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# The Competent Authority's approach to inspection of process safety management systems

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# HSE Strategy

- Strong leadership
- Avoiding Catastrophe
- Building Competence
- Involving the workforce
- Creating healthier, safer workplaces
- Customising support for SMEs

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# Leadership

- Process Safety Forum
- PSLG Principles
- CIA Good Practice Guide
- PSLG Final Report
- UKPIA self assessment Tool

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# Corporate Responsibility

- We live in an age of corporate social responsibility
- Successful businesses demonstrate that they take good care
- It is becoming a case of ‘who cares wins’
- Good words, corporate branding, commitments made in policy statements or glossy brochures is not enough – it is delivery that counts

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# Process Safety Leadership:

- Successful process safety management is essential for business success
- Leaders:
  - need to understand major hazard risks within their companies
  - Should ensure process safety management is managed in a systematic way
  - identify vulnerability and be sceptical
  - should focus on major hazard safety outcomes
  - Should work together, across industry, to share lessons and good practice

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# Focus on Process Safety Outcomes

- Leaders should:
  - focus on process safety outcomes and not draw comfort from the complexity of the control measures and the systems
  - Question perfection - never fully believe that risks are being adequately controlled – should actually know based on information from Key Process Safety Indicators – KPIs
  - Identify failings and act quickly and decisively
    - don't just measure and feel good

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## Buncefield: Why did it happen?

The underlying causes of the explosion and fire at the Buncefield oil storage depot, Hemel Hempstead, Hertfordshire on 11 December 2005

Management systems were both deficient and not properly followed, control room staff had little control over flow rates and timing of receipt and did not have sufficient information to manage precisely the storage of incoming fuel

A culture where keeping the process operating was the primary focus and process safety did not get the attention, resources or priority that it required

# Building Competence

- Increased awareness of PSM
- Process Safety Management Group
- UKPIA self assessment tools

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# Process Safety

- Process safety is shorthand for the ways in which major hazard risks are controlled
- one company's accident is everyone's problem
- root causes are often common across all organisations.
- only as good as the weakest in your sector

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# Leaders Need To Understand and Assess the Risks

- What hazards are present
- What are the challenges to plant integrity/containment
- How can this give rise to a major accident
- What is the likelihood and what are the consequences

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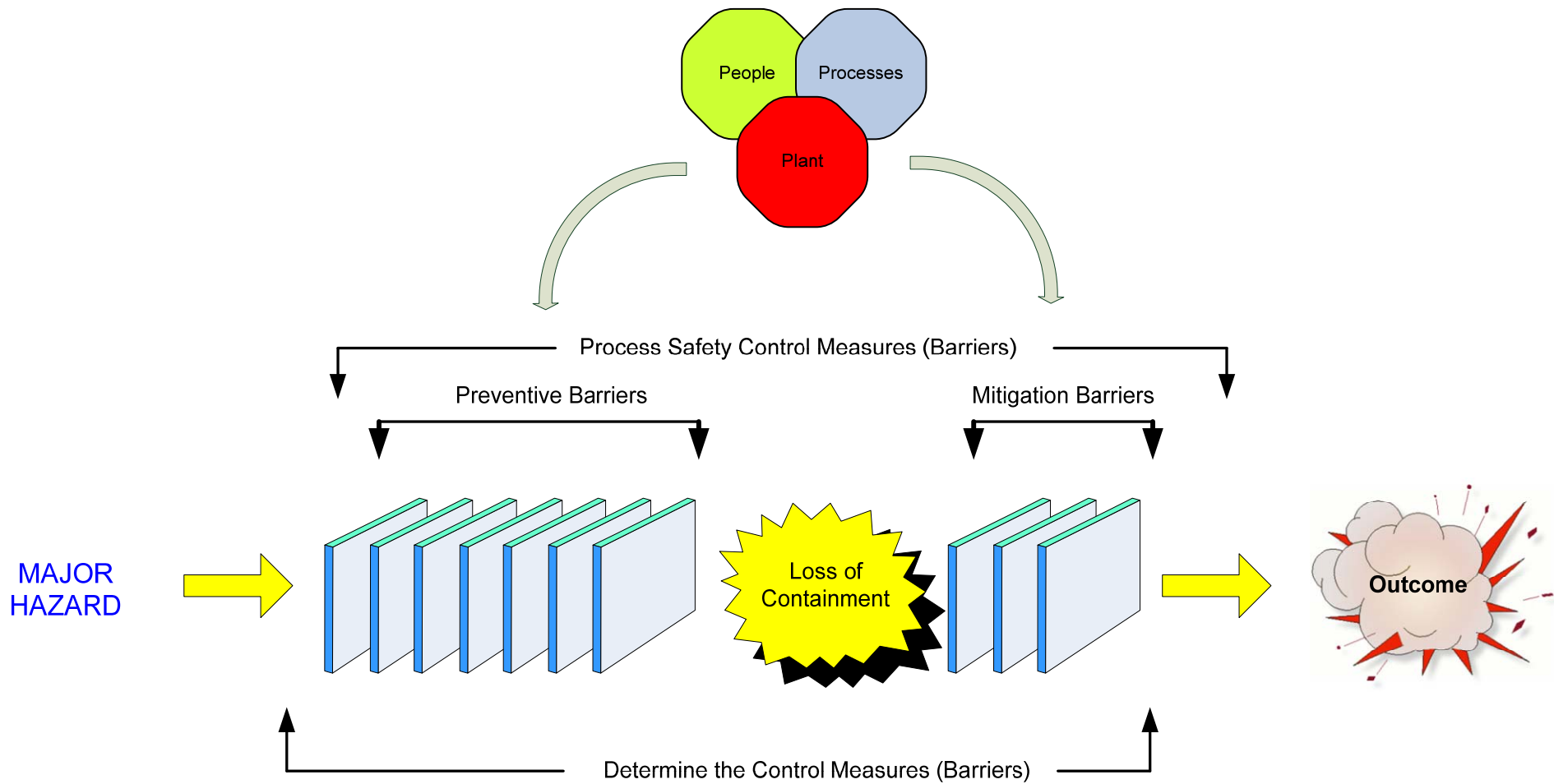


# Manage process safety in a systematic way

- Based on a recognised PSM standard, eg CCPS guidelines
- Multiple layers of protection – based on James Reason’s ‘Swiss cheese model’
- Tailored to the risks – not one size fits all
- Systems designed to manage conventional safety don’t easily transfer to major hazard risks
- PSM must be dynamic and never fixed

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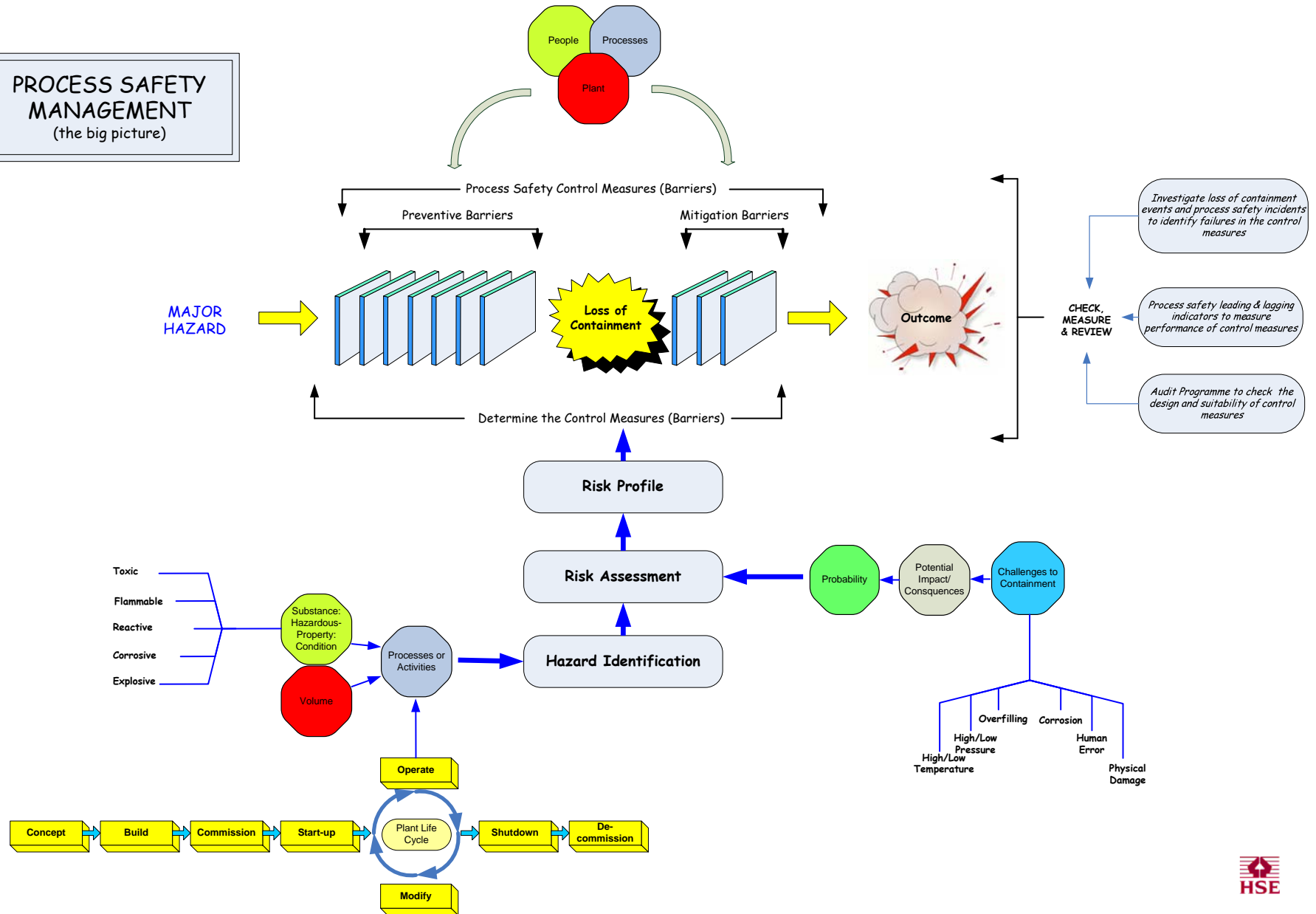




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**PROCESS SAFETY MANAGEMENT**  
(the big picture)



# Identify Vulnerability

- Know exactly how the plant containment might fail
- Know what the critical control measures are
- Recognise that people are the weakest part of a PSMS

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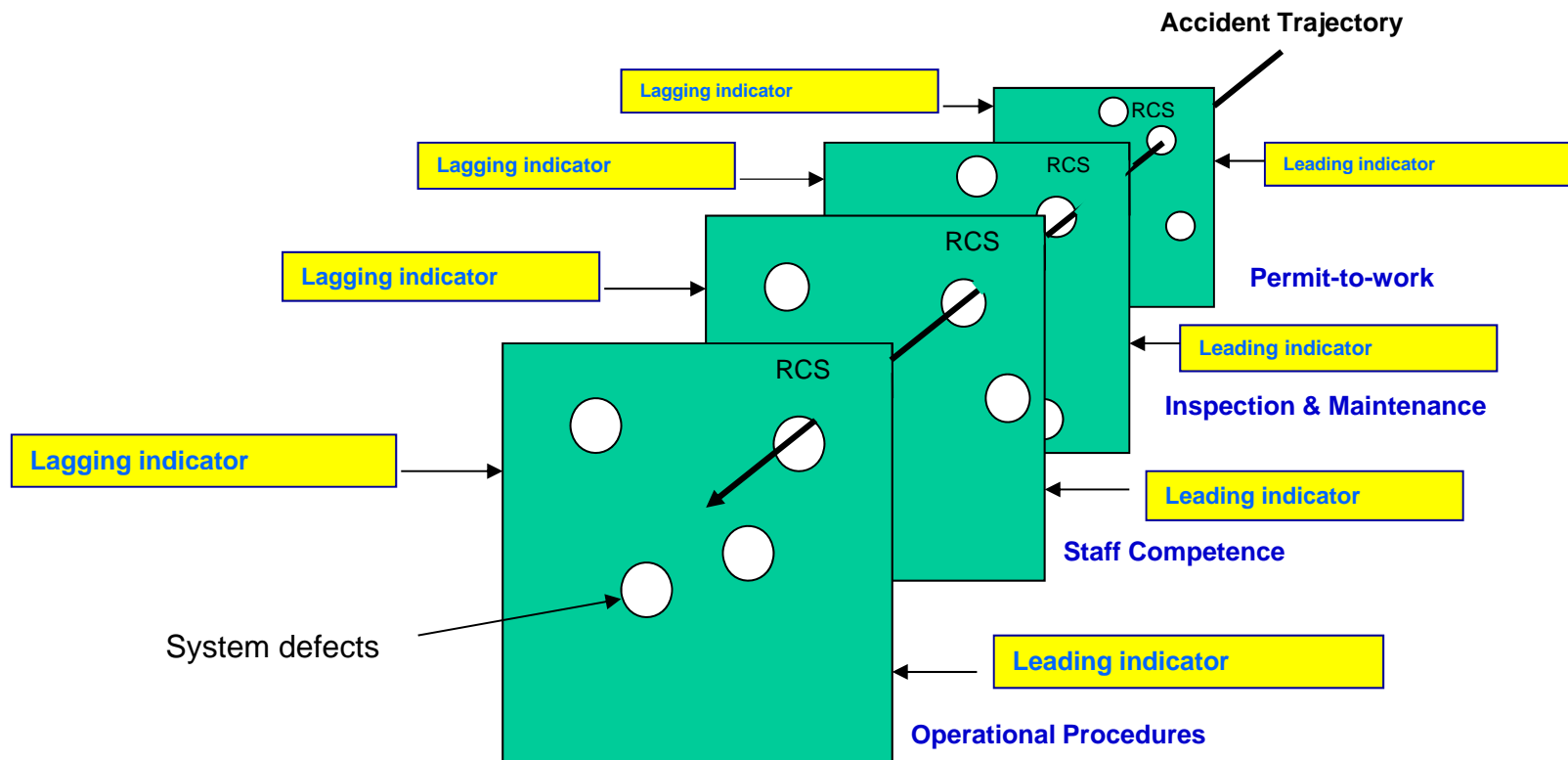
# Risk Profile

- Control measures tailored according to the 'risk-profile'. More emphasis, more in-depth control in parts of the process where numerous challenges to integrity and consequences are significant

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# KPIs to cover key control measures



## Case study: Scottish Power

Power generation company gets to grips with process safety



Energy company Scottish Power set out to learn from others about asset integrity, process safety management and key performance indicators. It looked to the chemical and major hazard industries for good practice. It has taken this learning and good practice and made dramatic improvements in its management of risk, delivering significant cost savings to the business.

The Institute of Chemical Engineers recognized this achievement by awarding Scottish Power first prize in the 2010 IChemE category of innovation in process safety.



Can the chemical and major hazard industries learn from Scottish Power?

*Process safety is a priority for the Health and Safety Executive. It is not enough to simply have designed and implemented a process safety management system. Without collecting and acting on information that shows the system is actually working and delivering effective control of risk, you cannot be sure that your major hazards are being controlled and you will be operating blind, hoping and believing that everything is fine but without actually knowing. Reality has a habit of catching up on such companies – frequently with catastrophic consequences. No successful company could stay in business for long without accurate information on its financial performance – so why act differently when it comes to process safety?*

**Judith Hackitt, Chair, HSE**

**If you want to improve business reliability and profitability – read on.**

Who is Scottish Power and what does it do?

Scottish Power Limited is a (vertically integrated) energy company with its headquarters in Glasgow, Scotland. In 2007 it became a subsidiary of the Spanish utility Iberdrola, one of the largest electricity utility companies in the world. It operates the distribution network for the central and southern Scotland and the Merseyside and North Wales regions. The company also supplies electricity and gas to homes and business around the United Kingdom and generates power for supply to the grid.

Energy Wholesale

Energy Wholesale is the part of the business that operates 6200 MW of electricity power in the United Kingdom using coal-fired thermal power stations, gas-fired combined cycle power stations, hydro-electric schemes, pumped storage generation as well as a range of small industrial combined heat and power systems. Energy Wholesale took the lead in developing the process safety approach which is now being adopted by the Transmission and Distribution businesses.

# Challenges

- Ageing plant
- Competence in the workforce - maintaining know how
- Reducing the number of process safety incidents
- Reporting performance
- Maintaining momentum of sharing learning and good practice
- Less support from HSE

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# Looking Forward

- PSM framework firmly embedded in major hazard companies
- Executives & senior managers fully aware of PSM and actively leading management of PS risks
- Clear understanding of PS vulnerabilities & KPIs used to measure performance
- Clear reporting on performance
- Greater sharing of lessons and good practice across all sectors

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Thank you

