

SUMMARY NOTE of the UK National Quantum Technologies Programme Strategic Advisory Board meeting, 25 November 2015, The Royal Society, London.

Members Present:

Strategic Advisory Board (SAB) Members

Dr. John Bagshaw	Independent
Dr. Trevor Cross	e2v
Professor Dave Delpy (Chairman)	Independent
Professor Peter Dobson	University of Warwick
Mr. Mark Hughes	BT Security
Professor Sir Peter Knight	NPL
Mr. Roger McKinlay	Independent
Baroness Pauline Neville-Jones	UK Parliament, House of Lords
Professor Neil Stansfield	Dstl
Professor Ian Walmsley	University of Oxford

Programme Operations Group Members & Programme Partner Organisation Representatives

Dr. Simon Bennett	Innovate UK
Dr. Liam Blackwell	EPSRC
Ms. Tanya Gurung	BIS
Dr. Richard Gunn	EPSRC
Ms. Amanda Howes	EPSRC
Dr. Richard Murray	Innovate UK

Apologies

Professor Gerard Milburn	University of Queensland
Dr. Heather Tewkesbury	Smith Institute

NOTE: The Strategic Advisory Board agreed that further details of discussions under items (2)-(3) are to be used for the purpose of policy and strategy development and should therefore be exempt from public scrutiny, in accordance with section 36 (conduct of public affairs) of the Freedom of Information Act 2000.

1. National Programme Update

- 1.1 The Chair invited the SAB to review the note of actions raised during the previous meeting on 22 July 2015. The SAB noted the progress made in addressing the outstanding action points from the previous meeting.
- 1.2 SAB members were presented with an updated Programme narrative that had been developed by the Programme's communications group in response to a SAB request, for comment.
- 1.3 SAB members discussed the progress that had been made by the Programme's partner organisations and the Quantum Technology Hubs (represented by Prof. Walmsley) since the previous SAB meeting on 22 July 2015, including a breakdown of the current status of allocating the Programme's funding.

- 1.4 The SAB acknowledged the progress that had been made and requested further details on the conditions of different funding mechanisms, in particular the partnership funding being allocated by the Quantum Technology Hubs.
- 1.5 The SAB discussed the Programme's international engagement strategy, in particular opportunities to engage with the European Commission and through the SIN network. The SAB noted the high level of interest from international delegates at the recent Quantum Technologies Showcase event held on 11 November 2015, and that the Quantum Technology Hubs were increasingly attracting international interest.
- 1.6 The SAB reviewed an amended Programme-level risk register that had been developed by the Programme Operations Group (POG) and incorporated modifications proposed by SAB members at the previous meeting on 20 July 2015.
- 1.7 The SAB agreed that the risk register was now acceptable and that this should be reviewed and updated on a quarterly basis (at a minimum) by the POG. A review of the risk register will be introduced as a standing item for future SAB meetings, with detail on the most severe risks and their mitigation activities provided in the supporting papers.

2. National Programme Capability Mapping

- 2.1 The Chair invited Roger McKinlay to provide SAB members with an update on progress to develop a National Programme capability map.
- 2.2 Following a suggestion at the 20 July 2015 SAB meeting, a SAB working group had been established to progress the capability map. The membership is John Bagshaw, Peter Knight, Roger McKinlay and Ian Walmsley, supported by Amanda Howes.
- 2.3 The working group has agreed on the format of a survey to gather input and has identified selected academic and industrial stakeholders to approach for input. However, the industrial stakeholders that had been approached had recommended revising the survey to make it less complex.
- 2.4 Following the update the SAB discussed additional sources of information that would be synthesised to develop the capability map, mechanisms for incentivising participation, the need to protect commercially sensitive information, and options for presenting and visualising the results.
- 2.5 The SAB discussed the formation of an 'early adopters' group that could be used to gather industrial input, and highlighted the importance of integrating the bibliographic and patent analyses that had previously been conducted into the capability map. The working group agreed to act on these recommendations.
- 2.6 The SAB acknowledged the progress that had been made by the working group and restated that the completed capability map should be presented for discussion at the March 2016 SAB meeting, as originally proposed.

3. Programme Level Indicators

- 3.1 The Chair invited Peter Dobson to provide SAB members with an update on progress to develop a series of Programme level indicators.
- 3.2 Following a suggestion from the POG to the Chair that the development of a series of Programme level indicators would be beneficial for monitoring progress within the Programme and focussing SAB discussions, a joint SAB-POG working group had been established to progress this activity. The membership is Peter Dobson, Peter Knight and Roger McKinlay (SAB); and Richard Gunn, Rhys Lewis, Richard Murray and Jonathan Pritchard (POG).
- 3.3 The SAB was presented with the results of the initial meetings of the working group, which had focussed on agreeing a number of principles for programme level indicators and how these might be used to monitor the Programme's progress holistically, facilitate strategic advice and articulate success features.
- 3.4 The working group presented a number of suggested indicators based on inputs, outputs and outcomes.
- 3.5 During the subsequent discussion, the SAB highlighted the importance of capturing the level of engagement with quantum technologies across different sectors and the value that would be returned to these industries as a result of the new capabilities offered by quantum technologies. The SAB also emphasised that capturing the 'direction of travel' would be an important feature of the suite of indicators.
- 3.6 The SAB acknowledged the progress that had been made by the working group and requested a further update on progress at the March 2016 SAB meeting.

4. Future Format of SAB Meetings

- 4.1 The Chair invited Richard Gunn to summarise the current status of the SAB, set in the context of the Programme's evolution over the previous twelve months from establishing a strategy and investments to developing the strategy and monitoring investments. A series of options were presented to facilitate discussion on whether the format and frequency of meetings should be adapted to reflect this change.
- 4.2 During the discussion the SAB agreed that the frequency of meetings should increase to four meetings a year, with one of these meetings rotating around locations of significant activity within the Programme.
- 4.3 The SAB discussed potential topics for discussion over the forthcoming year.

5. A.O.B.

- 5.1 Peter Knight tabled a question on how the SAB could most effectively engage with the UK Science and Innovation Network (SIN). The SAB agreed to explore this through establishing a working group to brief SIN officers.
- 5.2 Neil Stansfield tabled a question on whether SAB could provide guidance on the drafting of Non-disclosure Agreements (NDAs), in order for these to facilitate the effective operation of advisory boards while also ensuring the protection of commercially sensitive information. The SAB agreed to provide feedback in advance

of a POG meeting on 13 January 2017 where this issue could be discussed in further detail.

- 5.2 The next SAB meeting will be held in February or March 2016 (dates to be confirmed), with an additional meeting to be held *via* teleconference on 18 January 2016 to discuss the implications of the Comprehensive Spending Review outcome.

Richard Gunn
30 November 2015