



Project: The Technology Management Network
Meeting type: **Meeting no. 4: The Profitable Application of Technology**
Date: Wednesday 8 September 1999
Venue: Banff Springs Hotel, Golden Knowes Road, Banff, AB45 2JE, Tel: +44 1261 812881, Fax: +44 1261 815546. **Moray Suite.**
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Hotel: As above.
24hr rate (including 1 night's *table d'hote* evening dinner, 1 night's accommodation and breakfast) = £77.25 for a standard single room, £87.25 for a superior single
Additional nights accommodation = £45.00 standard, £55.00 superior
Plus Fife Lodge Hotel, Sandy Hill Road, Banff, Tel: +44 1261 812436, Fax: +44 1261 812636 = £35.50/ night B&B
Travel: Banff is 1hr drive from Aberdeen through scenic countryside. **Please advise OTM of your arrival time at Aberdeen (if travelling evening of 7th or morning of 8th September) and whether or not you are hiring a car.** We can therefore optimise transport arrangements (eg 3-4 persons/ taxi or hire car). Victoria Transport: +44 1261 833333, ~£32.00
Dinner: A TMN dinner will be held on the evening of 8th September 1999 at Banff Springs

Proposed agenda:

		From 10.00
1.	Welcome, introduction and objectives	OTM 10.30
2.	The profitable application of technology	Mike Taylor, Mobil 11.00
	Tea/ coffee	11.40
3.	The profitable application of technology	Round table informal presentations & discussions 11.50
4.	Guest presentation: the technology management process and the application of technology	Stephen Kaye, Innovations Division, Anglian Water 12.20
	Lunch	13.00
5.	Discussion – how best to ensure the maximum take up of technologies emerging from the R&D process?	Workgroup session 14.00
6.	Update on the UK Oil & Gas Industry Task Force – News Flash from Offshore Europe	OTM 15.00
	Tea/ coffee	15.20
7.	Review of other technology management initiatives Cambridge University Symposium; Website; DTI Management Action Note; Contractor Network	OTM 15.30
8.	The Technology Management Network – The future	Presentation and workgroup session 15.50
9.	Summary of day and next meeting date/ venue/ topic	16.30
	Meeting ends	16.45
	Evening meal in Banff Springs Hotel	19.30



Expected attendees, hotel & travel

Name	Company	Accommodation			Dinner	Hotel	Travel
		6 th September	7 th September	8 th September			
Stephen Kaye	Anglian Water	N	?	?	?	Not known	
Alan Turner	BG International	N	Y	Y	?	Banff Springs	Renting car, travelling separately
?	BP Amoco	N	?	?			
Ole Lindefjeld	Conoco	N	Y	Y	Y	Banff Springs	Taxi from airport 17.05 7/9/99
Gerard Fries	Elf	N	N	Y	Y	Banff Springs	Making own way on 8th
Alan Burns	Elf	Y	Y	Y	Y	Banff Springs	Driving to Banff from Offshore Europe 7/9 – lift to Paul Magelssen?
Alessandro Giuggiolo	ENI Agip	N	Y	Y	Y	Fife Lodge Hotel	Lift with Jenny Smith and Hans Johnsen – 19.40 7/9/99
Mike Taylor	Mobil	N	N	N	N	N/A	Travelling separately
Jenny Smith	OTM	N	Y	Y	Y	Boyne Hotel, Portsoy	Renting car 17.40 7/9/99, will give lift to Hans Johnsen and Alessandro Guigglioli
Paul Magelssen	Saga	N	Y	Y	Y	Banff Springs	Needs lift pm 7/9/99 from OE –with Alan Burns?
Bjorn Karlstad	Saga	N	N	Y	Y	Banff Springs	Taxi from ? morning of 8/9/99
Keith Eastwood	Shell	N	Y	Y	Y	Banff Springs	Renting car, travelling separately
Hans Johnsen	Statoil	N	Y	Y	Y	Banff Springs	Lift with Jenny Smith 20.00 7/9/99
Totals		1	8	10	9		



Profitable Application of Technology

All research and development activities in the upstream oil and gas industry exist to provide innovation (by way of equipment, procedures or software) which will enable exploration and production activities to be carried out either more efficiently or effectively – leading to higher margins through reduced costs or increased revenues or a better environmental or health and safety record. Gains clearly cannot be realised however, unless innovation emerging from the R&D process is applied by exploration teams, producing assets and new developments.

Consistently, throughout the TMN meetings, the importance of ‘of a clear path to application’ has been noted. Therefore, the meeting on Wednesday 8 September will be focused on how the members currently promote the application of technology and how such processes can be improved. The term ‘profitable’ pre-fixes the subject for this meeting, since technology has to be relevant and result in some gain. However, the difficult issue of calculating the *value* of applied technology will be deferred to a future meeting.

The eventual application of technology has to be considered at all points on the technology management cycle, going right back to ensuring the careful selection of asset and future asset needs and the selection of appropriate technologies to meet those needs. For instance, in choosing technology options to meet a particular need, it will be necessary not only to weigh the eventual notional cost reduction or revenue gain, but also in *what timescale the technology will be available, in what way will its application affect current operational procedures* and a whole range of other criteria which will be important to business units. Therefore, in the meeting we will consider the main issues and critical success factors pertaining to successful application *throughout* the management cycle.

The issues become more apparent however, once the R&D project is underway. All the members will be carrying out the following to a greater or lesser extent and should be in a position to relate their experiences to the attendees:

- Keeping the wider organisation informed about R&D developments
- Re-checking asset and corporate needs and timescales
- Involving business units in field testing, project management, in advisory capacities or by providing funding
- Tracking similar initiatives in the market to ensure projects are still leading edge and cost effective
- Consideration of the operational implications of product designs and consequent knock-on effects on the working practices of assets

Case histories are always more relevant and memorable than theory and it would be useful if members could identify relevant illustrative stories from within their own (or other) organisations.

One of the toughest barriers to the application of new technology is the concern on the part of a business unit that its application will be high risk with the potential for adverse repercussions on production and therefore profit and loss. Ways in which companies overcome this hurdle may include the following:

- Programmes of familiarisation and training
- Business unit managers to champion R&D projects
- Incentives, such as bonuses and awards to flagship assets for their use of new technology
- Budgetary compensation for field trialing new equipment, procedures or software

The issues are no doubt different for technologies produced in-house, those emerging from collaborative projects in which the company is a sponsor and those being promoted by suppliers in the marketplace. It may be considerably harder to find an asset to take on board a new idea generated by supplier A, than one in which he has been involved in creating through an in-house initiative. This is particularly problematic when the supplier is relatively unknown, does not have an impressive track record and lacks product demonstration funding.

In addition, the source of the technology may not be the only issue – but rather the reason for its development. In all companies, R&D portfolios are a mix of short term (often incremental) technologies, medium term strategic projects and a percentage of longer term ‘blue sky’ ideas. It is usually the medium and long term projects which can yield step change innovation, which may involve a completely new way of doing things. The acceptance procedure could be proportionately more complex in this case (the levels of risk and potential reward will both be much higher).



Once a technology is being applied it needs to be adequately supported by those involved in its development and the end users need to be assured of this support at the outset. There also needs to be a feedback loop for end users to suggest ways of both improving the product and for optimising the application process and level of take-up. This brings us back to the need to capture lessons learnt and feed these back into the whole technology management process.

In conclusion therefore the meeting will seek to cover the following:

- Application criteria to be considered when identifying needs and technology solutions
- How best to engage end users in the R&D process
- Providing a path to application for new 'not invented here' technologies
- Adoption of step change innovation
- Capture and utilisation of lessons learnt



