



NERC Centre for Doctoral Training (CDT) in Oil & Gas

Industry Advisory Board Meeting

3rd November 2015, 09:30 a.m. – 13:00 p.m.

Seminar Room, Enterprise Building, Heriot-Watt University

MINUTE OF THE MEETING

ATTENDEES:

Industry Advisory Board Members

Keith Gerdes (Shell; Chair)	(KG)
John Underhill (HWU; CDT Lead)	(JRU)
Matthew Brown (E.ON)	(MBr)
Mark Burchell (BP)	(MBu)
John Clayburn (Cairn Energy)	(JC)
Neil Grant (ConocoPhillips)	(NG)
Colin Oswald (Total)	(CO)
Alwyn Vear (Woodside Energy)	(AV)

INVITEES:

Lorna Morrow (HWU; CDT Manager) (LM)

Welcome and apologies

JRU welcomed everyone to the meeting, outlined the HSE provision and proceeded to thank companies for their support and attendance before handing the Chair to KG.

KG welcomed all representatives and introduced the two new sponsors, Cairn Energy and Woodside Energy. He thanked JU and the CDT Management team for their efforts throughout the year to make the 10-week, first year Training Academy programme a reality, including a very successful conference event the day before.

LM notified apologies from Maersk Oil, OMV and Statoil. BG Group are also not in attendance following the decision that they are no longer in a position to support the CDT going forward due to ongoing negotiations regarding a change in company ownership.



Review of actions from IAB meeting, 31st October 2014

ACTION	AGENT
Circulate JRU Powerpoint presentation with minute	LM Completed
Circulate list of 2014 entry cohort and projects and full Training Academy curriculum to enable companies to decide which topics they can provide support to	LM Completed
IAB members provide LM with contact details and purchase order reference for payment of annual subscription fee	IAB members Completed
Provide statement of intent regarding level of expected involvement of company in CDT programme to JRU/LM by 7 th November	IAB members Email replies were received from Maersk Oil, OMV, Shell, Statoil and Total
JRU to circulate pro-forma letter to IAB members to be forwarded to BIS and NERC pressing for additional financial support to the CDT.	JRU There had been no suitable opportunity to pass on this type of communication to BIS but JU outlined his ongoing discussions with BIS, both directly and via the Industry Technology Board
Nominate IAB representative to join CDT Training & Development Committee	IAB members Andy Bell (Shell) is now a member of the Training Academy Committee and Gary Nichols (Nautilus) agreed to join the Development Committee.
NERC to confirm if all CDT students can participate in NERC-run professional development courses irrespective of funding source (default position is minimum 50% NERC funding to be eligible for NERC training)	LF (Liz Fellman, NERC) LM confirmed that NERC agreed that all CDT students, irrespective of the source of funding, are eligible for free places on NERC's professional development courses and that 3 students in the 2014 cohort have already taken advantage of this, two of them taking a statistical course run by Strathclyde University staff.
KG/JRU to feed back to CDT Management Committee that industry sponsors would like individual PhD students to have the opportunity to visit company offices/sites	KG / JRU Completed



<p>KG/JRU to feed back to CDT Management and Awards Committees that more field-based PhD projects be submitted, and projects addressing niche skills. Also that there needs to be a process by which industry feedback is incorporated into the review process at an earlier stage for 2016 projects</p>	<p>KG / JRU KG confirmed that the summary provided by Awards Committee Chair, Rob Butler, to partners after the 2015 project call, plus the additional guidance accompanying the 2016 project proposal call did result in more proposals including field work. Insufficient representation in May 2015 led to the cancellation of a proposed IAB meeting to look at the projects advertised for 2015 entry. LM will circulate 2016 titles after the list is finalised on 18th November 2015 for companies to peruse and see if they are able to provide any additional data or support that might make the project even more attractive to applicants.</p>
<p>KG/JRU to feed back to Management Committee that industry would like to see internship opportunities in Year 2, Quarter 4 included in the CDT training programme</p>	<p>KG / JRU Completed. Please see further discussion in minute of 03/11/15 meeting regarding how internship timings fit with companies' recruitment cycles.</p>
<p>JRU to arrange for IAB members to meet Awards and Training & Development Committee members @May 2015 when next TA event is held at HWU.</p>	<p>JRU Timing of events at HWU in March did not suit IAB members and May TA event was held in Manchester. Members have met informally at the CDT Annual Conference and LM will inform members of all TA dates so that they can visit any CDT event to meet students and course contributors. The CDT Management team will continue to try to schedule CDT committee meetings to coincide with TA events thus providing networking opportunities.</p>

Update on industry contracts status

Both Cairn Energy and Woodside Energy have joined the CDT since the last IAB meeting, both on a retrospective basis covering 2014 and moving forward on a rolling annual basis. JU confirmed that all companies have signed the same contract terms and conditions, the only variable being the renewal period which can be on a one or three year annual basis following review. BP has committed to a full six years and Statoil has already agreed to extend its initial 3 year commitment to six. BG Group will not renew as indicated above and Shell are unlikely to pick up the additional subscription post-merger.



Review of 1st year of operation

Training Academy Programme: JU highlighted the successful delivery of training courses hosted at Heriot-Watt, Manchester, Durham and in the French Alps (led by Rob Butler from Aberdeen University and Rod Graham from ION). Courses at Manchester and Durham had included weekend field trips to Derbyshire and the N. Yorkshire coast respectively, and the French Alps trip covering the Challenging Environments research theme, comprised 9 days in the field. The latter field course was supported by additional funding from Shell and Statoil. The integration of field days was a direct response to recommendations made at the inaugural IAB meeting in October 2014.

JU reported that the situation regarding CDT student access to the open course portfolio offered through Nautilus is currently under discussion due to the company's acquisition by RPS and changes in governance between their USA and UK offices. It now looks as if the CDT will have access to European-based courses only, although one student has just returned from a course held in Houston. These courses are part of the optional offering within the Training Academy programme.

Mentoring Scheme: The CDT Management team has also established a Young Professionals (YP) Mentoring Scheme to provide each CDT student with an industry mentor, but not from their alma mater, or necessarily in their discipline. The existing YP networks of PESGB and AAPG had been used initially to avoid increasing the burden of support on IAB members and to establish the scheme as quickly as possible. This resulted in some mentors coming from non-CDT sponsoring companies. LM will forward the YP Mentoring Scheme guidelines to members so that they can propose their own staff as mentors for the next two cohorts of students. It was noted that EAGE and SPE also have YP networks which could be accessed. MBr noted that one of their staff acting as a mentor is now providing data to help her mentee's research.

Student feedback: Student feedback from each element of the training courses had been collated into large spreadsheets and circulated prior to the meeting, with a higher level summary document tabled at the meeting. Members agreed that it was useful to have access to the granularity of the full feedback which should be made available on a secure FTP site, but that the summary document is more suitable for use internally in promoting companies' continued investment in the CDT. AC will create a secure FTP site for the feedback documents and provide members with the access details.

Project Proposals: The rotation of the Chair of the CDT Awards Committee (Kevin Taylor replacing Rob Butler) and change in membership (Al Fraser replacing Anna Korre) went seamlessly and the process of approving project proposals for 2016 entry was successfully completed. KG reported that the Chair of the 2015 Awards Committee had circulated a very useful summary of the Awards Committee's process which had improved the breadth of projects submitted this year, as well as the clarity of presentation in terms of what tasks the student would be undertaking within the specific research topic. Many more projects also included a field work element. LM will circulate this summary. Members also asked LM to



make the single A4 project proposal documents available on a secure FTP site for companies to determine if they could offer additional support e.g. data that would enhance the project. JU noted that although non-CDT sponsoring companies are not allowed to be named as supervisors on projects, the inclusion of a single supervisor from a non-CDT partner university is permissible. Members also asked that they be petitioned for ideas for projects in time for suggestions to be included in the guidance that accompanies any call for 2017 entry projects, assuming that there is a successful extension or renewal of the CDT.

External endorsement of the CDT: The CDT has welcomed the Secretary of State for Scotland, the UK Minister for Energy, Business and Enterprise and the Scottish Minister for Business, Energy and Tourism to its events throughout 2014 and 2015. The CDT also facilitated two Innovation Fund workshops in Decommissioning and Extending the Life of Mature Basins on behalf of NERC, one of which has since led to a call for proposals from the academic community with industry collaboration.

Training Academy Funding Model: LM tabled a spreadsheet showing the Training Academy budget actual spend so far with estimated costs of future years/cohorts provision over the 6 year period of the initial grant. Based on the existing known industry contract commitments, the model is almost at the point of being able to cover students' travel costs to and from Training Academy courses, thus allowing students access to the full Research Training and Support Grant monies included in their studentships for other activities/equipment/data etc. that benefit their research. The CDT Training Academy Officer post, which is a requirement of the IAB for HSE and module delivery, is provided for the period November 2014 to November 2017 by additional funds from NERC which have been added to their studentship grant for innovation and added value activities.

Members will review the model and see what format/additional information would be required for their organisations to demonstrate the CDT's sound financial governance and audited budget responsibility. LM will use the Shell model and ask companies to review this internally with their finance colleagues. MBu stated that the CDT demonstrates the best, most open and transparent governance he has ever witnessed in his career of liaising with academia.

Student Recruitment: LM reported on the latest recruitment status and confirmed that all academic partners are working towards a final position after 3 years of recruitment of having either 3 or 9 students depending on their associate or core partner status although some may not have recruited in Year 1 or 2, but are making this deficit up in subsequent years(s). The gender ratio for the 2015 cohort is 53% male/47% female compared to 59/41% for 2014.

Reports from CDT Committees: JU reported that although Chairs of the various CDT committees were asked to provide reports for this IAB meeting, none had been forthcoming. Members asked that JU emphasise to the Management Committee at their meeting that afternoon the importance of Chairs providing a 2 page summary of highlights of each Committee's activities in the an annual report form.



NERC view – Aims and Goals

LM confirmed that NERC had been invited to send a representative to the meeting but that the organisation had decided not to do this in the light of the current re-commissioning exercise as it felt their presence might inhibit discussion.

Review of IAB Role and Responsibilities

KG outlined the role and responsibilities of the IAB to provide advice and recommendations to CDT Committees regarding projects, training and general management from an industry perspective. JU reiterated his appreciation of this input and support to the various aspects of the CDT's operations. Member expressed their satisfaction with the way in which the IAB comments and suggestions are fed through to CDT committees and how these are acted upon.

Industry expectations of the CDT

KG welcomed new members, Cairn Energy and Woodside Energy, and invited them to give their views on why they joined the CDT and what they are looking for in their association with it. Both see the link with the CDT as giving a positive message of support to the Scottish and UK economies and the oil & gas sector in general. AV noted that Woodside is particularly keen to contribute to the mentoring scheme and could also offer Andrew Murray to deliver a course using Trinity Software. Both companies stated that access to over 90 students and their research, together with the opportunity to influence and contribute to both the training and research programmes within the CDT remain a very attractive, cost-efficient option for the £40k annual subscription fee.

Training Academy module provision: CO reported that Total is looking for numerate geoscientists and members agreed that key skills for the future included integrated geophysics, non-seismic geophysics, acquisition and processing of geophysical data, Remote Sensing/LIDAR/time lapse analysis and micro-seismic.

Internships: It had been previously agreed by the Management Committee and IAB that the best time for internships would be quarter 4 of Year 2, but no firm process to effect internships has yet been established. JU reported that NERC would have to agree to an extension to allow students an additional 6 month completion deadline as they, as well as some universities e.g. Manchester, have strict submission timelines of 4 years for PhD completion. MBu noted that BP fills 80% of its employment quota via its internship scheme, but that the emphasis has been on MSc students as traditional PhD training has been too narrow and specialised. The bespoke training in the CDT, however, creates a new cohort for recruitment. MBr agreed that this was similar for E.On. CO noted that although the CDT studentship is for 4 years, able individuals may well still be able to finish in 3/3.5 years, thus allowing students to undertake an internship and complete within the original 4 years. NG noted that ConocoPhillips uses internships as a form of probation as they are only given to those who have already been made an offer of employment. JC said that Cairn views internships as an opportunity for the student to learn about industry and practical



operations and they are not explicitly linked to a recruitment cycle. Members agreed to respond positively about the value of internships in the submission to NERC regarding re-commissioning and the need for an extension to completion times to accommodate internships.

Future Growth Opportunities: JU reported that the Development Committee had not yet met, nor had there been any dissemination of the proposed remit and responsibilities document drawn up by the CDT Management Team and forwarded to the Committee Chair. In the light of this, and the recent urgent request from NERC for evidence of need in order to support CDT re-commissioning (see item below), IAB members proposed that the CDT Management Committee assume the lead role for extension/renewal negotiations with NERC and that JU and LM re-visit the remit of the Development Committee with the Committee Chair. Internationalisation remains a key development aim for example.

Renewal/extension of CDT model and RCUK/academic partner funding

JU reported that in the previous week, NERC has requested information for a meeting of its Training Advisory Group (TAG) to consider the case for renewal of CDTs, of which the Oil & Gas CDT is the first. Evidence is being sought from the lead academic partner only, the industry partners and the first cohort of students. Industry representatives will receive an email later on 3rd November asking for feedback on 3 questions relating to the need for this type of combined research and training programme to continue. TAG is evaluating the need in this field against evidence provided by other groups, many not yet in existence, for similar schemes in other areas falling under NERC's remit. LM will ask David Roberts at NERC to ensure that NERC's email is sent to all delegates attending the current meeting. JU also advised the meeting that NERC is not particularly comfortable in the oil & gas sector and that their investment decision was given key impetus from their own funder, BIS.

Members envisage this programme as providing the technical sub-surface leaders and practitioners in 10 years' time, and that without it, there may not be an indigenous workforce for the UK's oil and gas industries. The industry crew change that has been well documented and commenced in the last decade continues to remove large numbers of experienced and knowledgeable staff from the industry. This process has just been accelerated by recent events which makes the training of broadly based, technically capable individuals as important as ever for the future energy security of the UK.

The programme is imparting key skills and as noted above, a one-year extension is essential if only to provide data on completion rates for the first student cohort who began their studies in October 2014. Members asked JU/LM to enquire whether NERC will release the information provided by students to NERC in this process. NG suggested that CDT students be given a single-sided document reviewing the first year of the CDT experience and KG offered the reporting document used by Shell for their sponsored students as a template.

Members suggested that a bullet-point review of yesterday's conference – speakers, delegates etc. would be a useful tool for industry members to use in their submission to



NERC. The impact on gender diversity in employment is also important as the CDT has attracted a significant number of female students in the first two cohorts.

JU reported that some associate academic partners are interested in becoming core partners if one or more of the latter found themselves unable to continue with core status. Universities who had been in one of the failed bids for this CDT have also expressed interest in joining if places become available.

KG noted that the original driver for industry investment in the bid i.e. access to @90 PhD students and their research over a 4 year period with the ability to influence research topics and the bespoke training programme for the cost of sponsoring a single PhD student remains a key incentive, particularly when the training programme and the research topics are responding so positively to recommendations from industry partners.

JU ended the discussion by emphasising the importance of the industry partners' feedback to a positive decision by TAG to continue funding the CDT in Oil & Gas.

Any Other Competent Business

MBr reported that E.On is undergoing a strategic review and has divested itself of its Norwegian assets. The London office is currently on the market but he confirmed that the company's commitment to the CDT is included in the sale and any new owner will honour that. He hopes to be able to continue his personal involvement with the CDT.

NG reported that ConocoPhillips' exploration office in Aberdeen has closed and that the company's future recruitment needs and target areas are not clear at present.

JU outlined a proposed initiative that is being discussed within the OGA which would encourage industry and academia to work together and bring support for research and training such as the CDT model.

Date of Next meeting

This was agreed for May 2016, possibly to link with the Training Academy course on the topic of Extending the Life of Mature Basins scheduled for Manchester.

JRU passed a vote of thanks to the Chair, KG and to all participants in the meeting.

Actions and agents

Action	Agent
Circulate JU's conference presentation to members as pdf	LM
Provide copies of the YP Mentoring Scheme guidelines to members so that they can identify suitable staff members within their organisations as mentors	LM
Create an FTP site for student feedback documents and provide members with relevant access	AC



Provide copy of Chair of Awards Committee's summary of the 2015 project process	LM
Create FTP site for single A4 proposal documents for approved projects for recruitment in October 2016 and circulate to members so they can assess whether they can provide additional support e.g. data to make the project more attractive to potential applicants	LM
Petition companies in May 2016 for suggested research topics for October 2017 entry if CDT extension/renewal is agreed.	LM
Provide a financial budget model for the Training Academy based on Shell's template for companies to assess its suitability with their finance sections	LM
Emphasise to next Management Committee meeting the importance of CDT Committee Chairs providing a report on their Committee's activities in a timely manner to IAB meetings	JU
Review remit and responsibilities document for the Development Committee with Committee Chair, Rob Butler	JU / LM
Contact David Roberts (NERC) to ensure delegates in attendance receive NERC's email request for evidence to support continued funding of the CDT model for TAG meeting in December	LM
Ask NERC if evidence for TAG meeting received from students will be made available to CDT management and committees	LM
Provide Shell template for annual student sponsorship review to LM as possible basis for similar annual survey of CDT students	KG
Provide bullet point document outlining the successes of the First Annual Conference	AC / LM / JU