

Use Test & Risk Management

The Role of the Internal Model & Use Test

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Content classification: Public

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UK Financial Protection Market

- ▶ UK Life & Pensions market worth £1.5bn, the 3rd largest worldwide, behind US & Japan and the biggest in Europe.
- ▶ £173 million paid out daily in pensions & life insurance benefits in 2009.
- ▶ £18 million paid out daily in death and disability benefits.
- ▶ Life and pensions business sold through Independent Financial buyers (IFA's) has increased from 58% in 1999 to 68% in 2009.
- ▶ US Fortune 250 company.
- ▶ No.1 UK Group Risk provider, with a 27.6% share of the market in terms of premium income.
- ▶ Market leader in the Group Income Protection market with 51% market share and premium income approaching £300m.
- ▶ 4th in Group Life, with strong premium growth in H1 2010.
- ▶ UK number 1 for Group Critical Illness insurance.
- ▶ Voted 'Best Group Income Protection Provider' at the Health Insurance Awards every year, for the last 12 years.

Source: Swiss Re Groupwatch 2010, ABI

Intro to UNUM & Use Test

- ▶ Unum are currently implementing Solvency II.
- ▶ A critical part of Solvency II for Unum is the implementation of an Internal Model and the Use Test.
- ▶ The Use Test is, simply put, a test to ensure we are using the Model within decision making.
- ▶ However it is also a good test of integration and implementation.
- ▶ The following example will demonstrate how a series of problems, poor decisions and operational bias can combine to result in catastrophe.
- ▶ We will then show how the intelligent use of an embedded model can mitigate a potentially catastrophic chain of events.
- ▶ And finally we will show how, by exploiting the Use Test requirement, Unum is embedding the internal model in BAU processes.



Use Test

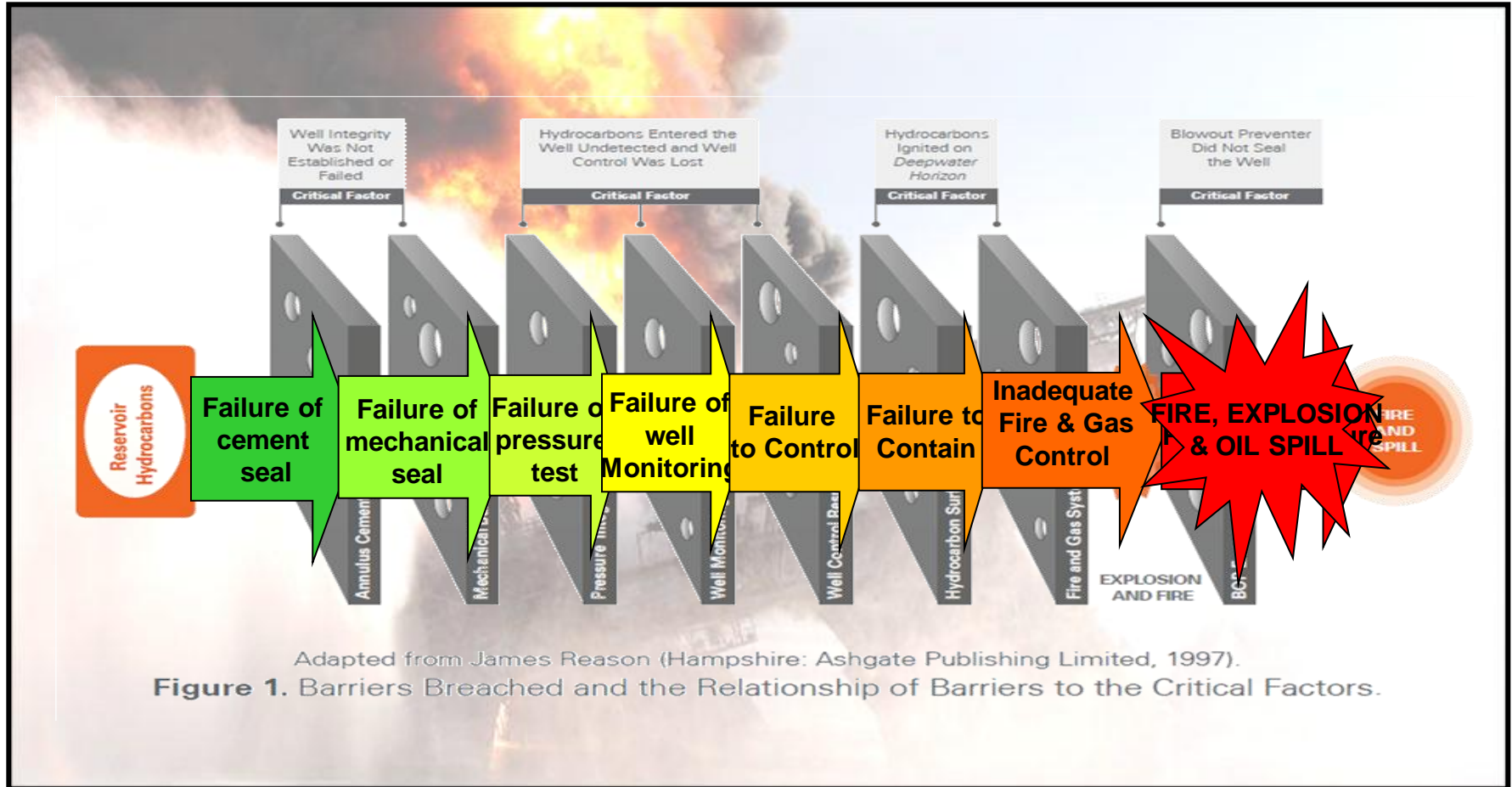
**Or how the Internal Model and Use Test
can help avoid a Financial Deepwater
Horizon**

Use Test & Risk Management

- ▶ On the evening of April 20th 2010, the exploration oil rig Deepwater Horizon exploded
- ▶ The subsequent fire lasted for 36 hours and resulted in the total loss of the rig
- ▶ 11 men died, and 17 others were injured
- ▶ The oil continued to flow from the well into the Gulf of Mexico for 87 days caused a spill of international significance.
- ▶ The financial and reputational damage to BP was huge, \$40bn estimated costs, and it will take years to repair the reputation
- ▶ This disaster was caused by a complex and interlinked chain of mechanical failures, events, design judgements and operational procedures that came together to allow the initiation and escalation of the accident.

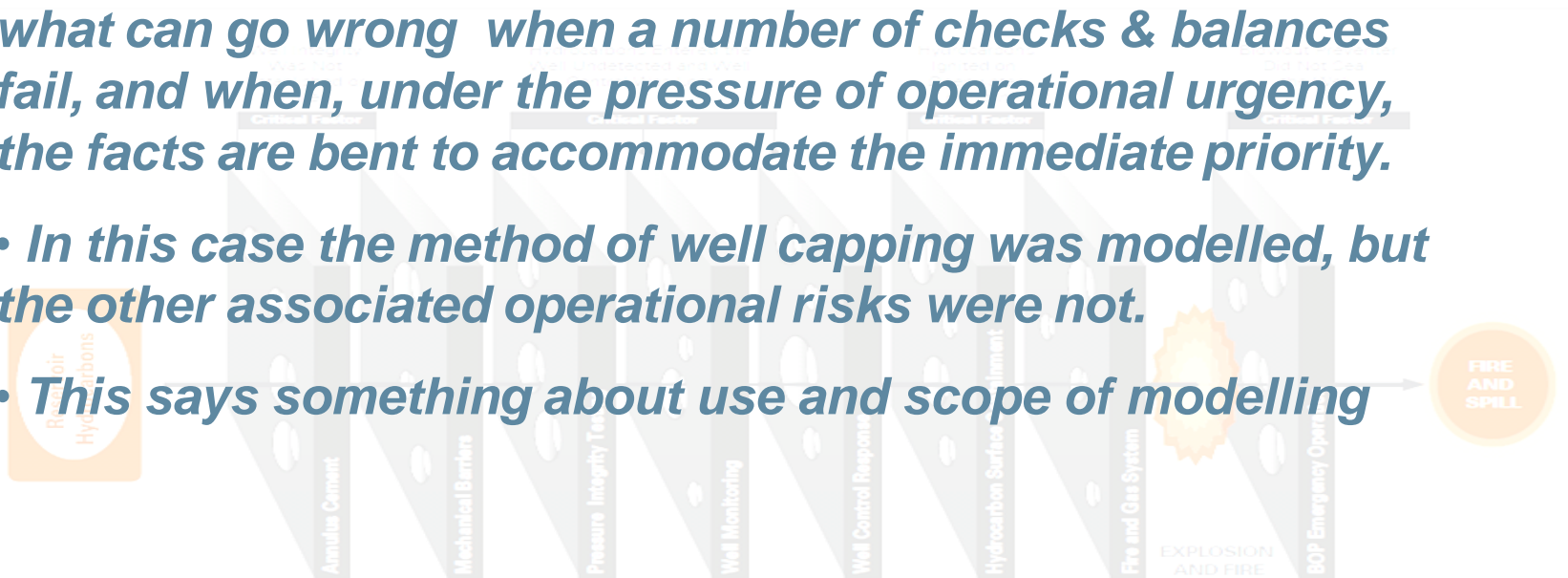
Deepwater Horizon - Eight Critical Failures

FIRE, EXPLOSION
& OIL SPILL



What has this got to do with Use Test ?

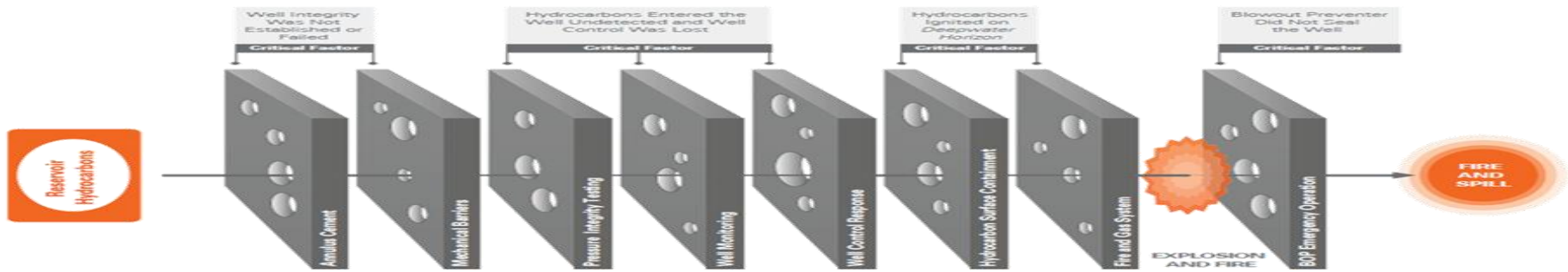
- *Although at first glance this might seem far removed from the world of Insurance, we can use this as an example of what can go wrong when a number of checks & balances fail, and when, under the pressure of operational urgency, the facts are bent to accommodate the immediate priority.*
- *In this case the method of well capping was modelled, but the other associated operational risks were not.*
- *This says something about use and scope of modelling*



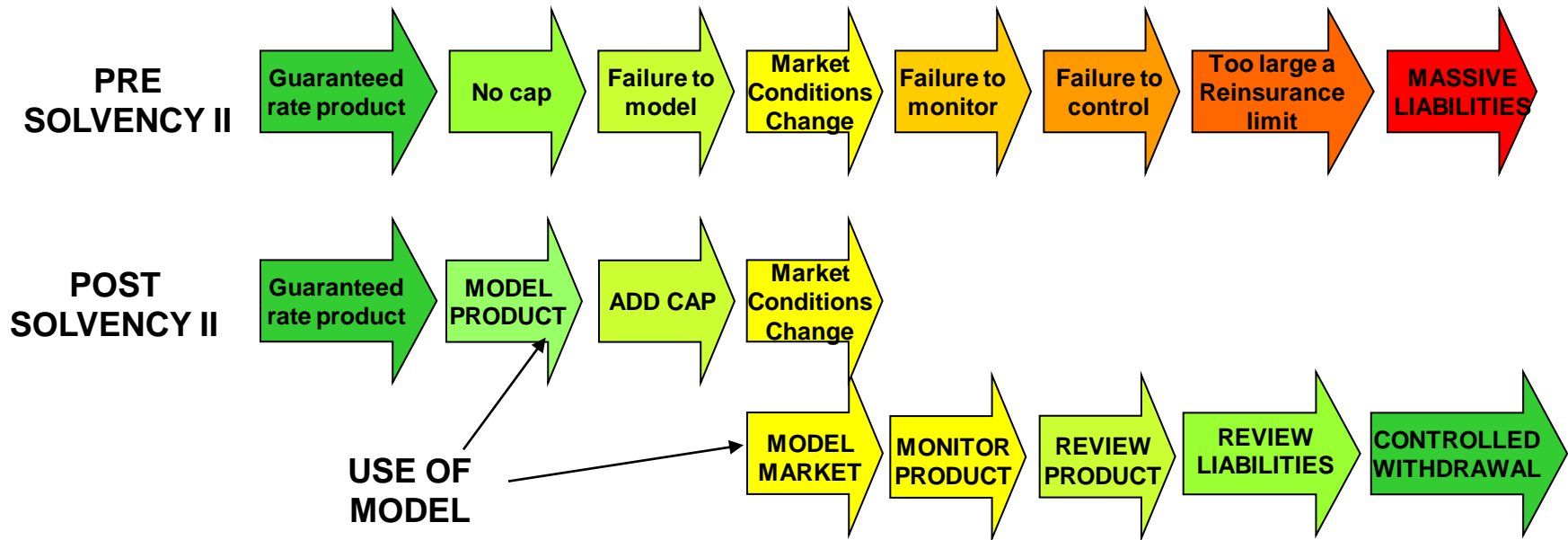
Adapted from James Reason (Hampshire: Ashgate Publishing Limited, 1997).

Figure 1. Barriers Breached and the Relationship of Barriers to the Critical Factors

What could be our equivalent ?



Adapted from James Reason (Hampshire: Ashgate Publishing Limited, 1997).
Figure 1. Barriers Breached and the Relationship of Barriers to the Critical Factors.



How will “using” a model help ?

- ▶ It can model multiple factors
- ▶ It can model linked causes
- ▶ Models parallel operations which can increase risk
- ▶ Reduces susceptibility to human error and corporate imperatives

But don't we already have established models ?

- ▶ The Risk and Capital Operating Model (RCOM) will have a altogether broader scope than traditional Pricing & U/W models
- ▶ It will more clearly link Capital cost with Risk dynamics
- ▶ It will model risk in a more holistic manner, taking into account insurance risk, operational risk and external factors
- ▶ It will allow the capital requirements for a new product, for example, to be clearly determined and transparent.

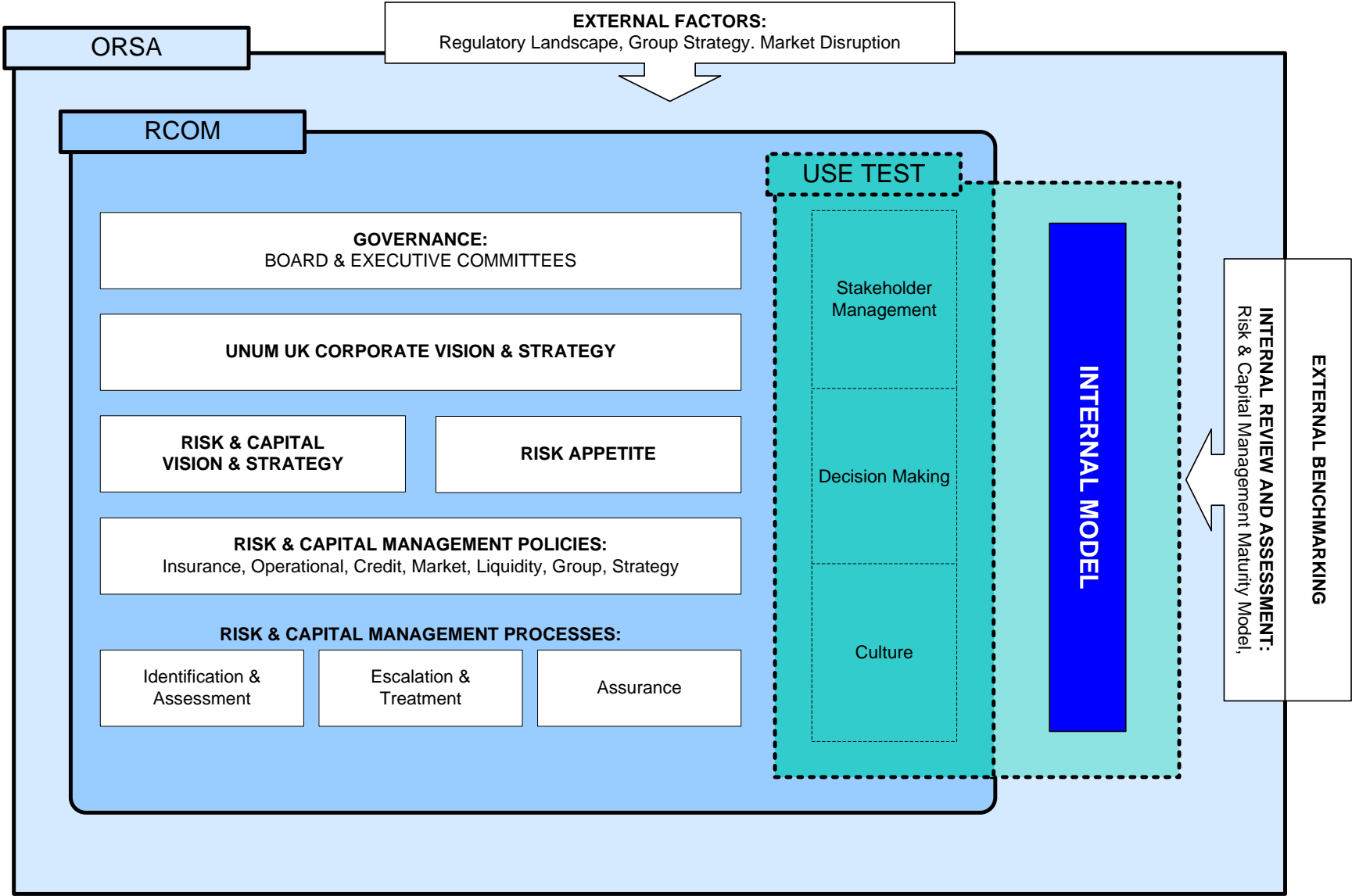
OK – So a model may help – why Use Test?

- ▶ To demonstrate the model is fit for purpose
- ▶ To show that the Internal Model (the engine) works.
 - Think about the RCOM as the car for the ORSA journey and the Use Test as the checks and MOT Test that makes sure that it will continue to work reliably with continued efficiency
- ▶ To add a further level of assurance
- ▶ To test the model with real world scenarios
- ▶ To implement a culture of continuous review and improvement
- ▶ To avoid a “Terminal 5” type screw up! (ensuring that all the bits work together)

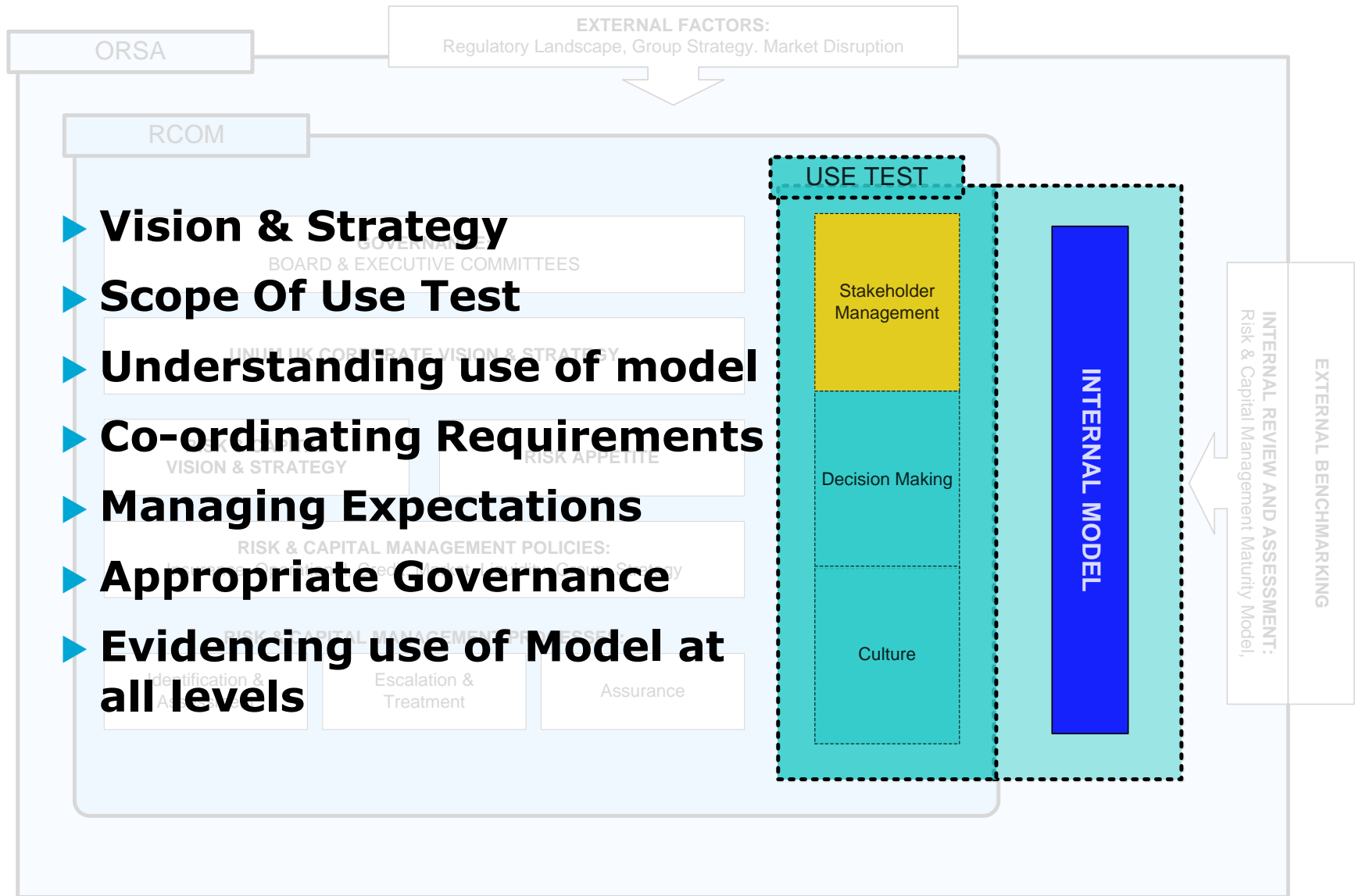
One Use Test or two ?

- ▶ The model will be used to determine the potential capital impact of key decisions that have a significant risk dimension
- ▶ The strict definition of the Use Test is to use the Internal Model to support the key decisions that have risk and capital implications by:-
 - » selecting those that will form the Use Test
 - » ensuring that the internal model can support those uses, in particular alignment with the Key Risk Indicators (KRI)
- ▶ The broader scope RCOM will also use the Internal Model in meeting those requirements, but in a more BAU context. Examples being:-
 - » Producing MI to support Economic Capital decision making
 - » Running the ORSA process on a continuous basis
 - » Providing MI for External Disclosure
- ▶ The principles of the Use Test will be embedded in the business model, i.e continuous improvement

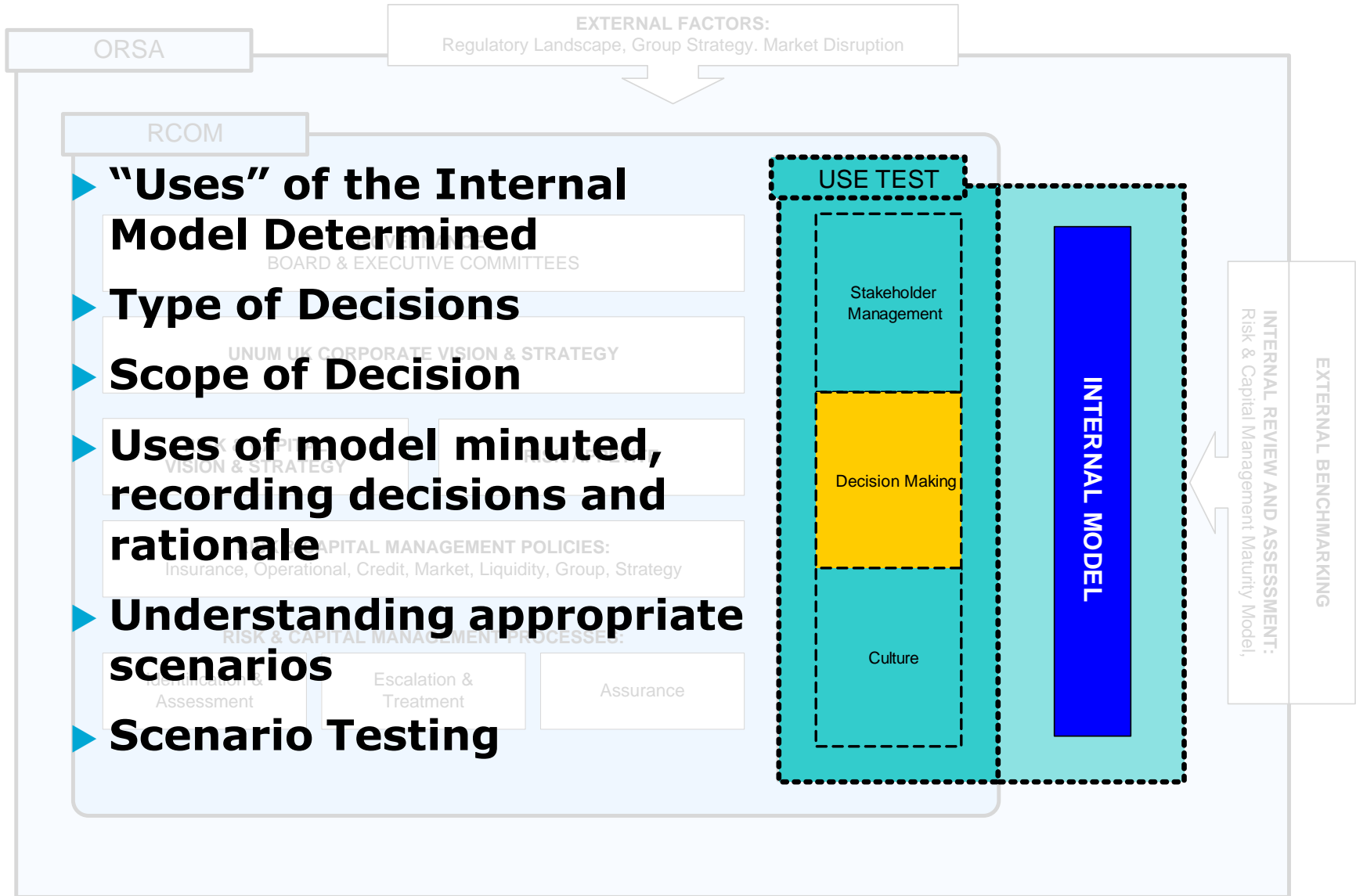
The perfect marriage : - The Model, Use Test, RCOM, and ORSA



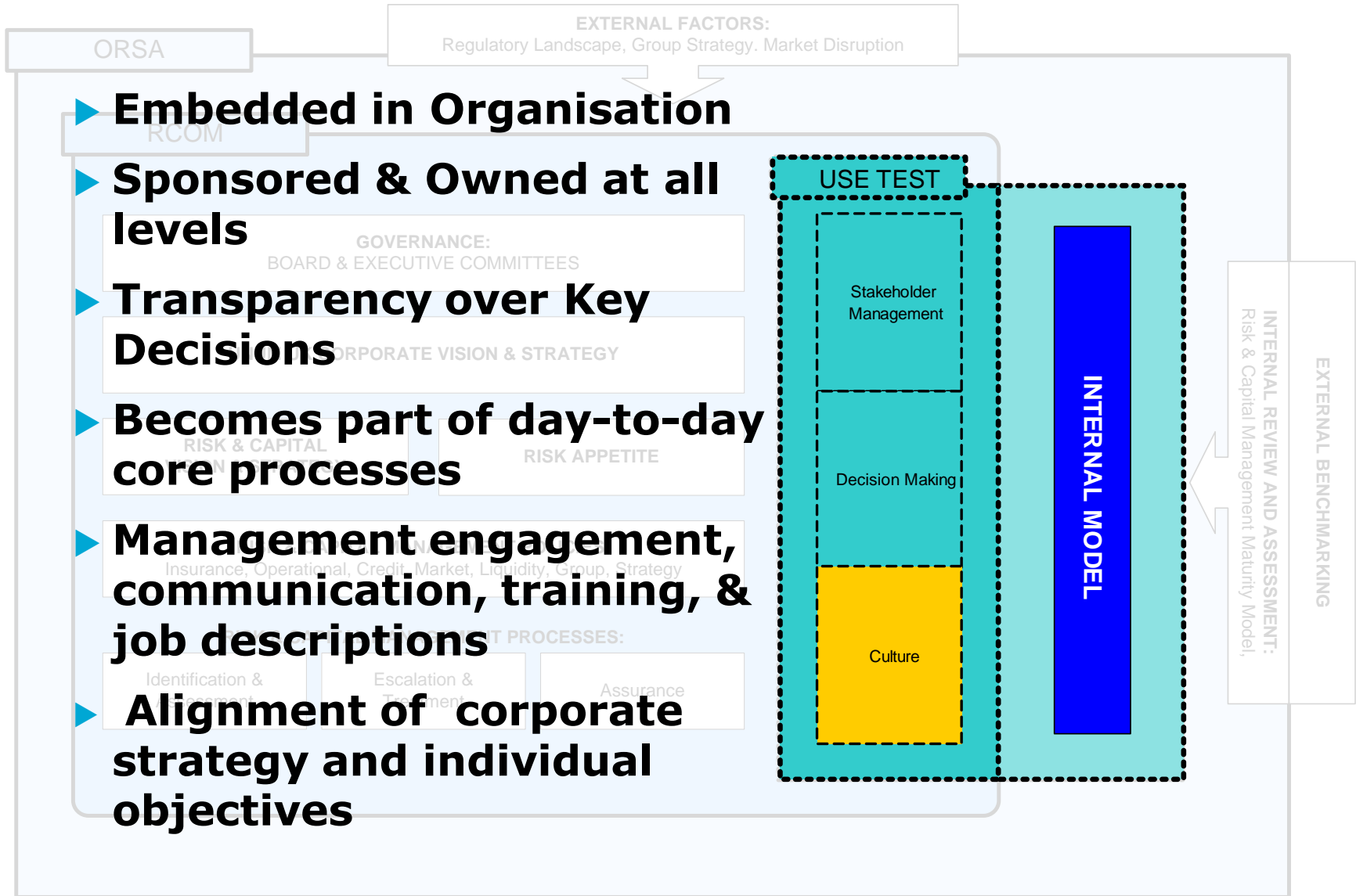
Use Test and... Stakeholder Management



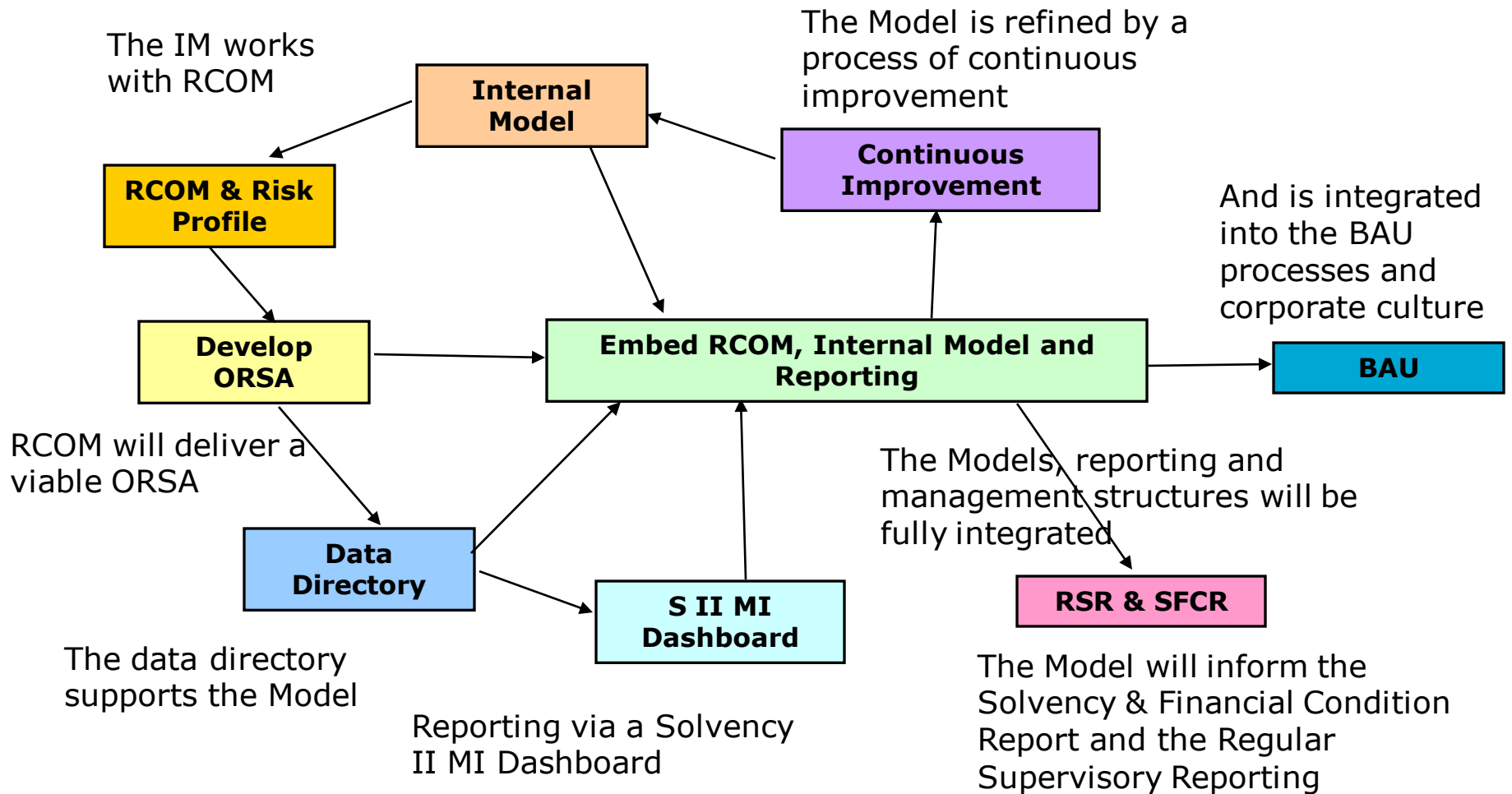
Use Test and... Decision Making



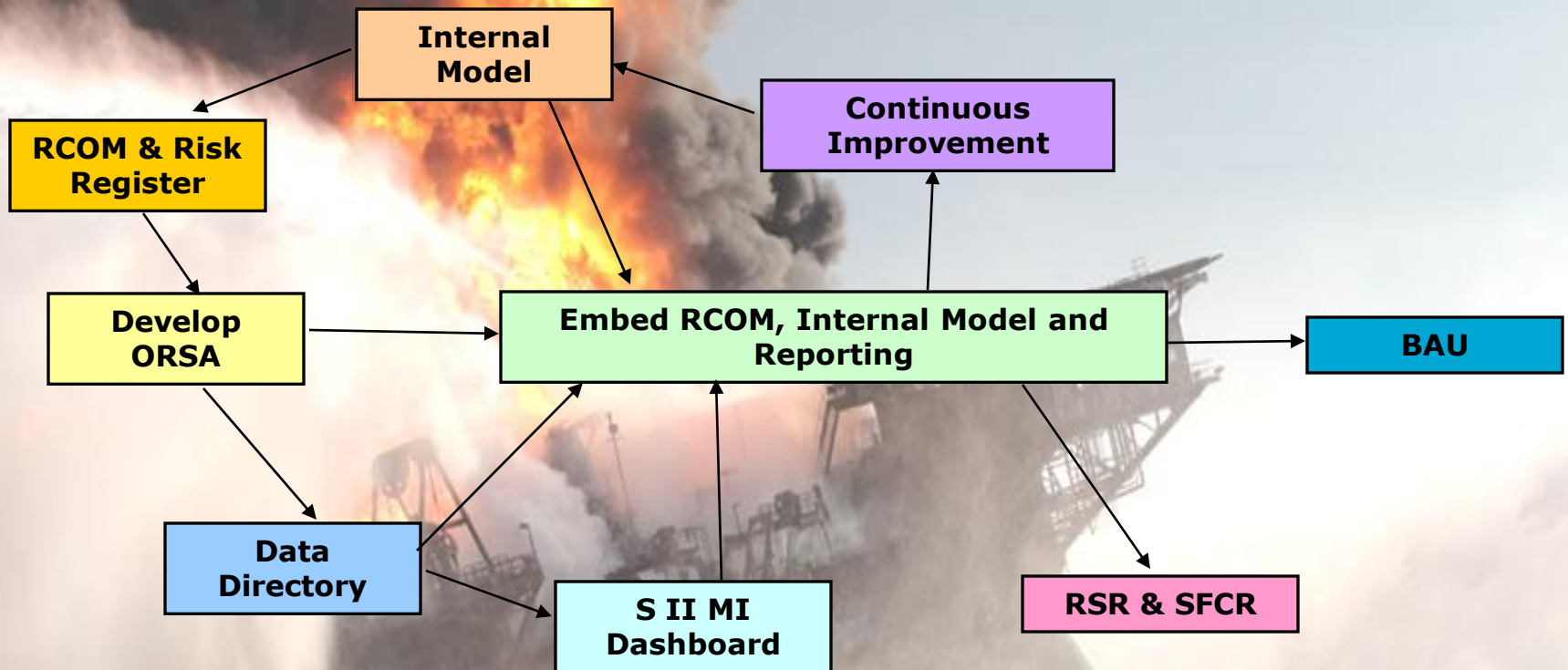
Use Test and... Culture



The broad view of the Use Test will demonstrate :-



To avoid a Financial Deepwater Horizon !!



Any questions?

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