

GENESIS LATE-LIFE AND DECOMMISSIONING EXPERIENCE

AGENDA

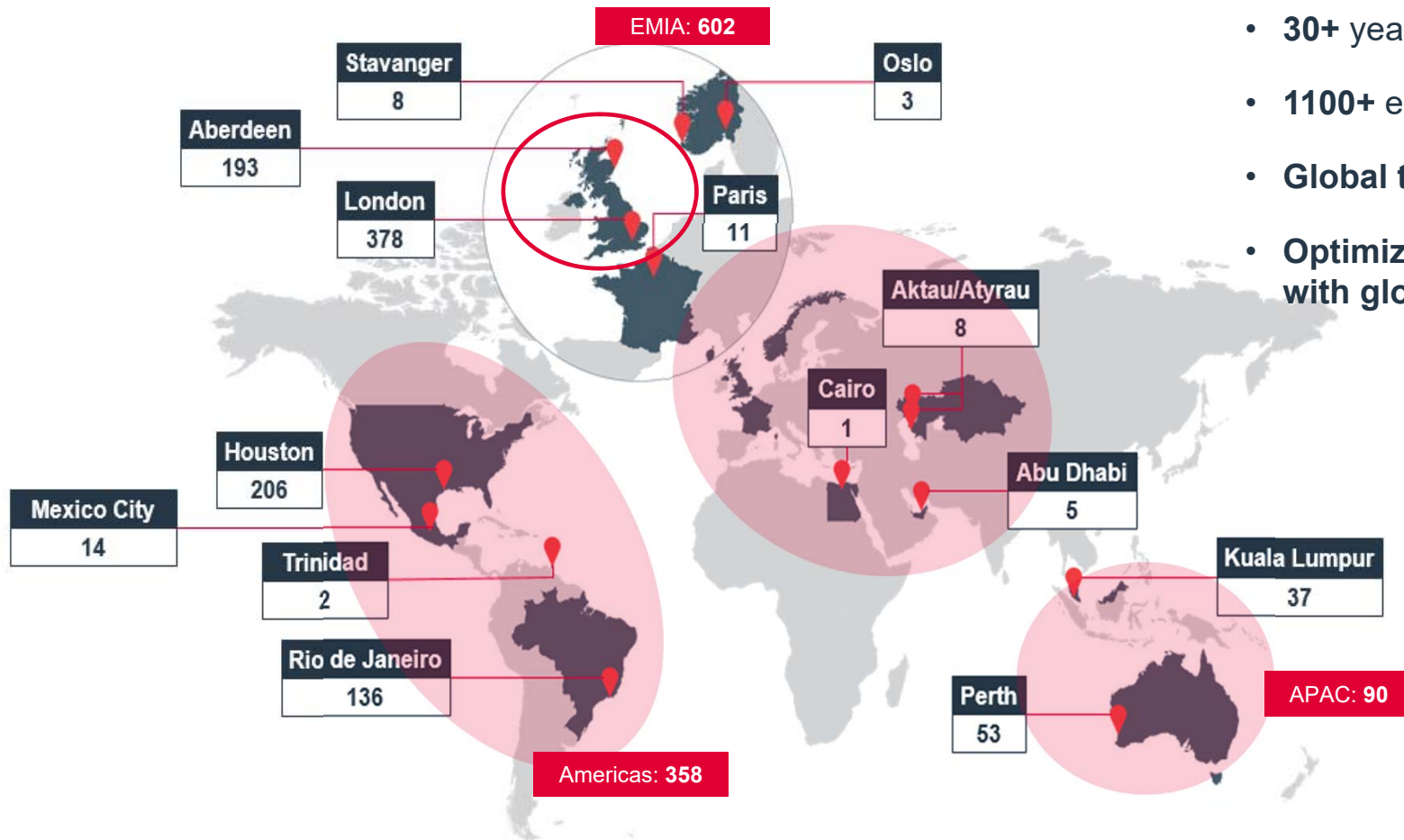
- Genesis quick overview
- Why decommissioning is an issue?
- UK regulation background
- Integrated engineering approach
- Decommissioning experience
- Case Studies
- Summary

GENESIS OVERVIEW

GENESIS – ENGINEERING SOLUTIONS FROM SUBSEA TO TOPSIDES AND ONSHORE



Global Presence

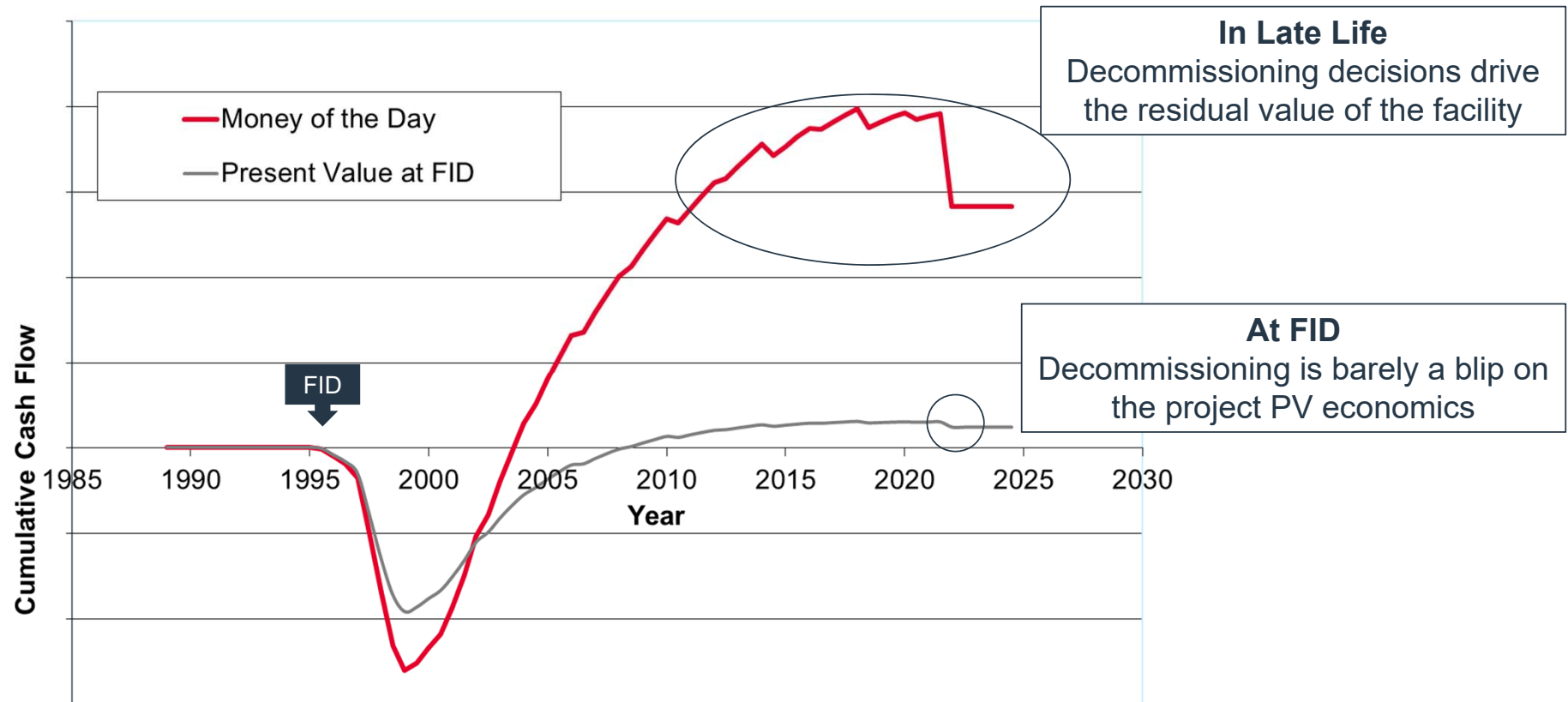


- 30+ years of operation
- 1100+ employees. 15 global locations
- Global tools, processes and systems
- Optimized engineering capabilities with global centres of expertise

WHY DECOMMISSIONING IS AN ISSUE?

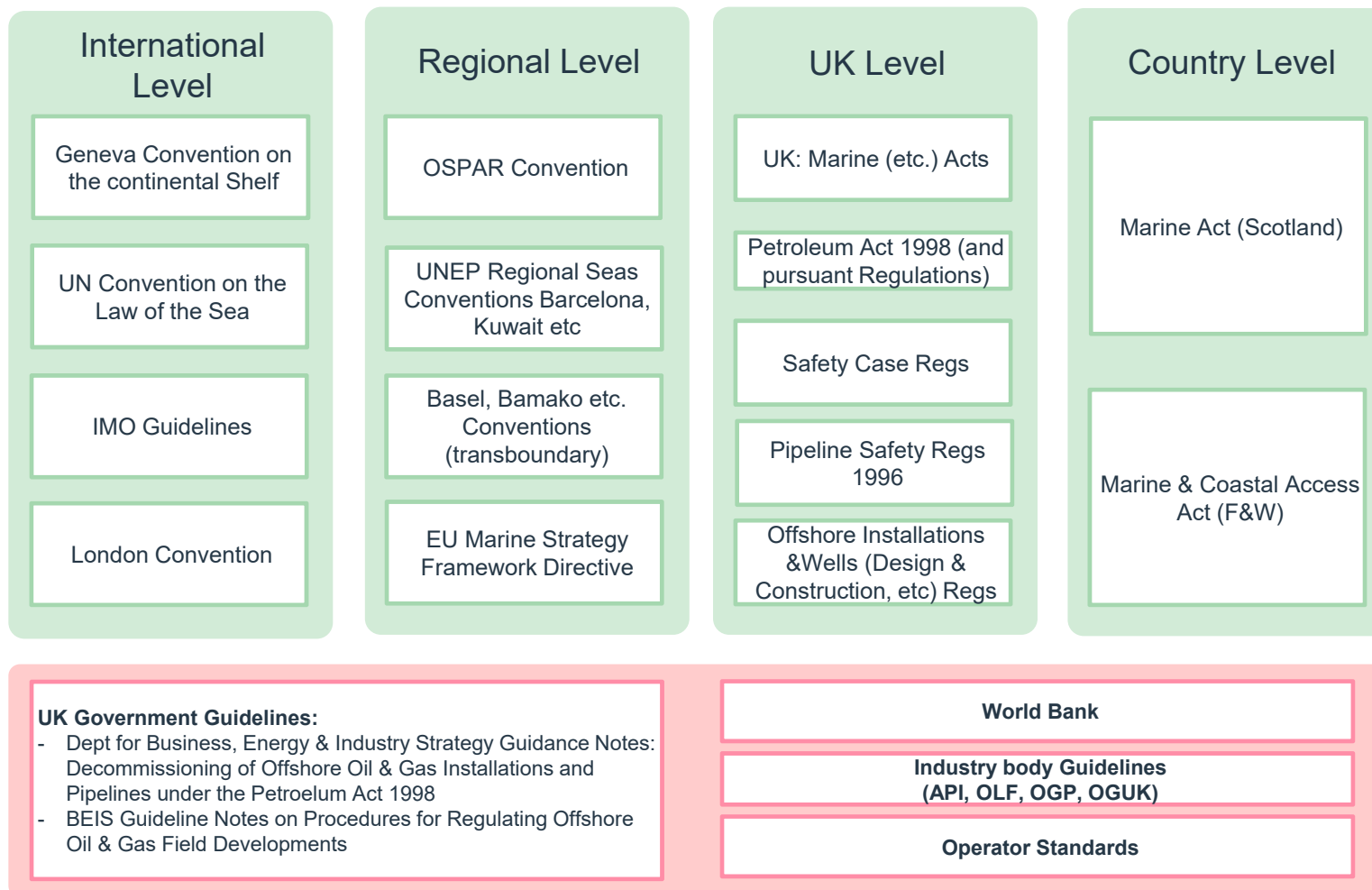


LATE LIFE - FINANCIAL APPROACH



UK REGULATION BACKGROUND

GUIDANCE & LEGISLATION UKCS



GUIDANCE & LEGISLATION UKCS FOR DECOMMISSIONING

BEIS (Business Energy and Industrial Strategy)

ODU (Offshore Decommissioning Unit)

Overarching responsibility for approval & regulation of all Decommissioning Programmes (DP's) for UKCS oil & gas installations, pipelines etc. To ensure that decommissioning is delivered in a safe, efficient & cost effective manner whilst minimizing the risk to the environment & other users of the sea.

BEIS : EMT and OIT

(Environmental management team and Offshore Environmental Inspectorate team)

Advice on all environmental aspects of decommissioning proposals

Approval of related consents including Marine Licensing

HSE

(Health and Safety Executive)

Accept the abandonment safety case Consultee to the Decommissioning Programme

OGA

(Oil and Gas Authority)

Custodian of MER UK, ensuring the supply chain is engaged & decommissioning costs are minimized

Consultee to the Decommissioning Programme

OTHER STAKEHOLDERS/CONSULTEES

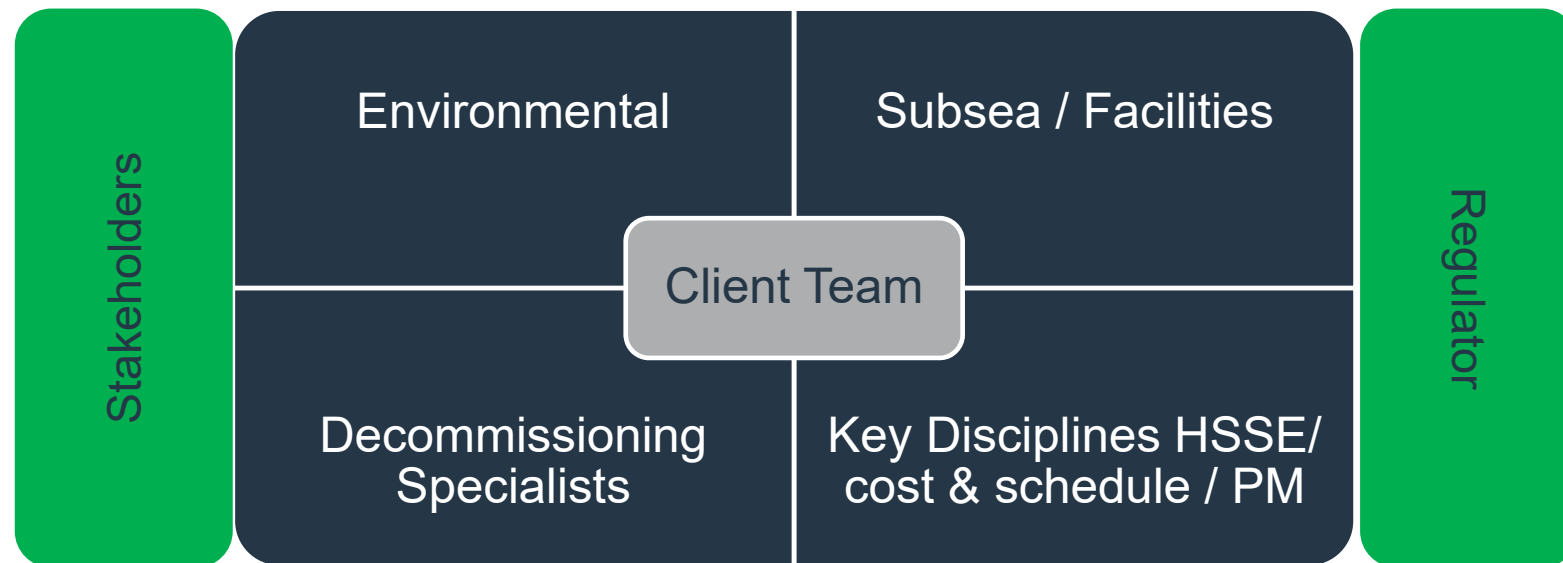
- ✓ SEPA, Environmental Agency, DEFRA
- ✓ Fishermen Organisations/ Federations
- ✓ Marine Scotland, JNCC
- ✓ Scottish Executive Marine Directorate
- ✓ Scottish Exec Radioactive Waste Team
- ✓ UK Hydrographic Office, Seafish,
- ✓ The Crown Estate, Historic Scotland
- ✓ Universities, Greenpeace, RSPB

INTEGRATED ENGINEERING APPROACH

DECOMMISSIONING ACTIVITIES ACROSS AN ASSET LIFECYCLE

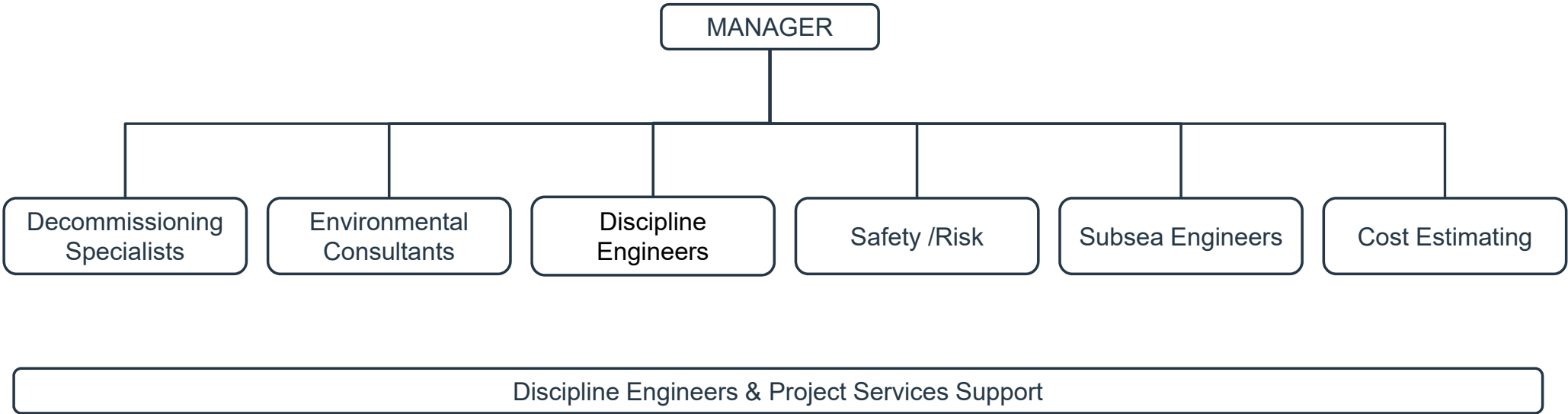


INTEGRATING THE DISCIPLINES



- Experts in individual fields, centres of excellence
- Same methods and tools globally
- Seamless multi-centre working

BASIC DECOMMISSIONING TEAM



DECOMMISSIONING EXPERIENCE



GENESIS DECOMMISSIONING HISTORY

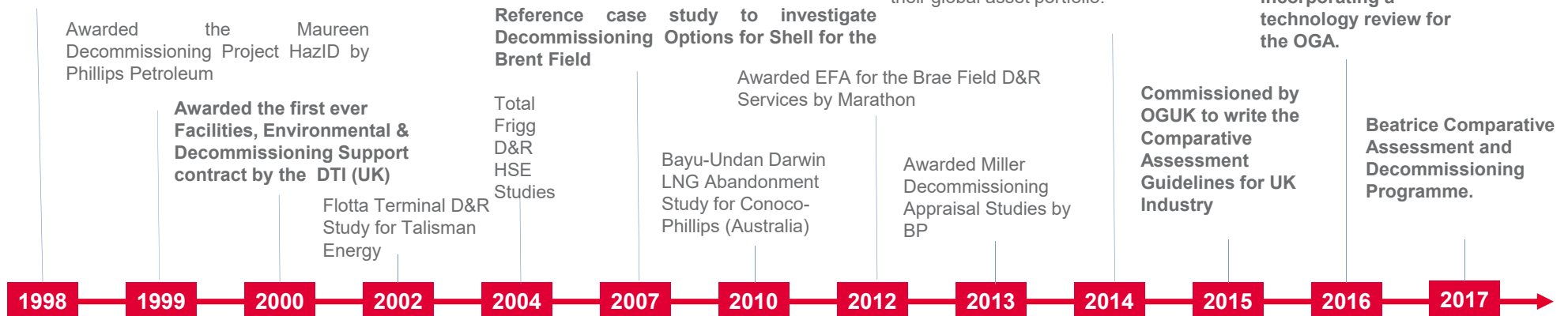
Following significant global market interest Genesis embarks on the development of a proprietary D&R Estimating and Reference database

Awarded global D&R EFA by ENI in conjunction with Technip (Rome) to support their global asset portfolio.

Completed a D&R Efficiencies Study incorporating a technology review for the OGA.

Significant Events

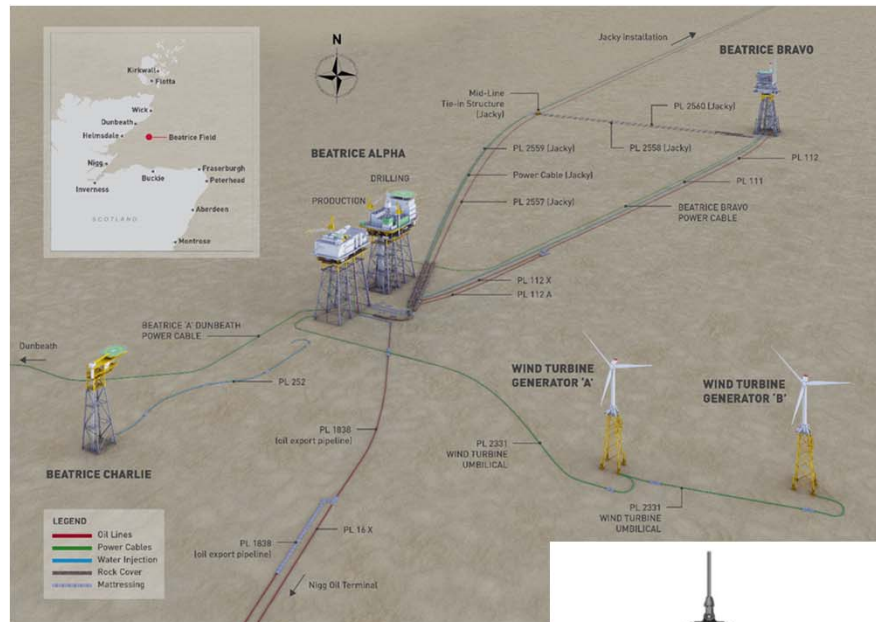
Recent D&R Clients



CASE STUDIES

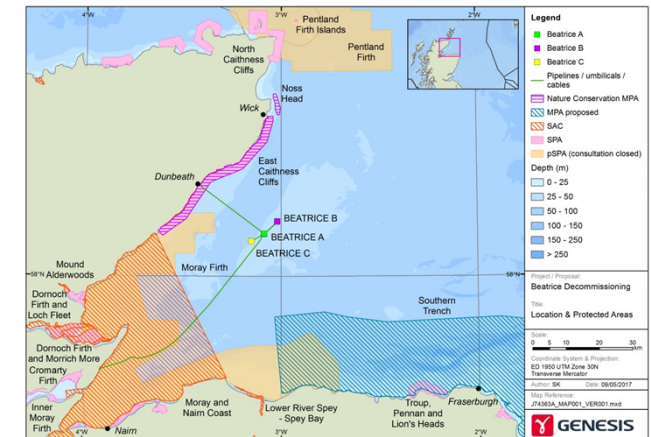
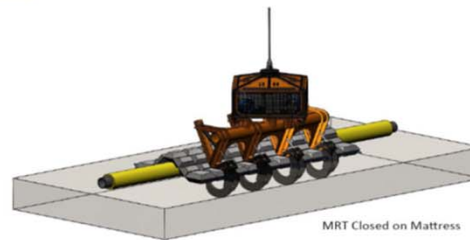
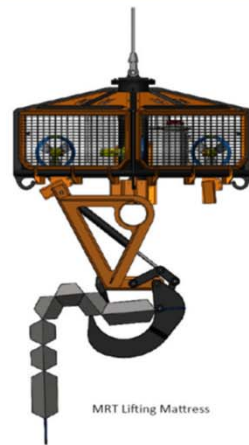
- RSRUK: Beatrice Comparative Assessment and Decommissioning Programme
- Spirit Energy: DP6 Process Simplification for OPEX reduction
- Enquest (Malaysia): PM-8 and Seligi Field Decommissioning Options Study

RSRUK BEATRICE FIELD COMPARATIVE ASSESSMENTS AND DECOMMISSIONING PROGRAMME



Scope included;

- Identification and Comparative Assessment of Decommissioning options for subsea infrastructure
- Supporting technical, safety, environmental and cost studies
- Review of emerging technologies and novel techniques
- Production of the Consultation Draft of the Decommissioning Programme for full field – All platforms and SURF
- Support to Stakeholder Engagement Workshops



SPIRIT ENERGY DP6 SIMPLIFICATION PROJECT

PROJECT AIMS:

Centrica approached Genesis for developing a project for the simplification of two drilling platforms in the East Irish Sea.

Genesis have been involved with the project from inception to execution.

■ Project Aims:

- Reduction of planned maintenance man-hours of 55-60% with backlog clearance as a function of simplification;
- Removal of FM backlog with targeted scope aimed at no future FM campaign required before COP;
- De-bottlenecking of process by removal of NRV's, Choke Valves, DP meter and redundant valves will increase gas recovery over life of field;.
- Increase in platform uptime by specifying 36hrs standby for both UPS system and HPU along with simplification of the ESD system to allow production to continue without any need for an intervention for up to 36Hrs following mains power outage.

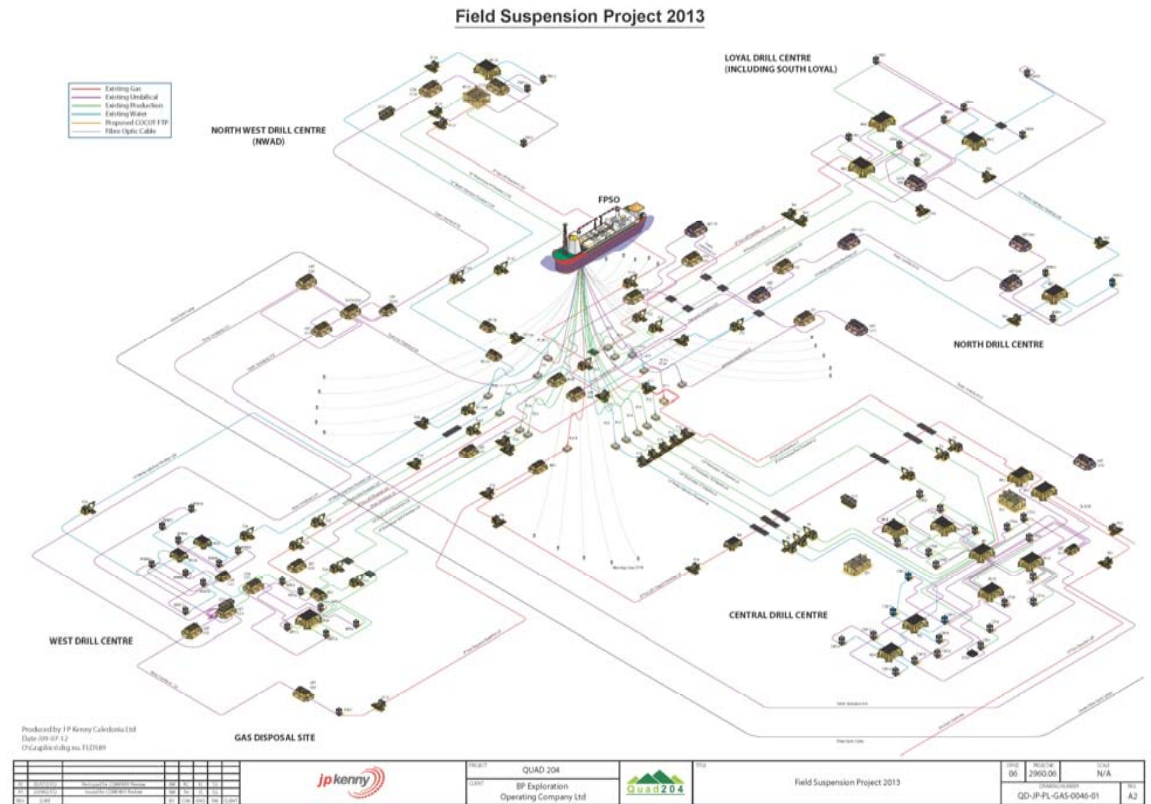
The DP6 campaign is now complete from the Genesis side with many notable achievements.



BP SCHIEHALLION COMPARATIVE ASSESSMENT STUDIES

Comparative Assessment studies for decommissioning the Schiehallion pipelines and subsea infrastructure, comprising:

| Infrastructure | Quantity |
|---|----------|
| Production flowlines | 10 |
| Water injection flowlines | 6 |
| Gas lift flowlines | 4 |
| Gas import/export flowlines | 3 |
| Gas disposal flowline (currently unused) | 1 |
| Dynamic umbilicals | 3 |
| Static umbilicals | 10 |
| Risers | 15 |
| Manifolds | 23 |
| Flowline Jumpers | 100* |
| *31 of the 100 jumpers are a bundle of 3 jumpers (2 production and 1 gas) | |



Summary

- ✓ REGULATORY MATURITY
- ✓ FULL AND EARLY ENGAGEMENT – FEL AND STAKEHOLDERS
- ✓ INTEGRATED ENGINEERING SERVICES
- ✓ EXTENSIVE DECOMMISSIONING TRACK RECORD
- ✓ INNOVATIVE AND COLLABORATIVE APPROACH
 - Safety
 - Economical
 - Social
 - Environmental
 - Operational

THANK YOU

Contact us

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