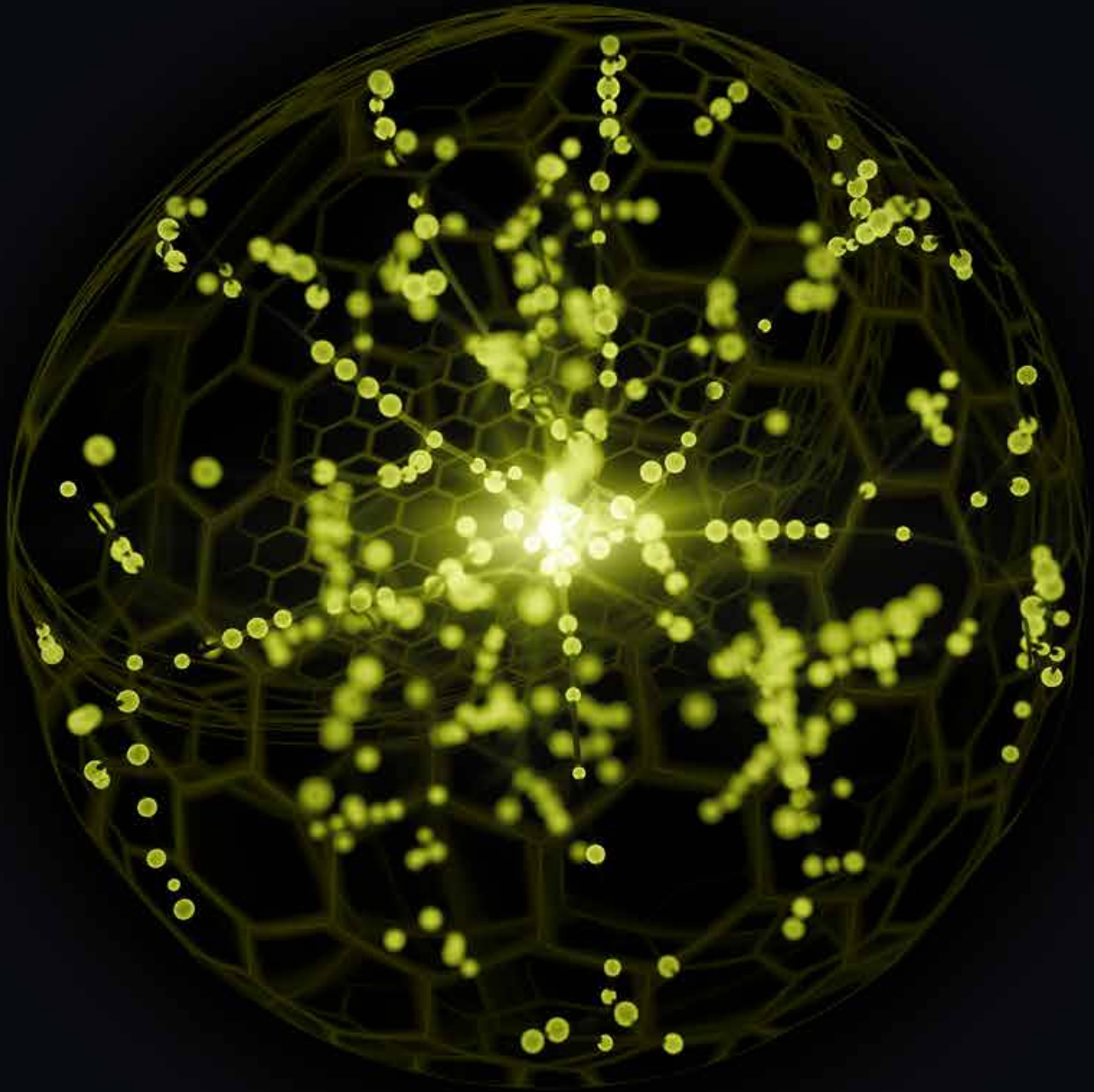


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Committed to change

Driving true industry
collaboration

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About this report

This report has been based on the paper 'Ready to collaborate? Operator and supply chain under the spotlight' which is published in the 2017 APPEA Journal.

Context

As part of Deloitte's mission to help the oil and gas industry become structurally more productive, it started a global initiative focused on supply chain collaboration. Considering the pivotal phase of Australia's LNG industry, a local variant of the survey has been conducted to provide insights and guidance for an accelerated learning curve.

Format

With the UK and the Netherlands reports providing ample background and clarification text on the collaboration survey results, this report will keep the narrative on survey outcomes concise and focus more on the 'so what now'.

Methodology

The Australian information is based on the results of confidential, electronic surveys conducted with industry participants in February-March 2017 enriched with additional feedback from face to face interviews. The UK Continental Shelf and the Netherlands comparison information was captured between September and October 2016. The data and analysis of the results are presented in the report anonymously in an aggregated format.

Demography

In total, 96 people contributed to the Australian survey across operators, suppliers and service providers, and industry bodies. Respondents were from a range of functions (engineering/projects, operations, procurement/logistics and strategy) and job titles (executive, senior management, mid-management and others).

A changing landscape

"If you don't collaborate, you will struggle"

– Operator

The next wave of value in Australian oil and gas

The last 18 months have seen speculation over the future of the Australian oil and gas industry, fuelled by the domestic political climate and global instability. There has been increasing noise about domestic gas reservation and the application of tax regimes. Globally, planned investment spend continues to decline and the challenge of reducing cost and increasing productivity is being felt across the industry.

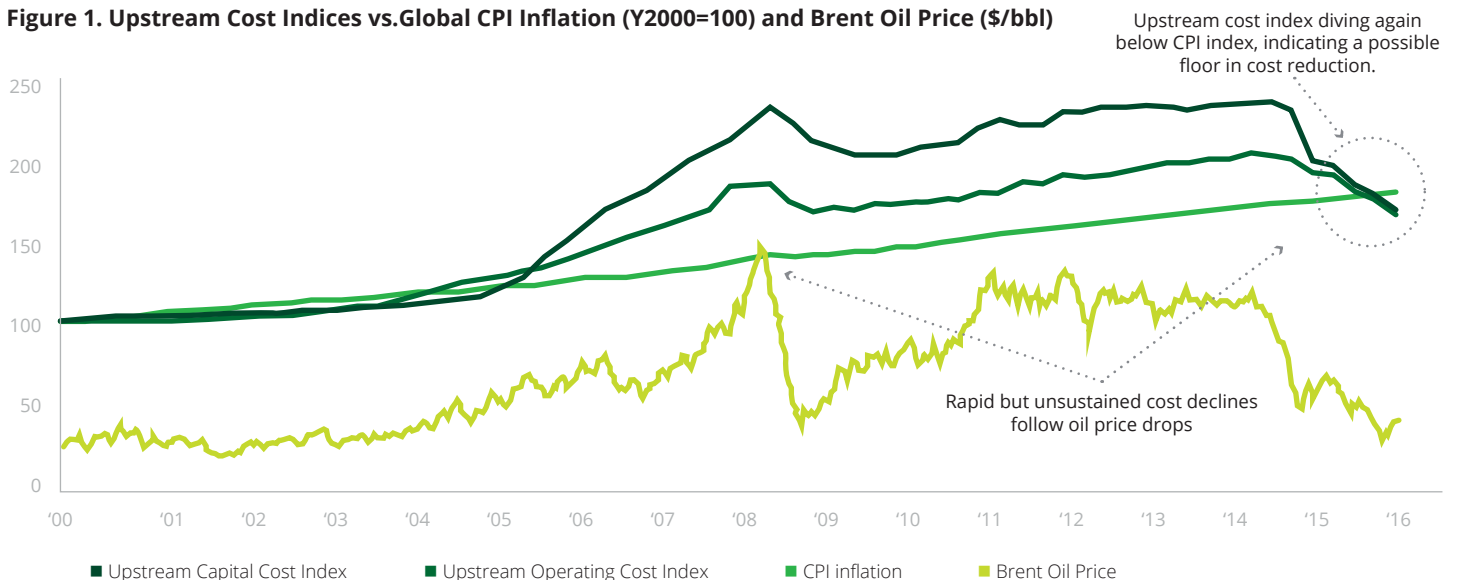
Strenuous efforts have already been made to bring down costs, reduce complexity and expedite the completion of major capital projects.

Squeezing harder seems to be becoming ineffective and, with the prospect of hitting the floor on cost reduction through conventional means, the quest is now on for the next source of value (Figure 1). The focus is shifting towards fundamentally changing the ways of working.

Collaboration is a theme that comes up time and time again. But what does it actually mean in the oil and gas industry? What does it look like in practice? And what should we focus on in Australia?

This report seeks to answer these questions with a focus on supply chain collaboration between operators and their suppliers and service companies.

Figure 1. Upstream Cost Indices vs. Global CPI Inflation (Y2000=100) and Brent Oil Price (\$/bbl)



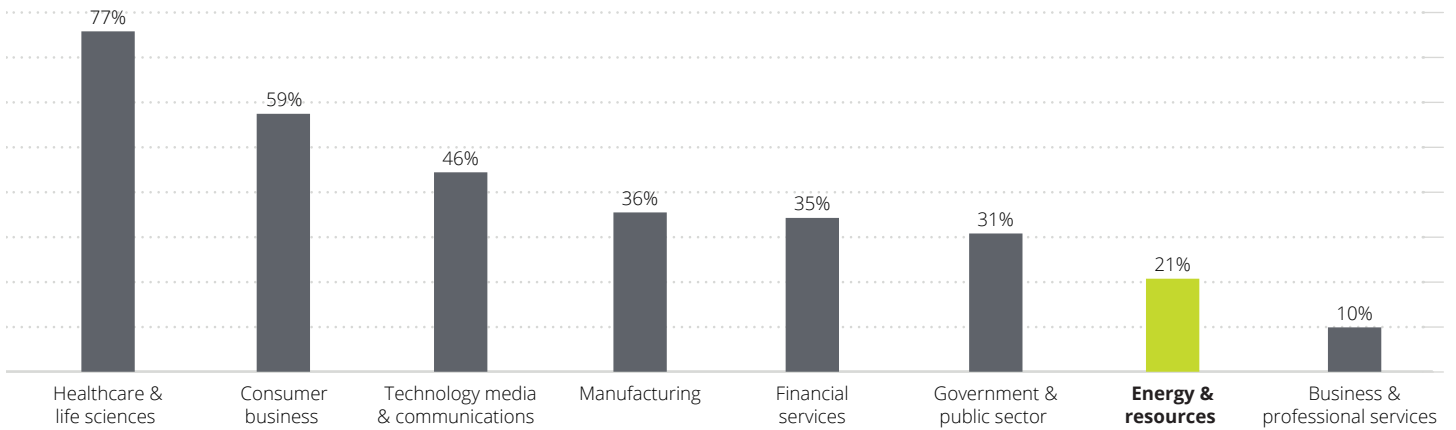
Progressing the collaboration imperative

In recent years, there has been a growing recognition that effective collaborative efforts are critical elements for growth in the future. Effective collaboration creates an opportunity for productivity improvement and sustainable OPEX reduction across elements of the value chain that may not be accessible by an

organisation on its own. Research by Younger (2016) concluded that energy and resources organisations are lagging behind other industries on actively driving innovation with suppliers (Figure 2), suggesting a sizable value gap in this area.

At the same time, 'increasing level of supplier collaboration' and 'specification improvement' gained relative importance as procurement levers. Taken together, the stars are lining up to capture collaboration value in innovative ways.

Figure 2. Percentage of CPOs actively driving innovation with suppliers



Note: The survey combines the opinions of 324 procurement leaders from 33 countries across multiple industries

Source: The Deloitte Global CPO Survey (2016)

Over the last year, reducing costs has become even more of a priority with 90% of Chief Procurement Officers (CPO) in the energy and resources sector identifying it as a 'strong priority' business strategy.

Interestingly, when asked to identify key procurement levers in achieving business strategy, 'consolidating spend' fell from first place at 50% to 35%, tied in second place with 'increasing level of supplier collaboration' which itself moved up a place.

This indicates that supplier collaboration is becoming increasingly acknowledged as an effective means of achieving cost reduction in energy and resources.

Strong priority business strategies

	2015	2016
Reducing cost	85%	90%
Managing risk		54%
New products/services/markets	21%	44%
Increasing cashflow	56%	60%
Expanding organically	21%	35%

Procurement levers

	2015	2016
Consolidating spend	50%	35%
Increasing competition	38%	37%
Specification improvement	25%	29%
Increasing level of supplier collaboration	35%	35%
Reducing total life cycle/ownership costs	35%	33%

Source: The Deloitte Global CPO Survey 2016

Collaboration roadblocks

"In the present environment, the priority is to survive"

– Operator

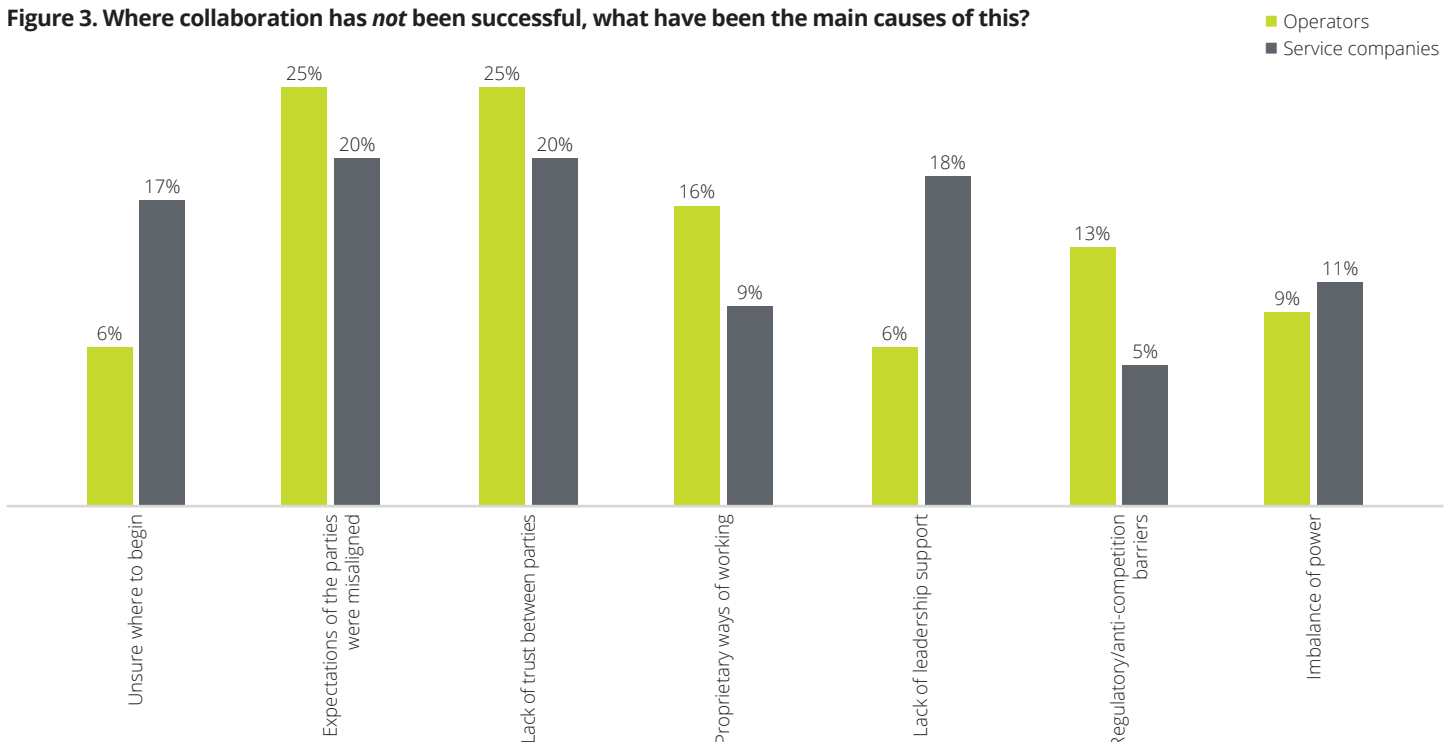
What's holding us back from collaborating?

The majority of operators and service companies in Australia have limited history of working together on operational oil and gas assets and less of a track record in accumulating trustworthiness and institutionalising collaboration.

Our Australian research indicated that among both operators and suppliers, a lack of trust and misalignment of expectations were the key factors in collaborative efforts proving unsuccessful (Figure 3).

Respondents from operators also indicated that proprietary ways of working were limiting areas in which they could collaborate, while suppliers cited a lack of leadership leading to unsuccessful collaborative efforts.

Figure 3. Where collaboration has *not* been successful, what have been the main causes of this?



Source: Deloitte Australia Oil and Gas Collaboration Survey 2017



Voice of Industry

“Regulatory bodies need to better understand what the industry is facing in the way of barriers, and how it restricts business”

– Operator

“The key issue is accountability and perceived loss of control within an operator”

– Operator

“Price expectations are unclear”

– Service company

“There is a lack of understanding of what is required”

– Service company

“Everyone is in it for themselves”

– Service company

“[Operators need to] trust in the ability of our company to deliver”

– Service company

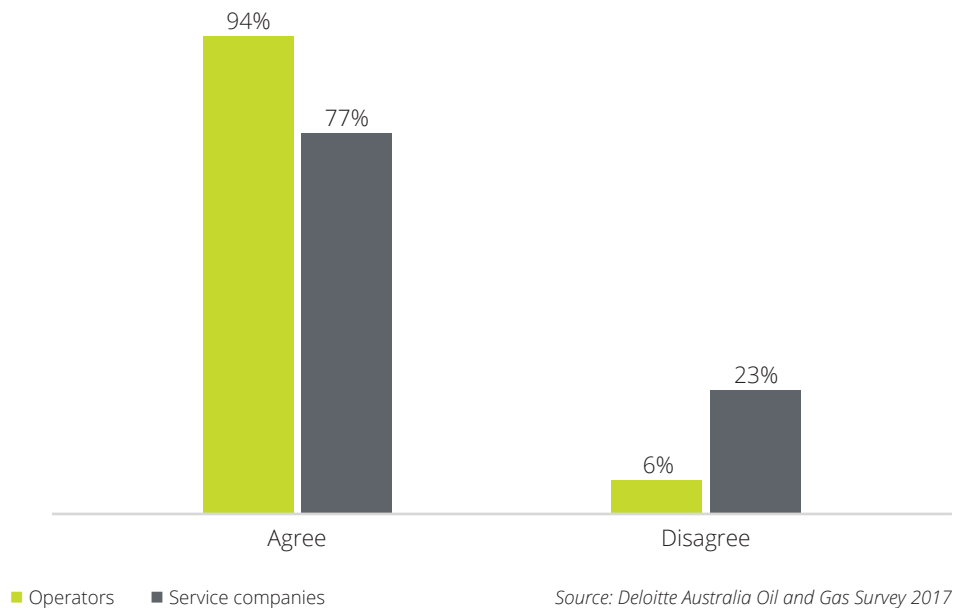
A respondent from a major Australian operator explained the biggest challenge in overcoming these factors is ‘shifting the mindset of not wanting to share’.

When asked whether respondents agreed or disagreed with the statement ‘Many business processes which are considered company confidential should be standardised to facilitate industry collaboration’, the majority of respondents from both

operators and services companies agreed (Figure 4). This indicates that this mindset may already be starting to shift.

The difference between operators and service companies could be explained in that people and processes in the service sector are often competitive differentiators in sales processes, rather than enablers for operational efficiency.

Figure 4. ‘Many business processes which are considered company confidential should be standardised to facilitate industry collaboration’



Challenge for collaboration: buyer-supplier tension

The inherent buyer-supplier tension in collaboration will need to be taken seriously in order to increase the chances for collaboration effectiveness.

After the boom years where service providers could achieve premiums without necessarily delivering better quality and more value, they now find themselves needing to rebuild trust with the operators, demonstrating that they have their interests at heart.

On the other hand, operators have been putting significant pressure on the supply chain, leveraging their current buyer's power, 'making up' for the past years. The risk is that the sector locks itself in a continual power struggle between parties, rather than finding a more sustainable equilibrium.

Barriers to collaboration in the UK and Netherlands

The results of surveys conducted across the oil and gas industry in the Netherlands (2016) and UK (2016) provide some interesting comparison insights.

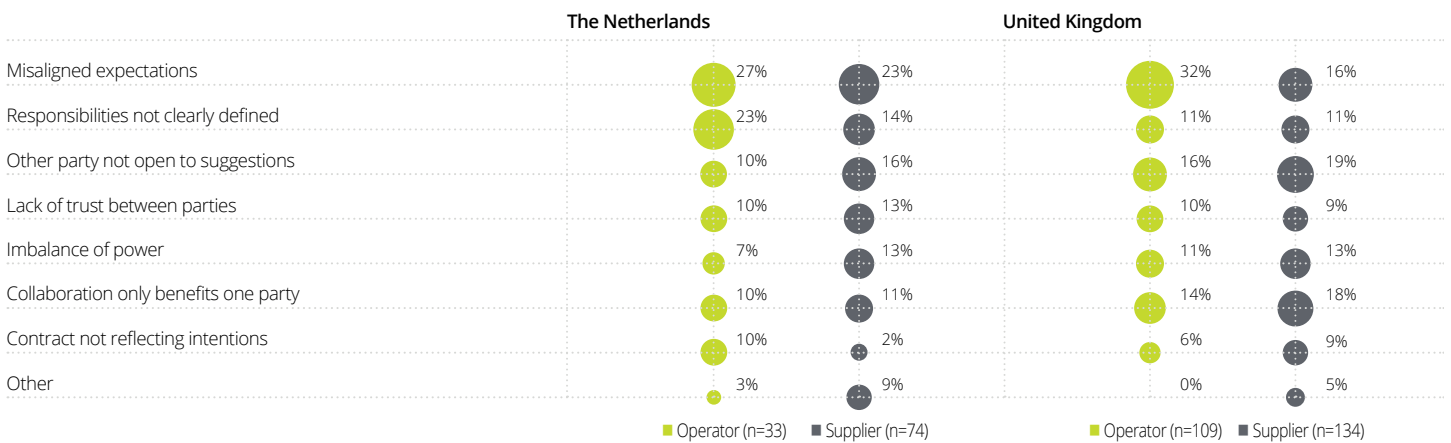
As shown in Figure 5, misaligned expectations were cited as the primary factor limiting collaboration and this seems to be a common denominator barrier across regions. This should be a clear area of focus for Australia and in theory not too difficult to solve. An interesting difference is the lower importance given to a lack of trust which reflects the long-standing relationships between operators and services companies in these regions.

As part of the Netherlands and UK surveys, respondents were asked to specifically identify operators and service companies they collaborated with, and then score them across a number of collaboration performance criteria (Figure 6).

The differences in how operators and service companies rated each other is reflected in the distances between scores.

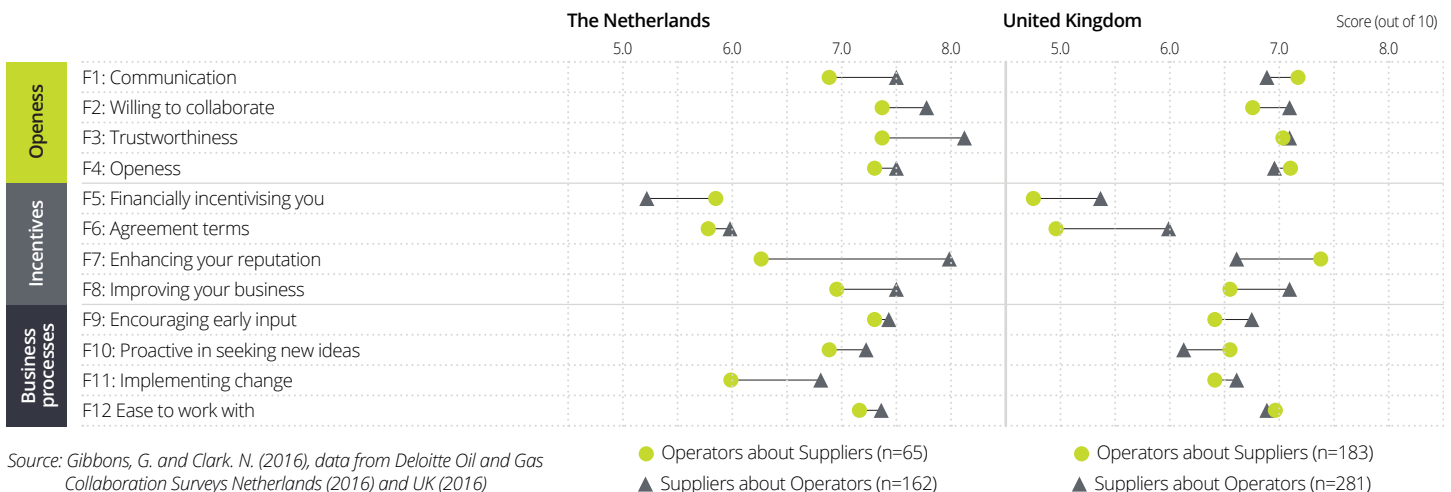
The low score outliers in both countries relate to the agreement terms and financial incentives. It is also interesting to note that operators in the UK scored suppliers much lower on these factors despite operators generally taking the lead in determining those incentives and terms. This reflects the difference in collaboration maturity between the countries further shown by the on average higher scores across factors in the Netherlands.

Figure 5. Rating collaborating counterparts - cumulative all partners relationships



Source: Gibbons, G. and Clark, N. (2016), data from Deloitte Oil and Gas Collaboration Surveys Netherlands (2016) and UK (2016)

Figure 6. Rating the performance of collaborating counterparts - across all partner relationships



Source: Gibbons, G. and Clark, N. (2016), data from Deloitte Oil and Gas Collaboration Surveys Netherlands (2016) and UK (2016)

“A ‘lack of trust’ and ‘fear of giving away intellectual property’ are significant challenges to achieving effective collaboration.”

– Major service provider

Local opportunities

"The big players need to pick contractors they trust and set up realistic standards"

– Service Provider

Opportunities for Australian collaboration

The Australian oil and gas supply chain has a significant challenge in moving towards a more collaborative model, but also a unique opportunity.

With new LNG projects coming online, asset management capability across operators and service companies will become key. The remoteness of assets also imposes a high level of interdependency on the sector and strong collaboration is critical for overall success.

Several forums have been established and multiple collaboration initiatives have been started with varying levels of success. In these forums, as well as in our research, the message is consistent that companies can see the benefits of collaboration. Our survey indicated that the key benefits operators are seeking from collaboration are reducing cost and risk, and acquiring knowledge through shared learnings. Service companies also identify benefit through shared learnings and to fill capability gaps (Figure 7).

When asked to identify which areas of the oil and gas business they would prioritise for collaborative activities, responses were varied. While major maintenance and turnaround planning was consistently identified as high priority by both segments, logistics topped operator responses while production operations and plant maintenance were identified more often by service companies (Figure 8).

Figure 7. Main reasons for collaboration

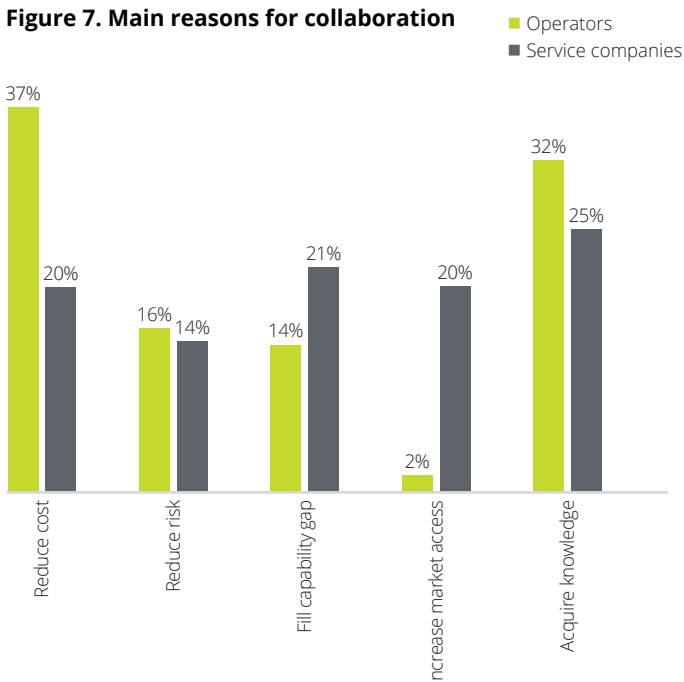
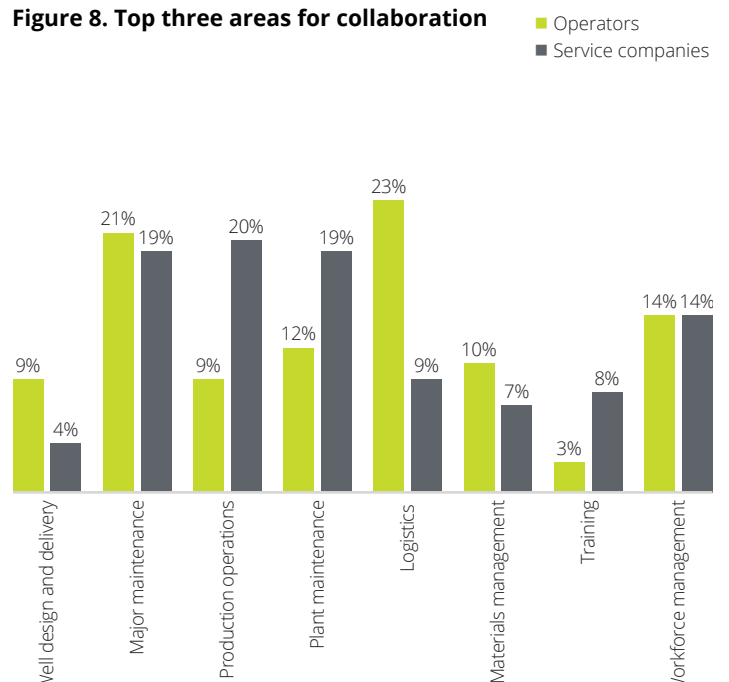


Figure 8. Top three areas for collaboration



Source: Deloitte Australia Oil and Gas Collaboration Survey 2017

“Contracting strategies and tendering processes often remove willingness from service providers to put in more than the minimum contracted requirements to the work”

– Operator

What can we learn

Collaboration lessons from the UK and Dutch oil and gas industries

The oil and gas industry has a long history in the North Sea with ample operational assets, multiple operators and a large and diverse base of service companies. In this mature market, the vast majority of operators (100% the United Kingdom; 92% in the Netherlands) and service companies (96% in the United Kingdom; 94% in the Netherlands) acknowledge that collaboration is essential for their future success. Yet, the oil and gas industry is leveraging supply chain collaboration to a lesser extent than other industries.

Despite existing enthusiasm, there is less evidence of radical, industry-wide behavioural change towards collaboration in the United Kingdom Continental Shelf (UKCS).

Cost reduction is still the main collaboration driver, and service companies are more focused on selling than ever.

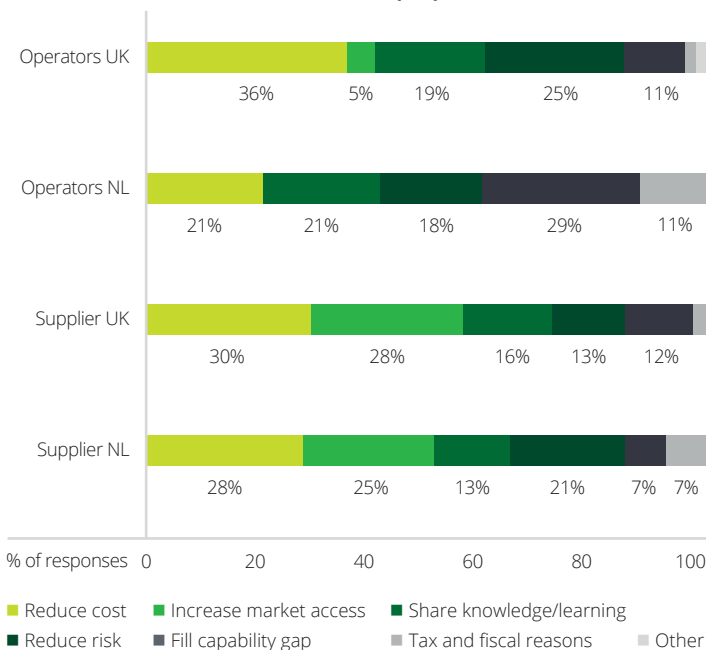
How can the best outcome be achieved? The main reason for making collaboration efforts successful comes down to a small number of proactive people with trusted relationships and the ability to ensure an equal share of the benefits for both sides.

Results from the Netherlands confirm a higher level of supply chain collaboration – primarily driven by operator behaviour. Dutch operators focus their efforts on getting the right capability, optimising delivery and nurturing collaborative behaviours rather than reducing cost and risk – these are seen as natural outcomes (Figure 9).

Successful collaboration (Figure 10) is driven by company business strategy and being proactive, where trust and sharing the benefits of collaboration are a given because of the established ways of working that exist in that market. Also a higher importance is given in the Netherlands than in the UK, to the investment of resources in managing collaboration which together with the above suggests that collaboration is more structurally ingrained in the Dutch sector than in the UK.

Overall, it can be seen that a clear business strategy encouraging collaboration provides a more structural foundation for success, making it less dependent on individual trusted relationships.

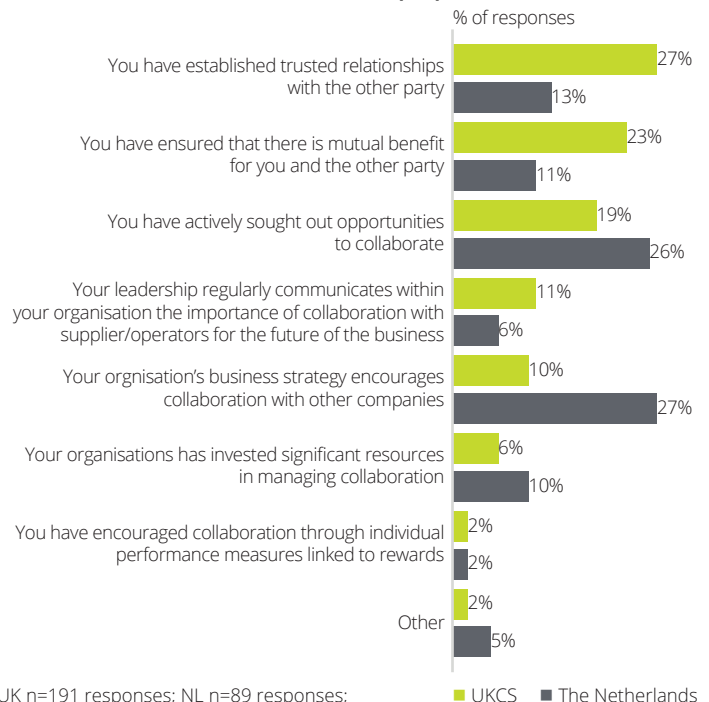
Figure 9. Principal reasons for collaboration UKCS vs the Netherlands (NL)



UK n=191 responses; NL n=89 responses;

Source: Cornelissen et al. (2016), data from Deloitte Oil and Gas Collaboration Surveys Netherlands (2016) and UK (2016)

Figure 10. Principal reasons for successful collaboration UKCS vs the Netherlands (NL)



UK n=191 responses; NL n=89 responses;

Source: Cornelissen et al. (2016), data from Oil and Gas Collaboration Surveys Netherlands (2016) and UK (2016)

“Be prepared to share objectives, ideas and concerns. Do not treat everything as a negotiation but instead open discussions with a willingness to learn and to share.

Only once objectives are clear, trust established and areas of potential synergy are clear, can collaboration begin.”

– Operator

What's next

How can Australian oil and gas companies unlock the value of collaboration?

A way forward for operator and supply chain collaboration

Ecosystem thinking continues to be cited as the way forward for collaboration, though the big question remains as to what that actually means and how to make it work in this context.

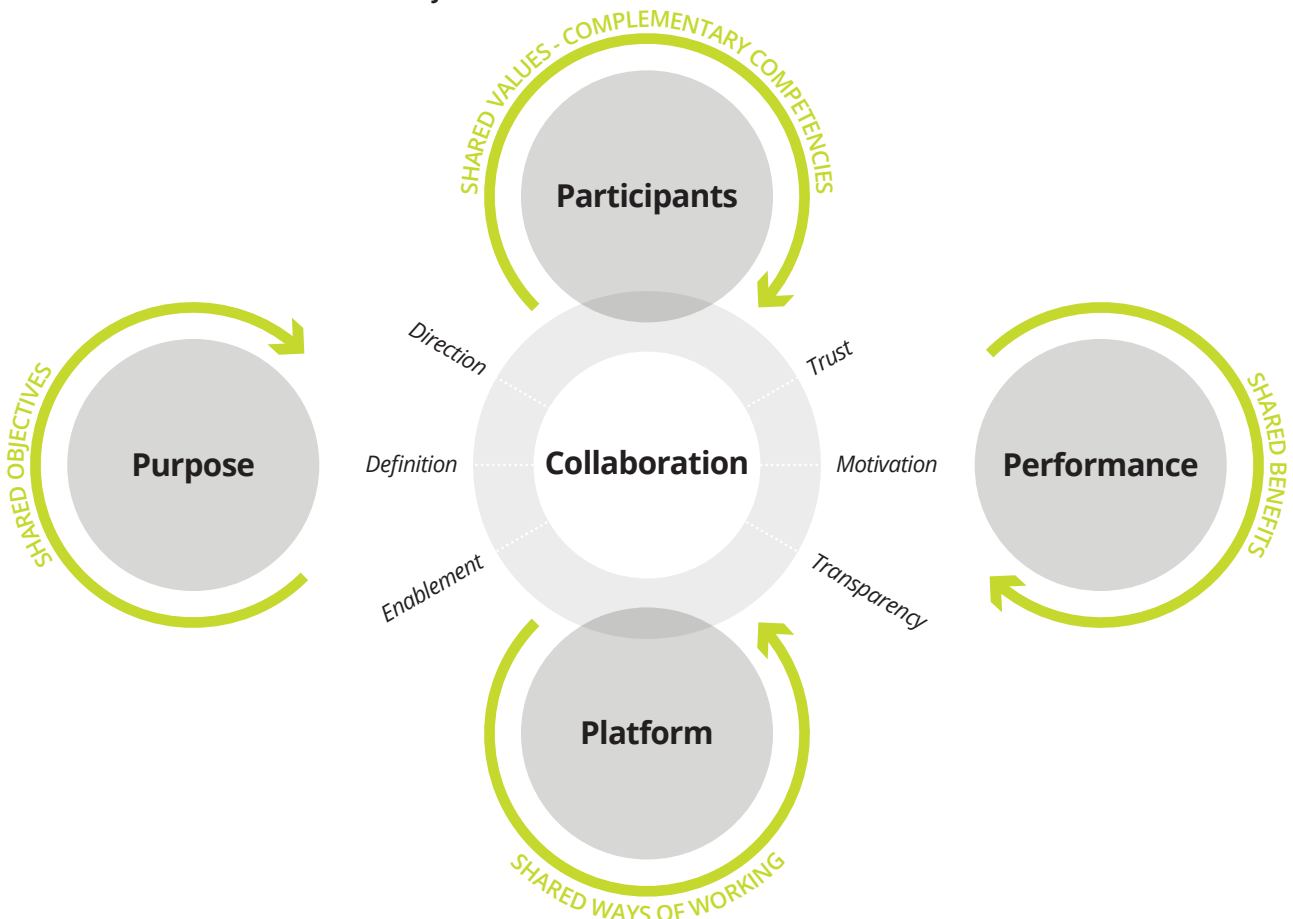
Our surveys suggest that ingredients for collaboration are adopted by companies inconsistently and that an effective ecosystem does not just naturally evolve in the market landscape.

Capturing the full value in a more holistic way, specifically in operator-service sector collaboration requires a clear purpose and deliberate design.

Inspired by the results and insights of our recent surveys, we have structured a model which can help operators and service companies who are willing to make a significant mindset change, to make that fundamental step change in value creation from collaboration (Figure 11).

The structured collaboration ecosystem is built up by its four Ps: Purpose, Participants, Platform and Performance, which provide six key ingredients for making collaboration an effective and preferred modus operandi in a sustainable way: definition, direction, enablement, transparency, trust and motivation.

Figure 11. The structured collaboration ecosystem



Purpose

Collaboration for collaboration's sake can put a burden on the organisation with limited sight on actual results and the consequential recognition for it. It starts making more sense if there is a specific purpose for it. Without the scope clearly defined with a set of shared objectives, it is hard to understand which parties should participate, what they should bring to the table and how their respective contributions dovetail and provide synergetic value.

Purpose brings definition and direction to the ecosystem.

In the case of supply chain collaboration between operators and service sector, the ultimate ecosystem value is determined by the value generation from the production asset of the operator, which also makes the operator the dominant participant.

Consequently the reason for service sector participation (i.e. their existence in the ecosystem) is the ability to deliver value to the production asset (i.e. client value). Collaboration in this context is not collaboration between 'equals' in a market sector. From a purpose perspective this means that the operator's purpose sits top of the hierarchy, cascading down to the ecosystem purpose which should align with the service sector participants business purposes.

Platform

Without being the same company, the ecosystem participants need to operate as a seamless organisation and requires a common platform that provides the foundation for shared ways of working geared towards achieving the purpose.

Agreements: By nature of this type of ecosystem, contractual-commercial agreements are the foundation of how scopes are going to be delivered. Appropriate standard terms and conditions are helpful for organisations to estimate and mitigate their risk exposure and tune their capability accordingly. This supports the ecosystem by having risks managed and scopes executed by the participant who is best positioned to do it. Also the commercial structures need to be tuned towards supporting participants driving overall ecosystem value, rather than focus on revenue growth through volume of work, as unintendedly but typically 'encouraged' by the conventional time and materials contracts.

Processes: Although different companies have specific differentiating capabilities, many processes are generic across the industry, whilst companies still have slightly different variants of those. This has a consequence for aligning on the interfaces between companies and sharing information in standard ways. As seen from our survey responses, the majority of operators and service companies suggest that many of these processes should be standardised and shared to facilitate better collaboration. Leveraging the platform to create a common denominator ecosystem process model and management system reduces ambiguity around responsibility split, interface expectations and provides transparency on the end-to-end process performance, ultimate delivering the overall ecosystem value.

Technology: Feedback suggests to focus on the following aspects in the technology space when collaborating:

01. Systems alignment and/or use of a common technology platform. This is about getting the basics right and remove the irritators and time wasters;
02. Agree information standards in detail (including data exchange). Information integrity is a foundational pillar for effective and efficient process execution;
03. Use technology to make collaboration easier than non-collaboration. More and more people are expecting the same ease of use from technology at work as the experience in their daily life. This provides an opportunity to enable collaboration as 'business as usual';
04. Leverage the digital revolution to power the new ways of working through analytics, mobile, augmented reality, artificial intelligence. Making collaboration more exciting and tying it to advancements in that playing field.

Insights: End-to-end process performance in an environment with multiple parties and interfaces requires insights normally not provided from within the functional silo or company standard ways. The 'I wish I knew' approach can help further identifying how participants can help each other with information sharing. In addition, composite information from different participants in a single overview can create new insights for the ecosystem to help better planning and managing the interfaces. Also, an increased level of transparency will drive ownership and build trust amongst the participants.

Participants

With the operator as the dominant party, it selects the participants for the ecosystem. The oil and gas sector, dominated by engineering brains, has a natural bias towards the more 'mechanical' ways of structuring collaborative teams, whereas our Australia survey responses suggest that the main reason for failure in collaboration relates to a lack of trust. This requires a fundamental mind shift in looking for effective solutions to improve on value from collaboration.

Looking through the lens of the trust equation (TE)* developed by Trust Advisor Associates (Figure 12), we have highlighted a number of considerations for the following dimensions:

Leadership: Clarity on purpose and having the appropriate platform in place only provides the set-up for ecosystem success. Critical for success is the example setting by leaders across all levels of the components of the TE. This also requires the participants to elevate collaboration to meta-level and discuss the 'state of working together' in an open, honest and constructive way.

Competence: A defined minimum competence for roles establishes the basis for the 'credibility' part of the TE. From a collaboration perspective the added value comes in when participants are:

01. Willing to discuss best matches for roles regardless which participant will assume/deliver the role; and

02. Open to discuss lack of competence, i.e. acknowledging missing skills with themselves and asking for help or identifying a possible gap with a fellow participant and offering help.

Increasing the level of understanding between participants on each others' ways of working, success criteria and critical information requirements can function as a catalyst for this.

Relationship: Although in the oil and gas sector, many technical problems are approached in a very structured way, when it comes to the more softer subjects like relationships it is often left to evolve naturally. Significant benefits can be reaped by applying a more structured approach to build and nurture essential relationships, which will increase the 'intimacy' element in the TE and reducing the 'self-orientation'. Furthermore, an increase in network connections between participants supports the speed at which both formal information and informal knowledge are shared across the ecosystem.

Behaviour: Participants' behaviours touch upon all factors of the TE, with 'reliability' and 'self-orientation' at the forefront. Apart from the standard motivational components influencing individual people's behaviour, the application of a reward model for service sector participants that is misaligned with the key drivers for overall ecosystem value has come out as one of the more structural barriers for collaborative behaviours.

Performance

The ultimate test lies in the tangible results the collaboration ecosystem will deliver.

Cascading from the overall purpose, clear objective definition and target setting provides that common goal for all participants to lock into their crosshairs. Also considering the longer term nature of these ecosystems, establishing a maturity staircase covering multiple years will provide both clarity on the visionary long-term future, as well as providing a set of interim way points on the journey to guide the team in the medium-term.

Sharing the benefits is another main ingredient for successful collaboration. From our UK and Dutch surveys, we learned that in the Netherlands it is less perceived as an issue, due to a higher level of collaboration maturity and application of more innovative contract models. The key question relates to what a fair share is and how structurally sustained improvements are rewarded.

A classic challenge lies in the misalignment between operator value driver and service company commercial contract drivers. Reducing (operator) cost on one hand and maximising (service company) revenue on the other hand are at war with each other in the standard time and material reimbursable contracts.

In the UK and Dutch surveys, both operators and service companies score each other the lowest on contractual/commercial incentivisation (see previous Figure 6). This is clearly an area that the Australian oil and gas industry should take on board and could leapfrog the others in more value based agreements.

Figure 12. The Trust Equation



Source: Trusted Advisor Associates LLC (n.d.)

Five issues operators and supply chains must address.

As new LNG projects move from development to production, Australia is experiencing a period of hyper growth with total production capacity increasing fourfold in just five years. Significant growing pains can therefore be expected in the asset management capability across operators and supply chain companies.

The five fundamental takeaways for the sector to keep top of mind are:

1

The power to drive fundamental changes sits with operators as owners of the overall business value and the ultimate client and buyer of supply chain services. Operators need to take an even greater role in orchestrating their full supply chain, through structuring their scopes and tender processes for increased supplier innovation and collaboration.

2

Make collaboration an explicit part of the business strategy now, and get a clear structure, well defined processes and an enabling platform to place to make collaborative ways of working the logical (and easier) choice. It is insufficient to leave improved collaboration to individual relationships and evolutionary processes. These are inconsistent and too slow for Australia, which cannot afford a long road to excellence.

3

Move on from the conventional time and materials contracting approach. Apply innovative commercial models that truly encourage collaboration and financially reward the service companies for overall value delivery, not just driving them to grow their work volume.

4

Seek out specific opportunities for collaboration. Operators should consider establishing special purpose ecosystems with a high level of delivery interdependency for the longer term so the participants can learn from each other, improve ways of working and have more certainty that investments can be earned back over time.

5

Actively solve the 'lack of trust' issue. This requires a fundamental mind shift in the world of oil and gas, dominated by engineering brains with a natural bias towards 'mechanical' solutions to make their business work. Drastically reducing the time it typically takes for trust to naturally evolve needs unconventional measures. Stepping out of the comfort-zone, taking personal risks in people area and 'paying it forward' will become a critical lubricant for letting the new collaborative machine work smoothly.

Are we ready to collaborate?

“Operators and service companies need to sync objectives and have a discussion about opportunities”

- Supplier

From our surveys across Australia, the UK and the Netherlands we can recognise the signs pointing towards effective collaboration.

There is a clear need to make Australia more competitive on the global playing field. We see an increased willingness across the Australian sector to take action. Learnings from the UK and Netherlands, together with the Australian insights give pointers for priority focus areas. Together with a framework that provides guidance on structuring and implementing collaborative ecosystems, the ingredients are to make a step change in collaboration.

Deloitte's 2017 Global Human Capital Trends report shows 'the organisation of the future' as the number one trend for all industries, including energy and resources industries.

As networks and ecosystems replace organisational hierarchies, the traditional question '*For whom do you work?*' has been replaced by '*With whom do you work?*'

Companies are organising themselves more for speed, agility and adaptability to better compete and win in today's global and fast changing business environment.

Are we ready for a shift in mindset and to use the power of collaborative ecosystems to unlock end-to-end supply chain value in our Australian oil and gas industry?

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“Set a clear strategy and empower your supply chain team to accept a different level of risk.

Savings won't be delivered if you are not prepared to do things differently.”

– Operator

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