 Oil & Gas Authority

AITG 

 The Oil & Gas Technology Centre

 Oil & Gas UK

 STEP CHANGE IN SAFETY

 HSE

Asset Stewardship Task Force

Asset Integrity Task Group (AITG)

Asset Integrity – Underpinning Economic Recovery

Abdullah bin Mubarak Al-Sayid - Head of Engineering & Integrity Repsol Sinopec

- MERUK Asset Integrity Task Group Lead

Asset Integrity Task Group



Asset Integrity – Underpinning Economic Recovery

- The need for far greater constructive collaboration between operators
- The need for better implementation of industry strategies
- The need for significantly improved asset stewardship

UKCS MAXIMISING
RECOVERY REVIEW:
FINAL REPORT

24 February 2014
Sir Ian Wood

Asset Integrity Task Group

MERUK Forum & Governance



MER UK Forum

Smaller, focused membership with industry chairs, government ministers and officials, OGUK & OGA leadership, with others invited according to the agenda.

MER UK Steering Group

Focus of this group will be to steer the six task forces, discuss & review key strategic issues such as industrial strategy, collaboration & OGA/ Industry interface.

The MERUK steering group will meet twice per year.

Exploration

Exploration Task Force

Asset Stewardship

Asset Stewardship Task Force

Efficiency

Efficiency Task Force

Technology

Technology Leadership Board

Decommissioning

Decommissioning Task Force

Supply Chain & Exports

Supply Chain & Exports Task Force

Six core areas highlighted by the WOOD report that would benefit from industry strategy.

Lead by appropriate industry leadership. The groups have been changed from “Boards” to “Task Forces” except in the case of the Technology area.

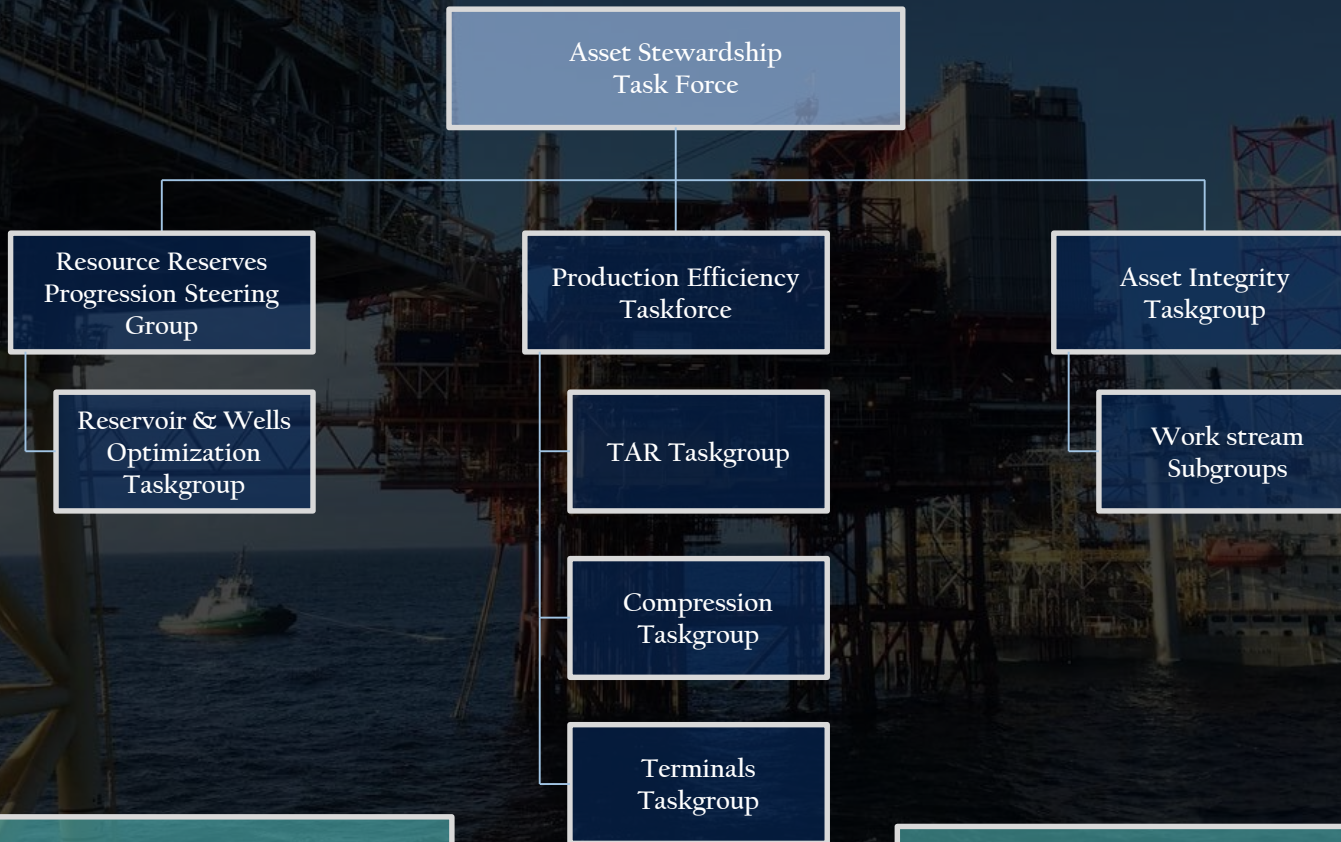
These groups are chaired by Industry Leaders

Eg Technology Chaired by RSRUK CEO
Asset Stewardship Chaired by Apache MD

Asset Integrity Task Group

Asset Stewardship Task Force Priorities

Objective: To enhance and improve asset stewardship by maximizing value by improving safety and efficiency
Chair: Jon Graham – Apache Managing Director
Funded: OGA Support funded from OGA levy , industry Supported and funded through association
Key Relationships: MERUK Task forces especially technology leadership board, supply chain and exports.



RRPS
 Focus of this group is about returning existing opportunities from our well stock

PETF
 Focus of this group is reduce production losses

Asset Integrity Task Group

AITG Members



Asset Integrity Task Group

AITG Objectives and Deliverables

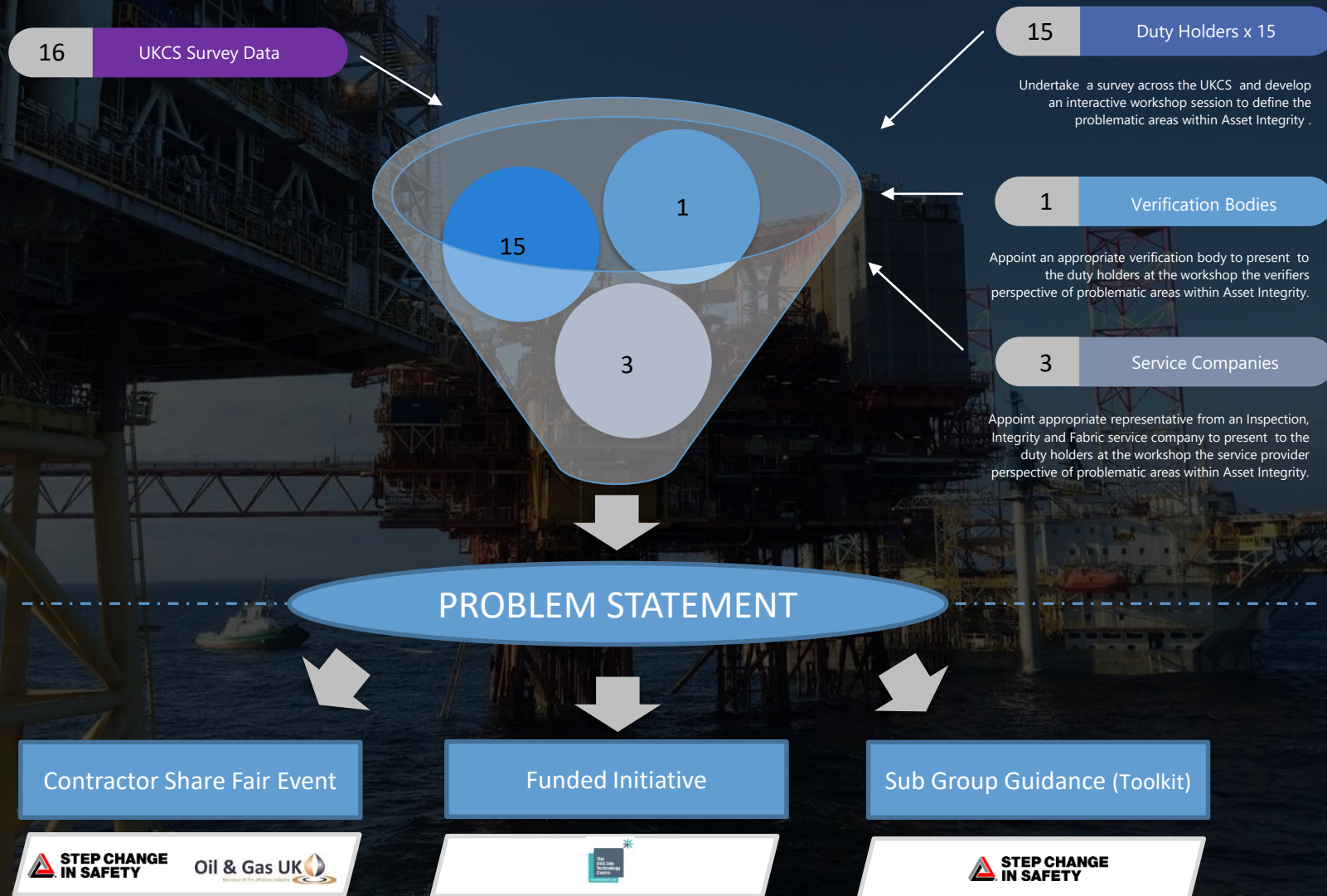


| | | |
|---------------------|---|--|
| Objective | To bring greater industry collaboration with the intention of solving common industry problems and setting a bench mark of Asset Integrity stewardship. | |
| Resources | Sponsor | Team |
| | Steve Gardyne – Operations Vice President RSRUK | 16 X Duty Holders, HSE, OGUK, Step Change In Safety, OGTC. |
| Deliverables | 1. Define a list of problematic areas/ improvement opportunities within Asset Integrity that are common across the industry. | |
| | 2. Develop a map of existing asset integrity initiatives and best practices showing industry ongoing improvements and future direction setting. | |
| | 3. Develop a draft expectation relating to good integrity practise for consideration of the Asset Stewardship Taskforce/OGA | |

Asset Integrity Task Group



Objective 1 – Define Problematic Areas (WORKSHOP)



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Survey Data - (From 45 assets / 80% UKCS Production)



Asset Integrity losses in 2017: 14.7 MMboe



Rise in Production Efficiency from 2016 to 2017 contributed circa 11.8 MMboe



Asset Integrity related production loss across 45 assets surveyed is roughly equivalent to PE gains from 2016 to 2017.

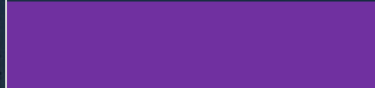


14.7 MMboe is equivalent to about the UK's 8th largest producing asset.

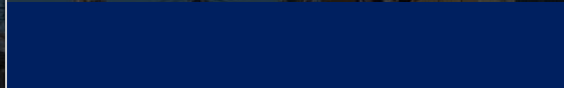
Asset Integrity Task Group

Survey Data - (Top causes of asset integrity related production loss)

External Corrosion



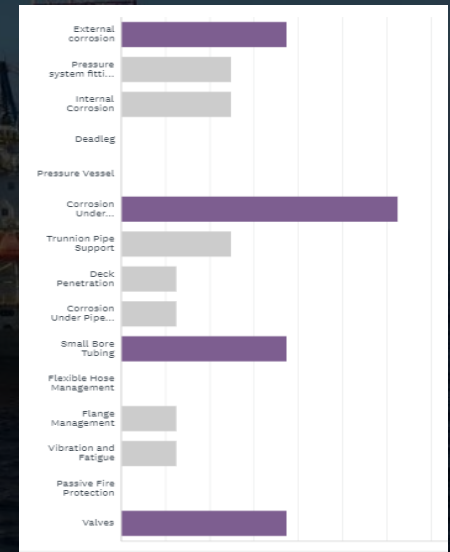
Corrosion Under Insulation



Small Bore Tubing



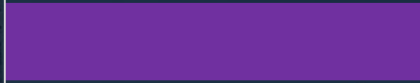
Valves



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Survey Data - (Top root causes of asset integrity related production loss)

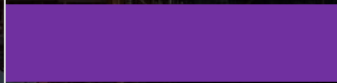
Failure to act on inspection findings



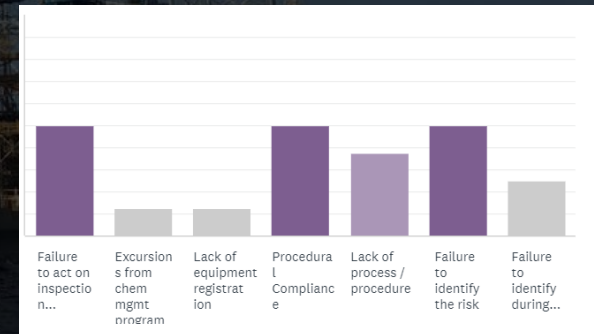
Procedural Compliance



Lack of process / procedure



Failure to identify the risk



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Improvement Opportunities- (Some Common Theme's)

Overly onerous/
Inadequate
CRA & RBI

Manual,
Excel-based
work packs. Lack
of software &
tablet tech

Lack of trust in
new inspection
techniques
resulting in
intrusive
inspections

Lack of
integration
between
databases
i.e. IM to
SAP/MAXIMO

Cottage industry
of Work pack
creation

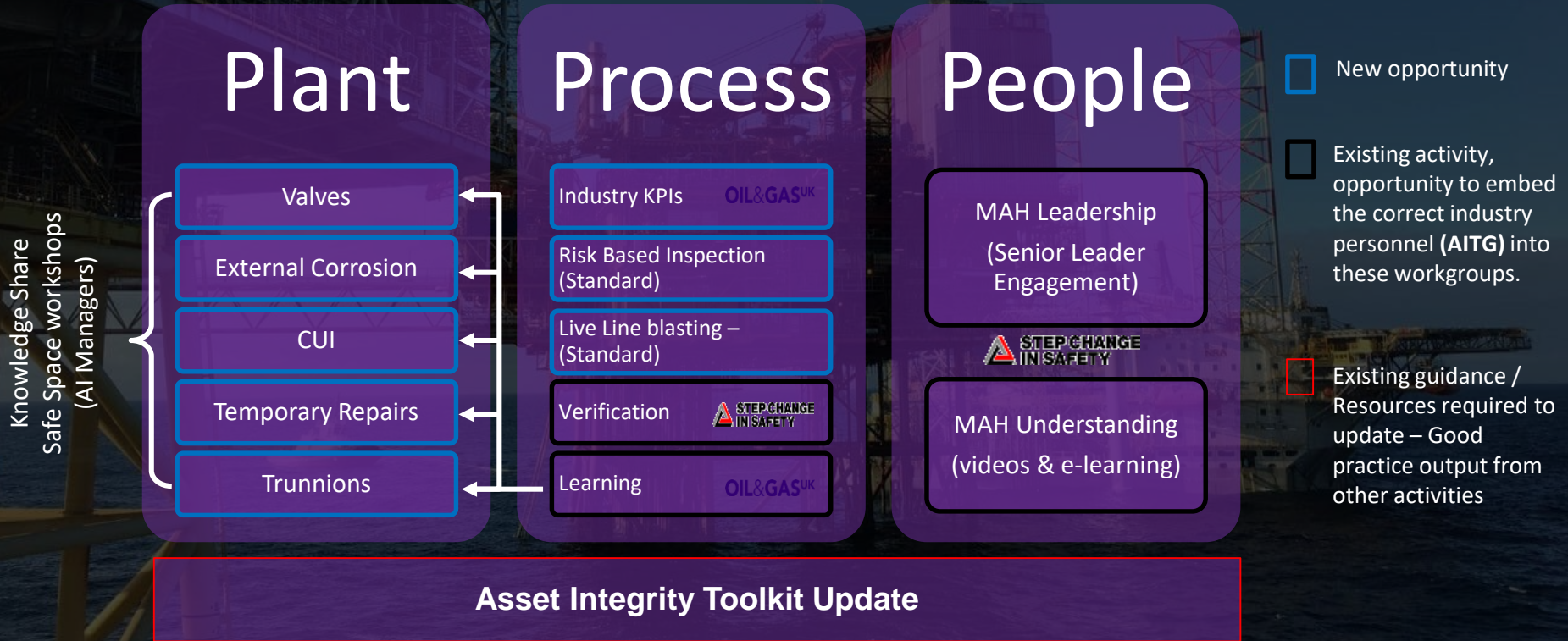
Duplication in
inspection
reporting &
review cycles

Chasing external
corrosion

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Deliverable 1 – Map Common Opportunities

14 Reportable HCRs
 95 Loss Of Containment Events
 14MBOE Production Loss Within A Year



Data driven identified improvement areas

| | 2019 | 2020-2022 | 2022-2025 |
|-----------------------------------|--|--|--|
| Valves | Draft valve management guidance and promote within industry | Operator adoption of guidance relating to valve management | |
| External corrosion | Better visualise existing data - corrosion surveying, create solutions that visualise data gathered through inspection to better understand potential failure and react more quickly with targeted interventions | Trial new inspection techniques. Inspection through corrosion material | Develop inspection standard and encourage adoption within service companies Remote visual inspection JIP - pressure systems |
| | Operator knowledge share for blasting on live equipment standard | Bolted assemblies JIP evidence based research | |
| | Testing of emerging coating systems | Testing of coating application performance | Adoption of new coating systems and application techniques |
| Corrosion under insulation | Trial new inspection techniques. Inspection through insulation material | Test and deploy sensor technology and alternative insulation systems | |
| | Operator knowledge share on risk based methodology | Adoption of industry best practise and new insulation systems | |

Plant

| Process | 2019 | 2020-2022 | 2022-2025 |
|--|--|---|---|
| Oil field servicing | Operator knowledge share for well bore tubing management | Adoption of hydrocarbon release prevention guidance | Compliance and awareness program |
| Well bore completion | IR software landscape study | Guidance for assessment of corrosion products in IR | Adoption of best practice. Develop specific IR training materials |
| Well stream completion | Ongoing development of NCT techniques to support application | Microstream trial use of wire line services | |
| Data analysis and systems | Complete final trials of ICI | Finalise the guidance notes for OHSF-CES | Finalise testing OHSF-CES |
| Industry key performance indicators | Develop data analysis software to maintain use of historic inspection data | Develop a pipeline inspection management and reporting system | |
| Asset integrity building data | Develop a consistent integrity prediction data measurement metric | Develop consistent industry KPI and measure annually against industry targets | |
| Hydrocarbon release prevention guidance document | Finalise the hydrocarbon release prevention guidance document and encourage adoption | | |

- To monitor progress of the roadmap
- To test ourselves annually to understand effectiveness of improvements
- To provide support to industry efforts in completing these tasks (Funding, Steering & adopting)

Asset Integrity Task Group MERUK Roadmap Launch



Asset Integrity Task Group



Summary

- Our objective is to pull existing industry efforts together and connect the efforts to those who can make the improvements real
- We have used a data driven approach to direct, guide and steer industry improvement efforts
- We have connected industry efforts to those who can gain benefit. This creates opportunity for funding, steering but most importantly commitment for adopting.
- The Asset Integrity task group meet quarterly and will discuss progress against the roadmap and constantly challenging ourselves to ensure its validity.

reducing hydrocarbon losses

2020

2025

2030

2035

2040

driving improvements in Asset Integrity
across all UKCS facilities

