



# The Technology Management Network

Project: The Technology Management Network  
 Meeting type: **Meeting no. 8: Improving the take-up of technology**  
 Date: Thursday 30 November 2000  
 Venue: TFE Technical Centre, CSTJF Avenue Larribau, 64018 Pau, France, Switchboard: + 33 559 835000  
 Local contact: Pierre-Alain Delaittre, TotalFinaElf, Tel: [33] 559 836190, Fax: [33] 559 834476, <mailto:pierre-alain.delaittre@elf-p.fr>, or Brigitte Martinez, Tel: [33] 559 835 673, Fax: [33] 559 834 476, <mailto:brigitte.martinez@totalfinaelf.com>  
 Coordinator: Jenny Smith, Offshore Technology Management Ltd, 44 Quarry Street, Guildford GU1 3XQ, UK, Tel: + 44 1483 598000, Fax: + 44 1483 598010 <mailto:jenny.smith@otmnet.com>  
 Hotel: Hotel Renaissance, 1 Passage de l'Europe, 64000 Pau, Tel: [33] 559 141414, Fax; [33] 559 141410. Room rate: 435F/ night (single); 475F/ night (double)  
 Dinner: There will be a dinner on the evening of 30 November (ie following the meeting) at 'Au Fin Gourmet' – details will be provided at the meeting.  
 Travel: By taxi it is 15 mins from the airport to the hotel, 10 mins from the hotel to the TotalFinaElf offices and 15 mins to the city centre. Tourist information/ maps available at: <http://www.rando.net/cartes/france/2frame.htm>; <http://www.ville-pau.fr/pg-h/somprat.htm>; [http://www.univ-pau.fr/ext/atb/villes/a\\_pau.htm](http://www.univ-pau.fr/ext/atb/villes/a_pau.htm) Both the hotel & TFE's offices are just off the A-64 which runs across the Northern outskirts of Pau. The attached map will give some indication of locations.

**Taxis will be booked from the Renaissance Hotel to TFE's offices – please meet at 7.45am in the hotel lobby on Thursday.**

## Proposed agenda:

<b>Arrival and tea/ coffee</b>			
1.	Welcome and introductions	OTM	8.30
2.	Framework and objectives for the day	OTM/ All	8.40
3.	Case history 'briefs' on the take-up of technology	TFE, Shell, BP, BG ....	8.50
4.	Round table sharing of issues/ problems/ processes and solutions related to the application of technology & how this is affected by a company's technology strategy	All	9.30
<b>Tea/ coffee</b>			<b>10.10</b>
5.	Guest presentation on technology management processes within Coflexip	Patrick Narzul, Group head of R&D, Coflexip Stena Offshore	10.30
6.	Discussion continued	All	11.15
7.	Presentation on TFE research facilities at Pau <i>or</i> tour of facility (more time to be allocated if necessary)	Pierre-Alain Delaittre, Total Fina Elf ( <i>to be confirmed</i> )	11.45
<b>Lunch</b>			<b>12.10</b>
8.	Guest presentation: Innovation metrics and corporate strategy: the majors in the upstream petroleum industry	Virginia Acha, University of Sussex	13.40
9.	R&D strategies for 2001 – what are the changes?		14.10
<b>Tea/ coffee</b>			<b>14.50</b>
10.	Project management issues: 2001 programme, related initiatives, website, marketing update etc	OTM	15.10
11.	AOB		15.40
12.	Next meeting topic, date & venue		15.50
<b>Meeting ends</b>			<b>16.00</b>

# The Technology Management Network

## Attendees



Company	Attendee	Attending	Hotel room		Dinner
			29/11	30/11	
BG International	Alan Turner	1	1	1	1
BP	Peter Duff	1	1	1	1
Coflexip	Patrick Marzul	1	1	N	N
ENI Agip E&P Division	Giambattista De Ghetto	1	1	N	N
Norsk Hydro a.s.	Finn-Erik Skaar	1	1	1	1
Norsk Hydro a.s.	Frank Ellingsen	1	1	1	1
Norske Conoco AS	Ole Lindefjeld	1	1	1	1
OTM	Jenny Smith	1	1	1	1
Shell International	Keith Eastwood	1	1	1	1
Sussex Univ.	Virginia Acha	1	1	1	1
TotalFina Elf	Alan Burns	1	1	1	1
TotalFina Elf	Pierre-Alain Delaittre	1	N	N	1
	<b>TOTAL</b>	<b>12</b>	<b>11</b>	<b>9</b>	<b>10</b>



# The Technology Management Network

## Improving technology take-up

The meeting to be kindly hosted by TotalFinaElf in Pau, South of France on 30 November 2000, will focus once again on the take-up of technology emerging from the R&D process. Also, in line with members' wishes expressed in meeting no. 7, the discussions should consider the affect on technology take-up of a company's technology strategy.

All research and development activities in the upstream oil and gas industry exist to provide technology (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 those in the field: exploration teams, producing assets and new developments.

The eventual application of technology has to be considered at all points on the technology management cycle, going right back to ensuring the careful identification 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 consider the eventual projected cost reduction or revenue gain, but also:

- in what timescale will the technology be available for application (ie commercialised),
- 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 should consider the main issues and critical success factors pertaining to successful application *throughout* the technology management cycle.

A company's technology strategy will be reflected in the processes and criteria for identifying needs and selecting appropriate technologies and the means to acquire those technologies. The company's technology goals will also have a direct impact on identifying technology needs at the outset. When discussing identification of technology needs and development of R&D programmes, the TMN members spoke about balancing asset-specific requirements and those deriving from business and technology plans. The company's philosophies on IPR and in-house technology skills will impact on where and how the technology will be developed – issues which may also affect how technologies are perceived by assets.

The type of technology may well affect its level of acceptance and take-up by the business units. 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, particularly since there is generally a resistance in companies to radical change (in such cases, the levels of risk and potential reward will both be much higher). Also, it may be harder to find field trial and implementation opportunities for equipment as opposed to 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 a supplier, 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. This is another factor which is influenced by a company's technology strategy. For instance, if the policy is to produce most innovation in-house, this may lead to a better (or quicker) take-up of technology by assets.

One of the toughest barriers to the application of new technology is the concern on the part of a business unit that application will be high risk with the potential for adverse repercussions on



## The Technology Management Network

production and therefore profit and loss. The way in which the level of risk is perceived or calculated will be affected by many of the variables outlined above.

Some of the processes adopted by participants to try and improve technology take-up may include the following

- Consideration of the operational implications of product designs and consequent knock-on effects on the working practices of assets
- Improving knowledge of R&D projects within the company – good communication
- Re-checking asset and corporate needs and timescales to ensure technologies are still needed
- Tracking similar initiatives in the market to ensure projects are still leading edge and cost effective (and therefore relevant and wanted by assets)
- Involving business units in field testing, project management, in advisory capacities or by providing funding
- Incentives, such as bonuses and awards to flagship assets for their use of new technology
- Budgetary compensation for field trials of new equipment, procedures or software
- Including technology application and technology transfer as part of the asset manager's job description

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. Asset managers also need to be prepared to support other assets who are following them in the application of the technology.

In conclusion therefore, the meeting should cover the following:

- How the criteria used to identify needs and select technology acquisition routes may ultimately affect the level of technology take-up
- How best to engage end users in the R&D process and gain their commitment to application
- Particular issues associated with the application of equipment and step change innovation

As usual participants are asked to come prepared to informally discuss your own company's experiences. 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.

# The Technology Management Network

