Minutes of Industrial Advisory Board Meeting – November 2022

Date: 9/11/2022

Time: 15:00 – 16.00

Location: Peston LT and Teams

Link to recording:

Chair: Martin Muir (Airbus)

Speakers:

Paul Balcombe (PB)

Jun Chen (JC)

Mohammad Hassanezhad (MH)

Oliver Fenwick (OF)

In-person attendees:

Maria Romero-Gonzalez	SEMS
Liz Tanner	SEMS
Jens-Domink Mueller	SEMS
Ketao Zhang	SEMS
Oliver Fenwick	SEMS
Paul Balcombe	SEMS
Vassili Toropov	SEMS
Zio Tse	SEMS
Han Zhang	SEMS
Keizo Akutagawa	Aston Martin F1
Ibilola Amao	Lonadek Global Services
Martin Muir	Airbus
Tom Dowden	FormFormForm Ltd
Andy Lewis	Owen Mumford
Keith Rodgers	Nanoforce
Sharon Knight	MHRA
Paolo Bianco	Airbus

Online Attendees:

Joe Hallett	Birla Carbon
Markys Cain	Electrosciences Ltd.
Yasmin Farhatnia	Platinum Medica
Sergey Karabasov	SEMS
Henri Huijberts	SEMS
Su Varma	Pilkington NSG
Danielle De Villiers	Mat Ortho

Chris Stevens	NSG
Craig Davies	Drax
Zulshan Mahmood	Ford
Nigel Smith	Biomedical Consultancy LTD
Rich Walker	Shadow Robot Company
Richard Smith	Winchester Consulting
Thomas Iskratsch	SEMS
Mark Jiskoot	Schlumberger
Sharokh Shahpar	Rolls Royce
Andrew Buchan	SEMS

Part 1

PB reported our NSS scores from the last period, including areas for improvement. 4th in UK for student voice, but a dip in "academic support"

Nigel Smith asked why the "Feedback" score so low?

PB explained that it is low in all instutions. Liz Tanner added that students often don't know when they've been given feedback. Rich Walker pointed out that it's up to us to tell them it's feedback.

Martin Muir asked if we do peer feedback, self-assessment and 360 degree feedback. Commented that in industry, people do self-assessment very year, identify certain attributes that need to be improved. This might be a good model that QM can adopt.

PB said that we address this partially in the graduate attributes portfolio.

PB mentioned that going forward new 3rd year project module to transition from research-focus to industrial design-focus, large groups of projects linking to industry relevant case studies but with individual element. Linked project can be of 6 students in a group. Asked suggestions from the IAB.

OF said there is opportunity with a new type of projects. It does not start until next year. We are always looking for sort of hard links with stuff that is relevant to current problems.

MM asked if industrial partners can propose these projects – in particular linked projects? How students will be put in a group?

PB: the idea is to create linked individual projects, around 6 students. We are already doing this in our chemical engineering cohort with 5~7 students in a group.

Online question on whether we had formed a relationship with the energy institutes? They have a degree of funding.

Liz Tanner this can be explored in the Centre for Sustainable Engineering. LT will pass it to Andrew Buchan

Question on how the project will be allocated and timeframe?

PB: no definite answers yet. Whether they are going to be allocated projects, or bid for different projects, or if this will be done automatically are the level of details we are sorting out at the moment.

JC presented our progress in Employer Led Education. Outlined the aims and objectives of this presentation focusing on understanding industrial needs, recruitment strategy, a serials of road mapping workshops, and a short questionnaire to fill during the IAB.

Mark Jiskoot asked if there was a route for digital avatars and predictive analytics.

JC explained that there was a definite route for predictive analytics. It was also explained that it was broad enough to include digital avatars.

MH introduces his workshop on Systems Engineering vision 2035 to refine our curriculum over the 5 – 10 year timeframe and asked about perception of systems engineering.

MM: Is there no other offering on systems engineering at the Master level?

JC: there is offering on Systems engineering at the master level, e.g. Loughborough and Cranfield, but our offering is unique as we put data at the centre of the systems engineering. We think we identified a gap here as enterprise is transitioning towards models, data and models based systems engineering, e.g. in airbus.

MM: Agreed there may be a gap relevant to Airbus. There are different schools of systems engineering depending on where you are in the design cycle but there is a trend to move to more model based systems engineering from requirements engineering in Airbus; this was also echoed by colleagues from Airbus.

JC: mentioned that we are currently offering model-based systems engineering as one of the modules and engineering design optimisation combined with decision science, as well as the module to introduce systems engineering.

MH: commented that we are also covering the systems of systems engineering and in a broad term, it is not just about the technical engineering disciplines.

Ibilola Amao: Asked how this programme relates to industry 5.0 and systems integration, and the energy transition.

MH: Regardless of 4.5 or 5.0 or 6.0, it is all about the connectivity and integration. The programme emphasis on the integration of different interconnected systems.

Question on looking at the future, modularizing systems to be able to dashboard intelligent data, optimisation of the asset, are we not supposed to be looking at again technology and systems integration? How systems engineering cuts across different sectors?

MH: Commented that is why we want to run the workshops to hear how it can work out for different industries.

Comments online mentioned the advantage of running this as an apprenticeship is that the companies directly involved from day one. The disadvantage of the course is that learning rate is lower than the full time option.

OF requested feedback from the IAB about how it is run.
MM commented that the Research Showcase was good.

Someone asked if it is possible to have physical examples in the Research showcase, not just posters.

Olly: we do have our MEng projects in the next ILF where they tend to present on a table with things that they made. This is the second person suggested today and it might be a sign that we should move in that direction.

Ibilola Amao asked if there could be student involvement in IAB meetings. It was agreed by several people that this would be a good thing.

Action for OF: invite student representative to next meeting.

MM and MR suggested a 1.5 hour meeting next time. This had general agreement from the room.

Action for OF: Ensure a longer IAB slot at the spring event.

MM suggested that many industry members would like the opportunity to present to us on research topics/challenges at the next IAB/ILF event.

Action for OF: Make space for research discussions at next ILF.

MM closed the meeting