



Control Your Risk Without Risking Your Control

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Pete Thomson

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Control Your Risk Without Risking Your Control

Biggest risks for Operators wanting to decommission assets are:

- (1) Long term liability for leakage
- (2) Obtaining cost surety

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“Your proposal is innovative. Unfortunately we won’t be able to use it because we’ve never tried something like this before.”

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What experience has also shown us is that the majority of Oil & Gas projects run over time and on cost

Table 1: Summary of findings on 58 projects reviewed (see notes in Appendix 1) *

	No Projects	Capital cost at FDP (£ billion)	Average delay (months)	Average cost growth
Already started up	38	13.5	10	35%
Under execution	20	25.5	13	20%

* Lessons Learned from UKCS Oil and Gas Projects 2011-2016

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- 3. Transfer the responsibility for risks and cost to the supply chain...**

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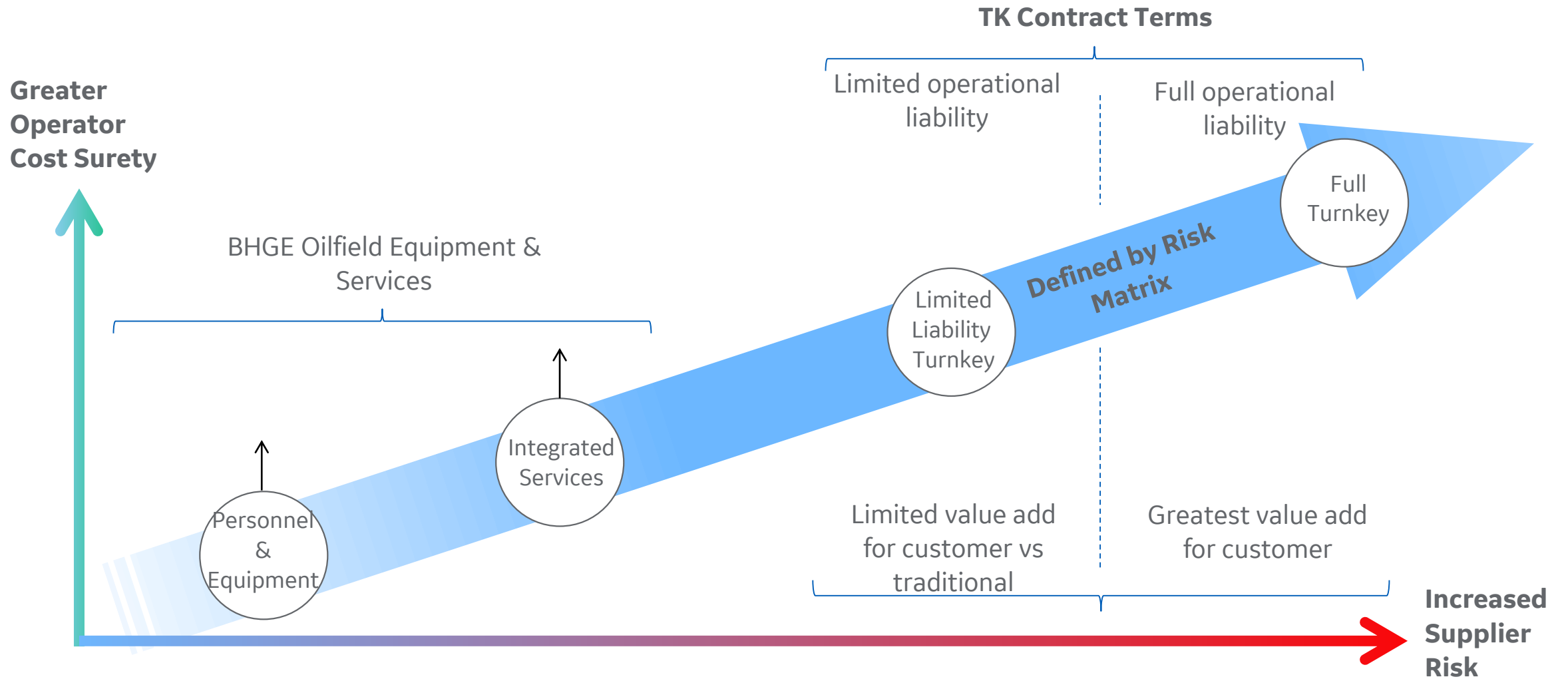
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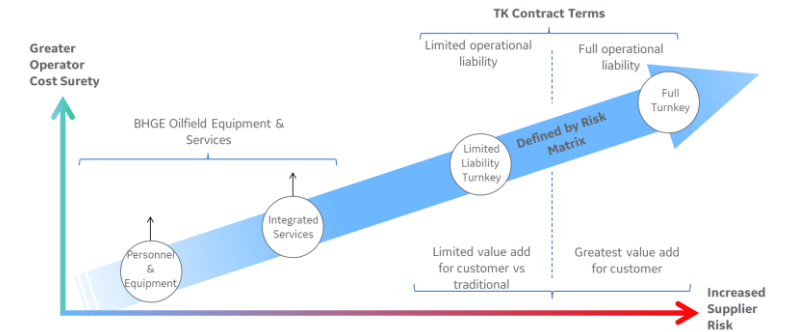
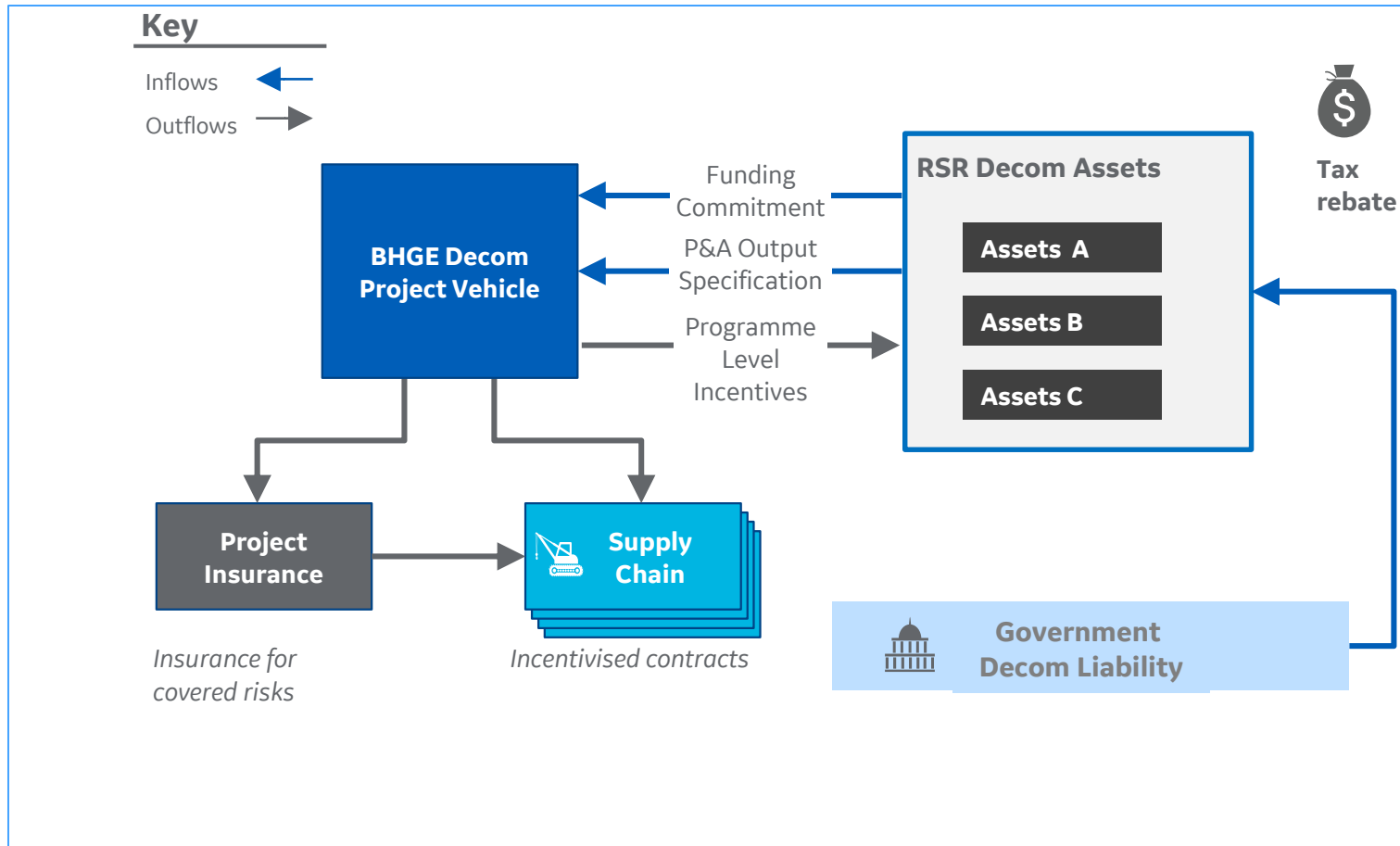
... but can Operators relinquish the control?



Commercial Models

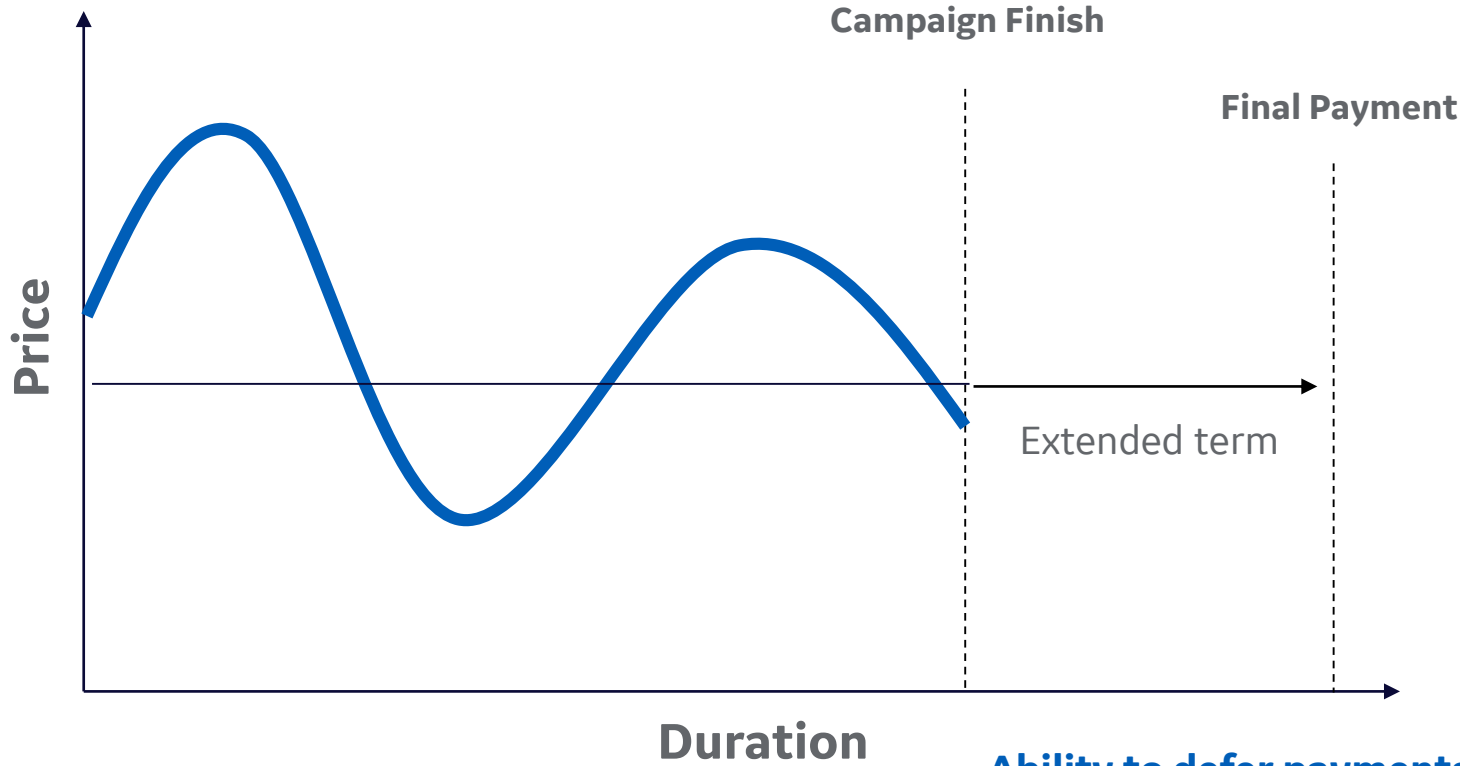


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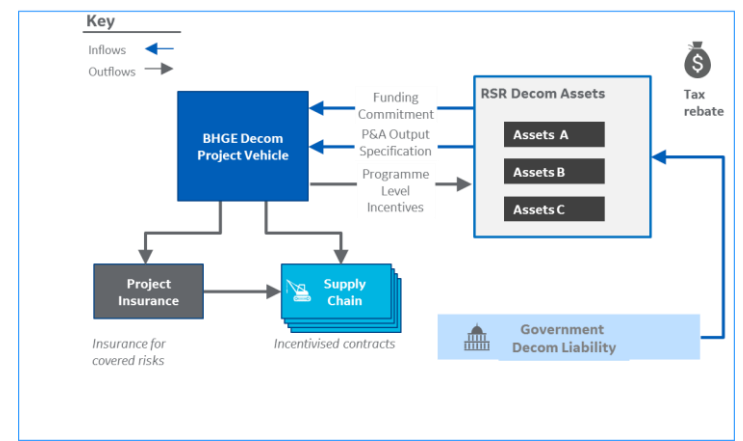
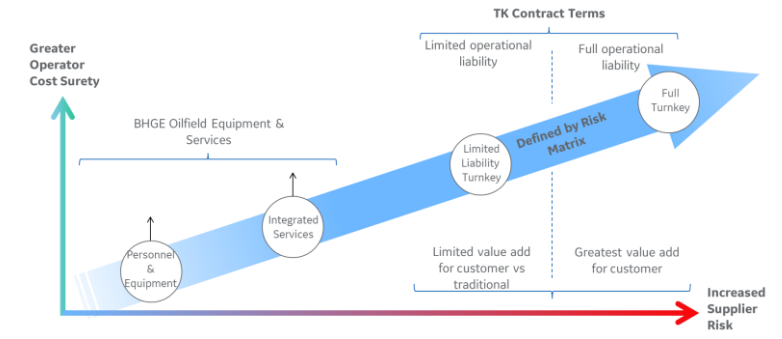


Commercial Models

Set annual budget



- Ability to defer payments
- Potentially linked to 'tax rebates'
- Field dependant



Managing Risk in Execution



Governing Factors

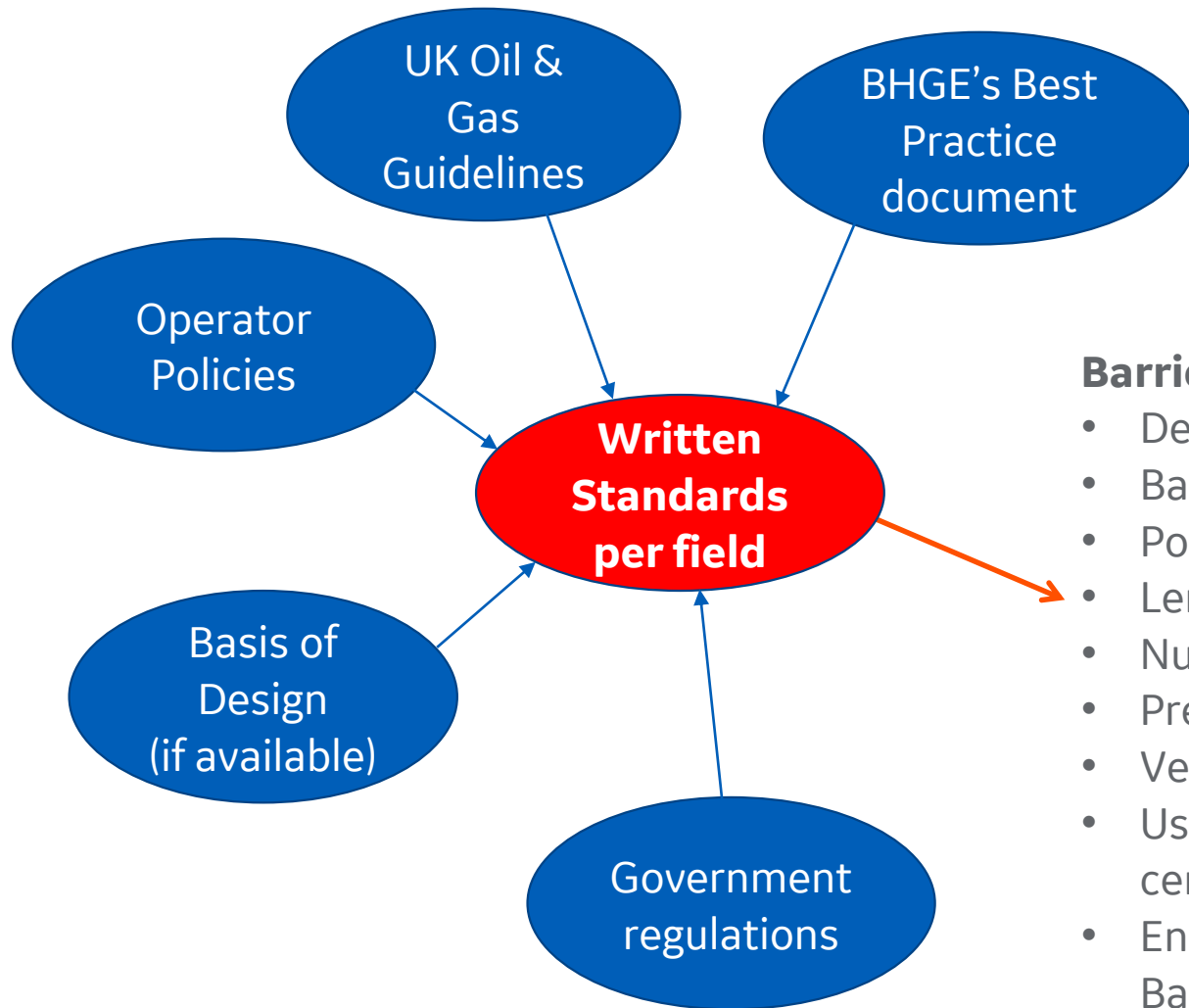


Well Abandonment Standards

Well Examination Scheme



So what control is required?

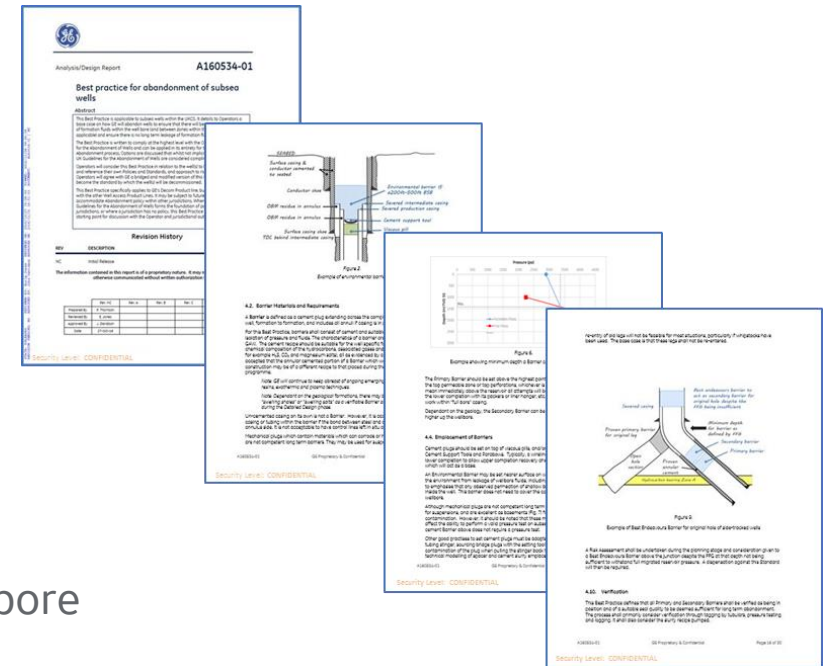


Barriers:

- Definition of a Barrier
- Barrier materials
- Positioning in the wellbore
- Length
- Number of barriers required
- Previously abandoned legs
- Verification of Barriers
- Use of pre-existing annular cement
- Environmental (near surface) Barriers

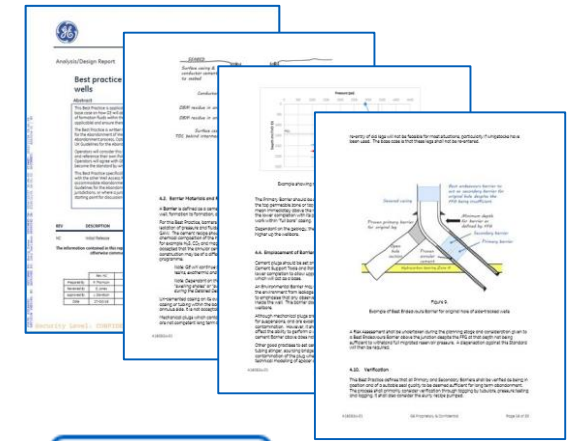
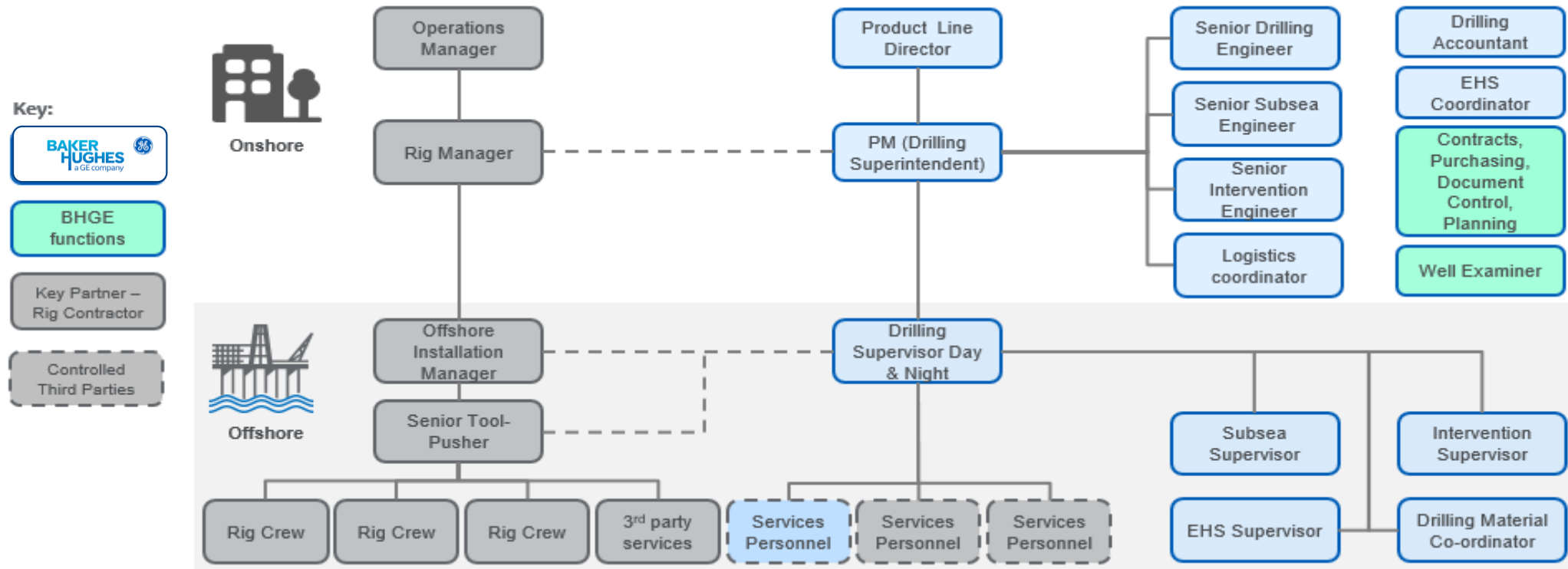
Effecting the Barrier

- Section milling
- PWC
- Emplacement techniques



So what control is required?

Delivery of Execution Structure



So what control is required?

Licensing & Operatorship



APPENDIX C - SAFETY AND ENVIRONMENTAL ISSUES LICENSING AND OPERATORSHIP

LICENSING AND OPERATORSHIP

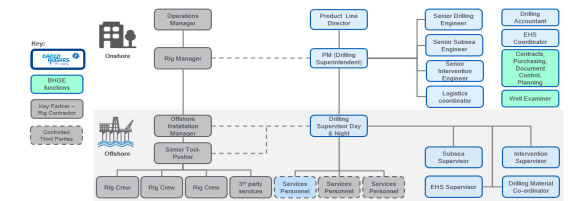
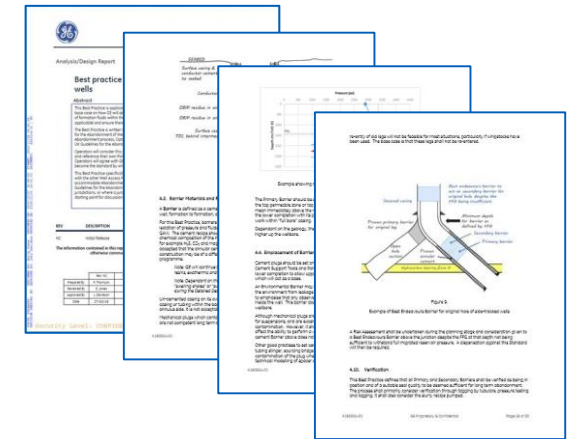
The Offshore Petroleum Licensing (Offshore Safety Directive) Regulations 2015 (the OSD Licensing Regulations) include provisions relating to the capability of prospective licensees and the capacity of operators who are appointed under the regulations to undertake the offshore oil and gas activities. Prospective licensees and operators should also be aware of the requirements detailed in the Hydrocarbons Licensing Directive Regulations 1995 and the Petroleum Licensing (Applications) Regulations 2015. Where the provisions in those regulations overlap with the safety and environmental provisions of the OSD Licensing Regulations, the requirements are consolidated in this guidance document. More general guidance relating to petroleum licensing can be found at <https://www.ogauthority.co.uk/licensing-consents/licensing-system/licensee-criteria/>

1. LICENSING TRANSACTIONS

1.1 Prospective Licensees

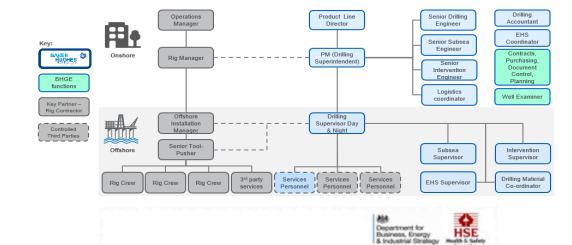
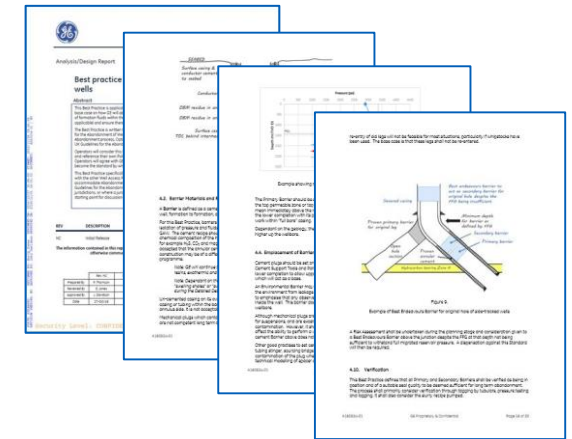
Prospective licensees are required to provide the Oil and Gas Authority's Licensing Authority (LA) with a number of submissions in support of their applications, including submissions to enable the Offshore Safety Directive Competent Authority¹ (CA) to assess their safety and environmental capability. It should be noted that the requirements are not restricted to formal Licensing Rounds, and the LA will normally require submissions from companies applying for out-of-round licences and, where appropriate, to support applications requesting consent for licence assignments or applications seeking comfort for other changes of control.

All prospective licensees must provide the safety and environmental submissions described in Sections 1.2 to 1.5 below. Where full details in relation to a particular requirement cannot be provided at the application stage, as the development of proposals may be dependent upon licence award or the commencement of offshore oil and gas activities, applicants can provide brief submissions to demonstrate that they understand the requirements and, if possible, provide an outline timetable for the submission of full details prior to appointing an operator to undertake any offshore activities. Timetables should be clearly linked to any work programme submitted in support of the application, and approvals for specific offshore activities will not be issued until applicants have provided a supplementary submission that addresses any outstanding requirements. Where applicants only intend to hold a financial interest in a licence, and the safety and environmental responsibilities relating to offshore activities will be assigned to a partner applicant or an appointed third party, this should be clearly stated in the relevant sections of the submissions.



So what control is required?

Selection of rig, vessel and services



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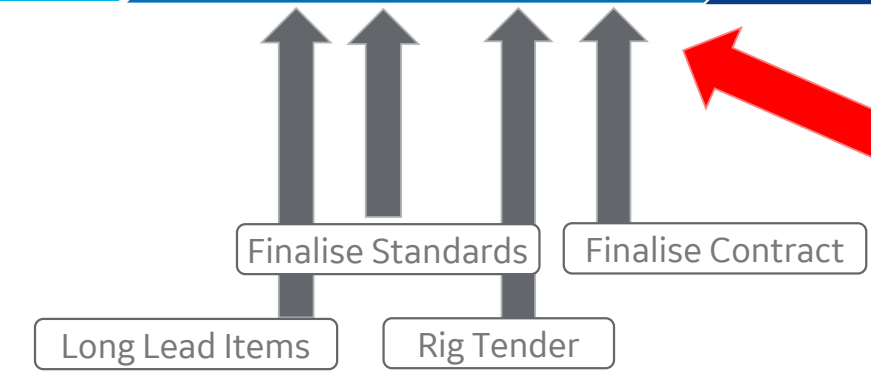
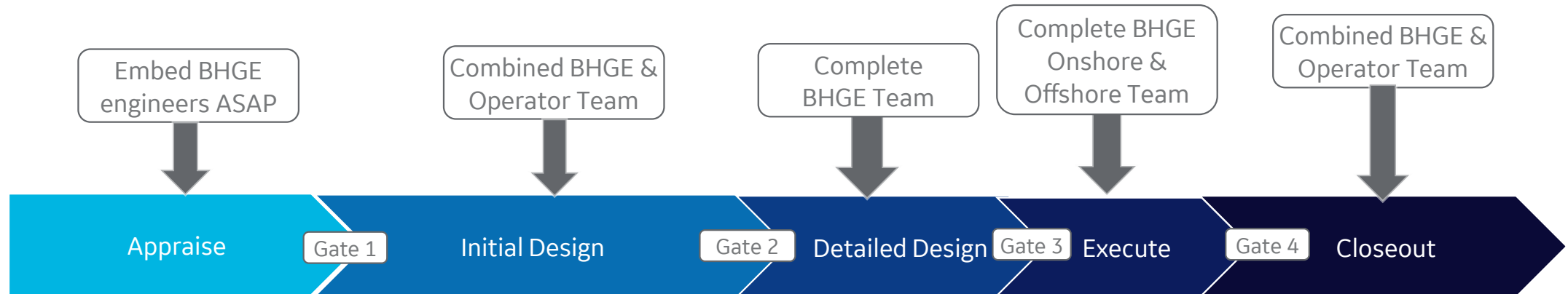
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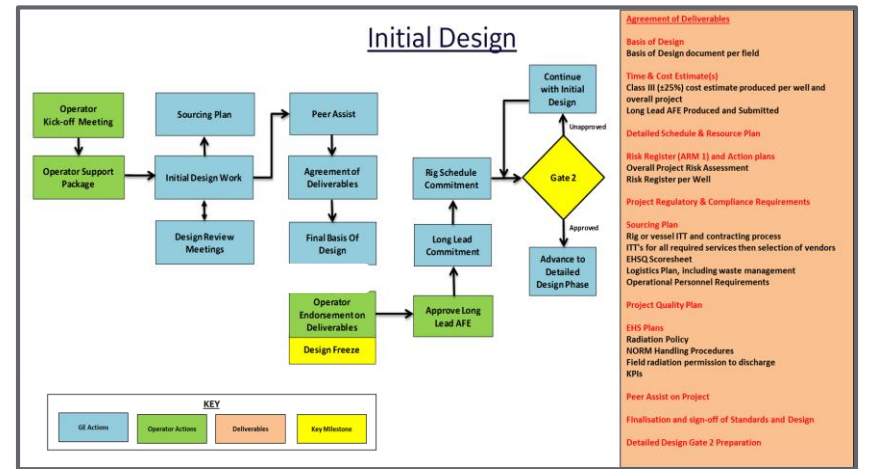
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Well Abandonment Gate Process



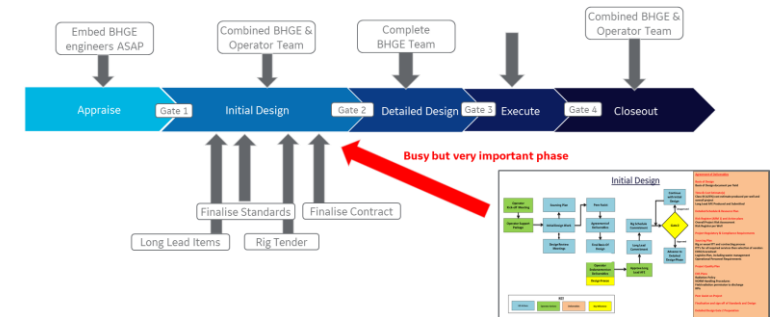
Busy but very important phase



- Appraise & Initial Design – project focussed
- Detailed Design, Execute & Closeout – well focussed

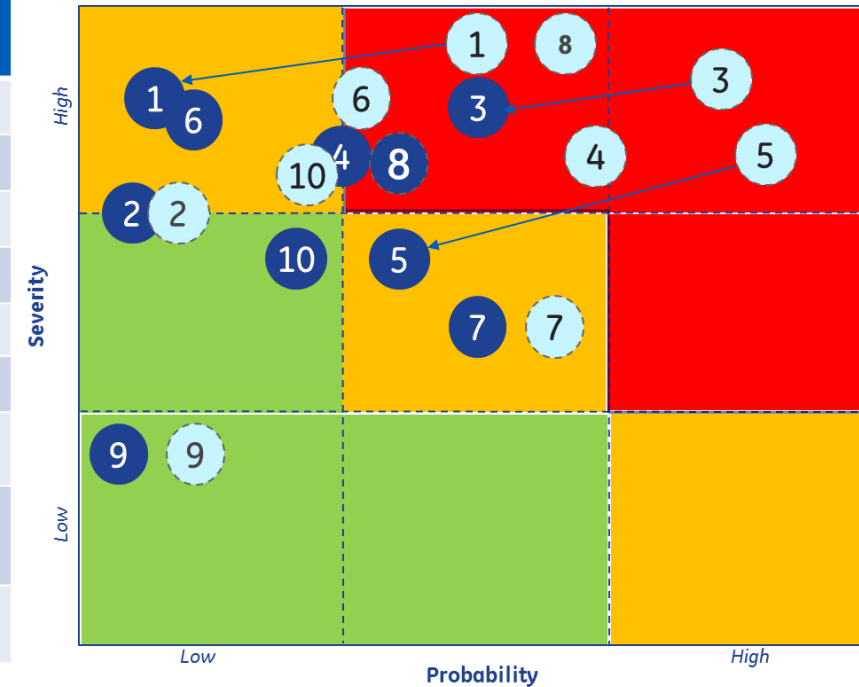
Cost estimating

Deterministic or Probabilistic?



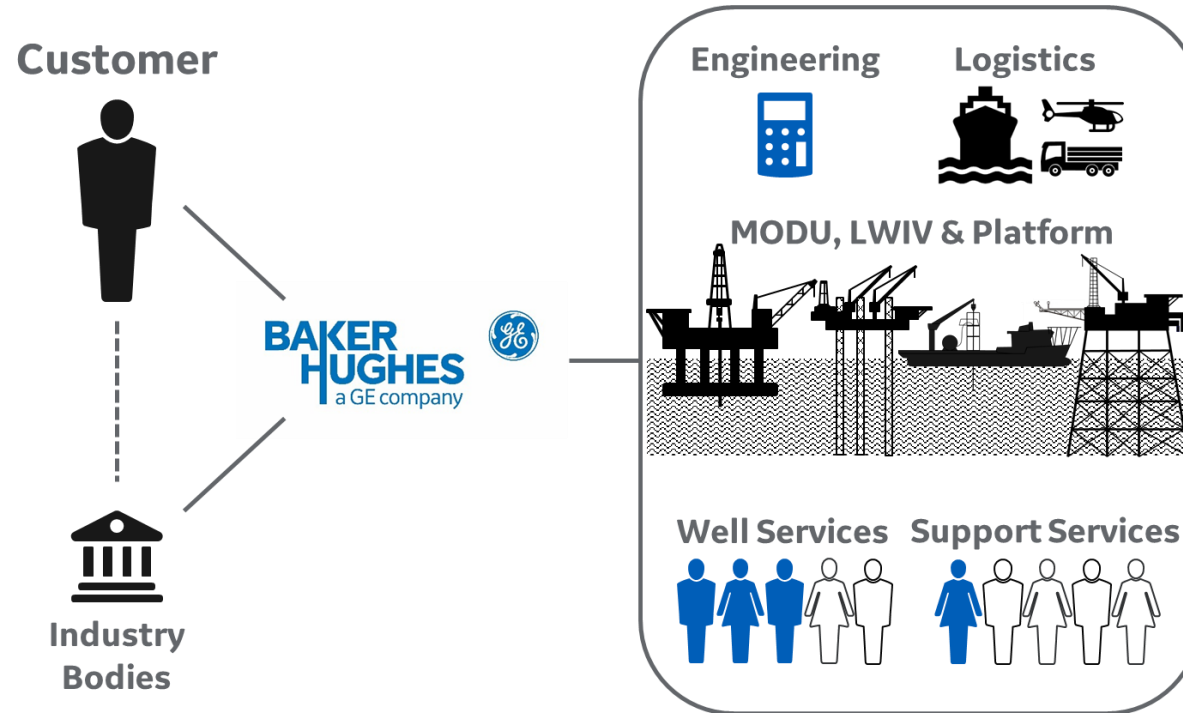
Risk & Mitigation Strategies – Standard TK Contract

Risk	Impact	Mitigation Strategy		Mitigated Impact
		Operations	Contracts	
Rig/Vessel Suitability	Red	Early interface with incumbent equipment. Early contract agreement. Hot rig.	Fixed price incentive model. LOL, Wellbore and seabed conditions = day rate clause, FM clause B2B with Operator.	Red to Yellow
Pollution	Green	Oil spill contingency plans. Early engagement with regulatory bodies.	Incl. as "Operator Obligation"	Green
Downhole Risk	Red	Deep dive inspection records. Minimum data quality requirement. Early risk matrix agreement with customer.	Unforeseen well bore and seabed conditions clause – Day rate clause for scope outside of agreed obligations.	Red to Yellow
Weather	Red	Schedule control (Summer). Known anchoring conditions. Av. Weather data contingencies (time/cost).	FM clause capping liability to 30 consecutive days.	Yellow
Emergency Response	Red	Service provider contract	Incl. as "Operator Obligation"	Yellow
Component Conditions	Yellow	ROV inspection. Deep dive inspection records.	Unforeseen well bore and seabed conditions clause – Day rate clause for scope outside of agreed obligations	Green
Non-OEM Long Lead Procurement	Red	Procure contingency equipment from other operators. Early contracting strategy	Incl. as "Operator Obligation"	Yellow
Force Majeure events	Yellow	Schedule control (summer). Early and ongoing engagement with governing bodies. Additional contingencies built into model for hazardous	Force majeure clause incl. acts of governmental bodies, severe weather conditions, access, information, tools, material, and approvals necessary to permit Contractor Group to timely perform the required activities.	Green
"Macondo Effect"	Red	Clear planning and execution of operational mitigation strategies based on actual operational outcomes. In-house operational experience in managing critical execution areas.	LOL - B2B with supply chain for individual scopes. Wellbore and seabed conditions clause triggering day rate.	Yellow



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BHGE Turnkey



Building solutions.. Invested in outcomes.. 'all risks' capability



Time to change things around...

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