

Risktec Solutions

risk management and assessment for business

BOEMRE Compliance and Beyond
Focusing on Real Not Paper Safety 2011

Workplace Safety Rule (30 CFR 250.1902)

- Requires operators in the Outer Continental Shelf (OCS) to have a Safety and Environmental Management System (SEMS)
- SEMS program in effect on or before **November 15, 2011**
- Makes mandatory **API RP-75**

BOEMRE Requirement

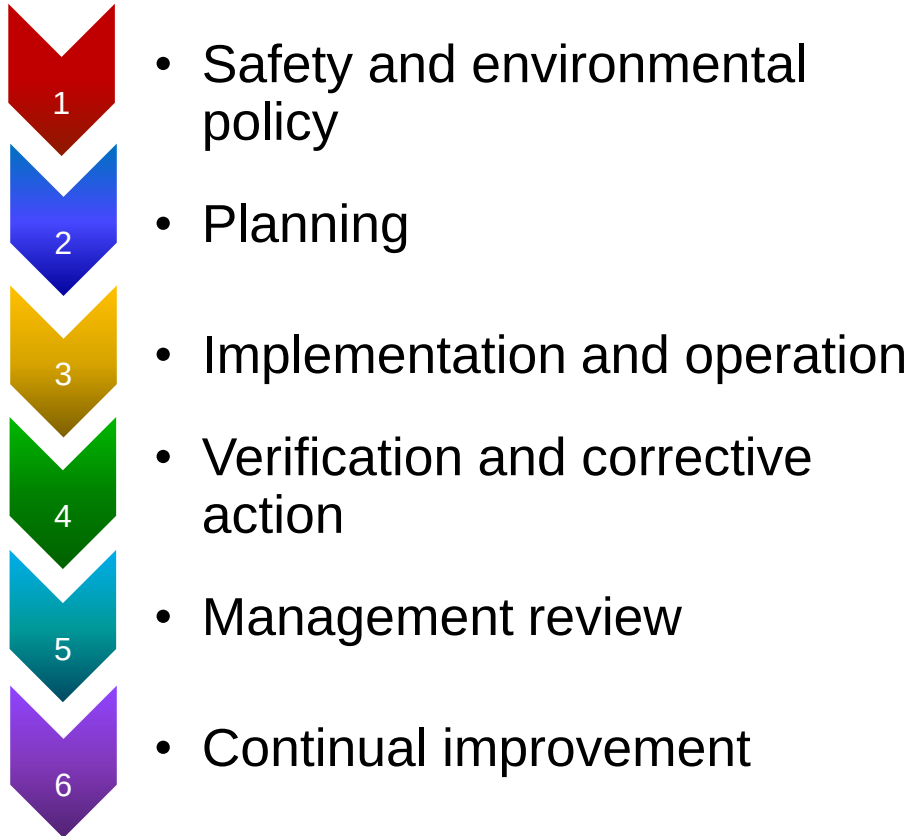
- Performance-based
- Principle – the operators' job to:
 - assess their processes, procedures and systems
 - identify and evaluate risks
 - implement appropriate controls to manage safety and environmental risk

Application of SEMS

- Offshore oil and gas operations and facilities:
 - fixed and mobile production units
 - mobile offshore drilling units
 - spars and pipelines
- All new and existing facilities throughout lifecycle

API RP 75 Program Development and SEMS 13 Elements

■ Development Hierarchy :



New Approach to “Old” Problem

Two ways to regulate safety:

- Prescriptive (“old”)
- Performance (“new”)

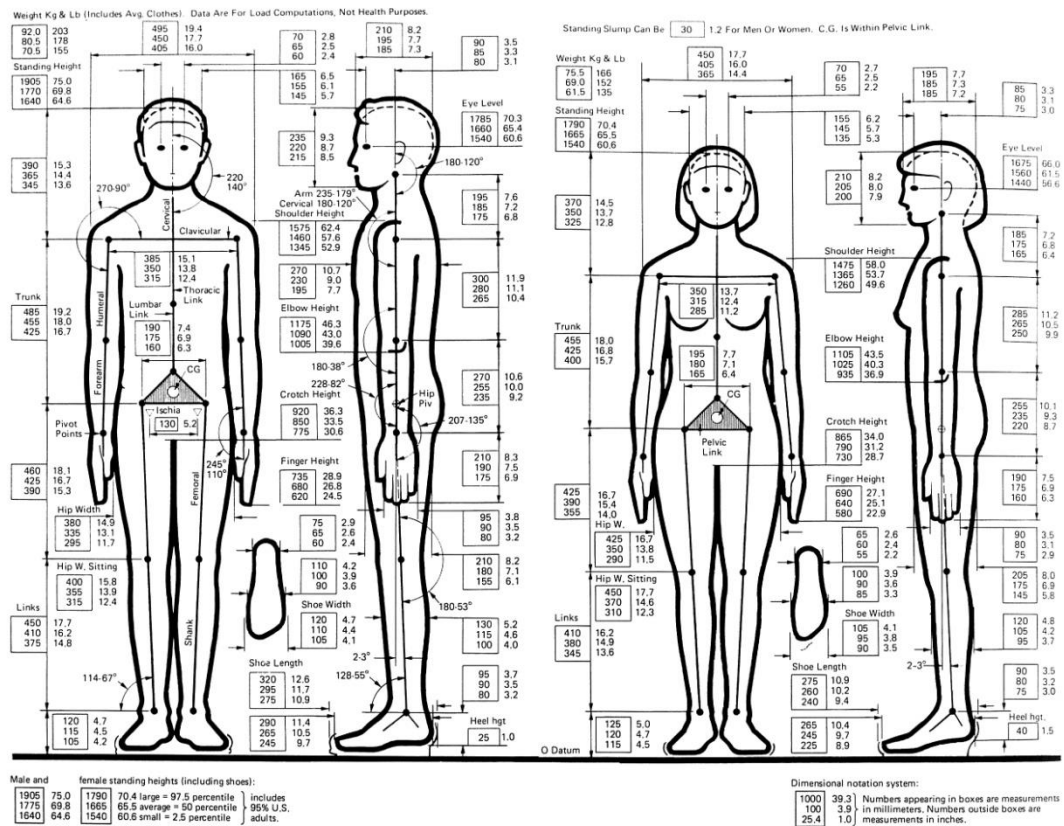
Prescriptive-based Standards



- “Rungs, cleats, and steps of step stools shall be not less than 8 inches (20 cm) apart, nor more than 12 inches (31 cm) apart, as measured between centre lines of the rungs, cleats, and steps”
- Intent – to make stools safe

Prescription Assumptions

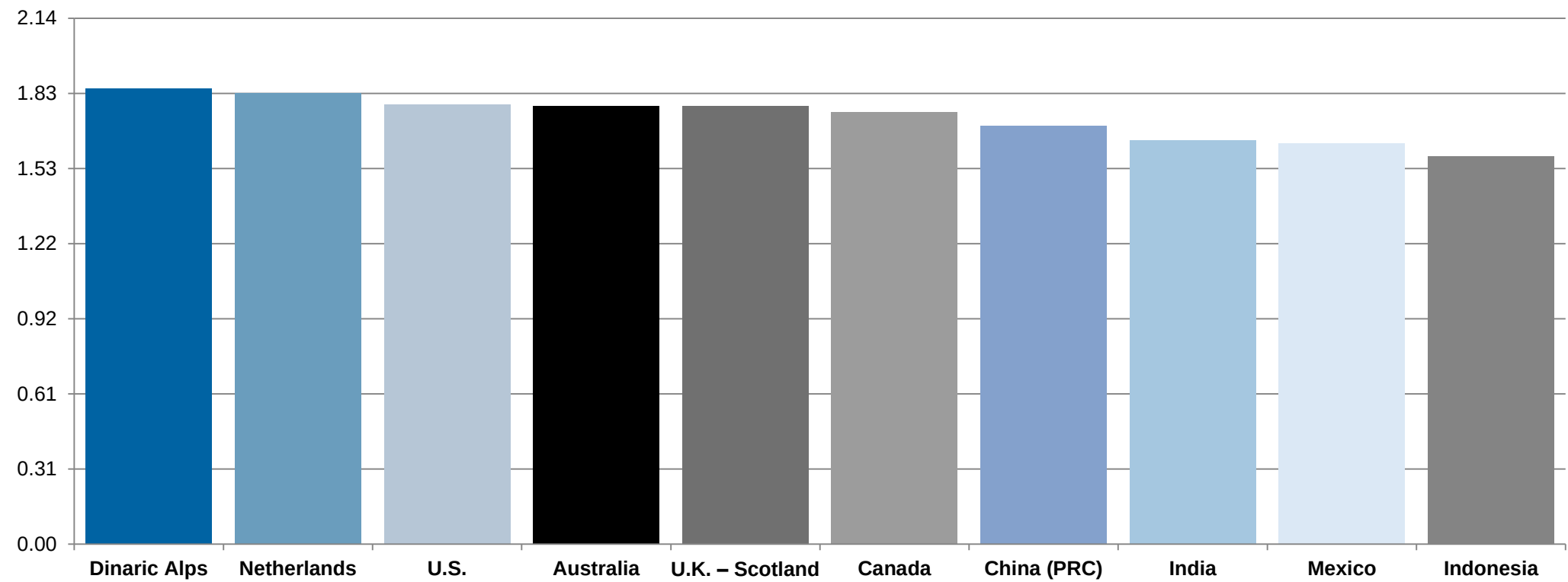
95% of US Adults



Niels Diffrient, Alvin R. Tilley; Henry Dreyfuss Associates; New York, New York

1 ANTHROPOMETRIC

Average Male Height



Performance-based standards



- *for existing equipment designed and constructed in accordance with codes, standards or practices that are no longer in general use, the employer shall determine and document that the equipment is designed, maintained, inspected, tested and **operated in a safe manner***
- More explicit – to make using stools safer

New Offshore Frontiers

- Prescriptive legislation inevitably lags behind advancements
 - in technology and practices
- In the performance based regime the onus is on the operator understand all hazards and risks and set controls and acceptance criteria
 - to guarantee a safe and environmentally sound operation

Fear of the Unknown



Ambiguity in the regulatory language leaves many feeling unsure and uncomfortable

Fear of the Unknown (CONT)

- Current regime is based on compliance with known and trusted standards
- New expectations will only truly be known after results from regulatory audits are published
- Performance-based legislation is designed to be as dynamic as the industry it regulates

Varying Methods of Compliance

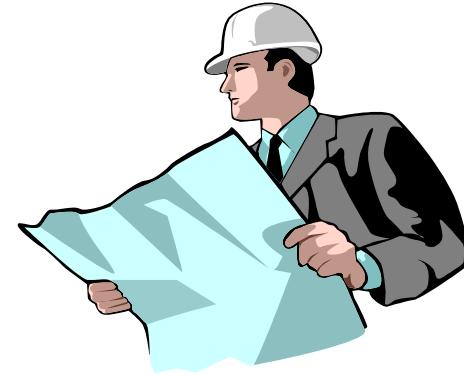
- Individualism of approach
 - What works for one company may fail miserably for another
- Success comes from a fundamental understanding of the risk and the ways in which controls act to manage that risk



Re-education

Both auditors and auditees need to be highly familiar with:

- hazards
- industry
- tools and methods used to manage risk



Skills and
competencies of both
may need to change

SEMS & HSE Case

Same or Different?

- SEMS purpose
 - encourage people to actively identify and reduce risk
- HSE Case purpose
 - describe what is being done to manage risk

SEMS – the Process

- Protects lives and the environment
- Helps a business manage the risks to its assets
- Helps maintain competency
- Reduces risk of lost production

HSE Case Demonstrates

- Formal risk assessments are done
- Control measures are managed
- Shortfalls are addressed
- Risks are managed to as low as reasonably practicable (ALARP)
- There is a process to achieve continual improvement

Real or “Paper Safety”?

Easy to mistake the HSE Case as being the “real” thing

- a lot of emphasis is placed on completing the sections of the document
- sometimes at the expense of program resources

HSE Case Regime - Pitfalls

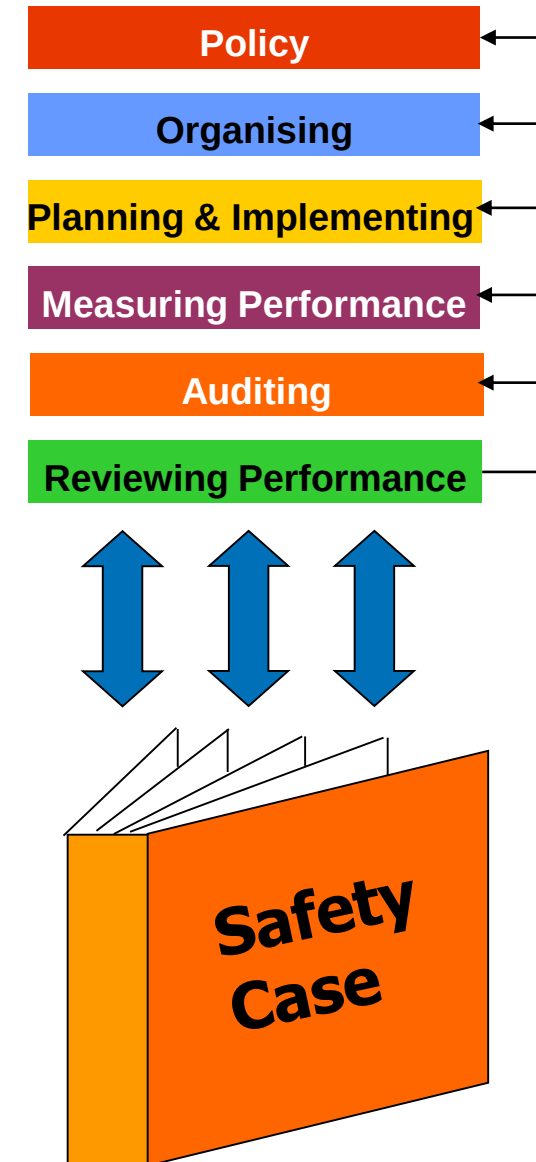


What if you Already Have a HSE Case?

- Existing hazard assessments should be reviewed against the Workplace Safety Rule
- Gaps should be identified and addressed
 - Procedures not in place should be written, implemented and affected personnel trained

SEMS vs. Safety Case

- Similar intent, different emphasis:
- SEMS
 - focus is on activities and performance (i.e. the process)
- Safety Case
 - focus is on documenting the process



Beyond Compliance



What Comes Next?

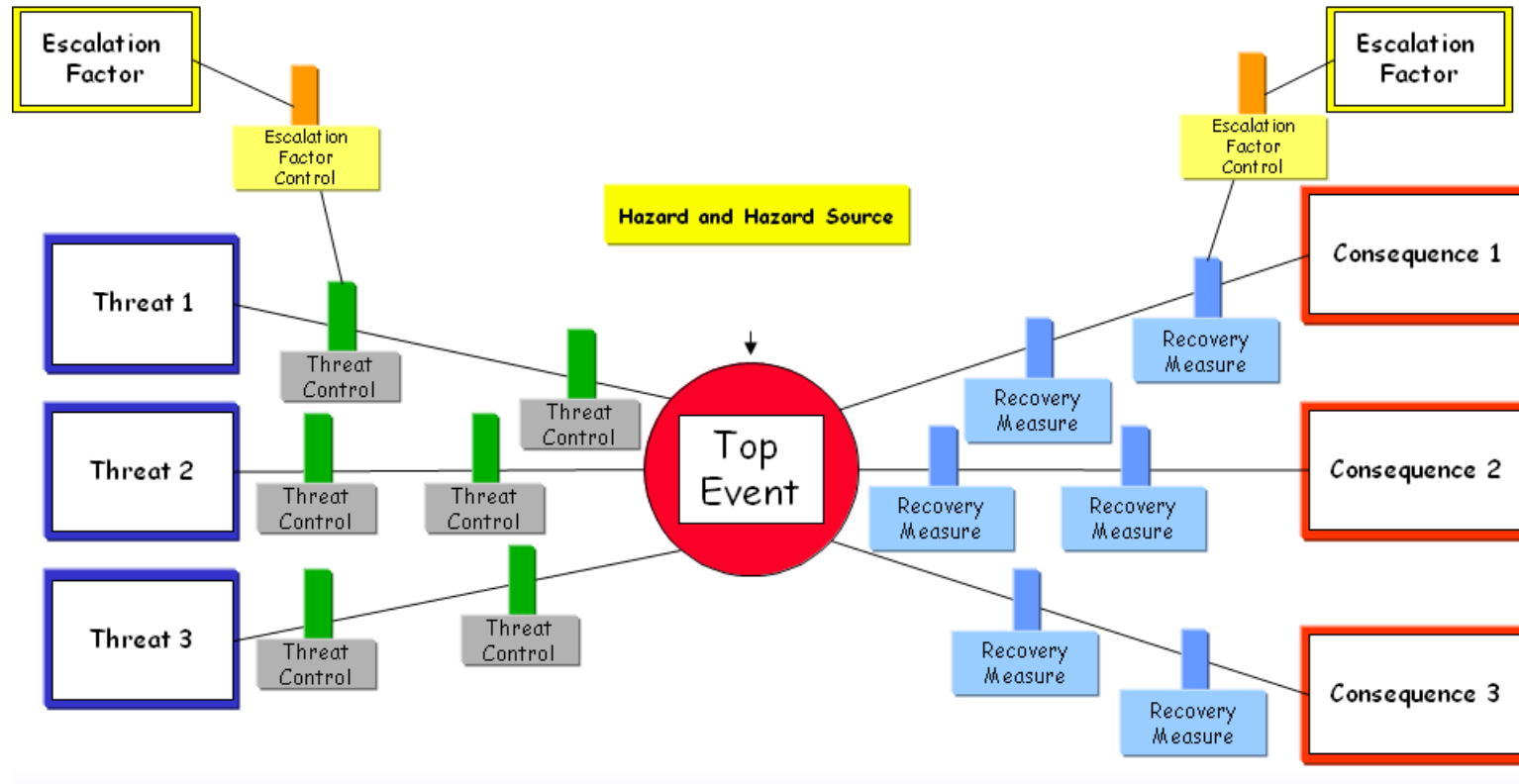
- Are HSE Cases are on the horizon?
- How best to communicate risk?
- How will future regulations come about?
- How do we achieve a “step change” in safety?

HSE Cases on the Horizon?

- Already required by many governments
- Thus, many international companies already have them
- Continual improvement part of performance-based standard

How to Best Communicate Risk?

Bow-tie 101

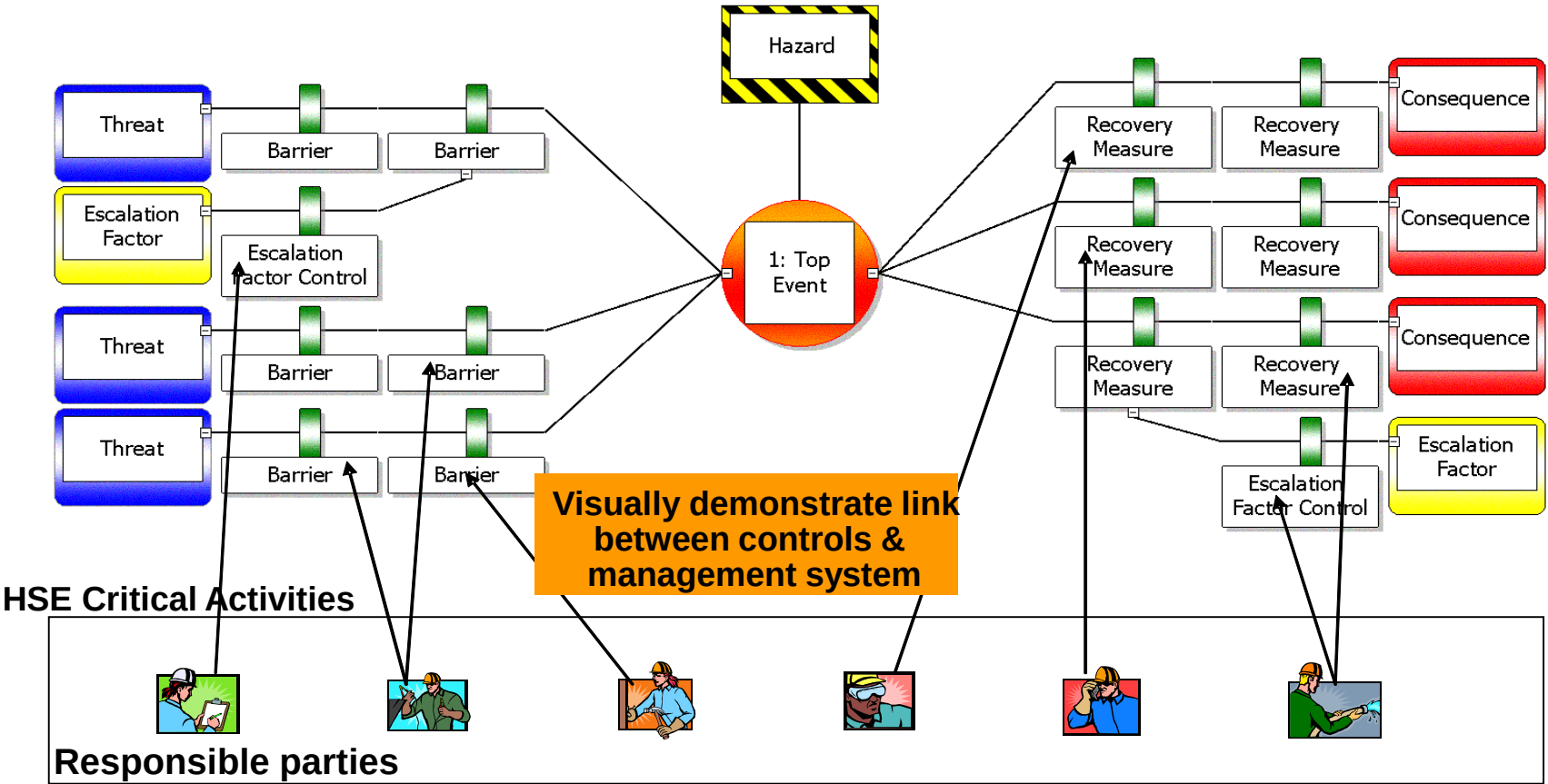


Communicating Risk? (CONT)

BowTies - *becoming more relevant*

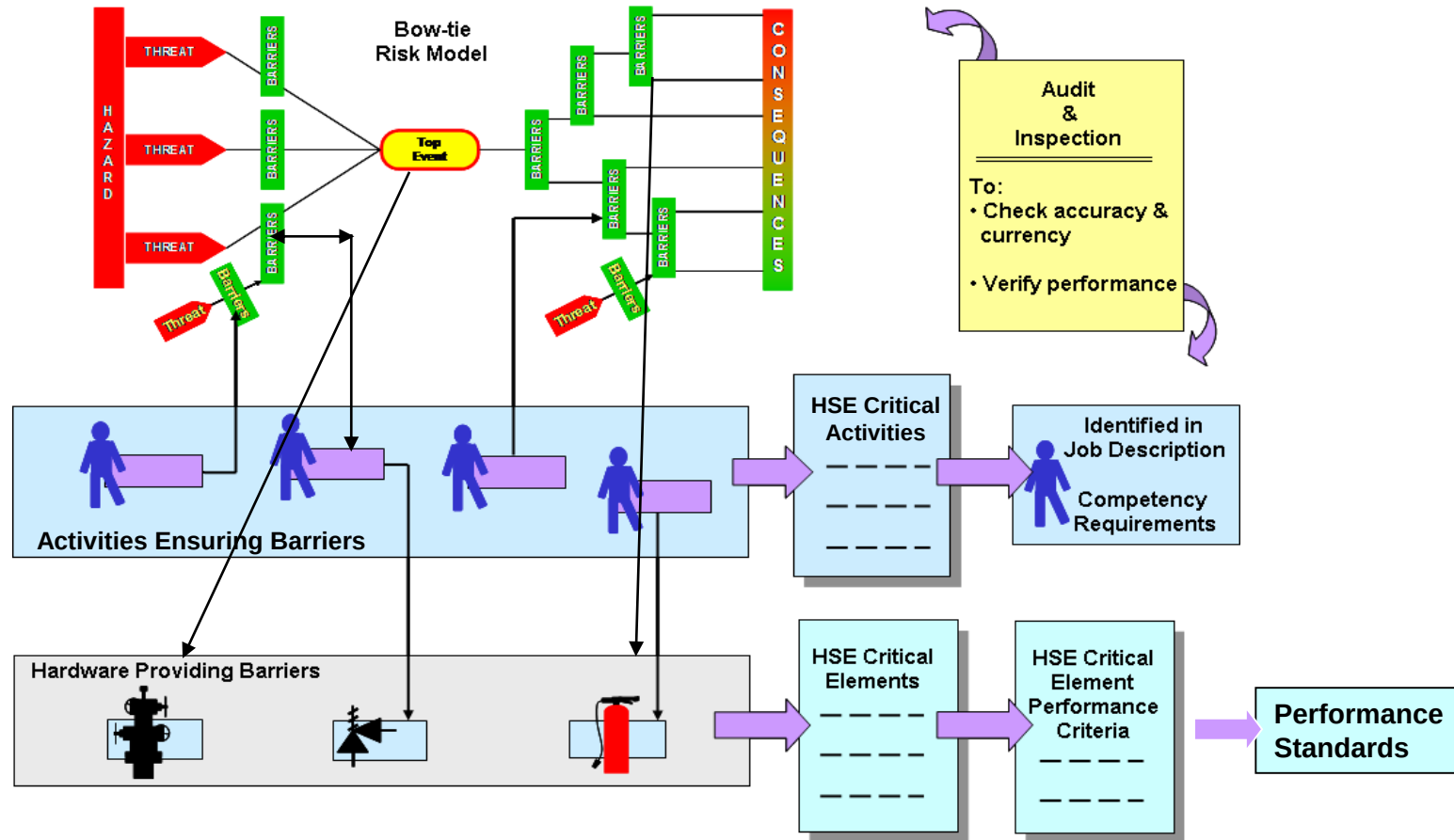
- Visual representation of hazard control measures
- Easily generated as part of the general hazard assessment
- Construct while assessment team is convened

Communicating Risk? (CONT)



Becoming more relevant as an analysis tool in the current regulatory environment

Communicating Risk? (CONT)



Management of HSE critical activities is crucial to major accidents prevention

Origin of Future Regulations?

- Leading/lagging indicators
 - Leading indicators will take precedence over lagging
- CCPS recommending companies track and publicly report process safety metrics
- Published data – regulations seem inevitable

How to Achieve a Step Change?

Safety leadership, organizational culture and individual behavior

- must be understood & improved to gain a performance step-change in safety

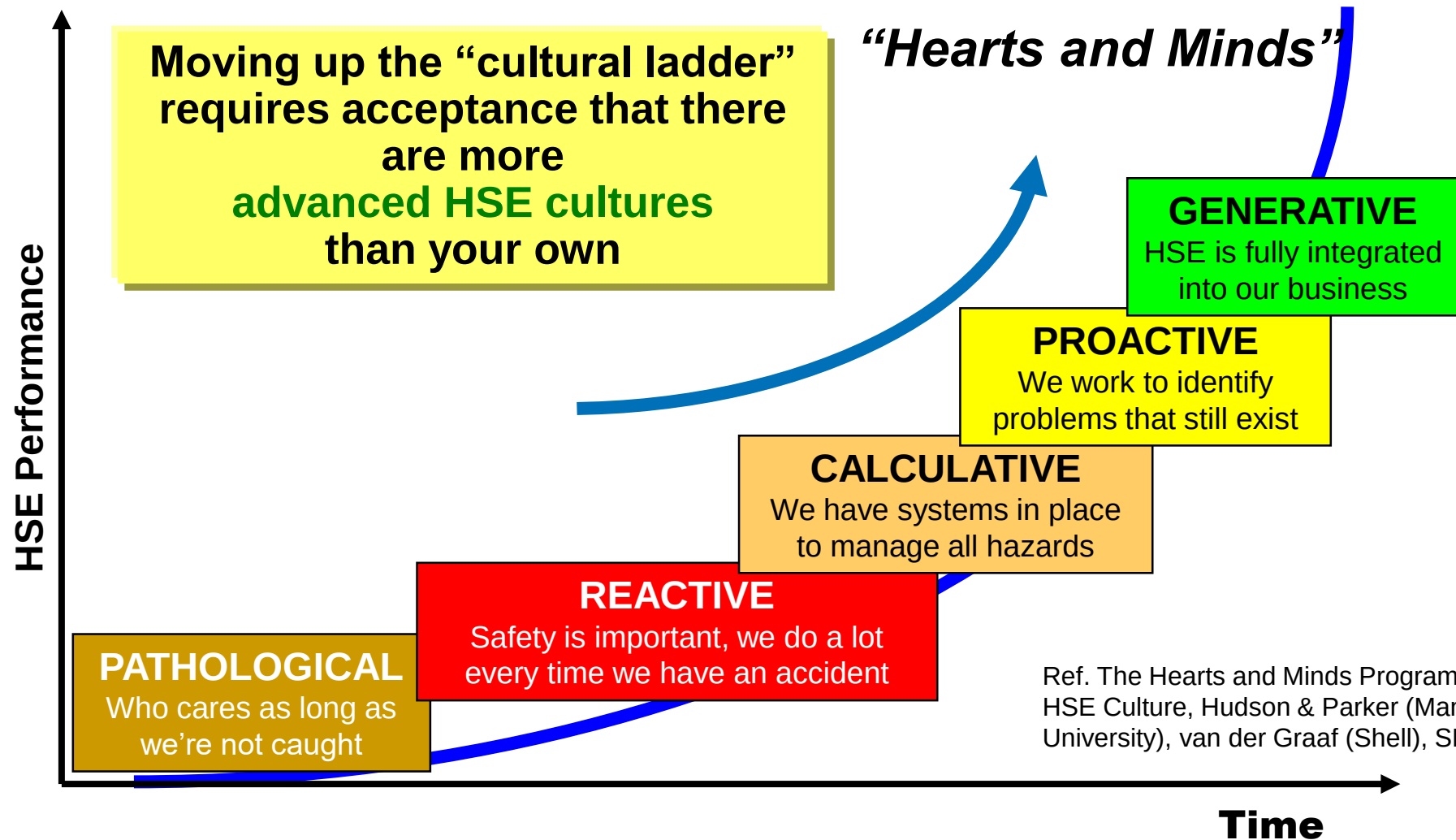
Acknowledging cause & effect relationship

- between leadership practices
- employee motivation and effort
- safety performance

Leadership, Culture and Behavior

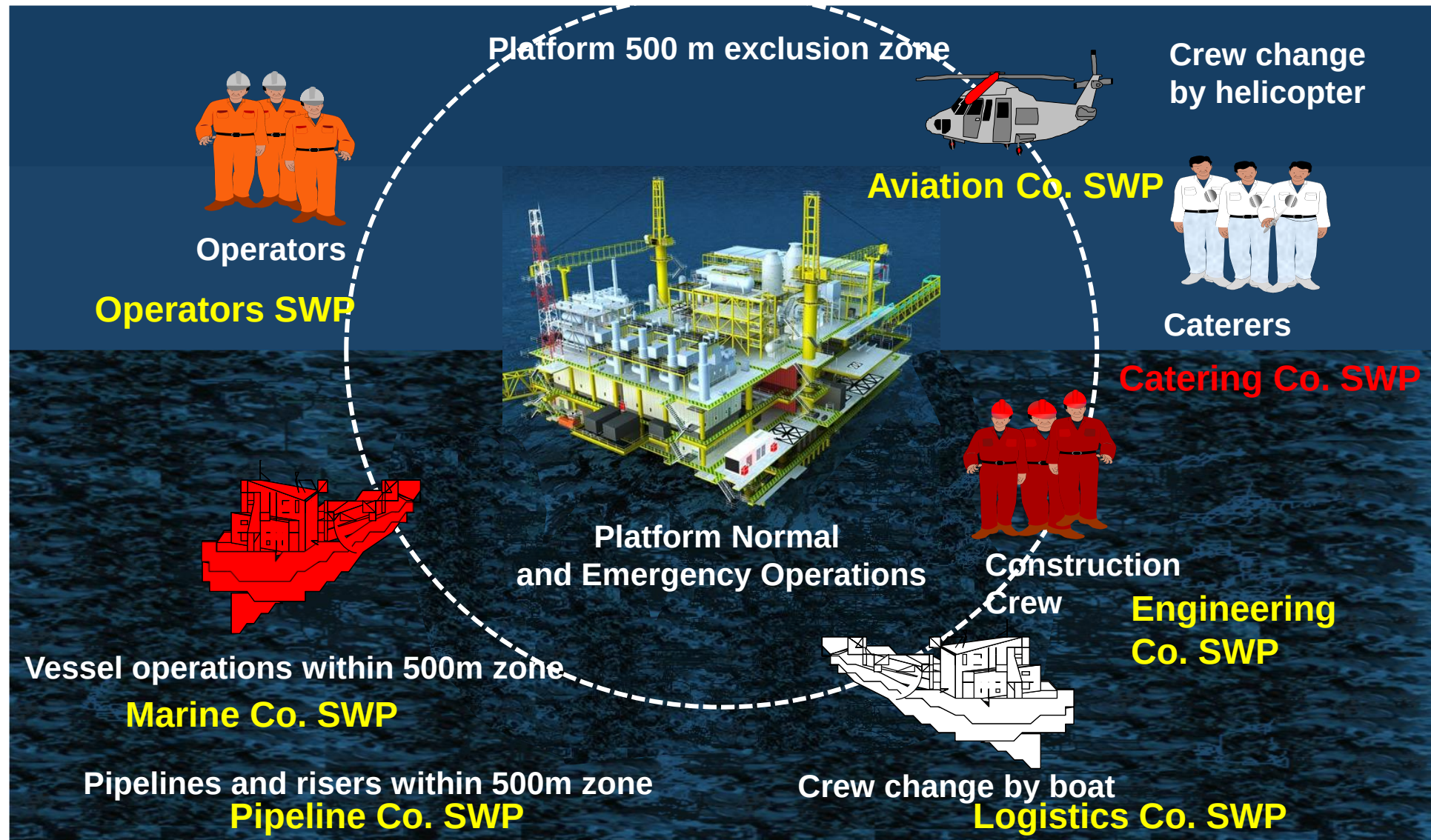
Once leaders accept that safety is a personal value, the organization can focus and involve people in the solution

HSE Cultural Ladder



Ref. The Hearts and Minds Program: Understanding HSE Culture, Hudson & Parker (Manchester University), van der Graaf (Shell), SPE 73938, 2002

Operator Challenge - SEMS all inclusive



Conclusion: Accountability

- Safety Rule (30 CFR 250.1902) focuses on desired characteristics
- Operators' job is to assess their processes, procedures and systems
 - Using people with a fundamental knowledge of the system

Conclusion: Emphasis

- Compliance means “doing prescribed things right”
- But in a performance-based regime, the focus is on “doing the right things right”
- SEMS requires us to determine what those “right things” are, and demonstrate their effectiveness

Conclusion: Beyond Compliance

- Regulators will place more emphasis on clear & effective communication of the hazards and barriers
- Aim is to protect from catastrophic consequences
- Leading indicators will focus future regulatory actions

Conclusion: Purpose

- Regulator is pledged to resist the fierce pressures to return to **business as usual**
- Determined to succeed in creating a system allowing offshore development while ensuring safety and environmental protection

Conclusion

- End of prescriptive legislation that is 'frozen in time'
- Dynamic to support effective and continually improving offshore safety
- Real safety improvement – not just 'on paper'

Conclusion

**Effective Safety and
Environmental Protection**

Should we and the
American people
expect anything less?

Thank you for your attention

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