



Asset integrity and leadership A BP perspective

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What I'm going to talk about

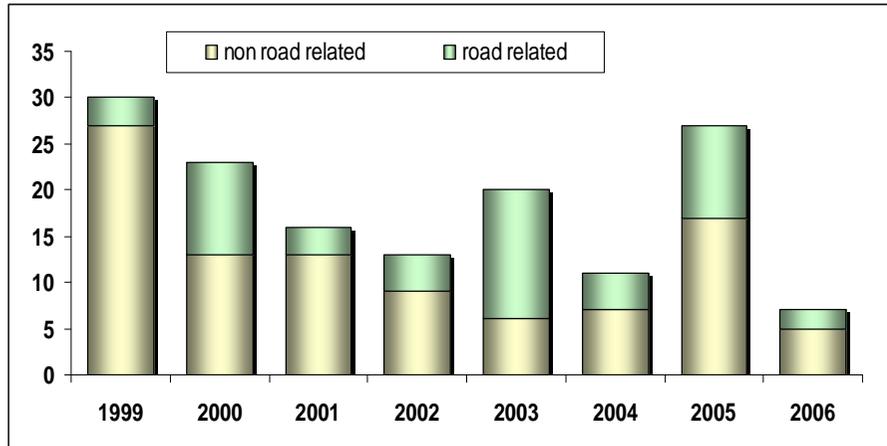


- Context for BP
- Our strategy
- Baker Panel – two key areas
- Where we are headed
- Measurement
- Leadership – stepping up the game
- Summary

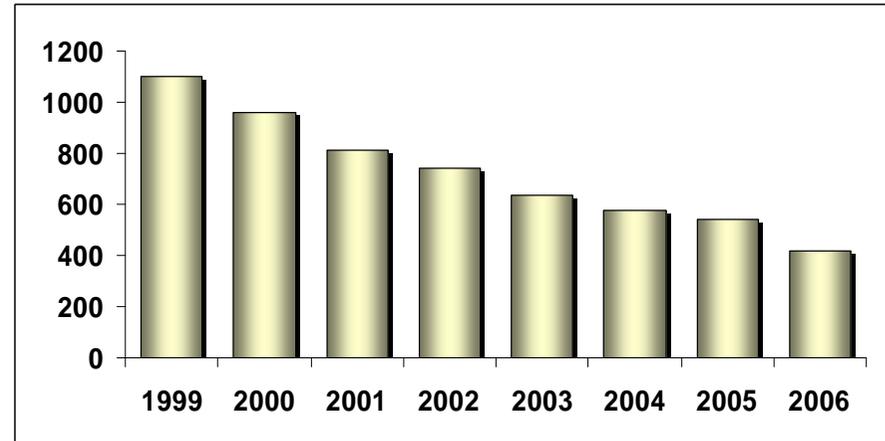
Context



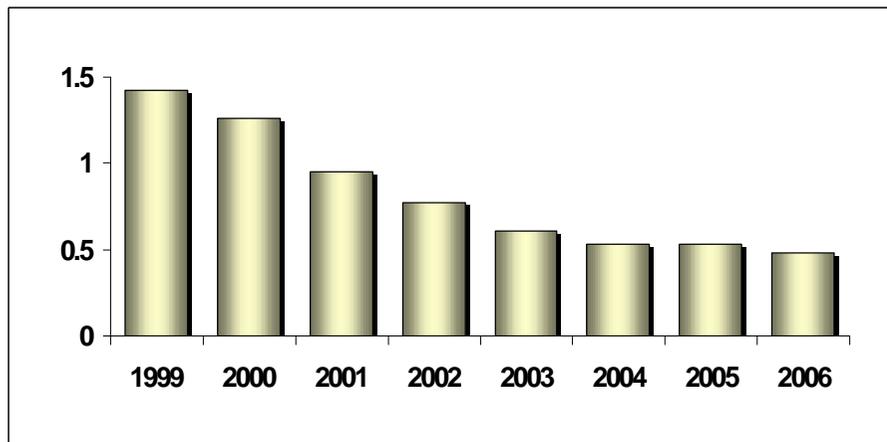
Workforce Fatalities



Oil Spills greater 1 bbl



Recordable Injury Frequency



BP Safety and Operations - strategic model

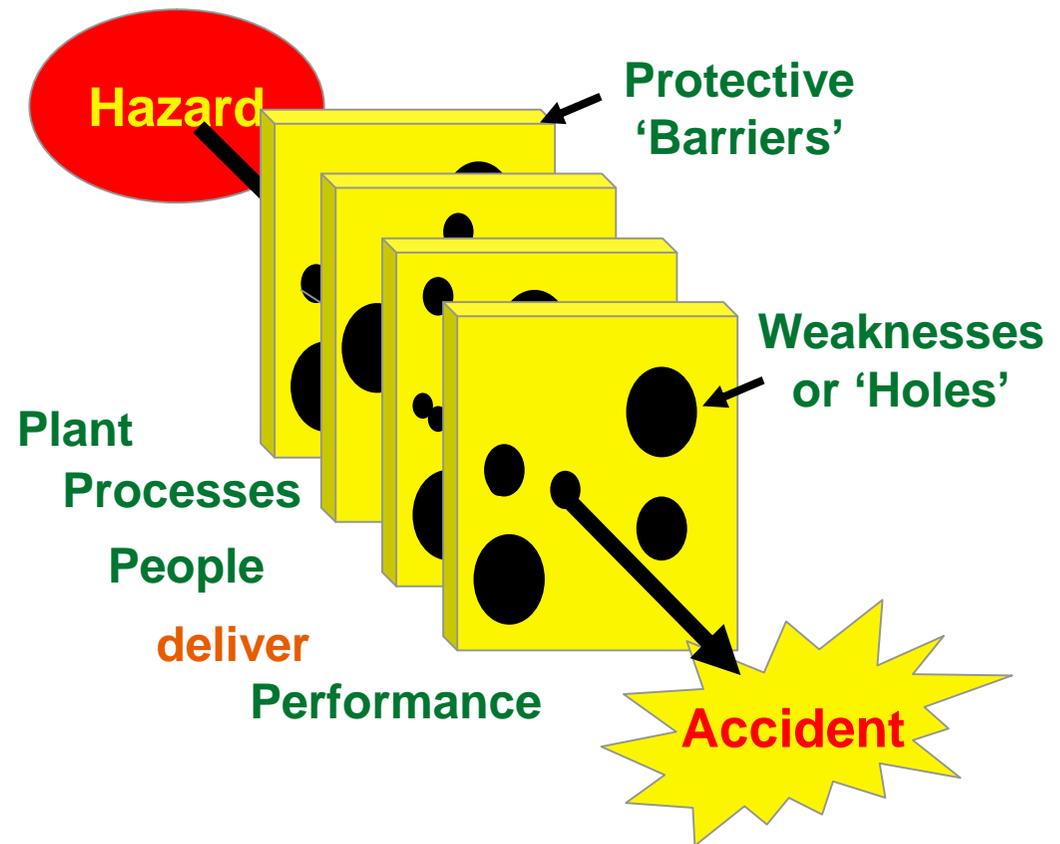


Performance & risk – layers of protection reduce the potential for major incidents and losses:

- **plant** – engineering hardware, control systems, physical layouts
- **processes** – management systems to identify, control and mitigate risks, and drive continuous operational improvement
- **people** – capability in terms of leadership skills, relevant knowledge and experience, and the organizational culture

‘Hard barriers’ are more reliable than ‘soft barriers’, but all ultimately rely on people

The ‘Swiss Cheese’ Model



Baker Panel - two key areas



1. We were challenged by the Baker Panel to become a world leader in process safety

2. Integrated and comprehensive system

- Manage process safety as an integrated and comprehensive system - about plant and processes, but cannot be independent of:
 - People - process safety knowledge and expertise
 - People - process safety culture (individually and collectively)

And where are we headed?



	Immediate action	Six point Plan	Deep Embedding	Aspiration
Plant	Temporary Accommodation Blow-down Stacks	Major Accident Risk	Operating Management System (OMS) ... sustained by the right organisational capability & culture	World Class Operating Company
	Processes	Operating procedures		
		Compliance		
		Audit Actions		
People	gHSEr	Operations Competence		

2005



2011+

How will we know if we're getting there?



We gather and analyse standard industry metrics – but are they sufficient ...?

- Lagging PS metrics are needed to address long-wavelength major accident risks, but have been insufficiently utilised (by BP & Industry)
- General lack of corporate - but especially site - management focus on leading safety indicators, and especially on PS risks
- Combination of leading & lagging provides “Dual Assurance” (UK HSE) – reinforcing the importance of developing risk specific KPIs at site level

How will we know if we're getting there? (continued)



- The Baker Panel called for - and we agreed - to :
 - Initially introduce a lagging index addressing fires, explosion, releases and PS injuries/fatalities
 - Develop an integrated set of lagging & leading PS indicators ahead of industry and work with industry to gain consensus on PS metrics
 - Make this part of a systematic review & improvement process
- The issue of PS measures is being responded to by companies (e.g. XOM, Shell, Chevron, COP) and by Associations (API, CONCAWE, CCPS and OGP)

Baker Panel Recommendations Leadership- stepping up the game



- Communicating that "safe and reliable operations" is our number one priority.
- Group Operations Risk Committee chaired by CEO has met 14 times so far this year,. It brings together our segment CEOs with senior functional expertise to oversee and build a foundation for consistent, safe, reliable operations
- Board (Executive & Non Executive) visits to major sites / refineries
- 8 members of the Executive Team attended a 2-day Operations training
- EVPs appointed for S&O and North America and new leadership appointments have been made for refining, Group & US
- Leadership teams in all US sites have been reviewed and upgraded.
- Front line deployment of experienced engineers to Whiting and Toledo refineries.

In summary



- Maintaining **asset integrity** is not just about integrity of **equipment**...
- It's also about developing and maintaining integrated **systems** and work **processes**...
- And it's about ensuring the **competence** of individuals and teams...
- As well as about creating and sustaining a world class operating **culture**, supported by a few clear and well-understood values and behaviours...
- And most of all, it's about...

leadership