



NOPSEMA

Australia's offshore
energy regulator

Recent history.....

**What Did We Learn?
And where does that leave us??**

Derrick O'Keeffe

Head of Division, Safety & Well Integrity

SPE – Perth

6 December 2022

A886169

nopsema.gov.au



Today's Discussion

Setting the scene

All about people

Interesting Lessons

All about wells

Our Future



Setting the scene

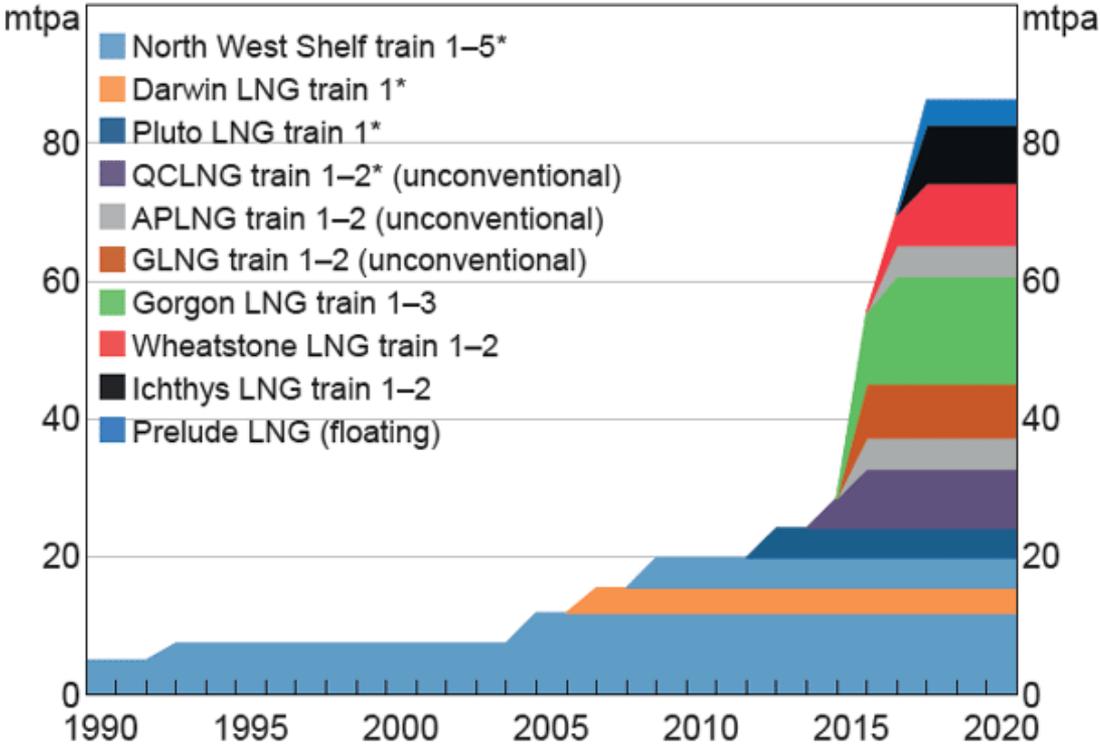


NOPSEMA

Australia's offshore
energy regulator

Building LNG Export Capacity

Nameplate capacity



* Indicates projects currently producing LNG; only train 1 of QCLNG is in production

Sources: Department of Industry (DOI); RBA

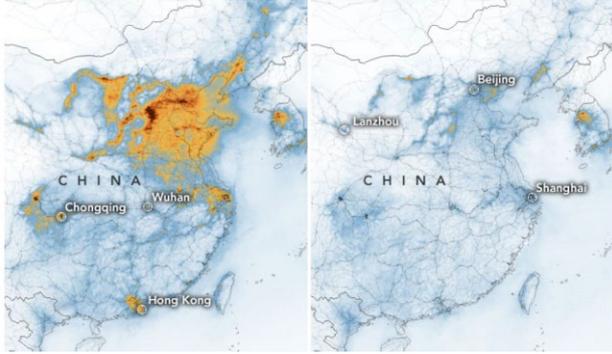
Increasing asset base



Decommissioning



Discoveries 2020





May 2022 – New Federal Government



Pre pandemic



Mid pandemic



Are we back to a
pre pandemic
world?

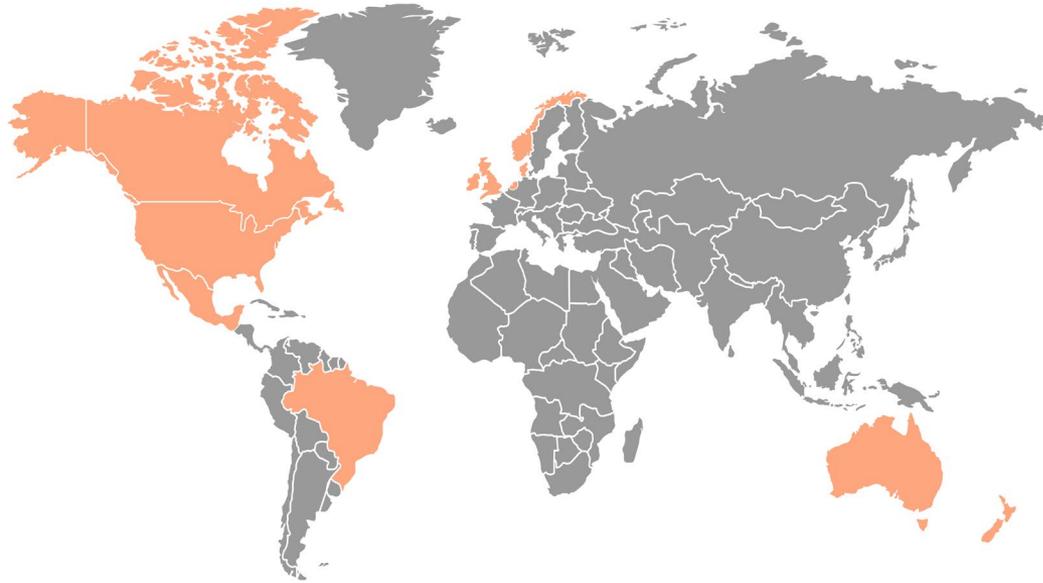


Or are we in new
post pandemic
world?



Where are we
now?

IRF – Bench strength



Canada Energy Regulator

Régie de l'énergie du Canada



CNSOPB



SCFA-A Preventing MAEs

Overview of Key Areas of Strategic Focus

Strategic
compliance
focus areas for
2022



**Executive Oversight
& Accountability**

**Asset Integrity
& Maintenance**

Human Factors

All about people



NOPSEMA

Australia's offshore
energy regulator

Back to the future



Surviving the next crisis: Building positive mental health

Derrick O’Keeffe – Head of Safety & Well Integrity

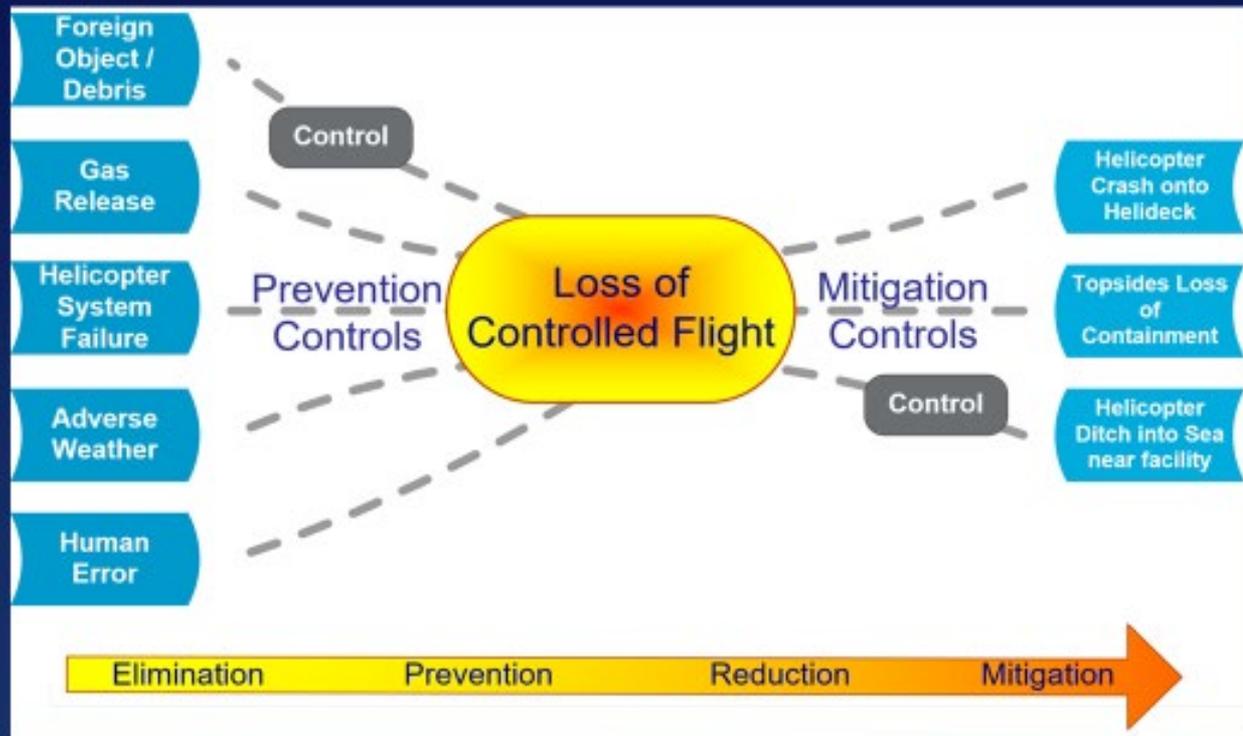
 **NOPSEMA** - National Offshore Petroleum Safety and Environmental Management Authority

Australia’s offshore energy regulator



Society of Petroleum Engineers
Distinguished Lecturer Program
www.spe.org/dl

Understanding complex risks: “Bow-tie” model



Mental Health: Bow-tie





HSR Forum 2022

Melbourne

Supporting Health and Safety
Representatives in Australia's
offshore energy industry



Interesting lessons

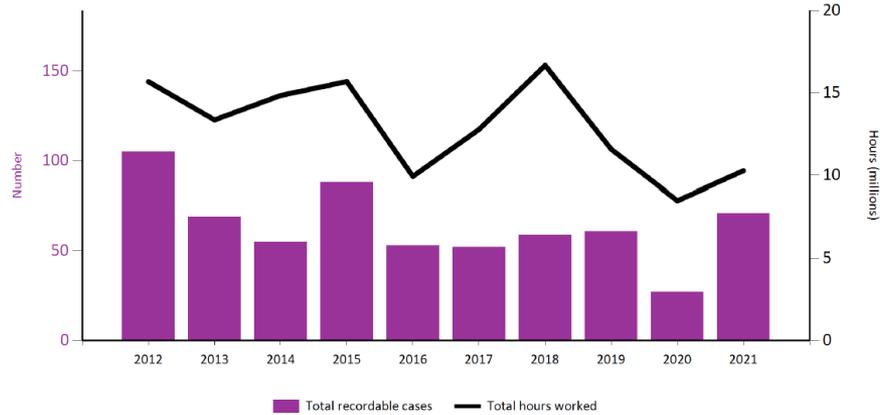


NOPSEMA

Australia's offshore
energy regulator

Metrics – Australia offshore

Injuries - Total recordable cases (TRCs)



Note: Total recordable cases is the sum of fatalities, major injuries, LTIs (lost time injuries), ADIs (alternative duties injuries) and MTIs (medical treatment injuries)

Total recordable cases (TRCs) - injury rates



Note: Total recordable cases is the sum of fatalities, major injuries, LTIs (lost time injuries), ADIs (alternative duties injuries) and MTIs (medical treatment injuries)

Increasing complexity



Asset integrity - Platforms



Asset integrity - FPSO



Increased communication

PREVENTING MAJOR ACCIDENT EVENTS

Leadership, commitment, and responsibility

NOPSEMA is implementing a program where we collect and review information relating to the degree to which senior executives and boards have sufficient oversight of, and accountability for, the control of major accident hazards.

Research in high hazard industries such as oil and gas reinforce the substantial influence incentivised target-setting and organisational reporting lines have on the proper identification, reporting and oversight of safety and environmental risks.

NOPSEMA expects senior executives and, where relevant, their boards to have oversight of the safety and environmental risks to their facilities and activities, to be capable of understanding the risks and to be accountable for ensuring controls are in place to effectively manage the risks.

Most importantly, NOPSEMA expects senior executives to manage the long-term low-likelihood, but high consequence risks to their facilities, in addition to any other operating or financial performance required.

Through its compliance monitoring activities, NOPSEMA has identified issues within the industry at an operational level that may have roots at the executive level. For example

- decisions made prioritising projects that will increase production over routine or campaign maintenance activities leading to unacceptable levels of corrosion and degradation

- workforce reluctance to raise safety issues or 'stop the job' over safety concerns
- management of change processes routinely misused to manage risks to the company rather than risks to the workforce and environment
- failure to address NOPSEMA's inspection findings until faced with the prospect of escalated enforcement action
- significant job or operating budget cuts without due regard for work re-prioritisation, deferred maintenance, OHS and process safety
- lack of support for the Health and Safety Representative role.

The examples above are potential symptoms of organisational structures and incentive systems that prioritise the mitigation of financial risk over safety and environmental risk.

NOPSEMA plans to review corporate scorecards and target setting for key personnel, transparency and visibility to senior management of relevant performance indicators, and the status of internal governance and oversight of operations responsible for safety and environmental management. Results from these reviews will be shared with company Chief Executives or equivalents and responses sought.



International Regulators' Forum
GLOBAL OFFSHORE SAFETY

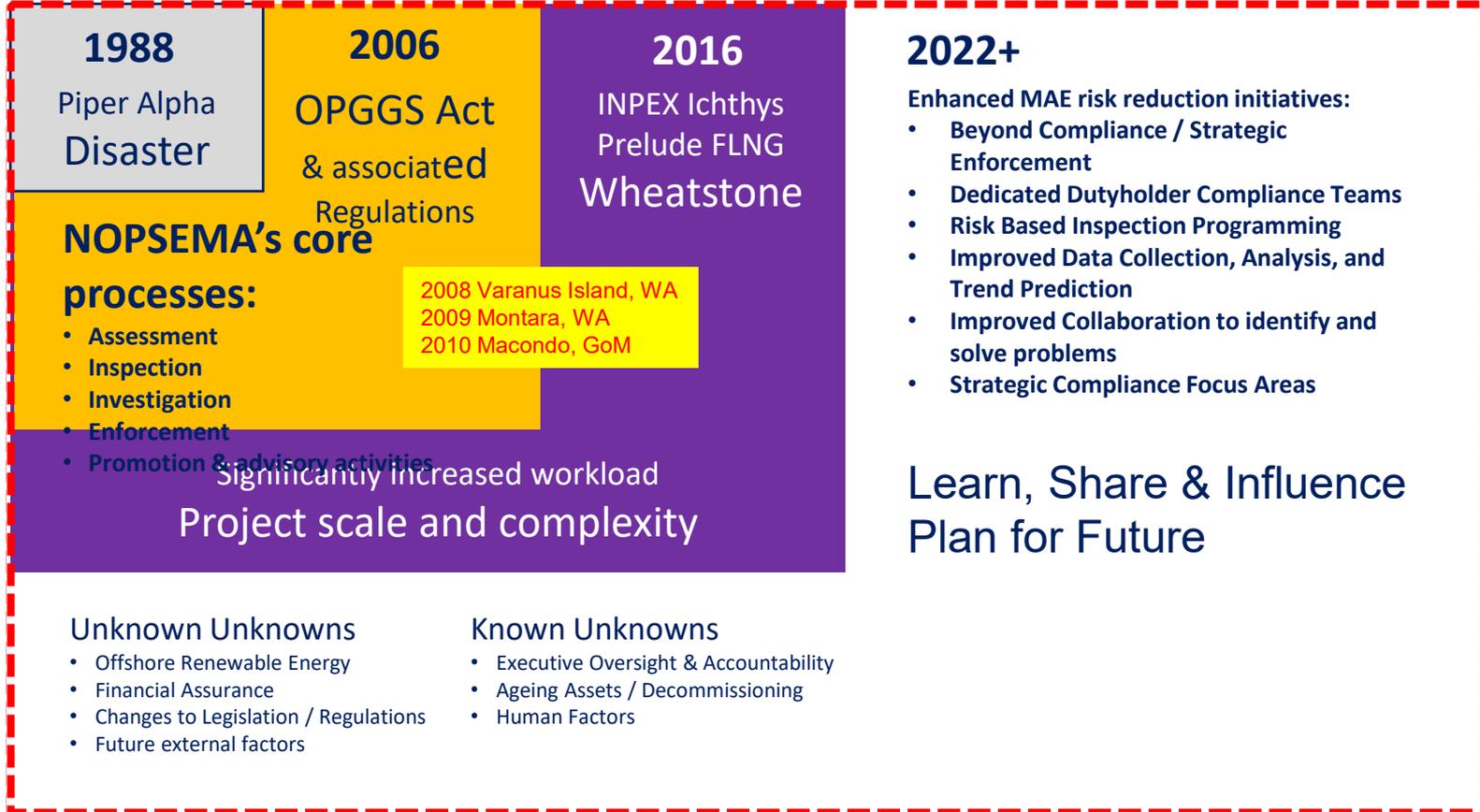
All about wells

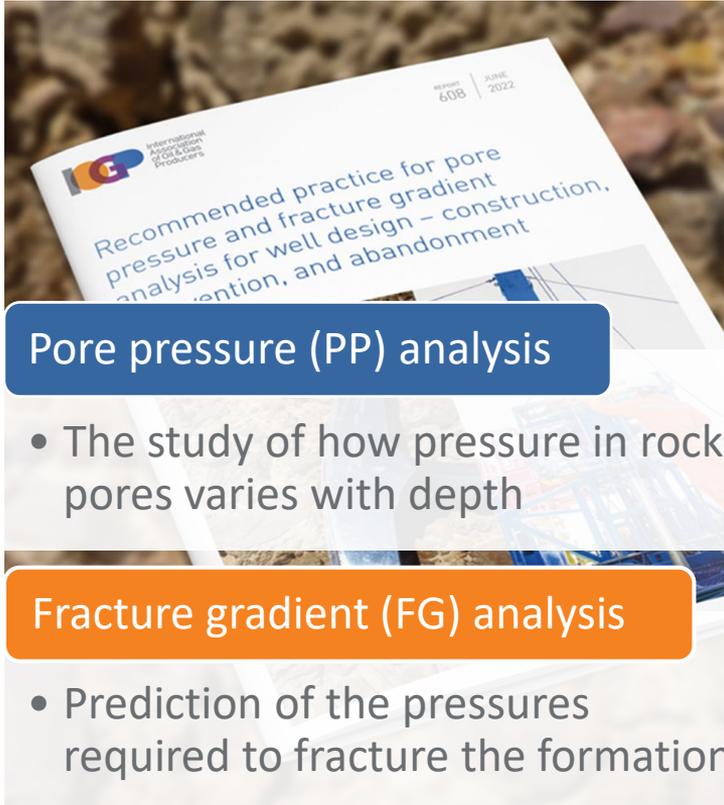


NOPSEMA

Australia's offshore
energy regulator

Expanding Responsibilities





Pore pressure (PP) analysis

- The study of how pressure in rock pores varies with depth

Fracture gradient (FG) analysis

- Prediction of the pressures required to fracture the formation

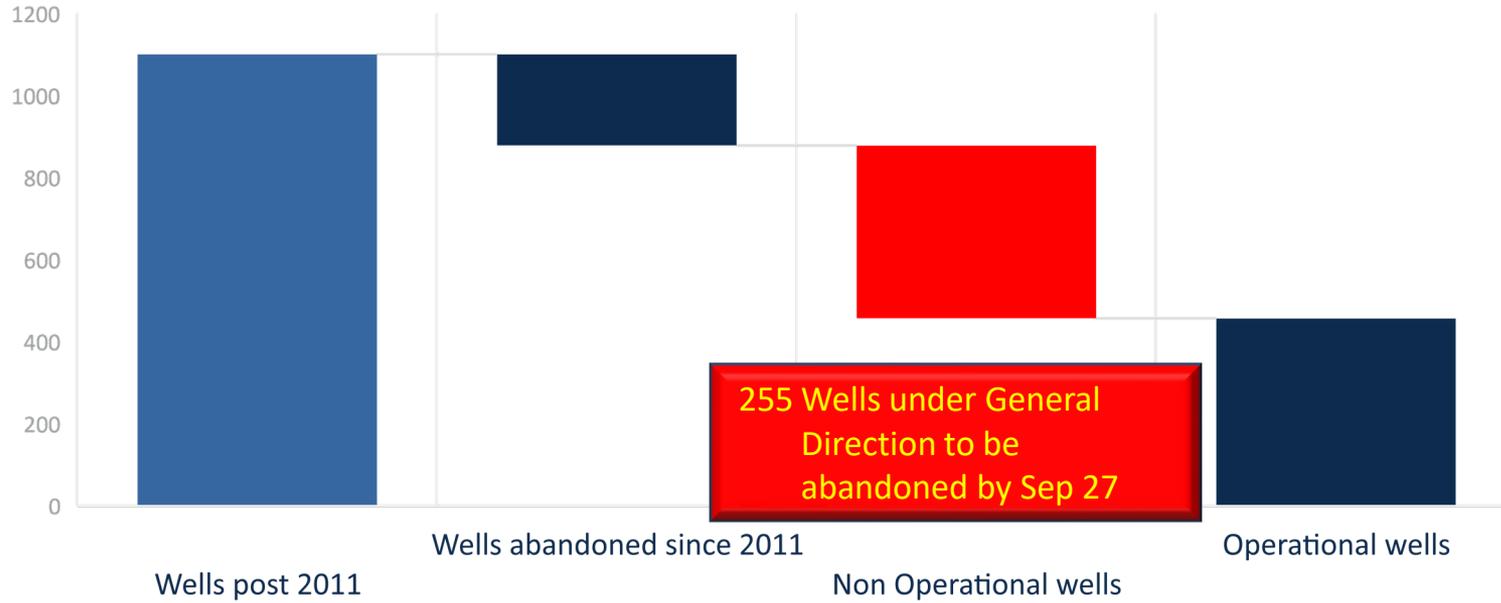
What's the purpose of the guidance?

Summary of methods and good practices for PPFG analysis and real time PP monitoring

A tool to help teams involved in generating and using PPFG predictions:

- Ensure a rigorous approach
- Improve understanding and communication

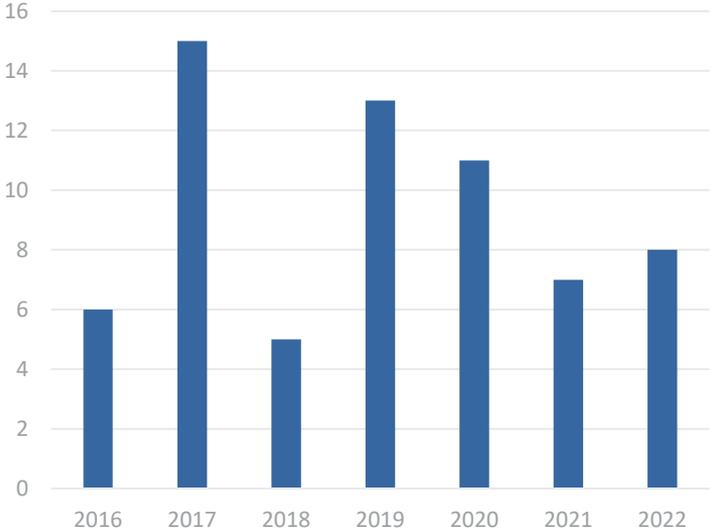
Well breakdown



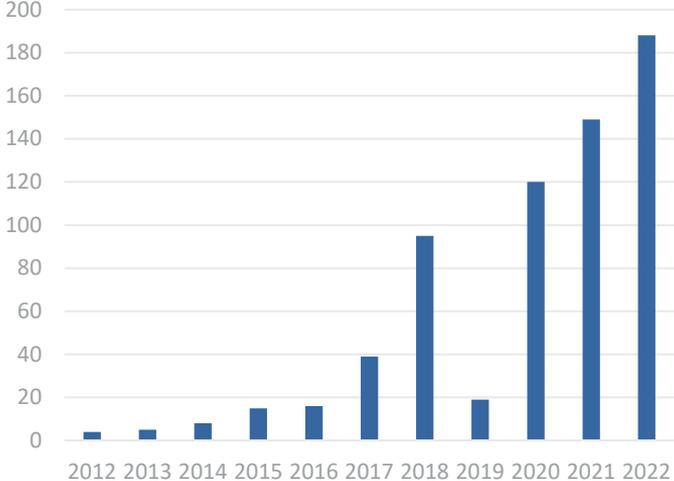
Regulator's perspective



Abandonments per year



Well Inspections



Problem Statement

Australia's Well Decommissioning Challenge

**Going forward –
new wells**



**Current
operating wells**

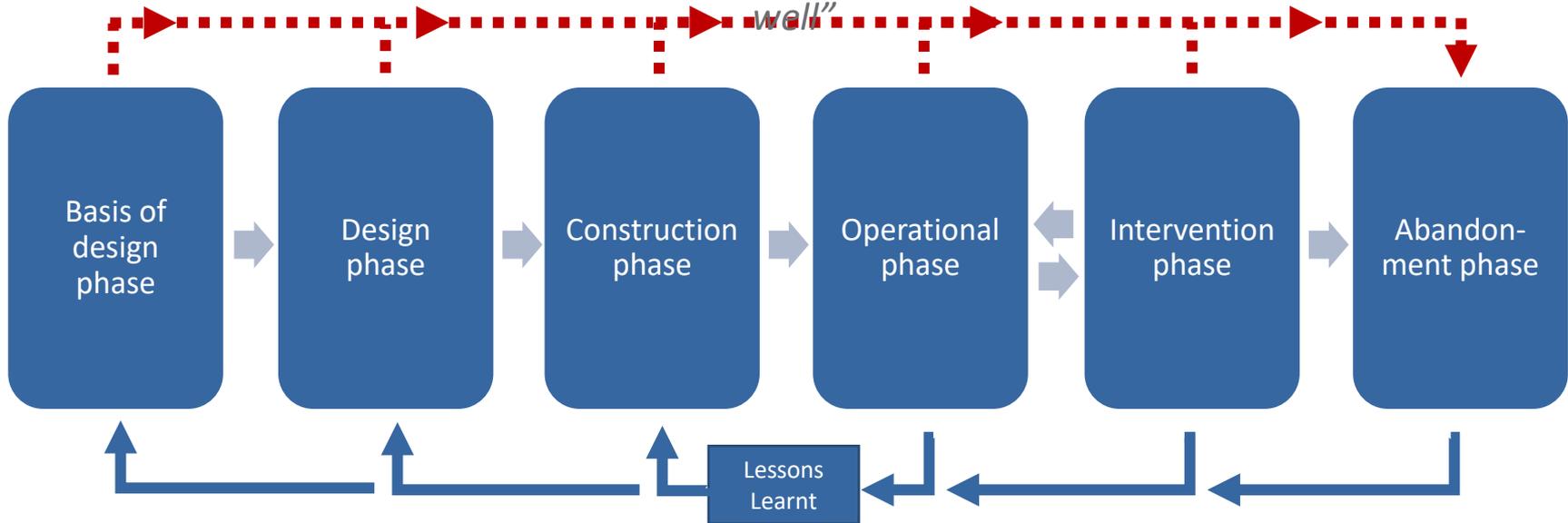


**The backlog of
unused wells**



Well integrity life cycle phases

“Well abandonment requirements should be considered throughout the life cycle of the well”



Targets for Well Decommissioning

01 By end of 2021 ✓

All new and revised
permissioning documents
address decommissioning
requirements

02 By end of 2023

All wells risk assessed
and have accepted
abandonment plans
in place

01

02

03

03 By end of 2025

All wells plugged or
closed off within three
years of becoming non-
operational

SPE Symposium – November 2022, Perth



Breakout session

Decommissioning in the fictitious offshore basin – Coco-Palm in Oceania

Top 3 issues: Cost, local resources, and alignment on outcome

Top 3 opportunities: Proactive planning, industry wide plan and best practice legislation



Our Future



NOPSEMA

Australia's offshore
energy regulator

Executive Oversight – An Evolving Process

- Often responsive to incidents
- Ability to establish key insights to organisational structural issues
- Effective where duty holder executive leadership is required to implement change
- Aim to become more proactive over time



Leadership, commitment, and responsibility

NOPSEMA is implementing a program where we collect and review information relating to the degree to which senior executives and boards have sufficient oversight of, and accountability for, the control of major accident hazards.

Research in high hazard industries such as oil and gas reinforce the substantial influence incentivised target-setting and organisational reporting lines have on the proper identification, reporting and oversight of safety and environmental risks.

NOPSEMA expects senior executives and, where relevant, their boards to have oversight of the safety and environmental risks to their facilities and activities, to be capable of understanding the risks and to be accountable for ensuring controls are in place to effectively manage the risks.

Most importantly, NOPSEMA expects senior executives to manage the long-term low-likelihood, but high consequence risks to their facilities, in addition to any other operating or financial performance required.

Through its compliance monitoring activities, NOPSEMA has identified issues within the industry at an operational level that may have roots at the executive level. For example

- decisions made prioritising projects that will increase production over routine or campaign maintenance activities leading to unacceptable levels of corrosion and degradation

- workforce reluctance to raise safety issues or 'stop the job' over safety concerns
- management of change processes routinely misused to manage risks to the company rather than risks to the workforce and environment
- failure to address NOPSEMA's inspection findings until faced with the prospect of escalated enforcement action
- significant job or operating budget cuts without due regard for work re-prioritisation, deferred maintenance, OHS and process safety
- lack of support for the Health and Safety Representative role.

The examples above are potential symptoms of organisational structures and incentive systems that prioritise the mitigation of financial risk over safety and environmental risk.

NOPSEMA plans to review corporate scorecards and target setting for key personnel, transparency and visibility to senior management of relevant performance indicators, and the status of internal governance and oversight of operations responsible for safety and environmental management. Results from these reviews will be shared with company Chief Executives or equivalents and responses sought.

PREVENTING MAJOR ACCIDENT EVENTS



NOPSEMA takes on new role



Guidance available for hazard identification and risk assessment



Living with COVID-19

Adapting to a new normal while remaining vigilant



Securing approvals for end states



SUBSCRIBE



NOPSEMA

Australia's offshore
energy regulator

A large, glowing sphere, resembling a planet or a celestial body, is the central focus. It is mounted on a dark, cylindrical pedestal. The sphere is illuminated from within, showing a gradient of colors from deep blue at the top to bright white and yellow at the bottom. The background is a serene sunset over the ocean, with the sky transitioning from a pale yellow near the horizon to a deep blue at the top. The water is dark and calm, reflecting the colors of the sky. The overall mood is contemplative and mysterious.

Questions?

**National Offshore Petroleum Safety and
Environmental Management Authority**

Level 8 Alluvion, 58 Mounts Bay Rd, Perth WA 6000
GPO Box 2568, Perth WA 6001 Australia

nypsema.gov.au



NOPSEMA

Australia's offshore
energy regulator

