

## UK RESEARCH AND INNOVATION

### ENGINEERING AND PHYSICAL SCIENCES RESEARCH COUNCIL

#### NOTE OF THE EPSRC SCIENCE ENGINEERING AND TECHNOLOGY BOARD (SETB) MEETING, HELD ON 11TH SEPTEMBER 2019 AT THE GRANGE FITZROVIA HOTEL, LONDON

In attendance: Professor Charlotte Deane (EPSRC) (SETB Chair)  
Dr Alison Burdett (Sensium Healthcare)  
Professor Sir Richard Friend (University of Cambridge)  
Dr Paul Gosling (Thales)  
Dr Sarah Harris (University of Leeds)  
Mr Jonathan Legh-Smith (BT)  
Dr David Payne (Imperial College London)  
Dr Deborah Pullen (Building Research Establishment (BRE))  
Professor Nilay Shah (Imperial College London)  
Professor Susan Stepney (University of York)  
Professor Rachel Williams (University of Liverpool)

Council Members: Professor Muffy Calder (University of Glasgow)  
Professor Alison Etheridge (University of Oxford)

Apologies: Professor Cameron Alexander (University of Nottingham)

EPSRC Staff: Dr Claire Graves (EPSRC)  
Dr Kedar Pandya (EPSRC)  
Dr Samantha Riches (EPSRC)  
Dr Simon Crook (EPSRC)

Secretary: Dr Sinead Balgobin (EPSRC)

#### **1. Welcome and Formalities (Charlotte Deane, SETB Chair)**

- 1.1. Professor Deane welcomed everyone to the meeting and formally opened the meeting.
- 1.2. Apologies had been received from Professor Alexander.

#### **2. Induction (Sinead Balgobin and Samantha Riches)**

- 2.1. Dr Riches delivered an overview of the Big Ideas initiative as part of the induction session, including an update on the achievements and successes to date, and reflections on the initiative from the past year. She also updated the SETB on the actions and next steps for the process and communications around the initiative.
- 2.2. The SETB discussed the update and provided feedback. Key points included:
  - Suggestion to engage with similar initiatives to Big Ideas in other Councils, and alongside this to engage with bodies analogous to the SETB;

- It would be useful to invite attendees from other councils/research communities where appropriate to discuss multidisciplinary ideas;
- Alongside the communications toolkit for Themes, it would be useful for submitters to have a toolkit for writing their Big Ideas submissions;
- The Big Ideas process should be able to capture the full spectrum of potential ideas, challenges and priorities to present to the SETB.

2.3. Dr Balgobin gave an overview of the strategic context of the SETB, the governance and advisory structure of EPSRC and the Terms of Reference of the board. The board agreed that they were happy with the Terms of Reference, highlighting the important message that SETB exists to support the development of ideas and priorities – not to just assess them. SETB did advise the executive to reconsider the length of rotation of Council members on the board – a year’s attendance would be preferable to one or two meetings.

### 3. Big Ideas – update on previous Big Ideas (Samantha Riches)

3.1. Dr Riches presented a dashboard of Big Ideas previously seen by the board (as the BIAG) and their current status. The SETB discussed the Big Ideas and provided advice on specific submissions.

3.2. The SETB also provided feedback on the format of this session, emphasising that the purpose of the session should be to double check the status of current Big Ideas, and to check the timeliness of and Big Ideas which are being held in the “bank”. The process for reviewing previous submissions will be discussed further at the next meeting.

### 4. Big ideas – assessment of new Big Ideas (Samantha Riches)

4.1. Dr Riches introduced this session, providing a short briefing to the board on the assessment criteria and potential recommendations. Professor Deane highlighted that the SETB should provide creative and constructive advice and feedback, using the assessment framework to guide them.

4.2. The SETB discussed three new Big Ideas submissions, providing specific advice for each one, which will be taken forward by the Big Ideas team in conjunction with the submitters. The Big Ideas discussed along with the overall SETB recommendations are listed below:

Title	Submitter	Recommendation	Next steps
<b>Translating Mathematical Sciences Research across UKRI</b>	Mathematical Sciences theme, EPSRC	<b>Develop further.</b> SETB noted support for this area but advised that further work was needed to develop the Big Idea as presented	Re-write based on feedback from the SETB; further engagement needed
<b>National Centre for Decarbonising Heating and Cooling</b>	Energy theme, EPSRC	<b>Develop further.</b> SETB noted the distinct and recognised need for investment in this area. Recommended that community workshops be organised to further define technology and policy challenges	Community workshops

<p><b>TRAnsforming Criminal Evidence Assessment (TRACE)</b></p>	<p>Simona Francese</p>	<p><b>Develop further.</b> SETB noted the importance of this area to the public and the government but recommended that further development was needed.</p>	<p>Take forward within UKRI, taking in to account the context of the House of Commons report on Forensic Science</p>
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**ACTION: Dr Riches**

## 5. Centres of Excellence (Claire Graves)

- 5.1. Dr Graves provided an overview of the Centres of Excellence, including background information and an update of the current status of where the EPSRC is in terms of prioritising and developing Centres of Excellence ideas. It was noted that the Centres of Excellence concept is in early development.
- 5.2. The SETB were asked to provide advice on next steps, and key points raised included:
- Need to be clear about definitions and expectations– centre vs network, for example;
  - As with other initiatives, it is important to balance underpinning science and challenge-led research carefully – challenges help government and other stakeholders understand the benefits of research;
  - The executive also needs to anticipate community reactions to any decisions around Centres of Excellence, and ensure any messaging around why certain areas have been identified, and what is expected from the Centres of Excellence, is clear;
  - It would be useful to know what success might look like – are there existing/previous initiatives which were similar which can be looked at? Then be clear on the measure of success;
  - Difficult to identify a single best pilot case due to the necessary differences between centres – the SETB advised that it would be more useful to gather evidence from what we have already and look at any evidence from similar initiatives (perhaps elsewhere in the world).
- 5.3. The SETB were asked to contact Dr Graves directly with any further input, including to note any areas not covered by the list of Centres of Excellence.

**ACTION: SETB**

## 6. Strategic Priorities Fund (Kedar Pandya)

- 6.1. Dr Pandya gave an overview of the Strategic Priorities Fund (SPF) and EPSRCs involvement in the fund so far, including a summary of SPF programmes EPSRC is currently involved in. He noted that over the whole SPF portfolio, EPSRC is involved in any capacity in 70% of the investments and is leading on approximately 40% of the total SPF investment by value (~£190 million).
- 6.2. The SETB discussed the fund and provided high level feedback and advice, as well as providing comments on specific wave 1 and wave 2 investments. Key points of high-level advice are listed below, specific advice will be provided to SPF teams directly:

- The short timelines associated with the funding calls in some programmes cause several major issues. The SETB advised that this could be addressed by considering the type of award for calls that cannot avoid a quick timescale – it is more challenging to produce a high-quality application for a large multidisciplinary award on a very short timescale than a smaller award;
- Small grants make it easier for different communities to participate, as different scientific communities work on different scales – but this must be balanced, as larger grants may be needed to ensure multidisciplinary within a project;
- It is an important principle to ensure there is a range of types of awards and mechanism in the SPF portfolio to facilitate high quality multidisciplinary research.

## 7. New Horizons Initiative (Claire Graves)

7.1. Dr Graves spoke briefly about the proposed New Horizons initiative from the 2019 EPSRC Delivery Plan. The SETB provided some initial thoughts, as this initiative is still in the early stages of development. The SETB noted that EPSRC currently funds high risk and transformative research through Standard Mode, and so it is crucial not to undermine this. This initiative provides an opportunity to take a new approach to both the type of small awards being proposed, and the peer review process associated with it; for example, simplifying the process to focus on the transformative nature of a proposal.

## 8. Current Investments – Case Studies (Sinead Balgobin)

- 8.1. Dr Balgobin gave an overview of this session, providing examples of case studies linked to large EPSRC investments, and asking the SETB to discuss what kind of information (e.g. case studies) would be useful to help inform their scientific guidance and advice.
- 8.2. Key points noted by the SETB included that it would be useful and interesting to understand both what has been delivered by EPSRC's large investments, and what was originally planned for – the differences may highlight interesting questions/scientific developments. In addition, it would be useful to understand the underpinning science of the investment, along with empirical evidence of the outputs.
- 8.3. The SETB advised that it would be valuable to be able to interact directly with directors of large investments and researchers involved in significant EPSRC investments in order to better inform their advice, and the Executive agreed to look into arranging SETB meetings at universities/institutes to facilitate this.

**ACTION: Dr Balgobin**

## 9. Comms from this meeting (Charlotte Deane, SETB Chair)

- 9.1. The SETB were asked to identify key messages to communicate from the meeting. These points are listed below:
- SETB is not a panel – it is a group that says “yes”, and nurtures and encourages science;
  - SETB is plumbed into the political reality, working positively and proactively to get science priorities right and understand how they fit into the political landscape;
  - SETB is open for ideas;

- In terms of Big Ideas, they should be thought of as community ideas, but still recognising the effort and altruism of the originators;
- We should celebrate the achievements of individuals and groups who have been able to lead their communities and drive Big Ideas through their development.

## 10. AOB and Close (Charlotte Deane, SETB Chair)

There was no other business at the meeting.

**The next meeting of the EPSRC Science, Engineering and Technology Board will be held on the 3rd February 2020 at the University of Manchester.**

### Summary of actions:

Action	Description	Owner
01-01	Communicate feedback to Big Ideas submitters and take forward any specific actions (e.g. workshops)	Dr Riches
01-02	Provide any further input on the Centres of Excellence directly to Dr Graves	SETB
01-03	Investigate possibility of hosting SETB at external locations to facilitate interactions between the SETB and directors/researchers on large EPSRC investments	Dr Balgobin