

UK Petroleum Industry Association – A Commitment to Process Safety

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UKpia

UK Petroleum Industry Association



- UKPIA is a trade association representing the interests of and speaking for the nine refining companies involved in UK downstream oil industry
- UKPIA's representation focuses on refining, storage, distribution, and marketing of petroleum products, in non-competitive areas.
- UKPIA informs members of proposed legislation, technical changes and other issues impacting the industry, and helps form and advocate the industry's position on them.
- UKPIA is also a source of information on the industry and a focal point for communication on behalf of our members.
- UKPIA co-ordinates the industry response to emergencies

UK Petroleum Industry Association



- UKPIA comprises a team of 8 people under the direction of a Director General
- Strategy and policy is decided by a Council made up of nine members appointed by the member companies.
- Issues are worked through a committee structure with expert representatives from each member company.
- Links to other EU trade associations to ensure co-ordinated policy across Europe (EUROPIA, CONCAWE)

A Commitment to Process Safety - Timeline

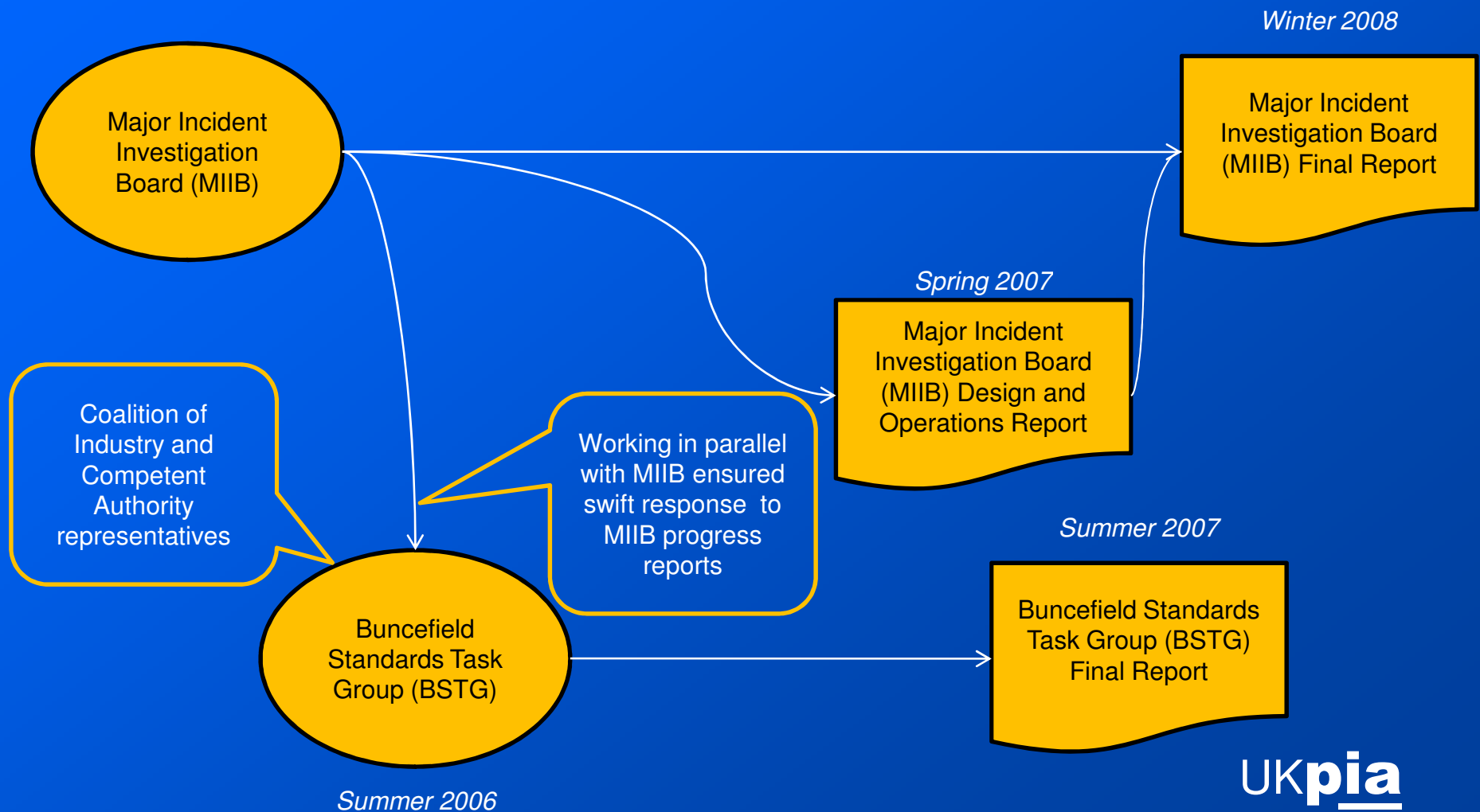
December 11th 2005 Buncefield



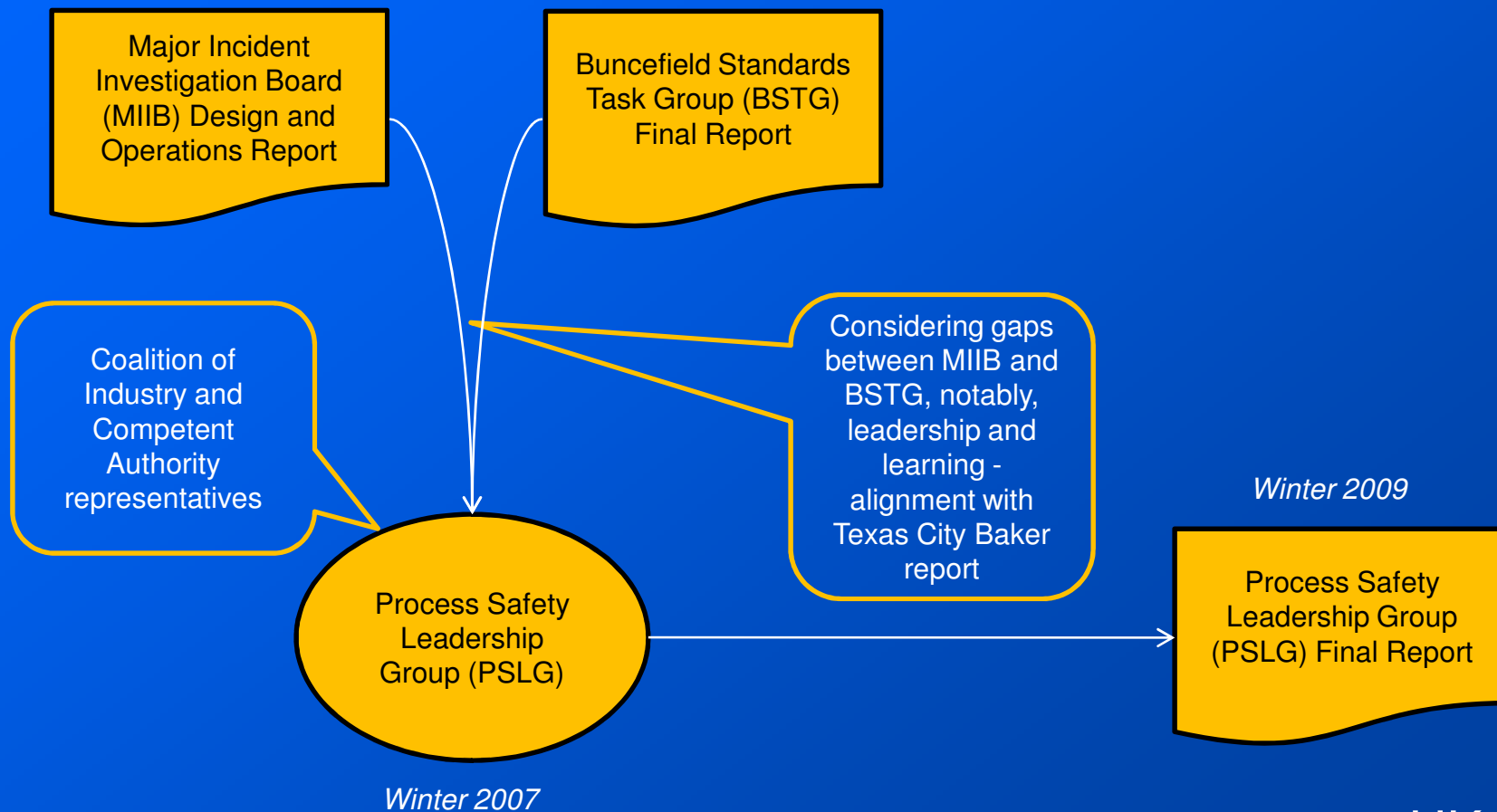
Major Incident
Investigation
Board (MIIB)

Spring 2006 –
3 progress reports,
'What went wrong at
Buncefield'

A Commitment to Process Safety - Timeline



A Commitment to Process Safety - Timeline



UKPIA Process Safety Leadership Commitment

Why a commitment to process safety?

- *Recognising strong performance is key to protecting people and the environment, preventing uncontrolled releases of hazardous materials, and minimising the impact should a release occur*
- *Foster a spirit of cooperation in pursuit of sector process safety excellence in all areas*
- *Address directly Buncefield Major Incident Investigation Board (MIIB) Recommendations :*
 - *Operating with High Reliability Organisations (21, 22)*
 - *Delivering High Performance through Culture and Leadership (23, 24 and 25)*

A Commitment to Process Safety – Managing the Process

- To manage the commitment to process safety, UKPIA formed the Process Safety Leadership Network (PSLN), consisting of senior Health, Safety and Environment Managers from each member company
 - PSLN Developed a series of process safety objectives (Released in April 2008), and as part of their implementation:
 - *Monitors and Expedites Implementation Progress*
 - *Nominates and Provides Expert Resources*
 - *Reviews and Approves Outputs from Implementation*
 - Provides Senior Level Interface to other UKPIA Committees and the Competent Authority (HSE, EA, SEPA)
- UKPIA Appointed a Process Safety Programme Manager in December 2008
 - Manage the Delivery of the Commitment to Process Safety Leadership
 - Liaise with Committees, Process Safety Leadership Group

UKPIA Process Safety Leadership Commitment

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UNITED KINGDOM

Petroleum Industry Association Limited

UKPIA Process Safety Leadership Commitment

As Council Members of UKPIA and representing the UK's nine oil refineries and circa fifty product terminals, we recognise the critical importance of Process Safety for all operators in the downstream oil sector.

A strong performance in this area is key to protecting people and the environment, preventing uncontrolled releases of hazardous materials, and minimising the impact should a release occur. We have always had and will continue to have Safety as our number 1 priority, both within our individual operations and at a sector level within the trade association; as an integral part of this priority we will place additional emphasis on Process Safety.

As business leaders we will foster a spirit of co-operation in pursuit of sector process safety excellence in all areas. UKPIA will be appropriately organised and resourced to deliver process safety leadership. This will include a Council level champion, accountable for leading process safety agenda items, which will be included in all Council meetings.

To facilitate the sector becoming a leader in process safety excellence, we further commit to the following:

1. UKPIA will establish and document a framework for self assessment in all key areas of process safety. This will include the technical elements of a high-performance process safety management system, the organisational issues which ensure a trained and competent workforce and the leadership and cultural aspects which help to embed process safety awareness and excellence throughout an organisation.

The process used to develop the framework will:

- Build on existing work within the sector
- Recognise that there may be several equally relevant approaches to achieving best practice.
- Facilitate continuous improvement over time.

2. Members will critically self-assess gaps within individual operations versus the agreed framework and subsequently develop challenging plans to address these.
3. UKPIA will adopt both leading and lagging performance metrics to demonstrate the success of the process safety programmes. As far as possible, these metrics will be in line with common international practice.
4. UKPIA will develop and implement an effective process for sharing of and learning lessons from relevant, high potential process safety incidents. Council members will actively champion this process within their own refining and terminal operations.
5. UKPIA will facilitate peer to peer comparisons of performance as a driver for improvement.
6. UKPIA recognises that many best practices outside of the sector have applicability to refining and terminal operations. We will actively engage with other sectors to seek improvement opportunities.
7. UKPIA will enhance dialogue with key stakeholders to ensure we take proper account of their concerns.

We the undersigned make this commitment as individual Council members and on behalf of the companies we represent.

 Janet Ashdown	BP Oil UK Ltd	 Brian Worrall	Chevron Ltd
 Rupert Turner	ConocoPhillips Ltd	 Nick Thomas	Esso UK Ltd
 Gary Haywood	IMEDS Manufacturing Scotland Ltd	 Stephen Wyle	Murco Petroleum Ltd
 Ron Ferron	Petroplus UK	 Craig McGrath	Shell UK Oil Products Ltd
 Malcolm Jones	Total UK Ltd		

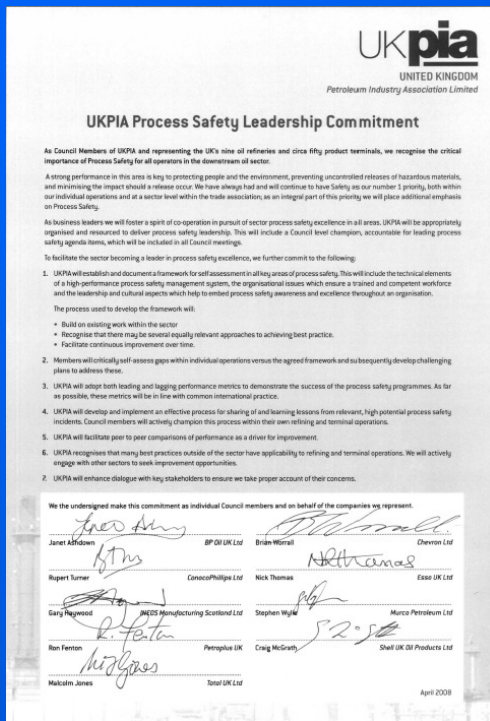
April 2008

A series of objectives signed and supported by UKPIA council, delivered through senior H,S&E managers

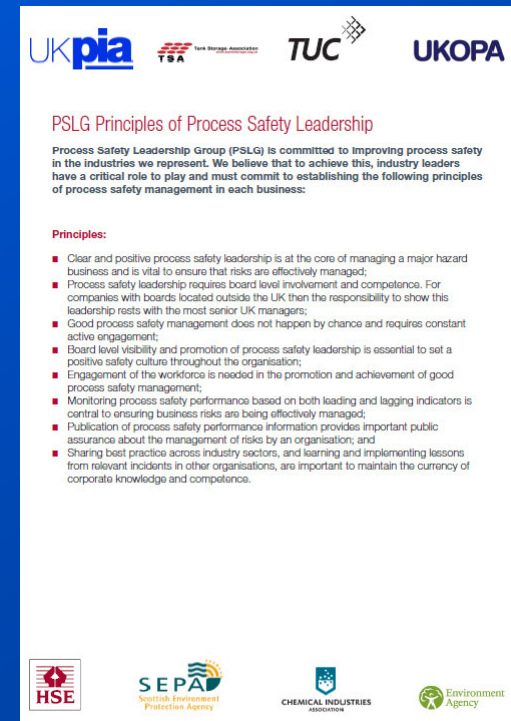
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Process Safety Leadership Commitment & PSLG Principles of Process Safety Leadership

To address the MIBB recommendations on delivering high performance through culture and leadership, PSLG produced the 'Principles of Process Safety Leadership'



Through implementation of the UKPIA Commitment, the PSLG Principles are addressed



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UKPIA Process Safety Leadership Commitment - Objectives

The Objectives –

1. Self Assessment Framework

- *Develop a framework for self assessment in all key areas of process safety*

2. Self Assessment

- *Perform self assessment against the agreed process safety framework and develop plans to address the gaps*

3. Performance Monitoring

- *Monitor the performance and success of the process safety programmes*

4. Incident Learning

- *Share, and learn from relevant potential process safety incidents*

UKPIA Process Safety Leadership Commitment - Objectives

5. Analysis

- *Facilitate peer to peer comparisons of the implementation of the process safety framework to promote improvement*

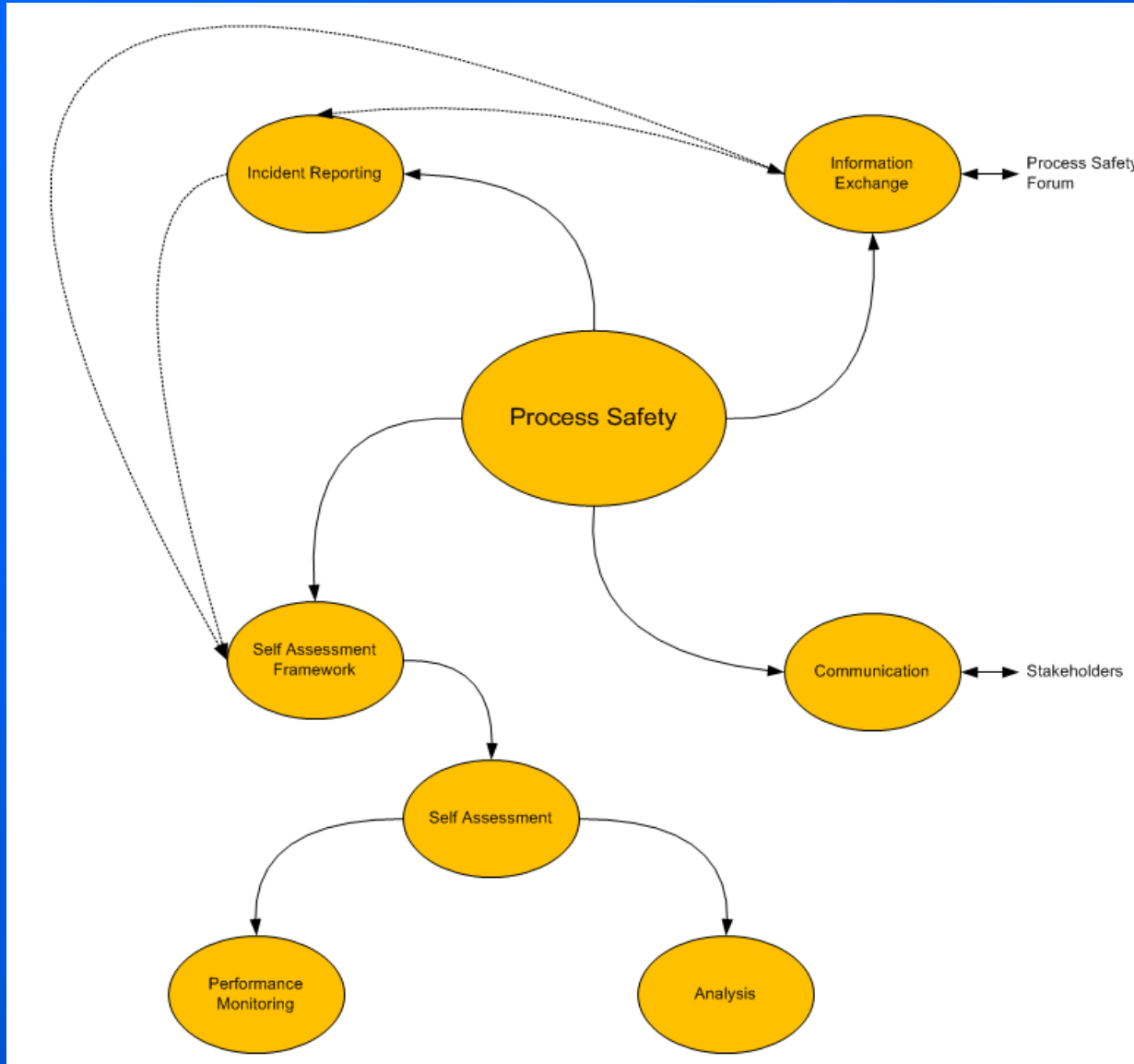
6. Information Exchange

- *Ensure information exchange for best practice in process safety with other sectors*

7. Communication

- *Enhance dialogue with key stakeholders*

UKPIA Process Safety Leadership Commitment - Objectives



Seven *inter-related* Objectives –

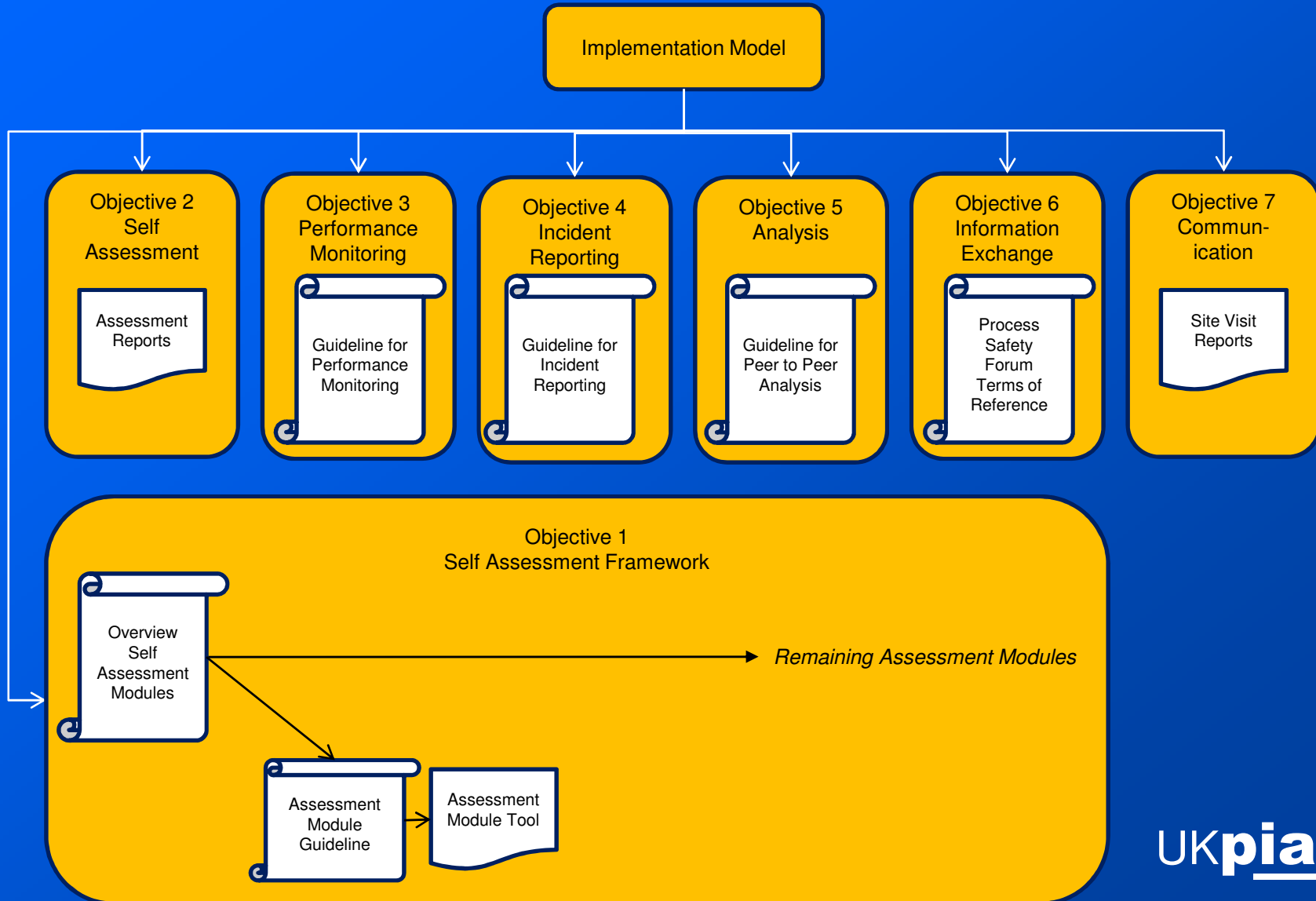
The output of one drives the priority of others

Implementation Strategy – The Implementation Model

To manage the implementation of each commitment, UKPIA developed an implementation model describing:

- **What we are going to deliver**
 - *Guidance*
 - *Assessment Modules*
- **How we will deliver it**
 - *Creating Working Groups*
 - *Scheduling and Progress Reporting*
- **Roles and Responsibilities**
 - *Process Safety Leadership Network*
 - *Process Safety Leadership Group (Buncefield Response)*
 - *UKPIA Process Safety Programme Manager*
 - *Working Groups developing Self Assessment Modules*
 - *Process Safety Forum*

Implementation Strategy – The Implementation Model



Objectives 1 and 2 – Self Assessment

Establish and document a framework for self assessment in all key areas of process safety

- **Develop a series of self assessment modules**
 - Not intended to demonstrate compliance to existing good practice – this is what we do already, but
 - Presenting a view of *excellence* in process safety
 - Module identification drawn from Centre for Chemical Process Safety (CCPS) publication ‘Guidelines for Risk Based Process Safety’

Commit to Process Safety

1. Process Safety Culture
2. Standards
3. Competency
4. Involvement
5. Outreach

Understand Hazards & Risk

6. Knowledge
7. Risk

Manage Risk

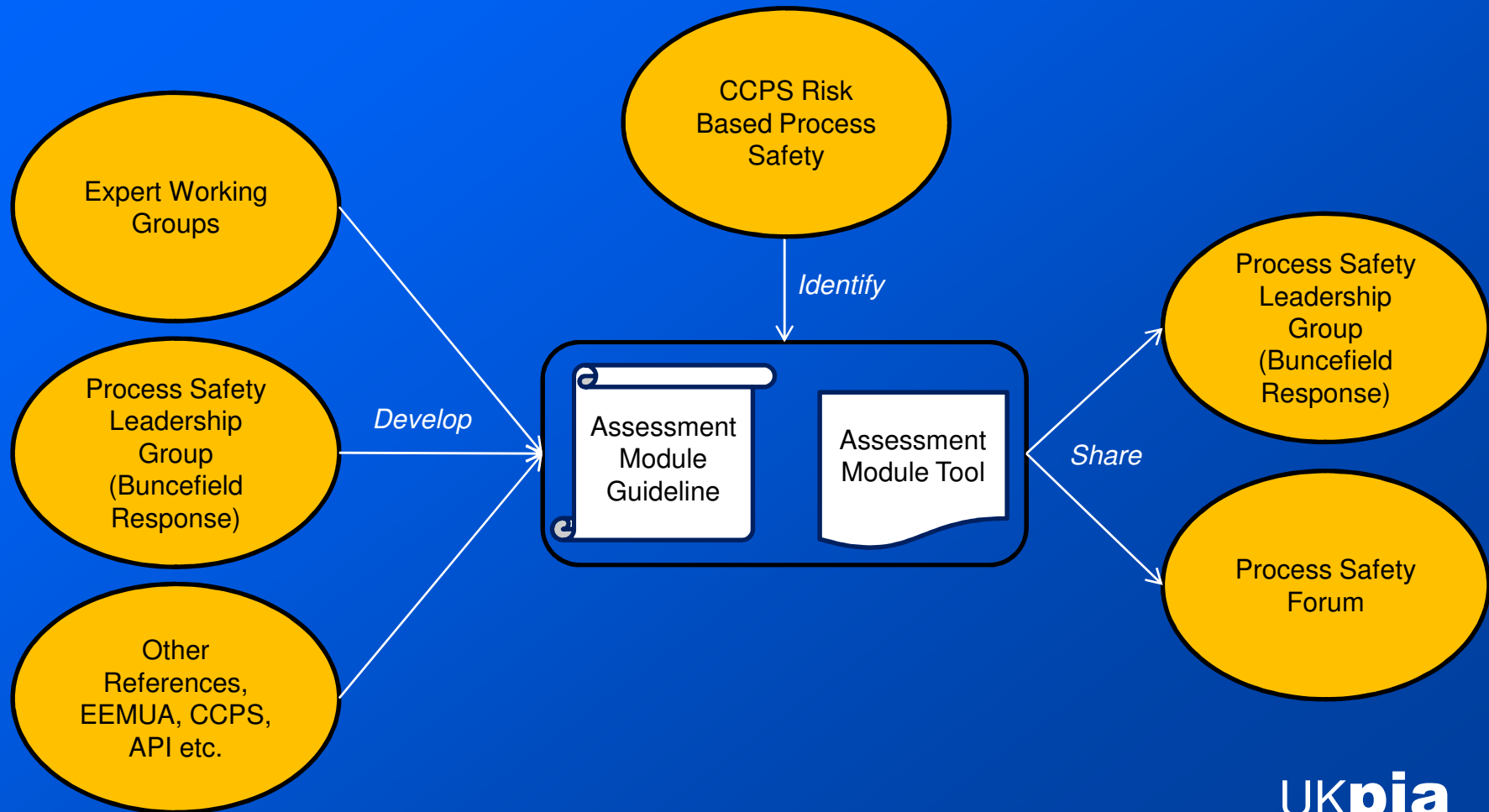
8. Procedures
9. Safe Work
10. Asset Integrity
11. Contractors
12. Training
13. MOC
14. Readiness
15. Operations
16. Emergency

Learn from Experience

17. Incidents
18. Metrics
19. Audits
20. Management Review

Objectives 1 and 2 – Self Assessment

Development Process



Objectives 1 and 2 – Self Assessment

Using the self assessment tools, critically assess gaps within individual operations versus the agreed framework and subsequently develop challenging plans to address these

- Assessment performed on a site by site basis, refineries and terminals
- UKPIA Process Safety Programme Manager provides guidance when required to ensure consistency in interpretation
- Periodic assessment , demonstrating improvement over time
- Assessment results fed back to UKPIA to facilitate Objective 5, analysis

Assessment is against where we all want to be – excellence in process safety

Objectives 1 and 2 – Self Assessment

- **The Assessment Tool**
 - Divided into phases, identifying specific aspects of the module
 - Simple question and scoring format
 - Provides clear indication of the level of implementation
 - Highlights areas for further development



Microsoft Office
Excel 97-2003 Worksheet

- **Management of Change module completed and in use**
- **SIL1 Human Factors module under final, independent review**
- **2010 focus on Asset Integrity**
 - Risk Based Inspection
 - Corrosion

Objective 3 – Performance Monitoring

Adopt both leading and lagging performance metrics to demonstrate the success of the process safety programmes

- Process Safety Performance Indicators (PSPI) derived from API RP 754 where appropriate
 - *UKPIA members are multinational – many with US bases/significant interests; developing local PSPI's would be complicated*
 - *Intent to collect Tier 1 and Tier 2 PSPI's (lagging indicators, Involving loss of process containment) in 2010*
- PSPI's reported to UKPIA



Microsoft Office
Excel 97-2003 Worksheet

Mechanism for data collation, distribution and the intended audience is under discussion with PSLN

Objective 4 – Incident Learning

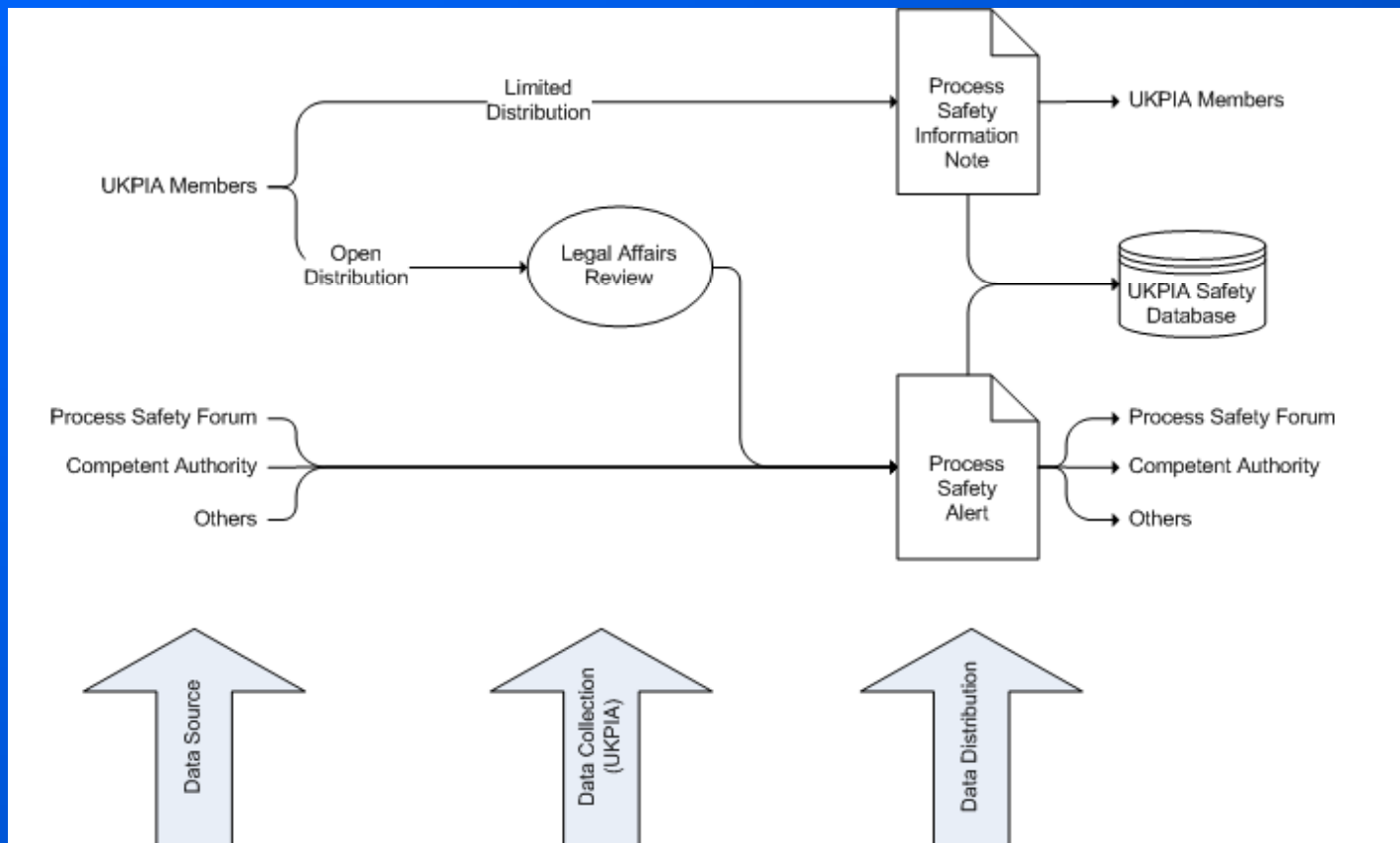
Develop and implement an effective process for sharing of and learning lessons from relevant, high potential process safety incidents

- **To meet these challenges, UKPIA**
 - *Developed a formal process ‘Guideline for the exchange of high level learnings’*
 - *Recognised the importance of the Process Safety Forum in sharing with other industry sectors (the Process Safety Forum consists of representatives from UKPIA, TSA, CIA, OGUK and NIA, and was created to address Objective 6 – Information Exchange)*

We are still in the early stages, and are still learning how this formal process should best be applied.

Objective 4 – Incident Learning

- Process Overview – Exchange of high level learnings



Objective 4 – Incident Learning

- The ‘two tier’ approach
 - **Recognising the legal constraints of sharing information that may be commercially or legally sensitive**
 - Open Distribution - Process Safety Alerts for distribution through, and on behalf of, the Process Safety Forum
 - Limited Distribution - Process Safety Information Notes for limited distribution by, and within UKPIA only
 - **Limited distribution ensuring early reporting of issues**
 - **Transition from Limited Distribution to Open Distribution (if still relevant) when legal issues have been addressed**
- Process Safety Alert entered into UKPIA’s Process Safety Database, facilitating future analysis of trends



Microsoft Office
97 - 2003 Document

Objective 5 – Analysis

Facilitate peer to peer comparisons of performance as a driver for improvement

- **UKPIA issues analysis reports to members**
 - *Based on comparative data from self assessments*
 - *Addresses refineries and storage terminals separately*
- **Reporting to individual members where they are in comparison to the whole**

Objective 5 – Analysis

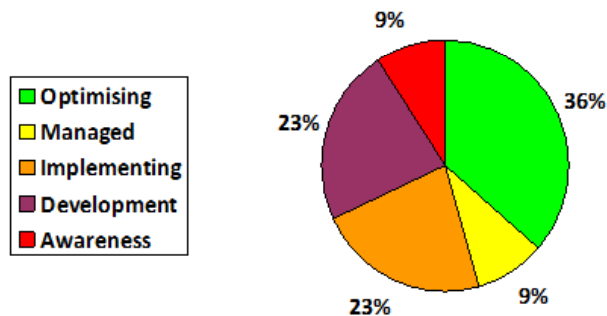
Analysis performed against self assessment returns

Note – the following are illustrative only, and not based on real data

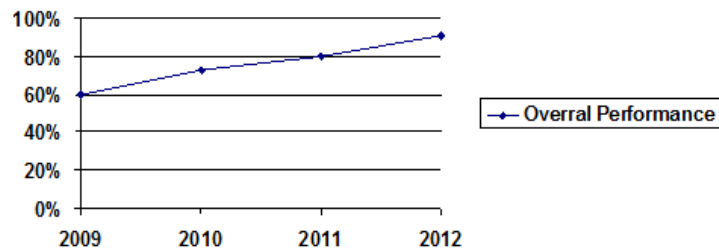
2. Management of Change

Management of Change (MOC) refers to the techniques and methods used to ensure that changes made during process plant design, operation and maintenance do not inadvertently affect or introduce new hazards within the process environment

Current implementation status of MOC is shown below as a percentage of all member organisations.

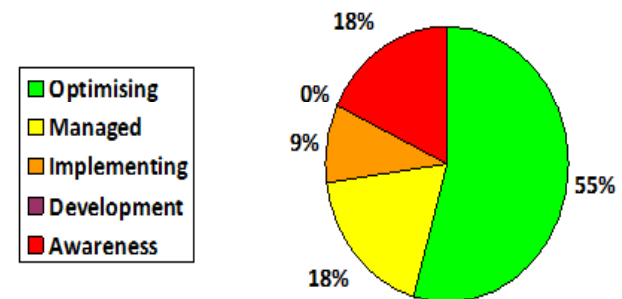


Historical improvement in implementation status for MOC is shown on the following graph.

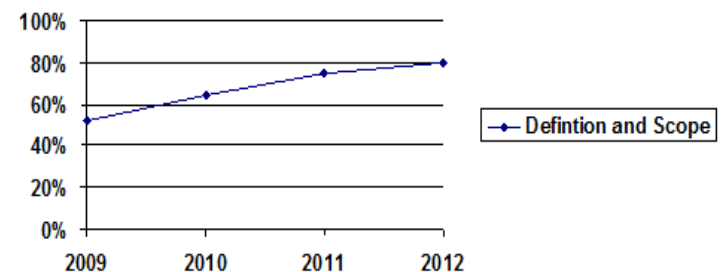


2.1 MOC Phase 1 – Definition and Scope

Current implementation status of the definition and scope phase of MOC is shown below as a percentage of all member organisations.



Historical improvement in implementation status for the definition and scope phase of MOC is shown on the following graph.



Objective 5 – Analysis

- **Charts current status for each self assessment module**
 - As a whole,
 - and individual assessment phases
- **Granularity identifies specific trends and areas for improvement**
- **Demonstrates progress to process safety excellence over time**
- **Allows members to focus on areas for improvement**

Objective 6 – Information Exchange

Recognise that many best practices outside of the sector have applicability to refining and terminal operations. We will actively engage with other sectors to seek improvement opportunities

- **Process Safety Forum formed to encourage cross-industry best practice sharing and learning.**
 - **Process safety initiatives**
 - Sharing of good practice and tools (Including UKPIA Self Assessments – Objective 1 and 2)
 - **Incident learnings**
 - Source of Process Safety Alerts (Objective 4)
 - **Drive process safety management performance agenda**
 - Review key safety reports for potential lessons from other industry sectors (For example Nimrod XV230)
- **Cross-Industry representation from**
 - UKPIA, Chemical Industries Association, Oil and Gas UK, Tank Storage Association, Nuclear Industry Association

Objective 7 – Communication

Enhance dialogue with key stakeholders to ensure we take proper account of their concerns

- **UKPIA Proactively encourages one to one meetings with members on site**
 - Facilitate consistent interpretation of self assessment modules
 - Share good practice from self assessment process
 - Understand the issues directly affecting member sites
- **Establish contacts, and maintain dialogue with the Competent Authority and other industry forums, for example PSLG, CDOIF**
- **If deemed necessary, a self assessment module ‘outreach’ could clarify best practice for communicating with other external stakeholders**

Final Thoughts

- Recognise the critical importance of process safety management
- To better understand what excellence in process safety is, and how to achieve it
- Become a leader, not a follower

Achieve a proactive industry that encourages continuous process safety improvement, through learning from itself and others