

Agenda – TMN Meeting #55

Meeting topic: Disruptive innovation – role & execution as large companies

Date: 4th - 5th May 2023

Venue: Woodside Energy Ltd., 1500 Post Oak Blvd, Houston, TX 77056, USA
Woodside Contact: Tim Ong, Tel No. +1 713 835 7124

Directions: Please park in visitors parking and report to the main reception on your arrival. Your parking ticket will be validated before you leave.

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Agenda

Day 1 – Thursday 4 th May 2023			CDT (Houston)	CEST (Europe)
	Arrival, tea/coffee, networking		08.30	15.30
1	OTM/ all	Welcome, introductions and objectives/ agenda	08.45	15.45
2	All attendees	Round table sharing of current activities	09.15	16.15
3	Woodside	Presentation 1	10.00	17.00
	Tea / coffee break		10.45	17.45
4	Equinor	Presentation 2	11.00	18.00
5	ExxonMobil	Presentation 3	11.45	18.45
	Lunch		12.30	19.30
6	ConocoPhillips	Presentation 4	13.30	20.30
7	Petrobras	Presentation 5	14.15	21.15
	Tea / coffee break		15.00	22.00
8	Hess	Presentation 6	15.15	23.15
9	Eni	Presentation 7	16.00	23.00
10	OTM / All	Concluding discussions & wrap-up	16.45	23.45
	End of day 1		17.00	00.00
	Dinner at Caracol, 2200 Post Oak Blvd #160, Houston, TX 77056		18.00	

Day 2 – Friday 5 th May 2023			CDT (Houston)	CEST (Europe)
	Arrival, tea/coffee, networking		08.00	15.00
11	Shell	Presentation 8	08.15	15.15
12	bp	Presentation 9	09.00	16.00
	Tea / coffee break		09.45	16.45
13	Chevron	Presentation 10	10.00	17.00
14	Stuart Corr	Guest presenter – Houston Methodist	10.45	17.45
15	OTM/ All attendees	Plenary discussion – final wrap-up	11.30	18.30
15	OTM/ All attendees	TMN future plans - meeting topics etc. / Any other business	12.00	19.00
	Lunch		12.30	19.30

Meeting Briefing Notes

Introduction:

There have been 2 previous meetings themed on disruption and disruptive innovation:

- 2001 - How to promote and manage radical new technology
- 2020 - Adopting new innovation practices as large corporations to enhance value from, and accelerate the pace of research & technology efforts

At the 2001 meeting, the discussions were based around 8 aspects: processes, culture, speed, funding, supply chain management, performance measurement, risks, and success stories. Points arising from the meeting included:

- Radical technology requires a separate pot of funds (not controlled by business units) for radical/ blue sky idea development, a process to stimulate/ capture/ nurture ideas, and slack within the organisation (human resources) to carry forward ideas
- Radical innovation flows both from 'back against the wall' (corporate stretch targets, the 'trousers on fire' model) and 'space and time to think' (the 'feet in tubs of warm water' model)
- Connectivity with, and nurture of, external suppliers, universities and technology networks (e.g., SPE) is essential, and a multi-disciplinary/ multi-sectoral (e.g., non-oil industries) approach has proved effective (e.g., Fiat's technology scouts)
- Conflict, or lack of connectivity, between technology/ R&D (at the corporate centre) and business units, presents a major risk to successful nurture and implementation of radical technology

In 2020, the following discussion points were raised during the members' presentations:

- Traditional stage-gate processes were here to stay but there are opportunities to blend agile approaches into that process.
- Internal tools/ approaches to manage internal innovations and promote technology knowledge sharing/uptake. The hidden value of people's time required to keep these up to date and useful was noted. Also, the benefit of systematising ecosystems to benefit technical networks
- Relevance of R&D/ disruptive innovation for big companies & how to deliver this. The progression of companies' philosophies was discussed and the optimum way to adopt radical ideas into innovation programmes
- Changing culture from internal focus to more external was discussed, plus where the future might go within the trend of democratisation of science, technology and innovation away from traditional sources
- It was identified that there are differences between the large multinational IOCs and somewhat smaller independents around venturing and start-up engagement particularly when it comes to piloting
- Seen several objections to agile working – however still pushing through changes. Projects seen as faster with better outcomes; yet to get to the technology programme level
 - At the programme level – large budgets, varied stakeholders & sponsors... needs change at the macro level of budgeting?
- How to fit the changing portfolio into a fixed resource base and the issue of be constrained by resources when deciding what projects can be done
- Role of new entrants & start-ups disrupting positively (cost & time) – how traditional players have engaged
 - Radical thinking & innovation still required – like harvesting resources in space for local fuels/ materials
 - Data, value of information and how this is monetised
 - Cross over between space and O&G – how to avoid tech transfer being seen as science fiction. This was noted as a particular challenge and yet oil & gas and space share a lot in common challenges around harsh environments and remote operations

Disruptive innovation – role & execution as large companies

Bringing things forward to 2023, this meeting of the TMN will look to share your experience regarding “disruptive innovation – role & execution as large companies”. The areas you may want to focus on in your presentation include:

- What is classed as disruptive innovation and what is incremental in your company?
- Does your company want to be more disruptive?
- How do you prepare your people to be more disruptive
- How to incentivise disruptors
- Structure / organisation for disruptive innovation (modular stand alone, or internal)
- Outsourcing disruptive technology development
- Value of disruptive innovation
- How to commercialize and scale

The below is a summary of discussions with a couple of TMN members as food for thought.

What is classed as disruptive innovation and what is incremental in your company?

How has that changed over the last 3 years?

One of the drivers is the low carbon solutions business. Technologies that were previously considered disruptive are now considered part of the low carbon business. Disruptive technologies have received a lot of funding and this affects pace of innovation of disruption.

Some companies have not changed much in the last 3 years – they were already aligned with disruptive innovation, but others may have had to change significantly over the last 3 years

Does your company want to be more disruptive?

It's likely the answer is generally yes, but maybe in a specific way. Perhaps not in a pure technology play, but perhaps in inventing new business models and new spaces. One common driver we all have is the need for less carbon from our operations. The low carbon drive in business units (and the new business models) is forcing disruption and technology must step up to answer the need. Business model innovation requires new technologies.

On the flip side new technology can also drive new business models! Which one is stronger in your organisation and what are the ramifications.

Is there a role for (Governmental) policy acting on new business models or technology – does it drive either of these, understanding that it is region / country specific.

How do you prepare your people to be more disruptive and align it to your approach to innovation.

You can't just tell people “be disruptive” – you have to change the ecosystem, both structurally and culturally, providing tools where appropriate.

Disruptive people should not be overtaken by routine projects in their daily jobs. This just prevents them looking out.

To drive disruption, you have to take people out of their comfort zone. We know that some people are disruptive by nature, and they propose risky disruptive ideas. Others have to learn – attending learning sessions, seminars, educational courses etc... to drive disruptive behaviour, however, only a few will become disruptive.

Do you encourage the naturally disruptive people rather than building new disruptors?

How do you support these people in a company. They can become side-lined. The organisation needs to give them space, time and funding to demonstrate business value.

You can find you have different types of disruptors such as technical disruptors and implementation disruptors. Do you acknowledge the difference and manage it.

How do you deal with cross fertilisation between disruptors, which can be critical – some companies have track records to show that they have been supported – and provided a safe environment in which to work.

How to incentivise disruptors

Don't take the disruptors baby away from them as it grows – allow them to carry on contributing rather than taken away by a team who develops the idea for commercial use. The disruptors get feedback from end users and learn new ways

Another route mentioned was to put a limelight on them / showcasing them – CEO visits. You often find these types of people are self-motivated anyway so it's not just about \$\$\$. Also patents etc...

Organisational structures for successful companies will usually have innovation focused teams and a mechanism to support early innovation – the system is harsh if you look at these early innovations with traditional measures. Has your organisational structure morphed to support disruption. What's the right formula. Low carbon business has driven this. Sometimes it comes down to individual leaders' willingness to support to the right areas and mindset – nurturing early innovation. Is your company too dependent on managers making decisions – would a more structural method be better?

Outsourcing disruptive technology development

Companies have started to embrace open innovation over the last 10 years. The make or buy ratio has changed significantly for many organisations. How has the balance of funding changed?

Over last 10 years large companies have become more ready to work in open innovation with outside partners – for most this is driven by business need. Digital tools have facilitated this.

In today's environment, decision makers have to be prepared – change how decisions are made to enable disruptive changes. Bring in more external people at decision making levels rather than internal.

Value of disruptive innovation

How do you measure the (tangible and intangible) value of disruptive innovation to the company?
Assessing the value from disruptive innovation in uncharted territories is difficult.

How to commercialize and scale

Value comes when you deploy innovation.... and maximum value when the innovation / deployment scales. This is a big issue, particularly for the transition. Companies need to work together in areas such as floating wind, CO₂ capture, sequestration. How is that achieved with disruptive innovation?