



A value proposition for multi well decommissioning

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Agenda



THE CHALLENGE

- Optimising the Decommissioning workload



A MEANS TO ACHIEVE IT

- Technological and Commercial Innovation



THE PROPOSITION

- An innovative end-to-end proposition



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The challenge

Optimising Decommissioning with focus on P&A

The biggest risks for Operators wanting to Decommission assets are:

- Obtaining cost surety – how much will it cost
- Long term liability

Options to Decommission:

- Do-it-your self.
- Sell the asset with the decommissioning liability!
- Collaborate with other Operators. Pool resources & spread the risk.
- Transfer part/all of the responsibility for cost & risk to the supply chain.

Is risk and the cost reduction target best served by reducing cost lines to the lowest common denominator, or by releasing control and giving the supply chain the freedom to innovate?

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A means to achieve it



Our strategy is based on three pillars

This is how we create value for our customers

MARKET-LEADING PRODUCT COMPANIES

*Increase margin and
competitiveness by reducing
product & service cost*

50%

Reduction in the cost of doing business

INTEGRATED SERVICE MODULES

*Create value through
integrated equipment and
service technologies*

50%

Improvement in productivity

FULLSTREAM SOLUTIONS

*Drive value creation
through outcome
performance solutions*

50%

Increase in industrial yield

Subsea Connect is our approach



**Project
Connect**



**Reservoir to
topside
technology
solutions**



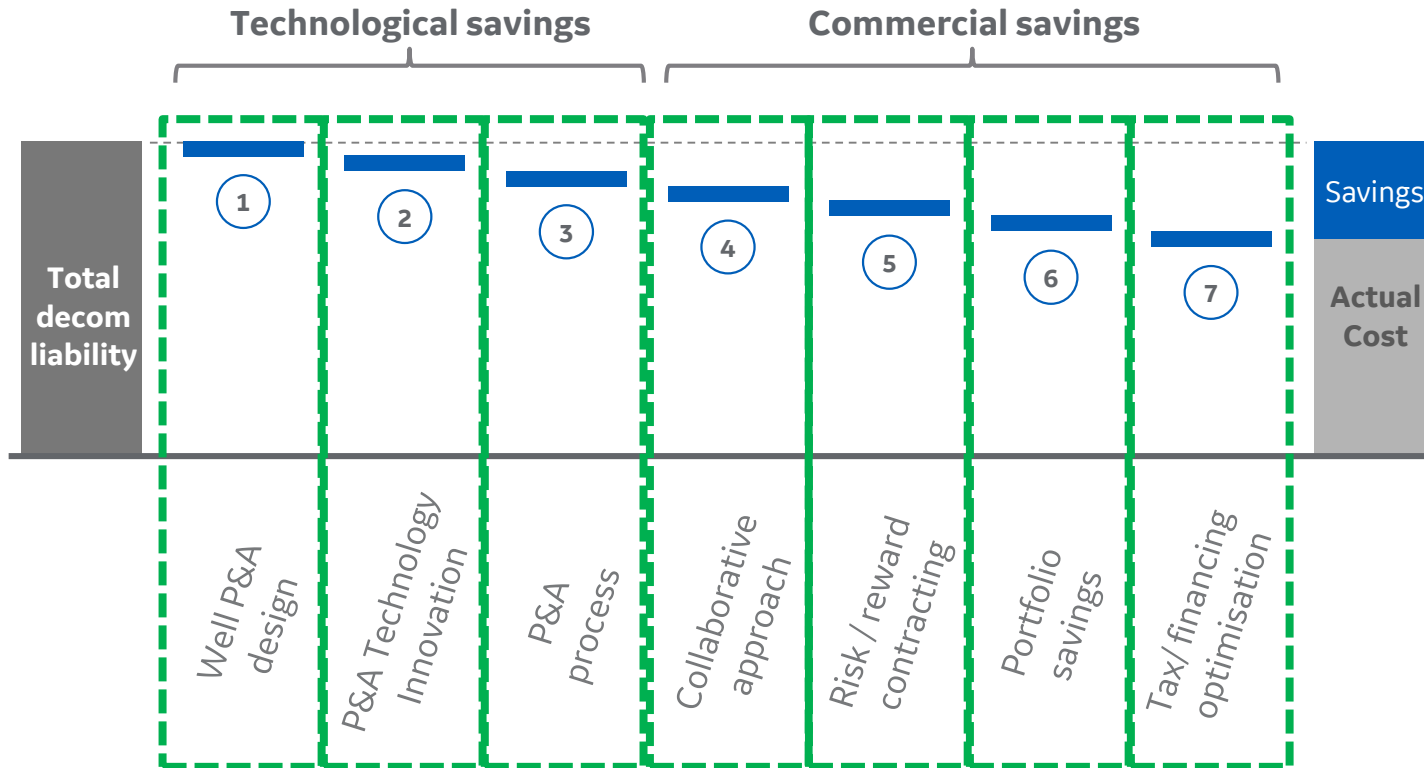
**Flexible
partnerships
and commercial
models**



**Digital
enablement**

Realising EOS in Well P&A and how aggregation can help

Technological & Commercial Innovation Categories

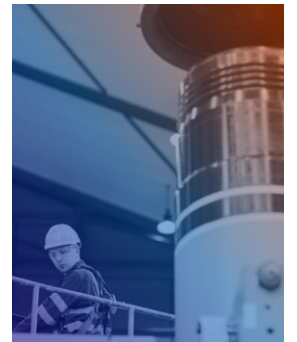


Savings

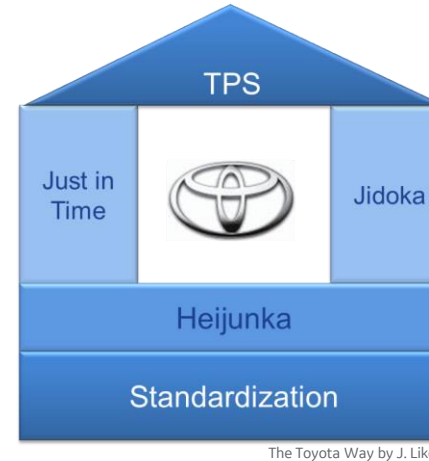
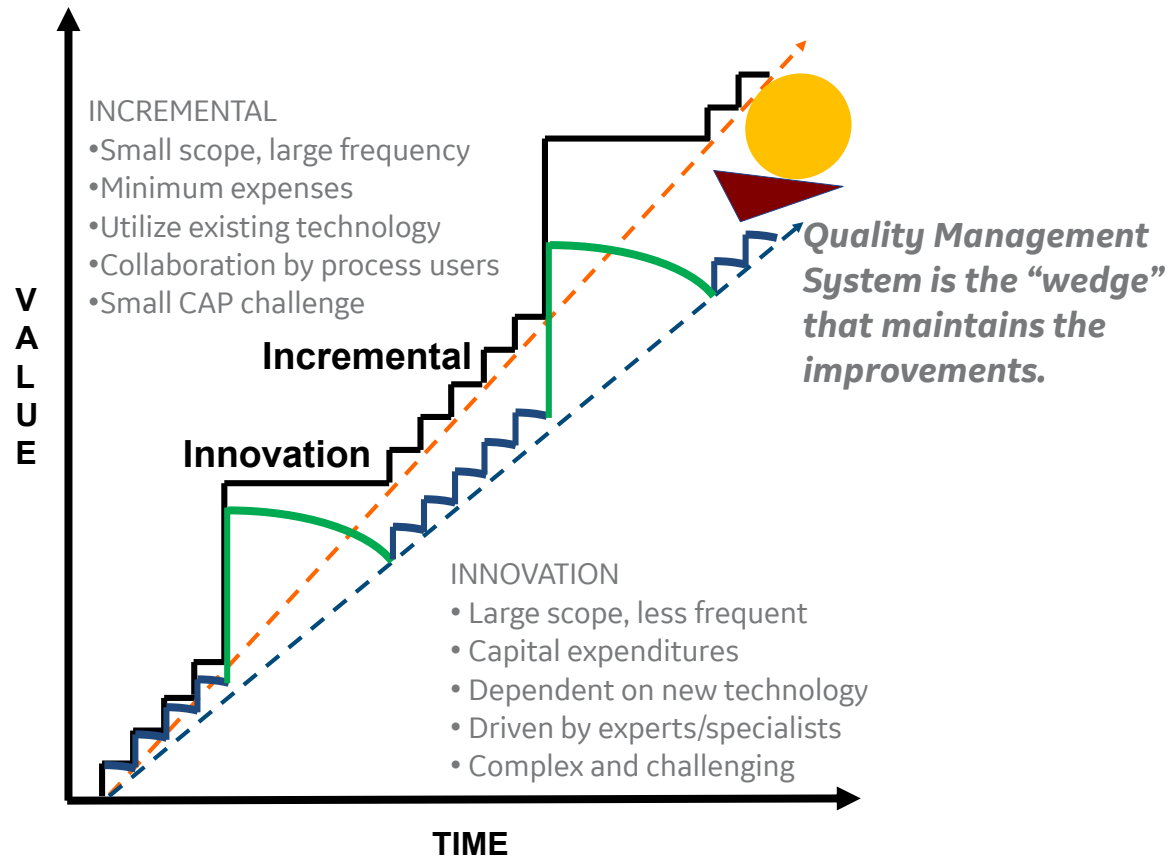
There will be interdependencies and composite benefits amongst categories

People

It does not happen without people. Aggregation will draw together a workforce both expert and new to Decommissioning and drive scalability within region and globally



How can aggregation drive value?



A “LEAN” VIEW

- The Foundation
 - Culture
 - Standardisation
 - Scheduling
- The Pillars
 - How to execute
 - How to control quality



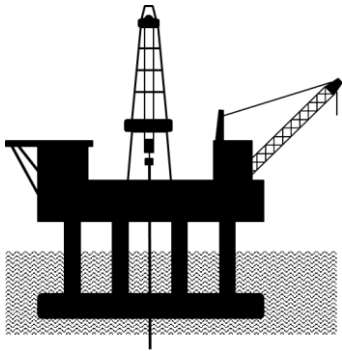
VALUE

- Defined by the Customer
- Addresses needs at a specific time
- Requires a clear understanding
- Enables the categorization of actions

Aggregation gives us the best of both – bold leaps and incremental improvement to grow the value

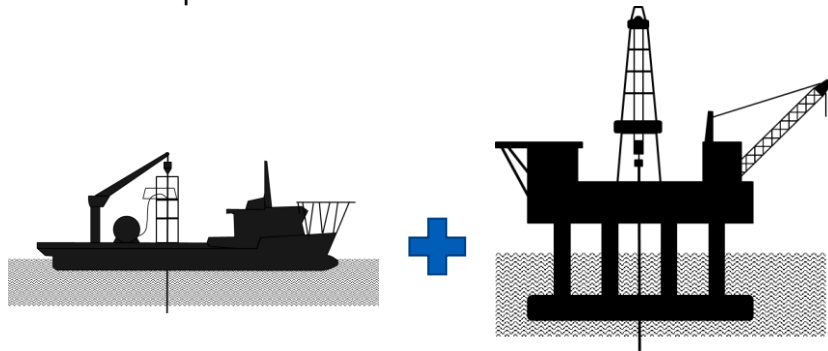
Case study: Well abandonment campaign vessel selection

Vessel availability/selection can have a significant impact on cost



15 WELLS RIG ONLY

Av. 33 days per well to fully abandon



15 WELLS LWIV + RIG CAMPAIGN

Av. 23 days per well to for a part scope LWIV campaign

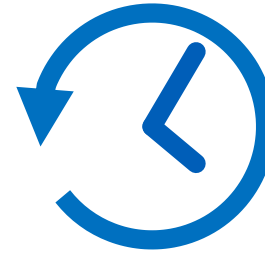
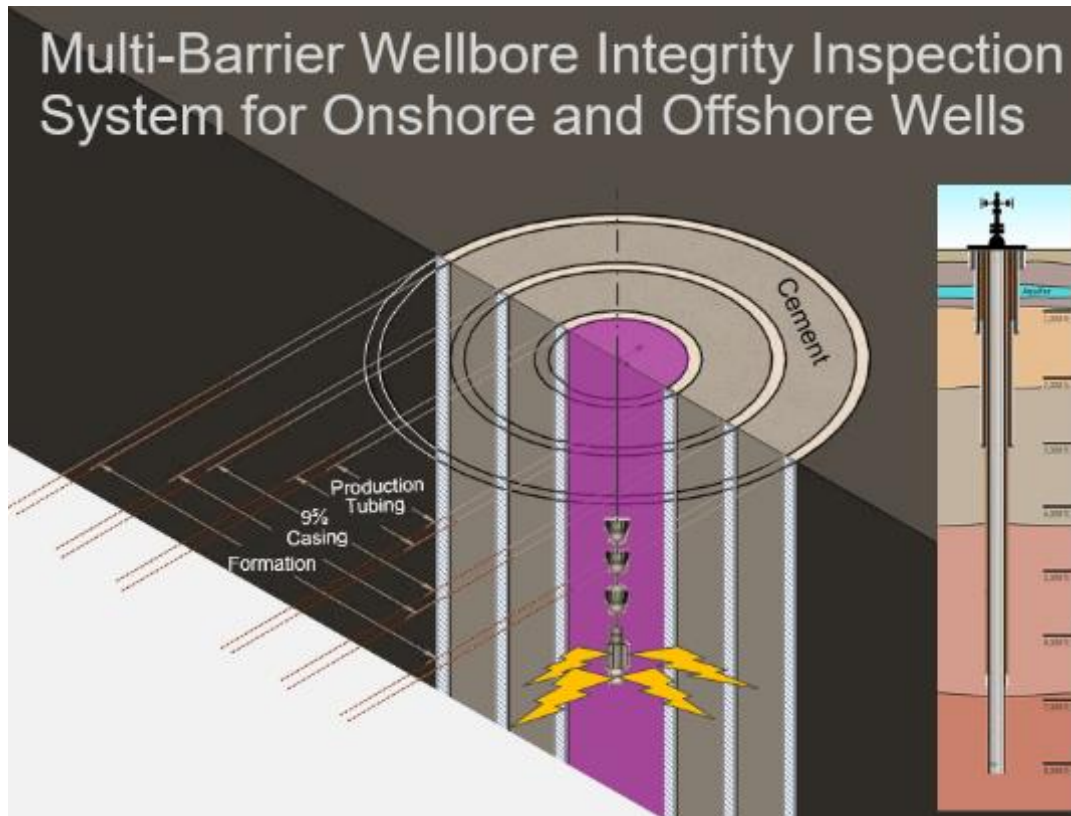
Av. 26 days per well to complete abandonment with Rig campaign

Av. 49 days per well to fully abandon

Where possible go straight onto the well with a MODU or HWIV and stay on until completion of Wellhead Severance. This example shows a time Δ ~50%

Case study: The potential impact of Innovation

Through tubing logging of cement behind production casing



Reduces time to abandon a well



Minimises service spread and crew size



Reduces risk associated with annulus cement verification

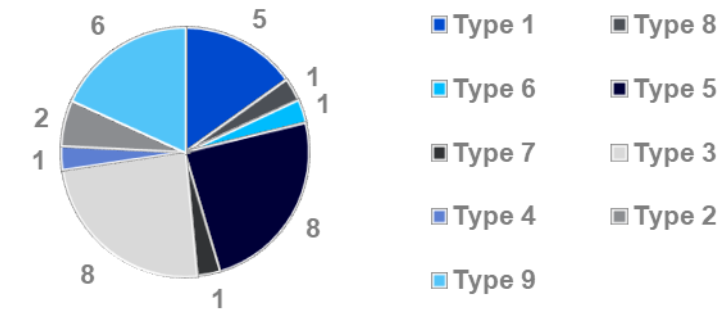


Reduces well abandonment costs

Case study: Campaign sequencing

Aggregation may provide saving in the sequencing according to types of wellhead

Analysis of Wellhead Type



Analysis of inter field tow times

~Distance	Hrs	~Distance	Hrs
A - B	1	F - G	6
B - C	4	G - H	1
C - B	4	H - I	1
B - D	7	B - F	11
D - E	1		
E - F	5		

~Av. tow speed assumed

Analysis identified:

- No schedule advantage in sequencing operations according to proximity of the fields.
- Winter weather and wellhead type have a greater emphasis on campaign scheduling.
- An innovative idea to further reduce schedule and provide for safer rig operations.

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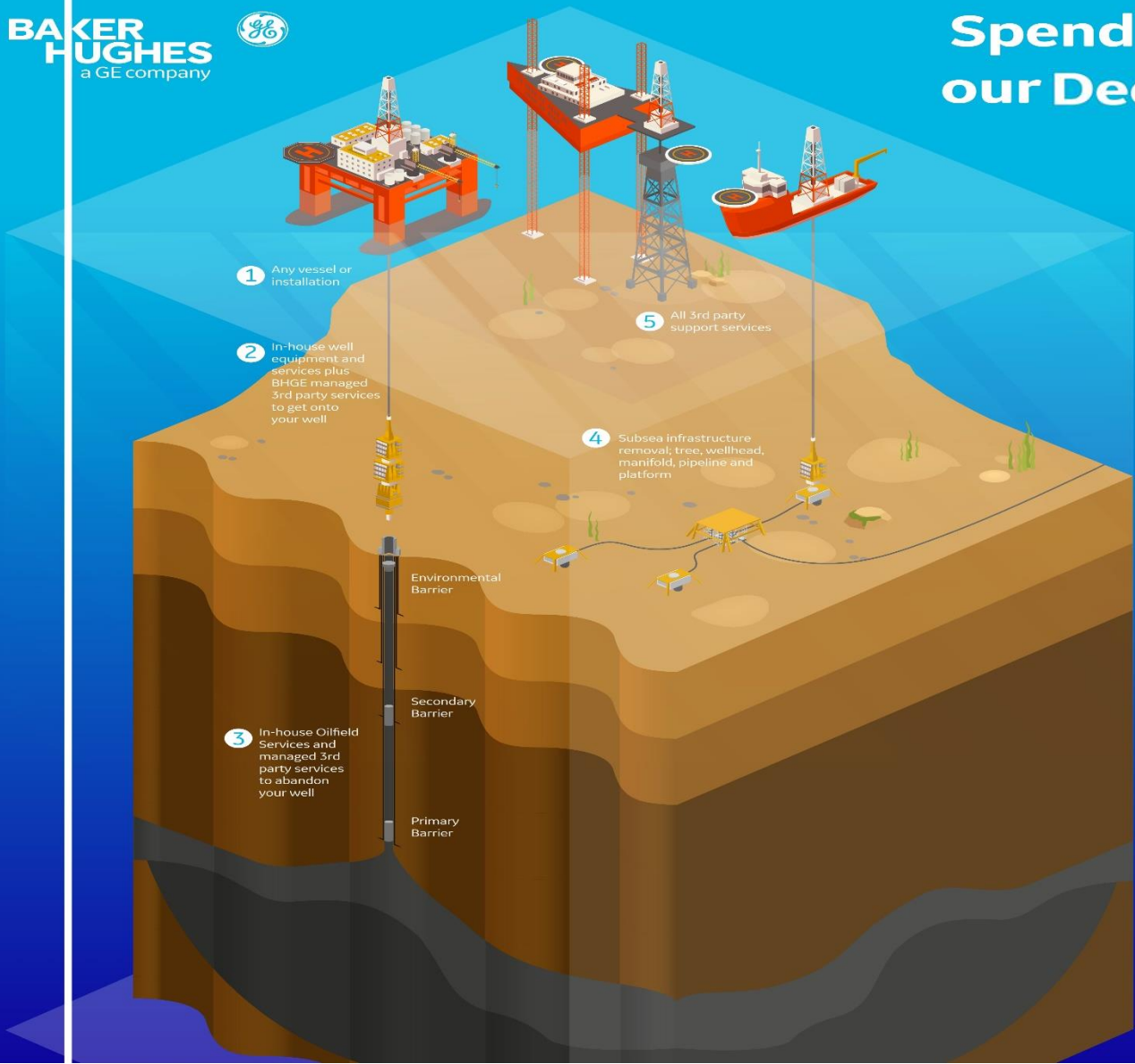


The proposition

S/N 45046960070



Spending Smart to Reduce Liability with our Decommissioning Solutions



Multi-field / multi-operator campaigns
Commercial innovation to deliver cost savings to all



60+ MSAs
Drives outcome driven supply chain led solution
See notes 1 2 3 4 & 5



Technical Innovation
in Decommissioning design, equipment and process



Turnkey solutions
Provided & managed in house & 3rd party supply
See notes 1 2 3 4 & 5



Commercial & Finance
Pay for the outcome, pay for performance. Defer payments, limit your liabilities



Contracting
Single contract, one entity for well decommissioning



MER through Alliances
For maximising returns in late life and minimising decom liabilities

Flexible models allow you to manage risk & reward

	Time & material	Turnkey	
	Input based contract	Outcome based contract	
	Resource cost	Resource value	
	Exposure to risk	Cost surety	



Closing remarks

If we delay might we cause a problem for the future, which comes at a greater cost to Licensees and us as tax payers?

Is now the time for us to capitalize on the benefits of aggregation, drive innovation and economies of scale and export the capability?

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