

Improving safety in a changing landscape

Introduction

Thank you for the opportunity to participate in this executive plenary. And thanks also to Bernard Salt for a thought provoking keynote address.

The bottom line from the observations, so far, clearly is - keep your eye on the game, otherwise you may find yourself and your organisation ill-equipped for the future.

Slide 2 – People challenges

I have focused my remarks for today's session on two themes:

People challenges – what will be the fitness of our organisations in the future?

Facility challenges – what is our ability to harness new technology for better safety, and productivity outcomes?

Slide 3 – Risk Factors

I suggest that there is a growing number of people-related challenges facing the offshore petroleum industry over the next decade.

With that comes a growing imperative to identify and address the **risk** of not considering the safety performance implications of factors (individually, and in combination) in the coming decade?

Organisations may consider:

- The need for greater focus on monitoring of workforce health and consideration of chronic age-related health issues.
- The prospect of losing a significant proportion of most senior / skilled / experienced personnel over the next 5 years and being unable to recruit appropriate replacements.

There are also implications posed by a geographically-dispersed workforce, and combined with a peak in retirements and 'phasing down' of full time work, an increasing demand for flexible arrangements that include working from home.

So there are clear effects of these dynamics:

- an aging workforce
- potential for a period of "mass retirements"
- and; the rise of workplace mobility

on the ability to develop, and maintain an organisational safety culture and climate that supports improving safety performance.

Slide 4 – Capabilities

I suggest that for an organisation to effectively deal with these challenges requires an organisation to possess a set of fundamental capabilities.

1. **Operational capability** is the range of activities and procedures that enable organisations to meet basic HSE operating requirements under standard conditions.

The key elements of this capability are **monitoring** all aspects of the environment and **responding** appropriately to meet the demands of the environment.

2. **Dynamic capability** is defined as an organisation's ability to extend, modify or create new safety capabilities in order to address changing safety environments. The key elements of this capability are **anticipating** and **learning**.

Slide 5 - Fitness-to-operate

These operational and dynamic capabilities are underpinned by three enabling factors create that fitness-to-operate in organisations:

1. **Organisational capital** is the expertise embedded in an organisation's structures, processes, and routines. These characteristics do not reside within a specific individual or part of the organisation but depends on the overall configuration and structure of the organisation.
2. **Human capital** is the knowledge and skills of the people in the organisation. Human capital depends directly on the characteristics of the work force operating at a given point in time.
3. **Social capital** is the interactions among individuals. The interactions determine essential requirements such as the communication of safety information and the development of a positive safety culture.

Slide 6 – Systems

Let's turn first to Organisational Capital – that is, organisational systems and how to develop them.

Operators and duty holders may consider targeting improved safety performance by ensuring there are systems in place to:

- ensure that each member of the workforce has the **necessary skills, training and ability** to undertake routine and non-routine tasks to be performed:
 - in normal operating conditions; and
 - in abnormal or emergency conditions; and

- during any changes to the facility; and
 - to respond and react appropriately, and at the level that might be reasonably required of him or her, during an emergency?
- actively **monitor** the age related demographics within your organisation?
 - actively **manage** career and succession planning to minimise the impact of baby bust type events?

Slide 7 – People

Now, looking at Human Capital. That is, the workforce and their individual attributes

Are organisations targeting improved safety performance through optimisation of workforce:

- demographics;
- psychological capital, personal resources, personality;
- motivation;
- skills and expertise;
- experience;
- safety knowledge and experience?

Slide 8 – Socialisation

And what about Social Capital - the interaction of people?

Are organisations targeting improved safety performance through:

- developing and maintaining a supportive safety culture and climate;
- nurturing effective teams;
- developing and supporting leadership.

Turning again to the observations of Bernard Salt and the traits of Gen Y-ers, have managers thought about how they give feedback about poor performance, particularly safety performance, to a young workforce which has been brought up on praise and buffered from the consequences of their actions?

Slide 9 – Facility Changes and Slide 10 – Bigger, more complex and further away

There is an important interface for the regulator in engaging with industry on the nature of today's offshore projects in Australia: that is, bigger, more complex and further away.



The current offshore facility landscape is comprised mostly of fixed platforms and floating production storage and offloading [FPSO] facilities producing oil, condensate and gas, the latter being flared, re-injected or piped ashore for domestic use or for conversion to liquid natural gas [LNG] and subsequent export.

With natural gas continuing to be the fuel of choice for many regions of the world in the power generation and industrial sectors, demand has started to drive the development of a number of Australia's stranded offshore gas fields, in addition to a range of expansion projects to existing facilities.

Approximately 10 new offshore gas facilities are expected to commence production in the next five years, a number of which are on a scale, or utilise combinations of technology, not seen in the Australian offshore industry to date.

Of the proposed new facilities, at least three are floating LNG [FLNG], which is a technology yet to be in operation anywhere in the world.

With this changing facility scene are challenges for operators and the regulator alike:

- ensuring the optimal safety outcomes for the offshore workforce
- managing regulatory risk and
- ensuring the regulator can independently challenge an operator's proposals at an appropriate stage of development,

have all tested the provisions of the existing offshore petroleum safety regime.

Slide 11 – inherent safety

I would suggest that the changing facility landscape is driving the need for industry to effectively embrace the principles of inherent safety into future production facilities.

Applying inherent safety principles effectively is inextricably linked to timing.

This means:

- recognition that, for inherent safety principles to be effective, they must be applied from the earliest stages of the life of a facility;
- commitment and leadership from the outset;
- ensuring all decisions - starting with concept evaluation and continuing through into operations and ultimately decommissioning – include consideration of inherent safety

Realising these objectives depends also on ongoing education and championing of inherent safety principles internally and with key suppliers.

By seizing the window of opportunity, operators can foster and harness the organisational, human and social capital that is the right fit for the offshore industry now and well into the future.

Thank you.