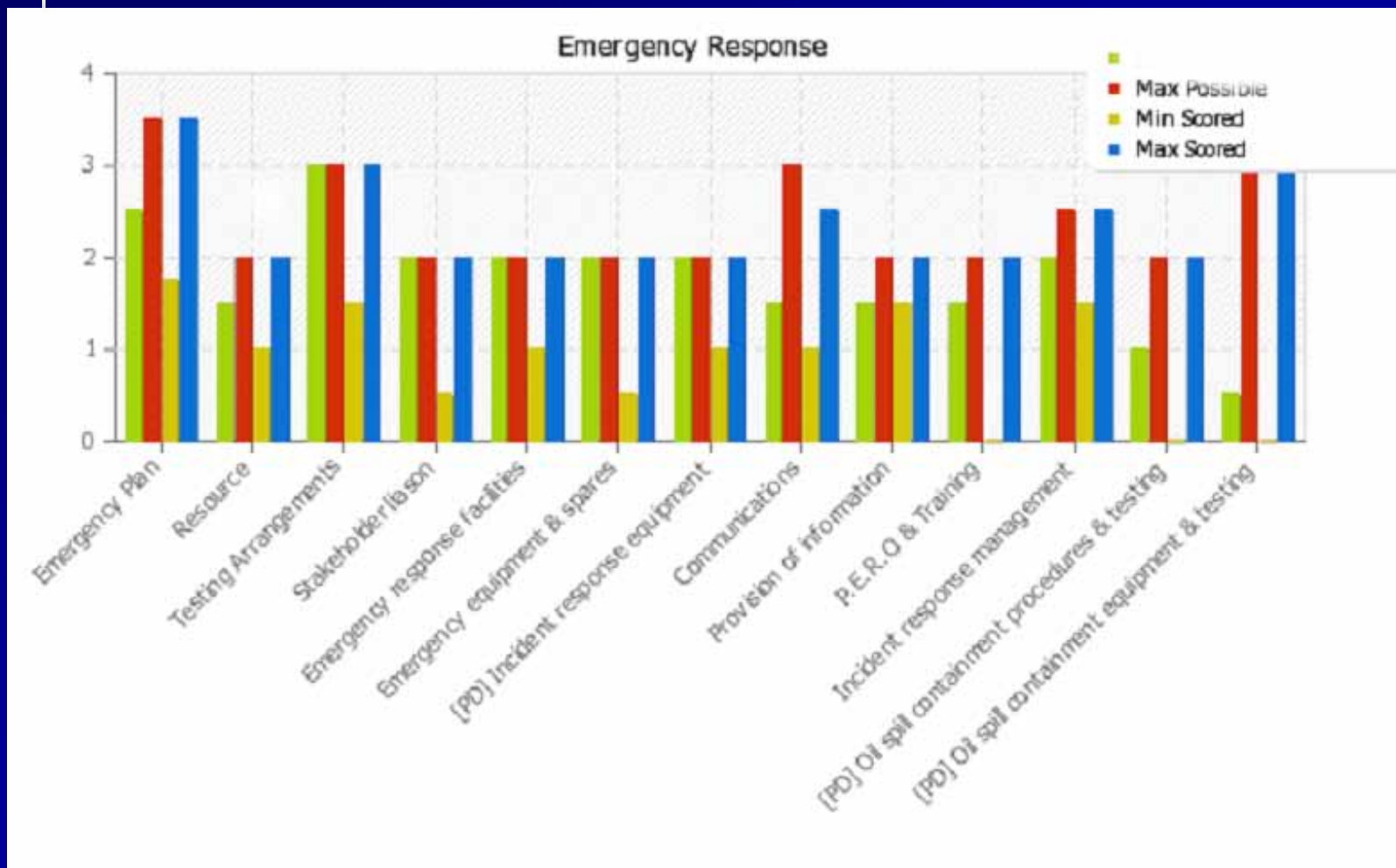
PSAT Example Report



PSAT Example Report



PSAT Example Report



UKOPA Process Safety Sharing

- Sharing Workshop
- Member companies presented their approach to managing the risk
- First workshop reviewed
 - Route Management
 - Modification and Design Process
 - Competence & Training
 - Leadership

UKOPA the way forward

- Improvements to the process and reporting
- Run Benchmarking in June-Aug 2010 (3 months to complete)
- Further best practice workshops Q4/10
- Consider additional participants.
Minimum number
Closing date
Cost

The Bottom line on Safety

"It is the sum of our contributions to safety management that determines whether the people we work with live or die"

Brian Appleton - Piper Alpha report



Pipeline Process Safety & UKOPA Benchmarking

QUESTIONS

www.ukopa.co.uk



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